

# The Polypipe Way



Helping professionals create sustainable,  
engineered water and climate management  
solutions for the built environment

# An industry approach to business

**We are a company proud to be a part of the construction industry. It's grown with us, and us with it.**

We understand the challenges today's projects face both from an economic and sustainability basis – having to prove best value, whole life costs and delivery within the project timeframe. Because we work within our specific market sectors, with the many different types of people making up the project delivery team, we understand all the key touchpoints of a project, and we can provide design and product support right from the start through to completion. Whether it's a roof-to-river water management solution, a fully fabricated drainage stack for a high-rise development, low energy living environment cooling, ventilation and heating systems or complete sewer systems; this brochure will help you understand why, how and where we can support you.

**Trust. Support. Experience. Innovation. They're not simply words – they're our philosophy.**

At Polypipe, we're proud of our British heritage and it's one we continue to build on, helping our customers in all areas of construction to deliver the best possible project results, from water management to climate management, for both outside and inside buildings, highways and infrastructure. Creating that very first plastic pipe back in 1980 triggered a passion within us – to support the industry at every stage of its growth, its future and to face the challenges together.

For example, bringing in large diameter pipe manufacturing innovations to site completely fabricated and ready to use. Sustainable methods in which to store and reuse rainwater, using recycled materials where appropriate, to help cool inner cities whilst reducing the strain on potable water and sewers – and provide low-energy filtered clean air and heat recovery systems within buildings for a healthier, more comfortable living experience.

**We enable solutions for a sustainable and resilient built environment.**



## Well-travelled ideas

**Whilst the UK is our main focus for delivering our sustainable solutions, we also export our products and systems to over 60 countries throughout Europe, India, Africa and the Middle East.**

For example, our particular experience in supplying sustainable water management systems, coupled with our Terrain Drainage expertise for tall buildings, has seen the opening of a new training centre in the Middle East – an area of the world that has a problem with too little water (and at times too much) and where tall building designs push the boundaries of internal drainage and ventilation innovation.



Our products and systems really do help meet the construction demands for this region – providing the proof of experience to know that a project planned with Polypipe, is a project planned with confidence.

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## The scale to deliver

It's the number and size of our manufacturing plants and the stock levels we hold, together with our own 400-vehicle fleet serving the largest distribution network in the industry, that allows us to deliver the confidence you need to ensure your projects are completed on time and in full.

We operate 18 factories producing 350 million metres of plastic piping and 950,000 ventilation products per year.

We have over 24,000 engineered plastic products providing access to all the options, configurations and fittings you need for your complete system, supported by 3,500 nationwide stockists, making them easily accessible. And with many of our products manufactured in more than one location, we're able to flex production to meet demand – so should our Disaster Recovery Plan ever be required, we have the scale to deliver.

Of course, with quantity comes quality, so all our products are manufactured to comply with the latest performance standards.

### Not just bigger... better.

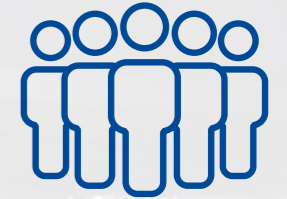
We also have teams that specialise in all areas of your project – whatever that project may be. They all work together with you to design a system that fits your scheme exactly, ensure your project runs smoothly and everything meets the necessary regulations. And because we're well networked with all the necessary trade associations and regulatory bodies, working with us means you'll have access to regular important updates on legislation and new industry developments.

From Account Managers to Business Development Managers, Specification and Field-based Staff, Designers and dedicated technical help, you've a team of over 2,500 experienced individuals supporting you from start to finish, whatever the size of the job. This includes:

- Over 20 Research and Development Technicians
- Over 2,200 Manufacturing and Support Services
- Over 70 Design, Heating and Ventilation Engineers
- Over 120 Dedicated Technical Support Engineers
- Over 200 Sales and Business Development Managers



18 factories



Over 2,500 people



24,000 product lines



Over 100 third party product approvals



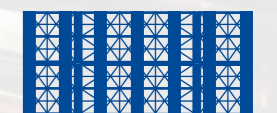
350 million metres of plastic piping per year



Exports to over 60 countries



Manufacturing over 950,000 ventilation products each year



Over 1 million geocellular units sold



Over 400 delivery vehicles



3,500 stockists nationwide

## Perfectly aligned to understand your vision

Having built our business around the residential, building services, civils and infrastructure markets, we have a detailed understanding of the applications in which our systems are used.

Through understanding the complexity of projects, we are able to deliver on time and on budget. We know that it takes a team of different disciplines such as Consultants, Architects, Contractors, Developers, Landscape Architects, Project Managers, Subcontractors and Quantity Surveyors, to deliver it. They in turn, work with external influencers such as Town Planners, Public Health Engineers, Water Companies and the Project Owners to establish and deliver the best results.

### Planning through knowledge

To ensure projects meet Balanced Scorecard challenges for value, Health & Safety and product innovation, quality of expertise and experience go hand in hand. Our sector-specific specialists understand what's required from the planning stages right through to the finished development. And because we know that interpretation of regulations can sometimes vary at a local level, it's good to know we have local teams right at the heart of the matter, who understand the area, its challenges and key stakeholders.

### We make it work together

We never underestimate how important our supply chain is – from our trusted suppliers and partners working with our business, to the strength of Polypipe's nationwide stockists; who align their businesses to meet the different sector demands. You know you are working with people who have a real insight to deliver your project needs. Whether it's a highways scheme, a fabricated drain replacement for a tall building or a new multi-residential scheme requiring energy-efficient ventilation and underfloor heating, we have people who understand.

Dedication towards delivering quality, sustainable products and services means a great deal to us, our supply chain and our customers – and has been recognised by the **BSI** with **ISO 14001** and **ISO 9001** accreditations across all of our businesses.



## Market-leading businesses



### Civils & Infrastructure

Within our Infrastructure and Water Management Solutions business, we work with our customers on their projects from design through to completion – giving us an unmatched understanding of the market, its requirements and its possible challenges.

Indeed, some of our most senior staff are Civil Engineers and their implicit knowledge has helped us create intelligent water management solutions. More important than ever, these systems will help towards the resilience of our cities – making space for water, resulting in a better environment for all. With our Civil Engineering experience, we are able to provide specialist support and deliver the widest range of surface water management, sewer systems and cable protection for roads & highways, power, ports & harbours, rail and commercial infrastructure.



### Residential

Whether for new build or refurbishment projects, our Building Products business specifically recognises the demands of modern construction environments and works across all disciplines to help you get the job done.

Together with National and Local Developers in both private and social housing, we have specialist teams working with Plumbers and Heating Engineers, General Builders, Groundworkers and National and Independent Merchants to bring together a successful project. From the only Kitemark® accredited traps range and our market-leading Domus range of energy efficient ventilations systems to our above and below-ground drainage systems, rainwater solutions and the largest range of plastic hot and cold plumbing products – we have a solution for every application.

### Building Services

From schools, hospitals and tall buildings to shopping centres and commercial and industrial developments, Polypipe's Terrain and Nuaire businesses work in partnership with the industry.

Our expertise in understanding the drainage and ventilation requirements is extensive and with the support of our technical teams and tools, such as BIM modelling, can provide the best solutions, delivering a focus on whole life costs as well as value. Working closely with external influencers such as Building Services Engineers, Public Health Engineers, Local Authorities and organisations such as the Building Research Establishment (BRE), we are able to provide engineered solutions from the ground up – and down again.

# Demonstrating our capability

Polypipe is one of Europe's largest manufacturers of engineered drainage, water management solutions, underfloor heating, cable management, plastic plumbing and energy-efficient ventilation – developing and manufacturing products that enable solutions for a sustainable and resilient built environment.



InterContinental London O2 Hotel

The following case study examples demonstrate how our products and services, with the support of our people and the expertise they bring, can help solve problems. Delivering adaptable solutions that help speed up installation, for example, successfully provide a rainwater storage and attenuation system where space is at a premium and help reduce the pressures placed on urban environments and natural resources.

## 19 storeys dancing to the tune of Polypipe Terrain FUZE HDPE

Situated within the InterContinental London O2 Hotel, is Europe's largest pillar-free ballroom with 4,800m<sup>2</sup> ready to invite dancers from all over the world.

The hotel, standing at 19 storeys high and containing 453 bedrooms and suites, required a drainage system that could be trusted not to leak. M&E Contractor, H.E. Simm & Son Ltd., approached Polypipe to design and manufacture a solution. As experts in providing intelligently designed solutions for the movement of water around tall buildings, Polypipe Terrain provided an engineered system using Terrain FUZE. Made of high-density polyethylene, Terrain FUZE is lighter in weight than cast iron equivalent systems and can be fabricated in longer lengths, meaning less jointing is required.

This in turn, provides less opportunities for the system to leak, making it ideal for the project. As the system is jointed using electro-fusion welding, where the weld area is as strong as the host material, system integrity is increased and consequently the risk of leaks in the development is further reduced.

For more information visit [polypipe.com/terrain](http://polypipe.com/terrain)



InterContinental London O2 Hotel

“The drainage system installed at the O2 Hotel needed to be intelligently designed. The innovation displayed by Polypipe's Terrain system, including FUZE HDPE made best use of the available space”.

Martin Thompson, Senior Project Manager at H.E. Simm & Son Ltd.



Hogwarts, Royal Connaught Park

## Unique Overlay™ Underfloor Heating works its magic at Hogwarts

Stunning Grade II listed buildings in Hertfordshire, made famous by the Harry Potter movies as the dramatic backdrop for Hogwarts, became the subject of the multi-million-pound historic Connaught Park apartment complex.

As well as incorporating Polypipe's comprehensive soil and waste systems and sanitary frames, the development owner, Cromer Homes, specified our pipe system for the hot and cold water plumbing and heating services. Protecting the fabric of the building, our system allows multiple elements to be installed from just one source of water – including Polypipe's unique Overlay™ Underfloor Heating system.

No two apartments were the same, so amongst the many issues posed throughout the scheme, one of the most challenging was finding a functional heating solution that complemented the interior design and layout of the properties, whilst providing a sympathetic approach towards the gothic architecture and intricate detailing.

Steve Blackwood, Trinity Services Mechanical Director for the project commented “On a large-scale project such as this, drawing in as many elements as possible from one source for the water, heating, drainage and underfloor heating helps to ensure compatibility between those components. The extensive nature of Polypipe's product range certainly made it easy for us to accomplish that.”

For more information visit [polypipeufh.com](http://polypipeufh.com)

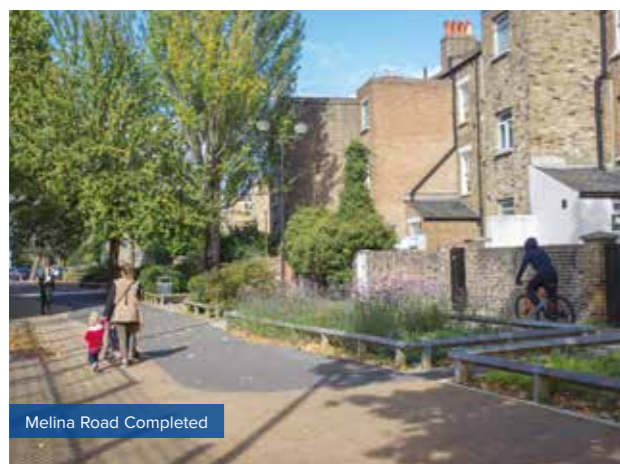
## Our capability



Arundel Gardens



Melina Road Installation



Melina Road Completed

### Green Streets, London Green Infrastructure solution

West London's combined sewer system which has been built over existing river culverts – known as Counter's Creek – was prone to flooding during severe weather events, causing flood damage and effluent ingress at homes within the area.

Working with the designers on the Green Streets Project, Polypipe helped to engineer sustainable drainage systems which alleviated the sewer from flooding by intercepting and storing large volumes of surface water within a network of shallow sites; ensuring existing underground pipes and cabling were left undisturbed.

Taking in Arundel Gardens, in Kensington, Mendora Road in Fulham and Melina Road in Shepherd's Bush, the Thames Water Scheme – using Polypipe's Permavoid system – helps capture, store and reuse rainwater. Incorporating a combination of products that have been designed to complement the Permavoid system – such as Permatex, Permafoam and Permafilter – allowed the designers to introduce and maintain greenery and trees, including rain gardens – whilst having the ability to filter and treat the water before it enters the geocellular tanks beneath. The homes now not only enjoy a flood-free existence, but also a self-sustaining green environment.

For more information on how we can help you design Green Infrastructure into your next project, visit [polypipe.com/green-infrastructure](http://polypipe.com/green-infrastructure)



Regent's Place (Houghton Regis)

### Mitigating stormwater run-off with intelligent water management solutions

Renowned developers, Taylor Wimpey, called upon Polypipe to provide an engineered drainage solution, designed to work with a sloping gradient found on-site.

Nestled in a tranquil area that offers stunning views over the landscape, the Regents Place development in Houghton Regis comprised over 180 two, three and four bedroom homes surrounding a sloping public open space with limited footprint for drainage design.

Taking on the challenge, Polypipe worked closely with Taylor Wimpey and Consultant Engineers JPP Consulting, to design a stormwater solution. Full-site layouts, CAD drawings and structural calculations were implemented to establish the most suitable system for the project, to capture and store the rainwater and attenuate it at a controlled rate. To reduce timescales, on-site labour costs and to promote ease of installation, Polypipe took the project off-site; pre-fabricating chambers and modular systems ready to install on-site when required. With staggered legs to take site conditions into account, the design also met site requirements and adopted elements laid out under a Section 104 agreement for approving water company, Anglian Water.

Keith Millard, Senior Engineer on the project for Taylor Wimpey said: "Polypipe designed the required stormwater attenuation system to not only fit the available area, but also saved us time and cost on the installation by delivering the system and fittings as one piece modular units ready to install."

For more information visit [polypipe.com/civils](http://polypipe.com/civils)



Specsavers Lens Online Distribution Centre

### Nuaire – thinking inside the box for Specsavers

When Specsavers decided to build two brand new industrial units to house its International Glazing Services and Lens Online Distribution Centre, it needed a ventilation system that could cool, heat and provide quality air throughout the premises – whilst running on a lower electrical feed and providing a cost-efficient solution.

Our Nuaire brand has been at the forefront of packaged Air Handling Units (AHUs) for over 20 years, designing and manufacturing market leading ranges. Ecosmart Boxer revolutionised the industry by providing the best solution for performance and energy efficiency, then enhanced it with the Ecosmart 'plug and play' control. And it's our Nuaire Boxer Packaged Solutions (BPS) that helped Specsavers with its move to its new 77,000ft<sup>2</sup> premises – providing four AHUs to provide balanced ventilation with heat recovery and cooling to the warehouse and office facilities.

As well as the system being designed, engineered and tested to provide efficiency and high performance, they are also the most compact in the market. The units were installed outside at ground level to allow Specsavers to maximise interior space. The system allows for an efficient, cost-effective cooling solution, which can also be used in the summer or, when needed, heating in the winter.

The key challenge was the limited electrical power supply at the former Romwire site. With only 250 kVA available and with increased production volumes predicted, this could have been a real issue for the M&E Consultants. But thanks to the innovative design technology of the Nuaire BPS system, we were able to meet the lower electrical inputs to successfully deliver Specsaver's vision.

To find out the full technical information please visit [nuaire.co.uk](http://nuaire.co.uk)

## Investing in people – ours and yours

Our people are our most valuable assets. They are here to help you move forward. And as we continue to grow and the industry adapts to the opportunities and challenges of digitisation and Smart technologies, so too does our investment in the capability of our people.

Investing in people and focusing on engagement remains at the core of our business strategy, with a number of training and development programmes running across all of our businesses, specifically targeting management and leadership development. This ensures that our top-level Sales and Technical Management teams are fully conversant with our products, systems and processes, the latest performance requirements, regulations and legislation to be able to provide the best solutions for your project.

Recruiting and retaining the right people and fostering a company-wide team spirit, with regular and meaningful communication, is key to our success. This is why we are proud to say that our average length of service is over 10 years. At Polypipe, everyone is encouraged to progress and develop new skills to help build on our existing reputation and move the business forward.

We have a series of professional development programmes which benefit all and they consist of:

- Dedicated Sales Academy providing relevant training for product and project sales involvement
- Leadership development programmes for management covering aspects of project management, motivating people, understanding systems and processes and identifying waste in business and projects

### Leading by example

We have recently placed apprentices at the new Advanced Manufacturing Research Centre at the University of Sheffield, underlining our commitment to advanced manufacturing engineering.

And we have an outstanding record of training and retaining apprentices in long-term, full-time employment. In fact, several members of our management team started their Polypipe careers as apprentices. Our dedicated apprenticeship programmes in engineering help to support young people in gaining experience in our industry, with apprenticeship numbers increasing by 14% in 2017, with further investment already in place for the future.

**Our apprenticeship numbers increased by 14% in 2017, with further investment already in place for the future.**





### Working with our Customers

When working with your individual teams, it's good to know that we have a series of training programmes to help Designers, Installers and Stockists understand how to get the best from our products.

Both on-site and at our dedicated training centres in Doncaster, Aylesford and Caerphilly, we provide crucial training and knowledge of our systems; which enables your teams to provide seamless, first-class customer service and helps you to deliver projects of the highest quality.

For example, the level of training our Registered Heating Engineers receive, working with the largest range of water-based underfloor heating (UFH) systems and heating controls, is the finest available – providing a BPEC qualification from one of the most advanced UFH training centres in the country. Whilst Nuair offers industry-leading training through the NICEIC; a Domestic Ventilation Systems Course that is required as part of the competent person scheme for all trade installers for ventilation – and covers the latest products including whole house heat recovery systems.

- On-site training and support  
- Dedicated training facilities at Aylesford, Doncaster and Caerphilly
- Dedicated online training portal for Stockists and their Staff

We can also provide technical information and training to help specifiers who are looking to include our products or systems within their designs. These consist of:

- Supporting the industry with the Fountain Academy and our involvement with the Building Research Establishment (BRE)
- Product training
- Technical advice
- CPD programme 

# Quality support and products from start to finish

With our leading-edge design expertise, innovative technology, detailed understanding within our sectors and our own award-winning delivery fleet, we're able to provide the support and service you need to bring whole life value to your projects. And provide systems that are engineered to perform.

Of course we supply your projects with expertly engineered products and systems, but our technical support goes much deeper.

We have expert teams who'll help you at design stage to ensure you receive the maximum performance and value from your system selection. And with such a wide range of engineered solutions, we can help you design-in value from the start of your project – helping you to plan ahead with confidence.

## Ahead of legislation

As with all sectors of our business and indeed the industry, legislation is an area that can introduce challenges. We're actively part of The European Plastic Pipes and Fittings Association (TEPPFA), British Plastics Federation (BPF) and a member of the Construction Products Association (CPA), so we're best placed to receive the latest updates on new legislation, regulations and standards. In fact, as industry experts, we help to create many of the British and European Standards that cover our products. And we understand the Balanced Score Card approach for ensuring sustainability, Health & Safety and whole life value can be demonstrated and achieved within a project.

## Our Approvals to meet your approval

Our products already have over 100 independent third party quality approvals from accredited industry bodies such as the British Board of Agrément (BBA) and the British Standards Institution (BSI).

We take our standards seriously and invest in ensuring approvals for all our products where possible – providing peace of mind and the confidence you've come to expect from Polypipe.



We invest heavily in marketing, providing all the technical support you need – from **design guides, technical drawings** and **data sheets** to **BIM Modelling** and everything in between.

## Value engineering to save time and money

We work with you to design and develop systems that align to a circular economy; delivering products and systems to add value and where possible, save you time and money.

Using manufacturing processes and materials that stand the test of time and are sustainable; building-in time-saving features and improving product performance specifications, help to reduce installation time and maintenance costs. We have a team of Engineers on-hand to help you whatever stage your project is at. And have the resources to train your workforce helping them with the installation processes such as with our pre-fabricated tanks and chambers.



## Systems created off-site to deliver a complete drainage solution on-site

We recognise that the supply chain has an integral part to play in facilitating the time and cost savings anticipated through off-site construction, so we have dedicated facilities to pre-manufacture drainage systems where possible. Whether they involve 3m diameter manholes or 3m long drainage stacks, we have a solution to most off-site challenges.

Alongside our manufactured systems, we can work with you to design a system that helps maximise your project budget and deliver a complete project even if you're experiencing skill shortages.

Our fabricated, fully modular replacement drainage and soil stacks, for example, enable installation floor by floor without having to assemble the component parts beforehand – reducing leaks and helping to minimise on-site storage and waste.



### The capability to meet your challenges

Manholes, catchpits, tanks and chambers can be fully fitted with useful additions such as integral lifting points, step rungs and ladders, toe holes, safety chain assemblies and guardrails – creating a system to a unique specification allowing you to simply 'plug-and-play' on-site at a time that suits you.

We'll work with you to establish the most suitable plumbing and drainage systems to complement your off-site project, that are specific to your customer's requirements – helping you towards an efficient, fast and more cost-effective installation – for now and in the future.



## Looking ahead smarter

Our technical credentials follow our quality platform. We invest heavily in research and new product development to create some of the best solutions in the construction industry today – enhanced with intelligent Smart technology.

### Controllable, cost-effective heating

Smart Plus controls are available with our Underfloor Heating systems, as demonstrated in our Dolls' House model, delivering comfort and value at the touch of a button – providing customers with complete control of their system, managed from the home units or from their Smart devices.

### Fresher thinking for fresh indoor air

Nuaire Ecosmart controls packages enhance the performance of our range of ventilation, heat recovery and cooling systems. Like our Drimaster-Eco range and low-energy Positive Input Ventilation systems, for example. Extremely cost-effective solutions that offer unique benefits; including detecting and removing harmful CO<sub>2</sub> levels and pollutants whilst introducing fresh filtered air into the home. Ecosmart controls packages allow customers to increase potential energy-savings, enabling them to tailor the unit's performance to suit changing user patterns. Making for a healthier, cleaner and more comfortable indoor environment.

### Plumbing innovation

Our research to bring the most comprehensive range of plastic plumbing products and systems to the industry is second to none. Developing products that are easier to fit and release, that don't require specialist welding or soldering skills and are manufactured using materials with anti-microbial properties to help improve hygiene.

### Drainage excellence

We understand that the drainage solutions industry has to move forward – and so we developed our large diameter pipes, Ridgistorm-XL; as part of a bespoke-engineered pipe system. They can be engineered to exact stiffness classifications to meet variable loading specifications and can be used to deliver large scale flood alleviation, foul sewers and even displacement ventilation.

### Some of our industry 'firsts'

Such is our passion to provide products and systems that help our customers design successful projects both for now and the future, that we have been responsible for some significant industry 'firsts'.



We were the first in the UK to manufacture engineered structured wall pipes, maximising product strength whilst minimising weight, making installation safe, quick and easy.



Surestop are the first switchable valves to replace the traditional stopcock, allowing the water supply to be easily and instantly turned off should a leak occur or if the home is left vacant.



Our innovative Overlay™ system was the first of its kind in the UK, providing the benefits of an energy-efficient underfloor heating system without having to excavate the floor.



Terrain was the first to provide a pre-manufactured drainage stack service in the UK, saving time, money and waste on-site.



In 1972, the first Positive Input Ventilation systems were introduced to the UK from Nuaire. To combat condensation and mould in UK homes, Northern Gas Board set the challenge to develop a solution. Today, Nuaire's market-leading Drimaster-Eco is still regarded as the market-leading PIV range, installed and introducing fresh filtered air into over 1 million homes across the UK.



The Nuaire IAQ-VALVE – a carbon filter and air supply valve in one – is the first of its kind and uses unique technology to remove up to 91% of Nitrogen dioxide (NO<sub>2</sub>) and Volatile Organic Compounds (VOCs) from traffic emissions whilst providing filtered fresh air indoors.



### Unique UKAS laboratory

Our UKAS-accredited laboratory – a testing and development facility that's been in operation since 1998 – works tirelessly 24 hours a day to ensure new products are optimised and brought to market efficiently and quickly.



### Making virtual reality, a reality

Embracing the construction industry's move towards digital technology, we have an online portfolio of assets for BIM Modelling. Our engineers can also work with designers and contractors to develop bespoke 3D design solutions.

## Sustaining a better outcome

Working with the material Polypipe has become synonymous with; plastic, we have placed sustainability at the heart of our offering, helping customers to safely manage some of the planet's most precious resources – water and air. It helps us to create systems that help the construction industry move forward – faster and easier.

But with more imaginative thinking, we're able to combine convenience, value and speed with sustainability and positivity to the environment.

Lighter in weight than rigid materials like concrete and clay, plastic piping and products are not only easy and safe to handle and quick to install, but they also help to reduce fuel consumption and carbon emissions during transportation. And where appropriate, our products are manufactured using responsibly sourced recycled materials. In 2017 we processed approximately 44,000 tonnes of recycled plastics, saving the equivalent of 44,000 tonnes of CO<sub>2</sub> compared with disposal at landfill.\*



## Polymer recycling technology

We have invested heavily in the right technology and people to develop our own polymer recycling and processing plant. It's a technically advanced system which removes the waste from bales of plastic bottles by extracting metals and non-target polymers via washing and density separation, before accumulating good quality, recycled polyethylene which can then be reformulated and compounded for pipe production. This enables us to deliver quality controlled and engineered products faster and more sustainably, providing our customers with the confidence of a stable and secure end-to-end supply process. Control of raw material on this level means we can confidently convert recycled bottles to pipe in just 55 minutes.

Very little goes to waste.

### Resource-efficient outlook

We have an environmental commitment – one we don't take lightly. So we don't just recycle all of our in-process material waste; we monitor every process and adjust the smallest thing to make a bigger difference. For example, we reduce power and water consumption by metering usage at machine level. It's all part of resource efficiency where the value of products, materials and resources is maintained within a circular economy for as long as possible. Plastic is a by-product of oil, is fully recyclable at the end of a product's life and therefore helps preserve the integrity of natural resources. We strive to ensure the generation of waste – both of plastic and other materials – is minimised, to help develop a sustainable, low carbon, resource-efficient service.



# Sustainable Water Management Solutions

Since Polypipe began in 1980, we've been developing new and innovative plumbing and drainage solutions to improve and manage the conveyance of water. Creating systems that are not only sustainably produced, but that enhance sustainability in their installation and everyday use.

And we've taken this philosophy further; creating water management solutions which save energy, reduce CO<sub>2</sub> emissions and create Green Infrastructure for healthy environments whilst managing water as a valuable resource.

Throughout our history, we've been at the forefront of surface water drainage innovation. With perpetual change in industry, climate and urbanisation, we've developed water management products and systems to provide solutions to make space for water and mitigate the impact of these changes.

Since 2004 we have been successfully manufacturing systems and solutions which include engineered Sustainable Urban Drainage (SuDS). Together with the developments in our range of geocellular and piped solutions, we are able to create systems that capture rainwater at source, that store, treat and release it at a controlled rate, re-using it to provide additional multifunctional benefits – such as amenity, biodiversity, climate cooling and shading whilst reintroducing a natural water cycle within the urban setting.

## Our systems don't just convey water – they can manage it.

The best designs are those that include the conveyance of water and making space for water together, ensuring that the drains within a building complement the functionality provided by those outside. Ultimately, this means we can create such amenities as rooftop restaurants, parks above underground car parks and greener spaces within cities. To protect and allow inner-city trees to thrive as part of a drainage system utilising our Polystorm and Permavoid geocellular systems.

To intercept, store, treat and attenuate rainwater on a large scale – at source and further afield; saving on potable water and easing the strain on our sewer systems.



## No green without blue

Green Infrastructure and making space for water to create these important green spaces is what we do. Sustainable drainage isn't just for the conveyance of rainwater – it's for repurposing it. Creating places where people want to live, enjoy and feel better by.

We design and develop engineered Sustainable Urban Drainage Systems (SuDS) – and the most sustainable schemes are those that use a combination of these systems; for interception, source control, attenuation, infiltration, irrigation, reuse and so on.

Simply, at Polypipe, we're proud to manufacture some of the most advanced water management systems – to deliver competent, tried and trusted sustainable and intelligent solutions and have the people behind the innovation to support you through every stage of the project.

## Sustainable Climate Management

Our carbon-efficient solutions satisfy the most stringent of government legislation. We continue to invest in those products to enable collection, transmission, emission and control in heating, ventilation, indoor air quality and cooling. It simply makes built environments better, more energy-efficient, more comfortable to live in and cleaner.

We understand how carbon emissions affect the construction industry and therefore strive to develop systems to help reduce carbon footprints – both within our own manufacturing processes and materials used, as well as with the products our customers purchase.

Our Nuair energy-efficient domestic and commercial ventilation solutions, for example, are designed to remove condensation and pollutants, improving indoor air quality, whilst recovering the heat that would otherwise be lost to the outside. And this can all be regulated with built-in sensors, helping to reduce CO<sub>2</sub> and energy costs.

### Saying NO to NO<sub>2</sub>

To help reduce contaminated air and provide filtered fresh air indoors, the patented Nuair IAQ-VALVE – a carbon filter and air supply valve in one – uses unique technology to remove up to 91% of Nitrogen dioxide (NO<sub>2</sub>) and Volatile Organic Compounds (VOCs) from traffic emissions. Particularly in homes located near main carriageways, the IAQ-VALVE could help to reduce negative health effects such as asthma, lung cancer, heart disease and even dementia.



Carbon is microporous and it has a much larger internal surface area than its external dimensions suggest; in fact, a spoonful of activated carbon equates to the surface area of a football field. Working as a complete system with our Nuair MVHR Eco Range, IAQ-VALVE absorbs the particulates and releases filtered, clean air into the room. Easily installed, only the sleek, attractive design of the valve is visible – whilst the carbon filter is easily changeable and can be carried out by the owner.



## A better environment inside

### Smart controllable heat

Polypipe Underfloor Heating systems are complemented by Smart Controls to remotely regulate input and output with an already low-energy emitting system. They also work particularly well with alternative forms of heating – such as ground or air source heat pumps. And because they are so controllable, they're the ideal solution for homes connected to District Heating Schemes.

**Together, Polypipe Underfloor Heating, Smart Controls and our Nuair ventilation systems create a more comfortable, healthy indoor living environment.**

## Safety first

Health & Safety (H&S) is an important part of any business – but in the construction industry, the risk factors become exponentially greater. Large projects, hundreds of personnel, the carriage and installation of components, all on an extensive scale – the Health & Safety regulations are imperative.

Needless to say, Health & Safety is a key initiative for Polypipe and we have an impeccable H&S record. Each of our sites and business units, for example, measure and monitor their Health & Safety Executive (HSE) performance with the details discussed at Group Board level on a monthly basis. And whilst Executive Management perform weekly meetings to ensure ultimate diligence, all our staff adopt a Health & Safety attitude on a daily basis.

We constantly service or upgrade our tooling and machinery, ensure our Engineers and Operators are fully conversant with all product apparatus and we recognise the importance of ‘hazard spotting’ and ‘near miss’ reporting. Indeed, our ‘See it, Sort it, Report it’ scheme continues to show growth, embracing improvement and safety – it’s a scheme we’re very proud of and is at the heart of the message, ‘preventing the next accident.’

And we even have incentives in place whereby sites that achieve 500 or 1000 days without a ‘lost time’ accident, receive a donation per employee to the site’s own chosen charity. It’s probably why we’ve won 5 consecutive Rospa Gold Awards for achieving a high level of performance, demonstrating well developed occupational Health & Safety management systems and culture, outstanding control of risk and very low levels of error, harm and loss.

Everything we do at Polypipe is designed to make your project run as smoothly as possible, and that means constantly **working to build in Health & Safety features.**



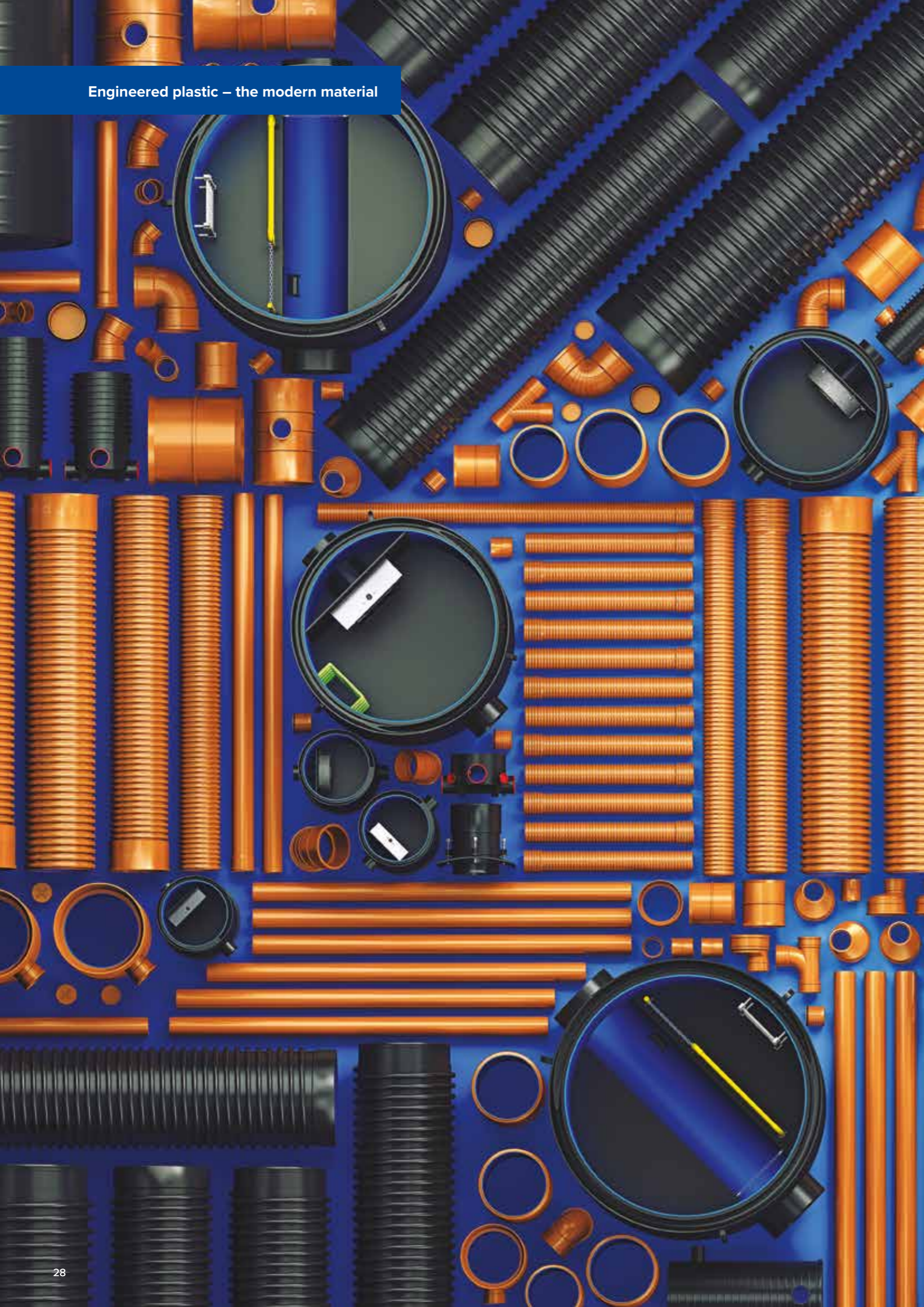
### Your safety is our priority

Our products and systems, for example, are engineered in plastic which is lighter in weight than rigid materials, making them easy to handle, transport and install, enabling longer pipe lengths and helping to reduce time within trenches. They also require less people, leading to less inductions, and ultimately less risk to human life.

We also have processes in place to reduce the transport of material by applying strict logistic schedules and maximising loads for a single journey – which also helps in delivering product to site quicker. And our vehicles are fitted with all-round warning sensors to detect obstructions and pedestrians within confined urban spaces.

### A safer insight by building off-site

Our large tanks and chambers can be fully fitted off-site; complete with innovative Health & Safety features such as integral lifting points, step rungs and ladders, toe holes, safety chain assemblies and guardrails. Once completed within our factory-controlled environment, the unit is then delivered to site. By working closely with our customers off-site, helps reduce the amount of labour and storage needed on-site.



## Engineered plastic – the modern material

Plastic pipes are simply perfect products for the conveyance of water, air or gas. They're ideal for radiant floor heating and resilient enough for sewer applications. They comply with European Product Standards for hygiene, safety, heat resistance and chemical resistance, giving a high level of performance over a long lifetime – and with reliability and safety.<sup>1</sup>

There are many reasons why plastic wins over rigid. It's a material that responds well to engineered adaptation, such as including anti-microbial coatings for infection control, high-mass particles to improve sound attenuating properties or fibres for the improvement of strength.

It's also lighter in weight than rigid materials, so we can design systems and engineer products that will be easy to install, that are flexible, more manageable, adaptable and, where appropriate, can be manufactured from recycled material.

As a by-product of oil, plastic as a material, is sustainable. It is also easier to fabricate and at the end of a product's life, is also fully recyclable.

With innovation of this level and responsible processes in place, we can facilitate the products and systems you need for a more sustainable and manageable project.



Plastic pipes **weigh substantially less than their concrete equivalents.**



1. Teppfa. The European Plastic Pipes and Fittings association. [www.teppfa.eu/why-use-plastic-pipe-systems/](http://www.teppfa.eu/why-use-plastic-pipe-systems/)

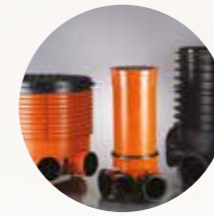
## What we do

Through constant innovation and focused research and development, Polypipe is the name for engineered plastic drainage, plumbing, water management systems, sustainable climate management solutions and cable protection. We are uniquely positioned to offer solutions that help deal with the pressures placed on urban environments and natural resources in the residential, commercial, civils and infrastructure markets, both within the UK and across the globe.

Our focus on the management and movement of water and air has influenced the development of our product systems, enabling us to offer solutions that contribute to a safer, healthier and more sustainable built environment, whilst helping to respond to the trends of global warming and increased urbanisation.



Above Ground Drainage



Below Ground Drainage



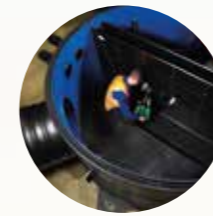
Rainwater



Domus Ventilation Ducting and fans



Smart Controls



Pre-fabricated Chambers



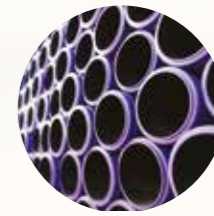
Commercial Ventilation and Air Handling Units



Sewer Systems



Water Management Solutions



Cable Protection



Acoustic Soil and Waste



Pressure Systems Pipes and Fittings



Mechanical Ventilation Heat Recovery (MVHR)



Cavity Closures



Surestop



Underfloor Heating



Indoor Air Quality Filters



Surface Water Drainage



Plastic Plumbing



Positive Input Ventilation (PIV)





## Responsibility taken seriously

Whether it's working towards a more sustainable solution to help the environment and add value that's not simply financial, or helping to put something back to the communities we serve, we take our existence in the construction industry very seriously.

And it starts with our people. We are proud of the diversity of our workforce, we encourage equality and we reinforce our fair labour policies. It all makes for a great place to work – and results in attentive and expertly delivered customer service as well as a very low turnover of staff throughout Polypipe – with an average length of service above 10 years. And our policies are comprehensive; taking a zero-tolerance stance against the discrimination towards diversity and the acts of modern slavery.

### A community player

We're a company that likes to be active in the wider communities in which we work – sponsoring rallies or taking part in cycling events to raise money for local and national charities.

Schools are particularly important as students are our future. We strive to promote community cohesion through school engagement, helping students to prepare for possible opportunities, responsibilities and experiences of working life.

### Always on-board to help

Our philanthropic work includes events programmes to promote and support local charities such as Macmillan and, for our 2017 Annual Regatta, the Help for Heroes Charity, which we also endorse through sales of our Traps range of products.

Indeed, Polypipe's 'now famous' Regatta is in its 20th year and 2017 saw over 50 yachts race around Port Solent, raising well in excess of £10,000 for charity. It's an event that provides guests with an exhilarating day out on the water.

**To date, the Regatta has raised in excess of £150,000 for charitable causes.**



## Innovating for change

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When there's new legislation. When there are changes in regulations. When the challenges of climate change, urbanisation and digitisation become ever more challenging. Or when you just need a product or system to make construction easier, faster, more sustainable and safer – we are here working, innovating and investing to stay ahead; to help you stay ahead.

Our heritage is one that is built on understanding our markets, bringing new innovations, from plumbing and drainage to ventilation and fabrication. We continually evolve our products and systems for example, to deliver alternative drainage strategies, those based on nature, which control, store, manage and reuse rainwater, but also protect and enhance the urban environment.

Our commitment to the future of the industry is at the heart of our business. Developing new and exciting methods to suit modern building design – either for a refurbishment scheme or completely new development. Placing sustainability as a forethought to deliver futuristic landscapes that also promote healthier lifestyles. And enhancing infrastructure using our cable protection systems to help Roads & Highways to deliver Smart motorways.

Each product and every system will play a part in making construction better, simpler, more dynamic. Technological advancement and enhancements will provide the opportunities to design more astutely; already we're working with Virtual Reality and BIM modelling to achieve these goals – whilst working with you to ensure your future projects are designed for the future.

We'll continue to invest – in our expertise to manufacture engineered solutions that bring whole life value to your projects. In our people, to ensure a fully integrated understanding of the industry we serve. In research and development, to bring to market only the most sustainable, beneficial, energy-efficient and cost-effective products – engineered from the most practical, recycled and recyclable materials. And in our service and capability – to ensure you're never left without a solution – whatever the challenge.

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**With Polypipe on your side, we can overcome the challenges ahead. Adding value along the way – the Polypipe way.**

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# The Polypipe Way

Helping professionals create sustainable, engineered water and climate management solutions for the built environment



## Residential

### Polypipe Building Products

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## Civils & Infrastructure

### Polypipe Civils

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Fax +44 (0) 1509 610215  
Email civils@polypipe.com

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### Polypipe Terrain

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Fax +44 (0) 1622 795263  
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Email industrial@polypipe.com

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### Surestop Ltd

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