

# 21 days

the WEHOLITE JOURNAL



Philippine refinery installs  
**WORLD'S FIRST PLASTIC  
'OUT OF SIZE' INTAKE STRUCTURE**

How heavy industry will be in charge of picking up the pieces  
**WHY MAN AND NOT MOTHER  
NATURE IS RESPONSIBLE FOR  
THE WINTER FLOODS**

Crossness and Beckton upgrades utilise Weholite  
**WEHOLITE PLAYS CRUCIAL ROLE  
FOR EUROPE'S LARGEST SEWERAGE  
TREATMENT WORKS**



# The unexpected proposal

## INTRODUCTION

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### It takes 21 days to change a habit

– Dr Maxwell Maltz

Never before has the UK water industry been in such a state of innovation and flux. Following on from the backdrop of the devastating winter floods, the industry is undergoing a sea change that will have a significant impact on the way water companies and their partners operate in decades to come.

It has now been almost 25 years since the water industry in England and Wales was privatised. During that time, the UK's water companies have spent over £100bn upgrading the UK's often antiquated Victorian water and sewerage networks, resulting in hugely improved water quality.

The main emphasis in the last 25 years has been on meeting legislative requirements, which has led to programmes to build and upgrade existing facilities to make sure they comply. With the bulk of that work now complete, there is going to be a huge shift in focus in the way the industry works, with an emphasis on consolidation and maintenance, and meeting new benchmarks set by Ofwat that are intended to govern the industry in the decades to come.

At the same time as the shift in Ofwat's focus, we must also set all this against a backdrop of the upcoming AMP 6 programme. As a result it is an incredibly busy time for all contractors and consultants across the UK, who are negotiating the multi billion pound contracts which will drive the industry forward in the years to come.

As pioneering suppliers to the water industry, we are wholeheartedly embracing this exciting new frontier. As Theodore Levitt suggested, in his ground breaking work "Marketing Myopia": "The trick is to survive gallantly, to feel the surge in impulse of commercial mastery: not just to experience the sweet smell of success but to have the visceral feel of entrepreneurial greatness".

With this quote very much in mind, as we reflect on the past year and look forward to the years ahead, I must acknowledge our recent involvement in some incredible national and international projects (many of which are showcased in this issue) and as AMP 6 ramps up, we're already beginning to book in projects that push the boundaries of innovation and usher in a new era of water management.

Simon Thomas,  
Editor  
Managing Director of Asset International Ltd.

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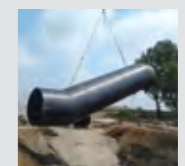
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## Weholite showcases its sustainability credentials with latest accolade



Asset took home **Sustainable Project of the Year** for its contribution to the **Giant's Causeway Visitors Centre in Antrim, Northern Ireland, at the last Builder and Engineer Awards 2013.**

The award-winning building, Giant's Causeway Visitor Centre, owned by the National Trust was designed by Dublin based architects, Henehan Peng, and cost £18.5 million to build. Central to the philosophy behind the design was the issue of ecology and sustainability and the entire complex was designed with this ethos in mind. This is perhaps best represented by the aesthetics of the building, hidden from the coastal landscape by a grass roof.

To highlight the success of the project, the Visitor Centre has already achieved a BREEAM 'Excellent' award, which measures overall sustainability in design, materials, energy, construction management and ecology.

Asset undertook the ecological heating and cooling project to supply a bespoke header pipe work system for a ground air heat exchanger in the building. The unique design of Weholite pipes made it the perfect choice for this ecologically focused project.

Weholite is a structured wall product, which means that there is an air barrier between the inner and outer wall of the pipe. This barrier reduces the thermal co-efficiency of the pipe, meaning that once the air has passed through the heat transfer pipes the Weholite header pipe minimises the residual energy loss until it reaches the main building.

The awards took place at The Point at Emirates Old Trafford in Manchester, and saluted the best-in-class companies and projects from across the Built Environment.



## Weholite shortlisted for 'Product of the Year' in national awards

Asset International was named as a finalist in the **Product of the Year** category in the prestigious **Housing Excellence Awards 2014.**

Widely recognised as the 'industry event' of the year, The Housing Excellence Awards is the largest awards event in the UK social housing sector, attracting 700+ of the sector's key leaders and serves to highlight the organisations, individuals and projects that are leading the way in affordable housing.

The 2014 winners were decided by an independent panel of industry experts and announced at the annual gala dinner where housing's elite converged on Lancashire County Cricket Ground to enjoy an evening of awards, networking and entertainment.



## Newport manufacturing firm has designs on the future



Asset has appointed **Kapil Jadva as a CAD engineer. The appointment follows a successful year for the company, which has recorded bumper sales and seen project numbers, both domestically and internationally, rise month-on-month, thanks to the uptake of its Weholite range of structured wall pipe, the largest diameter high**

**density polyethylene pipe on the market.**

Kapil, 26, from Cardiff, joins Asset as a fully qualified CAD engineer (Computer Aided Design). His role will entail the production of technical engineering drawings within a 3D package. This is an individual service that Asset provides for clients which displays complicated project specifications in a three dimensional format, as opposed to standard 2D models, which many within the manufacturing industries still use.

Simon Thomas, managing director of Asset, commented: "We are delighted that Kapil has joined us and I believe he will be fundamental to our growth plans. To survive and thrive in the manufacturing world it is vital to adopt new technologies and ensure our employees knowledge and skills remain at the coal face of industry innovation."

"With Kapil's appointment we are further demonstrating our commitment to ensuring Asset remains one of the UK's

most cutting edge manufacturing firms."

Kapil studied product design engineering at Cardiff University. His previous role was within Centrica as a gas engineer, however his move to Asset has enabled him to put his knowledge of the Solidworks CAD package to effective use.

Speaking about his new role, Kapil commented: "I'm excited to join Asset, particularly at a time when the company is growing exponentially.

"The Solidworks 3D system enables me to produce drawings at an incredibly fast pace. I am also able to produce finite element analysis for product design and development purposes, when optimisation of material is key for maximising value to the customer.

"I have already been involved with several projects working with some of the UK's biggest brands, including Airbus and Yorkshire Water, among others, and I look forward to developing my skills further."

## Asset International to count on new appointment Bryan

Asset has appointed **Neil Bryan as Finance Director, as it builds on record sales figures of recent years. Neil joins Asset at a time when the company is preparing for a new growth phase, following increased levels of business, both nationally and internationally.**

Simon Thomas, managing director of Asset, said: "Neil's support will be crucial during this exciting time for Asset, as we continue to move into a wider range of market sectors and become recognised as a global brand within the water and construction industry. It became clear that we were going to need not only a really experienced pair of financial hands, but also a dynamic and visionary fiscal mind, in order to help us exceed our potential. With this in mind Neil

was a perfect fit for us."

Neil, 44, who lives in Machen, brings with him nearly twenty years of experience from the financial and manufacturing sectors. Prior to joining Asset, Neil's previous role in the manufacturing sector was with AgriSense, a pest control product manufacturer based in South Wales. In his time with AgriSense, Neil progressed steadily from management accountant upon joining, through to general manager, his last role with the company. During this period, Neil was leading and participating in various projects for the company, including the implementation of a multi-site ERP system, linking companies in Europe, America, and Mexico. He was also instrumental in setting up a new finance department in its Spanish subsidiary, and performing a structural review at its sister company which led to a bottom



line turnaround. Following his tenure at AgriSense, Neil took eighteen months out of the manufacturing world to fulfil an ambition of working for a charity.

Speaking about his new role, Neil said: "I'm delighted to join Asset, particularly at a time when the company's profile is growing both domestically and abroad.

"Despite the poor economic conditions over the past few years, I firmly believe that the manufacturing sector is showing signs of recovery and that trend will continue. Asset has managed to buck the downtrend of the manufacturing world at large during the recession and it is extremely energising to be part of a company that are in a growth stage and who are continually striving to achieve more."

In its 17th year of trading, Asset achieved a turnover of more than £14million, which is a 40% increase in the past four years alone. The company employs 90 people from its factory and offices in Newport.

# Sun set to shine on Newport factory

**Asset's 6000 m<sup>2</sup> factory in Newport, South Wales is now home to one of Wales' largest rooftop solar panel system's as it installed 250 kWp of panels.**

The panels, supplied and installed by Brilliant Harvest Installations Ltd, are expected to generate 220,000 kilowatt hours of electricity, saving around 126 tons of CO<sub>2</sub> each year and offsetting up to 10% of the factory's annual electricity usage.

The factory is likely to use 100% of the energy produced on site, which will help protect the business from rising energy costs for the next 40 to 50 years.

Graham Bennett, operations manager at Asset commented: "We have always been committed to reducing our carbon footprint, and follow a strict eco-friendly agenda, something demonstrated by the minimal carbon footprint of the Weholite HDPE pipes that we produce. By investing in such a large scale solar panel system we are making a real statement about our ecological intentions, and will be implementing these practices across all

aspects of factory operations.

"Not only does it strengthen our environmental credentials; it also has significant potential to reduce costs at the plant. I strongly believe more businesses should look to greener and more efficient ways of generating energy."

Despite the common misconceptions on the affordability and performance of PV solar installations, the UK benefits from good levels of solar irradiation. Half of all production for the year will come from cloudy days but the generation will be nearly eight times greater in June than in December.

Although there has been a rapid increase in the uptake of green energy in the UK, in 2011 only 0.07% of all energy used was solar.

This announcement comes hot on the heels of the company's latest CEMARS accreditation by the Achilles carbon reduction programme, highlighting the company's commitment to its environmental impact.

Jeff Ingvaldson, Founder and Managing Director of Brilliant Harvest, comments;

*"We are delighted our solar PV strategy is meeting Asset International's objectives earlier than expected. Now is the time for companies to take a fresh look at solar energy. For anyone with doubts about related costs, solar installation has proven to be more and more affordable and can generate great savings as well as providing an income stream."*



# It's Hip to be Square

**Asset has invested in a new machine that will enable the company to produce its trademark Weholite large diameter HDPE pipes as flat panels.**

The new product, known as Weholite Modular, can be used to construct CSO control chambers, pumping stations, flow control chambers, ventilation chambers, detention tanks and other strategic water management products.

Asset can customise the individual chambers according to customer specifications to include hatches, pipe supports, ladders and more, all the while taking into account traffic loads, groundwater pressure and soil loads.

KWH Pipe Sweden has just unveiled an inspection chamber (pictured) that demonstrates the enormous capabilities of the new technology. And as with all Weholite products the designs arrive on-site from the factory as pre-fabricated ready to install solutions.

Speaking about the new product offering, Shaun Kalies, sales director at Asset commented: "There are occasions where rectangular chambers are necessary, traditionally these have been constructed using reinforced concrete, but many water authorities are now encouraging the use of bespoke modular chambers for speed of completion and ecological reasons.

"Weholite Modular offers the same versatility, longevity, eco-friendly qualities and value engineering as our renowned Weholite pipes.

"The addition of this new machine demonstrates our commitment to providing our clients with an even broader portfolio of water management solutions and further enhances the global leading Weholite brand."



# Weholite teams up with Barratt Homes to safeguard new housing development

**Asset has supplied a Weholite storm water attenuation tank in order to facilitate effective water management at a new housing development in the north of England.**

Barratt Homes, one of the UK's largest homebuilders, required a drainage solution which was to be approved by Yorkshire Water and which would be able to adapt to unique site conditions. The attenuation tank will provide storm water management for the new Springhill Meadows development, which will be home to 134 new properties and which lies just four miles south of the seaside resort of Scarborough.

Asset's specialist water management solutions team provided a tank of 433 metres in length, utilising 2600mm diameter Weholite HDPE pipe to give a total storage capacity of 2300 cubic metres (approximately 2.3 million litres of water). The tank will be used to help reduce peak flow at the housing development by restricting the flow of excess water caused by heavy rainfall before releasing it gradually via an outfall back into the ground.

The installation of the storm water attenuation tank was complicated by poor soil conditions, as a result of high levels of running sand at up to two metres below ground level, a common problem in coastal

areas. Asset recommended the use of 600mm crushed rock bedding to stabilise the trench bed, something that was approved by Yorkshire Water and has since proved to be extremely successful.

Jason Pritchard, Senior Technical Coordinator at Barratt Homes, commented: "As we all know, flooding can have devastating effects on people's lives and we will strive to ensure that this does not happen in our developments. This is why we have had the storm water attenuation tank installed at Springhill Meadows, which will be vital in times of heavy rainfall."

Speaking about the choice of Weholite plastic tanks and pipes, Brian Norton from Norcon Construction, who were the principle contractors on the project, commented: "Whilst Barratt Homes were responsible for the specification of the Weholite pipes we were more than happy with their choice and the technical support received by ourselves. The main criteria was the co-ordination of deliveries to installation, given the overall layout was some 1750m<sup>2</sup>, we were able to converse freely with their Transportation Office to avoid the necessity of a large storage area.

"The pipes were laid at a depth of 4 - 5 metres plus and their strength was never in question and complied very favourably with their specification. The pipes were

easily managed, transported on site and installed and we would have no hesitation in recommending Weholite for similar schemes."

Gareth Green, Technical Sales Engineer at Asset, said: "The Springhill Meadows project demonstrates once again the versatility of our Weholite product and how it can be effectively used as a solution for flash flood risk areas.

*"The attenuation tank was installed on site in a speedy and efficient manner so as not to hold up the dozens of other contractors on site, a particularly important requirement on such a large development, with so many moving parts."*

"Our custom drainage solution provided the client with exactly what they were after and ensures the new Barratt properties are safe from flood risk."

# Weholite used in one of the UK's largest sewerage treatment works



**Asset has been elected to provide a bespoke pipeline system to the £220 million upgrade at the UK's second largest sewerage treatment works.**

Water company, Thames Water, in consultation with Laing O'Rourke and Imtech Process Ltd joint venture – Tamesis, has chosen Weholite, the high density polyethylene (HDPE) pipe, to help reduce pollution and overflow as part of a sewer improvement at Crossness Sewage Treatment Works in south east London.

More than 4000m of Weholite HDPE pipe is to be used in the project, with variations in diameters ranging from 700mm up to 2600mm internal diameter. The upgraded pipeline system is designed to reduce the number of overflows and their environmental impact from the sewers and treatment systems serving London, and in particular to limit pollution from the sewers and treatment systems connected to Beckton and Crossness sewerage treatment works.

Vasilios Samaras, Product Manager at Asset, added: "We have worked successfully with Thames Water on many projects with this being the largest of its kind, so it was great that Weholite was the chosen solution. All fabrications are

bespoke in design and made in accordance with the needs of the scheme."

The project will see its treatment capacity rise by 44 per cent, significantly reducing the amount of storm sewage that overflows into the River Thames during heavy rainfall, as a result of the upgrade.

The largest quantity of Weholite pipe was one mile of 2100mm internal diameter pipe which was used for the main transfer line. There was also more than 300 metres of 2200mm internal diameter pipes used for the pipelines between the distribution chambers of the treatment plant.

Crossness STW and its sister site at Beckton STW, are the two biggest wastewater improvement projects to be delivered for Thames Water in AMP 5.

## About the project:

At over 70 hectares, Crossness STW is a large site and many of the scheme's complexities are caused by the sheer size of the site and the requirement to ensure that the existing works are not impacted upon throughout the construction period.

Once completed, the Crossness STW upgrade project will provide improved wastewater treatment with improved resource recovery, and will move the plant towards being a more sustainable, and power self-sufficient, wastewater treatment facility.



# Why man and not Mother Nature is responsible for the winter floods

**So called eco-friendly sustainable farming methods are at the root of this winter's floods, but it's heavy industry that will need to pick up the pieces, says Simon Thomas Managing Director of Asset International.**

Numerous credible sources have laid the decimation of the Somerset Levels and the flood damage to the Thames corridor firmly at the feet of the Environment Agency, National Farmer's Union and DEFRA. And whilst all of these parties have had very different roles to play in the saga, it's clear to me that all have to accept some of the blame for the staggering levels of over farming on the Somerset Levels, and the subsequent mass flooding as a result of poor soil and river management.

In a recent article for The Guardian, George Monbiot, who has surveyed the damage first hand, comments: "Along the road from High Ham to Burrowbridge, which skirts Lake Paterson (formerly known as the Somerset Levels), you can see field after field of harvested maize. In some places the crop lines run straight down the hill and into the water. When it rains, the water and soil flash off into the lake. Seldom are cause and effect so visible.

"Muddy water sluiced down the roads. A few score miles downstream it will reappear in people's living rooms. You can see the same thing happening across the Thames watershed: 184 miles of idiocy, perfectly calibrated to cause disaster."

It's clear to me, and no doubt the thousands of people whose lives have been destroyed by the winter floods that it's not just nature that is to blame for the now annual flood destruction, farmers and Government must also share in the responsibility. After all, we had been warned. And repeatedly.

*"... the simple fact of the matter is that the land cannot support such aggressive farming methods, leading to greater surface water run off as the soil breaks down, and thus increased flooding."*

In December a scientific journal called Soil Use and Management published a paper warning of impending flooding disaster. In hindsight this paper predicted the very near future with almost pinpoint accuracy just weeks before the flooding took hold. The paper stated that

surface water run-off in south-west England was reaching a critical point, and this was largely attributed to a massive change in the way the land is cultivated. At 38% of the sites the researchers investigated, the water – rather than naturally soaking into the ground, was now literally pouring off the land.

The farming of maize was identified as being a major culprit behind the winter floods thanks to an unprecedented rise in its production (a growth of 1,400 hectares to 160,000 since 1970). Such a huge increase in the farming of arable land for the purposes of maize production is not to feed humans, but to feed livestock and, increasingly, the biofuel business. However, that is a debate for another time, for now the simple fact of the matter is that the land cannot support such aggressive farming methods, leading to greater surface water run off as the soil breaks down, and thus increased flooding.

The paper went on to report that in three quarters of maize fields in the south-west, the soil structure has broken down to such an extent that they now contribute to flooding, as the soil is washed off the land along with the rain water, clogging up the rivers and ending up coating the roads, streets, driveways and front rooms of anything in its path.

Even the previous Government saw the problem coming, urging in a report as early as 2005, which catalogued the potential impacts of changes in land use: "Wherever possible avoid growing forage maize on high and very high erosion risk areas."

So who's to blame? Well obviously the answer to this is not a simple one, however George Monbiot, who I referenced above has a clear idea, commenting in his Guardian article on the topic: "Almost as soon as it took office, this government appointed a task force to investigate farming rules. Its chairman was the former director general of the National Farmers' Union. Who could have guessed that he would recommend "an entirely new approach to and culture of regulation ... Government must trust industry"? The task force's demands, embraced by Paterson (Sec of State for Environment, Food & Rural Affairs), now look as stupid as Gordon Brown's speech to an audience of bankers in 2004: "In budget after budget I want us to do even more to encourage the risk takers."

I can't say I disagree with Mr Monbiot, particularly when you read the (somewhat baffling) particulars of the various farming policies implemented in recent years, however the complexities of the political "he said, she said" argument would fill a hefty tome and so for those of us who are interested in ensuring the Somerset Levels and Thames corridor do not experience this level of devastation ever again, we must focus on the solutions. After all it is clear that despite changing weather patterns providing

milder wetter winters, much of the blame for the excessive flooding of recent months can be attributed to man, and not Mother Nature. And therefore the solution must be provided by us too.

Dredging has of course been heralded as the interim solution, with the Environment Agency coming under constant attack for not dredging the rivers sooner, however, dredging comes with its own problems, perfectly summed up by Mr Monbiot who describes it as like "trying to empty the bath while the taps are still running".

And of course much has been made of SUDS (Sustainable Urban Drainage Solutions), which utilise 'natural' drainage solutions like ponds, 'green' roofs and grassland depressions called swales. Speaking as a man who has worked at the heavy manufacturing end of the flood management sector for decades you may expect me to be anti-SUDS in my approach to water management. However, my philosophy or approach to it is a lot more grounded than that, in that I recognise that SUDS have their place in certain urban environments as an ecological extension of manmade solutions.

However, when you consider the sheer volume of water that fell on the UK during the winter months and the sorry state of the land it fell on, SUDS were quite frankly never going to cut it as a viable alternative to manmade flooding solutions. After all, when the land is fully saturated the water has nowhere to go. Not unless it is piped away, or stored, by manmade means. Something there is going to be a much greater call for in years to come unless the Environment Agency, DEFRA and the NFU can get their act together and work symbiotically to help stem the flow of both water and soil from our arable land directly into our rivers as a result of the mismanagement of our farmland.

Simon Thomas is the managing director of Asset International, a leading manufacturer and the UK licensee of the Weholite range of structured wall pipe, the largest diameter high density polyethylene pipe on the market. Asset International Ltd supplies bespoke designs to the water and construction industries from surface drainage to foul sewers and inter-process pipework.



# Luxury superyacht builders turn to Asset for shipyard extension

**Asset has demonstrated its versatility as it moves into the ventilation sector, with the provision of a network of HDPE pipes to service the new extension at the Pendennis Shipyard in Falmouth, Cornwall.**

Pendennis is one of the world's leading superyacht builders, with a heritage spanning 25 years. During that time the shipyard has completed over 200 refit projects and created 30 custom new build yachts.

In early 2013, Pendennis Shipyard commenced the major development of its Falmouth location, in order to respond to an increased number of refit enquiries as well as provide facilities for larger 60m+ vessels. The new extension will see the creation of three new marine facing sheds and workshops, as well as an expanded office, workshop and crew facilities. The project is partially funded by the European Regional Development Fund (ERDF).

In order to facilitate the extension, Pendennis appointed Midas as the main

contractor to undertake the required works. Asset International was appointed by SCB Groundworks, a sub contractor on the project.

Asset was specifically involved in providing a large network of underground pipes in order to service an airtight duct, designed to carry air from the plant room to vast blowers within the workshop. These giant blowers help to dry the fresh paint on the hulls of the superyachts built or refitted at the shipyard.

Asset supplied 750 metres of 1350mm diameter Weholite, along with prefabricated access shafts.

Paul O'Regan, Technical Sales Engineer at Asset said: "Weholite lends itself to underground air duct systems such as the one installed at Pendennis Shipyard, due to its versatility and ability to be fabricated easily into complex arrangements. This is essential when the air duct needs to navigate around a multitude of other services that need to be installed.

"We were thrilled to be involved with the Pendennis Shipyard expansion. The work they do in refitting and building luxury

superyachts is not only impressive but also extremely interesting and the level of engineering on site is something to behold."

Andy Mansell, Quantity Surveyor for SCB Groundworks, commented: "After looking at several different options Weholite proved to be the most suitable solution and offered both programming and economical advantages".

*"After looking at several different options Weholite proved to be the most suitable solution and offered both programming and economical advantages".*

# Redrow Homes benefits from drainage engineering expertise

**A bespoke drainage solution provided by Asset is set to help developer, Redrow Homes, protect its new housing development in South Wales.**

Groundwork contractors, Brandwells Construction required a drainage solution which could be installed at a major housing scheme on the 20-acre site of the former Penalta Colliery near Ystrad Mynach. The new urban village will eventually provide more than 600 new homes.

Asset worked with consulting engineers, Parsons Brinckerhoff to design a Welsh Water approved solution. Its specialist water management solutions team provided over 300 meters of 3000mm Weholite large diameter pipe, complete

with manholes and control chambers.

The new drainage solution will be used to help reduce peak flow at the housing development by restricting the flow of excess water caused by heavy rainfall before releasing it gradually via an outfall back into the ground. In addition, a pumping chamber will pump water from lower levels back into the outfall for release.

A Brandwells Construction representative commented: "Due to the size of the development a large amount of storage was required, with limited space available. By using 3000mm diameter Weholite tanks, narrow sections of public open space were utilised creating over 2000m<sup>3</sup> of storm water storage.

*"Weholite was lighter and faster to install and required less bedding materials and installation machinery, bringing significant cost savings and health and safety benefits to the project."*

By turning to Weholite's water management specialists, Redrow Homes achieved an easy-to install solution much lighter than the weight of alternative concrete products.



## Weholite plays crucial role for Thames Water



### Asset has been chosen to provide extensive pipe work for the new £190 million upgrade at Beckton Sewage Treatment Works in east London, to help clean up the River Thames.

Water company, Thames Water, in consultation with principal designer Hyder, along with Tamesis, a joint venture of Laing O'Rourke and Imtech, chose Weholite, to provide its signature large diameter HDPE pipes, to implement improvements to the sewage works, which currently serves 3.5 million people. The improvements will enable the site to treat 60% more sewage than it does now and allow for a 10% population increase until 2021.

The improvements to the sewage works will allow for the ability to fully treat increased flows during heavy rainfall, which are currently discharged into the River Thames, to prevent streets and homes from flooding.

The treatment works will have the capacity to cope with additional storm flows from the Lee Tunnel, a new four mile sewer which captures storm sewage that currently overflows into the River Lee when the system is overwhelmed during heavy rainfall. The additional capacity will also be of benefit to the proposed Thames Tideway Tunnel, a major new sewer that will help tackle the problem of overflows from the capital's Victorian sewers, and will protect the River Thames from increasing pollution for at least the next 100 years.

Asset supplied over 5km of Weholite HDPE pipe, in various sizes; ranging from 400mm to 3000mm in diameter. The pipes have been used throughout the extensive project for inter-process pipe work, and all of the associated chamber fabrications.

Shaun Kalies, project manager at Asset,

added: "We have worked successfully with Thames Water on numerous projects over the years and to be involved in a project of this scale, along with several others, across the Thames Water sewage management system, is a huge feather on our cap."

#### About the project:

Beckton, located in the London Borough of Newham, is one of Europe's largest sewage treatment works, and currently serves 3.5 million people.

The improvements will enable the site to treat 60% more sewage than it does now and allow for a ten per cent population increase until 2021 so it can:

- Fully treat increased flows during heavy rainfall, which currently discharge into the River Thames when the site becomes overloaded to prevent streets and homes from flooding.
- Treat additional storm flows from the Lee Tunnel, a new four-mile sewer which will capture storm sewage that currently overflows into the River Lee when the sewerage system gets overwhelmed during heavy rainfall.
- Accommodate additional flows from the proposed Thames Tideway Tunnel. As well as helping to protect the River Thames, other benefits resulting from this scheme include:
  - A 64 meter high wind turbine that will help generate eight per cent of the energy needed to power the site.
  - Enhancing the landscape within the sewage works site and improving the Barking Creekside habitat to encourage wildlife, including creating a new nature trail.
  - Opening footpaths around the site and river and creating new paths along the northern edge of the site by the River Roding and River Thames.
  - A thermal hydrolysis plant (THP) is currently under construction. This industrial-scale 'pressure cooker' will heat sludge, the leftover solids from wastewater treatment, to around 160 °C, in order to produce up to 50 per cent more biogas, which is then burnt to create heat to generate renewable energy.

## Asset aims for the sky with Airbus factory extension

### Asset has supplied a network of surface water drainage pipework to facilitate the extension of the Airbus factory at Broughton, Flintshire.

Airbus currently employs around 6,000 people at its Broughton factory, where the wings for the entire family of Airbus commercial aircraft are made and with a growing order book, production is set to increase.

Airbus initiated an extension of the current factory facilities in order to manage the increased traffic from the vast Beluga cargo planes, which fly in wing panels from other facilities in Europe and the finished wings of the A320, A330 and A350 aircraft to the final assembly lines in Toulouse and Hamburg.

In order to facilitate the extension Airbus Broughton appointed Interserve as the main contractor to undertake the required works.

The new extension comes just two years after the £400 million Airbus Broughton North Factory site was opened by Prime Minister David Cameron in 2011. It is now one of the largest manufacturing facilities in the UK and as a result of its size and the number of people located at one site, comes with its own set of unique requirements.

In collaboration with Interserve and Tier Consult, Asset delivered a complete network of surface water drainage pipework, utilising Weholite's 1,400mm diameter HDPE pipe, to serve the extended site, including all of the associated manholes and connections. In all over 800 metres of Weholite pipe work has been installed at the new site.

The project also needed to take into account an issue with the existing onsite services which resulted in a redesign of the original plans to bypass certain elements of the Airbus site.

Another specific requirement of the Airbus Broughton site was that all work conducted to the factory extension was carried out in an environmentally friendly manner. Airbus in the UK is committed to reducing CO<sub>2</sub> emissions and energy consumption, and the North Factory, which makes the wings for the new A350XWB aircraft, has earned a BREEAM Excellence rating, an achievement made all the more impressive considering the sheer scale of the site – over a million cubic metres.

This eco friendly outlook was a direct fit with that of Asset International, who have been awarded certification to the world class ISO accredited CEMARS standard by the Achilles carbon reduction programme. An achievement characterized by the recent unveiling of one of Wales'

largest rooftop solar panel systems at their Newport factory.

Darren Williams, Technical Sales Engineer at Asset International, said: "Asset has previously worked on earlier extensions at the Broughton factory and so we are extremely familiar with both the site and the unique requirements and challenges that it brings.

"A project of this scale, working alongside one of the biggest manufacturing brands in Europe was always going to be a big undertaking. However, devising large scale water management solutions is at the very heart of what we do and despite the inevitable tests involved when working on a site of this scale, I am extremely pleased with how operations are currently progressing."

Vernon Ellis, Project Manager for Interserve, who is in charge of the Airbus Broughton extension, commented: "We have worked with Asset on previous projects and so they were the obvious choice when it came to planning the extension of the Broughton Airbus site. We have a great relationship with the team who understand the complex nature of our requirements and the strict onsite security."





# The Philippines largest oil refinery installs the world's first plastic 'out of size' intake structure



## The Petron Bataan Refinery (PBR) in the Philippines chose Weholite, the high density polyethylene (HDPE) pipe, to complete its cooling water intake and outfall pipelines.

The Project Services team at Uponor Infra, international experts in providing turnkey solutions for the marine environment designed, installed and supervised the installation of

cooling water intakes and discharge outfalls and all of the intake structures for the project.

Weholite, the global leading brand in large diameter pipe technology, is one of the few solutions on the market that can be produced in diameters up to 3.5 meters internally. The HDPE pipe can be easily welded together on site and does not corrode, which is an important factor when pipes are installed in salt water and marine applications.

The Petron Bataan Refinery (PBR) is the country's largest integrated crude oil refinery and petrochemicals complex in the Philippines. Inaugurated in 1961, with a capacity of 25,000 barrels per day, it has steadily grown to its current rated capacity of 180,000 barrels-per-day.

In 2011, it decided to develop the Refinery Expansion Project (RMP-2), to make the refinery more competitive in the Asia-Pacific region by significantly increasing its production rate (by up to 200% in some products).

As part of the redevelopment, Uponor Infra supplied the world's first plastic super-size intake structure, made from its new Weholite Modular product, which is lighter, faster to install, and therefore much better value than other traditional solutions.

The connecting pipelines were made up of 610m of 2400mm internal diameter and 450m of 2200mm internal diameter pipes. Weholite was chosen for its design lifetime guarantee and non-corrosive material, all of which eliminates costly maintenance for Petron.

Uponor Infra provided all the hydraulic and mechanical calculations for the intake and outfall, and the supervision of the installation process.

The wealth of experience that Uponor Infra Project Services has on these types of projects and installations is the ideal complement for Weholite, particularly when working on a project on the other side of the globe.

Pablo Ramón, Project Services Site Manager at Uponor Infra, commented: "This complex marine project was well suited to Weholite for a number of reasons, as it eliminated the need for heavy concrete collars to ballast the strings which can often be extremely risky during the submersion process. The filling of its hollow profile with an inexpensive and pumpable material such as limestone is much faster and easier to carry out.

*"The submarine installation of Weholite is also faster than that of steel pipes, so much so that you can even install up to 150 linear metres in just one day. Since Weholite doesn't require any concrete collars, the contractors were able to use a smaller trench, therefore minimizing the dredging operation. This reduced volume excavations means lots of savings as the cost of any work under water is much higher than on dry land."*

Other contractors on the project include; Daelim (Korean), main EPC contractor for Petron in charge of building this RMP-2 PBR (Refinery Master Plan 2 for Petron Bataan Refinery), the Consortium CCT -Toyo Construction Co. Ltd., sub-contractor for Daelim for the construction of the Civil Package J, Marine Works, that included the intake, the outfall, and some auxiliary structures as jetties.



View more images here



## Newport manufacturer takes on the survival of the fittest

**Asset took part in Cardiff's annual Men's Health, Survival of the Fittest 10k race to raise money for a local charity.**

Ten employees from plastic pipe manufacturer, Asset, joined thousands of people taking part in the annual, Men's Health Survival of the Fittest 2013. The colossal 10k urban assault course is Britain's biggest adventure running series interspersed with obstacles.

The team raised a total of £2000 for the Aneurin Bevan Local Health Board's premature baby ward, chosen by an Asset employee with strong links to the charity. The money raised will help investigate the causes of sickness in newborn babies as well as with research into the prevention, treatment and cures for neonatal illnesses.

All fundraising also enables the advance of the education of nursing and midwifery staff working on the Neonatal Unit by providing money for them to attend educational meetings and training courses and to provide other educational material.

Gareth Green, Technical Sales Engineer at Asset International said: "We're really proud of the team for their dedication to completing such a gruelling challenge. Not

only for the event itself but for the effort they put into raising the amount we did. We're also extremely grateful to a number of our generous customers, friends and family alike."



# Judging by its cover

## Out of the shadows into the light for Weholite

**Asset contributed one of its large diameter plastic Weholite pipes, to an award-winning garden designer for use at The Royal Hampton Court Palace Flower Show.**

The garden, 'Falls the shadow' a quotation from T.S. Eliot 'The Hollow Men' was designed and created by Sheena Seeks, who took home Silver in the best conceptual garden award.

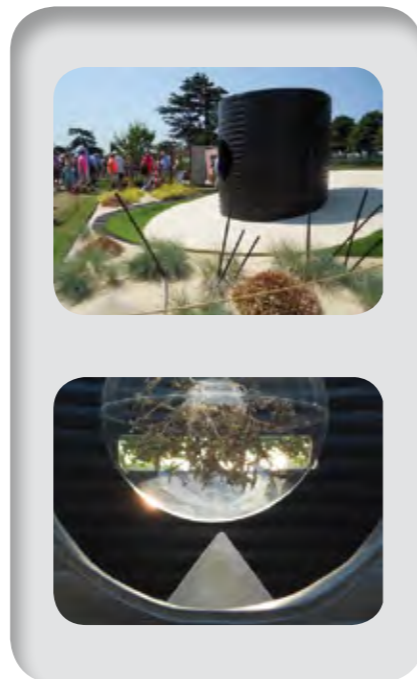
Sheena Seeks, garden designer commented: "The inspiration for the garden is sight and the way in which we see. Although our eyes receive images, like a camera obscura, it is our brain that makes sense of these images and the world around us.

"The Weholite pipe made a perfect centre piece as it created a viewing hole allowing light to fall on the eye (the globe hanging inside the tank). I put the gold tree inside but upside down to represent the way the image falls upside down in the eye. The eye has rods and cones so hence

the tank (the rod) and the sand cone. I was so pleased at the effects, and grateful to Asset for their donation. It was better than I imagined. The sun shone and created an incredible range of optical effects."

The large diameter plastic pipe, usually utilised underground for water management projects, was at the centre of the display creating a viewing hole. Inside, a sphere was suspended over a cone of sand, surrounded by black and white rods. The elements within the garden represented the seeing parts of the eye.

Speaking about Asset's involvement with the event, Managing Director, Simon Thomas commented: "Following the success of Sheena's Gold award at the RHS Flower Show Tatton Park in 2013, for which we contributed a pipe, we were delighted to be asked to contribute to Sheena's latest design. It was a spectacular showing for our pipe, and we're proud to play a small part in winning Silver."



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