

# Watson & Hillhouse

Unrivalled Service in Piling Equipment Supply Since 1972



2017

Inside this issue:

## NEW AGENCIES

WOLTMAN PILING AND DRILLING RIGS  
BELL DREDGING EQUIPMENT

## STAFF NEWS

UPDATES FROM OUR HQ

## PICTURE GALLERY

EQUIPMENT ON HIRE

## NEW PVE RESONATOR

INNOVATIVE TECHNOLOGY





## Welcome - from the Managing Director

Welcome to the latest edition of the Watson & Hillhouse newsletter.

2016 was another good year for Watson & Hillhouse. So far this year we have seen a slight slow down but this was expected. However, we remain confident that we're on track to achieve our targets for both hire and sales.

We are very excited to have some new products to tell you about since our newsletter last year. The PVE resonator is an innovative pile driver which has the potential to revolutionise the piling industry in terms of efficiency and cost effectiveness. We are now also agents for Woltman piling and drilling rigs, of which we have a 40PR (featured on the front page) available for hire, and the Bell range of dredging equipment - new territory for us but with huge potential. To learn more about any of these products please do get in touch.

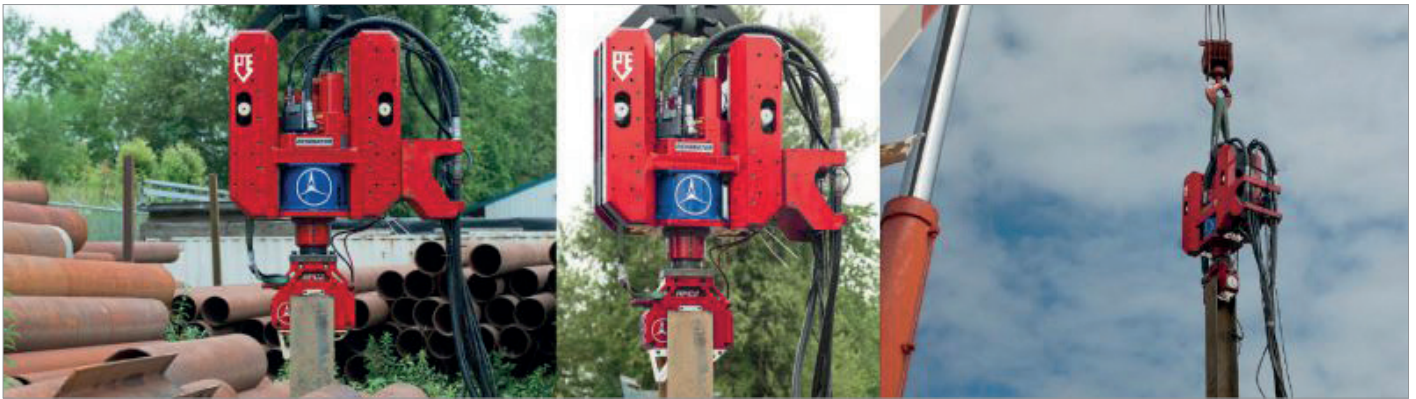
With ongoing product development from our Dutch principal Dieseko Group and Japanese supplier Kowan, keep an eye on our social media and website for updates.

We hope you enjoy reading this edition and look forward to your ongoing support.

*Phil Bell*



## INTRODUCING THE PVE RD260 RESONATOR



Dieseko Group BV have been collaborating with Resonance Technology International to engineer an innovative new type of pile driver. Dieseko has obtained the world-wide licensing rights for this technique which is described below.

Whilst vibratory hammers work on the basis of eccentric mass, the resonator has a high frequency piston cylinder arrangement operating at a very high frequency from 100 to 180Hz (6000 to 10,000 rpm), the so-called 'resonance'.

At the moment when the ideal resonance is reached, the energy is utilised, by way of the profile, to penetrate the soil at comparatively high speeds and with minimal amplitude.

The resonance technique is extremely efficient because it transfers all of the energy to the place where it's needed i.e the end of the steel sheet pile, pipe or H-beam. This generates enormous g-forces from 100 to 200g! As a comparison, a conventional vibratory hammer generates approximately 9g.

The resonance driver has some impressive advantages: no vibrations are lost to the soil and surroundings, work proceeds faster, and this new technique has a wider range of applications than the vibratory hammer technique.

The hydraulic PVE RD260, the first of its type, is compact and weighs just 1500kg. As PVE say - a true innovation in the field of foundation engineering!



## WOLTMAN RIGS

We became UK and Ireland sales agents for the Woltman range of piling and drilling rigs at the end of last year. We marked the occasion by purchasing a Woltman 40PR driven piling rig with a 4/5 ton accelerated hammer which is now part of our hire fleet.

The state of the art Woltman rigs are sophisticated and yet easy to operate in restricted and urban surroundings. They are customisable and all have access to a powerful engine and hydraulic system. This makes it possible to power an impact hammer, vibratory hammer or rotary head via the rig without the need of an additional power pack - although it is possible to add one, if required, for extra power.

Woltman offers a wide range of machines for CFA, soil displacement and driven work with leader lengths exceeding 50 metres using the proven PVE hydraulic hammers.



## BELL RANGE OF DREDGING EQUIPMENT

Bell recently became part of the Dieseko Group and we are now the UK and Ireland agents for their range of dredging equipment.

Their dredging pumps are known for their durability, power and adaptability and are capable of dredging a variety of soils including sand, gravel and clay. They are ideal for precision dredging and reaching parts that long reach dredging can't access.

Their range of amphibious excavators are unique machines designed to work in areas such as marshlands, soft terrain and on water - areas that are inaccessible to conventional dredging equipment. This makes them ideal for use in canals, along shorelines and in wetland areas.

Their amphibious excavator dredging equipment is completely self-propelled and can access virtually any terrain with very little in the way of supporting transportation.





# SOUND ENGINEERED

We designed and engineered this acoustic shroud for a client for a specific project - the story was covered in a previous issue. Other customers are now able to take advantage of this innovation.



This is not a common sight - a hydraulic hammer working as close as this to housing. However, with the shrouding fitted the noise levels were deemed acceptable. We received these comments in an email from the customer:

*"The shrouding worked extremely well, and we would not have been allowed to continue without the shrouding.*

*The actual noise level dropped by 10 dBA at 15m which in itself does not seem a lot, but it's the difference it makes in the type of noise that really comes up trumps.*

*Having used this type of hammer for many years, listening to the crack and ringing type of noise usually associated with impact driving, the noise was more of a thud rather than any high pitched ringing as steel hits steel. The residual noise will always be there, but it is brought down to 84Dba, which is within the limits of acceptability.*

*A great innovation, thank you".*

# FASTEST SALE?

It was the quickest sale we can remember.



We received a call enquiring about excavator mounted vibratory hammers at 14:00 on the Friday, and the order was taken in that same telephone call.

The money was transferred by the customer into our bank account at 15:30 on the same day.

At 07:30 the following Monday an OVR-S-50 was delivered to the customer and commissioned on site.



# STILL WORKER TRAINING

Following the discontinuation of the CRO card, and as the original training provider for the Still Worker CRO card, contractors have been sending their operators to us for refresher training. The training is still recognised by the CITB. However, as the CRO card no longer exists we now issue *Competent Still Worker Operator* ID cards (right). We have also used this as an opportunity to update our certificates.

Keltbray, SPI Piling and Sheet Piling (UK) (left) have all sent their operators for either familiarisation training, full training or refresher training - which should be undertaken every five years.





# ALL PART OF THE SERVICE

We like to exceed expectations where we can, so we thought we'd share a couple of things we are happy to help with - it's all part of the service!

## THE RIGHT ANGLE - RAKING CHAINS

It's not uncommon for customers to request their chosen piling equipment be suspended at a rake. Both our crane suspended vibratory hammers and our impact hammers can be configured in this way. All we need to know is the type of pile and the angle required.

Our workshop staff will then prepare the hammer for hire by setting up the raking slings. This is done by attaching dedicated adjustable chains to the hammer and then using a special device with angle presets and a spirit level to set the angle. With vibratory hammers it is sometimes necessary to adjust the oil levels in the gearbox. We then send a fitter out with the equipment who checks that the gearbox bearing temperatures are satisfactory and that everything is running correctly.



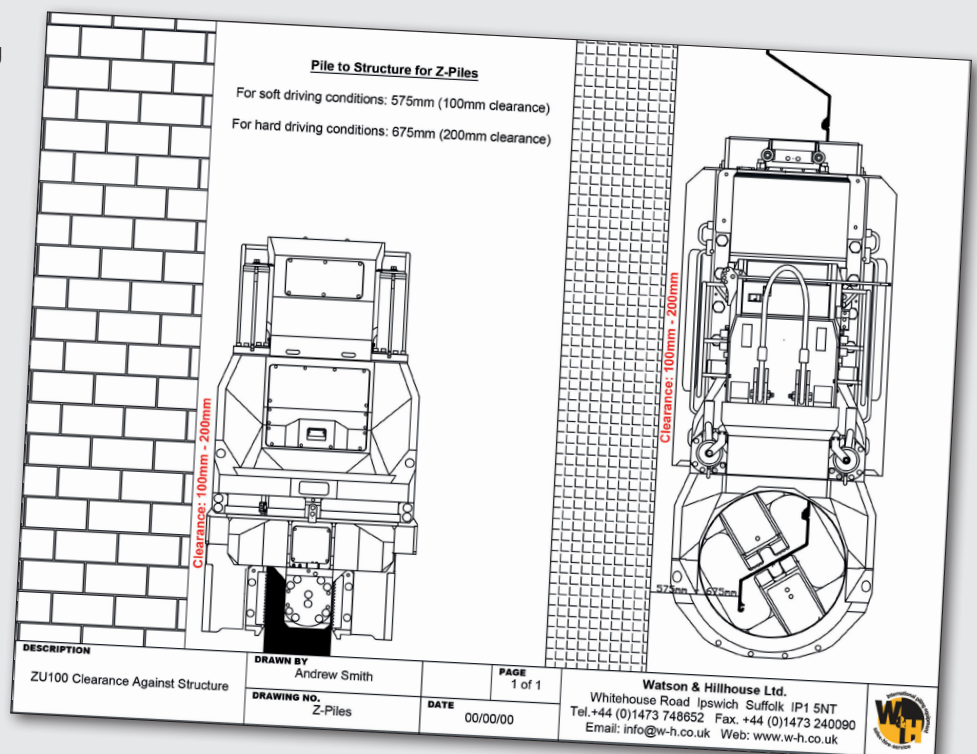
## CAD EVALUATIONS

Our CAD technician, Andrew, has ten years experience of in-house engineering design for us, but he also uses his skills to make sure we are supplying the correct equipment for the job.

He is able to view CAD plans for sites and assess the pile designs to ensure our equipment can drive as required. We can then make suggestions for improvements if needed.

Andrew can also establish whether or not clamps will fit correctly onto the specified piles - we can then recommend alternatives if required.

When it comes to the Still Worker he can ensure it will fit into tight spaces and assess whether it can do what the customer has requested. The example to the right shows the clearance between a building and the Still Worker when a pile is a specified distance from it.





# GALLERY

Here's a small selection of our hire equipment working on various sites this year.



BSP CX110



Kowan Still Worker ZU-100



PVE200M





PVE 38M



Woltman 40PR



BSP CX110



PVE 82M



BSP CG300



# WELCOME TO:

We are pleased to introduce the latest editions to the Watson & Hillhouse team.

## Darren

Darren came to us from Sutton Services in Lakenheath where he worked as an HGV fitter. He is experienced in a wide range of construction plant, with eleven years of plant fitting under his belt, and was looking to expand his knowledge with a new challenge.

Even outside of work he has a keen interest in all things mechanical which is borne out by his hobbies involving cars and motorbikes.



## Sam

Sam joined us as a mobile fitter and workshop engineer at the end of 2016 having previously worked at Claas where he was a mobile service engineer. During his apprenticeship he was nominated twice for apprentice of the year and was in the top three apprentices in the country.

Like Darren, outside of work his passion for engineering continues with a love of classic motorbikes.



## Aaron

Not only do we have brothers and a husband and wife working with us, we now have a father and son. Aaron is our newest recruit and has joined us as a Still Worker operator. He has undergone intensive Still Worker training in our yard and has been working alongside our knowledgeable operators to gain valuable experience out in the 'field'.

He follows England's away games which takes him around the world.



# MEET BOB



**Every time a newsletter comes out Bob tells us how, in his 175 years of working here, he has never featured in the Newsletter (although he did star in the original Still Worker video). We thought it was about time we remedied that.**

Bob, who is a larger than life character, is our longest serving workshop employee. He came to Watson & Hillhouse in 1985 after working for Tilbury Plant for fifteen years (the same place Chairman, Robin Watson, worked before establishing W&H).

He was the first Still Worker operator at Watson & Hillhouse and probably one of the first pile press operators in the UK! His first Still Worker project was in Cowes on the Isle of Wight after three days training. He's worked on some great projects including: Imperial College, London; Science Park, Cambridge and the Eagle Centre in Derby. His biggest and most memorable Still Worker projects, were at Aldershot and Gorleston - both infrastructure projects.



We're hoping Bob might be lost for words to be appearing on the back page at last!

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