

The Wet End

WJ Groundwater's In-House Magazine

Spring 2015

Steve Cooke's
**Health
& Safety**
Column
pg 6-7

Issue 27

WJ Moves To New Offices

Featuring:

*Goodbye to Frances Dewitt, Dubai Canal,
Dewatering at Airports & Basketball Qatari Style.
Plus more...*

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Welcome to Issue 27

Richard's Update.



Greetings everybody and welcome to the spring edition of The Wet End, WJ Groundwater's bi-annual in-house magazine. Much has been happening across the group since we published Issue 26 last Autumn.

First of all I'd like to wish you all a belated Happy New Year. 2015 feels like it's going to be a great year - we've got a slate of interesting projects ready to commence, amongst which are the Dubai Canal and Hinckley C Nuclear Power Station. We have also virtually reached completion work on the Lusail Expressway job in Qatar, which has been a giant undertaking.

We ended 2014 with an exciting move of our central operations in the UK to new premises in Kings Langley. As I write, I'm pleased to report that we're all settled in with barely a backward glance at our trusty old HQ in Bushey. The move proved to be an immense task as expected and I'd like to give huge thanks to Lawrence Dalby and everybody that helped us complete the job. We celebrated the event with an enjoyable office party to mark the beginning of a new chapter in WJ history!

WJ brought 2015 in with another Crossrail tunnel breakthrough. The picture below shows the precise moment of 'breakthrough' for you all to see. The occasion was widely documented in the newspapers and other media. WJ's involvement in the Crossrail project is now winding down as the tunnelling reaches completion. There are still a number of complicated cross passages to dewater and this will keep us busy until the summer time (see below).

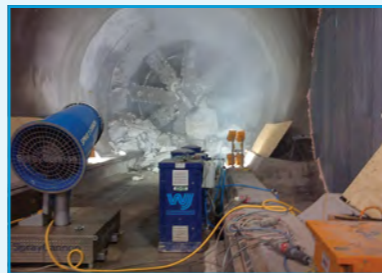
In other news 2014 was a record year for hours worked with no reportable accidents, so a big thank you to everybody for taking extra care and responsibility in the work place. Long may the improvements continue. Steve Cooke has some more tips to share in his regular Health & Safety column on pages 6 and 7, so please have a read.

Lastly, I'd like to welcome any new starters to the company and to wish them a prosperous future with WJ Groundwater.

Richard Fielden

Crossrail - The Breakthrough Moment In The Crossrail Tunnel Project.

Check out this collection of photographs to mark the occasion of the Crossrail breakthrough into the east-end of Liverpool Street Station in London, England.



WJ loves this collection of images caught as workmen witness the tunnelling machine, Elizabeth, breaking through into the east-end of Crossrail's Liverpool Street Station.

Photography by A Devlin/PA

Pictured in Main Front Cover Photo: Maddy Maye / Neil Coulter / Qinqchao Ren / Stevyn Harris / Steve Cooke / Gary Holmes / Toby Roberts / Richard Fielden / Lawrence Dalby / Ula Markowicz / James Southwell / Mark Pickett / Dan Carpenter / Frances Dewitt / Jyoti Vyas.

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News From The East

Dubai World Trade Centre Development, UAE

Dubai World Trade Centre is predicted to be the future location for the city's premier landmark properties and businesses. Initial plans for the Dubai World Trade Centre district were first drawn up by Hopkins Architects and WSP in 2006. The complex will comprise two hotels, more than 2000 apartments and 250,000 m2 of office space with shops and car parks.

The first phase of the new project, is located between the Dubai International Convention and Exhibition Centre, and Emirates Towers.

Al Jaber Engineering and contracting was awarded the contract to build the project in 2008, but was told to down its tools the next year. Later in 2014, Al Futtaim Carillion was awarded the main contract worth approximately Dhs 375 million by Dubai World Trade Centre.

WJ Groundwater was involved early in the design stage and has been present

on site since it started back in 2009. WJ's design allows the giant 350m by 350m plot to be dewatered all at once with only a ring of external deepwells. The system contains over 50 external wells and has successfully maintained water levels on site to below 20m depth. The final dewatering solution removed the need for internal wells or sumps that can obstruct the excavation



works, as well as giving the Client significant time and cost savings as contiguous pile shoring could be used instead of secant piles.

'WJ are always keen to get involved at an early design and tender stage with Contractors and Clients' says Oliver Vincent, Bid Manager for WJ. 'As well as helping us to understand their needs and priorities, it also gives us the opportunity

to work with them to find practical and cost effective solutions. The Dubai World Trade Centre is a great example of all parties working closely together from the outset to come up with a great solution, and WJ are certainly proud to be part of this prestigious project.'

The scheduled completion date of the project is in the third quarter of 2015.

by Revathy S. Nair



Continuing work on the Dubai World Trade Centre.

The New Year brings exciting new challenges for WJ in the UAE and Qatar with several key projects 'taking off' in a big way.

In Dubai, UAE, WJ are undertaking the dewatering works on the 2 bn\$ Canal extension project, one of the largest and most prestigious infrastructure projects of recent times. The 3 km long canal extension will be over 100 m wide and will extend Dubai Creek from Business Bay, beneath a 16 lane bridge on Sheikh Zayed Road, through Safa Park and Jumeirah and on to the Arabian Gulf.



Dubai Canal

On the RTA project WJ are dewatering the main canal and over 50 pits for Six Construct, as well as bridge piers and abutments for MAPA-Gunal Construction, China State Construction, and Ghantoot Water.

At the Dubai International Airport, as well as ongoing dewatering works, WJ are installing state-of-the-art remote water level sensors across the 7,200 acre site.

In Doha, Qatar, WJ have installed two major dewatering systems for the Red Line North Underground Section of the Doha Metro. The two sites are the West Bay South and West Bay Central Station boxes and will form part of the 98.5 km long Red and the 17.5 km Blue Metro Lines. To dewater the hard limestone rock on site, WJ is making use of its modern fleet of piling rigs to drill 600 mm diameter holes to install deepwells up to 41 m depth. WJ is working for the Impregilo-SK E&C - Galfar Al Misnad Joint Venture. WJ has had all hands on deck installing the systems over the New Year period and have worked closely with the 'JV' to overcome limited access constraints and challenging drilling conditions. West Bay Central was the first system to be operational with 47 deepwells installed with pumps ranging in size from 7.5 kW to massive 22 kW.

More exciting projects are expected to start for WJ in the first quarter of 2015, so watch this space.



Red Line North Underground Section

News From Up North

Scottish Power Headquarters, Glasgow, Scotland, UK

WJ was commissioned by building contractors Laing O'Rourke to work on the brand new regional headquarters for Scottish Power based at Charing Cross in the city centre of Glasgow, Scotland.

The complex will mainly consist of offices, with the basement housing a split-level car parking structure. WJ was brought in to control groundwater levels in the alluvium and top of rock inside of the excavation to facilitate the works of the ground and first floor slabs.

In order to achieve the drawdown for the basement, a three-phase wellpoint system was installed with a rotary drilling rig

around the building footprint. The system was carefully designed and installed so as to minimise the drawdown effect on sensitive neighbouring structures and services.

Powered by three brand new super-silenced wellpoint pumps, specifically procured for the job, the project was a great success with the contractor being extremely pleased with our efforts. WJ's involvement lasted from early June to late October 2014 with the completed project scheduled for delivery in early 2016.

by Michael Cummiskey



Angleham Pond A1 Motorway Improvement Scheme, North Yorkshire, UK



Recently, WJ worked on the remaining section of the A1 between Dishforth to Barton (A1 D2B). The scheme was originally approved in 2012, with construction works now well underway. This is the only stretch of non-motorway on the M1/A1(M) route between Newcastle and London. The main contract works (a joint venture between Carillion and Morgan Sindall) involved the construction of the Angleham House Balancing Pond in a figure of eight shape with an approximate plan size of 170 m by 65 m as part of the improvements.

WJ was tasked with dewatering the open-dig excavation that comprised of clay-like sandy gravels. In order to achieve the 7 to 10 m worth of drawdown eighteen 16 m deepwells were installed around the 440 m perimeter of the pond. When the installation and commissioning phases were complete a total of seventeen wells were operational resulting in the desired drawdown for the client. Not only did we provide a successful dewatering service to our client but we also provided the adjacent farm with a clean water supply for irrigation purposes.

by Michael Cummiskey



New Arrivals

Congratulations from all at WJ Groundwater

Meet Baby Florence Stockman born to Jane and Tom on the 10th November at 17:11 weighing in at 8 lb 2 oz.



Baby Florence Stockman

Also, Baby George Hart born to Eloise and Dave on 25th September at 11:22 weighing 8 lb 12 oz.



Baby George Hart pictured with his brother Graham

Dallas Court, Manchester, UK

As part of the AMP 5 programme of works, United Utilities (UU) proposed to carry out the construction of a detention tank and diversion chamber at its Dallas Court site in Manchester. WJ's expertise and installations were called upon to intercept excess flows from the sewers that discharge into the Salford Quays.

WJ were appointed by Structural Soils in September 2013 to carry out a multiphase pump test on the site in order to investigate the hydrological properties of the underlying superficial deposits and sandstone. Due to concerns over the level of dissolved methane in the groundwater, a treatment system comprising one of WJ's tower strippers was utilised during the test to remove methane prior to discharge to the foul sewer.

The pumping test results were extremely useful and allowed us to validate our design for reducing the water levels in the sandstone by nearly 20 m to allow UU's construction contractor, GCA, to undertake their works. The test also showed that the water could be discharged directly into the sewer without treatment, giving the client considerable cost savings for the main works.

Installation of the dewatering wells took place in April 2014 during a break in the construction programme and the dewatering system was installed in July 2014. Initial abstraction flows were 25 l/s and the water level in the sandstone sufficiently reduced to allow excavation works to proceed. WJ have implemented an upgraded maintenance programme to control the elevated levels of biofouling found in the wells. This includes frequent re-development and cleaning of the wells to maintain the system performance. It is thought that the high amount of biological activity in the area is partly due to the close proximity of Waste Cemetery and the Manchester Ship Canal where historically high levels of algae growth and anaerobic conditions exist.

by Phill Reay

WJ say goodbye to Frances Dewitt

The end of an era has come about and it's with a heavy heart that we say goodbye to Frances Dewitt who has been with WJ Groundwater for just under nine years.

Frances has decided to move on because she has planned a few years abroad with her husband Martyn. First of all they're off to visit their daughter Faye in Malaysia for a few weeks. This sojourn will be followed by a 7 month stint supervising a section of a campsite in France. If all goes well, the pair plan to spend another year or so living over there.

"Frances is an extremely helpful and kind person. She has become one of the rocks we've all come to rely on here at WJ. We're all really sad to see her go.

However, it's an exciting time for her so we wish her and Martyn all the luck in the world," said Stevyn Harris.

During her time with us, Frances has processed 65 successful payroll runs in a row (get your calculators out!) and making and drinking a record number of cups of tea bordering on the millions! Frances will take many great memories away with her from her nine year run at WJ. Her leaving do was a modest (by request) pub meal and social at the local pub.

We wish her all the very best and thank her wholeheartedly for all her hard work, commitment and friendship. We'll miss her very much!

by Stevyn Harris



Excavation progressing in dry conditions



GCA constructing the capping beam



WJ is also saying goodbye to Maddy Maye and Kerri Simpson in this edition. Everybody at WJ would like to thank both of them for the years of hard work and companionship they've contributed to the company.



Welcome to Steve's Health & Safety Column.

Steve Cooke here! Once again we've had an eventful few months on the Health & Safety front and I'm here to bring you all up-to-date!

We've got some interesting information on how WJ has begun to set the foundations in establishing an official industry training standard for the dewatering trade. It's a long road but we all have to start somewhere. This has been kicked off by employing our first official trainee (dewatering specialist) back in January. Elsewhere, Pristine Condition has continued their mission to help us develop even better practices when it comes to moving equipment around. Ever mystical, we've been drawing parallels between the world of the magician and our Health & Safety practices.

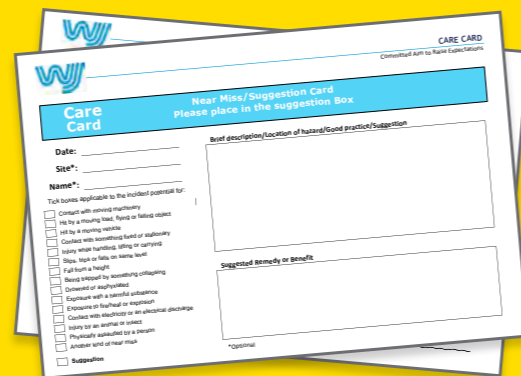
Pre-Employment Health Screening and Surveillance

It's with increased regularity that contractors are legally required to show that its employees and associates carry health credentials as well as a CSCS card. One way that WJ is addressing this is by introducing a pre-employment medical as part of its recruitment process. WJ has engaged Hampton Knight to officiate and advise on the level of surveillance required depending on the job being applied for. For instance - office workers may receive a questionnaire, yet site operatives may have to undertake a full medical that could include: hearing, sight and lung function tests.

In addition to the rollout of these measures, WJ is still keen to promote on going health promotions like the smoking cessation programme.

Introducing 'The Care Card'

Congratulations to Dave Lowe for winning our competition to find a new name for the new 'Near-Miss' card in the last edition of the Wet End. The Care Card is already in circulation so be on the look out. If you don't know how to use one, please ask your line manager for help.



Pristine Condition Moves Into The Training Phase

Pristine Condition has completed its observation phase and has since led a series of training sessions at WJ's work yards in Bushey and Clipstone.



Alex Walford and Wouter Loots being trained by Pristine trainer, Andy Meadows at the Clipstone Yard. www.pristinecondition.com

It's a Kind of Magic!

Last September WJ attended an engineers' forum at the Clumber Park Hotel near to our Clipstone yard. In the evening we thought we'd put a spin on the usual Health & Safety-based shenanigans so we invited a magician called The Amazing Kris Krendo to show us some tricks. The magic was skewed so that it would highlight ways in which staff may be vulnerable to accidents onsite via card tricks and various props usage. The evening was a great hit especially in the manner it exposed some of our more natural predispositions when it came to day-to-day risk assessment. Kris' interactive display was an effective,

eye-catching and memorable way to get Health & Safety practices and messages over to a susceptible audience. Feedback from the evening has been really positive and there may be opportunities to invite Kris Krendo back to dazzle us again one day!

www.magicentertainments.co.uk/



WJ Continues To Devise a National Training Standard

Recently, I've been attending a CITB (Construction Industry Training Board) work party. We're currently in the process of reviewing and devising a national occupational training standard for dewatering. At present there are no industry qualifications available to students in the UK. It's becoming ever more important to demonstrate that our employees are suitably trained to our clients and one such way forward is to lobby for and develop an official standard.

Dewatering is such a specialist industry that there haven't been sufficient numbers of course candidates to justify the CITB's getting behind the

development of a specific qualification. The reason for recent forward momentum is because the CITB have grouped dewatering with other specialist trades to make up the 'substructures works'. In effect this group includes all the trades involved with building basements.

WJ is also aiming to gain a CSCS category certification because specialist companies such as dewatering engineers have to 'make do' with CRO (Construction Related Occupation) cards or Pump Installer cards when on site. These are self-certifying cards - so we're looking to further validate and officialise our industry presence, competence and lobby for something that is regulated.

In step with all this activity, WJ has employed a trainee at the Clipstone Yard to learn the ropes from our experienced onsite operatives. Our new trainee (Josh Somma) will serve as a case study for the CITB so that we can monitor the areas which are suitable to be included for a training scheme and later qualifications. I aim to report on any developments regarding the establishment of a qualification in future issues so follow closely!

Thanks for reading and enjoy yourselves, safely.

Steve Cooke,
Health & Safety Manager
stevecooke@wjgl.com

New Starter Corner: Josh Somma , Trainee Dewatering Operative

WJ welcomes Josh Somma to the company. Josh joined us last January to become our first Trainee Dewatering Operative.

Josh's training programme will be used as a case study to show to the CITB in preparation for a potential dewatering qualification. With Josh's help it may be possible for students around the UK to get an NVQ or equivalent at college in future years.

"I want to set a good example to others that may follow. Being the first trainee of my kind is a good responsibility to have and I will do my utmost to meet that challenge," said Josh when asked how he feels about being WJ's first Trainee Dewatering Operative.

WJ Groundwater wishes Josh continued success with his new career in dewatering.



Dewatering at Airports

Flying Dry (Part One)

by Toby Roberts

It is not immediately obvious why groundwater control is frequently required at airports. However with a moment's thought you can see that going underground makes sense; high rise buildings are not very common; loads of space is needed for all the usual paraphernalia of an airport from car parking, shopping to security; and any modern airport must have rail connections which often are best below. However, there is one building at every airport which is high rise; the control tower. High buildings require a good deep foundation that is why WJ were called to dewater the foundations for the new control tower at Manchester Airport back in 2012.

WJ's first involvement with airports was in 1986: the brand new Stansted Airport. Practical and environmental pressures at the time meant this was sunk low into the landscape involving an immense excavation. Deepwell dewatering was required for the main terminal building, railway station and the tunnels for the driverless shuttle trains which speed passengers to and from the satellite hubs.



Stansted Airport geothermal well installation

Heathrow is on the Thames flood plain and groundwater is not far below. This is demonstrated by the presence of The Duke of Northumberland's River and the Longford River that used to pass under the runways but were diverted to the west to make way for Terminal 5 and its associate satellites and transport links, which extend deep underground. These rivers were constructed in the 16th and 17th Centuries to provide a water supply from the River Colne to the royal residences at Syon House and Hampton Court Palace in west London respectively. WJ developed the temporary groundwater control strategy for the Terminal 5 site including undertaking pumping tests and some wellpointing works. Not long after Terminal 5 was opened work began on development of Terminal 2 which included substantial excavations for a basement all dewatered by WJ pumps with treatment of the groundwater required prior to discharge. Terminal 2 re-opened to passengers in Summer 2014.



Heathrow Terminal 5 open trench and sump pumping in Terrace Gravels

The first bit of the building to be completed was the iconic roof structure. This allowed the rest of the building to be constructed in a weather-protected environment below. An early test of the integrity of the roof structure was the Great Storm of 15 - 16 October 1987. One of our site engineers (Andrew Hawes) drove through the storm to carry out the weekly inspection of the dewatering system. I will always remember his description of being overtaken by trees on the A12. He arrived to find some damage

to the well system from wind borne debris. Fortunately, the terminal roof was intact despite the absence of the walls (which had yet to be installed).

The picturesque hamlet of Heathrow, west of London, was levelled and turned into a long haul military aerodrome in the latter part of the Second World War but the conflict was over by the time construction was finished. Heathrow was then designated as London's main civilian airport, taking over from Croydon in south London, which was too small and constrained by the surrounding urban sprawl. Heathrow has continued to morph, expand and regenerate itself ever since and maintains its status as one of the world's busiest international airports (it is currently ranked third by passenger numbers at 55.6 m but is being fast overtaken by Dubai, UAE).

Basketball Qatari Style

WJ Groundwater is the proud sponsor of its own basketball team at its Qatar office. The team is composed of contractors, subcontractors and a number of WJ employees who happen to be basketball crazy!

Already its star player Jeffrey Pedigloria (a site engineer) has earned himself the enviable moniker of 'The Scoring Machine'. He has competition for star slot in Randy Lazaro who provides exemplary outside shooting and back-court stability.

"It's a good look for WJ Groundwater because it shows the community and fellow sub-contractors that we have a good presence in the region and a love of basketball," said Lawrence Mendoza (WJ Administrator and Team Member).

The WJ team plays in a Qatari league organised by Hyundai Engineering and Construction for all subcontractors. This is one such league that is open to anybody that wants to get involved in Qatari basketball.

"We generally play a good game, and most recently got to the semi-finals where we lost to the eventual champions by a single point," Lawrence continued.

We wish them even more luck in the up coming series. With a player like 'The Scoring Machine' how can they go wrong!?

WJ Qatar's Basketball Team



So next time you are gazing out of a plane window which is taxiing around an airport see if you can spy any dewatering systems, I was delighted to spot a WJ discharge tank airside at Heathrow when jetting off to the Middle East a couple of years ago.

To be continued in Issue 28...

WJ Sponsors: Frankie's



Frankie's riders train with Giro D'Italia Champion Ryder Hesjedal and Tour De France winner Vincenzo Nibali (Astana).

Faster Than The Average Camel:

WJ Sponsors Frankie's Cycling Team in Dubai

WJ Groundwater is the new lead sponsor for Frankie's Cycling Team based in Dubai, UAE. The Wet End talked to WJ's Overseas Director Paul Turner, who is a Frankie's team-cyclist, to learn more.

The Abu Dhabi Tour in October which is expected to attract some of the biggest names in professional cycling. Nowhere else in the world could WJ's name get such excellent exposure to the sporting world."

Jokingly referred to locally as 'The Smurfs' because of their eye-catching blue kit, the team was formerly sponsored by the world famous race jockey Frankie Dettori for 18 years. A fixture of the city streets and cycling tracks in and around Dubai, Frankie's has enjoyed a regional high profile since Dettori got involved. (This was during the time he was retained by Sheikh Mohammad's racing firm Godolphin). The team now takes its name from an abandoned puppy found in the desert by team-cyclists three years ago (pictured right).



www.facebook.com/teamfrankies

"At present, I'm the only WJ employee in the team. We mainly consist of pilots, bankers and brokers. Sometimes we invite semi-professional riders to join us. Our current 'star' is a New Zealander called Roman van Uden from the Asian CCN Team. He won the Spinneys Dubai '92 in WJ colours last year and went on to win a couple of other regional trophies. No small achievement in these hot climates."

At present there are two main locations: the 100 km Al Quadra Loop and the smaller Nad Al Sheba track. The sport has had unprecedented support thanks to the number of Princes and Sheikhs that enjoy cycling.

"WJ decided to sponsor Frankie's because a good percentage of staff (across the group) are avid cyclists and also because of the increased investment by the Dubai Government in the city's cycling tracks," said Paul. "This has had an encouraging knock-on effect because in 2015 the city will play host to the first tour of the Dubai Cycle Race to find the world's best cyclists. We've also got the new race

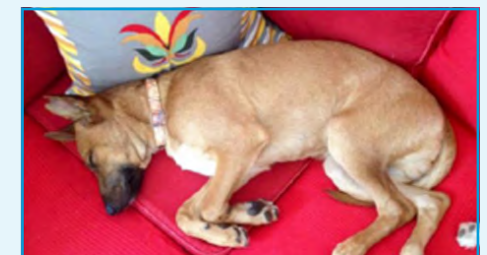
"We race in UCI organised events and although the UAE is yet to create a professional league the local cycling federation was established as long ago as 1974. Ex-pats have been able to join since 2012. Frankie's regularly compete against the main Emirati teams: Al Wasal and Ah Ahli. We meet 2 to 3 times per month for a race and we expect to win the master category this year!"



Paul Turner with Bradley Wiggins at the Tour of Qatar



Paul Turner's sons Jack and Henry with Mark Cavendish



Team mascot Frankie The Dog

Women in Engineering

Women Engineers at WJ Groundwater

by Richard Fielden and Ula Markowicz

Richard is WJ's Managing Director and Ula is a UK based Engineer, originally from Poland. The Wet End asked for their comments on gender equality in the engineering industry (in the UK and Poland respectively).

Richard: Engineering is still perceived as being a male dominated trade in the UK. During my 25 years in the engineering industry there has been a depressingly small increase in the number of women engineers. Here at WJ Groundwater, we operate an equal opportunities policy across the entire group, regardless of whether we're recruiting in the UK, Poland, the Middle East or elsewhere. People are recruited on their ability to do their jobs well.

Although there has been a rise in the number of female applicants for graduate roles I think that an awareness of choice needs to be cultivated before 6th form and undergraduate levels. Perhaps it needs to start even younger and that parents, primary schools and secondary schools need to be encouraging women to consider careers in engineering, science and technology sectors from an early age. It is also up to the civil engineering industry to be competitive with other sectors for skilled and qualified graduates. In the long run, if there are fewer female graduates then there are fewer candidates to balance out the inequality.

At present WJ employs four female engineers: two in the UK - Ula Markowicz and Daniela Vendettuoli, and two in the UAE - Revathy Nair and Merlyn Jinesh. That's a 400 per cent increase since Ula joined us back in 2007.

"Schools need to be encouraging women to consider careers in engineering, science and technology"

Ula: The prospects for civil engineers (not only women) are reasonably good in Poland - the construction industry has seen increased activity over the last few years and this work is available to both women and men. However, the civil engineering industry in particular has quite specific requirements - long hours, weekend work if required and on site work in all weather conditions. That means that fewer women choose to get involved in the site work and engage more with the office work. It's difficult to juggle a busy family life with an outdoor engineering role too. Unfortunately, discrimination can still be seen when it comes to salary - according to the statistics women are being paid approximately 20 per cent less than men. This issue is not specific to engineering though, it is a problem that exists across many industries in Poland.

To become a graduate of engineering in Poland holds the expected academic challenges yet it's not difficult to find a course. There are a number of technical universities (virtually every large city has one). Also there are some NGOs (non-governmental organisations) that actively promote relevant courses to females.

My Engineering Life

by Revathy S. Nair

Although the Middle East has no dearth of female civil engineers, especially amongst expats like myself, it is quite rare to find females present on site. However, you will find numerous female engineers in the office behind a desk.

Imagine my surprise and excitement when WJ Groundwater offered me a site-based engineer position. It's a great yet sadly rare opportunity because in the UAE and my home country of India on site females are generally welcomed with raised eyebrows and are seldom encouraged. I remember that when I went onsite for the first time in Dubai, the technicians there teased me by asking whether the reason why I chose this profession is because my husband and my family doesn't provide for me. Although I laughed it off with the same good humour the quip was delivered, that comment still struck a chord. After all the advancements women have made it's still early days because our numbers are still low. Where I come from in India, a woman in a 'man's' job faces a continuous struggle, not just in her profession, but from within her community as well. Gender equality is still an issue but more companies need to follow WJ Groundwater and open the way to welcoming female engineers on site.

Dubai is changing all the time and positive change is on the way. Dubai is now a hub, it's a fast paced Emirate teeming with culture from around the world. It has no choice but to be influenced by it and with that comes an opening for women professionals. After all this is an Emirate where there are female fencing champions amongst the Royalty. One day I hope to have a comparable experience of on site work in Qatar.

At present, I am one of two female engineers working at WJ Middle East. Yet, I have been fortunate in being provided with an opportunity to work for a company like WJ that won't let my gender hinder my career development and learning.

Revathy S. Nair has worked at WJ Groundwater in Dubai, UAE since June 2014. She is Indian national, hailing from Kerala, a state located towards the South of India.



New Dewatering Project on the M3, Surrey, UK

WJ has been contracted to dewater a section of the M3 motorway southwest of London. 300,000 vehicles per day use the stretch of the six-lane dual carriageway between Junctions 3 and 4. Since it was built in the 1980s, a troublesome 2.1 km section of the motorway has been subject to persistent drainage problems. Drainage is located 3 m below carriageway level in wet sand - the strata known as Bracklesham Beds has been throwing up challenges for contractors for years. With this in mind, WJ knew how to prepare and what conditions it was up against early on.

WJ performed a test to determine the most appropriate methodology to enable the old drainage systems to be dug up and replaced with a new drain in dry conditions. The test showed that a single row of ejector wells, offset 2 m from the drain, at 6 m spacing would provide the most cost effective and reliable solution. We are installing a total of 350 ejector wells along the embankment with an installation rate of up to 10 wells per day. Tom Stockman has led the project with aplomb where he and his team were faced with a narrow / linear site yet were still able to beat their drilling forecast. The drilling is being undertaken by Jim Waugh, Jason Kitchen, Stuart Ward and Wouter Loots who have brilliantly delivered a fast, clean and controlled drilling operation on a site sandwiched between a residential area and high-speed traffic lanes. Mike Sutton, Paul O'Brien, Ant Webb, Ian Evans and Ilia Shabani have all worked hard to make this a great team effort.

WJ are using a new containerised ejector pumping station for this project to enable rapid set up and moves along the motorway. We also had some interesting environmental factors to take into consideration because the stretch of motorway embankment is home to a population of slow worms and newts!

Work began on this project on the 5th of January and is expected to be completed in June 2015.

by Richard Fielden



The containerised ejector pumping station



Completed ejector wells ready to pump



The Baby Giraffe & SM10 drilling rigs at work



Stuart and Wouter at work with the Baby Giraffe



Jim and Jason installing a well

Project Update

Dewatering Lodz Fabryczna Station, Poland

The dewatering system in Lodz, Poland was switched on just over a year ago. Much has changed since then; the construction of the station and the tunnel is now in full swing. The station structure is being simultaneously constructed above and below the ground.

The erection of the steel structure of the station roof is well under way and - at the same time - the base slab and the intermediate slabs are being constructed. The abstraction flow from the station

dewatering system is approximately 200 l/s with full drawdown being maintained. The drawdown influence from the main station box has led to the lowering of the water table to beneath the railway tunnel that leads to the station and currently dewatering in this area is switched off. The project continues to be a great success and a real show piece for WJ in Europe and the rest of the World.

The entire project is forecast for completion in late 2015.

by Ula Markowicz



UK Head Office

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Project Bulletin

Exeter Road Cinema, Bournemouth

by Phill Reay

After many years in the planning, works have started on the Exeter Road development in Bournemouth. The site was previously a car park and is being developed to a multi-screen cinema with underground parking facilities. WJ's initial involvement with the project was in 2007 with the completion of a pump test as part of the design works. The initial design for the temporary dewatering was for 37 drilled ejectors some inclined and some vertical; along with 46 drilled wellpoints. However, just for good measure we have allowed for the installation of a number of submersible pumps whilst access to install the ejector pipework is provided.

Contractor Awards Prize to WJ

WJ started in February 2015 and the site works were off to a great start with the project team who were awarded a prize for an outstanding approach to Health & Safety, from Vinci Construction UK Ltd. The prize was a ride in the hot air balloon that is moored adjacent to the site. This afforded Rhys Holmes a great view of the site and shows the difficulties faced by the site team installing a system on a very congested site. Many thanks go to Stef Thomas, Rhys Holmes, Craig Cowling and Alex Walford for their on-going efforts on the project.



Vinci Site Manager congratulates Stef Thomas (left)

Car Chase - Clipstone Yard's High Speed Night Out

Steve Cooke recently rounded up the guys from Clipstone Yard for an evening of go-karting at The Kürburgring in Mansfield on the 10th of January.

The team agreed it was an awesome way to bring in the New Year. The Kürburgring boasts a 13-corner track that is both demanding and technical for beginners

and addicts! The kart-racing outing in 270 cc karts was made up of a 20-lap qualifier around its 450 m course followed by a 40-lap competition.



The winner was Michael Crowley with Stuart Ward and Danny Ashton taking 2nd and 3rd spots respectively. Yard manager Lee Stone bagged 4th position.

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