



AQUATRINE

SPRING 2015 news

Celebrating 10 years of Project Aquatrine in Scotland



On 21 March Veolia Water Nevis celebrated 10 years of success on Project Aquatrine.

Veolia Water Nevis (Nevis) delivers water and waste water services to the Ministry of Defence through a 25 year PFI, Project Aquatrine. The project delivers these key services to some 550 Army, Navy and Royal Air Force sites throughout Scotland. The team consists of 14 highly motivated and driven members managing this service delivery.

Main successes through the ten years have been:

- Proactive health and safety culture delivering a high level of health and safety performance, and no RIDDORs or LTIs over last three years.
- Customer focus and stakeholder management is seen as key to delivery performance with customer satisfaction consistently greater than 94 per cent.
- Financial performance year on year.
- Driving down leakage and gross water consumption (25 per cent reduction.



660,000m³/year), achievement of Government 2020 water sustainability target by 2009, 11 years early.

- Installation of new water treatment plants at a number of sites delivering robust supply of potable water. Procedural governance in place for potable water supply across the estate.

- Consistent environmental compliance at all sewage treatment works.

While Nevis is proud of its achievements to date, it is hoping this will provide a solid base from which to continue to grow this successful, long-term partnering relationship with the MoD over the next 15 years.

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If you have a story to include, please email: DIOSDTFM-AquatrinePMO@mod.uk

New A400M hangar at RAF Brize Norton

KEY FACTS:

- New hangar for Airbus A400M aircraft, with hard standing the equivalent of three football pitches.
- Two new drainage systems, one for the hangar itself, second for the airside perimeter hard standing.
- Each with a large scale attenuation tank and oil water interceptor.
- The airside perimeter network is the larger of the two, with the one of the largest SPEL interceptors in Europe installed.
- Kelda worked closely with the designers Arup to ensure smooth handover from development project to Aquatrine.
- Innovative materials used in the attenuation tanks, as they are designed for ease of future maintenance and inspection and can carry the weight of emergency vehicles, so no fencing above ground required.
- Kelda to operate and maintain from now until end of contract.



Installation of inteceptor

At RAF Brize Norton a new 22,000m² hangar is being constructed to house the new A400M aircraft.

This new hangar is the second largest at the site and as such has created challenges for the design and construction in terms of reducing interference with radar and aircraft guidance systems, and working the construction around existing airfield operations.

For Aquatrine the challenge was to ensure that the increased impermeable area created by this development would not create additional flood risk at the site.

Surface water run-off for the development was limited to greenfield equivalent rates and this required the installation by the developer of some of the largest attenuation facilities seen in Europe.



Installation of cellular storage attenuation tank

Severn Trent Services assists with development of new training facility

A new army cadet training centre has recently opened in Yardley Chase, Northamptonshire, replacing the outdated Second World War buildings previously used. The new centre can now accommodate up to 180 cadets and 45 adult volunteers, a considerable increase compared to the old buildings, and the site will be used much more frequently.

Due to an oversight by the construction team, Severn Trent Services (STS), the waste water treatment provider for the

site, had not been notified of the planned expansion.

When the site was first opened it was for weekend use and a flow balancing system, which had been built a decade before, provided waste water treatment. The impact of the new development on the existing sewage treatment plant had not been considered, and the plant did not have capacity to service the planned expansion.

During a routine site visit, STS staff became aware of the project and notified

the project team of the issue which could have caused a significant environmental problem had it not been addressed. To avoid this, and a substantial delay to the project, STS worked with various parties involved to ensure a suitable waste water solution was identified that could cope with the requirements of the new development.

To ensure water and waste water requirement are considered, your Aquatrine service provider should be notified, as early as possible, of all Estate Development projects.



RNAD Coulport – Chemical storage and delivery improvement

The scope of the work was to upgrade the current chemical storage facility (aluminium sulphate and sodium hydroxide) as part of planned work to improve asset condition and ensure continued compliance with regulations and standards for chemical storage and deliveries at Coulport WTW.

This involved the detailed design, procurement, manufacture, supply, delivery to site, off-loading, moving into position, erection, installation, construction, testing and commissioning of the following:

- New 16,000 litre aluminium sulphate storage tank complete with integral bund
- New 11,500 litre sodium hydroxide storage tank complete with integral bund
- Existing raw water main was diverted around the perimeter of the proposed new works and reconnected within the treatment building
- New storage tanks connected to existing chemical dosing systems
- New reinforced concrete chemical delivery area complete with surface water drainage system capable of diverting any spillage which may arise during chemical deliveries
- New 6m³ underground chemical spill tank complete with three compartments, capable of being independently isolated
- Each compartment is dedicated to each chemical to ensure that there is no potential for mixing of chemicals resulting from spillages during deliveries
- Interlock valve arrangements and associated pipework to facilitate diversion of each chemical to a dedicated compartment within the spill tank
- Digital level panels and alarm system installed for level and control instrumentation
- Existing chemical storage tanks decommissioned and removed.



New oil and water interceptors at RAF Marham

A Fuel Safety Assurance Assessment (FSAA) audit at RAF Marham found that the existing oil and water interceptor tanks did not have sufficient capacity to deal with surface water from the site.

According to the Environment Agency's Pollution Prevention Guideline 3 (PPG 3) all locations that take delivery of and dispense fuel oils, must be served by an alarmed, class one, full retention forecourt separator. In order for the site to be compliant with the guidelines two new oil and water interceptor tanks were required.

Severn Trent Services (STS) undertook the feasibility study and construction work to install a 50,000 litre capacity, PPG 3 compliant, class one, forecourt separator with an alarm telemetry system, vent, and automatic shut off valve.

Whilst installing the tank a considerable amount of fuel contamination was found in the soil around the old tank which could have caused pollution issues in the surrounding area. STS arranged for excavation and disposal of the soil in accordance with legislation and guidance on the disposal



of contaminated land. This was to prevent any future environmental issues that could have been caused. The work was completed ahead of schedule and with minimum disruption to the site.

Kay Hughes, WMF Office Manager at RAF Marham said 'I would like to thank staff at STS for the attention and dedication given to the work on the bulk fuel interceptors. It was so refreshing to work with people who took pride in their work. I was impressed with the communication which flowed regularly throughout from the start to completion of the work.'

If you have any technical or maintenance queries on oil and water interceptors, please speak with your local contact or call the customer care team for your area:

- Package A** – Kelda Water Services
24 hour helpline: 0845 129 2293
- Package B** – Veolia Water Nevis
24 hour helpline: 0845 607 8855
- Package C** – Severn Trent Services
24 hour helpline: 0845 850 0249

For contractual compliance queries please contact the Aquatrine PMO via our mailbox: DIOSDTFM-AquatrinePMO@mod.uk



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Sennybridge training camp borehole upgrade works – provision of potable water

Kelda Water Services (KWS) has successfully undertaken the necessary upgrade and installation works at seven boreholes on Sennybridge Range, Brecon, providing site personnel with a safe and plentiful supply of potable water.

The training area has been served by 15 boreholes and a spring dispersed across a 68 square mile area and these have historically provided for the potable and sanitary needs of MoD personnel using the ranges, including a combination of full time range wardens and visiting troops. The nature of the range area has always presented potential water quality risks, especially that relating to Cryptosporidium due to the presence of animals grazing on the ranges and the lack of protection around the borehole headworks. Furthermore, the existing UV treatment system was not fit for purpose in producing a consistent and reliable potable water supply. In 2011, a risk assessment conducted by KWS concluded that all the boreholes at Sennybridge were high risk when compared to the requirements of the Private Water Supply Regulations 2009. Further to this, in November 2012, the Army Environmental Health Team decided that the present borehole system should not be used for domestic purposes (other than toilet flushing) due to the potential

risk of water borne disease transmission.

In response to this, KWS was asked by the DIO to undertake a two phase project inclusive of a feasibility study to identify the necessary upgrade works to bring seven of the boreholes strategically selected by the site as water supply ‘hubs’ at key locations up to potable supply standards. This included an assessment of structural condition and asset life, water quality and yield analysis, as well as regulatory consent requirements. The feasibility works were completed in the spring of 2014 with the subsequent capital works phase commencing in the autumn of the same year. The works are now complete and potable water is now being actively utilised on site following two clear water quality samples. The supplies greatly benefit the site both from a health and safety and strategically important perspective and will alleviate the historic challenges faced with transporting water via bowsers from the main camp some distance away. Throughout the project there



has been close liaison between KWS, the site contractor, Landmarc and DIO personnel who have all worked alongside each other in a co-operative manner further accentuating the shared success of the project and the ever strengthening partnering relationship created and maintained through the vehicle of Project Aquatrine.



“ Thank you to all stakeholders, directly and indirectly involved with this project and all the experts who have contributed during times of complexities. KWS and their contractors have managed the works both professionally and with consideration for the ongoing day to day activity within the training area.”

Heidi Waggett,
DIO (Wales and West)





Veolia sponsors RAF Leuchars exhibition

Veolia recognised the close partnership it has had with the Royal Air Force at Leuchars by sponsoring St Andrews University Museum and Galleries exhibition celebrating the history of the RAF at Leuchars.

The exhibition "From Balloons to Typhoons" used a variety of objects from the Leuchars base and donations from other museums and focused on the people of RAF Leuchars, their stories, and provided a personal representation of life behind the wire.

The history of Leuchars for the RAF goes

back to 1908 with a Balloon Squadron being stationed there in 1911. The last squadron of Typhoons flew out of Leuchars in September 2014. The RAF squadrons have relocated to RAF Lossiemouth, another Veolia Water Nevis site.

Leuchars now becomes the home of the Royal Scots Dragoon Guards, 2 Close Support Battalion of the Royal Electrical and Mechanical Engineers and 110 Provost Company of the Royal Military Police. Veolia looks forward to continuing its close relationship with the base.



Ancient and modern infrastructure on Salisbury Plain

Under the £1.6B Army Basing Programme announced by the Secretary of State in March 2012, 4,300 army personnel plus their families are relocating to the Salisbury Plain area from Germany. A significant number of these personnel will need to be accommodated in areas surrounding Larkhill Camp and Bulford Camp to the South of Salisbury Plain.

Proposed increases in population at Larkhill Camp and Bulford Camp and the associated service family accommodation (SFA) at these camps will have a direct effect on the supporting infrastructure such as the supply of wholesome water and the arrangements for the effective collection and disposal of waste water.

DIO has instructed Kelda Water Services to carry out an evaluation to determine the suitability of the existing water supply infrastructure and the effect that army rebasing will have on this. The scope includes liaising with all the key stakeholders and proposing preferred options for upgrade of existing water networks and assets. The key stakeholders involved in this process include DIO/Mod, Aspire, MUJV, Veolia, White Young Green, Wessex Water, and English Heritage.

Following redevelopment of the Stonehenge World Heritage site by English Heritage they have expressed a preference for the re-location or redevelopment of the Larkhill Sewage Treatment Works (STW), if at all possible, as the works can be seen from the ancient monument site.

Currently options being considered include relocation of Larkhill STW to a new location to serve additional population at Bulford and Larkhill, or to send all waste water flows to the public sewer network for treatment.

Kelda Water Services continues to work with the Army Basing Programme development team to evaluate the most appropriate option, with consideration being given to the key objectives of; adhering to and supporting the DIO/Mod programme for army basing, providing a cost effective solution, providing adequate provision of water and waste water services, delivering no detriment to the environment, and to meet the MOD's pre planning commitments and support future planning applications.





Interview with... Stefan Schmid, KWS Graduate

● **How long have you been in your role and what were you doing previously?**

I'm currently on a Kelda Group two year Graduate Scheme with Kelda Water Service Defence (KWSD) being one of five placements. I've been in my role on the projects team since November 2014 prior to that I worked in Yorkshire Water's Water Quality Department and in the Waste Networks team. Working on Aquatrine has allowed me to gain challenging and unique experiences whilst working on some

interesting sites. Kelda Water Services Defence and working with the DIO has given me invaluable learning of which Yorkshire Water will benefit from when I return in May.

● **Describe your typical working day.**

I'm still waiting to find out what a typical day entails! Lots of phone calls and emails ensuring I'm up to date on the different projects I am involved with, confirming our solution for flood and oil protection

improvements at RAF Odiham is suitable or sending teams to carry out reservoir inspections across Aquatrine Package A. Every day is fast paced with huge variation, it's great to be involved in such a wide range of projects and able to get involved in all stages of the process, dealing with our procurement team to issue contracts, or reviewing construction plans with our Construction Manager.

● **What do you feel are the key successes you have achieved?**

As I'm relatively new to the business and to project management as a whole I feel being thrown in at the deep end and succeeding in my objectives for the placement has been a great success. I've had to carry out the same functions as experienced project managers with my share of difficult projects to manage. I have had great support from KWSD and my experience with contractors and the DIO has been positive. I've utilised the great learning I've received from Yorkshire Water and been able to apply it and grow it with Aquatrine.

In terms of projects I've had great success with the Service Reservoir Inspection Programme, we have been able to robotically inspect and clean service reservoirs keeping them in supply without compromising water quality. Typically for a clean or inspection, service reservoirs need to be drained down completely, cleaned and refilled potentially taking them out of supply for days at a time, this method has removed that need and minimised any impact to site and reduced costs to us, a great win all round!

● **What hobbies do you have?**

I've always had a real passion for all things snowy, stemming from a little boy visiting my family in Switzerland and tobogganing down the hills on the Üetliberg in Zurich. Now I try and ski or snowboard as much as I can (that said I haven't managed to go this year!) and am at most at home on a slope. Other than that I enjoy watching my rugby union and what most other 20 something's like doing whilst living in a city...



“
I'm still waiting to find out what a typical day entails!”

