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 RVTGROUP

EnviroHub

EnviroHub



WATER TREATMENT

Water Management Solutions For Hire

 RVTGROUP

www.rvtgroup.co.uk



An Introduction To RVT Group

Protecting People and Our Environment

At RVT Group, we recognise the pressure our customers are under to manage budgets, deadlines, staff, suppliers and day-to-day activities, whilst also ensuring regulatory requirements are adhered to, staff welfare is prioritised, and the environment is protected. It is an immensely stressful balancing act, which is why RVT are on hand to completely remove the hassle from hazard control.

- ✔ Noise Control
- ✔ Dust Control
- ✔ Fume Extraction
- ✔ Environmental Monitoring
- ✔ Ventilation
- ✔ Confined Space Equipment
- ✔ Water Treatment Solutions
- ✔ Heating / Cooling Solutions

At RVT, we don't just provide solutions - we deliver assurance.

Across construction, infrastructure, industry, and defence, we are your trusted partner, offering the expertise, tools, and unwavering support to ensure your success.

Our commitment is simple yet profound: safeguarding your projects, protecting your people, and upholding the highest standards of performance.

By listening, adapting, and delivering with care, we don't just meet expectations - we exceed them, creating lasting partnerships grounded in reliability and respect.



 **RVTGROUP**

Water After Treatment From
RVT's EnviroHub Systems

Specialist Water Treatment Solutions

Hassle-Free and Fully Compliant

When carrying out activities on a plot of land the main contractor or landowner is responsible for any water that is to be moved or discharged from the site.

It is therefore essential for contractors to have a tailored plan for the control and discharge of water from site; furthermore more you must be able to distinguish between rain water and water arising from works undertaken on your project.



When carrying out works on your project, water can become mixed with sand, silt, clay, concrete, oils, metals and other pollutants. These pollutants are damaging to our ecosystem if discharged into the environment; it is therefore important for us to manage water in the correct way and in-line with Environmental permits.

In recent years, the demand for sophisticated water treatment systems has rapidly increased and we expect this trend to continue. RVT are well-versed in adapting as your project does, so you can rest assured that RVT Group has an expert Water Treatment solution ready to support your project at every stage.

From earthworks during the early stages of a project to concrete works during final stages, or anything in-between and across all industries, we have a solution to help you.

This brochure contains a selection of water treatment solutions provided by RVT Group, but if there is something you can't find, please give us a call on 0808 281 3150 and we'll be happy to tailor a solution to your exact requirements.



WATER TREATMENT

A Summary of Important Regulations and Guidelines in the UK

Temporary dewatering RPS 261

This RPS (Regulatory Position Statement) applies to short term (max 3 months), temporary discharge of uncontaminated water (wholly or mainly rainwater) from an excavation to surface water. This RPS does not apply to discharges to ground or groundwater.

An RPS means that the Environment Agency will not normally take enforcement action against you providing that:

- Your activity meets the description and you comply with the conditions set out in this RPS.
- Your activity does not (and is not likely to) cause environmental pollution or harm human health.

Pollution Prevention Guideline (PPG)

PPGs are based on relevant legislation and good practice. By following these guidelines, it will help you to manage your environmental responsibilities and protect the environment.

Consequences of Water Pollution

Failing to provide evidence that an adequate monitoring programme is in place can result in significant fines and imprisonment. The previous maximum penalty for polluting the environment was £250,000, this was changed to 'unlimited' in December 2023.

Discharge Permits

It is usual for construction sites to have excess water that needs to be discharged, but under the Environmental Permitting Regulations (2010) and the Water Resources Act (1991), it is an offence to discharge water without prior approval from regulators such as the Environment Agency (England and Wales) and Scottish Environment Protection Agency (Scotland).

There are limited exceptions to the need for a bespoke discharge permit and the The Environment Agency have produced the RPS 261 'Temporary Dewatering from Excavations to Surface Water' which outlines exactly when you do not require a water discharge permit. However, this is very limited in the scope of where it can be applied.

When applying for a bespoke permit it is important to identify and consult with the relevant authoritative bodies that may have direct influence in your environmental arrangements (EA / SEPA / Water board / Local Council), otherwise your application may be rejected.

Also, be aware, applications usually take several months to be approved, so it is worth assessing your requirements early and submitting an application form as soon as possible.

Please note, you will also be expected to demonstrate the Environmental Management System (EMS), Risk Assessment and Water Management Plans you have in place.



WATER TREATMENT

The Science Behind Water Treatment

One of the biggest challenges to managing water on site is knowing where to start. A complex project may have water that has been contaminated in a number of ways or have several pools of water with different treatment requirements. Some pollution, such as silt is obvious to see, but other forms are invisible, such as pH imbalance or dissolved contaminants.

Where chemical dosing is required, our internal testing processes can accurately assess the most efficient treatment methodology. Water quality can frequently change over time as the programme of works develop or as your project changes, but RVT's technical consultants are here to support you in finding the best water treatment solution for your challenge.



'Jar testing' in progress at RVT Group



WATER TREATMENT

EnviroHub® Lamella Settlement Tanks

RVT's EnviroHub® HL20 and HL50 Settlement Tanks are a simple but effective way of separating solids from water, with effective settling areas of either 20m² or 50m² - eight times the settlement area of a conventional 'box' settlement tank.

Silty water flows up over inclined settlement plates; the slow linear flow causes solids to settle out of the water. This unit can be used standalone for settling heavy and fine solids, or combined with chemical dosing for optimum removal of slow setting and colloidal particle. Solids accumulate in the sludge hopper at the bottom of the tank, and can be discharged from the valve as it accumulates.



Removable plates for easy cleaning

Oil & water separation available

Internal sludge hopper with drain valve

Specification by Model

Weight/Measurements	HL20 Lamella	HL50 Lamella
Mass (Empty)	2,000kg	3,750kg
Mass (Full)	6,000kg	10,750kg
Length	2m	2.9m
Width	2.4m	2.4m
Height	2.3m	2.8m
Area/Capacity	19.95m ² Effective Settlement Area	48.62m ² Effective Settlement Area





WATER TREATMENT

EnviroHub® Treatment Tanks

EnviroHub® TT05 and TT10 Treatment Tanks are agitated mix tanks, designed to pre-treat water ready for advanced settlement or pH correction.

When paired with dosing skids and control panels, the tanks provide internal chambers for coagulation, flocculation and pH correction.

The tanks have either 5m³ or 10m³ holding capacity and can perform batch or continuous flow mixing depending on the application.



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Specification by Model

Weight/Measurements	TT05 Treatment Tank	TT10 Treatment Tank
Mass (Empty)	1,800kg	2,600kg
Mass (Full)	17,000kg	12,800kg
Length	2.3m	3.8m
Width	1.7m	1.7m
Height	3.7m	3.7m
Area/Capacity	5.2m ³ Total Capacity	5.2m ³ Total Capacity



WATER TREATMENT

EnviroHub® Dosing Skid

The EnviroHub® TU02 Dosing Skid is a flexible piece of water treatment equipment that is designed to be used with other EnviroHub® units to form part of a full water treatment system.

The unit can be used with treatment tanks to automatically add the correct dose of flocculant and coagulant, as often as required, to the pre-treated water. By using the system together, fine suspended solids are easier to remove from contaminated water.





Case Study: Bespoke Water Treatment Solution at HS2 Sewer Repair

Overview: Sewer repairs were required for Thames Water, on a HS2 site, where the Colne Valley viaduct carries train tracks over a series of lakes and waterways at Hillingdon.

Challenge: Due to the proximity of several lakes, and despite the installation of a cofferdam, Browne required continuous dewatering at a rate of 20-30m³/h to keep the excavation area dry. Water from the excavation was highly turbid and needed to be treated to produce visually clear and safe water before being discharged.

Solution: RVT installed an agitated mix tank, dosing stand, and lamella settlement tank. The system provided flow-proportional chemical dosing and pH adjustment. A real-time monitor was also installed on site, which gave the team the ability to assess water quality levels in real-time.



Water Treatment
Lamella Settlement Tank

Client:

BROWNE



Case Study: Reactive Chemical Dosing Project in the Midlands

Overview: One of the UK's largest house builders was undertaking construction on a housing development, consisting of 370 new homes.

Challenge: Water began to collect in the attenuation basin at the lowest point of the site after heavy rainfall and melting snow caused the ground to become saturated. With no outfall available to discharge, there was a risk of the pond overflowing, leading to an uncontrolled discharge that would negatively impact the environment.

Solution: RVT Group performed site surveys and took water samples to perform in-house jar-tests to determine the best water treatment solution. Based on these results, RVT Group supplied:

- Dosing stand and control panel.
- Agitated mix tank.
- Lamella clarifier.
- Holding tank and pump for discharge.
- Monitors reporting on turbidity, pH and flow levels.
- Generators and diesel fed pumps as a complete package.
- SOUNDEX® Curtains to screen the system and reduce the noise.

Client:

Bellway

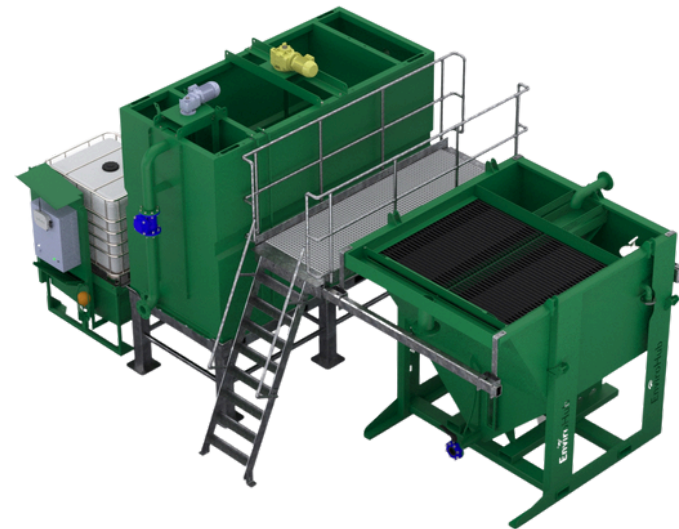


WATER TREATMENT

Full Water Treatment Systems

RVT's EnviroHub® Water Treatment equipment consists of modular units that can be used to build bespoke solutions to complex challenges. A complete water treatment solution is our most popular system.

The system set-up includes Chemical Dosing and Settlement to cover pH correction, real-time monitoring, flow-proportional dosing and suspended solids removal for flow rates of up to 14L/s to ensure contaminated water is treated fully before being discharged in-line with environmental permits.



A Typical Water Treatment Set-Up

1.



Contaminated water is pumped up into the treatment tank and pH neutralised.

2.



The dosing unit adds flocculant and coagulant to the treatment tank, automatically as required.

3.



pH neutral water is pumped into the settlement tank where the chemical doses separate solids and liquids.

Full Water Treatment System On-Site For John Sisk





WATER TREATMENT

EnviroHub® In-Stream Monitoring

Given the environmental impacts of discharging polluted water and risk of associated financial and reputational damage, it doesn't make sense to rely on manual water quality checks. EnviroHub® In-Stream Monitors provide real-time water quality levels, historical data, alerts if water quality strays outside of your set parameters.

The unit can monitor and report on a range of water quality parameters including turbidity, pH, dissolved oxygen, and flow. They can be added as a stand-alone system to an existing water management process, or as part of a wider EnviroHub® treatment system.



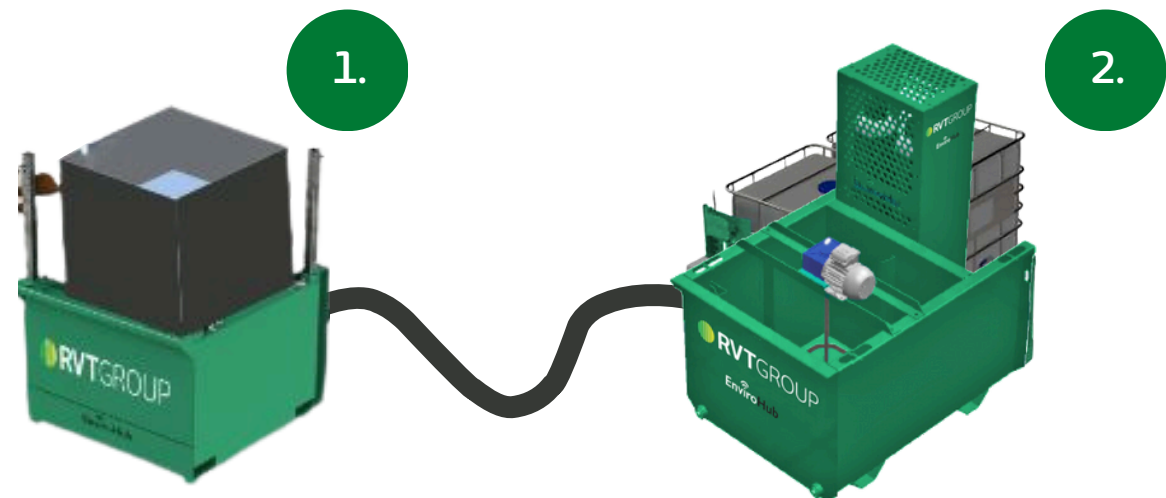


WATER TREATMENT

EnviroHub® Concrete Washout

The EnviroHub® Concrete Washout system provides a simple on-site solution for managing the environmental risks of concrete washout water. It has been designed specifically for managing water used for washing out concrete mixer chutes, barrows and tools, handling up to 30 washouts per day.

The Concrete Washout benefits from the sustainable closed loop system, reducing water use and disposal issues. It consists of the Concrete Washout Bund¹ and the pH Correction² Tank which each play a vital role in the water treatment process:



1.

Aggregate and silt are separated from the run-off or wash water using a geotextile filter bag in the Concrete Washout Bund.

2.

Remaining liquid is pumped into the Treatment Tank where it automatically pH neutralised using CO₂.

The treated water can then be re-used to clean more chutes and tools, stored, or discharged in line with your trade effluent license.

It's All Part of The Package!

RVT Don't Just Offer Products - We offer a Complete Service

So, How Does It Work?

- 1** **Discuss:** You contact us with your challenge by phone, e-mail or through our website. We then ask you a series of questions to understand as much about the project as possible, and if required, we send one of our technical consultants to site, to ensure it is scoped correctly.
- 2** **Plan:** Once we have all the information we need, our team begin developing a proposal for a fully compliant, reliable, and efficient water treatment solution. Depending on how complex your project is, we may supply you with a few different proposals containing drawings and calculations. We will then talk you through the options, either on the phone or at a face-to-face meeting. This step is very important because our number one priority is to deliver the right solution for your site activities. In most cases, we would fully commission the system and then hand-over detailed instructions to your team regarding day-to-day system management, we would then check-in regularly to ensure everything is running smoothly. However, if you would prefer dedicated onsite engineer support, we can arrange that too. The bottom line is that we can provide as much or as little support as you require.
- 3** **Execute:** Once you are happy with the proposal, we ask you to issue us with a PO and confirm what date you require the systems on site. We will calculate the RAMs and organise the logistics. We will then work with your teams to ensure we have all of the necessary clearances to begin work. You will have access to our technical support team from the very start to very end of your project (by phone or in person) - ensuring that any problems are resolved immediately so that you do not experience any down time.

**The value we provide isn't just in the products we supply,
but in the consultancy service we wrap around them.**



Why Work with RVT Group?

Peace of Mind and Quality Assured

By choosing to work with RVT Group, you are choosing to work with a sustainable and reliable supply chain partner, who will deliver superior equipment, exceptional expertise and outstanding service.

- ✓ Water Treatment solutions that are fully compliant with legislation
- ✓ Best practice advice from highly experienced and qualified consultants
- ✓ Extremely effective solutions, tailored to your project requirements
- ✓ High quality, robust and reliable equipment, serviced and tested between each hire
- ✓ Next day delivery and installation service available
- ✓ Responsive customer service and access to technical support
- ✓ Your project remains on track and within budget
- ✓ Most importantly, people remain safe and the environment remains protected

RVT Group is an ethical company that genuinely cares for people's lives, and it is our vision to achieve a world where the impact of site work on life, health and the environment is effectively zero.

If you would like to discuss a project, please call us on 0808 281 3150
Enquiries can be submitted to enquiries@rvtgroup.co.uk
For product information or best practice whitepapers, please visit www.rvtgroup.co.uk

"RVT were efficient in their approach, the quote was received within 24 hours. After the order was placed we received our products on time as requested. A very impressive service."

- Site Manager, Overbury



RVT Group are trusted by some of the UK's largest construction companies.

babcock™

bam

Barhale

GallifordTry plc

KIER

SKANSKA

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EnviroHub

RVT is working with EnviroHub® to provide simple and stressfree water solutions for environmental protection.

Charities We Support



Certificates & Accreditations



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