



Aquatic Control Engineering

Pumps & Pumping Stations

Specialist Supply, Installation & Project Management



ABOUT US

PUMPING EXPERTISE. DELIVERED.



WHO WE ARE

Aquatic Control Engineering (ACE) is a market-leading MEICA contractor specialising in land drainage, flood defence and water management. With over three decades of experience, we supply, install and project-manage pumping solutions for Internal Drainage Boards, the Environment Agency, Tier 1 contractors and utility companies — from compact drainage sets to large-scale flood-defence pumping stations.

OUR APPROACH

We go beyond pump supply. ACE combines world-class equipment partnerships with in-house engineering expertise to deliver turnkey pumping solutions, fully tailored to your site, your programme and your environmental obligations.

PROBLEM AND SOLUTION

THE CHALLENGE

AGEING ASSETS

Ageing pumping stations operating beyond design life, with declining reliability and rising maintenance costs.

ENVIRONMENTAL COMPLIANCE

Increasing pressure and regulations to protect aquatic biodiversity — fish, eel and wetland habitats — alongside operational performance demands.

PROGRAMME CERTAINTY

Complex installations in live, operational environments where disruption must be minimised and delivery assured.

OUR SOLUTION

EXPERT SPECIFICATION

ACE works with clients and designers from the earliest stages to select the right pump technology — ensuring buildability, efficiency and environmental compliance are all addressed upfront.

ENGINEERING-LED DELIVERY

Our in-house technical team uses 3D scanner, CFD modelling and 3D design to ensure pump performance, hydraulic efficiency and fish-passage safety before manufacture begins.

TURNKEY CAPABILITY

From design and supply through to installation, commissioning and aftercare — ACE delivers the complete package, under one roof, to a proven standard.



BUSINESS CAPABILITY

DELIVERING AT SCALE



PROVEN PROJECT DELIVERY

ACE regularly delivers multi-million-pound pumping station projects across the UK — from single-pump upgrades to complete new-build installations for critical flood defence and land drainage infrastructure. Our experience spans complex, high-value schemes where performance and programme certainty are essential.

TRUSTED PARTNER

We maintain long-standing relationships with IDBs, the Environment Agency and Tier 1 contractors, built on consistent delivery, technical competence and a collaborative approach. Repeat appointments reflect the confidence our clients place in ACE as a dependable contracting partner.

OPERATIONALLY ASSURED

Our teams are experienced in delivering works within live operational environments, across geographically dispersed sites. With UK-wide project capability and robust delivery systems, ACE provides assurance from mobilisation through to commissioning and handover.

OUR PUMP RANGE

ACE supplies a complete spectrum of pump technologies, sourced from world-class manufacturers Pentair Fairbanks Nijhuis and Fishflow Innovations. Whatever the application, we specify the right solution for your site.

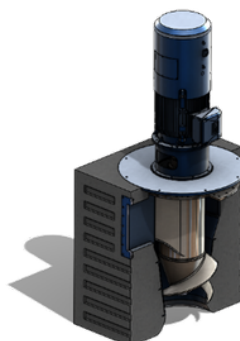
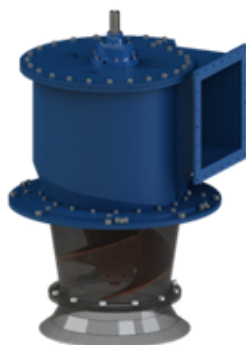
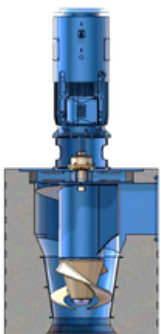
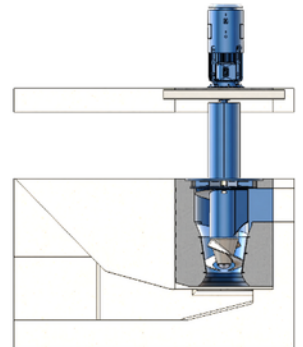
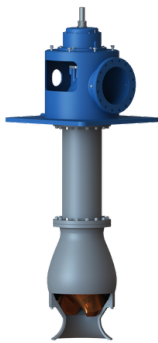
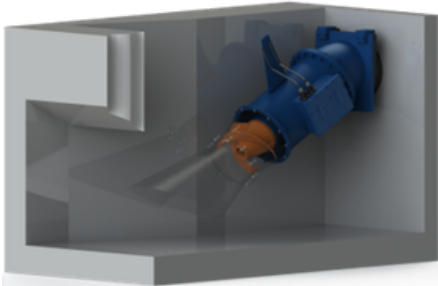
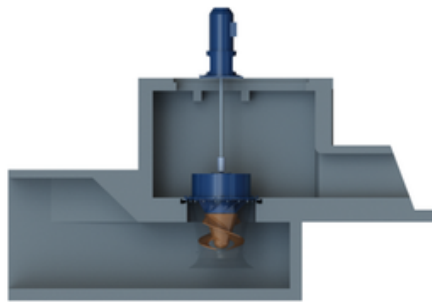
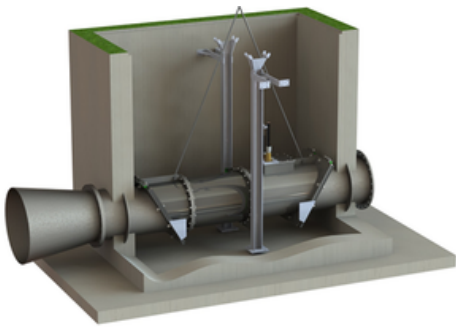
Choosing the right impeller design is one of the most important decisions in pump specification – and no single application is the same. ACE supplies the full Pentair Fairbanks Nijhuis impeller range, giving clients access to the right solution for every duty, whether that's handling rag-laden wastewater, transferring clean water, or protecting aquatic life in environmentally sensitive schemes.

Pentair Fairbanks Nijhuis – the original pioneers of the fish-friendly axial flow impeller – have taken that engineering legacy further with the development of the Xcentric™ mixed flow impeller. This patented design eliminates traditional vane leading edges entirely, replacing them with a tapered conical profile that delivers improved hydraulic efficiency, reduced vibration and less capacity drift – all in a pump that remains fish-friendly and validated to NEN 8775.

For engineers and specifiers, this represents a genuine step forward. The expanded Pentair impeller range opens up solutions for lower flows, higher heads and improved efficiencies across a far wider range of sites – meaning ACE can specify the right pump for virtually any duty, whether your priority is operational reliability in a municipal pumping station or environmental compliance on a sensitive abstraction scheme.



BROADEST RANGE OF FISH FRIENDLY FLOOD DEFENCE PUMPS ON THE MARKET



OUR PUMP RANGE

ANTI-CLOGGING PUMPS – XRW SERIES

Next-generation solids handling pumps built around Pentair's patented Xcentric™ Impeller — a smooth, tapered conical profile that allows wipes, fibres and solids to pass freely, eliminating the blockage risk that plagues traditional designs. Named 2024 Sustainability Product of the Year.

- Specifically designed for modern wastewater containing wipes and fibrous material
- Flow rates up to 3,000 m³/h; heads up to 60 m
- Ductile cast iron casing, hardened wear ring, double mechanical seals
- Horizontal and vertical configurations available — IEC B5 motor compatible
- Ideal for retrofit into existing wastewater pumping stations with minimal civil modification
- Maintains high efficiency due to anti ragging technology



OUR PROCESS

HOW WE WORK



01



Early Engagement

Collaborating with clients, designers and stakeholders from the outset to understand site constraints, agree specification and reduce programme risk.

02



Engineering-Led Design

Using CFD modelling and 3D design to validate hydraulic performance, fish-passage compliance and buildability before manufacture.

03



Supply & Installation

Partnering with Pentair Fairbanks Nijhuis and Fishflow Innovations to supply proven, high-quality equipment — installed by experienced ACE site teams to a high standard.

04



Commissioning & Handover

Fully tested, compliant assets handed over with confidence — supported by aftercare and ongoing maintenance services where required.

COMPETITIVE ADVANTAGE

WHY CHOOSE ACE FOR PUMPS

BROADEST UK FISH FRIENDLY PUMP PORTFOLIO

No UK suppliers can match the range and depth of ACE's fish friendly pump offering — covering centrifugal, screw, anti-clogging and wind-powered technologies, across the full spectrum of drainage, flood defence and water management applications.

FISH & ECOLOGY SPECIALISTS

Our pump technologies lead the market in aquatic biodiversity protection — independently tested, compliance-proven and regularly specified on SSSI sites, nature reserves and EA-regulated schemes.

RETROFIT CAPABILITY

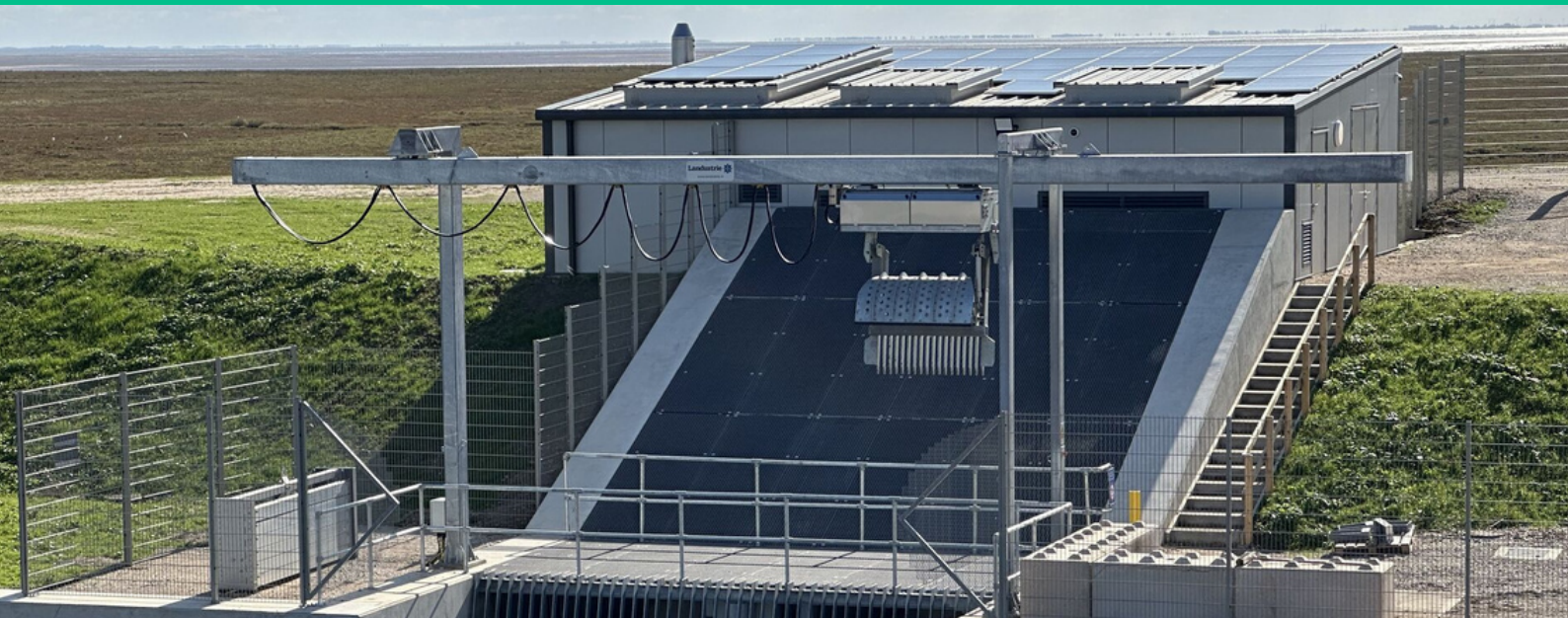
ACE regularly upgrades existing pumping stations with minimal civil works, reducing cost, programme time and disruption. A practical solution for asset managers replacing ageing or fish-unfriendly equipment.

WHOLE-LIFE VALUE

Every pump we specify is selected for reliability, energy efficiency and low maintenance demand — reducing lifecycle costs and improving long-term asset performance for our clients.

SINGLE-POINT ACCOUNTABILITY

Design, supply, installation and commissioning under one contract with one team. Clear lines of responsibility from start to finish.



THE COMPLETE PUMPING STATION SOLUTION

ACE doesn't just supply and install pumps. We provide everything a pumping station needs to operate reliably — from intake to outfall, and from control panel to commissioning.

AUTOMATED WEEDSCREENS

Pumping station intakes are typically fitted with screens to prevent trash and weed from entering the pumps. Without regular clearance, these screens become obstructed, reducing flow and threatening reliable operation. ACE supply and install a range of automated weedscreen solutions that detect blockages and clear debris without any human input — ensuring continuous, unattended discharge performance.



ELECTRICAL, CONTROLS & KIOSKS

ACE design and install the full electrical scope for pumping station projects, including Motor Control Centres (MCCs), control kiosks, telemetry and associated cabling. All electrical works are delivered in compliance with current regulations and fully integrated with the mechanical installation, providing a complete, tested and commissioned system at handover.

AQUIKO — FLOW CONTROL PRODUCTS

ACE supply a complete range of AQUIKO flow control products designed specifically for pumping station applications. Penstocks are installed for flow control and isolation, engineered to the exact dimensions and loading requirements of each site. Pumped flap valves are designed to withstand the velocity and force of pumped discharge — conditions far more demanding than standard gravity-drainage applications. All AQUIKO products are designed and manufactured in the UK, drawing on over 25 years of ACE experience in the drainage and water industry.

A TRUSTED PARTNER FOR CRITICAL INFRASTRUCTURE



Aquatic Control Engineering (ACE) delivers reliable, engineering-led MEICA solutions for flood defence and land drainage infrastructure.

With over three decades of experience, we provide the technical expertise, project governance and assurance required to deliver complex assets safely, compliantly and to a high standard. Through a collaborative approach and focus on whole-life performance, ACE provides confidence at every stage of project delivery.

GET IN TOUCH WITH US



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