Arlington WATER

Alternative and Emergency
Drinking Water Supply Equipment

EMERGENCY Support 0800 772 3140 Arlington WATER .co .uk

Alternative Water Supply Equipment

Water Supply

The Arlington Emergency Water Tank (AEWT) is 1000ltr Bag-in-box DWI approved water supply tank. Can be deployed full or empty, individually or in arrays of almost any size. Collapsible for easy transport and storage and can be stacked 5 high, full or empty.

Intelligent Pumping Unit

AiS variable speed digital pumping unit. Quiet, easy operation; set the desired pressure and walk away. Incorporates dry run, frost and abnormal power protection. Outputs up to 6 bar and can be used in smart arrays to achieve impressive delivery volumes.

5ltr Water Carrier

The AWC is a high quality, flat pack, reusable, carrier for water. Designed to provide a lightweight, compact, alternative to bottled water. With integrated tamper evident features it ensures the highest levels of water quality and security.

Water Quality

Compact stacks when empty

AEWT's deployed during a supply interruption

Arlington's AEWT is a bag in box system meaning the integrity of the fill space is managed by the DWI approved liner bag. The liner bags which have integrated inlet/outlet ports and valves are new at the time of each deployment. The unique nature of the system means the tank needs no venting during fill or discharge thus avoiding the introduction of contaminants from the surrounding atmosphere. The outer container made from heavy duty polypropylene, is easily cleaned for aesthetic purposes and collapsible for ease of storage and transport. Because the outer box has no impact on water quality they are much more cost effective to manage than traditional static tanks or bowser's requiring no ongoing maintenance and testing.

In tests, water drawn from the main and stored in AEWT's has continued to be wholesome and palatable well beyond 4 weeks.

Quick and easy to deploy AEWT's can be used either stand alone as a gravity fed static tank with the Arlington 5ltr water carriers providing unassailable water quality, or they can be used in conjunction with an AiS pump unit.

The AiS can be directly connected to individual properties, care homes, civic amenities etc., or used to infuse directly into the main servicing many properties. It can equally be used to supply tap manifolds at distribution points.

AWC kerbside to kettle.

Where supply is delivered away from the point of use the AWC 5ltr water carrier is used to bridge the potential quality gap. Flat packed and reusable the tamper evidenced AWC provides a hygienic, convenient and known alternative to the old plastic container that's been in the garage for ages, 'but it's OK because we swilled it out before we came down'.

AiS, alternative water with improved outcomes...

What is AiS?

AiS or the 'Always in Supply' unit from Arlington consists of a variable speed digitally controlled pumping unit which is both portable and powerful. Connected to a water supply like Arlington's own bag-in-box AEWT storage units (the de-facto standard in most UK water companies), the AiS can pressurise

almost any section of isolated pipework. The system is easy to setup and use and lightweight to deploy and fully Reg 31 compliant

What does it do?
At its simplest, being deployed to a planned supply interruption, the AiS system (pump, tanks and power source) can be brought to site and deployed from the back of a standard transit style van. The tanks are set-up close to the chosen fill point, hydrant, boundary box, stopcock etc. and filled from the main, prior to the shut occurring. Once the tanks have been filled, they can be connected back to the point from which the water has just been taken via the AiS unit. The integrated pressure gauge within the pump will indicate the current pressure in the main. The pump can then be set slightly below that pressure and left on standby. As soon as the shut is actioned, any reduction in pressure from demand in the main will be instantly and seamlessly met by the AiS unit. Customers are completely unaware of the interruption.

Performance.
Developed in conjunction with Thames Water, the AiS system has been tested on a wide variety of event scenarios both planned and unplanned. A single AiS unit will service the usual demand placed on the network by up-to 100 homes operating at 2.5-3bar. If required this ratio can be significantly stretched by reducing system pressure, in which case usual demand is curtailed and at the same time the system output increases.

Scalability
When required AEWT's can be daisy-chained together to provide the required size of reservoir, AiS units can be set to communicate with one another in arrays where increased flow is required.

Flexibility
Because AEWT's can be mechanically handled when full, for example with a Hiab lorry crane, and can be filled and replenished from a road tanker, the AiS system can be used in a very wide range of situations both planned and unplanned using a wide range of available vehicle types.

A new approach to alternative water.

New capabilities provided by AiS opens the way to a whole new approach to the supply of alternative water to planned, unplanned and emergency events. Convention provides for two different avenues to the supply of alternative water, those controlled through the resilience and security function to address notifiable events, and, the greater number of those initiated due to less significant planned and unplanned interruptions from routine network operations.

Changes to statutory incentive and penalty mechanisms have over recent years caused processes designed for more serious notifiable events to be used to tackle business as usual interruptions. This usually results in unnecessary tanker movements and bottled water drops, with a consequential impact on budgets.

The power, flexibility and scalability of AWS equipment from Arlington provides for the first time, a system, capable of tackling both sides of the alternative water coin. In the event of a major incident, Arlington AWS will scale up to create temporary infrastructures requiring far lower operational inputs than other approaches with consequential service and cost benefits. In routine business as usual scenarios AiS provides a quick lightweight means to reduce interruptions, provide business continuity and reduce costs.

MAIN BENEFITS:

- ***Low cost - Slashing AWS budgets***
- ***Zero Cap-ex, reduced Op-ex***
- ***Fast - Quicker first response***
- ***More rapid escalation***
- ***lowest cost soft-start and contingency volumes***
- ***Better outcomes for vulnerable & priority customers***
- ***Company-wide familiarity with BAU equipment***
- ***Reductions in minutes lost***
- ***Improved C-Mex and D-Mex rating***
- ***Helping to meet PC and ODI targets***

Fast, flexible Deployment

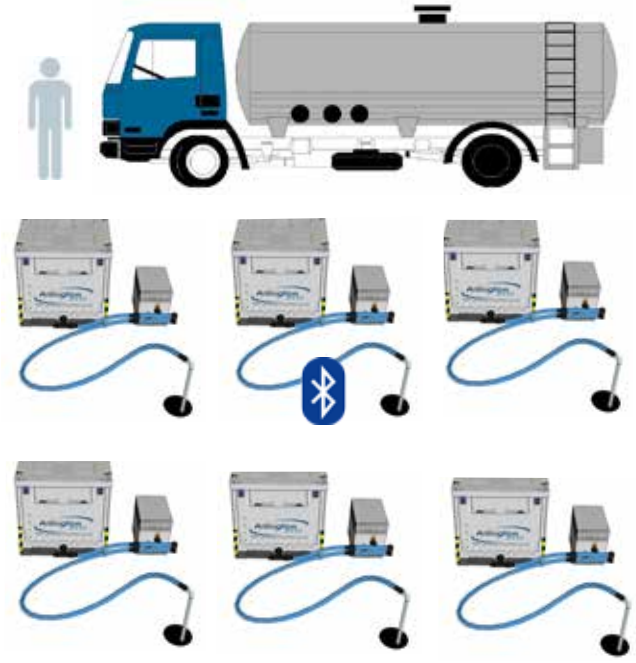
Because all Arlington AWS equipment is modular, in the event of a major or widespread incident it can be deployed using the widest range of available resources and assets from standard transit style vans through to crane lorries and mobile water stations. Its simplicity of use also allows for the widest possible range of operatives to be utilised in setting up the equipment.
Temporary Supply Infrastructures

The AEWT's unique liner system, means that once a tank has been installed on-site either as a gravity or pumped unit, it does not need to be removed for cleaning or testing. The dark, air-free storage environment controls the quality of the water for extended periods with there only ever being the need to exchange liners in accordance with quality procedures.

Once in place, temporary supply infrastructures require only minimal operational resource to maintain the supply.

As an event unfolds the infrastructure can be enhanced both to add resilience in terms of volume but also improve the level of supply through improved levels of directly connected properties etc. The overall impact of the event can be gradually reduced as areas that can be, are isolated and directly connected and restored to a level of normal functionality.

Maximise Asset Utilisation



Whilst the use of directly infusing isolated areas of the network is not new, the assets required to perform the task have been expensive and tend to be in greatest demand during an emergency namely, tankers and drivers.
As well as freeing tankers to make better use of their capabilities, the performance and size of the AiS unit enables it to deliver water where it is needed from a single intermittent requirement like a vulnerable customer property through to the much larger demands of whole areas, homes, hospitals or businesses.

Temporary infrastructures

AiS is supplied as a basic kit consisting of 2 x AEWT's, 1 x AiS unit and 1 x Power source. Kits can be joined together either physically or virtually via Bluetooth and additional elements can be added as required. In a short space of time it is possible to create temporary infrastructures to support interrupted areas supported by tankers. Tanker and driver utilisation can be considerably improved and many more people can be kept in supply

Business as Usual.
Arlington AWS equipment offers a unique blend of scalability, flexibility and power which doesn't just make it ideally suited to large scale events, it is also the perfect solution for BaU planned and unplanned interruptions.

Low cost and lightweight the AiS system is a quick, secure way to combat the ongoing fight against lost minutes of supply.

Cost effective support

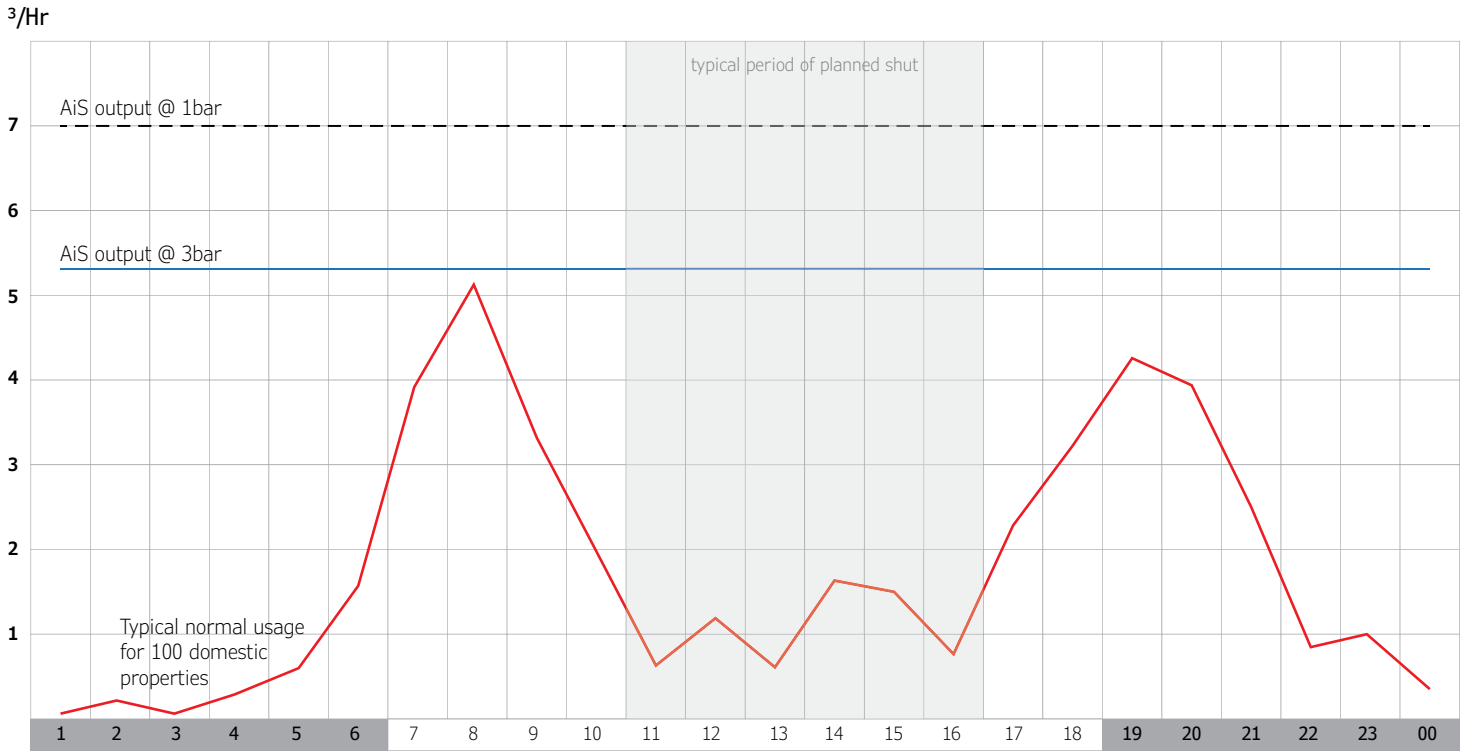
Arlington offer a range of contracted and non-contracted options for AiS, maintenance and support as well as deployment/installation services using our own vehicles and operatives as well as Arlington trained third party EUSR contracted resource.

Our audit and pre-survey service ensures equipment is ready to be deployed and can be deployed and installed very rapidly to key pre-determined locations when required, critical for vulnerable and priority services like care homes. schools, disabled customers etc.

Contact us for full rate card details or for contracted hire and deployments rates based on your specific requirements.

Power, Performance and Control

Estimated water flow and volume for 100 average domestic properties



Normal week day usage for the 100 properties 43.5m³. Usage for the duration of a typical shut 5.8m³, Max estimated flow requirement during the shut 1.8m³/hr.

Case Studies

Reservoir Maintenance - Booster and break tanks supply

Gloucestershire. Planned maintenance on a small service reservoir required it to be isolated from the network and drained prior to inspection and maintenance work. Serving a rural community of approximately 59 properties. Incoming pressure is low and of intermittent volume.
Previously when work has been required on this reservoir, maintenance operations were carried out over a 24 hour period using tanker support to maintain supply. This was resource intensive and didn't really provide sufficient time to perform all tasks properly. Tanker traffic on the narrow lanes, along with the associated noise of the pumps also caused a nuisance. The Arlington AiS alternative involved situating 6 AEWT tanks along with two AiS units (duty and standby) and an electronic level valve, as in the picture above.

The AiS system was in place for 12days whilst work was carried out on the reservoir during that time it pumped 508m³ into the network at an pressure of 2.8bar. Following initial adjustments the levels were checked once a day but required no further operational intervention.

Planned Leak Repair

Wiltshire, planned 4hr shut to repair split PVC main. The closure was due to affect 47 properties in 3 different Cul-de-sac's. 1 set of AiS equipment was deployed in each and served approximately 9, 15 and what was originally thought to be 23

(but in fact turned out to be 46) properties each. Water for the AEWT's was drawn from the main prior to the shut.
The initial plan had been to warn residents and interrupt supply during the shut incurring consequential minutes lost and SIM penalties. In the event the 3 systems supplied all 70 properties for just over 3 hours using approximately 3.1m³. Local residents were supplying tea and coffee to water company operatives during the closure and asking when the water would be going off.

Business Continuity

Kent. Unplanned burst event caused a local retail park to loses supply. Due to the scale and expected duration of the event tankers were mainly engaged in other duties. AiS deployed to 4 locations to service the requirements of several water dependant businesses including the Nando's and a Parcel Force vehicle maintenance depot shown above. AEWT tanks were filled once a day from tankers on a milk round basis, and systems were maintained by staff in the ground with Arlington providing support. The systems were in place for 14 days, none of the connected businesses claimed for losses.

DG2 School and Hospital

Berkshire, reservoir pump failure allied with ongoing network maintenance work caused supply issues across a wide area impacting both homes and businesses.

AiS deployed to schools in the area enabling them to remain open throughout the course of the event (above left) removing issues related to alternative child care lost work days for parents etc. AiS was also deployed, as a booster, to a hospital in part of the affected area to remedy low pressure issues during peak draw periods (above right).

The hospital, which contains an acute and minor surgical unit had already suffered many cancelled operations earlier in the year due to low or no pressure with a consequential impact not just to the business but also to the many patients involved. Managers at the hospital were obviously very anxious that the situation did not recur. AiS delivered over 300m³ to the hospital at a constant 3bar during the course of problem.









For more information visit our website
www.emergencywater.co.uk
or go straight there by scanning the code.

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