



One of the most consistent concerns raised by the local community for Otterpool Park has been the demands the new housing will put on water supply, given that Kent is in an area of water stress. The issue of water shortage is widely recognised and requires a responsible approach to minimising future water use, something that is being supported and prompted by a range of organisations including the water companies. This note sets out the work done to date on ensuring a sustainable water supply for all residents in the district, including Otterpool Park, and sets this work in the wider context of work happening both regionally and nationally to address this critical issue.

Otterpool Park – solutions for water supply to meet need from new housing

Affinity Water (AW) has recently undertaken their water resourcing review for their south east region (which covers the Folkestone and Dover area) and the future demand from Otterpool Park was factored in to their long term Water Resource Management Plan (WRMP), which all water companies are obliged to produce every five years). It has been confirmed that there are sufficient water resources available in the Folkestone/Dover region to serve the full 10,000 home development without detriment to the existing catchment. As part of Affinity Water's initial water resourcing review, it has been confirmed that there is existing capacity for the first 1,500 units without improvements to infrastructure, then the remainder of the demand will require offsite improvements to the local network to bring water to the site. This includes expansion

of Paddlesworth Reservoir and a new water main to be constructed between the reservoir and the development. The water main will follow the same alignment as an existing water main, rather than upsizing the existing main. Upgrades to the sizing of the existing offsite and onsite mains will ensure sufficient water pressure is achieved and maintained between the reservoir and the development and neighbouring communities. Crossing of M20 and CTRL will involve using micro tunnelling construction methods. The point of connection will be at various locations along the existing A20, with spine mains emanating off the points of connection to create ring mains within the respective development phases.

It should be borne in mind that as a planning authority Folkestone & Hythe District Council has a duty to make adequate provision for identified new housing need in the district. This means that an additional 700 plus homes a year will require water wherever they are located and will need to be planned for in Affinity Water's WRMP. The local planning authority will not give planning permission to any proposal unless its water supply has been agreed.

The policy in the council's Core Strategy Review draft plan sets out a maximum water consumption of 90 litres/person/day, in response to the need to minimise future water use. The outline planning application for Otterpool Park sets out how this can be achieved, including a waste water treatment works on site that can treat and recycle water. The assumptions on future

water investment are based on current average usage, so it is likely that with a lower consumption rate a greater number than the anticipated 1500 units can be served before the reinforcement infrastructure is needed. However Affinity Water will need evidence of this reduction through monitoring over the early years before changing its assumptions about the timing of reinforcements to their network.

Addressing wider water shortages in the region and impact of new development

The wider question that has been posed in relation to water supply for Otterpool Park is – if there is no rain, how will this additional reservoir capacity make any difference? This is a valid and topical question that the water industry and politicians have been grappling with for some time, and the answer requires looking at the bigger picture of planning for water resilience, particularly in areas of water shortage such across the wider south east and East Anglia.

Further emerging work is taking place to strengthen the interconnection of regional water networks to allow water to be moved around more widely, which will then be picked up by water companies in their own plans. The water companies in SE England are already well interconnected and a new organisation called ‘Water Resources in the South East’ is developing a plan to build the region’s resilience, including managing very extreme droughts. Water companies are required to prepare drought plans – Affinity Water’s Drought Plan indicates that their zone in SE Kent is able to cope in all except an extreme drought. The Plan holds some useful information:

<https://www.affinitywater.co.uk/corporate/plans/drought-management>

At the national level, a group has been set up led by the Environment Agency to prepare a new National Water Resources Framework.

This will give statements of both national and regional water needs, including the expectations on regional groups to address issues of water resilience and reducing demand. The following documents may be of interest:

<https://www.water.org.uk/publication/water-resources-long-term-planning/>

and

<https://www.nic.org.uk/publications/preparing-for-a-drier-future-englands-water-infrastructure-needs/>.

The new WRMPs prepared by the water companies will come into effect in 2020 and will, for the first time, be looking as far as 60 years into the future. These plans are underpinned by detailed population projections that take the latest data from local planning authorities and consider, for example, the number of existing Kent residents moving into new homes (no additional water demand) and those moving into new homes from outside Kent (creating additional water demand).

Capacity to store water in Kent and move it around the network to meet demand can be increased through for example expansion of Paddlesworth and by providing a new reservoir at Broad Oak that would be filled during high river flows in winter, during drier periods. However it is unlikely that any additional water can be taken from Kent’s environment, and the Environment Agency is looking to reduce the current abstractions in some cases. On a strategic level, AW’s Folkestone and Dover supply area is relatively small, and the company is already moving water around the network and bringing it into the area to ensure demand is met resiliently. This forward planning for the catchment will ensure the demand created by new development within Folkestone and Hythe district is met.

On the positive side Affinity Water has been successful at reducing water consumption through a range of investment in reducing leakage, improving efficiency and helping all customers to reduce their water demand. Water consumption is less now than it was in 1990, in spite of the increase in the number of homes in the area. Many organisations including Kent County Council have been promoting such efficiency improvements for several years and KCC continues to work with the water companies to consider the impacts of new housing and an increase in population and devise a coordinated approach. It works with companies on their WRMPs and is also heavily involved in the 'Water Resources in the South East' group. KCC has been involved in advising on water and drainage for Otterpool Park, and has supported the proposals to consider a system of recycled water that will return it to homes as 'greenwater' for use in toilets and gardens.

Wider plans in the county include schemes to treat wastewater effluent to a much higher standard so that it can be returned to support upstream river flows and be available to be used a second time to meet our water supply needs. The treatment technologies needed to achieve this water reuse are improving rapidly and becoming cheaper, so such schemes are becoming increasingly important in meeting new water demand. They are also more reliable than reservoirs during drought periods.

Climate change impacts are also being closely monitored nationally for their impact on potential future water scarcity.

Affinity and the other water companies still have work to do to go on improving the efficiency of our water use systems, through further investment. Reuse and recycling of water will also have to increase.

Conclusion

Water supply to Otterpool Park has been incorporated into Affinity Water's long term plans for supplying water to the area, ensuring new and existing households' needs are met resiliently. The first 1500 homes can be supplied using the existing infrastructure, with investment in the network and expansion of Paddlesworth Reservoir planned to meet the need of 10,000 homes. This forms part of their Water Resource Management Plan. However Affinity Water's supply locally sits within a wider context - the issue of water scarcity is a recognised challenge that affects much of England, and relies on a strategic approach to storing water, reducing water usage through a range of measures, reducing leakage and exploring technologies to reuse and recycle water. Regional and national bodies have been formed to plan the infrastructure required to manage and distribute water efficiently, and ensure strategies for severe drought conditions are in place including monitoring weather pattern changes.

***Folkestone & Hythe District Council, for
Otterpool Park Collaboration Board,
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