

High Lane Service Reservoir

Non-Technical Summary

Introduction

This Non-Technical Summary (NTS) forms part of the Environmental Statement (ES) that accompanies a planning application by United Utilities (UU) to construct a new service reservoir at High Lane, Stockport.

A new reservoir is essential to ensure the continued supply of clean water to homes and businesses in Stockport, Wilmslow, Macclesfield, Whaley Bridge and Disley. UU therefore proposes to construct a new underground 35Mega litre (35 million litres) service reservoir at the Wybersley Water Treatment Works (WTW) which would be used in conjunction with an existing reservoir.

This document sets out a summary of the proposed development and reports on the likely significant environmental effects that might be experienced by the nearby community as a result of the construction and operation of the proposed development.

Location

Wybersley WTW is situated to the north of High Lane Village in Stockport Metropolitan Borough. High Lane is a small settlement situated along the A6 between Hazel Grove, Marple and Disley. The proposed reservoir is situated to the west of the existing works, between the WTW and residential properties on Meadway and South Meadway which are located to the south west. To the north and east of the existing WTW is open countryside.

The Site and Development Proposals

The land is currently poorly draining pasture which is periodically grazed by stock. The area to be covered by the reservoir covers the majority of two fields. A dry stone wall with trees and hedging

separates the new reservoir site from the existing reservoir and the site is bisected by a further poorly managed hedgerow. The WTW is screened from the reservoir site by a wooded bund. To the north of the reservoir site is the spoil heap from the construction of the Disley Tunnel which runs under the site. This is in the region of 5m high and vegetated. It is grazed by stock.

The proposed development comprises a large rectangular concrete reservoir measuring around 50m x 110m. This would be surrounded by a bund which is approximately 8m wide at ground level at each side and up to 6m tall. A two-storey valve house comprising a ground floor and basement, would be built into the embankment at the south eastern end of the reservoir facing away from properties on Meadway/ South Meadway to reduce its visual impact. This would be built in brick to match the existing buildings on site and extend to 6m tall. The bund on the south western side of the reservoir would be extended to provide screening for the valve house. The bunds and roof of the reservoir would be grassed but would be punctuated with small vents, which would stand less than half a metre above the ground.

Other elements of the development comprise:

- * A new road within the site which would link the existing Wybersley WTW access and the new reservoir. It would be located between the existing WTW landscape bund and Disley Tunnel spoil heap;
- * A new control valve kiosk to the east of the proposed reservoir, south of the existing WTW;
- * A ditch behind the properties on Meadway and South Meadway to address existing flooding as a result of natural surface water run-off;
- * Two gappy hedgerows would to be removed but new hedges would be planted to the north, east and south of the reservoir; and
- * Other landscape and habitat improvements including the creation of a hay meadow and a wet meadow with ponds.



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Environmental Impact Assessment

The Environmental Impact Assessment (EIA) has been undertaken by a team of experts from various consultancies. Overall coordination was undertaken by Entec. The EIA seeks to identify and assess effects that are or could be significant. The developer presents the findings in an Environmental Statement.

An important part of the EIA is early consultation to agree the scope of the document to be submitted. Informal consultations have been undertaken with Stockport Metropolitan Borough Council and the Environment Agency. Consultation has also taken place with residents in Meadway, South Meadway and Mead Close who have been informed about the proposed development and EIA.

Alternatives

A number of alternatives to this scheme have been considered. These include a ‘do nothing’ alternative which would not resolve the current risk to the water supply and three alternative locations.

The location for the service reservoir is dictated by the need for storage at the highest point of the water network so that the water can flow by gravity into the distribution network. It is also preferable to feed the reservoir from the WTW by gravity rather than pumping.

Four sites were considered; option B and option C were located south south west and north north-east of the existing site. Both of these are on land higher than the existing WTW and would require pumping to fill them with water. The opportunities for excavation were considered to lower the reservoir height but this would require the removal of 20 truck loads of material a day for up to 40 weeks. The fourth option was off-site at Hazel Grove Service Reservoir which is lower in height than the existing supply network and would require pumping of

water back up to the distribution network. Thus option A, to the west of the WTW was the preferred location.

Environmental Effects

Introduction

The following sections provide a brief summary of the main findings of the EIA as set out in the technical sections within the ES.

Landscape and Visual

The key elements of the proposed development which are likely to have some effect on the landscape and visual amenity of local people include site clearance with the loss of grassland, hedgerows and trees; the introduction of earth embankments surrounding the proposed reservoir and the construction and operation of the above ground buildings, structures and associated infrastructure.

During construction, the landscape effects would be slight to moderate in terms of the changes to landscape features such as topography, hedgerows and walls. Once completed, site operations would be similarly not significant due to the proposed planting.

Visual effects would be more significant. During construction, significant effects would be experienced by some properties on Meadway, South Meadway and Meadow Close because of the erection of a 3m high close boarded fence. This would foreshorten residents’ views for a minimum of 24 months although it would restrict views of other visually intrusive elements within the site and reduce noise and dust effects. From other locations, the views of the site would be filtered by trees and other buildings.

The completed Service Reservoir would continue to foreshorten views towards the elevated western edge of the Peak District from properties at Mead Close although the gradual maturation of the hedgerow and hedgerow trees would in time partially filter views of the Service Reservoir



and the magnitude of change would gradually reduce from high to medium. For properties on Meadway and South Meadway the reservoir embankment would form a prominent element and would foreshorten existing views.

Cultural Heritage

To identify whether the development might affect archaeological and other features of the historic environment on or near the site, a desk-based review of the site and a site visit were undertaken. There are no recorded archaeological features within the site and no evidence to suggest that the presence of previously unrecorded sub-surface archaeology is likely. Therefore no effects on archaeology are expected to occur as a result of the proposed development.

The nearest listed buildings to the site are the group of Grade II buildings at Wybersley Hall, which are located approximately 300 m to the east. The hall and outbuildings form a compact farm group and are screened by surrounding trees, which define its principal setting. All low level elements of the scheme would be screened from the hall by the intervening topography, whilst any views of the upper part of the reservoir embankments and construction activities would be filtered and partially screened by trees. There would therefore be no change to the principal setting of the hall and only very limited changes to outward views from the hall. This would result in a negligible change to the setting of the hall, which would not be significant.

Lomber Hey House would be screened from the proposed reservoir by the farm buildings of Lomber Hey Farm and its setting would not be affected in any way. There are no other listed buildings whose settings could be affected. Thus the cultural heritage effects of this development are not considered to be significant.

Hydrology

At present surface water on the site, surrounding fields and adjacent properties runs into Daisy Brook at Andrew Lane. From here the Brook then flows west through High Lane, underneath the Macclesfield Canal and Windlehurst Road before passing through open farm land to Hazel Grove.

United Utilities has a discharge consent which allows it to discharge water into the Daisy Brook. This includes water from surface run-off and from the existing reservoir if required. The discharge level is set to ensure that there is no risk of flooding.

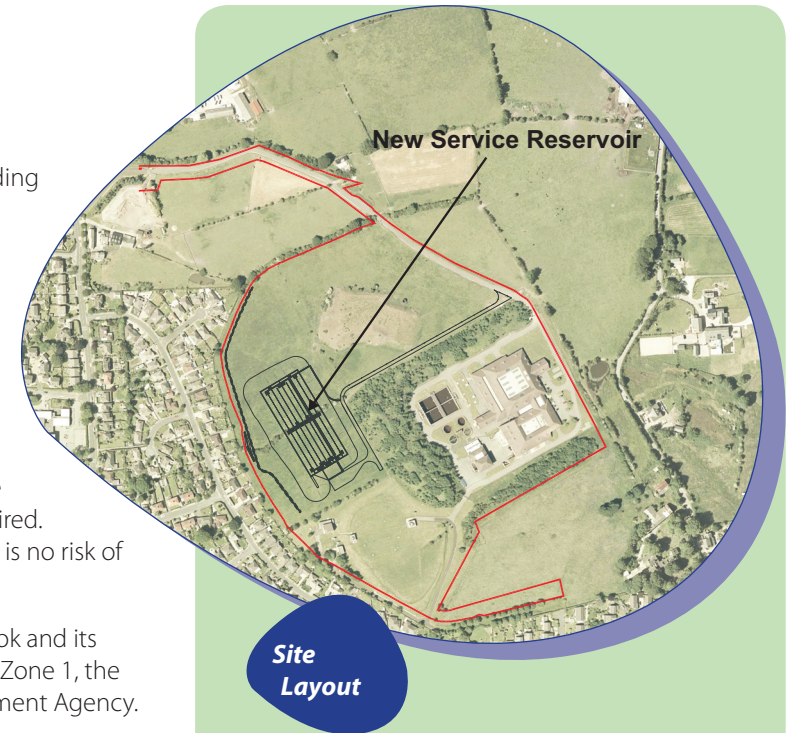
The site is outside the floodplain of Daisy Brook and its location is categorised as being within Flood Zone 1, the lowest risk category assigned by the Environment Agency.

The detailed site specific Flood Risk Assessment has demonstrated that provided the existing Discharge Consent is maintained then there would be no increase in the level of flood risk downstream of the reservoirs.

Surface water from the proposed development would need to be managed on site to prevent additional surface water discharge entering the receiving watercourse. A ditch would be constructed behind properties on Meadway to address current issues with surface-water run-off.

Potentially significant effects identified with respect to water quality comprise pollution during construction activities from sediments washed off the site. The risk of sediment washing into sewers can be mitigated by good site management and installation of settlement tanks or other filtration methods.

Therefore the hydrological effects resulting from the development are not considered to be significant.





Biodiversity (ecology)

Extensive surveys were carried out on the site to identify any important habitats on the site and the presence of any rare or protected species. Relatively new woodland around Wybersley WTW, semi improved neutral grasslands, the two hedgerows across the middle of the site, the shaded ditch along the northern hedgerow and the ponds all offer habitat which is considered to be of local importance. The northern most hedgerow on the site was considered to be more important because it links to other hedgerows and biodiversity features.

In terms of species, a brown hare was seen on the site, occasional evidence was found of badger along with a disused outlier sett; bats and breeding birds were identified; and great crested newts were found in a nearby pond.

The grassland would be lost during the construction of the reservoir, but it would be reinstated with a higher quality, more diverse, seed mix once the reservoir is complete. Some of this would be wet meadow with newly created ponds to provide additional newt habitat. Similarly, although two hedgerows would be removed, as part of the site management plans, new hedgerows would be planted which would provide additional habitat for badger, bats brown hare and breeding birds.

During construction fencing would be used to protect sensitive ecological receptors such as the northern hedgerow, the badger sett and great crested newts.

The scheme would result in the temporary loss of some habitat but provides the opportunity for most of this to be reinstated with higher quality habitat. No significant effects are predicted and overall the effects of this scheme would be positive for biodiversity.

Noise

In order to assess the potential noise effects of the proposed works, current noise levels at the site have been measured and the likely noise generated from construction plant has

been calculated to identify what change in noise there would be. No noise would be generated from the new reservoir so this has not been included in the assessment.

Three locations around the site were used to assess the likely construction noise. These were dwellings on Meadway (14 metres from site boundary), dwellings on Meadow Close and dwellings on Andrew Lane (traffic noise).

The construction works are likely to involve the operation on site of two 35 tonne excavators, two bulldozers, four dumper trucks, a fork lift truck, a 50 tonne crane, two crawler cranes, two Continuous Flight Auger piling rigs and two concrete pumps. In addition, skips would be delivered on four-axle trucks and this would occur perhaps two to three times a week. Heavier vehicles would be predominantly six-axle concrete wagons. Ancillary items would be delivered on four-axle flat bed trucks and any additional aggregates would be delivered on six-axle tipper wagons.

A 3m high solid fence would be constructed around the site to reduce noise arising from these machines. In addition, vehicle movements would be minimised and routes used to limit the need for reversing alarms. All plant and vehicles would be well maintained to reduce their sound.

The assessment concluded that the expected levels of construction noise would be noticeable to nearby residents but below those recommended by Government guidance for noise control on building sites. Potential vibration due to road vehicles would be controlled by reduced vehicle speeds.

Dust

The main air quality issue that the public associates with construction is the generation of dust. This is because the methods employed during construction usually involve the large scale excavation and handling of potentially dry materials which may cause dust. Generally, the transportation of excess materials from the site involves the use of un-surfaced haul roads by dump trucks and other

vehicles, which can create significant amounts of dust. Wind blow across bare ground or stockpiles of material can also represent a significant source of potential dust generation.

A key fact in dust assessment is the usual direction of the wind. Most dust will be deposited upwind of a construction site. At High Lane, the prevailing winds are not typical of the UK situation as they are dominated by winds blowing from south to north with a westerly component, whereas nationally the prevailing wind is generally from the south west. There are no receptors in the path of the prevailing wind (north of the site).

However, to ensure that dust is not an issue for local residents, the following actions will be taken:

- * The haul road will be situated away from residential properties;
- * A close boarded fence would be erected at the site boundary during construction;
- * Stockpiles of materials would be located away from residents;
- * Facilities would be provided on site to dampen down roads and stockpiles in the event of dry weather.

The number of potentially sensitive dust receptors within the vicinity of the construction is quite high. However, the prevailing weather conditions, existing land topography provided by the existing service reservoir and the proposed mitigation means that the risk of dust effects at these receptors would be not significant.

Traffic and Transport

An assessment was prepared by Transportation Planning (International) Ltd (TPI). The focus of the assessment has been on the construction period as no additional traffic would be generated when the reservoir is operating.

The scheme would generate approximately 15 deliveries per day during the construction period along with vehicles for approximately 75 site personnel at the peak of the construction phase. Heavy vehicle movements would also be required at the start and end of the construction period for the delivery and collection of plant machinery/equipment. Also, on twelve non-consecutive days during the construction period concrete pours would take place which would require 70 heavy vehicles per day delivering concrete to site (i.e. 140 heavy vehicle movements per day).

Mitigation measures would be implemented to reduce the potential effects that traffic might have on Andrew Lane or the A6. Traffic movements would be restricted during school opening/closing times and the large concrete pours would be scheduled for school holidays whenever practical. A lollipop person would be provided for the duration of construction to improve the ease of crossing for pedestrians.

The additional construction traffic expected on the A6 Buxton Road will only constitute an approximate 5- 6% increase in traffic flow during the AM and PM peak hours. This is not expected to have a significant effect on the road or its users.

The additional construction vehicles expected along Andrew Lane would increase traffic by approximately 35%. Although representing a significant increase, this additional flow is expected to be easily accommodated by the road as it is lightly trafficked at present. Any potential effects on the road or its users are therefore considered not significant.



Conclusions

The proposed development of the service reservoir at High Lane site would provide essential infrastructure to ensure continued supplies of potable water to homes and businesses in Stockport, Wilmslow, Macclesfield, Whaley Bridge and Disley.

The scheme has been designed to reduce the potential for adverse environmental effects which might occur through construction such as noise and traffic movements. Extensive mitigation measures are proposed to reduce the construction effects including restrictions on working hours, traffic safety and boarding the site to reduce the effects of noise and dust. The only remaining significant construction effects would therefore be the visual effects of the fencing which would reduce views for residents on Meadway/South Meadway and Meadow Close.

Following the construction phase, views would continue to be foreshortened for these residents with the embankments of the reservoir forming prominent features in residents' views although the grass cover established across the slopes would reduce any visual contrast with the principal colours and textures within the surrounding landscape.

No other significant adverse effects have been identified. However the scheme would deliver habitat creation and enhancement. The existing habitats on site are only of local value and therefore changes to them, either positive or negative, are not significant however this does not detract from the clear ecological benefits that this scheme would deliver.

Further details concerning the potential effects that the development may have upon the environment are contained within the Environmental Statement. Copies of this statement are available for inspection at Stockport Metropolitan Borough Council at:

Hygarth House 103 Wellington Road South, Stockport (0845 644 4307)

8.30 am – 5.00 pm Monday to Thursday

8.30 am to 4.30 pm Friday

and at High Lane Library during normal library opening hours.