

NORTH EAST LINCOLNSHIRE WATER ORDER

Great Eau Scheme - Phase II

Statement by the North East Lincolnshire Water Board explaining the reasons for the extension of the Great Eau Water Supply Scheme proposed in the draft North East Lincolnshire Water Order 1972.

1. Application is being made by the Board to the Secretary of State for the Environment for an Order under the Water Acts 1945 and 1948 to authorise the construction of works to provide additional storage for water taken by the Board by means of their existing intake in the River Great Eau for treatment at their existing Covenham Treatment Works. In conjunction with these works powers are also sought for the provision of a new covered storage reservoir for treated water at Weelsby.

An associated application has been made by the Board to the Lincolnshire River Authority to increase the quantity of water which the Board may take at their existing intakes in the River Great Eau and the Louth Canal.

The Board have also made application to the Louth Rural District Council and the Grimsby Rural District Council for outline planning permissions in respect of works proposed in the present draft order. Notice of these applications has been sent to the owners and occupiers of the lands affected.

The purpose of this statement is to set out a summary of the reasons why this extension of the Board's Great Eau Water Supply Scheme is now proposed and to give a short explanation of the proposed works.

Demands for Water

2. Demands for domestic and small metered supplies in the area of the Board now total some 12 to 13 m.g.d. and in addition the Board provide substantial supplies to industry: an average quantity of 21.5 m.g.d. is now taken by industry

but the total demand for industrial supplies which the Board must meet is presently 27.6 m.g.d. It is estimated that the demand for domestic and small metered supplies in the Board's area will have increased to 14.5 m.g.d. by 1975, to 16.7 m.g.d. by 1980 and to 19 m.g.d. by 1985. In the same period it is expected that the actual consumption for industrial purposes will total 24.5 m.g.d. by 1975, 29.3 m.g.d. by 1980 and 33 m.g.d. by 1985. To meet these needs the Board will require sources providing a total quantity of about 52 m.g.d. by 1985.

These figures are all daily averages and the Board must be able to meet peak demands which exceed the average demand by more than 15%.

3. In 1964 when powers were sought to construct the Great Eau Scheme comprising the storage reservoir and treatment works at Covenham it was estimated that the Board would require additional water resources yielding 12 m.g.d. to meet demands arising in their area by 1975. The Covenham works were first brought into supply in June 1968 and have provided a greater yield than the 12 m.g.d. originally estimated and, following a detailed assessment of river flows, the Lincolnshire River Authority have now granted the Board an abstraction licence under which the effective yield for supply of the Covenham works is now 16 m.g.d.

In order to meet rising demands, particularly demands for industrial supplies, the Board also propose to take from the Trent Ancholme Scheme of the North Lindsey Water Board an additional 4 m.g.d. from 1974. The water to be so obtained from the Trent is however of inferior quality and only suitable for supply as non-potable water for certain industrial uses.

Water Resources

4. The resources now available to the Board for water supply provide a total reliable yield of about 40 m.g.d., including 16 m.g.d. made available from the first stage of

the Covenham works. To this will be added the non-potable supply of 4 m.g.d. to be made available from the Trent/Ancholme Scheme making a total by 1974 of 44 m.g.d. In order to meet the demands that will arise after 1975 the Board are seeking to augment the supply made available from their Covenham works by taking additional water from the River Great Eau and the Louth Canal.

The chalk aquifer in the Board's limits of supply is fully exploited and no additional quantities of water can be obtained by sinking new boreholes in the chalk. The Trent/Ancholme Scheme referred to above is capable of further development but the water made available by that Scheme is unsuitable for domestic supply or for many industrial uses. Even after expensive treatment the water produced from the Trent will be inferior in quality to that obtainable from the River Great Eau.

The Existing Great Eau Scheme

5. By means of the works authorised by the North East Lincolnshire Water Order 1965 water is now taken by the Board from the Great Eau at a point above Cloves Bridge near the tidal outfall at Saltfleet. The water is then pumped through an aqueduct some 6 miles in length and discharged into the Louth Canal at the disused lock (Austen Fen Lock) near High Bridge House, Alvingham. The water level in the Louth Canal is maintained at a predetermined height by means of a weir and sluices constructed immediately downstream from the confluence of the Waithe Beck. Water in the canal, including water discharged into it from the River Great Eau, is taken by the Board at an intake near Fire Beacon Bridge, Covenham and pumped into the Covenham Storage Reservoir which has a capacity of approximately 2,300 million gallons. Water from the reservoir is treated at the Covenham Treatment Works and then pumped through an aqueduct 12 miles long to Grimsby and the Humber bank for supply.

The Works Proposed in the Draft Order

6. The yield obtainable from the River Great Eau and the Louth Canal can be substantially increased if further provision is made to augment the storage available in the Covenham Reservoir. At an early stage the Board made detailed investigation of a number of alternative sites for storage reservoirs as a result of which the site of the existing Covenham Reservoir was chosen. For the purpose of augmenting storage the Board now seek to construct a second storage reservoir with a capacity of 1,800 million gallons on some 260 acres of land near Alvingham. This site has been selected by reason of its proximity to the canal and to the existing aqueduct bringing water from Cloves Bridge and also because the subsoil of boulder clay would provide suitable material for the rolled clay embankments and a firm base on which to construct them. It is proposed that the depth of water in the reservoir when completed should be approximately 50 feet thereby providing maximum storage on the area of land taken.

7. The other works proposed in the draft Order comprise a 36 inch pipe leading from the existing aqueduct on the east bank of the canal and crossing the canal by a bridge at Austen Fen Lock for passing water to the proposed storage reservoir at Alvingham. A pumping station would also be provided at Austen Fen Lock (controlled by a cable from the Covenham Treatment works) for raising the water into the storage reservoir. Water from the storage reservoir would be discharged as and when required through a parallel pipe laid in the same trench discharging into the Louth Canal through a cascade aerator. By these means the level of water in the canal would be maintained to enable the Board to take greater quantities by means of their existing intake from the Canal near Fire Beacon Bridge. Some extension of the treatment plant at Covenham is proposed but these works would be wholly situated on lands already owned by the Board.

No new main is required for taking the additional water made available from Covenham Treatment works since, under altered working arrangements now proposed, the existing main would be sufficient to deliver up to 26 m.g.d. to Weelsby. At Weelsby a new covered service reservoir is proposed with a capacity of 20 million gallons together with booster pumps to convey the water through the existing mains and some new mains to the Board's area of supply in Grimsby and the Humber bank.

8. For the purpose of the construction of the works proposed in the Order it is necessary for the Board to acquire lands or rights in lands and they hope that it will be possible to acquire all such lands or rights by agreement. In case however it becomes impossible to do this without unduly delaying the construction of the proposed works urgently needed for public water supplies, it is necessary for the Board to seek compulsory powers. If as a result of negotiations any lands or easements in land owned or occupied by you and required for the construction of the works can be acquired on terms mutually agreed, then provisions of the draft Order for the compulsory acquisition of such lands or easements would not be implemented. The Board hope that hardship which may be suffered by some who would be dispossessed in the area required for the proposed Alvingham storage reservoir can be alleviated by reinstatement on other lands nearby which have recently come on the market and which the Board are willing to purchase for this purpose.

The Engineer of the Board, Mr. C. Cooper at Town Hall Square, Grimsby (Telephone: Grimsby 58631) would be pleased to give you any further explanation you may require with regard to the Board's proposals or to discuss with you any points which you may have to raise.