

## **Proposed project for environmental improvement – east of Marsh Lane, Christchurch**

As a neighbour of our Knapp Mill water treatment works, we are writing to let you know about our proposed project to improve the quality of the water we discharge into the River Avon as part of our operations.

### **What we propose to do**

We plan to create 12 reed beds, which will serve as filters for wash water, on land to the east of Marsh Lane. This site, comprising open grassland and fields, is currently used for the grazing of horses and cattle.

The reed beds will cover approximately 0.76 hectares (1.9 acres) on a site extending to around one hectare, to allow for access tracks from the Knapp Mill works and pipework. The pictures below from another site show what the reed beds will look like just after planting and once mature. Mature reed beds normally extend to about 1 metre above the ground, so there will be little visual impact.



**Reed beds immediately after planting**



**Mature reed beds**

### **How the reed beds work**

Reed beds provide a natural method of filtering water to remove organic matter, mainly in the form of suspended solids, from waste water arising from our drinking water treatment process. Water containing some naturally occurring solid organic material will be piped to the reed beds, which will act as a filter. The reeds collect the natural solids in the water, which then remain on the surface, allowing the clear water to percolate through layers of graded sand and gravel below the reeds to the collection area. The reeds themselves also absorb organic material for growth. From there, the clear water is returned to the river via a pipe, thereby ensuring that water we

discharge to the river meets the very high standards expected. The water passing through these reed beds will have been abstracted from the River Avon and will have had no chemicals added to it.

After 8-10 years, the reed beds have to be emptied and the solids removed. The solid, organic waste will be recycled off site and generally used for agricultural purposes.

### **Why use reed beds?**

Reed bed filters will be a highly effective way of returning clean water to the River Avon. No chemicals are required and the process is energy efficient – the only relatively small power usage is in pumping the water to and from the reed beds. Therefore, carbon emissions are also low compared with alternatives. Maintenance of the reed beds is minimal (once every eight years) and less waste is physically transported off site, meaning there will be far fewer vehicle movements than those required by alternative methods.

### **How this project might affect you**

Access tracks to the reed beds will be formed from within land owned by us. There will be no new, permanent connection to the public road network. During construction of the reed beds, and when these are emptied, access will be via the existing vehicular access to the Knapp Mill site from Mill Road. This means that during these periods, Mill Road will be busier, with around 10-12 additional vehicle movements daily during construction, and additional vehicle movements for four weeks each year after the first eight years.

Other than these periodic, additional vehicle movements, the project will have no negative impact on residents. The development and access will take place at an appropriate distance from the residential properties. In terms of visual impact, the change from grazing and fields to reed beds will be similar to changing from livestock to arable farming, as the openness and landscaped setting will be retained. This conforms to the requirements of the statutory green belt within which the site is located.

### **Dorset County Council's proposed school development**

On a separate matter concerning this site, we have been approached by Dorset County Council and are in discussions with them regarding their acquisition of part of this site for the provision of a new primary school for the west Christchurch area. Discussions are at an early stage, and any acquisition by the County Council would be subject to the granting of planning permission for the school development. The enclosed map outlines the extent of our Knapp Mill site, the land we have earmarked for the reed beds, and the part of the site identified for the proposed school development.