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# Odour

We recognise that there are a large number of people who live or work close to Deephams Sewage Works who at times are affected by odour from the works and other waste and industrial operations in the area. Reducing odour from sewage treatment is one of our top priorities for the upgrade project.

### Why the sewage treatment process can smell

Sewage gives off odour when it is treated, or moved around during the treatment process. Although it is mainly water, sewage contains polluting materials that produce gases when they are treated. If the treatment process takes place in tanks that are open to the air, these gases can be released into the air and cause odour.

The amount of odour from a sewage treatment works depends on a range of issues including what is in the sewage, how it is treated, the direction and strength of the wind and how warm the weather is (sewage can smell more on hot days).

### Assessing odour for the upgrade

We are carrying out modelling to predict odour levels likely to be produced from the different treatment options we are considering as part of the upgrade and to assess the effectiveness of different ways of controlling odour.

We will take into account the amount of odour produced by each treatment option when we decide upon a preferred sewage treatment process and site layout for the upgrade. We have also reviewed the odour complaints that we and the London Boroughs of Enfield, Waltham Forest and Haringey have received from customers and local residents since 2006.

We will design the new sewage works to significantly reduce the current odour levels. This is likely to include introducing measures to control odour at the smelliest parts of the sewage works.

### How we plan to reduce odour

Our early odour assessment work shows that the three potential treatment options we have looked at in more detail (see the 'Our preferred site' leaflet), would all allow the same level of reduction in the odour produced by the upgraded sewage works.

We therefore plan to include measures to manage and control the odour produced by the most odorous parts of the sewage works – the primary treatment and sludge treatment stages of the sewage treatment process.

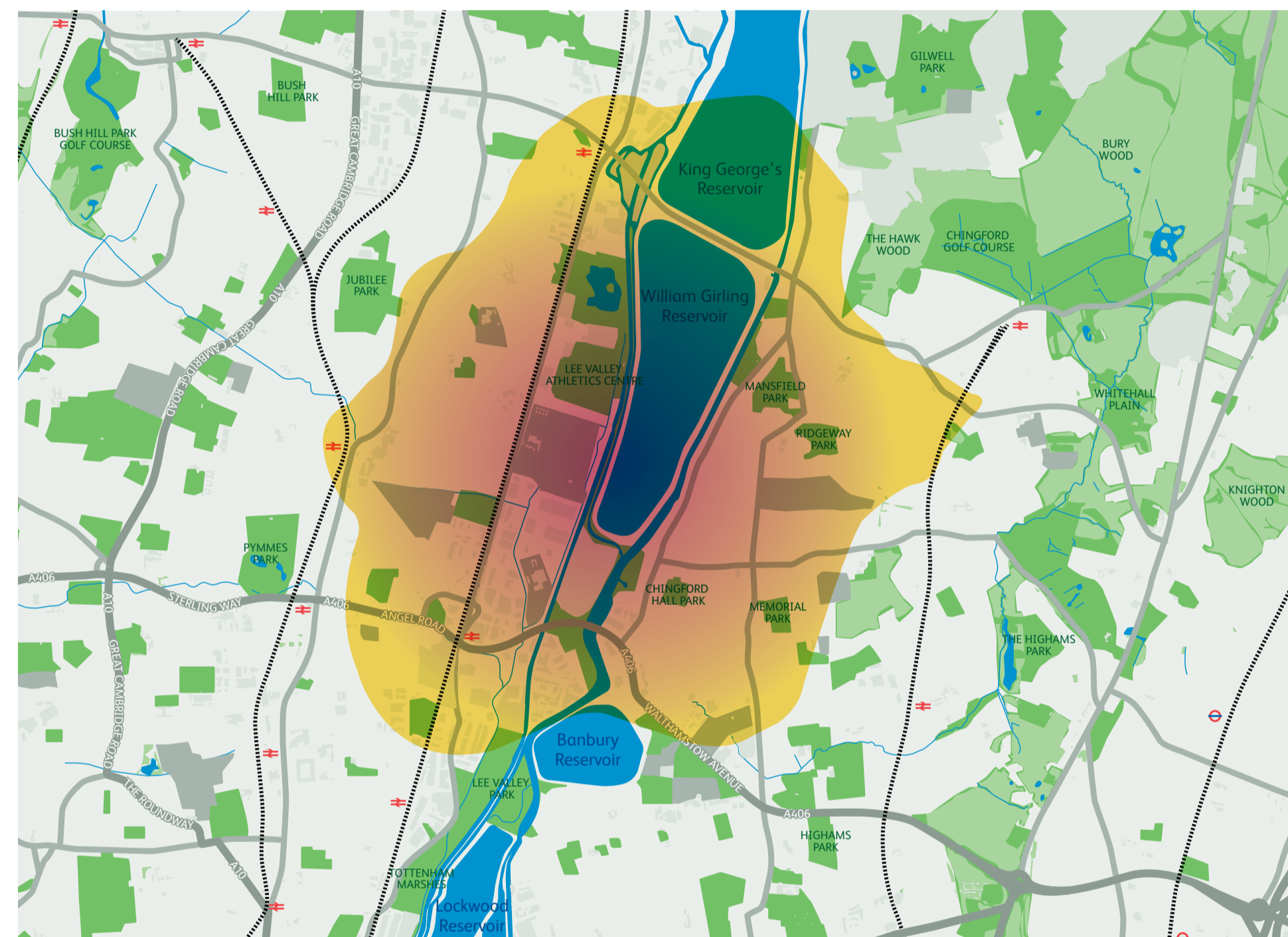


Figure 1: Map showing current odour situation

This may involve covering the large settlement tanks used at the primary treatment stage or putting this part of the process inside a large building and treating the gases produced. We would then release the treated air higher above the sewage works using a tall ventilation column.

We also plan to manage and control the odour produced by the sludge treatment stage of the sewage treatment process, which will further reduce the amount of odour produced by the sewage works.

We believe that these measures will significantly reduce odour from the works and we will develop our proposals in more detail as the design of the upgrade progresses.

Figures 1 and 2 give an indication of how odour currently leaves the existing works and how our odour assessment predicts the odour from the upgraded works could be significantly reduced once the construction work is complete. The red areas of the map are where the odour is strongest and the yellow areas are where it is weakest.

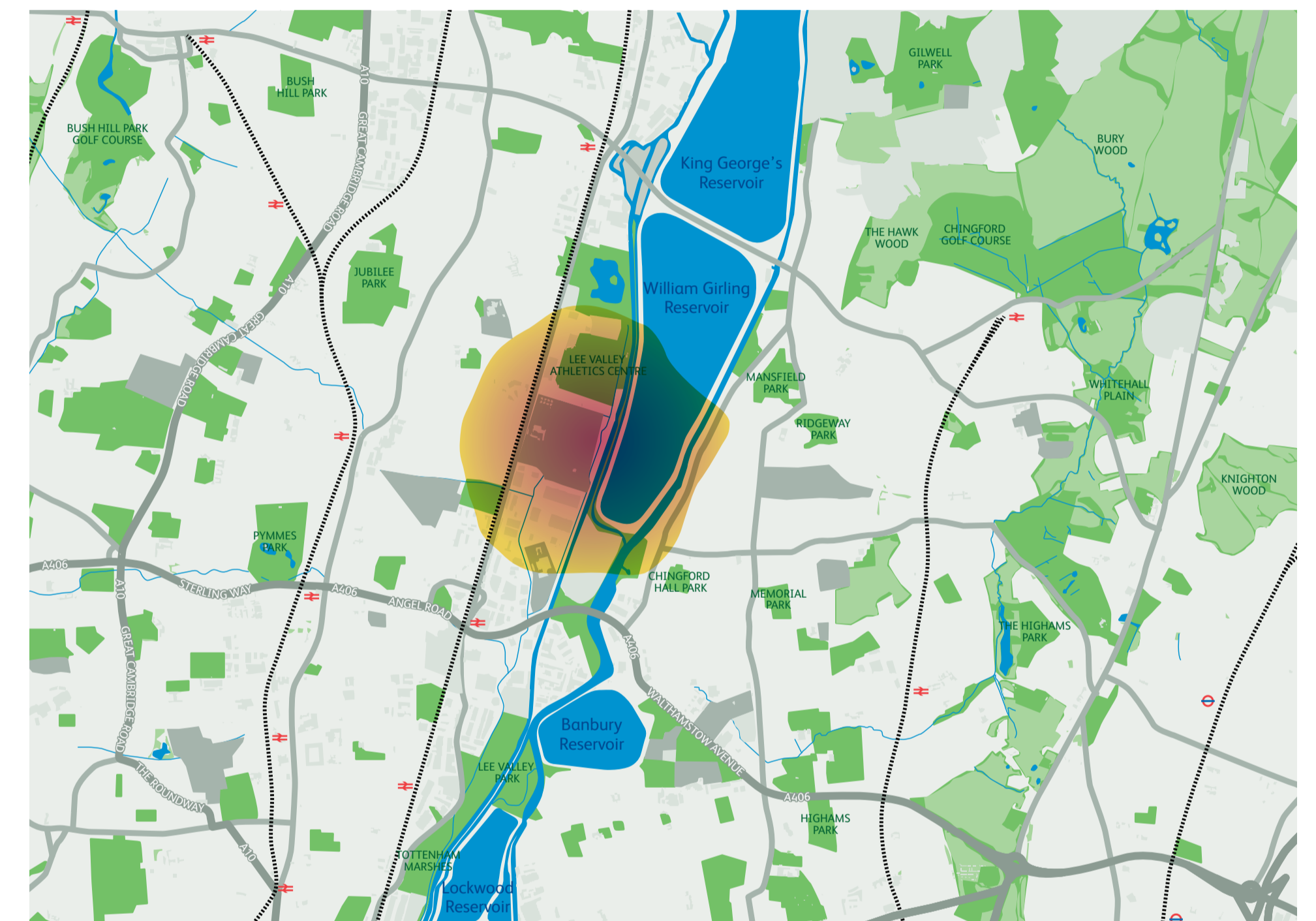


Figure 2: Map showing the predicted odour after the upgrade

The odour levels shown in Figure 2 are based on one of the proposed treatment technologies that we are looking at in more detail for use at our preferred site. The funding needed for any further measures to reduce odour, apart from at the primary treatment stage, will need to be approved by Ofwat before they can be put in place.