

Southall Waterside FAQs

1. What is happening at Southall Waterside?

Southall Waterside is a major regeneration scheme in the west of Ealing borough located on the former Southall Gasworks site. Berkeley Group has planning permission for a large mixed development across the site. Due to its historical use as a gasworks and chemical works from the 19th century until the late 1960s, there was extensive contamination of the soil which is being treated to make the land safe and suitable for its new uses, including housing.

2. What is remediation?

The term *remediation* describes actions taken to correct or reverse damage and is often used in relation to environmental contamination. In this case, remediation is the actions taken to deal with the contaminated soil, so that it is suitable for future use and any risks to the environment are prevented. There are several techniques available to remediate contaminated soil. Before the main remediation work began, the contractors assessed the most sustainable and economic option to use and selected a process known as stabilisation/solidification as the most suitable for the range of contaminants that needed to be treated. This involves chemically treating the pollutants with lime and encapsulating the treated soil with a concrete-type material.

3. Have alternative remediation methods been considered?

Yes, remediation contractors consulted before works began concluded that excavation and stabilisation/solidification, possibly with alternative techniques including bio-remediation and soil washing, were the only viable ways to remediate the site due to the type, extent and depth of the contamination. Only stabilisation/solidification has been used as the soils were too clayey for washing and stabilisation/solidification achieved the required standard without the need to use bio-remediation.

The remediation methods have been adapted in response to the odour reports, which have included slowing down the works and limiting the area of any open excavation. Work is planned around weather conditions to prevent the excavation and treatment of odorous materials when there is an increased likelihood of odour release beyond the site boundary. More rigorous odour monitoring has also been implemented, including increased on-site and off-site odour checks.

4. What happens to the soil once it is treated?

The resulting stabilised and solidified soil is first tested to ensure it meets the required standard for re-use and as a further precaution it is then placed at depth on the site, at least 600 mm below the proposed ground level and below a layer of crushed concrete and top soil.

5. Why not just leave the contamination in the ground?

The site could not be redeveloped for housing and other uses with the underlying contamination remaining in place. Its recent use for car parking left the contamination undisturbed, but to provide buildings and landscaped areas suitable for residential and other uses, the contamination has had to be dealt with to bring the land to a suitable standard. Leaving the contamination in the ground would also have posed a potential risk to groundwater and the Yeading Brook.

6. Why can't the contamination be taken off site and out of our neighbourhood?

Government policy is for the landfill of waste soil to be a last resort and its remediation and re-use on site is recommended as the sustainable option. Additionally, to have taken all the material off site to landfill would have meant thousands of lorries carrying contaminated soil through the neighbourhood. Apart from the cost and pollution arising, the road capacity meant that this would not be possible, and the project would have been unviable.

7. What happens to material that can't be treated on site?

There is very little material that couldn't be treated at the site. Some contaminated water and small amounts of asbestos cement were removed from the site by suitably qualified contractors. The water was taken by tanker to a water treatment plant and the asbestos cement was double bagged, suitably labelled with an asbestos warning and taken off site to a permitted waste facility.

8. When will the remediation work be complete?

The soil treatment hospital completed its operations in March 2019 and Berkeley's contractors began to dismantle it at the beginning of April. There is a relatively small area of the former gasworks site under the control of Cadent (utilities company) who have applied to do some remediation work on this piece of land. As this is a much smaller amount of contaminated soil it will be removed off-site. There will be some ongoing monitoring of air quality.

9. What is the role of the different parties involved in the Southall Waterside development?

Ealing Council is the local planning authority and is responsible for overseeing all aspects of the regeneration of the site, including the remediation of contaminated land and the construction of roads and buildings. The Council's contaminated land officer has been involved in the remedial works, ensuring the treated soils are suitable for re-use. This work will continue with the overseeing of the soft landscaping and checking that imported soil and topsoil are safe for future land use.

The Environment Agency (EA) is a non-departmental public body, sponsored by the Department for Environment, Food and Rural Affairs (Defra), with responsibilities relating to the protection and enhancement of the environment in England. It regulates the soil

remediation work at the site and advises the local planning authority (the Council) on the management of land affected by contamination, including the protection of water courses and groundwater.

Officers from both Ealing Council and the Environment Agency attend the site every month as part of the remediation validation process. The officers liaise with representatives of the remediation contractor **Blackwell**, the supervising environmental consultant **Atkins** and developer **Berkeley West Thames** during these meetings.

Public Health England (PHE) is an executive agency of the Department of Health and Social Care, that exists to protect and improve the nation's health and wellbeing and reduce health inequalities. PHE provides government bodies, professionals and the public with scientific support and expertise. PHE is providing public health advice and does not have a role in supervising or regulating the development.

10. What are Ealing Council's health and safety powers regarding the works?

Responsibility for enforcing health and safety legislation in places of work, *i.e.* occupational health and safety, is divided between local authorities and the Health and Safety Executive (HSE) according to the type of work involved. The HSE is the health and safety authority for the works, as they are responsible for nearly all construction work.

11. At what point can the council serve an abatement notice on the developers?

The Council has a duty to take reasonable steps to investigate any complaint of 'statutory nuisance' (such as odour nuisance) made by a resident and can serve an abatement notice on the developers when it considers that a statutory nuisance exists or is likely to occur or recur. However, in cases where a nuisance is reported from an activity regulated by the Environment Agency under an environmental permit (in this case, the soil remediation work), Defra expects the local authority to draw this to the attention of the Environment Agency to decide what further action needs to be taken.

In the case of the Southall Waterside remediation work, the Environment Agency carries out inspections and will take enforcement action as necessary to respond to the odour issues reported.

12. What chemicals have been found on site?

Hydrocarbons (including benzene, naphthalene and 4-isopropyltoluene), poly-aromatic hydrocarbons, metals and cyanide were identified before development started. These chemicals are commonly found on sites previously used as gasworks. The remediation work is designed to treat the soil to deal with these contaminants. Very little asbestos was found and what has been detected was in cement form (a cement-based product where about 10-15% of asbestos fibres are added to reinforce the cement). This was collected by hand, double-bagged, labelled, and safely removed from site by suitably qualified persons.

13. Can contaminated soil be accidentally carried off site on vehicles?

No, the on-site vehicles used for transporting soils do not leave the site. Heavily contaminated areas are cordoned off from the rest of the site and excavated soil is loaded directly on to dedicated vehicles situated away from the excavation and taken for on-site stabilisation/solidification. All vehicles leaving the site have their wheels washed before going on to the on-site tarmac access roads. The on-site access roads are regularly washed and swept. The transportation of significant amounts of soil onto surrounding public roads has not been reported and is considered unlikely.

14. What chemicals could be released into the air?

The excavation of soils contaminated with wastes from previous uses of the site including the gas works may cause the release of a range of volatile organic compounds (VOCs) including hydrocarbons (commonly found in petrol, diesel and coal tar).

15. Is the air being monitored?

Yes, air quality monitoring is being carried out by the developer on the site boundary, both near to the soil hospital and at down-wind locations on the site boundary. 21 monitoring locations are positioned to provide information on air quality at the boundary and nearest population areas, including residential properties, schools and commercial facilities. Some of the monitoring equipment is sampling continuously, so that it captures both shorter term 'peak' concentrations and can be assessed for potential longer-term health impacts.

Passive monitoring equipment is also being used, where air passes onto a tube which is then analysed by an accredited laboratory on a weekly basis. Testing is undertaken for a range of chemicals classed as volatile organic compounds (VOCs). Monitors have also been deployed to detect potential dust (and noise) nuisance from building activities. The VOC test results are subsequently checked against appropriate health-based standards to identify if there are potential risks to human health. Public Health England has reviewed these monitoring results and carried out a health risk assessment.

16. Are odours being monitored?

Yes, the developer is required to conduct monitoring for odours. This is carried out by trained staff who do 'sniff' tests on the site and in the surrounding areas. Also, as well as checking against health-based standards, the results of VOC monitoring are compared to odour thresholds.

17. What is being sprayed around the boundary?

Commonly used water-based odour suppressant sprays are being used at the site boundaries and around the soil treatment hospital as part of the contractors' odour control measures. The chemicals used in the sprays are not harmful but are designed to reduce the impact of the odours. They can appear to be clouds of smoke at a distance.

18. What are the health risks to people living around the site?

Overall, the results for the air quality monitoring are considered unlikely to pose a direct toxicological risk to the long-term health of the nearby population.

The data provided to PHE by Ealing Council has been compared to available health-based air quality guidelines and standards or assessment levels; these standards are for the protection of the general population and are often at lower levels than the standards for occupational exposure. Where the concentrations in air are shown to be lower than appropriate health-based standards or guidelines, it may be assessed that the risk to health is minimal. Based on the available monitoring data, average levels of VOCs have been below or comparable to guideline or assessment levels. There have been occasions where the levels of benzene, naphthalene and 4-isopropyltoluene have been recorded above health-based guidelines.

These exceedances have been short lived and are mostly at monitoring locations immediately adjacent to the soil hospital, whereas the guidelines used for comparison are based on annual average concentrations. The exceedances have also remained below levels that are likely to cause acute or short-term health effects. Furthermore, it should be noted that monitoring stations are positioned on the site boundary and the concentrations of the compounds in air will have diluted further before reaching the surrounding population, reducing the potential risk. Further monitoring data has been received and this risk assessment will be updated in due course.

19. Can odours cause ill health?

There have been public concerns in relation to odours. The human nose is very sensitive to odours and substances that are perceived as odorous are commonly present at levels below which there is a direct toxicological effect. Odours can cause a nuisance and possibly lead to stress and anxiety. Some people may experience symptoms such as nausea, headaches or dizziness, as a reaction to odours even when the substances that cause those smells are themselves not harmful to health.

The PHE risk assessment is based on monitoring undertaken by the developers, their contractors and consultants. The first interim risk assessment was based on air quality monitoring undertaken between 1st June and 25th September 2018 and the second was based on air quality monitoring undertaken between 25th September and 12th December 2018. The latest report and risk assessment have been updated following receipt of additional air quality monitoring data undertaken between 12th December 2018 and 10th May 2019.

Full details of the latest PHE report and risk assessment is available to see at www.ealing.gov.uk/sw-assessment

20. Naphthalene and ethnicity

Long term health impacts from naphthalene are uncommon and you would need a large dose over a long period of time. Many reported cases have involved children swallowing mothballs, with the most serious effect being haemolytic anaemia in those with glucose-6-phosphate dehydrogenase (G6PD) deficiency. Long term health impacts from naphthalene by any route into the body would require a significant dose.

BME people who are deficient in G6PD may be more susceptible to certain chemicals including naphthalene. G6PD is an enzyme found in red blood cells which helps prevent chemicals from damaging these cells. There are different types of G6PD deficiency and these tend to affect specific ethnic groups; G6PD deficiency is most common in people from Africa, India and Thailand (1 in 5 people).

Excluding the soil hospital, the average site-wide concentration at Southall Waterside falls within WHO Indoor Air Quality Guidelines. However, naphthalene levels found to be above both the chronic minimal risk level (MRL) and the WHO guideline value does not indicate an immediate risk to health, as the guidelines are set to be protective of exposure over a lifetime.

The results obtained from the air quality monitoring indicate there is unlikely to be a direct toxicological risk to health of the nearby population from the levels of VOCs detected.

21. Is there potential for the soil in my garden and public areas outside the site boundary to be impacted as a result of the remediation works?

It is extremely unlikely that the remediation works have resulted in the contamination of soils off-site. The generally wet nature of the contaminated soils meant that airborne dust was not produced. The soils were clayey and stuck together. Localised dust on site from the haul roads and uncontaminated stockpiles is quickly dealt with by damping down the areas concerned.

22. Whilst outdoor air quality may be acceptable, is there potential for indoor air quality in my house to be worse as a result of these works?

Odour can sometimes be perceptible through open windows or vents but it is unlikely that outdoor pollutants would accumulate indoors. Other sources of indoor air pollution are more likely to worsen indoor air quality – e.g. smoking, poorly vented gas appliances, use of cleaning solvents and other chemical products.

23. Are people from BME ethnicities more genetically susceptible to illnesses from exposure to naphthalene?

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24. What do I do if the odour is affecting me?

Members of the public can use the Council's Response service to report the odour on 020 8825 8111.

The Environment Agency should also be contacted on their Incident Hotline number 0800 80 70 60. Council officers will aim to visit to witness the nuisance and will liaise as appropriate with the Environment Agency and the developer. The EA will inform the site operator of any odour reports received, having removed personal information from the reports shared.

If an odour is causing concern for health, please consult your GP or NHS 111.

25. Where have the Air Quality Public Meetings being publicised?

The public meetings have promoted on local media publications, and across the council's channels including the council's website, Twitter, Facebook, Instagram and LinkedIn as well as Ealing News Extra. Leaflets have also been distributed in Southall.