



Risk assessment for odour encroachment



Introduction

Our sewage treatment works and other wastewater sites, like pumping stations and storm tanks, can sometimes be odour sources. They were originally built on the edges of towns and villages, some distance from homes and businesses. But population growth means these once remote sites are now potential locations for development.

We already treat sewage for 15 million customers and this number is growing all the time. This is likely to lead to people living nearer to our sites – a process known as encroachment.

It can be costly to reduce and treat smells – for example, by covering parts of sites that weren't designed to minimise the risk of odour.

This guidance applies where new and 'change of use' developments are proposed near sewage treatment works and, occasionally, large pumping stations, and where odours from our operations could create a nuisance.

We want to minimise future exposure to odour and make sure existing customers aren't required to fund previously unnecessary odour control work.

We aim to ensure all proposed developments near our wastewater sites are risk assessed and, where necessary, that developers fund any mitigation needed to enable them to build there.

We apply this approach consistently across our region, regardless of land ownership.

Our approach to the odour encroachment process is outlined below. We adhere to:

- Defra's 'Code of practice on odour nuisance from sewage treatment works' (2011 – now withdrawn)
- The Institute of Air Quality Management's 'Guidance on the assessment of odour for planning' (2018)
- The Environment Agency's 'H4 Odour Management' guide (2011), which applies only to sites with an environmental permit

When making our desktop assessment, we always consider schemes on a case-by-case basis and reflect on wider stakeholder impact. This could lead to us requesting modelling work.

Collaborative working

We encourage developers to contact us as early as possible to discuss encroachment prior to their outline planning application. This will enable issues to be identified and resolved early, meaning fewer delays at the planning and construction stages.

We actively identify encroachment risk by:

- (a) Liaising with local planning authorities (LPAs) at the local planning stage, prior to site-specific consultation at planning permission stage
- (b) Searches on local authorities' websites for consultation on planning applications.

We'll carry out risk assessments in phases – by desktop and then sample surveys – depending on the likelihood of encroachment occurring. Where developers haven't engaged with us, we'll seek planning conditions, which can lead to delays.

Screening development plans

Before making any recommendation, we'll consider the nature of the development and the scale, impact and location of the proposal. In general, we'll look closely at any proposals within either 800 metres of a sewage treatment works or 15 metres of a large sewage pumping station.

We'll also take into account the degree of odour complaint levels at the wastewater site.

We'll carry out a desktop assessment, then recommend whether further modelling work is needed.

This guidance applies to new and change of use developments proposed close to potentially odorous assets.

The outcome and potential need for further information

If our preliminary risk assessment shows the development could increase the risk of statutory nuisance based on our assessment criteria, we'll object to the development. We'll do so based on the principle of incompatible use, until the developer has submitted an odour modelling assessment, in consultation with us, and it's been approved by the local planning authority.

We advise that the most accurate method for assessing odour impact should be a full sample survey consisting of source measurements at all relevant sources by olfactometry, followed by dispersion modelling.

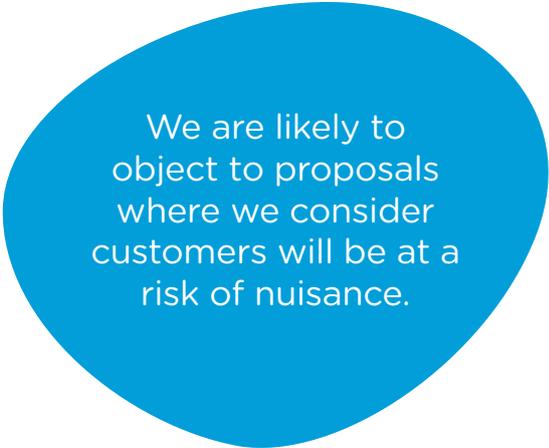
We don't support such methods as the use of sniff tests, which don't provide accurate emission rates and are unlikely to represent a reasonable assessment of the impact risk.

A developer can instruct us to undertake an odour impact modelling study by contacting our Development Planning team on 0203 577 9998.

We'll then arrange for approved consultants to provide a quote based on a standard scope.

On completion of the study the developer will have the opportunity to contribute to the final version of the report which can then be used to support any planning applications.

Please note, we don't allow third parties to carry out independent surveys at our sites.



We are likely to object to proposals where we consider customers will be at a risk of nuisance.

Mitigation

After extensive analysis of complaints across our area, we've set a threshold at 3.0 ouE/m³ as the likely odour level at which customers' living arrangements are affected. We therefore use this figure to establish our 'cordon sanitaire' for a wastewater site.

This is supported by the Institute of Air Quality Management's 'Guidance on the assessment of odour for planning', which classes smells from sewage treatment works operating normally as "moderately offensive odours", and adopts the Environment Agency's H4 benchmark odour criteria, which is also set at 3.0 ouE/m³.

This threshold is for a 98th percentile hourly average across a calendar year, with the potential that for 2% of the year the modelled odours may exceed this benchmark odour criteria.

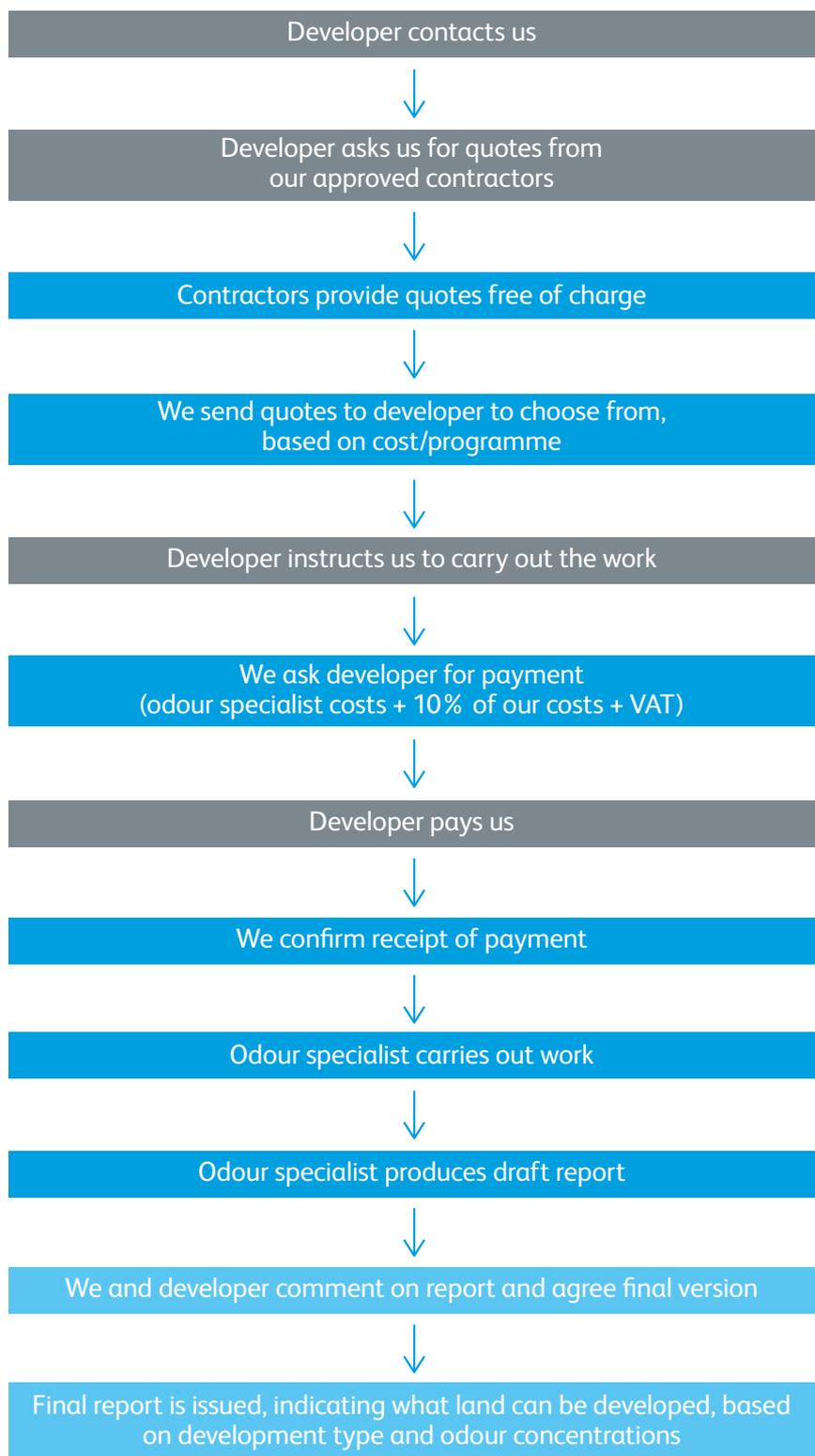
Where the developer wishes to release further land from within the cordon sanitaire, it may be possible to do this by providing odour mitigation at the site. Further modelling would be required to understand the benefits and cost of this mitigation.

Odour from our sites can vary throughout the year but is generally stronger during warmer months. Odour surveys can therefore only take place under typical summer conditions between May and September.

The odour assessment should be submitted to the local planning authority in support of the developer's planning application. We'd expect it to show the representative odour plume and where development will be located in relation to that contour.

Where development is still located within the cordon sanitaire, the application should include a strategy setting out what mitigation will be provided to reduce odours and what the revised contour will look like.

How the process works



-  Developer's responsibility
-  Thames Water's responsibility
-  Both to take responsibility