Water quality, wastewater infrastructure and drainage

Policy CE8 – Water quality, wastewater infrastructure and drainage

Protecting and enhancing water quality

1) Development must protect and enhance water quality, including through:

   a) the use of green infrastructure, including sustainable drainage systems (SuDS);

   b) utilising natural means of water quality improvements where possible, with mechanical water quality improvement devices only being used in situations where insufficient water quality improvement can be achieved through natural means;

   c) maximising water efficiency; and

   d) identifying and implementing opportunities to remedy historical water contamination issues, where appropriate.

2) Where a development includes the creation or extension of roads, the potential water quality issues associated with road runoff must be considered and appropriate mitigation provided to address impacts.

3) Where development may have an adverse impact on water quality, evidence must be provided that identifies potential impacts (including for human health, the natural environment and amenity) and suitable mitigation. Engagement should be undertaken with the Environment Agency to agree the scope and content of the evidence required. Mitigation must be in place before any environmental effects occur. Where appropriate, water quality monitoring should be undertaken and submitted to the council to ensure that mitigation is effective.

Meeting legal requirements

4) Development, individually or cumulatively, must not prevent the future attainment of "good" status under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017[a].

5) Where there are impact pathways on habitats of national or international importance, development must not prevent a protected waterbody achieving the objectives set out in the Common Standards Monitoring Guidance[b] (or any future standards/guidance that may supersede this).

Wastewater infrastructure

6) There must be adequate wastewater treatment capacity to serve development.

7) Applications for major development must be supported by a Sewage Capacity Assessment.

8) Where wastewater infrastructure capacity constraints are identified, development must not commence until the delivery of sufficient new and/or upgraded wastewater infrastructure has been agreed and programmed (between the developer and Thames Water or other utility provider). Development must not be occupied until the necessary wastewater treatment infrastructure upgrades have been completed. A phased approach may be required to ensure alignment between development and infrastructure delivery. The council will apply Grampian conditions, where appropriate, to ensure that adequate sewerage capacity is in place before new homes are occupied in order to protect water quality.

Drainage

9) All development will be required to provide a Drainage Strategy.

10) Development will be expected to incorporate sustainable drainage systems (SuDS) that:

a) are well designed;

b) are appropriate to their location (for example, infiltration SuDS are unlikely to be appropriate in areas of contamination, even following remediation);

c) are multifunctional, providing a range of benefits for people and nature, including protecting and enhancing water quality (including groundwater quality), managing flood risk and supporting biodiversity;

d) attenuate run-off rates to greenfield run-off rates. Higher rates would need to be justified and the risks quantified. Development on brownfield land should reduce run-off rates to as close to greenfield rates as possible; and

e) reduce the amount of water discharging to the wider wastewater infrastructure network at source, with opportunities taken to disconnect flows where possible. (For example, by using features such as water butts, swales and rain gardens, rather than direct network connections from gullies and rainwater pipes.)

11) Major development must comply with the latest local standards and guidance for surface water drainage produced by the Lead Local Flood Authority (Oxfordshire County Council)[c].

12) No new surface water connections are to be connected to a foul sewer. For brownfield sites, where existing connections are proven, the drainage strategy should seek to either remove these if feasible or attenuate existing flows to as close to the QBar greenfield rate as feasible or to a rate acceptable to Thames Water whichever is the lower.

13) In the case of extensions to buildings, changes of use and refurbishments, developments are encouraged to take the opportunity to upgrade the drainage of the existing building as well as the extension, by disconnecting roof drainage from the surface water sewer network and incorporating soakaways, water butts and greywater recycling schemes.

14) All development will be required to demonstrate suitable arrangements for future maintenance and management of drainage schemes. All below ground drainage serving more than one property should be designed to adoptable standards and offered to an OFWAT approved statutory water authority for adoption.

15) In areas where high groundwater could potentially affect the drainage system, specific measures should be incorporated in any new network provided to reduce the risk of groundwater affecting the drainage system.

[a] The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017, available at: https://www.legislation.gov.uk/uksi/2017/407/contents

[b] Joint Nature Conservation Committee (various dates) Common Standards Monitoring Guidance, available at: www.jncc.gov.uk/our-work/common-standards-monitoring-guidance/

[c] Current local standards can be found at Oxfordshire County Council (2021) Local Standards and Guidance for Surface Water Drainage on Major Development in Oxfordshire (Version 1.2), available at: www.oxfordshirefloodtoolkit.com/wp-content/uploads/2022/01/LOCAL-STANDARDS-AND-GUIDANCE-FOR-SURFACE-WATER-DRAINAGE-ON-MAJOR-DEVELOPMENT-IN-OXFORDSHIRE-Jan-22-2.pdf

4.47 Waterbodies in South Oxfordshire and Vale of White Horse include the River Thames, globally rare chalk streams and groundwater aquifers. These waterbodies provide a range of social, environmental and economic services, such as providing water supplies for homes and businesses, supporting a diverse range of habitats and wildlife, contributing to the districts' special character, heritage and identity, and providing opportunities for sports, leisure and recreation. However, the Joint Local

Plan Water Cycle Study Scoping Report[17] shows that of the 45 surface waterbodies wholly or partially in the districts that are monitored by the Environment Agency (EA), four are classed as being of 'bad' ecological status, 18 are classed as 'poor', 22 are classed as 'moderate', and only one is classed as 'good'. All these waterbodies fail in their chemical status. It is therefore important that the Joint Local Plan helps to protect our waterbodies from further decline and supports their enhancement wherever possible.

4.48 The quality of watercourses can be affected by a range of factors including pollution and changes to water levels and flows. Climate change will also have an impact on water quality as drier summers and wetter winters alter water levels and flows. Warmer weather will also change water temperatures, which can affect delicate ecosystems. Development can negatively impact water quality in a range of different ways, for example:

- development can increase demand for water. As more water is taken from waterbodies, water levels and flows may change and the concentration of pollutants may increase.
- development can result in more rainwater draining from hard surfaces such as roads, pavements, car parks and driveways. This water can carry pollutants such as silt, grit, bacteria from animal faeces and oil that may enter surface water sewers that discharge directly into our rivers and streams.
- some development, for example industrial uses, can cause specific concerns (for example in relation to chemicals used).
- development can also result in more wastewater going to treatment works. This means that more treated wastewater may be released back into the environment, which still carries some pollutants. If wastewater infrastructure capacity is overwhelmed, there is also the risk that untreated wastewater may be released directly into rivers and streams, causing significant health and environmental risks.

4.49 Therefore, it is essential that there is sufficient wastewater infrastructure capacity available to serve development. Policy CE8 (Water quality, wastewater infrastructure and drainage) seeks to ensure that wastewater infrastructure capacity is appropriately assessed and, where capacity issues are identified, seeks to ensure alignment of development and infrastructure upgrades. The Water Cycle Study updated to inform the Joint Local Plan assesses wastewater infrastructure capacity and environmental impacts. It identifies that a number of wastewater infrastructure upgrades are required to support development in the districts,

[17] South Oxfordshire and Vale of White Horse (2024) Water Cycle Study (WCS) Scoping Report (prepared by Wallingford HydroSolutions), available at: www.southandvale.gov.uk/JLPEvidence

and this is also set out in the Infrastructure Delivery Plan[18]. Developers should engage with Thames Water, the wastewater service provider for South Oxfordshire and Vale of White Horse, at a very early stage of their proposals.

4.50 This policy also sets out drainage requirements for developments. Ensuring developments are supported by appropriate drainage solutions is important in helping to manage flood risk, protecting and enhancing water quality, and avoiding additional pressure on wastewater infrastructure. Sustainable drainage systems (SuDS) can also provide a wide range of additional benefits for people and nature and should be considered as part of a comprehensive approach to green infrastructure.

Air quality

Policy CE9 – Air quality

Protecting and enhancing air quality

1) Development must protect and enhance air quality through:

   a) design that seeks to avoid negative impacts on air quality and/or exposure to poor air quality, both during construction and over the lifetime of development;

   b) where it is not possible to entirely avoid negative impacts on air quality and/or exposure to poor air quality, design measures should be used to minimise negative impacts/exposure as far as possible, both during construction and over the lifetime of development;

   c) provision of appropriate green infrastructure; and

   d) regard to the councils' latest air quality developer guidance[a].

2) Development, on its own or cumulatively[b], should not result in the creation of any new areas that exceed national air quality objective levels or delay the date at which compliance will be achieved in areas that are currently in exceedance of national air quality objective levels[c].

[18] South Oxfordshire and Vale of White Horse (2024) Infrastructure Delivery Plan, available at: www.southandvale.gov.uk/JLPEvidence