

**Biodiversity Net Gain and Air Quality
Extracts from nPPG
28 November 2019**

[A] Biodiversity Net Gain

nPPG – amended 21-7-2019

Biodiversity, geodiversity and ecosystems

Is there a statutory basis for seeking to conserve and enhance biodiversity?

[Section 40 of the Natural Environment and Rural Communities Act 2006](#) places a duty on all public authorities in England and Wales to have regard, in the exercise of their functions, to the purpose of conserving biodiversity. A key purpose of this duty is to embed consideration of biodiversity as an integral part of policy and decision making throughout the public sector, which should be seeking to make a significant contribution to the achievement of the commitments made by government in its [25 Year Environment Plan](#).

Guidance on the law concerning designated sites and protected species is published separately because its application is wider than planning. In applying this, the aim should be to fulfil statutory obligations in a way that minimises delays and burdens.

Paragraph: 009 Reference ID: 8-009-20190721

Revision date: 21 07 2019

How can planning authorities plan for biodiversity and geodiversity?

Development plans and planning decisions have the potential to affect biodiversity or geodiversity outside as well as inside relevant designated areas.

Planning authorities and neighbourhood planning bodies can work collaboratively with other partners, including [Local Nature Partnerships](#), to develop and deliver a strategic approach to protecting and improving the natural environment based on local priorities and evidence. Equally, they need to consider the opportunities that individual development proposals may provide to conserve and enhance biodiversity and geodiversity, and contribute to habitat connectivity in the wider area (including as part of the Nature Recovery Network).

In this context, it is useful to consider:

- the latest government policies that are relevant, including the commitments in the [25 Year Environment Plan](#);
- the contents of existing up-to-date plans and strategies for biodiversity and nature recovery;
- the potential effects of a development on the habitats or species on the [Natural Environment and Rural Communities Act 2006 section 41 list](#);
- whether an ecological survey is appropriate;
- opportunities to restore or enhance local ecological networks, including those that contribute to the wider Nature Recovery Network;
- how to secure net gains for biodiversity as part of green infrastructure provision; and
- opportunities to work strategically in order to streamline development decisions: for example, by establishing a 'zone of influence' around protected sites.

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What evidence needs to be taken into account in identifying and mapping local ecological networks?

Relevant evidence in identifying and mapping local ecological networks can include:

- the broad geological, geomorphological and bio-geographical character of the area, creating its main landscapes types;
- key natural systems and processes within the area, including fluvial and coastal;
- the location and extent of internationally, nationally and locally designated sites;
- the distribution of protected and priority [habitats and species](#);
- areas of [irreplaceable natural habitat](#);
- habitats where specific land management practices are required for their conservation;
- main landscape features which, due to their linear or continuous nature, support migration, dispersal and gene flow, including any potential for new habitat corridors to link any isolated sites that hold nature conservation value, and therefore improve species distribution;
- areas identified by national or local partnerships with potential for habitat enhancement or restoration, including those necessary to help biodiversity adapt to climate change or which could assist with the habitat shifts and species migrations arising from climate change;
- audits of green infrastructure, such as open space within urban areas;
- information on the biodiversity and geodiversity value of previously developed land and the opportunities for incorporating this in developments; and
- areas of geological value which would benefit from enhancement and management.

Local Nature Partnerships and similar partnerships working to conserve wildlife can be a useful source of information for existing ecological networks.

Paragraph: 011 Reference ID: 8-011-20190721

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How do local ecological networks relate to the Nature Recovery Network?

As set out in the Government's 25 Year Environment Plan, the Nature Recovery Network is an expanding and increasingly-connected network of wildlife-rich habitat across England. It comprises a core network of designated sites of importance for biodiversity and adjoining areas that function as stepping stones or wildlife corridors, areas identified for new habitat creation and up to 25 nature recovery areas for targeted action. Defra, Natural England and other government bodies are working with national and local partnerships to deliver the Network, which includes support for developing maps and advice to show where actions to improve and restore habitats would be most effective. Local ecological networks can make a significant contribution to developing the Nature Recovery Network. Local ecological networks can be identified and mapped as a part of the plan-making process, with policies identifying appropriate levels of protection and opportunities to create, restore or enhance habitats or improve connectivity.

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How can plan-making bodies identify and safeguard Local Wildlife Sites and Local Geological Sites?

Locally designated 'Local Wildlife Sites' and 'Local Geological Sites' are areas of substantive nature conservation value and make an important contribution to ecological networks and nature's recovery. They can also provide wider benefits including public access (where agreed), climate mitigation and helping to tackle air pollution. They can be in rural, urban or coastal locations, can vary considerably in size, and may comprise a number of separate sites.

National planning policy expects plans to identify and map these sites, and to include policies that not only secure their protection from harm or loss but also help to enhance them and their connection to wider ecological networks.

Local planning authorities can take a lead in establishing and maintaining partnerships and systems to identify, manage, enhance and safeguard local sites. The positive engagement and co-operation of land owners and their representative bodies can contribute significantly to the success of these partnerships.

All local sites partnerships need to use clear and locally defined site selection criteria with measurable thresholds. For example, where a particular habitat is especially scarce, it may be appropriate to adopt a lower threshold for selection than would be appropriate for other natural areas so that a suitable range of sites is protected. Selection criteria need to be developed with reference to the standard criteria in the following question, with all sites that meet the relevant criteria (informed by detailed ecological surveys and expertise) then being selected.

Paragraph: 013 Reference ID: 8-013-20190721
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What are the Standard Criteria for Local Wildlife Sites?

Standard Criteria	Detail
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Size or extent	Larger sites are important for supporting viable populations of species, but smaller sites can be important as part of a larger habitat resource dispersed across the landscape. Smaller sites can be particularly valuable in areas lacking natural greenspace.
Diversity	Sites should seek to reflect the diversity of wildlife, habitats, geological or geomorphological features that characterise the area.
Naturalness	The degree to which a site supports natural features, including rock exposures revealing underlying geology, or demonstrates active or past natural processes
Rare or exceptional feature	Sites should comprise habitats or geological or geomorphological features that are rare or exceptional in the area. The local loss of a rare species or habitat may result directly in the reduction in its wider geographical range. Geological sites are often unique, formed in environments and processes that no longer exist, and their loss removes part of our understanding of the geological history of an area.
Fragility	Some habitats and geological features are more sensitive to change and are at greater risk of being lost or damaged due to the direct or indirect impacts of climate change, human activities or other influences
Typicalness	Areas that exemplify a type of habitat, geological feature, or a population of a species, that is characteristic of the natural components of the landscape in which they are found.
Recorded history and cultural associations	Sites with links to land-use, industrial and cultural history, historic events, literary or other associations in art, and the history of natural environment research can reveal environmental change over time, changes in the use of natural resources or changes in perception of the natural environment.
Connectivity within the landscape	Species may require habitat comprised of dispersed areas which are accessible and part of a functional network. Individual sites (both wildlife and geological) need to be considered in terms of the contribution they make to wider ecological networks.
Value for appreciation of nature and for learning	Sites can provide opportunities for local educational use, enabling people of all ages to learn about, better understand, experience and enjoy local wildlife and geology. Sites with less intrinsic interest may be of nature conservation value for the opportunities they provide for the appreciation of nature. Sites may also provide opportunities for ecological or geological research.

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How can information on ecology be gathered and kept up to date?

A Local Record Centre can be an effective mechanism for facilitating access to environmental information which may be held across many public and voluntary organisations. Such centres provide a one-stop information source, often serving a specific county or grouping of local authorities. Their main function is to collate, manage and disseminate biodiversity information but they may also hold other types of environmental data and can also advise on evidence gathering. The local planning authority can provide contact details if it supports a Local Record Centre.

The [Multi-Agency Geographic Information for the Countryside \(MAGIC\)](#) website also provides a range of geographical information on the natural environment from across government.

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How can protected and priority species be considered in planning?

Planning authorities need to consider the potential impacts of development on protected and priority species, and the scope to avoid or mitigate any impacts when considering site allocations or planning applications. [Guidance on the law affecting Habitats Sites, protected species and SSSIs](#).

Natural England has issued standing advice on protected species. A protected species mitigation licence from Natural England may be required before any work can start.

Natural England is working with local partners to develop strategic mitigation approaches to address the impacts of development on certain protected species such as great crested newts.

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How can ecosystems services be taken into account in planning?

[Guidance on ecosystems services](#) (the benefits people obtain from ecosystems, such as food, water, flood and disease control and recreation) and using an ecosystems approach is available. This guidance can, where appropriate, inform plan-making and decision-making on planning applications.

Paragraph: 017 Reference ID: 8-017-20190721

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How can biodiversity and geodiversity be taken into account in preparing a planning application?

Information on biodiversity and geodiversity impacts and [opportunities](#) needs to inform all stages of development (including site selection and design, [pre-application consultation](#) and the application itself). An ecological survey will be necessary in advance of a planning application if the type and location of development could have a significant impact on biodiversity and existing information is lacking or inadequate. Pre-application discussions can help to scope whether this is the case and, if so, the survey work required.

Even where an [Environmental Impact Assessment](#) is not needed, it might still be appropriate to undertake an ecological survey, for example, where protected species may be present or where biodiverse habitats may be lost.

As with other supporting information, local planning authorities should require ecological surveys only where clearly justified. Assessments should be proportionate to the nature and scale of development proposed and the likely impact on biodiversity. Further guidance on information requirements is set out in [making an application](#).

[Planning conditions](#), [legal agreements](#) or undertakings may be appropriate in order to provide for monitoring and/or biodiversity management plans where these are needed.

Paragraph: 018 Reference ID: 8-018-20190721

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What questions are important in applying policy to avoid, mitigate or compensate for significant harm to biodiversity?

The following questions are relevant when applying the 'mitigation hierarchy' at [paragraph 175 of the National Planning Policy Framework](#):

Information

- Where an Environmental Impact Assessment has been undertaken, what evidence on ecological effects has already been provided in the Environmental Report and is this sufficient without having to undertake more work?
- In cases where biodiversity may be affected, is any further information needed to meet statutory obligations and/or policy obligations (including Ramsar Sites and Local Wildlife Sites) as signposted in [guidance published by Defra/Natural England](#).
- Is the significance of the effects clear?
- Is relevant internal or external expertise available?

Avoidance

Can significant harm to wildlife species and habitats be avoided; for example by locating on an alternative site with less harmful impacts?

Mitigation

Where significant harm cannot be wholly or partially avoided, can it be minimised by design or by the use of effective mitigation measures that can be secured by, for example, conditions or planning obligations?

Compensation

Where, despite mitigation, there would still be significant residual harm, as a last resort, can this be properly compensated for by measures to provide for an equivalent or greater value of biodiversity? Where a development cannot satisfy the requirements of the 'mitigation hierarchy', planning permission should be refused as indicated in [paragraph 175 of the National Planning Policy Framework](#).

Paragraph: 019 Reference ID: 8-019-20190721

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Net gain

What is net gain?

Net gain in planning describes an approach to development that leaves the natural environment in a measurably better state than it was beforehand. Net gain is an umbrella term for both biodiversity net gain and wider environmental net gain.

Paragraph: 020 Reference ID: 8-020-20190721

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How can plans encourage net gain?

Plans, and particularly those containing strategic policies, can be used to set out a suitable approach to both biodiversity and wider environmental net gain, how it will be achieved, and which areas present the best opportunities to deliver gains. Such areas could include those identified in: natural capital plans; local biodiversity opportunity or ecological network maps; local green infrastructure strategies; strategic flood risk assessments; water cycle studies; air quality management plans; river basin management plans; and strategic protected species licensing areas. Consideration may also be given to local sites including where communities could benefit from improved access to nature.

Paragraph: 021 Reference ID: 8-021-20190721

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What is biodiversity net gain?

The National Planning Policy Framework encourages net gains for biodiversity to be sought through planning policies and decisions. Biodiversity net gain delivers measurable improvements for biodiversity by creating or enhancing habitats in association with development. Biodiversity net gain can be achieved on-site, off-site or through a combination of on-site and off-site measures. It may help local authorities to meet their duty under Section 40 of the Natural Environment and Rural Communities Act 2006.

Paragraph: 022 Reference ID: 8-022-20190721
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How can biodiversity net gain be achieved?

Planning conditions or obligations can, in appropriate circumstances, be used to require that a planning permission provides for works that will measurably increase biodiversity. An applicant may also propose measures to achieve biodiversity net gain through a unilateral undertaking. The work involved may, for example, involve creating new habitats, enhancing existing habitats, providing green roofs, green walls, street trees or sustainable drainage systems. Relatively small features can often achieve important benefits for wildlife, such as incorporating 'swift bricks' and bat boxes in developments and providing safe routes for hedgehogs between different areas of habitat. Benefits could be achieved entirely on-site or by using off-site gains where necessary. Off-site measures can sometimes be secured from 'habitat banks', which comprise areas of enhanced or created habitats which generate biodiversity unit 'credits'.

Care needs to be taken to ensure that any benefits promised will lead to genuine and demonstrable gains for biodiversity. Discussions with local wildlife organisations can help to identify appropriate solutions, and tools such as the Defra [biodiversity metric](#) can be used to assess whether a biodiversity net gain outcome is expected to be achieved. Planning authorities need to make sure that any evidence and rationale supplied by applicants are supported by the appropriate scientific expertise and local wildlife knowledge.

When assessing opportunities and proposals to secure biodiversity net gain, the local planning authority will need to have regard to all relevant policies, especially those on open space, health, green infrastructure, Green Belt and landscape. It will also be important to consider whether provisions for biodiversity net gain will be resilient to future pressures from further development or climate change, and supported by appropriate maintenance arrangements.

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How does biodiversity net gain fit with the mitigation hierarchy?

Biodiversity net gain complements and works with the biodiversity mitigation hierarchy set out in [NPPF paragraph 175a](#). It does not override the protection for designated sites, protected or priority species and irreplaceable or priority habitats set out in the NPPF. Local planning authorities need to ensure that habitat improvement will be a genuine additional benefit, and go further than measures already required to implement a compensation strategy.

Paragraph: 024 Reference ID: 8-024-20190721
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How can biodiversity net gain be calculated?

Using a metric is a pragmatic way to calculate the impact of a development and the net gain that can be achieved.

The [biodiversity metric](#) can be used to demonstrate whether or not biodiversity net gain will be achieved. It enables calculation of losses and gains by assessing habitat:

- distinctiveness: whether the type of habitat is of high, medium or low value to wildlife.
- condition: whether the habitat is a good example of its type.
- extent: the area that the habitat occupies.

The information needed to populate this metric is taken from habitat surveys of the site before development and any related habitat clearance or management, and for the habitats proposed within the development as well as any additional habitat improvement off-site. The metric translates habitat distinctiveness, condition and extent into a score which is presented in biodiversity units. It also uses multipliers to account for risks in delivering habitat creation or enhancement. To achieve net gain, a development must have a sufficiently higher biodiversity unit score after development than before development.

Paragraph: 025 Reference ID: 8-025-20190721
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What is the baseline for assessing biodiversity net gain?

The existing biodiversity value of a development site will need to be assessed at the point that planning permission is applied for. It may also be relevant to consider whether any deliberate harm to this biodiversity value has taken place in the recent past, and if so whether there are grounds for this to be discounted in assessing the underlying value of the site (and so whether a proposal would achieve a genuine gain).

There are laws to protect important sites and species from harm, for which Natural England have [enforcement powers](#). In addition, the felling of trees requires a [Forestry Commission licence](#) in most cases before felling can commence. There may be a penalty or requirement to restock if felling occurs without this. There are some exemptions relating to the location, volume and diameter of a tree, and an exemption for felling which is immediately required for the purpose of development authorised by a planning permission.

Paragraph: 026 Reference ID: 8-026-20190721
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How can biodiversity net gain be of lasting value?

New or improved habitat needs to be located where it can best contribute to local, national and international biodiversity restoration, including the Nature Recovery Network proposed in the 25 Year Environment Plan, locally identified ecological or green infrastructure networks and biodiversity opportunity areas. Providing biodiversity net gain close to where people live can improve access to nature and bring health and wellbeing benefits.

It is good practice to establish a detailed management plan to ensure appropriate management of the habitat in the long term, and to arrange for regular but proportionate monitoring on how the habitat creation or enhancement is progressing, indicating any remedial action necessary. Planning authorities may consider recording where habitat compensation has been established, and how relevant survey and monitoring data can best be utilised to strengthen the local biodiversity evidence base; for example by working with Local Environmental Record Centres.

Paragraph: 027 Reference ID: 8-027-20190721
Revision date: 21 07 2019

What is wider environmental net gain and how can it be achieved?

The aim of wider environmental net gain is to reduce pressure on and achieve overall improvements in natural capital, ecosystem services and the benefits they deliver. For example, habitat improvements can provide a range of benefits such as improvements to soil, water and air quality, flood risk management and opportunities for recreation.

In planning strategically for the enhancement of natural capital, planning authorities can draw upon evidence on natural capital assets, the supply and demand of ecosystem services flowing from them, and existing and future risks and opportunities for these services.

A number of metrics to measure and monitor aspects of wider environmental net gain are under development.

Paragraph: 028 Reference ID: 8-028-20190721
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Trees and woodland

What are the considerations when planning for trees within settlements?

Well-placed and well-chosen trees on streets and in urban spaces can provide a range of benefits: encouraging walking and enhanced physical and mental health; contributing to local environmental character and distinctiveness; providing habitats for wildlife; reducing noise and excessive heat; and supporting sustainable drainage. Changing climate, in particular hotter summers and more frequent periods of dry weather, and unknown pests and diseases, will place new pressures on green infrastructure in the long-term, so trees of the right species and age profile are essential. The interaction of trees and tree roots with built infrastructure, transport networks, buildings and utility services is complex and requires detailed inter-disciplinary co-operation, with expert arboricultural or forestry advice. The selection of street trees needs to consider which species will best suit the highway environment in the long term, including associated infrastructure and utilities.

Paragraph: 029 Reference ID: 8-029-20190721
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What are the National Forest and Community Forests, and how should development be approached there?

The National Forest and the Community Forests are designed to bring the benefits of multi-purpose trees, woodland and forestry close to where people live. Within these areas developments are expected to include appropriate [green infrastructure](#), in accordance with the National Forest Strategy or an approved Community Forest Plan. Planning policies and decisions need to consider the extent and type of woodland planting necessary to ensure that the new development will contribute to the creation and emerging character of the Forests.

The National Forest Company Guide for developers and planners will be available, after revision, to download from The National Forestry Company website.

Paragraph: 030 Reference ID: 8-030-20190721
Revision date: 21 07 2019

How can I find out whether an area contains ancient woodland?

A starting point is to look at the relevant ancient woodland inventory. These inventories comprise digitised maps of sites that are thought to have been continuously wooded since 1600 AD. The [national ancient woodland inventory](#) is published and updated by Natural England.

Paragraph: 031 Reference ID: 8-031-20190721
Revision date: 21 07 2019

How can I find out whether a site contains ancient or veteran trees?

Ancient trees are trees in the ancient stage of their life. Veteran trees may not be very old but exhibit decay features such as branch death or hollowing. Trees become ancient or veteran because of their age, size or condition. Not all of these three characteristics are needed to make a tree ancient or veteran as the characteristics will vary from species to species. Further guidance on ancient and veteran trees is set out in the Forestry Commission and Natural England [standing advice](#).

The [Ancient Tree Inventory](#) can help identify ancient and veteran trees, although not all known ancient and veteran trees are included. Local Records Centres and other organisations with an interest in trees may also be able to advise on the location of known ancient or veteran trees. Tree surveys and site assessments may be needed to identify the ancient and veteran trees on a site and inform planning decisions.

Paragraph: 032 Reference ID: 8-032-20190721
Revision date: 21 07 2019

How can local planning authorities assess the potential impact of development proposals on ancient woodland and ancient or veteran trees?

Local planning authorities need to consider both the direct and indirect impacts on ancient woodland and ancient or veteran trees when assessing development proposals and the scope for avoiding or mitigating adverse impacts. Their existing condition is not something that ought to affect the local planning authority's consideration of such proposals (and it should be borne in mind that woodland condition can usually be improved with good management).

When assessing whether 'wholly exceptional reasons' exist that may justify a loss or deterioration of ancient woodland, ancient trees or veteran trees, it will not be appropriate to take any compensation measures into account. These should be considered only once the existence of 'wholly exceptional circumstances' has been ascertained.

Further guidance is set out in the Forestry Commission and Natural England [standing advice](#).

Paragraph: 033 Reference ID: 8-033-20190721

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What compensation can be provided if development resulting in loss or harm is, exceptionally, permitted?

Where development that results in the loss or deterioration of ancient woodland, ancient or veteran trees is exceptionally permitted in line with the Framework, a suitable compensation strategy should be secured and implemented via planning conditions or obligations. Compensation measures need to be decided on a case by case basis and be appropriate to the scale, nature and impacts of the development, but it is desirable for them to be provided as close to the development site as possible. Appropriate compensation might include:

- Planting new native woodland or wood pasture
- Restoring or improving other nearby ancient woodland
- Improving connections between the ancient woodland and other woodlands or habitats
- Planting individual trees that could become ancient or veteran trees in future

Paragraph: 034 Reference ID: 8-034-20190721

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Do the Forestry Commission and Natural England need to be consulted where development proposals affect ancient woodland?

The [Forestry Commission](#) is a non-statutory consultee for development proposals that contain or are likely to affect ancient woodland (as defined and recorded in Natural England's ancient woodland inventory), including proposals where any part of the development site is within 500 metres of the boundary of an ancient woodland, and where the development would involve erecting new buildings, or extending the footprint of existing buildings.

Natural England is a statutory consultee for proposals which may affect a Site of Special Scientific Interest. The Forestry Commission and Natural England have prepared [standing advice](#) to provide assistance to local planning authorities in considering proposals which affect ancient woodland or ancient and veteran trees. This is a material consideration in appropriate circumstances.

Paragraph: 035 Reference ID: 8-035-20190721

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[B] Air Quality

nPPG – revision 1-11-19

What air quality considerations does planning need to address?

The [2008 Ambient Air Quality Directive](#) sets legally binding limits for concentrations in outdoor air of major air pollutants that affect public health such as particulate matter (PM₁₀ and PM_{2.5}) and nitrogen dioxide (NO₂).

The UK also has national emission reduction commitments for overall UK emissions of 5 damaging air pollutants:

- fine particulate matter (PM_{2.5})
- ammonia (NH₃)
- nitrogen oxides (NO_x)
- sulphur dioxide (SO₂)
- non-methane volatile organic compounds (NMVOCs)

As well as having direct effects on public health, habitats and biodiversity, these pollutants can combine in the atmosphere to form ozone, a harmful air pollutant (and potent greenhouse gas) which can be transported great distances by weather systems. Odour and dust can also be a planning concern, for example, because of the effect on local amenity.

The Department for Environment, Food and Rural Affairs carries out an annual [national assessment of air quality](#) using modelling and monitoring to determine compliance with relevant [Limit Values](#). It is important that the potential impact of new development on air quality is taken into account where the national assessment indicates that relevant limits have been exceeded or are near the limit, or where the need for emissions reductions has been identified.

The [local air quality management \(LAQM\)](#) regime requires every local authority to regularly review and assess air quality in their areas. Air quality is a devolved matter, and for England these reviews identify whether national objectives in the [Air Quality \(England\) Regulations 2000](#) have been, or will be, achieved by an applicable date.

If national objectives are not met, or at risk of not being met, the local authority concerned must declare an [air quality management area](#) and prepare an air quality action plan. This identifies measures that will be introduced in pursuit of the objectives and can have implications for planning.

Air quality considerations may also be relevant to obligations and policies relating to the conservation of nationally and internationally important habitats and species. The [Air Pollution Information System](#) and Natural England's 'Impact Risk Zones' tool (available on [MAGIC](#)) can help to determine the types of development proposal which can adversely affect these designated sites of special scientific interest and indicates when consultation with Natural England is required.

Paragraph: 001 Reference ID: 32-001-20191101

Revision date: 01 11 2019

What is the role of plan-making with regard to air quality?

All development plans can influence air quality in a number of ways, for example through what development is proposed and where, and the provision made for sustainable transport. Consideration of air quality issues at the plan-making stage can ensure a strategic approach to air quality and help secure net improvements in overall air quality where possible.

It is important to take into account [air quality management areas](#), [Clean Air Zones](#) and other areas including sensitive habitats or designated sites of importance for biodiversity where there could be specific requirements or limitations on new development because of air quality. Air quality is also an important consideration in habitats assessment, [strategic environmental assessment and sustainability appraisal](#) which can be used to shape an appropriate strategy, including through

establishing the 'baseline', appropriate objectives for the assessment of impacts and proposed monitoring.

Drawing on the review of air quality carried out for the local air quality management regime, plans may need to consider:

- what are the observed trends shown by recent air quality monitoring data and what would happen to these trends in light of proposed development and / or allocations;
- the impact of point sources of air pollution (pollution that originates from one place);
- the potential cumulative impact of a number of smaller developments on air quality as well as the effect of more substantial developments, including their implications for vehicle emissions;
- ways in which new development could be made appropriate in locations where air quality is or is likely to be a concern, and not give rise to unacceptable risks from pollution. This could, for example, entail identifying measures for offsetting the impact on air quality arising from new development including supporting measures in an air quality action plan or low emissions strategy where applicable; and
- opportunities to improve air quality or mitigate impacts, such as through traffic and travel management and green infrastructure provision and enhancement.

As part of the [strategic environmental assessment](#) or [sustainability appraisal](#) of a plan, consideration will need to be given to potential trends in air quality in the presence and absence of development, as well as any impacts and mitigation / improvement opportunities arising from the plan's proposals.

Paragraph: 002 Reference ID: 32-002-20191101
Revision date: 01 11 2019

Are air quality concerns relevant to neighbourhood planning?

Air quality concerns can be relevant to [neighbourhood planning](#), and it is important to consider whether air quality is an issue when drawing up a neighbourhood plan or considering a neighbourhood development order. The local planning and environmental health departments will be able to advise whether air quality is an issue that may need to be addressed in a neighbourhood area, and how this might affect potential policies and proposals that are being considered.

Paragraph: 003 Reference ID: 32-003-20191101
Revision date: 01 11 2019

What information is available about air quality?

In addition to the information on local air quality held by environmental health departments in local authorities, the Department for Environment, Food and Rural Affairs publishes information and there is a range of other potential sources which can be drawn on, depending on the development and its proposed location.

Information published by Defra

- the [UK Air Information Resource \(UK-AIR\)](#), which contains information on historic and current air quality across the UK, including a [GIS portal](#) of Defra's national assessment against relevant Limit Values and air quality management areas;
- [air quality management area records](#) and [modelled background pollution concentrations](#);
- the [National Atmospheric Emissions Inventory](#) for emissions of air pollution including maps at a 1km by 1km resolution for a wide range of pollutants;
- the [Pollutant and Release Transfer Register](#), which has links to emissions from installations permitted under the Environmental Permitting Regulations, which is useful for point sources;
- the [Clean Air Strategy](#) sets out actions for dealing with 5 major sources of air pollution. A detailed [National Air Pollution Control Programme](#) was published by the Department for Environment, Food and Rural Affairs in April 2019.

Other sources of information

- the [Environmental Pollution Incident dataset](#) published by the Environment Agency, which has information about pollution incidents and [sites](#) registered under the Environmental Permitting Regulations;
- information about the impact of air quality on habitats and species (including critical loads and levels) held by the [Air Pollution Information System](#). This has been developed in partnership by the UK conservation agencies and regulatory agencies and the Centre for Ecology and Hydrology;
- the sustainability appraisal or habitats assessment informing strategic planning policies and whether these required an Air Quality Assessment;
- recent environmental statements that may include updated baseline assessments.

Paragraph: 004 Reference ID: 32-004-20191101

Revision date: 01 11 2019

When could air quality considerations be relevant to the development management process?

Whether air quality is relevant to a planning decision will depend on the proposed development and its location. Concerns could arise if the development is likely to have an adverse effect on air quality in areas where it is already known to be poor, particularly if it could affect the implementation of air quality strategies and action plans and/or breach legal obligations (including those relating to the conservation of habitats and species). Air quality may also be a material consideration if the proposed development would be particularly sensitive to poor air quality in its vicinity.

Where air quality is a relevant consideration the local planning authority may need to establish:

- the 'baseline' local air quality, including what would happen to air quality in the absence of the development;
- whether the proposed development could significantly change air quality during the construction and operational phases (and the consequences of this for public health and biodiversity); and
- whether occupiers or users of the development could experience poor living conditions or health due to poor air quality.

The steps a local planning authority might take in considering air quality are set out in this flow diagram.



[Flowchart](#)

PDF, 105KB, 1 page

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It is important that applicants [engage](#) early on with the local planning and environmental health departments to establish the need and scope of any assessment to support an application.

For large and complex industrial processes, the Environment Agency should also be able to help by identifying:

- if an [environmental permit](#) is also required before the proposed development can start operating;

- if there are any significant air quality issues that may arise at the permitting stage (so there are ‘no surprises’); and
- whether there are any special requirements that might affect the likelihood of getting planning permission (such as the height of chimneys).

Environment Agency guidance – [Developments requiring planning permission and environmental permits](#) provides advice on aligning the planning and permitting processes to address these issues efficiently and aid faster decision making.

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Revision date: 01 11 2019

What specific issues may need to be considered when assessing air quality impacts?

Considerations that may be relevant to determining a planning application include whether the development would:

- Lead to changes (including any potential reductions) in vehicle-related emissions in the immediate vicinity of the proposed development or further afield. This could be through the provision of electric vehicle charging infrastructure; altering the level of traffic congestion; significantly changing traffic volumes, vehicle speeds or both; or significantly altering the traffic composition on local roads. Other matters to consider include whether the proposal involves the development of a bus station, coach or lorry park; could add to turnover in a large car park; or involve construction sites that would generate large Heavy Goods Vehicle flows over a period of a year or more;
- Introduce new point sources of air pollution. This could include furnaces which require prior notification to local authorities; biomass boilers or biomass-fuelled Combined Heat and Power plant; centralised boilers or plant burning other fuels within or close to an air quality management area or introduce relevant combustion within a [Smoke Control Area](#); or extraction systems (including chimneys) which require approval or permits under pollution control legislation;
- Expose people to harmful concentrations of air pollutants, including dust. This could be by building new homes, schools, workplaces or other development in places with poor air quality;
- Give rise to potentially unacceptable impacts (such as dust) during construction for nearby sensitive locations;
- Have a potential adverse effect on biodiversity, especially where it would affect sites designated for their biodiversity value.

Paragraph: 006 Reference ID: 32-006-20191101
Revision date: 01 11 2019

How detailed does an air quality assessment need to be?

Assessments need to be proportionate to the nature and scale of development proposed and the potential impacts (taking into account existing air quality conditions), and because of this are likely to be locationally specific. The scope and content of supporting information is best discussed and agreed between the local planning authority and applicant before it is commissioned.

It is not necessary for air quality assessments that support planning applications to duplicate aspects of air quality assessments that will be done as part of non-planning control regimes, such as under Environmental Permitting Regulations. Air quality is a consideration in [Environmental Impact Assessment](#), if one is required, and also in a [Habitats Regulations Appropriate Assessment](#).

The following could form part of assessments:

- a description of baseline conditions and any air quality concerns affecting the area, and how these could change both with and without the proposed development;
- sensitive habitats (including designated sites of importance for biodiversity);
- the assessment methods to be adopted and any requirements for the verification of modelling air quality;

- the basis for assessing impacts and determining the significance of an impact;
- where relevant, the cumulative or in-combination effects arising from several developments;
- construction phase impacts;
- acceptable mitigation measures to reduce or remove adverse effects; and
- measures that could deliver improved air quality even when legally binding limits for concentrations of major air pollutants are not being breached.

Paragraph: 007 Reference ID: 32-007-20191101
Revision date: 01 11 2019

How can an impact on air quality be mitigated?

Mitigation options will need to be locationally specific, will depend on the proposed development and need to be proportionate to the likely impact. It is important that local planning authorities work with applicants to consider appropriate mitigation so as to ensure new development is appropriate for its location and unacceptable risks are prevented. [Planning conditions](#) and [obligations](#) can be used to secure mitigation where the relevant tests are met.

Examples of mitigation include:

- maintaining adequate separation distances between sources of air pollution and receptors;
- using green infrastructure, in particular trees, where this can create a barrier or maintain separation between sources of pollution and receptors;
- appropriate means of filtration and ventilation;
- including infrastructure to promote modes of transport with a low impact on air quality (such as electric vehicle charging points);
- controlling dust and emissions from construction, operation and demolition; and
- contributing funding to measures, including those identified in air quality action plans and low emission strategies, designed to offset the impact on air quality arising from new development.

Paragraph: 008 Reference ID: 32-008-20191101
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