LOST NATURE

Are housing developers delivering their ecological commitments?

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WILD justice

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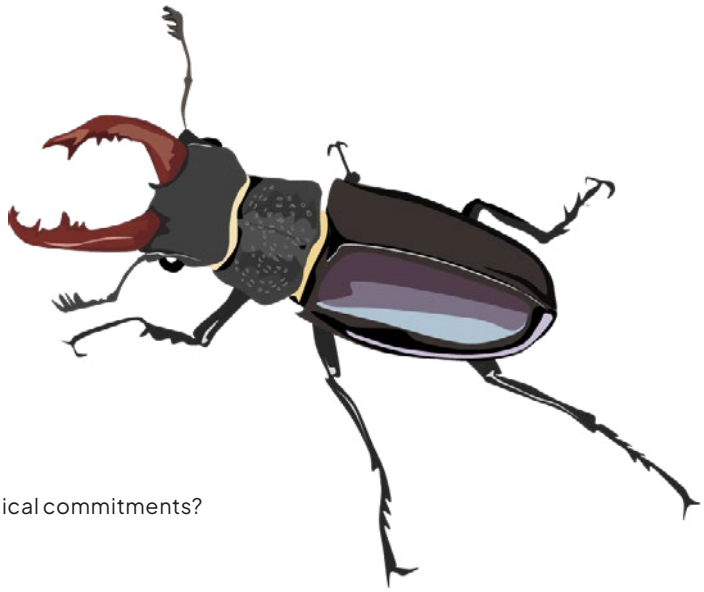


Part One

To what extent are developers complying with the legally binding conditions of their planning permissions?

1. Introduction: does the nature of planning allow planning for nature?

"Let me tell you all about the planning system!" is the kind of phrase that has people running for the hills at parties.

However, if you care about nature and the environment, it's important to pay attention to planning policy. We are currently in the midst of a global 'nature emergency', in which the UK now features as one of the most nature-depleted countries in the world.[1] The causes are many and complex, but urban development of the kind that falls under the planning system's remit is a known driver.[2]

Part of the issue is that the decision to develop often introduces a permanent change in the way we use land - a process known as urbanisation. While well-planned cities can support biodiverse communities, urban habitats are spatially very different from natural environments, both in their inherent characteristics and in the way that they connect to surrounding ecosystems.[3]

This significantly impacts both the kinds of species that are present, and their abundance.[4] While some species are able to adapt to life in urban environments, others are sensitive to disturbance and unable to survive.[5] Though the overall picture is complex, the general trend is towards a decline of native species in more urbanised areas.[6]

Building projects impact on nature throughout their lifespan. The initial construction process can be devastating for wildlife, since vegetation and topsoil are often removed from large areas of land. However, the physical effects of land use change once development has finished are also significant: for example, increased road density,[7] pollution,[8] higher temperatures in urban areas,[9] disturbance by humans and their pets,[10] and increased car use where houses are built in unsustainable locations,[11] all pose ongoing challenges for nature.

1 Hayhow, D.B. et al (2019) State of Nature 2019. London: State of Nature Partnership.
2 McKinney, M. L. (2006). Urbanization as a major cause of biotic homogenization. Biological Conservation 127, 247–260. Ibáñez-Álamo, J. et al (2017). Global loss of avian evolutionary uniqueness in urban areas. Glob. Chang. Biol. 23, 2990–2998. Burns F et al. (2016) Agricultural Management and Climatic Change Are the Major Drivers of Biodiversity Change in the UK. PLoS ONE 11(3): e0151595. Kondratyeva A, et al (2020) Urbanization Effects on Biodiversity Revealed by a Two-Scale Analysis of Species Functional Uniqueness vs. Redundancy. Front. Ecol. Evol. 8:73.
3 Simkin et al (2022) 'Biodiversity impacts and conservation implications of urban land expansion projected to 2050', PNAS, 19 (12) e2117297119.
4 Li, G., et al (2022) Global impacts of future urban expansion on terrestrial vertebrate diversity. Nat Commun 13, 1628 (2022).
5 Alberti, M., et al (2017) 'Urban Driven Phenotypic Changes: Empirical Observations and Theoretical Implications for Eco-Evolutionary Feedback.' Philosophical Transactions of the Royal Society B: Biological Sciences 372: 20160029. Aronson, M. et al (2016) 'Hierarchical Filters Determine Community Assembly of Urban Species Pools.' Ecology 97: 2952–63. Chace, J. (2006) 'Urban Effects on Native Avifauna: A Review.' Landscape and Urban Planning 74: 46–69.
6 Hou Y, et al. (2023). Negative effects of urbanization on plants: A global meta-analysis. Ecol Evol. 13(4):e9894.
7 Bennett, V.J. (2017) Effects of Road Density and Pattern on the Conservation of Species and Biodiversity. Curr Landscape Ecol Rep 2, 1–11. Donald, P (2023) Traffication: How Cars Destroy Nature and What We Can Do About It, London:Pelagic.
8 Grimm, N. B. et al (2008) Global change and the ecology of cities, Science, 319 (2008), pp. 756–760. Theodorou, A (2022) 'The effects of urbanisation on ecological interactions', Current Opinion in Insect Science 52:100922.
9 Zhizheng, C. (2023) 'The surface urban heat island effect decreases bird diversity in Chinese cities', Science of The Total Environment, 902: 166200. Čeplová, N et al (2017) 'Effects of settlement size, urban heat island and habitat type on urban plant biodiversity'. Landscape and Urban Planning, 159: 15–22. K. Huang et al (2019) Projecting global urban land expansion and heat island intensification through 2050, Environ. Res. Lett. 14, 114037.
10 Trouwborst, A et al (2020) 'Domestic cats and their impacts on biodiversity: A blind spot in the application of nature conservation law', People and Nature, 2(1): 235–250. Buchholz, S et al (2021) 'Impacts of dogs on urban grassland ecosystems', Landscape and Urban Planning, 215: 104201.
11 Spencer S and Pendlebury D (2021) The Location of Development: Analysis of the location and accessibility of approved residential development in England. London: RTPI.

The change of land use associated with development is a global problem: from 2000 to 2030, research suggests that around 290,000 square kilometers of land worldwide will be lost to urban expansion.[12] But it is a particularly pressing issue for the UK, and not just because of the scale of existing biodiversity loss. The new government has committed to reforming the planning system: in order to generate economic growth and fix the housing affordability crisis, Labour has promised to deliver 1.5 million new homes within five years, whilst local authorities are expected to plan for around 370,000 houses per year. To achieve this, they propose to speed up the development process and to use both previously developed or 'brownfield' sites and new 'greybelt' areas, which are ecologically-denuded parts of the greenbelt (an area of land around urban areas that has traditionally been protected from development).

The impacts of development in terms of the carbon embodied in building materials, and the contribution this makes to climate change should also not be forgotten. Recent research estimates that building 300,000 homes a year would consume 104% of England's cumulative carbon budget from 2022 to 2050 (consistent with a scenario of 1.5 degrees of warming). In other words, **more than the country's entire carbon budget** would be expended on housing, which is clearly inconsistent with commitments to net zero.[13]

The government promises that nature will be protected by a series of 'golden rules' that will ensure that the harms of urbanisation are properly mitigated, creating spaces that are good for humans and for nature. They point to commitments in policy and process that supposedly ensure that biodiversity is conserved and protected. However, there has been very little work to explore whether these written commitments translate into practice. Do fine words equate to action that mitigates biodiversity loss on the ground? We had heard reports of new housing developments where the required bird and bat boxes weren't installed, and where new compensatory meadow areas were either not created or managed so badly that they failed to have any real ecological benefit. We therefore wanted to find how widespread these failures in implementation are, and why they happen.

Together, the depth of the biodiversity crisis combined with the current government's desire to accelerate the development process mean that it is more important than ever to understand the ecological impacts of development in reality, rather than on paper. This report aims to address this gap in knowledge. It asks: **are new housing developments actually delivering the ecological improvements that are required of them by the planning system?**

[12] McDonald, R. I. et al (2018) Nature in the Urban Century Washington: The Nature Conservancy, Washington. McDonald, R.I., Mansur, A.V., Ascensão, F. et al. Research gaps in knowledge of the impact of urban growth on biodiversity. Nat Sustain 3, 16–24 (2020).

[13] zu Ermgassen, S. et al (2022) 'A home for all within planetary boundaries: Pathways for meeting England's housing needs without transgressing national climate and biodiversity goals'. Ecological Economics, 201: 107562.

The structure of this report

Wild Justice commissioned this report because they are interested in failures of public bodies to deliver wildlife protection and enhancement. They spoke to us about our work, and discovered that we had quantified a scandal that they thought deserved wider publicity.

This report is divided into two main parts. The first part presents the results of an audit conducted in summer 2024 of 42 new build housing estates. The question we asked was: are developers putting in the ecological mitigations and enhancements that they promised when they received their planning permissions? **Our findings uncover a huge issue: only half of the ecological features that are legally-binding conditions of planning permission are actually in place on the ground. This figure falls to a third when trees are taken out of the equation.**

Part 2 takes a broader lens. It presents an overview of points of failure in the way that the planning system interfaces with ecology across all of its stages. The findings here are more tentative than in the first part: what we offer is an outline of the areas where the planning system might be failing to mitigate harms for nature. We intend to conduct further research to investigate these in more detail.

2. Planning policy and planning processes vs outcomes on the ground

Ecological commitments in policy

On paper, the planning system recognises the harms of development and takes action to mitigate them. The last 20 years have seen an ever-growing list of international, national, and local ecological policies that are designed to mitigate the harms to nature that result from changes to land use. Central to them is a document called the *National Planning Policy Framework*, which stipulates that planning should identify and safeguard wildlife-rich habitats and ecological networks, and promote the conservation and enhancement of priority habitats and species, securing measurable net gains for biodiversity.

In Spring 2024, new legislation and policy came into force introducing Biodiversity Net Gain, or BNG, to the planning system. For 'major' residential developments (those building 10 or more houses, or involving at least 1 hectare of land), ecologists use a spreadsheet to calculate the 'biodiversity value' of the site before development, and formulate a strategy that not only offsets the harms but delivers a 10% gain in biodiversity units. These units can be situated offsite, on land that is specifically set aside for conservation, or onsite, as part of the development. The policy was designed to create a revenue stream for offsite conservation, but early data from pilot sites suggests that the majority of developers are choosing to deliver their BNG on the development site itself. BNG can be seen as an intensification of a commitment to recognise and mitigate ecological harms, but there are questions about how effective it will be at doing this.[14] While this report does not assess the impacts of Biodiversity Net Gain policy, many of its findings about mitigations more generally will also apply to the attempt to deliver net gain on the ground.

What's the difference between enhancement and mitigation?

Ecological enhancement measures are designed to improve the ecological environment and increase biodiversity on a new build estate. They may or may not be related to the impacts of a particular development on a specific site.

Mitigation measures are undertaken to reduce and ideally negate the adverse impacts of development on a specific ecological species or habitat, e.g. chalk grassland or a bat roost.

In 2012, the new National Planning Policy Framework required developers to produce net gain on all new build estates where possible. This has now been formalised in a mandatory requirement for a 10% Biodiversity Net Gain, using a metricised calculation. Net gain sits alongside ecological enhancement and mitigation measures.

[14] zu Ermgassen et al (2021) 'Exploring the ecological outcomes of mandatory biodiversity net gain using evidence from early-adopter jurisdictions in England'. Conservation Letters, 14(6), e12820.

Ecology in the planning process

In theory, the planning system has built these commitments to nature into its process for granting planning permission. Most residential planning permissions are awarded by the Local Planning Authority, which is most commonly the local council.

The planning process can be quite complicated, but Table 1 gives an outline of the way it works for residential developments, which are the focus of this report. As you can see, the planning system interfaces with ecology at many points during the process of creating a new build housing estate. In each case, if the system does not work well for nature, then outcomes for wildlife and biodiversity will worsen. Part 2 of this report identifies points of failure at stages 1–6; Part 1 describes problems with stages 7 and 8, which were the focus of our audit.

Table 1: Stages of the Planning Process

Stage	Process	Description	Risks to ecology
1	**Land allocation**	The Local Planning Authority chooses sites that are suitable for development and publishes them in a Local Plan	Inappropriate allocation of sites that are ecologically sensitive in their own right, or part of a wider network for nature.
2	**Application and surveys**	Developer decides to put in a planning application for a site, and starts to gather information, including ecological surveys and (from spring 2024) Biodiversity Net Gain calculations. These are conducted by private sector ecologists.	Surveys can be wrong or misleading.
3	**Design**	Landscape architects, engineers, ecologists, and architects lay out an initial design for the site.	Unambitious or poor landscaping and ecological mitigation/ enhancement plans fail to minimise ecological impacts.

Stage	Process	Description	Risks to ecology
4	**Consultation**	The application is submitted and the proposals made public. A range of official bodies, including statutory consultees like Natural England and the Environment Agency, and non-statutory bodies like NGOs should take part, with ordinary people also given an opportunity to have their say. Together, these consultees object, support, or ask the developer to make improvements.	Lack of resources means that key bodies such as Natural England do not provide substantive input on many applications, or if they do, they are late.[15] Poor consultation may not gather the opinions of key ecological stakeholders who may have valuable information and perspectives to add.
5	**Decision-making**	Planning officers (and Planning Committees) weigh and balance the evidence and make a decision.	Officers or committee members experience pressure from developers to greenlight ecologically inappropriate development.
6	**Conditions**	If planning permission is granted it will come with a series of conditions that the developer must meet to ensure that the development is acceptable. Some of these will relate to biodiversity.	Conditions don't accurately interpret further actions that are flagged up as being required in the ecology reports. Poorly worded conditions can cause confusion, leading to delays, e.g. in obtaining protected species licenses. Badly worded conditions are also difficult to enforce.
7	**Construction**	Developers build out the site.	Construction works don't adhere to conditioned compliance strategies to avoid ecological impacts. Developers fail to install the ecological mitigation, enhancement, or net gain plans that are conditioned.
8	**Landscaping and maintenance**	An organisation takes over the management of public space onsite and organises landscape maintenance by a private company, a residents' association, or the Local Authority.	Inappropriate landscape maintenance practices reduce or destroy habitats that have been created to offset losses or provide ecological gains.

[15] https://prospect.org.uk/news/planning-deadlines-missed-by-natural-england-because-of-staffing-problems-soars-by-a-third

But no-one is looking at outcomes on the ground!

Many hours have been spent refining planning policy, improving planning processes, and weighing and balancing the evidence for and against granting planning permission for particular sites. But hardly any attention has been paid to the question of what happens at stages 7 and 8: construction and maintenance of new build housing. We wanted to find out: when developers promise to add features to housing estates to help nature (stage 6), do they actually deliver them on the ground (stage 7) and ensure that they are properly maintained (stage 8)? In other words: **are developers and those tasked with landscape management doing what they have promised for nature?**

We spent a summer visiting 42 new build housing estates, and assessed whether the developments had provided what was promised in terms of ecology.

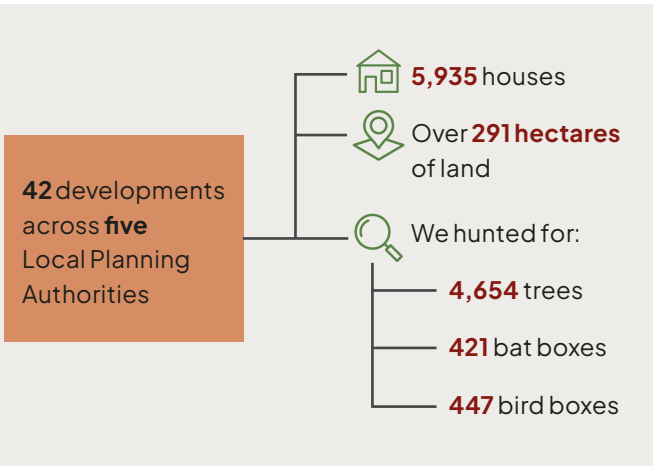
3. What we did

A brief introduction to ground truthing

Ground truthing is a method that tests whether what has been promised is really there on the ground. Between June and August 2024, we visited 42 new housing estates across England to see whether the ecological mitigations and enhancements that developers had promised when they signed up to planning permissions were actually in place on the ground. **Our report is the first time anyone has looked at outcomes on the ground over such a large number of housing estates.**

Firstly, we collected all the documents, plans, and reports for each development. These set out what is to be delivered under the planning permission and how any ecological features are to be managed. We then went to each development site at least once, and in the majority of cases (38 out of the total 42) we made sure that two people visited, either together or separately, to ensure that we hadn't missed anything. To conduct the survey in sufficient detail, we walked through every street and across all publicly-accessible areas, checked every tree in public open space, and looked at every house for bird and bat boxes.

We looked at:



How did we choose which five Local Planning Authorities to investigate?

We chose our focal authorities because:

- They were located in areas with very different local habitats and designations, of varying international importance.
- They represented a range of urban, suburban, and rural areas.
- They had different levels of housing need, representing some areas with very high pressure to develop in the south-east of England and some areas with lower development pressure elsewhere in the country.
- They made all of the information we needed available on their planning portals.[16]

[16] Some Local Planning Authorities are doing a much better job than others at making all of the necessary information about a development available on public portals for scrutiny. Since availability of data is essential for the planning system to be democratically accountable, it is extremely worrying that making essential information accessible is not a priority for some councils. The difficulty of getting good data in some areas significantly shaped the number of developments we could audit.

How did we select development sites within those Local Planning Authorities?

We then chose between 6 to 10 developments from each authority. Developments were selected on the basis of the following set of criteria:

- There was sufficient information on the public portal for the site to enable the ecological mitigations/enhancements that formed part of the planning consent to be determined.
- The site was a 'major' housing development, meaning that it had 10 or more new houses.[17] Major developments currently account for 91% of all new homes granted permission, representing the majority of the market.[18]
- The development had been granted planning permission after 2012, which is when the *National Planning Policy Framework* first introduced a requirement for ecological enhancement.
- The development was completed, meaning that we could assess it fully and fairly (or, for larger developments, a distinct phase of the development with a separate ecological mitigation plan had been completed).
- The site had ecological mitigations and enhancements to assess. Because biodiversity policy has become more demanding over the last 12 years, many of the more urban developments towards the start of our survey period for 2012 had virtually no ecological features in place at all. We excluded these from our survey.
- Taken together, the sites represented the outputs of a range of housebuilders, from small-scale local companies to the major national housebuilders.
- As a whole, the sites covered a range of different sizes of development. The smallest site we looked at had 10 houses, the largest, 500.

Table 2: Mix of developments audited

	Minimum	Maximum	Mean
Development size (number of houses)	10	500	141
Development area (in hectares)	0.41	30.66	6.93
Year first permission granted	2012	2020	

[17] From NPPF glossary: https://www.gov.uk/guidance/national-planning-policy-framework/annex-2-glossary
[18] See https://www.gov.uk/government/statistics/planning-applications-in-england-january-to-march-2024/planning-applications-in-england-january-to-march-2024-statistical-release

Amongst the 42 audited developments, 6 were built by small-medium enterprises (SMEs), 9 were built by regional developers, 24 were built by large, national developers, and the remaining 3 were built by other types of developer (such as housing associations and local authority-owned housing companies).

We also looked into the 'planning story' for each site, from start to finish, to build up a detailed picture of how ecological issues were handled at each stage of the planning process. We found a lot of issues with the way that ecology was being handled through stages 1–6 of the planning process, which we will be investigating in future research. We will give an outline of these in Part 2 of this report. Part 1, however, deals with stages 7 and 8.

What data did we gather for each site?

For the audit, we collected data for each site including

- All ecological surveys for the site throughout the time period that the application was being determined.
- Any correspondence relating to the surveys, e.g. comments from statutory and non-statutory consultees as well as the wider community's comments on findings
- The ecological mitigation/enhancement schemes and plans, detailing things like bird and bat boxes.
- The soft landscaping plans, including all planting schemes.
- The SuDS plans, including landscaping plans for these features.
- The landscape management plans for the site, detailing for example how and when grassland should be mowed. Sometimes these also determine who should pay for replacements if something goes wrong.
- Section 106 agreements, where these were relevant to ecological enhancement.
- Suitable Alternative Natural Greenspace (SANG) plans and ecological management specifications, where relevant.[19]

What is a SuDS?

The impacts of climate change mean that heavy rain is increasingly frequent in the UK. When water falls on hard surfaces, it can quickly overwhelm drainage systems, causing flooding.

SuDS, short for 'Sustainable Urban Drainage Systems', are a solution to this problem. They mimic natural drainage regimes to reduce surface water flooding by slowing the flow of water to the drains, and holding it back in pools and ponds on site. A well-designed SuDS can offer real biodiversity benefits. SuDS are a feature of many new build housing estates, and we assessed the quality of both the pond, and any marginal or wet grassland system as part of our project.

[19] See below for wider discussion on SANG analysis

What types of ecological mitigation and enhancement did we count?

If you live on or near a new build estate, you might have noticed a sharp divide between the type of planting developers put around houses, and the type of planting in public open space. The former is often ornamental and of lower ecological value, while the latter has more native species. We think this is a missed opportunity to create more nature-friendly developments. For more information see Part 2.

However, for the purpose of our audit, we ignored ornamental non-native planting around houses. We also did not count anything planted in private gardens, since we could not be sure whether the developer, the landscaper, or the homeowner was responsible for a missing tree or hedge in private space. Instead, we focused on the features and habitats that were put in to mitigate losses or provide ecological gains within public open space, including streets.

We asked questions about habitat creation and maintenance like:

- Have different areas of native wildflower grassland been sown with the right seed mix and appropriately maintained?
- Are woodland buffer zones, designed to protect sensitive existing ecosystems, in place, and maintained appropriately?
- Where woodland improvements are specified, have these been implemented?
- Where orchard and nut plantings have been specified, has this happened and are they in good condition?
- Have the developers planted the right number of native trees and are they in a healthy condition or are many dead or dying?
- Have SuDs schemes been correctly created, planted, and maintained?
- Have areas of native scrub and hedgerows been planted and maintained according to the management plan?
- Have hedgehog highways been installed?
- Are the bat, bird and insect boxes that have been promised in place?
- Have tussocky grassland areas for reptiles been created and maintained according to the management plan?
- Where ponds were supposed to be adapted to improve their suitability for great crested newts, has this happened?
- Are plantings for dormice in place, where specified?
- Are hibernacula and refugia for amphibians and reptiles present on the ground?

Table 3 sets out the categories of enhancement and mitigation that we audited.

Table 3: Main analytical categories to classify ecological mitigations and enhancements

Mitigation/enhancement	Count type
Bat boxes	Number installed/number specified Note: we assessed integrated, house-mounted and tree-mounted bat boxes separately.
Bird boxes	Number installed/number specified Note: we assessed integrated, house-mounted and tree-mounted bird boxes separately.
Hedgehog highways	Existing/not existing Note: we could not count individual gaps in fences, because many hedgehog highways run through inaccessible areas of private gardens. However, we inspected fencing in public areas carefully to see whether there were clear efforts to ensure accessibility for hedgehogs.
Hedges	Existing/not existing Note: we included improvements to hedging, including gapping up of existing hedgerows.
Hibernaculum (usually in the form of a log pile)	Number installed/number specified
Invertebrate boxes	Number installed/number specified
Long grass	Existing/not existing
Marginal aquatic planting	Existing/not existing
Ponds (including SuDS)	Existing/not existing
Scrub	Existing/not existing
SuDS wet grassland	Existing/not existing

Continues overleaf

Table 3: Main analytical categories to classify ecological mitigations and enhancements (continued)

Mitigation/enhancement	Count type
Trees (not including trees in private space)	Number present/number specified. Note: trees that were present were graded 1, trees that were dead or clearly dying were graded as 0. Trees that were in poor health were graded as 0.5. In many cases, the wrong species of tree had been planted: where this happened, we noted it but graded it as 1 provided the tree was a native species and the overall mix of species was substantially in line with the planting plan.
Wildflower grassland	Existing/not existing. Note: we correlated species in each specified seed mix against what we found onsite, bearing in mind the need to consider equivalent seed mixes from other suppliers. Grassland is subject to multiple failures of creation and maintenance. At times, it could be difficult to tell whether a seed mix had not been applied, or whether the grassland had been so poorly managed that species diversity had been subsequently reduced. In these cases, we inspected closely and exercised judgement based on the species mix that we found onsite compared to the species mix of seeds supplied by specialist companies on the market.
Woodland edge planting	Existing/not existing
Woodland edge seed mix	Existing/not existing

What types of ecological mitigation and enhancement did we ignore?

We did not collect information on:

- Ecologically sensitive lighting schemes designed to mitigate harm to bats, as this requires specialist equipment and expertise to evaluate.

- Retention of individual trees (as opposed to the planting of new trees, which we did count). This was because not all of the applications contained sufficient detail to allow us to assess this accurately. We did, however, investigate habitat improvements that were part of the planning conditions, e.g. the additional planting or 'gapping up' of hedgerows, woodland management etc.

- SANG schemes that were shared across multiple developments, as we did not want to count features for developments that we were not auditing.

- Biodiversity Net Gain calculations. Since BNG only came into force in spring 2024, very little housing has yet been constructed under this new legislative and policy regime. Some Local Planning Authorities across England were early adopters of Biodiversity Net Gain, but we think that, by their nature, these pilot sites might not be representative. We will be conducting further research to audit developments that have been through these calculations, and compare results to our findings in this report. However, whilst for some BNG offsets there are plans for heightened monitoring, for many smaller mitigations/enhancements the same requirements operate. This means that for many BNG enhancements, we would expect to see similar problems with compliance.

How did we count what was there?

In a small number of cases, we couldn't count a specific feature because it was in an inaccessible area, for example, bird and bat boxes placed in a narrow strip of fenced-off woodland with no sightlines or public access. In these cases, we removed that feature from our calculation.

Our method compared what was there on the ground with what was shown on plans. For unit-based features, like trees or bird and bat boxes, we counted the number present as a proportion of those indicated on plans.

For area-based features, such as grassland, we assessed whether an area was present, and whether it had been sown and maintained as the type of grassland specified on the plans. We did not calculate planting by area, as the focus of this study was on presence/absence rather than scale. Separate areas of planting were counted individually, so if there were supposed to be three areas of scrub, we counted what was present out of three. The aim was to reach figures for the percentages of each feature that were present. For example:

- We assessed the presence of trees in a public open space where 15 out of 20 trees were missing or dead as 5/20, or 25%.

- We graded an area of grassland that had not been correctly sown as 0/1 or 0%.

- Where 2 out of 10 bat boxes were present, we graded this as 2/10 or 20%.

What exactly were we trying to measure?

Our methodology was quite simple. We were measuring **the extent to which the development that had been created on the ground conformed with the commitments imposed on developers by the conditions of their planning permission**.

It is important to note that this is not the same thing as measuring the ecological value of what is present or absent. Our calculation does not weight the contribution each ecological mitigation or enhancement features makes to the overall biodiversity value of a development.

We did this because we wanted first and foremost to measure the actions of developers and landscape contractors, in order to reveal problems with the way that the planning system is currently operating.

Whose compliance are we measuring?

In many cases, compliance reflects the developer's actions when constructing the estate. For example, a lack of integrated bird and bat boxes on houses and hedgehog highways is often a result of developers simply not installing these features. It was also often possible to tell when areas showed no evidence of being seeded with the right mix (e.g. an intended wildflower area that had actually been sown as a regular amenity lawn), or when trees and hedges just hadn't been planted.

However, in some cases, the destruction of ecological features could have been the result of inappropriate management by landscaping contractors. For example, we found a few areas that were shown as wildflower grassland on plans that were being mown fortnightly as amenity grassland. This kind of maintenance reduces species diversity and makes it difficult to distinguish an inappropriately maintained wildflower grassland from a scenario where an area has not been sown at all.

Given the difficulties of separating the actions of developers from those of landscape contractors in some cases, our audit covers both: the compliance of an estate assesses both developer and landscape management actions.

Why aren't we naming and shaming the estates we visited?

We have anonymised our findings for a number of reasons:

1. Our results are remarkably consistent across the Local Planning Authorities that we investigated, to the point where we are confident that the same patterns would be likely to show up anywhere we had chosen to look. It therefore seems unfair to blame these particular councils for failures that we think are far more widespread.

2. Our results are consistent across small, medium, and large-scale developers suggesting a systemic problem with the interface between the construction industry and the planning system. We want to keep people's attention on this broad picture, rather than on local detail.

3. We chose five Local Planning Authorities as a sample, but the consistency of our results suggests that findings would be very similar elsewhere in the country. For reasons that we will explain in our Discussion section, we want to avoid blaming specific Local Authority planners and ecologists for the situation we are describing.

4. Whilst we can confidently point to individual developments as being particularly poor or particularly good, our sample size of 42 was not sufficiently large to allow us to draw conclusions about the performance of individual developers. In future, we hope to develop a much larger dataset.

5. In one case, a development we surveyed was subject to ongoing enforcement and legal action. We did not want to jeopardise this process by naming individual developments.

The method that we have developed can be used to audit any new residential development. In the near future, we will produce a toolkit so that communities, charities, NGOs and other interested parties can use the same method in their own areas. For more information, see the conclusion to this report.

4. Headline figures

Across England, only **53%** of the ecological mitigations and enhancements that developers have committed to undertake as a legally binding condition of planning permission are in place on the ground.

This means that **47%** or around half of the ecological features are missing.

When trees are removed from the calculation, the rate of compliance with ecological and landscaping conditions falls to just **34%**.

Breakdown by habitat types

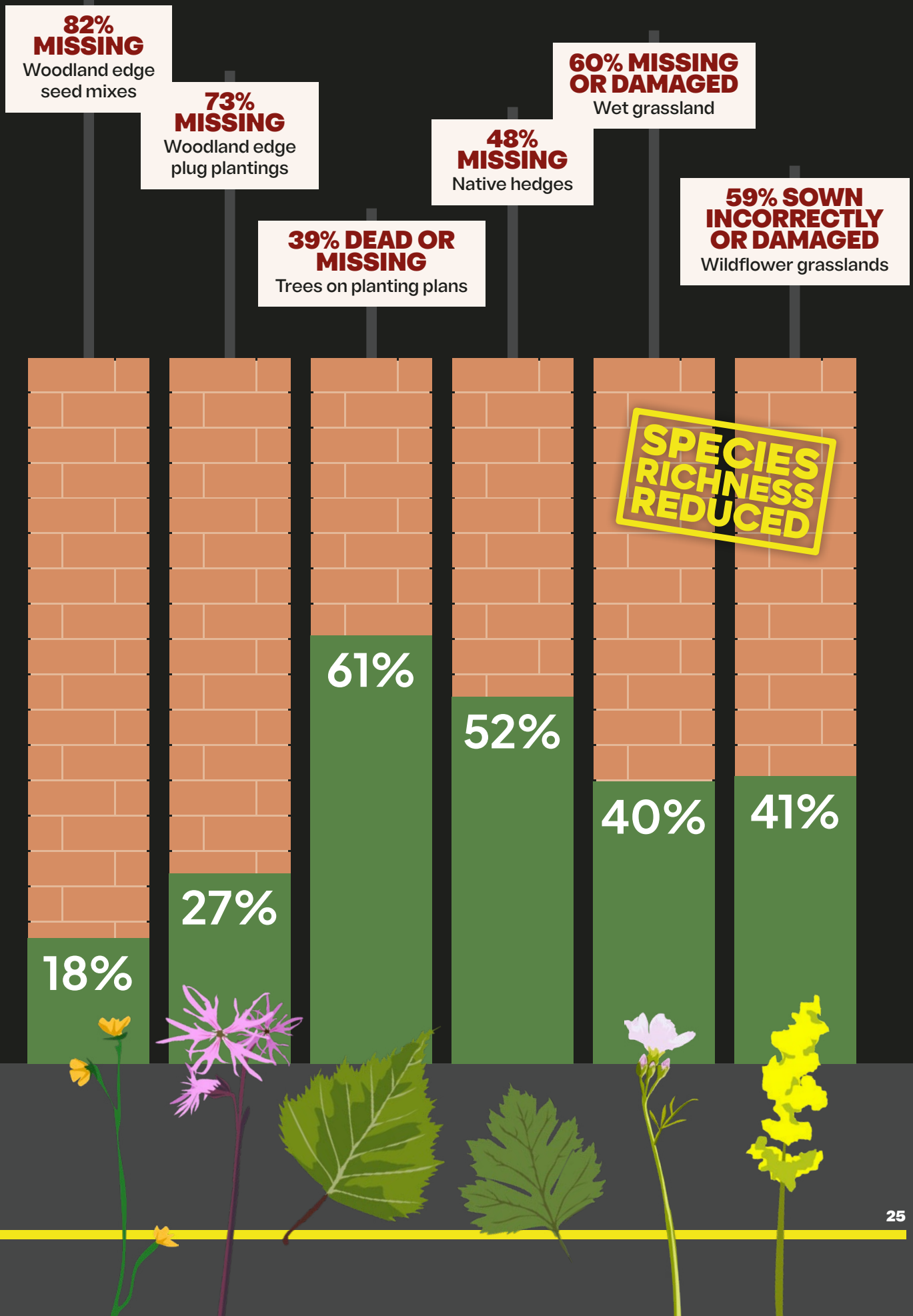
The figures here show the percentage of each type of ecological mitigation/ enhancement that is **present** onsite.

Table 4. Compliance by habitat

Type of habitat	Number actually present	Number in mitigation/ enhancement plans	% Compliance
Bat boxes	107	421	**25.4**
Bird boxes	114	447	**25.5**
Hedgehog highways	2	12	**16.7**
Hedges	66	126	**52.4**
Hibernaculum	9	60	**15.0**
Invertebrate box	0	12	**0.0**
Tussocky grassland	4.5	8	**56.3**
Marginal aquatic planting	15	36	**41.7**
Other	9	16	**56.3**
Pond	25.5	36	**70.8**
Scrub	85.5	141	**60.6**
SuDS wet grassland	24	60	**40.0**
Trees	2820	4654	**60.6**
Wildflower grassland	79	194	**40.7**
Woodland edge planting	6.5	24	**27.1**
Woodland edge seed mix	6	33	**18.2**

What we found

A high percentage of habitat and species enhancements are missing:


82% MISSING
Woodland edge seed mixes
73% MISSING
Woodland edge plug plantings
39% DEAD OR MISSING
Trees on planting plans
48% MISSING
Native hedges
60% MISSING OR DAMAGED
Wet grassland
59% SOWN INCORRECTLY OR DAMAGED
Wildflower grasslands
SPECIES RICHNESS REDUCED
18%
27%
61%
52%
40%
41%

This means that:

82% of woodland edge seed mixes and **73% of woodland edge perennial plug plantings** are missing.

60% of wet grassland SuDS areas are missing or have been mown so that species diversity has been lost.

59% of wildflower grasslands have either not been sown correctly, or have been mown incorrectly so that their species diversity has been lost.

48% of native hedges that should have been planted are missing.

39% of trees on planting plans are missing or dead.

39% of native scrub areas are missing.

To understand more about what is missing, the next section evaluates how different types of ecological enhancement are delivered within new developments.

Woodland and woodland edge habitats

'The smaller the woodland the greater the potential for edge effects so the provision of a complex edge structure will be important for reducing the penetration of these effects into the interior of the woodland'.[20]

Woodland edge species mixes are used in two main ways on landscaping plans. Firstly, they are often specified as a way of creating a protective buffer to areas of established woodland on or near to construction sites. Often a layered approach is specified, with a mixture of seeding, plug planting, and scrub creating a protective ecotope. This is intended to shield established woodland from 'edge effects' which can interfere with its existing ecosystem, including airborne pollution, disturbance from humans and their pets, noise, and artificial lighting.

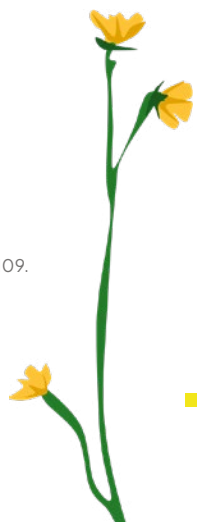
Secondly, woodland edge mixes can be specified to be sown in particularly shaded areas of a site, often by established hedgerows, where wildflower grasslands will be difficult to establish or maintain.

Woodland edges are particularly beneficial for biodiversity, not just for their role in mitigating 'edge effects' but because of their structural diversity, which creates more ecological niches than a less varied habitat. Woodland edge seed mixes and plantings therefore do not merely protect woodland but offer an opportunity to create valuable habitats in their own right. Ideally, these areas should connect to wider green corridors, enabling species to move across the landscape.[21]

Across the 42 housing estates we examined, only **6.5 out of 24 (27%) areas of proposed woodland edge planting were actually present** (one was considerably smaller than specified, hence we gave it a half score). Only **6 out of 33 areas (18%) areas of woodland edge seed mix had been sown**. In some cases, this was the result of a wider tendency to sow large areas with one wildflower seed mix rather than observing the detail on plans, but in others there was a failure to sow any seed mix at all. In the worst cases, this left the border of an established ancient woodland without any of the protective effects that had been explicitly conditioned through the planning process.

In some cases, we witnessed direct evidence of harm to ancient woodland that appeared to result from the absence of a dense natural barrier, such as large quantities of grass cuttings deposited at the edge of the treeline by either grounds maintenance contractors or residents.

[20] Ryan, L. (2012) Impacts of Nearby Development on Ancient Woodland - Addendum, Grantham: The Woodland Trust
[21] Bentrup, G. (2008) Conservation Buffers—Design guidelines for buffers, corridors, and greenways Gen. Tech. Rep. SRS-109. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station.



Wet grassland, ponds, and SuDS

'Common frog, common toad and natterjack toad populations have been reported as being in decline since the 1970s. Recent research in 2016 by Froglife and the University of Zurich has shown that common toad populations have declined across the UK by 68% over the past 30 years, which approximates to a 2.26 % decline per year.'[22]

Across all of the areas we visited, the wet grassland mixes that are supposed to be sown as part of many nature-friendly SuDS systems (typically Emorsgate EM8) were consistently missing, or so poorly maintained that it was difficult to tell whether they had been sown at all. Just **24 out of 60 (40%)** of such wet grassland areas were present on site. Marginal aquatic planting fared little better with **15 out of 36 (42%)** of agreed schemes present in these wet areas.

In many places, no obvious maintenance was happening and perennial weeds had become dominant and reduced species diversity in the wet grassland sward, with pioneer species like birch and willow creating areas of scrub. While scrub habitats can have significant biodiversity value, sometimes wet grassland is specified for particular ecological reasons, for example, to provide replacement habitat for displaced amphibian populations. In some cases, the wet meadow grassland areas shown on plans were being regularly mown, despite the planning documents specifying a maintenance regime of less regular cutting. This is likely to reduce species diversity.

71%, or 25 out of 36 of the ponds that were supposed to be present were in place. While some were excellent, the quality of many was poor, with the worst having more than 50% of their surface covered by fast-growing species, especially bulrush, *Typha latifolia* (in a few cases, ponds were completely covered by this species, which was clearly not being managed). Where such ponds form part of great crested newt mitigation schemes, this is particularly problematic since current guidance suggests that this species prefers mid-succession ponds with emergent vegetation covering a quarter to half of the area.[23]

Access to ponds could also cause issues. In one case, the developer had not fenced off a particularly ambitious pond mitigation scheme, despite requests from the Local Planning Authority ecologist to do so. This resulted in the introduction of predatory goldfish to a pond system intended to provide compensation for the loss of amphibian breeding sites elsewhere. In addition, the landscaping contractors responsible for the site had added enriched topsoil to the area around the pond, which was intended to have poor soil in order to encourage grassland diversity.

[22] Froglife 'Amphibian and reptile declines – UK perspective' https://www.froglife.org/2018/03/23/amphibian-and-reptile-declines-uk-perspective/
[23] Langton, T. et al (2001), Great Crested Newt Conservation Handbook, Froglife, Halesworth.
J Whitehurst (2001) Great crested newt mitigation guidelines, Peterborough: English Nature.

Wildflower grasslands

'Since the 1930s, over 97% of wildflower meadows have been lost. Where once thirty species of plants would bloom under your outstretched arms, in most of our fields there are now just six.'[24]

Wildflower grasslands were a popular choice amongst developers seeking to enhance onsite biodiversity. This trend is likely to increase with the introduction of mandatory Biodiversity Net Gain, since the metric calculation will make species-rich grassland an attractive option for developers seeking to reduce costs by delivering as much of the required gain as possible within the red-line boundary of the development application.[25]

Only **79 out of 194 (41%)** of wildflower grassland areas had been delivered. The high numbers relative to the number of housing estates are explained by the fact that the calculation was not area-based: instead we counted each individual area of wildflower seeding separately.

The quality of many of the wildflower grassland areas we assessed was poor, with two main issues becoming apparent. Firstly, many areas of meadow grassland were not sown at all, with no evidence of the species listed on the seed mix present on the site and ruderal vegetation instead taking its place. In some cases, the wrong seed mix had been used, often containing non-native species, instead of the specified native mixes produced by specialist wildflower seed companies. On one site, a large area that was supposed to be a wildflower grassland had clearly been sown with an amenity mix that included large amounts of perennial ryegrass *Lolium perenne*. On another, it appeared that the landscaping firm had run out of the correct seed mix three quarters of the way through the job, and reverted to sowing an amenity mix in the remaining area.

Secondly, areas of meadow grassland that had been sown were often managed inappropriately. Most planning permissions were accompanied by Landscape Management Plans, which specifically set out the grassland management regime that should be followed (including details of mowing). However, when it came to the management of meadow grassland, practices on the ground rarely if ever met the standards set out in these documents, rendering them no more than a tick-box exercise.

[24] Plantlife 'Everything you wanted to know about making and looking after meadows' https://meadows.plantlife.org.uk/. Statistic from R M Fuller (1987) 'The Changing Extent and Conservation Interest of Lowland Grasslands in England and Wales: A Review of Grassland Surveys 1930–84' Biological Conservation, 281–300

[25] Rampling EE, et al (2024). 'Achieving biodiversity net gain by addressing governance gaps underpinning ecological compensation policies'. Conservation Biology 38(2):e14198

Inappropriate mowing regimes were a particular problem. In many cases, areas that were supposed to be managed as meadow grassland were being mown fortnightly like amenity grassland, reducing species diversity. 'Cut and collect' mowing, which involves the collection of arisings, is an essential part of meadow management as it reduces soil fertility, thereby promoting competition for nutrients and increasing species diversity. Whilst every landscape management plan specified that arisings from meadow areas should be collected in this way, we found little evidence that this was actually happening on any of the sites we surveyed.

On other sites, a common problem was that the 'weed' control specified in the management plans was not happening in practice. This is important during the establishment of meadow grassland, as a failure to control robust species can lead to swards dominated by coarse grasses, dock and thistle, with a corresponding decline in species diversity.

Native hedgerows

'Approximately half of Britain's hedgerows were lost between the 1940s and 1990s, mostly in England, due to development and agricultural intensification. Recent years have witnessed a new threat – a lack of maintenance, resulting in gappy hedges or overgrown lines of trees.'[26]

Native hedgerows are a priority habitat in their own right, but they also support around 130 Biodiversity Action Plan species, including protected species such as hazel dormice and horseshoe bats.[27]

Out of **126 proposed sections of native hedgerow, just 66 had been delivered – 52%**. Many were not being managed appropriately, often being cut on an annual basis prior to or whilst fruiting, reducing the supply of berries that can be an important source of food for wildlife.

Some 'maintenance' appeared to be purely destructive: on one site, the landscape maintenance contractor had used a strimmer on grassland and completely destroyed a whip-planted area of hedging in the process, despite the Landscape Management Plan explicitly warning against this. Remediation work on existing hedgerows was also notably poor on many sites, with 'gapping up' either not carried out or failing to become established.

Hedgerows are an area where many landscaping benefits could be significantly improved. Often the ornamental areas of landscaping around homes include non-native hedge species such as Laurel and Photinia, when an equally attractive native hedge could be provided, adding ecological value.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[26] UKCEH (2024) 'High-tech aerial mapping reveals England's hedgerow landscape', https://www.ceh.ac.uk/press/high-tech-aerial-mapping-reveals-englands-hedgerow-landscape
[27] Hedgelink (2009) UK Biodiversity Action Plan: Priority species linked to hedgerows.

Street trees and trees in public open space

'43% of neighbourhoods in England have less than 10% tree canopy cover, while a whopping 84% have less than 20% coverage.'[28]

Street trees and trees in public open space were more present than most other types of habitat, which may reflect their visibility in planting schemes and aesthetic perceptions that they enhance new development layouts. **We assessed a total of 4,654 trees that had been conditioned as part of landscaping plans and found that 2,820 (61%) were present**.

While some developments had not planted as many trees as proposed on plans, a more significant problem was the high rates of death in trees following planting. This may reflect a wider problem with landscaping: the timescales for making an estate look attractive and saleable do not necessarily correlate well with the best seasons for planting trees (in the winter or early spring, before they have come into leaf). Planting on construction sites also encounters difficulties with establishment caused by compacted ground, particularly where insufficient root ball space is provided. On one estate that we visited, the final tree was being planted in August, in 30°C heat, with only an initial watering using office water dispenser tanks. The landscape contractor explained that this less than ideal situation was caused by the trees having been ordered by another contractor and arriving onsite weeks earlier, necessitating their planting in the middle of the heatwave.

Our assessment of the number of street trees is just a snapshot of the situation at the time of our survey. For newer estates in particular, it is likely to be an overestimate of the total number of trees that will survive, for the simple reason that the death of a tree can be a slow process. We visited one site in the north of England twice, at the beginning of the survey season in late April, and again in August. A large number of trees that appeared to be thriving when relatively newly planted in April were dead by our August visit.

[28] Friends of the Earth and Terra Sullis (2023) Mapping English tree cover: results, ranking and methodology. https://policy.friendsoftheearth.uk/insight/mapping-english-tree-cover-results-ranking-and-methodology

The extent of dead trees could be very noticeable: on one estate in the south east, residents with views over what should have been an attractive public open space managed for nature were instead gazing across a landscape of poorly planted trees, over 50% of which had died. A resident confirmed that the young trees had been left in this state for 2–3 years. There are implications for human as well as ecological wellbeing in such landscapes of ruin.

Since the death of newly planted trees is a known issue, most landscape maintenance plans make provision for their replacement over the first five years of a new housing estate. While some sites showed clear evidence of replacement plantings (e.g. a smaller tree planted in a row of more established saplings), the majority either simply removed dead trees, or left them in situ.

Scrub areas

'Scrub often exists as a mosaic with grassland and other open vegetation. Spatial patchiness is an extremely important habitat feature for many plants and animals. In the case of invertebrates, fine-scale mosaics of structure and plant composition provide a diversity of niches and a variety of food and shelter.'[29]

The ecological value of scrub, particularly for invertebrates, is being increasingly recognised and this habitat type is now included in most new developments, often in nature-driven public open space. It is sometimes described on plans as 'native thicket mix', and generally contains a mixture of plants such as hazel, hawthorn, dogwood, wild privet, holly, and dog rose, that are used to build islands of native vegetation in grassland and wildflower areas as opposed to more linear hedge features.

60% of the scrub areas proposed on plans were actually planted, a total of **86 out of 141 different areas** across the 42 estates we surveyed.

[29] Mortimer, S. et al (2000) The Nature Conservation Value of Scrub in Britain. Peterborough: JNCC Report no 308, p. 7.

Traditional and community orchards and nut plantations

'Threats to old orchards include neglect, intensification of agriculture and pressure from land development… Supermarkets have long been importing cheap fruit from overseas which has led to orchard habitats becoming economically unviable and increasingly rare. The area of orchard habitat across England has declined by more than 60% since the 1950s.'[30]

Biodiversity exists at many different scales: there is diversity amongst individual species, and diversity amongst ecosystems, but also diversity at a genetic level. Traditional orchards are a habitat type in their own right, and are considered a priority habitat under the 2006 NERC Act on the basis of the number of species and genetic diversity they support. They often contain heritage varieties of fruit trees produced by grafting, many of which are rare and locally specific to a particular area. The loss of traditional orchards is therefore damaging in terms of losing ecosystem, species, and genetic diversity.

5 of the 42 sites we looked at involved the planting of new orchard habitat, in most cases to replace lost traditional orchards and nut plantations. One involved the retention and improvement of an existing orchard. In another example, the loss of an orchard was not associated with any ecological conditions, so no mitigation or replacement planting was provided.

In the 5 landscaping plans that specified new orchard planting, **335 out of a total of 725 orchard trees (46%) promised in the landscape plan had been planted and survived**. In the case of the retained and improved orchard, this work had been completed.

In most cases, it was difficult for us to judge whether the young trees that we found in replacement orchards were of the heritage varieties specified in the landscaping plans. However, in one case, the landscape contractors had left the nursery tags on the trees, enabling us to identify them. The landscape architect for this site specified "local heritage varieties, such as: Lady Henniker, Lord Stradbroke, Aldeburgh beach, St Edmund's russet, Sturmer pippen [sic]". Onsite we found that the trees that had been planted were of far more common varieties: Discovery, Cox's orange pippin, James Grieve, and Golden Delicious. There is reason to suspect that, in addition to the problem of orchard trees failing to establish, common and commercial varieties are being substituted, contributing to a decline in genetic diversity.

[30] PTES 'Traditional orchards: a guide to wildlife and management', PTES: London.

Species-specific mitigations

Our survey found that mitigations and enhancement features for specific fauna were missing to a greater degree than habitat and landscape features.

75% of bird boxes are missing.

75% of bat boxes have not been installed.

83% of hedgehog highways are not in place.

85% of hibernacula and refugia are not in place.

100% of invertebrate boxes are not in place.

Bird, bat, and invertebrate boxes

'Most bat species are threatened by urbanisation, although urban areas can also offer important roosting and foraging opportunities. Urban development should consider how bats are likely to respond to development, and take measures to minimise impacts.'[31]

Our survey shows that 75% of both bird and bat boxes are missing on development sites. A total of **427 bat boxes were promised, but only 107 delivered**. Similarly, only **115 out of 467 bird boxes** that had been promised were present onsite. Of the 12 invertebrate boxes that were marked on landscape plans, none were found to be in place.

Table 5: Compliance of bird and bat boxes by installation location/type

Category	% compliant
Tree-mounted	10.2
Integrated	31.7
External on houses	39.0

As shown in Table 5, integrated bat and bird boxes (i.e. boxes built into the walls of houses that are installed by builders during construction) were missing in greater numbers than non-integrated boxes (boxes mounted on the outside of the building, which can be retrofitted after a build is complete). However, tree-mounted boxes (which are often installed by ecological consultants employed by developers) fared worst of all, with only 10% installed. These low figures demonstrate an especially weak area of compliance.

Integrated bat boxes are normally the preferred option for ecologists, since they are more secure and less easily removed by homeowners. The low installation rate for integrated boxes could indicate supply issues, but is more likely to be due to the fact that they are often shown on separate plans to those used for construction purposes. As a result, bricklayers and site managers are unlikely to be aware of the requirement for them to be included during the build. Ensuring all relevant elevation plans show integrated and external boxes in the correct location, prior to approval, would significantly improve this situation.

The figures for tree-mounted boxes, often located in woodland and trees in public open space, are far worse than those for integrated boxes: 9 out of 10 were missing. Since these boxes are often installed by ecological consultants, this may indicate a lack of post-completion communication between developers and consultants engaged earlier in the planning process to provide an ecological enhancement scheme. Determining the presence or absence of tree-mounted boxes could be challenging. While some ecological enhancement plans detail exactly where boxes should be located, others state only a number to be placed onsite, meaning that every established tree has to be investigated, which was difficult over the

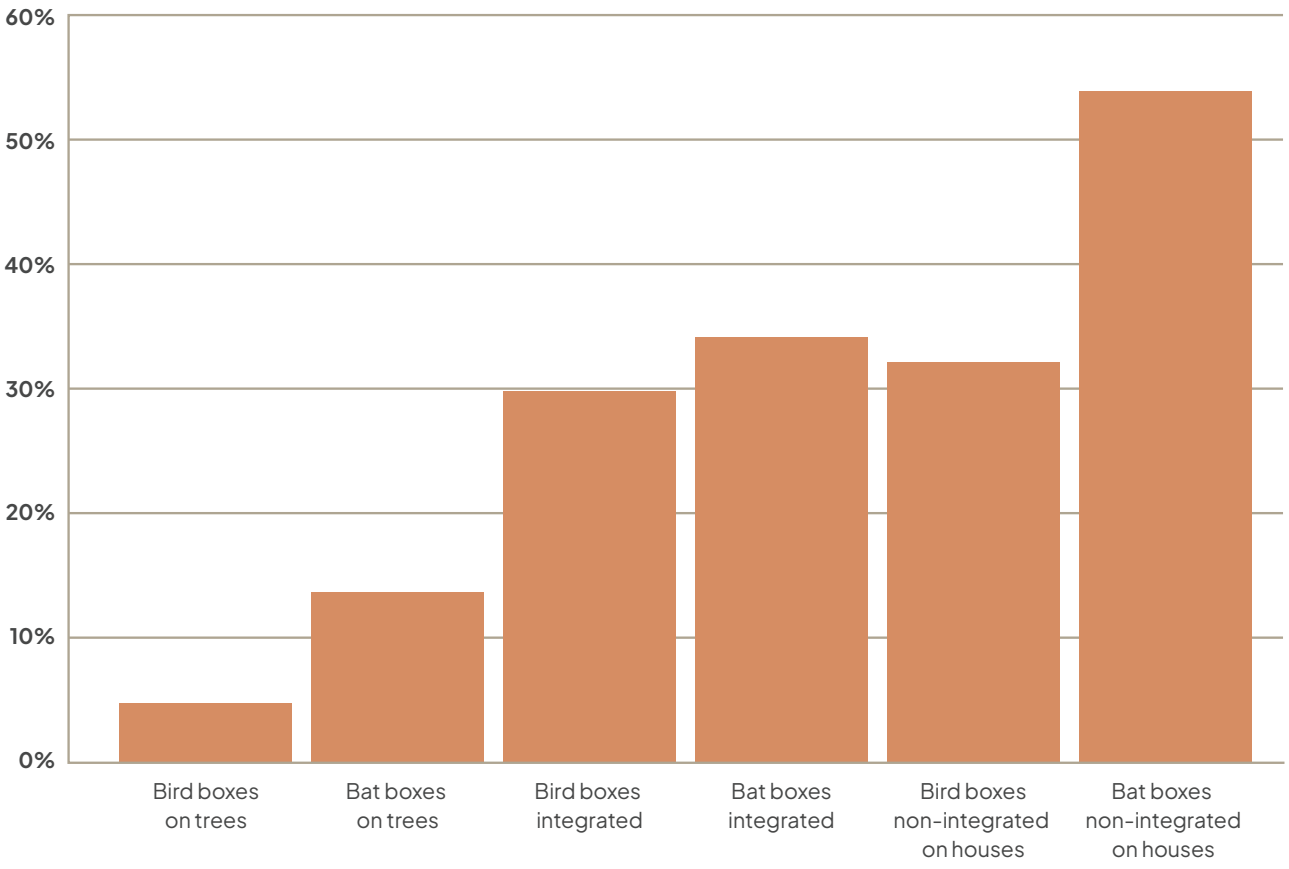
[31] F. Gill et al (2020) 'Bats in urbanising landscapes: habitat selection and recommendations for a sustainable future'. Biological Conservation. 241. 108343. 10.1016/j.biocon.2019.108343.

summer period of leaf cover. Where we could not determine with certainty that a box was missing, we removed it from our calculations.

Even where bird and bat boxes had been provided, they were not always suitably placed, reducing the likelihood that they would be used by the intended species. Some were placed on the wrong elevation, for example, bird boxes facing south with no shade above, exposing chicks to the risk of lethal overheating. (Sometimes we could trace this back to enhancement plans, which sited these boxes on the wrong elevations, suggesting a need for further training with regard to ecological mitigation and enhancement). Some swift bricks were mounted singly, reducing the likelihood of their uptake by this species, which prefers to nest in colonies. Others were mounted too close to the ground, making it harder for chicks to fledge successfully without becoming grounded, and exposing occupants to a greater risk of predation by cats. In one instance, bird boxes had been installed upside down.

We were unable to locate any insect boxes or 'bug hotels', despite their location being indicated on plans.

Figure 1. Bird and bat box percentage compliance by mitigation location.



Hedgehog highways

'Urban areas (mixtures of gardens, amenity grassland and other green space) are thought to be a refuge for hedgehogs from pressures in the wider landscape and can support high numbers of hedgehogs.'[32]

The most recent State of Britain's Hedgehogs report (2022) found that urbanised areas may offer a valuable refuge for hedgehogs, since rural populations appear to be declining. It is therefore important that all new developments close to suitable hedgehog habitat are accessible to these threatened mammals.

Many of the developments we surveyed used wooden fencing with solid concrete gravel boards below to separate rear gardens. In more upmarket developments, brick walls were sometimes used to delineate between private and public spaces, and acted as an equally impenetrable barrier to hedgehogs. The planting of more hedgerows within estates, particularly in public open space, would not only improve their permeability for hedgehogs but also provide valuable habitat for other species. Some hedgehog highways were difficult to assess since they linked private gardens, but the best schemes had designed a network of gaps linking gardens with public open space, and showed this clearly on plans.

Only **12 out of 42 developments** in our audit included hedgehog highways as part of their ecological enhancement strategy. This represents a huge missed opportunity to make new developments more accessible to this species. Of those 12, a mere two had actually installed the hedgehog highways with holes of a sufficient size (13cm x 13cm) to allow an adult hedgehog passage. In some cases, garden gates had been raised slightly, but this often did not provide sufficient room. In one case, a construction worker had clearly hollowed out a few areas underneath fence panels by hand. However, unmarked hedgehog gaps are liable to be inadvertently blocked by bins and other garden items, or by overgrown vegetation.

[32] Wembridge, D et al (2022) The State of Britain's Hedgehogs, People's Trust for Endangered Species.

Hibernacula and refugia

'Great crested newts are rather more fastidious in their habitat requirements than our other widespread amphibian species, and as a result, have declined more severely. Nevertheless, their needs are now quite well known and the possibility to reverse recent declines lies clearly before us.'[33]

Hibernacula are places used by amphibians and reptiles for hibernation over the winter period.

Hibernacula are quick, easy and cheap to create, but despite this are often constructed incorrectly. The more permanent method is partially to bury hardcore, rocks, timber, and branches underground, and cap with a layer of soil and turf, leaving access holes. As a temporary measure, it is often recommended in ecological reports that branches and brash from trees felled on site are retained in piles to provide additional habitat for various species.

Despite this, only **6 out of the 60 hibernacula** shown on landscaping plans were actually delivered onsite.

[33] Langton, T et al (2001) Great Crested Newt Conservation Handbook, Froglife: Halesworth. Neave, D and Moffatt, C (2007) 'Evidence of amphibian occupation of artificial hibernacula' Herpetological Bulletin, 99, 20–22.

Breakdown by development types

We found very little variation in the compliance of sites by type of developer, size of development (number of houses), area of the development site (in hectares), or Local Planning Authority. Given that our methodology looked at local, regional, and national housebuilders, **this lack of local variation suggests a systemic issue across the planning system as a whole**.

Did the type of developer affect compliance rates?

We categorised developers according to the scale of development at which they typically work. Whilst there is no agreed categorisation of housebuilders, many studies group them into national, regional and local.[34] We defined four categories:

National:

- large national housebuilders operating across England and building at scale (>2000 homes per developer in 2021–22)

Regional:

- operating regionally, mostly building at medium to small scales

Local/small-medium enterprises (SMEs):

- operating locally and often building smaller housing developments

Other:

- This category included other types of developers, including housing associations and council-led housing companies.

[34] See CMA (2024) Housebuilding Market Study Final Report, available at: https://www.gov.uk/government/publications/housebuilding-market-study-final-report

Of the 42 audited developments, 24 were built by large national housebuilders (57%), 9 by regional builders (21%), 6 by local/SMEs (14%), and 3 by other types of developer (7%). Nationally, approximately 40% of new housing across the UK is supplied by large national housebuilders, and around 27% by SMEs. Our sample is therefore skewed towards large national housebuilders, compared to their share of the market. This is mostly due to the fact that we only selected developments that featured ecological enhancement or mitigation schemes, which predisposed our sample towards larger developments in suburban and rural areas, rather than those in dense urban areas (many of the latter have hitherto lacked much in the way of ecological mitigation or enhancement features) - see 'How did we select development sites?' above.

Overall compliance with ecological mitigations and enhancements by type of developer was as follows:

Although the total number of developments was small, a test of the data confirmed that there was no statistically significant difference in terms of mean compliance rates according to the type of developer. This means that our data shows that there is little difference in the ways that different types of developer meet commitments to deliver ecological enhancements and mitigations.

All types of developers, except the 'other' category, produced developments at opposite ends of the compliance scale: sites that were almost non-compliant, and sites that were mostly compliant. Our dataset was not large enough to draw conclusions about individual housebuilders, but where we did survey two or more developments by the same housebuilder, we noted quite significant variation in the rates of compliance between them.

Table 6. Compliance by type of developer

Type of developer	Average	Minimum compliance %	Maximum compliance %
Local/SME	51.1	0.0	95.0
Regional	55.6	13.2	83.3
National	52.7	11.7	90.5
Other	51.8	42.9	63.6
Total	53.0	0.0	95.0

Did the size of development affect the rate of compliance?

Our sample of developments ranged between 10 houses and 500 houses. There was no discernible difference between the overall rates of compliance in small or large developments. Whilst there was a greater variation in rates of compliance amongst small developments, this was not particularly marked, and some larger developments also had poor levels of compliance.

The total size of housing sites varied considerably from less than 0.5 ha to over 30 ha. Despite this, compliance rates were not significantly correlated with the size of the development. Again, there is more variation in compliance rates amongst smaller developments, but the overall relationship showed no statistically significant difference. Larger sites tended to have larger areas of bespoke enhancement (in some cases large 'nature areas' or Suitable Areas of Natural Greenspace, SANGs).

Figure 2. Percentage compliance vs total dwellings in each development

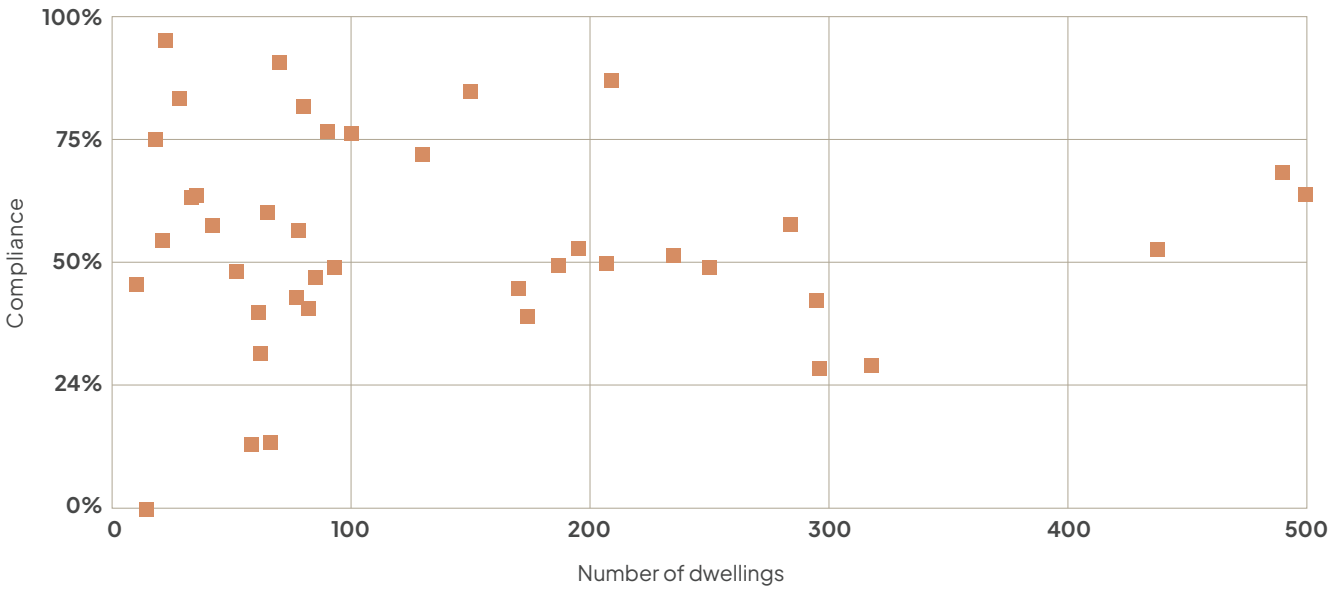
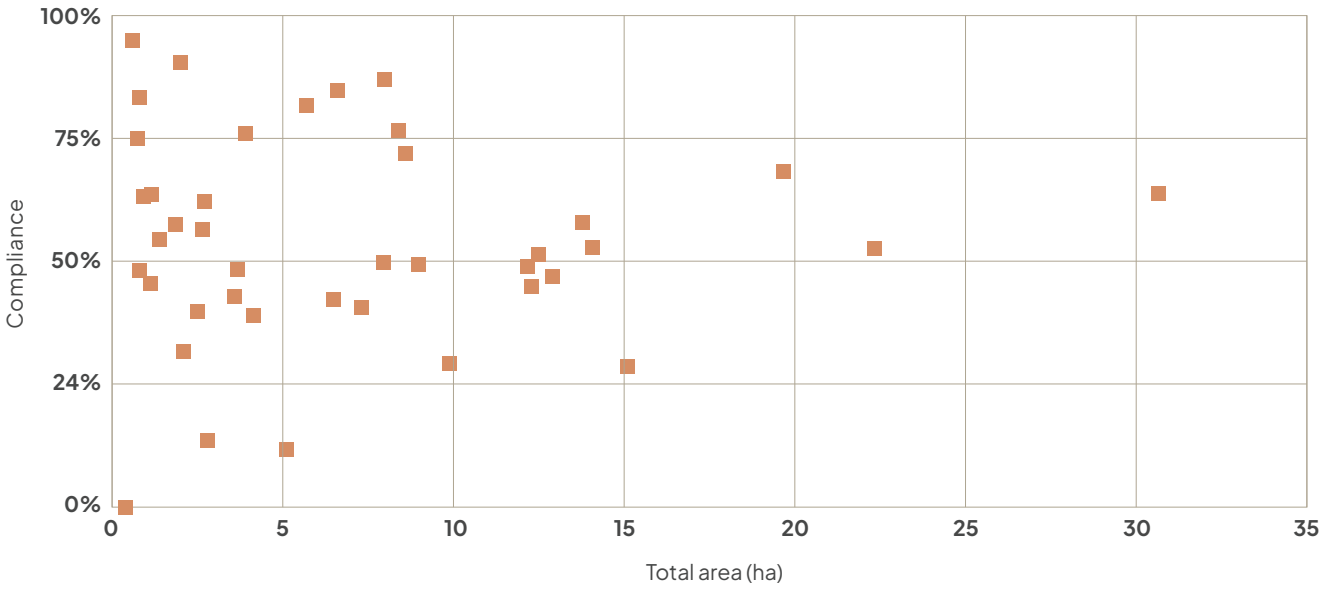


Figure 3. Percentage compliance vs total area in hectares



Was there a difference in rates of compliance between different Local Planning Authorities?

We found that this picture of poor compliance was relatively consistent across England. There was a 20% difference in average compliance between the five Local Planning Authorities that we studied.

Table 7. LPA location and percentage compliance

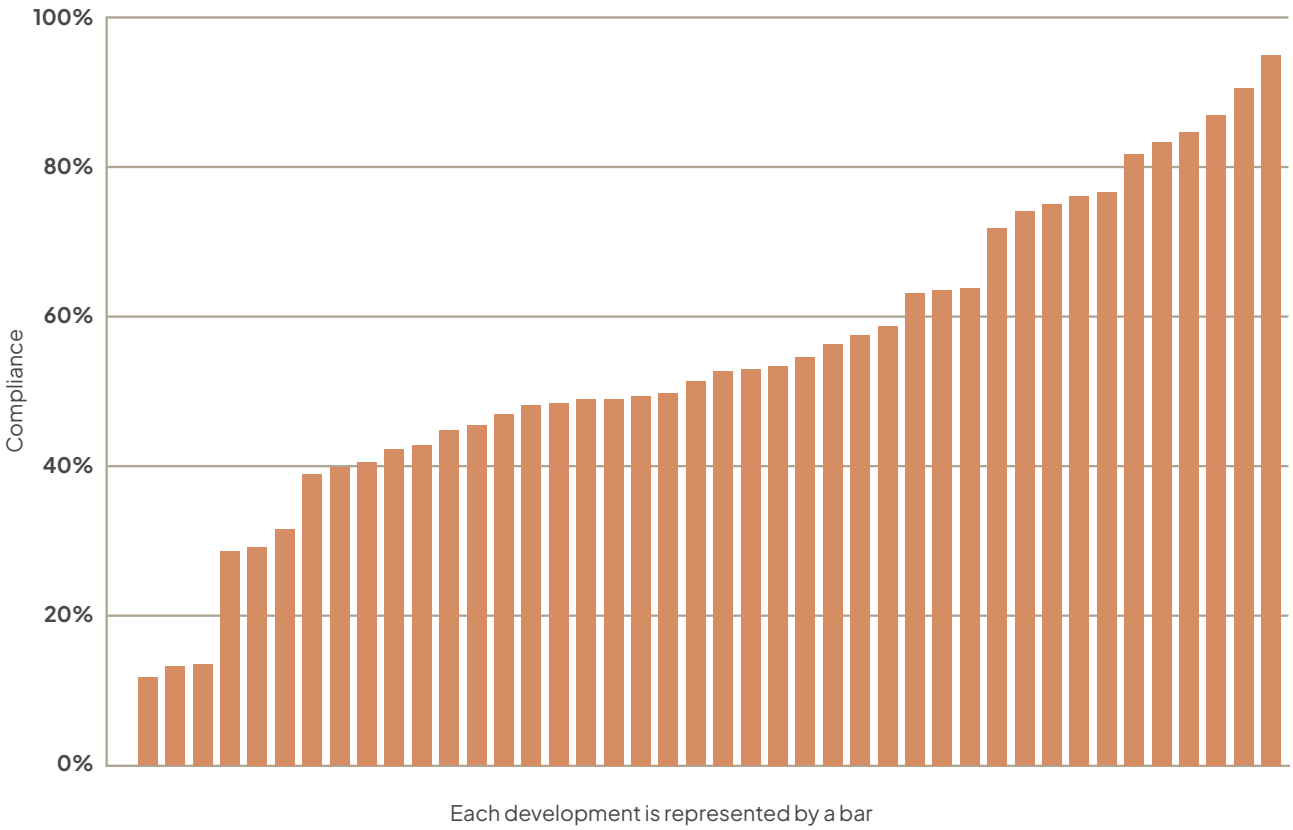
Region in which LPA is located	Total number of developments surveyed per LPA	Average % compliance
South West	6	43.8
South East	9	53.5
East of England	8	64.3
East Midlands	10	57.8
Yorkshire & Humber	9	50.8

What was the distribution of results?

There were significant differences in compliance rates between the sites we surveyed. The most compliant site had 95% of mitigations and enhancements in place, but the least compliant site scored just 0% (this was a small site where three bat boxes should have been provided as mitigation for the loss of a roost within a building that was demolished to make way for the development). Amongst the larger sites with extensive mitigation and / enhancement features, the lowest compliance was on a site developed by a large national housebuilder, at 11.7%.

However, the "positive" results are not necessarily a reflection that mitigation and enhancement schemes will provide good outcomes for biodiversity. Because our method measures compliance with the plans that are agreed as a condition of planning permission, not ecological value, one of its drawbacks is that an enhancement scheme that requires little in the way of new or appropriate features can score highly so long as the developer delivers what is shown on the plans.

Figure 4. Distribution of results



5. Discussion: Why is compliance so low?

Isn't the Local Planning Authority supposed to enforce planning conditions?

It is tempting to lay much of the blame for this situation on Local Planning Authorities for not taking enforcement action against non-compliant developments. Every LPA has a planning enforcement team who, ideally, would be able to go out and monitor all new developments.

In practice, though, proactive monitoring rarely happens, as most enforcement teams do not have the resources to do any more than respond to issues reported by members of the public. Local authority budgets have been subject to swingeing cuts over the last fifteen years,[35] and many enforcement teams are significantly understaffed, leaving them unable to deal with anything but the most major breaches of planning conditions, for example people building structures or using land without permission. Compliance with ecology-related issues therefore tends to be a very low priority for most teams. Biodiversity Net Gain legislation is unlikely to change this, since it will raise the complexity of enforcement cases and has not been supported with additional funding for enforcement from DEFRA.[36]

Furthermore, assessing the presence or absence of ecological mitigations and enhancement features requires specialist ecological knowledge. For example, a level of ecological skill is required to determine what kind of seed mix has been sown, or what external and integrated bat and bird boxes look like. Most people currently working in planning enforcement have not received training in this kind of skillset. Alongside a resources gap, there is a skill and knowledge gap that needs to be filled.

This resource and knowledge gap means that **there is effectively very little regulation of developer behaviour in practice**. This is particularly worrying as we move towards a system dominated by the political logic that we can safeguard biodiversity whilst hugely increasing the rate at which we build new houses by mitigating the ecological harms through the system of Biodiversity Net Gain. Delivering a 10% gain on a spreadsheet is very different from ensuring that beneficial habitats are delivered on the ground. To improve compliance, we need to change developer behaviour by providing a robust regulatory system.

Why are private sector companies involved in the management of new build estates?

Landscape maintenance is an ongoing issue because many local councils no longer adopt public open space, SuDS areas, or even roads due to increasing financial pressures. Instead, residents of new build estates must either manage the public open space themselves, or more commonly, pay an annual fee to an estate management company, who take on the responsibility of sourcing grounds

[35] Local Authorities cut spending on planning by 43% between 2010 and 2021: see Bauer, M. (2022) Planning Enforcement Resourcing, RTPI Research Report, London: RTPI: https://www.rtpi.org.uk/media/13292/planning-enforcement-resourcing-report-final.pdf

[36] National Audit Office (2024) Implementing statutory biodiversity net gain, HC729, London: HMSO: https://www.nao.org.uk/wp-content/uploads/2024/05/implementing-statutory-biodiversity-net-gain.pdf

maintenance contractors and ensuring that this work is carried out to an acceptable standard.

The issue of estate management fees has been recently investigated by the Competition and Markets Authority, whose report concludes that there are significant social justice implications for this model: 'households may face detriment in the form of the charges they pay, the quality of amenities available to them and the quality of management services they receive, the potential for disproportionate sanctions to be applied for outstanding charges, and the sometimes significant efforts required to achieve a satisfactory outcome in those regards. We consider that if the status quo is maintained, aggregate detriment is likely to worsen over time.' [37]

This means that land management on new build estates is very piecemeal. It is conducted by a host of different companies, which makes it more difficult to identify whether the maintenance regime is carried out in accordance with the specific measures detailed in the landscape management plan. Practices of sub-contracting, a lack of oversight, and high management fees relative to spending on maintenance are all large problems.[38]

In a significant number of the developments we audited, poor maintenance practices were common, such as dead trees not being replaced, inappropriate grass cutting regimes for meadow areas, and damage to hedgerows caused by strimming.

Privatising the management of public open space also introduces a potential for conflicts of interest between the desire of residents onsite to keep charges low, and the need to maintain ecological features appropriately. For example, the use of larger trees in landscaping schemes to achieve instant impact is not only expensive but can result in a higher failure rate if they are not properly planted or cared for. The cost of replacements falls to estate management companies, and therefore ultimately residents. Similarly, the costs of managing meadow grassland appropriately can be significant if arisings have to be removed from the site for disposal. Such additional costs have the potential to stoke resentment against ecological mitigation and enhancement schemes amongst residents of new build estates.

Sometimes, residents are left to manage large areas of offset themselves. We spoke to one group on a site in the East of England, who told us that the developer had simply sent the first house on the new road an information pack stating that they needed to organise fellow residents to maintain a relatively large area set aside for nature. The whole group were older (the youngest being in their late 60s) and the labour involved clearly represented a considerable burden. None of them had any ecological expertise or support, which meant that they were taking well-intentioned but ecologically questionable actions. For example, when we visited, they were cutting ivy out of mature trees because they believed that it was 'strangling' them, and preparing to use a

[37] Competition and Markets Authority (2024) Housebuilding Market Study: Final Report. p. 24

[38] The Competition and Markets Authority found that around 60% of the estate management charge paid by residents go to management companies as administration fees, leaving only 40% for the actual work of managing the estate including its ecological features.

digger to clear ditches that formed part of a network for great crested newts. The site was of fairly high ecological value, illustrating the dangers of non-expert management resulting from private management of public open space.

But won't Biodiversity Net Gain solve this?

The introduction of Biodiversity Net Gain in spring 2024 mandated that developments should achieve a 10% gain in biodiversity over the baseline value for each site. This legislation aims to put habitat creation at the heart of planning decisions. It includes some mechanisms to secure delivery of habitats, such as conservation covenants and section 106 agreements, both of which legally oblige developers or offset providers to deliver habitat improvements.

However, we think that the issues raised in this report will also affect the delivery of ecological mitigations, enhancements and offsets under Biodiversity Net Gain for three reasons:

1. Whilst new legal requirements are in place for offsite habitat creation, emerging evidence shows that developers are preferring to comply with Biodiversity Net Gain by providing smaller onsite habitats. These will conventionally be secured by a planning condition. This is the same method of securing ecological enhancements used in the developments we audited, and which led to such poor outcomes.
2. Even where habitat creation is secured by specific legal mechanisms, this does not remove issues of compliance and enforcement. Section 106 agreements are commonly used in the planning system for a range of mitigations, but not all of these are followed or enforced.
3. The complicated nature of many legal agreements for habitat creation through Biodiversity Net Gain is likely to mean that there are many grey areas. Even if enforcement action were to be taken by a local authority, this complexity might mean that problems are not resolved. For example, legally defining the ecological condition that habitats must achieve over a 30 year period is likely to be difficult, and open to challenge.

The widespread problems we identify in this report with implementation of ecological enhancements and mitigations are therefore unlikely to be resolved by the new Biodiversity Net Gain system. There is a risk that the 10% gains indicated on paper, actually turn into a substantial loss of biodiversity in practice. Whilst we did not audit individual developments using the Biodiversity Net Gain metric, the rate of 50% non-compliance that we found is still likely to lead to substantial loss, unless wider issues of implementation are addressed.

6. Recommendations: what can be done?

To improve compliance, we make 5 key recommendations:

1. **Put effective and adequately resourced ecological enforcement in place**

Our research suggests that developers are unlikely to meet the conditions of planning applications unless there is effective and adequately resourced enforcement in place. Extra resource must be put in place to fund this in Local Planning Authorities, and the skills involved mean that it's a job best done by trained ecologists.

Meet Ben!

This is Ben. He is currently employed by Maidstone Council to act as a Landscape Enforcement Officer. This is a new role that has been created by ecologically-minded local leaders, who have already recognised the existence of a problem with developer compliance.

Ben's role is to ensure that the ecological and landscape conditions of planning applications are enforced. He visits development sites to check ecological features and responds to tip-offs from members of the public about non-compliant sites. He has the power to write to developers and demand that they install the ecological mitigation and enhancements that they have promised, using something called a 'Breach of Condition' notice.

If there is still no response, Ben will prosecute housebuilders for non-compliance. Having been in post for just two years, he is now beginning his first prosecutions of developers who have not responded to his requests to replant dozens of dead trees on a local development site.

Ben's appointment doesn't just mean that there is a mechanism to hold developers to account after they have failed to comply with planning conditions. The fact that enforcement is in place sends a strong signal to developers that they won't get away with failing to deliver on their commitments, which should mean that breaches of conditions are less likely to occur in the first place.

The effectiveness of Ben's role, however, relies on the rest of the system functioning properly. If, for example, the planning conditions that he is enforcing are badly worded, or attempt to secure inappropriate features for a given species or site, then his ability to prevent harm to nature will be limited. Part 2 outlines some other areas across the planning system where things can go wrong.

2. Fund local councils to take on the management of public open space on new build housing estates

The private management of public open space is very piecemeal. Thousands of different estates are maintained by hundreds of different companies, which makes it difficult to implement wide-ranging changes for the benefit of nature on the ground.

Bringing public space into local authority maintenance (and charging developers a commutable sum to cover the costs) could help ensure that appropriate standards of ecological maintenance are upheld. It also avoids creating a conflict between people and nature, and an unjust situation where residents of new build estates pay more money to maintain public open space that is also used by the local community who do not have the same financial burden.

3. Ensure that landscape and management plans are appropriate, setting high standards for ecological mitigation and enhancement

Too many of the higher-scoring developments were more compliant because they were unambitious. This means that opportunities to increase biodiversity within new developments have been missed.

However, with mandatory Biodiversity Net Gain in place, overly-ambitious schemes may also become problematic, since the metric incentivises the creation of high-scoring habitats, which may be extremely difficult to establish in reality. For example, lowland meadow scores highly and is therefore often included in landscaping schemes, even where its requirements for low soil nutrient levels, a high water table, and specialist mowing regimes cannot be met.

Opportunities to enhance landscaping schemes for nature should also be taken, for example, replacing non-native planting around houses with equally attractive but more ecologically valuable native species.

4. Make developers pay for ecological features that are missing, or those that die, for the first 30 years of a development

Developers work on a model of value extraction over the short term from a change in land use. However, the ecological effects of this change are long term. This mismatch in timescales means that they are profiting from a change but not paying the full costs of the ecological harms they are causing.

We think that developers should be held accountable for the long term health of ecological mitigations and enhancements on their sites. Biodiversity Net Gain makes provisions to do this for 30 years, but this can only be realistically enforced when there is also a bond or penalty clause for non-creation or failure to deliver habitats in the stated condition. However, the majority of biodiversity gains will be secured only by a planning condition, meaning that this element of BNG will still require effective enforcement.

For the reasons already stated above, it is important to ensure that any costs from BNG failures are not passed on to residents.

5. Support communities auditing developments

The kind of audit that we did in this research is something that can be done by anyone with a bit of time, patience, a few computer skills, and a bit of knowledge of nature. We are working to provide a toolkit enabling members of the public to carry out their own audits. This will help alert local authorities to breaches of planning conditions, and raise awareness of the scale of the challenge. We hope it will force developers and management companies to improve things for nature.

One important recommendation is that local authorities should be required to make available on their planning portals all of the documents that have contributed towards the granting of planning permission. Too often, crucial documents are missing or buried amongst piles of online PDFs filed without informative titles. We think that Local Planning Authorities should include a **clear and comprehensive list of all the ecological mitigations and enhancements that have been conditioned, to assist members of the public in identifying** when planning permissions are not being implemented correctly.

We will be in touch with readers via Wild Justice in the near future to provide further information on our toolkit.

Together, we can help build an argument that more resources are needed to protect nature.

Part Two

Points of failure across the planning system

7. Introduction to Part 2

Part 1 of this report explored the final two stages at the end of the planning process (see Table 1). We provided figures that showed the extent to which developers are failing to comply with planning conditions, and the ways in which the actions of landscape maintenance contractors are compromising ecological mitigations and enhancements.

However, the planning system itself contains many more potential points of failure where outcomes for biodiversity can be overlooked, minimised, or excluded.

Our 42 housing developments provided us with some case studies that demonstrated failures to protect biodiversity at every stage of the planning process. Because our sample size is relatively small, we do not yet have the data to say how representative these problems are. This will be the subject of more in-depth research in the future, so **if you have experience of issues that you think might be relevant, please feel free to contact us**. Our email addresses are given towards the end of this report.

8. Points of failure analysis

Methodology

To identify key points of failure, we worked through documentary evidence from planning portals on each of the 42 developments we audited. The stages noted here are drawn from Table 1 (page 10).

Stage 1: Land allocation, housing targets, and ecological outcomes

The tilted balance and threats to nature

Local Planning Authorities are required to write a Local Plan, which sets out where new development should be located over the next 15 years. A key requirement, set by national government, is that these documents should show that councils have at least 5 years' worth of viable land to meet housing targets at all times.

However, housing targets are moveable. Local Planning Authorities can fail to meet them for reasons that are outside their control, for example an economic downturn that leads to a slowing down in the construction industry. Delays in making and ratifying Local Plans because of strong local disagreements can also mean that an area is deemed to have insufficient land allocated for housing. Housing targets can also be changed by the government. The Labour government is currently considering increasing housing targets to meet a goal of 1.5 million new homes in five years.

Around a third of all local council areas are currently in a position where they are judged to have failed to deliver a viable five year land supply.[39] Once this happens, the threshold at which land can be developed is lowered and a scenario called the 'tilted balance' comes into play. Essentially, this means that developers can submit proposals for housing on unallocated sites, and unless there are very strong reasons to refuse the application, it must be approved. If Labour go ahead and increase housing targets, it will cause a far greater number of Local Planning Authorities to fall into this 'tilted balance' scenario.

This has the potential to undermine legislative and policy-based commitments to protect biodiversity and halt its decline, not least because the normal weighing and balancing of evidence that is supposed to take place in the planning system is replaced by a stronger presumption in favour of development. This means that the ecological value of sites may be underestimated, and land that could play an important role in nature recovery may instead be assigned for development. In terms of carbon and sustainability, the tilted balance can lead to less sustainable sites, for example those that are not served by public transport, getting planning permission.

Land for Nature Recovery

Existing ecological designations (such as Sites of Special Scientific Interest and Local Wildlife Sites) are taken into account when deciding which land to allocate, but there can be information gaps about non-designated land that is nonetheless ecologically valuable. The cumulative effects of urbanisation and the ecological impacts of development beyond the boundaries of a site are often poorly considered. A new system of Local Nature Recovery Strategies has been designed to mitigate this, but these currently sit outside the Local Plan process and it is unclear what their future status will be in terms of making decisions on planning applications.

[39] https://www.savills.co.uk/research_articles/229130/363279-0#:~:text=LPAs%20are%20generally%20required%20to,at%20the%20end%20of%202023.

Land allocation raises some thorny issues around which element of sustainability we prioritise. For example, urban edge sites are often the best for biodiversity due to multiple factors: they tend to be less intensively farmed, to have higher densities of original small field boundaries, and diverse uses. Yet they are also sites that are more likely to be allocated for development because their proximity to existing urban areas makes them more sustainable in transport terms.

Case Study: tarmacking irreplaceable habitat

On one site in South East England, land was allocated for housing in a Council's Local Plan nearly 20 years before the planning application for the site was submitted. The parcel of land had a belt of woodland across it, between two areas of the site that were allocated for housing. The woodland, whilst recognised as old, was not at that time designated as ancient woodland.

The subsequent planning application and appeal process considered the impact of new housing adjacent to the woodland. Upon surveying the site in detail, the Council were able to demonstrate that the woodland was in fact ancient, and had it designated as such in the Natural England register.

Despite this change in designation, and despite ancient woodland being considered an irreplaceable habitat, the land was developed. The principle of development on the whole of the site had been established in the earlier plan, and the Council could not demonstrate a five year housing supply, meaning that it was in a 'tilted balance' scenario. This led to the placement of a new road through the woodland to access one relatively small area for development. The case shows how difficult it is to reverse inappropriate allocation of land for development, even when the land was first designated in an era with less stringent ecological protection policies. It also shows the weight of 'tilted balance' arguments in the current context of housing shortages.

After the development was completed, further damage to the ancient woodland occurred, caused by inappropriate usage by the public. This indicates the ways in which proximity to housing can also lead to impacts on ecologically valuable sites.

Stage 2: Ecological surveys

The survey process

Before development starts, a suitably qualified ecologist should survey the entire area covered by the planning application, and produce a report detailing the habitats on site, and any protected species that are present or potentially present.

The most basic type of survey is called a Preliminary Ecological Appraisal (PEA) or Preliminary Roost Assessment (PRA) for bats. It should include a desk-based element that summarises records of nationally and locally designated sites, as well as protected and notable species, for the site and local area.

The PEA can be expanded with further surveys looking for specific habitats or species. Together, these reports should provide a detailed overview of the likely impacts of proposed development and any mitigation and enhancement measures that are needed to ensure that it is compliant with legislation and planning policy. For major developments, these individual reports are normally combined to form a broader assessment of impacts, known as an Environmental Impact Assessment. Additionally, Biodiversity Net Gain now maps the habitats present on a site and calculates their value, as determined by a standard metric. The results are expressed as a number of 'biodiversity units' and a developer must demonstrate that a 10% gain on this baseline figure is achievable after development.

Errors and potential conflicts of interest

Ecological surveys are commissioned by the developer, but submitted to the Local Planning Authority for scrutiny. This can introduce a conflict of interest into the process, whereby professional impartiality, integrity, and adherence to good practice are compromised to varying extents by client demands, exacerbated by the fact that ecologists are dependent on developers for future work.

While many of the ecological reports that we saw were of a high standard, some contained serious errors. We only know about these mistakes because they were picked up during the consultation process for the planning application by various consultees, whose responses were available on the planning portal. Potentially serious omissions or errors in reports can go unnoticed if the Local Planning Authority does not subject them to sufficient scrutiny.

Scrutiny by Local Planning Authorities

Many, but not all, Local Planning Authorities employ ecologists, who act as a 'thin green line' for nature. They provide feedback to planners about the quality of ecological information submitted in support of an application, and help negotiate better outcomes for biodiversity.

However, in some cases this crucial element of planning scrutiny is missing. A 2022 survey found that 45% of local authorities have no dedicated 'in-house' ecologist (some rely on

external providers such as Wildlife Trusts, ecological consultants, or agency staff) while others are struggling to fill ecologist vacancies because public sector wages tend to be lower than those in the private sector.[40]

This has the consequence that many Local Planning Authority ecologists have an extremely high workload, meaning things are sometimes missed or not dealt with properly. Budgets for training and time for the upskilling of ecologists have also been reduced, with some LPAs having no training budget at all. Being able to keep up-to-date with developments in legislation and best practice guidance is essential if LPA ecologists are to provide an effective service.

The additional resource burdens placed on Local Planning Authorities by Biodiversity Net Gain have not been met in any meaningful way by the additional resources made available so far by the government. As a result, validation staff or planners with no ecological training are sometimes stepping in to backfill these specialist and important roles.

Since the planning process is one that depends on negotiation, the time that Local Planning Authority ecologists are able to spend scrutinising information and fighting to achieve better outcomes for biodiversity represents a major constraint that prevents optimal outcomes from being achieved.

This is a key point of failure within the planning system. **If ecological survey reports are inadequate for whatever reason, and there is no meaningful scrutiny of their quality, then important habitats and protected species can be missed altogether. In these cases, if no-one is aware of what is missing, no mitigation or compensation measures can be put in place.**

Case studies: the mysterious case of the missing orchard

We found serious errors in the ecological reports for a small number of the cases we investigated. These included:

- A survey for a site in the South East was riddled with mistakes concerning the biological records data on the presence of bat roosts, dormice, and reptiles. These errors were all picked up by the Local Planning Authority ecologist, who also noted discrepancies in the survey's habitat assessment. For example, the consultant ecologist had stated that one area of grassland on the development site was 'managed and species poor' without identifying grassland type or species present. They had also judged another area to be 'improved' when a previous survey had recorded it as being 'semi-improved neutral lowland meadow'. The ecologist reported the site to be unsuitable for great crested newts without any assessment of ponds being undertaken, and they also ignored the need to survey a building on site which had the potential to support bat roosts. The standard of the report was sufficiently poor that the council's letter in response to the ecological survey

[40] Snell and Oxford (2022) Survey of Local Planning Authorities and their ability to deliver Biodiversity Net Gain in England, Report for ADEPT, ALGE, and DEFRA, https://www.adeptnet.org.uk/sites/default/files/media/2022-07/ALGE-ADEPT%20Report%20on%20LPAs%20and%20BNG.pdf

report requested 'that clarification is sought on the following points: Details of the qualifications and experience/ competence/accreditation of the surveyor(s)'.

- An ecological survey for a site in the East of England failed to note the presence of a traditional orchard (a priority habitat that would have required some form of compensation for its loss) in 1.12 hectares of land. This omission initially went unnoticed by the Local Planning Authority, and was only picked up later when a sharp-eyed landscape architect included "apple trees to replace an area of cleared orchard" in their drawings.

- In a site in northern England, the ecological survey found no evidence of otter or water vole onsite. The local Wildlife Trust, however, provided documented evidence of otter activity in or close to the vicinity of the development site.

Other issues included questions about baselines:

- One development, in the East of England, was on a rare belt of chalk (in a landscape that has very little of this geology) that had been intensively farmed. Ecological baselines from the surveys (which there is no reason to question based on the submitted evidence) therefore painted the picture of a place denuded of ecological value. However, in the years since the development, species associated with chalk grassland have reappeared onsite, including dozens of pyramidal and bee orchids. Verges are now being managed by the local council to aid this recovering biodiversity. While this technically represents an increase in biodiversity as a result of development, it also demonstrates the limitations of ecological surveys that are often just snapshots in time, and can miss important features if undertaken at the wrong time of year. As this site shows, the ecological **potential** of sites for conservation and restoration is also important. We would expect new Local Nature Recovery Strategies to recognise the potential of land for nature and designate them accordingly, but their uncertain and weak position in relation to land allocation for housing means that such protections may not hold as much weight as they should in future.

Stage 3: Design and landscape architecture

The soft landscaping of a construction site is usually designed by a landscape architect. The quality and detail of the plans produced by these professionals varied greatly in the extent to which they considered and included areas for nature. While some landscape architects were finding innovative ways to include nature-friendly species in their designs and persuading developers to budget for better ecological mitigations and enhancements, others were creating unambitious schemes that delivered suboptimal outcomes for nature, or even caused harm.

In most cases, landscaping schemes were quite generic when it came to planting. Almost all of them operated a division between the species used in 'natural' areas, which were generally of some ecological value, and the species used in social space around houses, which were often of lower or limited ecological value, typically ornamentals like *Photinia*, *Euonymous*, and laurel (*Laurus*). The underlying assumption, which these plans then reinforce on the ground, is one of an old-fashioned disconnect between people and nature. Given that we now understand that the human and non-human worlds are deeply interconnected, and that, as humans, we depend on healthy ecosystems for survival, perhaps it is now time to change this long-standing and artificial landscaping division, and move towards more nature-friendly planting in social space, including meadow species that deliver more than nectar and pollen for invertebrates.

Symphoricarpos albus © AdobeStock

Case Studies: invasive questions

We found several schemes that:

- included invasive species such as *Cotoneaster horizontalis*, *Gaultheria shallon* and *Symphoricarpos albus* in planting plans, including in sites located close to areas where their spread could become problematic.

- situated bird boxes on the wrong faces of houses, where exposure to heat can be lethal for chicks.

- placed large trees far too close to houses. This will limit their lifespan as homeowners will inevitably remove them as they grow too large, calling into question the long term mitigatory value of some tree planting on development sites.

Stage 4: Consultation

Consultation on planning applications allows a wide range of people, with varying levels of expertise, to comment on proposed developments. It is currently under attack, with the government seeking to portray those who want to be involved in planning decisions as NIMBYs (short for 'Not In My Back Yard').

However, in the process of exploring the background to our audit cases, we found a number of organisations playing pivotal roles in scrutinising the planning process on ecological grounds. These were mostly local organisations, since national NGOs cannot deal with the volume of applications countrywide. Wildlife Trusts often played an important role in identifying problems with ecological surveys, or calling for further surveying to be done. This points to the need to ensure that planning advisory roles in Wildlife Trusts are properly resourced with suitably experienced staff, and not constrained by political and internal pressures, or affected by any conflicts of interest.

Wider public consultation on development is a fundamental plank of a democratic planning system: it allows places to be made in ways that are sensitive to the needs and wishes of local people. The community is not homogeneous, and many individuals who count as 'members of the general public' for an application may well have an in-depth knowledge of certain aspects of ecology. As one of our case studies shows, the ecological knowledge that exists in the wider community can be detailed and persuasive.

Case Studies: otterly ridiculous

- A professional ecological survey for a site in the East of England confidently reported that there were no otters onsite. This was challenged by a local resident, who not only questioned this judgment, but actually included a still from video footage of an otter on the river in the exact location of the development.

- On a more positive note, in one area in the South West, a member of the public with significant ecological expertise had established a local partnership to scrutinise planning applications on ecological grounds, and was doing an excellent and detailed job of pointing out areas for improvement that the Local Planning Authority had missed. This points to the benefits that can be gained when members of the community contribute to planning decisions.

Stage 5: Decision-making

The ecological survey, the landscape design, community objections, and the professional opinions of Local Authority staff all become part of the **decision-making process** to determine whether a site obtains planning permission. Depending on the process, the decision makers can be local authority planners, or elected local councillors.

Decision-makers are encouraged to weigh a large amount of evidence when making their decisions, and to reach a balance between social, economic, and environmental goals. However, some pieces of data carry more weight than others: for example in many cases, current policy dictates that decision-makers must use a 'tilted balance' that ensures that figures for housing need have a very high priority, overriding ecological concerns. In this context of negotiation, a promise from the developer to mitigate some of the ecological harms can become a significant factor in deliberations.

There can also be less official forms of pressure that are exerted on Local Planning Authority staff to compromise their duty to uphold professional independence and achieve certain results. Local politicians are not immune to similar pressures from the development industry. While we did not find any examples of this in our research sample, we know from other cases that this sometimes happens.

Case study: goodbye, blithe spirit

On one site in the East Midlands, an outline application was submitted with an ecological survey that established that the site consisted of intensively-farmed arable fields of low ecological value. The absence of skylarks was explicitly noted: "hedgerows, hedgerow trees and mixed plantation woodland offered potential for nesting birds, however the site was considered unsuitable to support Schedule 1 bird species, due to the lack of suitable features on site".

The application was refused by the Local Planning Authority, because it was on an unallocated site and the number of houses that it delivered exceeded the minimum housing target for the village by 160%. The Council also judged that the scheme represented an expansion beyond the established built edge of the village, in a less sustainable location. The developer appealed, and the Planning Inspector ruled in their favour, granting permission on the grounds that the Council could not demonstrate a five-year land supply for housing. Even though the village had already 'done its bit' towards housing targets, it was the overall target for the Local Plan area that was judged to take priority.

Three years later, a detailed reserved matters planning application was submitted. The local Wildlife Trust asked that ecology surveys be updated, noting that in the time that had elapsed, the unfarmed land had reverted to far more ecologically beneficial

grassland (another example of the limitations of assessing the current state of land at the time of application as a baseline, and not its potential ecological value). At the same time, the Wildlife Trust referred to a paragraph in a new draft of the *National Planning Policy Framework*, stipulating that all new developments should provide net gains for biodiversity.

A limited ecological re-survey was conducted and nesting skylarks were found to be using the grassland, triggering a recommendation that some land be left to provide compensation for the loss of breeding habitat. However, the difficulty of providing a suitable mitigation scheme for skylarks within the development site was immediately noted by the ecological consultants who had undertaken the survey work: 'given the likelihood of new homeowners to walk dogs on this grassland, to keep cats as pets and to play ball games throughout the bird nesting period, it is however unlikely that the grassland will retain suitability for ground nesting birds'. Instead, they recommended a more appropriate off-site mitigation scheme. At the same time, they made a strong argument for the developer not to have to demonstrate a net gain for biodiversity across the site, since planning permission had been granted under a previous policy regime that did not require this, and the council did not have any additional local biodiversity policies in place that required net gain.

The developer ignored the offsite suggestion and pursued the idea of an onsite solution for skylarks. Their landscape architect consequently designed a small patch of grassland in between houses, a footpath, and a main road, which was surrounded by sheep fencing. This design runs completely counter to all of the ecological knowledge that we have about skylarks, who prefer to nest in open habitats, well away from fences, trees, or buildings that offer convenient perches for crows and other predators. Both the Wildlife Trust and the ecologist working for the Local Planning Authority acknowledged in correspondence that this design was hopelessly inadequate: 'I am concerned with the location of the proposed skylark mitigation, which has been sited close to housing and adjacent to a path,' writes the local authority ecologist, 'it would seem likely that this area will become used as a dog walking and toilet area and therefore risks a high likelihood to fail in its objectives.' Similarly, the Wildlife Trust recognised '... it is unlikely that the grassland will retain suitability for ground-nesting birds due to the recreational pressures on site. Despite this, we would like to recommend that this area is managed for the agreed purpose (skylark/breeding bird nesting habitat) and should follow the guidance as specified in the Biodiversity Management Plan'. Despite the fact that every ecologist involved agreed in writing that the proposed mitigation was entirely unsuitable for skylarks, the

charade of delivering habitat mitigation was maintained, and a strategy pursued that had no chance of achieving its stated purpose on the ground.

Today, you can visit the development and marvel at a patch of overgrown grass, nettles and docks, as the specified meadow mix was never sown. The fencing is of a gauge that does not keep out either cats or small dogs, but there is a large shiny information board that proudly proclaims the developer's generosity in providing this mitigation for endangered skylarks. This shows the extent to which the negotiative process around mitigation can go badly wrong: a solution that everyone agrees is completely unsuitable ends up being promoted as the best achievable win in a situation where the land allocation process and the irrevocability of the grant of planning permission militate against better outcomes.

Skylark © AdobeStock

Stage 6: Conditioning

Where planning permission is granted, it comes with a series of **planning conditions** that are meant to make the development acceptable in policy terms. This means that, in exchange for getting planning permission, the developer makes a legally binding commitment to provide certain things in return. For example, it is common for the Local Planning Authority to require the developer to submit details of the development's design before they can get sign-off to start building. The developer can be asked to produce things like a plan to ensure that wildlife is not harmed during construction (known as a Construction Environment Management Plan); an ecological mitigation and enhancement strategy that details the ways in which the harms of development will be reduced or compensated for; a set of detailed landscaping drawings; and a Landscape Management Plan, which covers how new and retained features and habitats will be managed in great detail. Together, these documents should detail everything that needs to be done during and after construction to ensure ecological mitigation and enhancement measures are delivered and maintained in the long term.

To achieve the best outcomes for biodiversity, it is important that conditions are precisely worded so that they are relevant, comprehensible, achievable, meet the specific needs of the wildlife onsite, and enforceable. Where conditions are vague or poorly worded, poor outcomes for nature can result.

Case study: The devil is in the detail

On one large development site in South East England, confusion over what was included in the planning conditions contributed to loss of bird and bat boxes. At the outline planning permission stage, the ecologist's initial report suggested that 25 bat and 20 bird boxes would be required across the whole site, largely to compensate for the loss of some mature trees. A site-wide Landscape and Ecological Management Plan (LEMP) was also included, though these plans only indicated 18 bat boxes and 23 bird boxes across the site.

The outline application then went to appeal and was "called in". This is when the Secretary of State determines the outcome of a planning application, because it is deemed to have sufficiently large impacts to warrant higher-level attention. The Secretary of State granted permission, with a set of conditions that did not specify the number and location of bird and bat boxes.

As this was a multi-phase project, the outline application was followed by several 'reserved matters' applications, outlining the detail for each phase of the development. At each stage, the council added a condition to the planning permission that a plan should be submitted showing the number and location of bird and bat boxes.

In the second phase of the development, the submitted LEMP indicated only 2 bat and 2 bird boxes, in different locations from the site-wide LEMP. This was picked up by the local authority ecologist, who wanted a greater number. The response from the developer was that 25 bat and 20 bird boxes were the originally-agreed number across the whole site, so the inclusion of only 2 of each in this phase was not contravening the original permission. The developers did, however, promise to add another 6 to this phase. This problem was repeated for the third phase, with the local authority ecologist highlighting insufficient information on the location and number of bird and bat boxes, and the developer pointing to the promised number across the whole site.

The problem could have been resolved with clearer conditions at the outline permission stage, including the need to set out how many bird and bat boxes would be delivered in each phase.

The problem was compounded by issues at stage 7 and 8. When we audited the development we could only find one tree-mounted bird box and no bat boxes at all.

Stage 7: Construction
Stage 8: Landscaping and maintenance

These stages are the subject of Part 1 of this report.

9. Conclusion

Why this all matters...

The ecological mitigation and enhancement strategy for a site should be tailored to its particular ecology. In the case of mitigation, it is supposed to minimise and compensate for impacts on wildlife. It therefore protects the nature that had a home on the site before development was even considered.

The habitats in question are not hypothetical environments for imaginary creatures that live on documents or in spreadsheets. They are real, material interventions to help living, breathing beings to survive a devastating change in land use, and to provide new homes for wildlife after the houses are built.

People sometimes try to sugar-coat this, imagining that, when development starts, wildlife happily decamps from one site to another, equally favourable one close by. While some creatures may escape destructive effects in this way, the reality is that many will simply perish. On a site where there are dormice, but where all the mitigations for dormice are absent, the outcome is quite likely to be the death of these creatures onsite.

Many such erasures, happening here and there across the local area, can be a form of death by a thousand cuts, leading to the local extinction of a species.

Multiply that picture at a regional, national, and international scale of development, and the implications for a much wider biodiversity crisis are obvious.

... and why we need to go so much further

In this report, we have audited what is happening on the ground, shown what is going wrong with the current planning system, and made some recommendations about how this could be changed.

But defending nature means doing so much more than this. We need to imagine a different world, one in which the planning system and housing policy are set up to care for nature as a top priority.

This means making a much bigger and more creative leap, reframing the questions that we have raised in this report. Instead of ensuring that 'business as usual' functions better, we need to rethink the way that we shape places from the start to the finish with ecology in mind.

We have long been trained to think in terms of tensions between society and nature. In this view, achieving good ecological outcomes is often portrayed in terms of sacrificing human-oriented goals. For example, Housing is often portrayed as a trade-off between social goods and nature. But this is the wrong way to frame the problem: quite often, a more egalitarian solution for humans also creates better outcomes for nature.

... And how you can help!

The kind of audit that we carried out in this research is something that can be done by anyone with a bit of time, patience, a few computer skills, and a bit of knowledge of nature. **We want to make it possible for anyone to hold developers to account by producing a guide that explains how to evaluate new developments for their compliance with planning conditions, and how to alert local authorities to breaches.** We hope that this will encourage developers, estate management companies, and grounds maintenance companies to take their obligations towards biodiversity more seriously than they do at present.

Our wildlife deserves better.

Please join, donate, and keep in touch with Wild Justice

to hear more about this campaign

wildjustice.org.uk

About the team

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Sarah Postlethwaite is an experienced Local Planning Authority ecologist who deals daily with the impacts of the planning system on biodiversity. The methodology used in this audit is based on the one she developed for an audit she undertook in her own time of all new developments in her local area, with the aim of highlighting and rectifying problems she was noticing, having moved onto a new build estate for the first time. She sits on the Advisory Board of the Planning for Nature project.

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