snts

Proof Of Evidence

Prepared by Peter Norman
Spokesperson for snts

Appeal: APP/W0340/W/20/3265460

Site: Sandleford Park, Newtown Road, Newbury

SayNOtoSandleford (snts) is a campaign group set up to oppose the development of 2,000 homes on a green field site in south Newbury, and instead calls on West Berkshire Council to develop smaller more sustainable mixed use brownfield sites and sustainable housing in the surrounding villages. As a campaign group they have 242 followers and on the 14th June 2012 handed in to West Berkshire Council a petition with 1,382 signatures against the development as well as two separate online petitions with a combined total of over 14,000 signatures

TABLE OF CONTENTS

SUMMARY

1 ANCIENT WOODLANDS

1 Ancient woodlands are recognised as a key natural resource in the UK and is at the heart of the NPPF (Feb 2019) policies regarding **Section 15 Conserving and enhancing the natural environment** where in para 175c it states "development resulting in the loss or deterioration of irreplaceable habitat (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists".

2 In determining planning applications material considerations are not only The NPPF and accompanying updated Planning Guidance but also according to para 6 "Other statements of government policy may be material when preparing plans or deciding applications, such as relevant Written Ministerial Statements and endorsed recommendations of the National Infrastructure Commission"

3 What is not in dispute is that there are 6 ancient woodlands within the proposed development area and other protected habitats. What is in dispute are the steps necessary to ensure there is not "*loss or deterioration of irreplaceable habitat*".

4 The evidence we are putting forward in this section covers recent Government pronouncements on the importance not only of preserving the status quo on biodiversity but expanding and enhancing the level of biodiversity in the UK, of which Sandleford should be a prime site for delivering on this objective.

5 Moreover we present research that shows the impact of urban development on ancient woodlands which concludes that buffers for major developments need to be **at least** 50m for housing development and **a minimum** of 100m for major roads if loss or deterioration of biodiversity is to be avoided. This latter finding is reinforced by recent research from Exeter University that also takes into account noise and light pollution from roads.

6 Evidence in this section

- i Prime Minister statement on signing UN Leaders' Pledge for Nature (28/9/2020)
- ii Standing Advice from Forestry Commission and Natural England updated (5/11/2018)
- iii keepers of time - A Statement of Policy for England's Ancient and Native Woodland (4/2/2019)
- iv A Green Future: Our 25 year Plan to Improve the Environment (2018)
- v Government Forestry and Woodlands Policy Statement - Defra (2013)
- vi Impacts of nearby development on ancient woodlands - addendum, Luci Ryan, Ecologist, The Woodland Trust (December 2012)
- vii The crucial link between air pollution and biodiversity loss - airqualitynews.com (3/7/2020)
- viii Statement from The Woodland Trust (19/3/2021)
- ix Spatial extent of road pollution: A national analysis (March 2021)

2 POLLUTION IMPACTS AND THE SITING OF PRIMARY SCHOOLS & ACCESS ROADS

7 Air pollution has long been recognised as a major cause of respiratory diseases and other life threatening conditions and is a contributory cause of anywhere between 29,000 and 60,000 deaths a year. Exhaust pollution from vehicles in the form of NO2 is a major contributor to the problem but as we move towards a non-combustion engine future it is important to realise that particle pollution from tyres, brakes and road dust are also

recognised as serious risks to health especially as the move towards heavier electric vehicles and SUVs gathers pace.

8 The evidence we are putting forward in this section looks at the harm caused by small particulate matter especially to developing children and therefore the importance of ensuring that school streets are not shared with major access roads. This problem is highlighted by the Coroner's verdict in December 2020, into the death of Ella Roberta Adoo Kissi-Debrah who died aged nine on 15 February 2013 who lived near the South Circular Road in south-east London. He concluded that Ella "died of asthma contributed to by exposure to excessive air pollution" and the medical causes of death were recorded as, "acute respiratory failure", "severe asthma", and, "air pollution exposure."

9 The fact that the proposed major access road north to Monks Lane is to go directly past a proposed two form entry primary school; the proposed major access road east to the A339 passes a newly built two form entry primary school (Highwood Copse School) to the south and The Castle School a special needs school for children with learning difficulties (The Castle School) to the north; and the proposed major access road west to the A343 along Warren Road is to go directly past a proposed two form entry primary school as well as disgorge traffic into a heavily used area by pedestrians of existing primary and secondary schools should be a major source of concern.

10 Rebecca Pow MP, Transport Minister stated "If we want to get our PM2.5 down and we do not want big concentrations in certain places where people are living, around schools and hospitals, we have to design the places so that does not happen."

11 Evidence in this section

i PM2.5 in London - Roadmap to meeting World Health Organization guidelines by 2030 (October 2019)
ii The Mortality Effects of Long-Term Exposure to Particulate Air Pollution in the United Kingdom, A report by the Committee on the Medical Effects of Air Pollutants (2010)
iii Non-Exhaust Emissions from Road Traffic Air Quality Expert Group Report for DEFRA (2019)
iv House of Commons Environment, Food and Rural Affairs Committee: Air Quality and coronavirus: a glimpse of a different future or business as usual - Fifth Report of Session 2019-21(11th February 2021)
v West Berkshire Council - 2020 Air Quality Annual Status Report (June 2020)

3 CS3 - SELECTION CRITERIA REVIEW

12 Sandleford has always been a controversial choice as a strategic site for delivering new homes through an urban extension, ever since it was elevated from an appraisal that ranked it joint bottom of 13 sites under consideration, to a short list of three. The selection process was at best opaque especially the process under which the term "Reserve Site" switched to become a "long term strategic allocation", or that the site was considered comparable to the Newbury Rugby Club in terms of sustainability in spite of the large majority of the site lying considerably to the south of the rugby club away from the town centre. Although in the Planning Inspector's review of the Core Strategy in 2012 he concluded that an evolution of selection criteria as you run through the process is inevitable, it never satisfactorily explained why Sandleford was chosen to be taken forward from that initial list while other sites that scored higher were rejected.

13 Key criteria that acted in its favour was the sheer size of the development site at 140 hectares and the site sponsors claims that it could deliver 2,000 homes. A number that would deliver a fifth of WBC's housing requirements, provide commensurate infrastructure and would take pressure off the rest of the district in terms of finding locations for that many homes

13 However a number of the claims for the site enabled tick boxes in the criteria that did not reflect the reality on the ground of which the most notable are:

- The site was within 2km of the town centre - therefore sustainable in people being able to walk or cycle there
- The site has a designated cycle route nearby - this is Monks Lane that has a shared pedestrian cycle path running along the north side of the road

14 The reality is somewhat different, the nearest proposed access point off Monks Lane is 1.92km from the train station and 2.5km from the town centre meaning the majority of the proposed development is over 2km from the train station and as such beyond what is viewed as reasonable for people to walk or cycle.

15 The shared footpath/cycle lane along Monks Lane is reduced in width to under 1m in some places due to street furniture and under 1.5m due to vegetation in other areas - such a narrow path is not deemed suitable as a cycle path under highway regulations

16 Moreover other selection criteria have fallen away. Wash Common Library was cited as a facility within 20 minutes walk. WBC has since closed this library in a round of cuts to public services, and it is only open now with the help of volunteers on a much restricted rota of opening hours.

17 Moreover the delivery of the Sandleford with a holistic comprehensive plan for delivery of the requisite infrastructure has proved impossible as it has been revealed that there are two landowners involved and that their chosen developers are incapable of coming up with one single outline plan which is a core requirement of the Core Strategy as approved by the Planning Inspector

18 However the biggest issue is the number of houses that Sandleford could deliver. The complex topography of the site alongside the presence of a patchwork of ancient woodlands always made it unlikely that as many as 2,000 homes could be delivered. The current applications on the land area that formed part of the SSSA under the Core Strategy indicate that only 1,350 homes can be delivered. However when proper protections for the protected habitats is taken into consideration this number will be reduced considerably to well under 1,000. Had these factors been known at the time the selection was made it is impossible to see how it would have been chosen over one of the alternatives, North Newbury.

19 The fact is of the three short listed sites for a strategic allocation, North Newbury is now being developed, and Siege Cross is being recommended in the Local Plan Review for up to 2,500 homes. The challenge for opponents to Sandleford opponents was always if not Sandleford where would you build 2,000 homes? However when that number is less than a thousand it is no longer such an issue. Redevelopment of sites such as the Kennet Centre in that Town Centre promises over 400 homes, and the rest of the numbers could be absorbed in surrounding villages that are in desperate need of affordable homes and revitalisation of their populations to support local amenities such as stores and pubs.

20 Sandleford infrastructure requirements of 2 access roads to the north to Monks Lane with a sustainable link to the West to Warren Road for Bus and cycles only would never have delivered a satisfactory permeable site as was acknowledge in an early Master Planning meeting for the site, however the need for additional routes were kept off the scheme in order to satisfy the “deliverability” criteria for the Planning Inspector Review. It was a challenge that the Planning Inspector tacitly acknowledged when he insisted that in order to find the Core Strategy sound the wording in CS3 should be amended to state that Warren Road would be a sustainable route. This condition both the Council and Developers have been seeking to undermine ever since

21 The choice of Sandleford as a Strategic Site was always a political one as opposed to be decided on its planning merits. Indeed the portfolio holder at the time of its selection, Alan Law, has recently gone on record to admit that the choice of Sandleford was down to political nimbyism. What Sandleford could deliver in terms of housing was deliberately over stated and what it needed in terms of infrastructure underplayed in order to ensure that it would be selected as a strategic site

22 If we are to avoid site sponsors gaming the planning system through grossly over promising deliveries while underplaying the mitigations needed then it makes a mockery of any attempt to rationally choose sites for development based on planning merits. It is why we believe a comprehensive review should now take place as to the suitability of Sandleford as a strategic site that simply does not carry forward previous assumptions as under the current Local Plan Review.

23 Evidence in this section

i Strategic Sites SA-SEA Policy Paper Update (October 2011)
ii Combined Strategic Appraisal Document Phase 2
iii Minutes of Sandleford Masterplanning Meeting - 30th March 2010
iv The Planning Inspector Report on the examination into the West Berkshire Core Strategy (3rd July 2012)
v Appendix F - Alan Law NWN 2021-02-25
vi Appendix G - Alan Law NWN 2021-03-25

4 OTHER MATTERS

24 The fact that the plans submitted fail to comply with WBC's core strategy in providing a single, holistic, comprehensive plan for the whole strategic site will be well covered by WBC and the problems of only a partial plan, especially in leaving open the question of Warren Road. However we differ from WBC in opposing the opening up of Warren Road to all vehicles to service both Sandleford Park West and the Central Parcel which otherwise will be reliant on a bridge to link up with the northern parcels. and onwards to Monks Lane and the A339.

25 However the fact that the plans fail to take in to account the 2015 Paris Climate Accord or the WBC 2019 Climate Emergency declaration where it is now policy to deliver a carbon neutral by 2030 is leaving a problem for future generations to deal with. We have repeatedly suggested that the plans take advantage of the south facing orientation of the site to make best use of solar and thermal renewables, but these suggestions have been ignored.

26 Instead we have a standard Bloor Home template design that can be found up and down the country helicoptered in to Sandleford with no regard to the topography of the area or the local appearance of Newbury houses. This is in conflict with The Rt Hon Robert Jenrick MP's statement in Planning for the Future where he says plans should be with a local vernacular.

27 Evidence in this section

i Planning for the Future - Closed consultation (4th February 2021)

5 LIST OF APPENDICES

Appendix A - impacts-of-nearby-development-on-the-ecology-of-ancient-woodland-addendum
Appendix B - Strategic_sites_SA-SEA Policy Paper_Update-October 2011
Appendix C - Combined Strategic Sites Appraisal
Appendix D - Master Planning 2010-03-30
Appendix E - Public reports pack 16-07-2012 1900 Council
Appendix F - Alan Law NWN 2021-02-25
Appendix G - Alan Law NWN 2021-03-25
Appendix H - A pictorial record of Sandleford

EVIDENCE

1 ANCIENT WOODLANDS

i Boris Johnson Statement

"The British Government is absolutely committed to tackling biodiversity loss and we are already taking action both at home and on the international stage….we must turn these words into action…we need not just good intentions but real action. Biodiversity loss is happening today its happening at a frightening rate and if left unchecked the consequences will be catastrophic for all"

Boris Johnson PM 28th September 2020 on signing UN Leaders' Pledge for Nature at which he also committed the UK Government to increase the amount of protected land in the UK to 30% by 2030 (currently 26%).

Source: https://www.bbc.co.uk/news/uk-54320030

ii Standing Advice Forestry Commission and Natural England 5/11/2018 Ancient woodland, ancient trees and veteran trees protecting them from development

Ancient woodland
Ancient woodland takes hundreds of years to establish and is defined as an irreplaceable habitat. It's important for its:

- wildlife (which include rare and threatened species)
- soils
- recreational value
- cultural, historical and landscape value

It's any area that's been wooded continuously since at least 1600 AD. It includes:

- ancient semi-natural woodland mainly made up of trees and shrubs native to the site, usually arising from natural regeneration
- plantations on ancient woodland sites - replanted with conifer or broadleaved trees that retain ancient woodland features, such as undisturbed soil, ground flora and fungi

They have equal protection in the National Planning Policy Framework (NPPF).
Other distinct forms of ancient woodland are:

- wood pastures identified as ancient
- historic parkland, which is protected as a heritage asset in the NPPF

Many of these do not appear on the Ancient Woodland Inventory because their low tree density did not register as woodland on historic maps.
You should give consideration to wood pasture identified as ancient in planning decisions in the same way as other ancient woodland.
'Wooded continuously' does not mean there's been a continuous tree cover across the whole site. Not all trees in the woodland have to be old. Open space, both temporary and permanent, is an important component of ancient woodlands.

Potential impacts
Development can affect ancient woodland, ancient and veteran trees, and the wildlife they support on the site or nearby. You can assess the potential impacts using this assessment guide to help you with planning decisions.
Direct impacts of development on ancient woodland or ancient and veteran trees include:

- damaging or destroying all or part of them (including their soils, ground flora or fungi)
- damaging roots and understorey (all the vegetation under the taller trees)
- damaging or compacting soil around the tree roots
- polluting the ground around them
- changing the water table or drainage of woodland or individual trees
- damaging archaeological features or heritage assets

Nearby development can also have an indirect impact on ancient woodland or ancient and veteran trees and the species they support. These can include:

- breaking up or destroying connections between woodlands and ancient or veteran trees
- reducing the amount of semi-natural habitats next to ancient woodland
- increasing the amount of pollution, including dust
- increasing disturbance to wildlife from additional traffic and visitors
- increasing light or air pollution
- increasing damaging activities like fly-tipping and the impact of domestic pets
- changing the landscape character of the area

Use of buffer zones

A buffer zone's purpose is to protect ancient woodland and individual ancient or veteran trees. The size and type of buffer zone should vary depending on the scale, type and impact of the development.

For ancient woodlands, you should have a buffer zone of at least 15 metres to avoid root damage. Where assessment shows other impacts are likely to extend beyond this distance, you're likely to need a larger buffer zone. For example, the effect of air pollution from development that results in a significant increase in traffic.

A buffer zone around an ancient or veteran tree should be at least 15 times larger than the diameter of the tree. The buffer zone should be 5m from the edge of the tree's canopy if that area is larger than 15 times the tree's diameter.

Where possible, a buffer zone should:

- contribute to wider ecological networks
- be part of the green infrastructure of the area

It should consist of semi-natural habitats such as:

- woodland
- a mix of scrub, grassland, heathland and wetland planting

You should plant buffer zones with local and appropriate native species.

You should consider if access is appropriate and can allow access to buffer zones if the habitat is not harmed by trampling.

You should avoid including gardens in buffer zones.

You should avoid sustainable drainage schemes unless:

- they respect root protection areas
- any change to the water table does not adversely affect ancient woodland or ancient and veteran trees

Forestry Commission and Natural England Planning Guidance

(Source: https://www.gov.uk/guidance/ancient-woodland-and-veteran-trees-protection-surveys-licences)

---

iii Keepers of Time - A statement of policy for England's Ancient & Native Woodland

(Defra, Forestry Commission 14/2/2019)

Forward

Ancient woodlands are a tangible expression of the principles of sustainability, used by people for many generations to produce essential yet sustainable everyday materials. At the same time, these woods have provided homes for much of England's wildlife. Although this sustainable use continues today in many of our woodlands, others have declined in value, and some have been lost forever. Addressing loss and decline by tackling the threats to our ancient and native woodlands is essential if these cherished places are to continue enriching our lives.

The Government's vision is that "Ancient woodlands, veteran trees and other native woodlands are adequately protected, sustainably managed in a wider landscape context, and are providing a wide range of social, environmental and economic benefits to society." This is an ambitious vision but one which we believe is realistically achievable by 2020.

Threats
6 Loss
There are still occasions where native and ancient woodland is threatened by development, and many woods suffer attrition through incursions at their boundaries. Even if the woodland itself is protected, it can suffer serious disturbance where houses or roads are built right up to its margins, both directly from the impact of development, or indirectly through changes to drainage. Dumping, cutting back of trees and shrubs along the woodland edge and unmanaged recreational and access pressures are also threats in many areas.

Management at a landscape scale
5. Woodland creation should focus on increasing the area of semi-natural habitats available to wildlife and reducing the negative edge effects of intensive adjacent land use. Woodland margins typically have the greatest species diversity and are also invaluable for many non-woodland species, particularly where they border other semi-natural habitats

(Source: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/778106/KeepersofTimeanw-policy.pdf)

---

iv A Green Future: Our 25 Year Plan to Improve the Environment (2018)

Regularly refers to woods and trees as being central to protecting and enhancing the environment for the next generation. The Plan reinforces the protections for the natural environment and the green belt set out in the NPPF. The plans set sets out the aspiration that the planning system can be used positively to protect natural assets and encourage high- quality green infrastructure in urban areas. There is an emphasis on making towns and cities healthier and more attractive by committing to planting one million urban trees. Key to this commitment is recognising the need for green infrastructure and trees to be more fairly distributed and accessible across our urban areas so that everyone can benefit from them

(Source: UK Forestry Standard for Planners P2)

Beyond the economic benefits, the Government recognises the significant heritage value and irreplaceable character of ancient woodland and veteran trees. We are committed to ensuring stronger protection of our ancient woodlands, making sure they are sustainably managed to provide a wide range of social, environmental, societal and economic benefits.

(*Source: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf P47)*

---

v The Government's Forestry and Woodlands Policy Statement (2013)

Work to improve and restore our native and ancient woodlands and open habitats through renewing our commitment to the policies set out in the Open Habitats Policy and Keepers of Time (P4)

England's 340,00010 hectares of ancient woodlands are exceptionally rich in wildlife, including many rare species and habitats. They are an integral part of England's cultural heritage and act as reservoirs from which wildlife can spread into new woodlands. Our native and ancient woodlands are subject to a wide range of pressures causing often slow and subtle declines both in habitat

quality and in species diversity. The most significant of these are excessive deer browsing, non-native species and, as has come recently to the fore, tree pests and diseases.

The National Planning Policy Framework recognises the importance of the natural environment and biodiversity. It gives strong protection for habitats such as ancient woodland. This includes an expectation that planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss.

The Framework is clear that if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused. We announced in the Natural Environment White Paper that we would work with local planning authorities and their partners to test biodiversity offsetting as a way to compensate for harm resulting from planning decisions that cannot be avoided or adequately mitigated. This is being done through a number of pilot projects in Devon and elsewhere.(P20)

Governments response to Recommendation 12 We agree that our native and ancient woodlands are important and recognise the benefit of open habitat restoration to create a balance of the right habitats and trees in the right places. We confirm our commitment to the policies set out in both the Open Habitats Policy and Keepers of Time. We will also publish the Open Habitats Strategy for the Public Forest Estate. (P36)

(Source https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/221023/pb13871-forestry-policy-statement.pdf)

---

vi Impacts of nearby development on ancient woodlands - addendum, Luci Ryan, Ecologist, The Woodland Trust - December 2012

(Attached as Appendix A)

1 Executive Summary

In 2008 The Woodland Trust published a report on the impacts of nearby development on the ecology of ancient woodland. Further work on this subject has been undertaken since then and this report was commissioned to review work published since 2007

Woodland is a finite resource and ancient woodland cannot be replicated once lost. It is important to understand each individual woods importance on a landscape scale as even small losses may have unforeseen impacts on other woods. Pressures from development are varied and are often not obvious, and without a thorough understanding of the ecology of individual woods these pressures are harder to predict and mitigate. Enhancement of existing woodland is key to promoting habitat health and in a climate of limited funding, spatially targeted restoration schemes are vital to improve the connectivity between woods. (P2)

2 Introduction

In the UK only 12% of the landscape is native woodland, and of that only 19% is classified as ancient woodland (woodland that has been in existence since at least 1600AD) ie 2.28% of the UK Landscape is ancient woodland (P4)

4 Development types and impacts

In their review of research papers they identified five areas of potential harm caused by nearby developments:

Chemical Effects
Disturbance
Fragmentation
Invasion by non-native plant species
Cumulative effects (P5)

4.1 Chemical Effects

Road networks are a potential source of air pollution that can impact on woodland. Emissions from vehicles contain a cocktail of pollutants that include nitrogen oxides (NOx), volatile organic carbons (VOCs), polycyclic aromatic hydrocarbons (PAHs), ammonia (NH3), metals and particulates. These chemicals are wind dispersed to neighbouring vegetation, where they are then deposited on plant surfaces. (P6)

Keely et al. (2008) undertook a study to determine the impact of road transport on the growth and physiology
of six bryophyte species. They observed an increase in nitrogen tolerant species close to the motorway and physiological changes in some species such as increased membrane leakage and changes to chlorophyll concentrations. They determined that the effects of pollution from roads could extend up to 200m from the road and that the effects they observed were directly related to the concentration of nitrogen dioxide. Keely et al. (2008) proposed that any new road project should include a buffer zone of between 100 and 200m from sensitive sites, to reduce the likelihood of these effects occurring. (P6)
Source: Keeley L. Bignal, Mike R. Ashmore, Alistair D. Headley (2008) Effects of air pollution from road transport on growth and physiology of six transplanted bryophyte species, Environmental Pollution, Volume 156, Issue 2, Pages 332-340

Work by Fenn et al. (2010) in California found that nitrogen (N) enrichment of woodland caused by vehicle emissions caused changes in epiphytic lichen communities and promoted invasion by exotic grasses. An increase in N in the woodland ecosystem threatens the sustainability of that environment by increasing the stresses the system is subject to. They recommend that some reduction in N within the system can be achieved by physically removing leaf litter and some plants, but the effect of this is limited as the majority of the N will be contained within the soil itself. Ultimately the only solution to reduce N deposition is to improve air quality. (P6)

Source: Fenn, M.E., Allen, E.B., Weiss, S.B., Jovan, S., Geiser, L.H., Tonnesen, G.S., Johnson, R.F., Rao, L.E., Gimeno, B.S., Yuan, F., Meixner, T. and Bytnerowicz, A. (2010) Nitrogen critical loads and management alternatives for N-impacted ecosystems in California, Journal of Environmental Management, 91, Pages 2404-2423

4.2 Disturbance

4.2.1 Noise - Work undertaken by González-Oreja et al. (2012) in urban parks in Mexico found that the higher the background noise level the lower the number of woodland bird species present. They also found that different species reacted differently to similar noise levels. This indicates that some birds are able to adapt positively to noise (e.g. by changing the pitch at which they sing), but some will respond maladaptively and disappear from an assemblage (P6)

Source: Gonzalez, M., Ladet, S., Deconchat, M., Cabanettes, A., Alard, D. and Balent, G. (2010) Relative contribution of edge and interior zones to patch size effect on species richness: An example for woody plants, Forest Ecology and Management, 259, Issue 3, Pages 266-274

4.2.2 Vegetation Clearance - When woodland is managed for recreational purposes an open understorey is often considered to add value, as it makes it easier for people to move around within the wood. However, clearance of the understory has a negative effect on woodland birds and other animals. Heyman (2010) undertook controlled clearance of patches of understorey in a Swedish woodland and found that bird diversity was significantly reduced in areas where total clearance (100%) occurred. (P6/7)

Source: Heyman, E. (2010) Clearance of understory in urban woodlands: Assessing impact on bird abundance and diversity, Forest Ecology and Management, 260, Issue 1, Pages 125-131

4.2.3 Light Pollution - Kempanaers et al. (2010) found that artificial night lighting had a strong effect on the timing of breeding and individual mating behaviour in five European songbird bird species. Female blue tits (Cyanistes caeruleus) were found to begin egg laying earlier if nesting close to artificial light sources. This could result in chicks hatching before enough food is available in the environment to support them. Artificial light also caused yearling males to start singing earlier. Early singing appears to be an important indicator to females of the quality of the male. However, yearling males are not necessarily quality partners for breeding females and artificial light may be enhancing the breeding success of males that under natural conditions would not be so successful. (P7)

Source: Kempenaers, B., Borgström, P., Loës, P., Schlicht, E. and Valcu, M. (2010) Artificial Night Lighting Affects Dawn Song, Extra-Pair Siring Success, and Lay Date in Songbirds Current Biology, 20, Issue 19,
Pages 1735-1739

4.2.4 Trampling - Trampling along paths can change understorey vegetation considerably, with different woodland plant species being able to withstand different levels of disturbance. A three-year study by Hamberg et al. (2010) in Finland clearly showed the more frequently a path was used the greater the loss of vegetation. Even at low levels (less than 35 visits to a path per year) trampling resulted in a loss of up to 30% of the vegetation along a path. Higher use of paths (up to 550 visits per year) led to a loss of vegetation in excess of 75%. At lower path usages, vegetation cover was reduced but species composition remained the same, however at higher path usage species composition was altered. (P7)

Source: Hamberg, L., Malmivaara-Lämsä, M., Lehvävirta, S., O'Hara, R.B. and Kotze, D.J. (2010) Quantifying the effects of trampling and habitat edges on forest understory vegetation – A field experiment, Journal of Environmental Management, 91, Issue 9, Pages 1811-1820

Trampling not only reduces vegetation cover and alters species composition but it can also affect the sexual reproduction and genetic diversity within a species (Rusterholz et al. 2008). Many woodland species are clonal and therefore they cannot produce new leaves in response to damage to their structure caused by trampling. Disturbance of Anemone nemorosa plants by trampling significantly reduced the proportion of shoots that survived during the growing season compared to A.nemorosa in undisturbed areas. This led to a reduced genetic diversity within the disturbed population of A.nemorosa (P7/8)

Source Rusterholz, H.P., Kissling, M. and Baur, B. (2009) Disturbances by human trampling alter the performance, sexual reproduction and genetic diversity in a clonal woodland herb, Perspectives in Plant Ecology, Evolution and Systematics, 11, Issue 1, Pages 17-29

4.3 Fragmentation

Fragmentation of woodland lowers biodiversity as less space for seeds to take root. The smaller the patch size and the greater the distance between patches (patch isolation) the lower the species richness and diversity. This was particularly true for woodland specialist species, such as ferns, which have very specific habitat requirements usually only found in the interior of large, mature woods. Once woodland specialist species have disappeared from a patch the isolation of the patch becomes the main factor controlling the recruitment of woodland specialists back into the woodland. (P8)

Source: Rodríguez-Loinaz, G., Amezaga, I. and Onaindia, M. (2012) Does forest fragmentation affect the same way all growth-forms? Journal of Environmental Management, 94, Issue 1, Pages 125-131

Digiovinazzo et al. (2010) found that species richness when compared to patch size followed an s-shaped curve and that recruitment of woodland species was highest in patches between 1 to 40

hectares in size. Therefore, they recommend that conservation efforts concentrate on preserving those patches greater than 40 hectares and increasing the size of those greater than 1 hectare as small increases in size can result in large increases of biodiversity. However, they also found that connectivity between patches needs to be high to ensure maximum recruitment of woodland species to isolated fragments of woodland. (P9)

Source: Digiovinazzo, P., Ficetola, G.F., Bottoni, L., Andreis, C. and Padoa-Schioppa, E. (2010) Ecological thresholds in herb communities for the management of suburban fragmented forests, Forest Ecology and Management, 259, Issue 3, Pages 343-349

Two thirds of British macromoths are associated with woodland and native tree species, so fragmentation of woodland is likely to have an impact on species composition and species number…Moths are important pollinators and an important food source for other native animals (e.g. bats and birds). Like butterflies, moths have undergone a serious decline in numbers over the last few decades and one of the most important factors in this is thought to be habitat loss and fragmentation. Fuentes-Montemayor et al. 2012 found that patch size was directly related to the number of moth species found within a wood, with woodland <1ha showing poor species richness and abundance and woodland >5ha having the highest species richness and abundance (P9)

Source: Fuentes-Montemayor, E., Goulson, D., Cavin, L., Wallace, J.M. and Park, K.J. (2012) Factors influencing moth assemblages in woodland fragments on farmland: Implications for woodland management and creation schemes, Biological Conservation, Volume 153, Pages 265-275

The total amount of woodland within a landscape was also found to be directly related to species number, so even small patches of woodland may be beneficial if they are in close proximity to other woodland. The landscape scales at which this is relevant differed between macro moth and micro moth species. Micro moths are influenced at a much smaller scale (<500m) and macro moths at larger scale (1500m). However, the results for both types of moth indicate that landscape-scale management of woods would be beneficial to all moth species. (P9)

Source: Merckx, T., Feber, R. E., Hoare, D. J., Parsons, M. S., Kelly, C. J., Bourn, N. A. D. and Macdonald D. W., Conserving threatened Lepidoptera: Towards an effective woodland management policy in landscapes under intense human land-use (2012), Biological Conservation, Volume 149, Issue 1, Pages 32-39

Woodland configuration is the most important landscape characteristic influencing the activity of two species of British bat (Pipistrellus pipistrellus and Pipistrellus pygmaeus). Bat activity decreased in the study area as the distance between woodland patches increased. Pipistrellus pygmaeus in particular was shown to need a well connected network of suitable habitat on a landscape scale of 500m or less in order to capitalise on available resources. Whereas the effects of landscape were significant for Pipistrellus pipistrellus at much larger landscape scales (3km) (P10)

Source: Fuentes-Montemayor, E., Goulson, D. and Park, K.J. (2011) Pipistrelle bats and their prey do not benefit from four widely applied agri-environment management prescriptions, Biological Conservation, 144, pages 2233 – 2246

Boughey et al. (2011) studied six British bat species and showed that 90% of the 1,129 bat roosts they surveyed were within 440m of broadleaved woodland, which suggests that bats are unwilling to travel much further than this to forage. Furthermore, they demonstrated that bat species benefit if up to 20% of the landscape within 1km of the roost consists of broadleaved woodland. However, none of the species studied showed a relationship between roost location and the size of the woodland patch, indicating that even small stands of woodland may be of value within a landscape matrix. The work of Boughey et al. (2011) echoes that of Fuentes-Montemayor et al. (2011) in that roost location was shown to be associated with the spatial arrangement of broadleaved woodland. This supports the idea that for bats at least, woodland conservation, management and restoration needs to be viewed from a landscape scale. The ideal in this case is

woodland patches less than 440m apart and an increase of broadleaved woodland to 20% in the kilometre surrounding a roost. (P10)

Source: Boughey, K.L., Lake, I.R., Haysom, K.A. and Dolman, P.M. (2011) Effects of landscape-scale broadleaved woodland configuration and extent on roost location for six bat species across the UK, Biological Conservation, 144, pages 2300 -2310

Woodland can be fragmented on a smaller scale by the development of transport corridors through them, which results in linear clearings being created. The width of such structures may be relatively small but various studies have shown that some species cannot adapt easily to their presence. A review of linear clearings in tropical forests (Laurance et al. 2009) clearly shows that many woodland species will avoid even narrow clearings (<30m wide) and that those species that do not avoid the clearing are then susceptible to roadkill. This research is backed up by studies of both European and British species indicating that work from overseas can be extrapolated to a British context. (P10)

Source: Kerth, G. and Melber, M. (2009) Species-specific barrier effects of a motorway on the habitat use of two threatened forest-living bat species, Biological Conservation, 142, Issue 2, Pages 270-279

Woodland paths can cause small scale fragmentation. A study of urban forest fragments in Finland by Malmivaara-Lämsä et al. (2008) found that the population within 1-2 km radius of the fragment correlated positively with the area of paths in the forest and that on average 5% of the forest was made up of paths. They found that the soil microbial community was negatively affected 1m on either side of each path, resulting in changes to nutrient cycling within the forest (P11)

Source: Malmivaara-Lämsä, M., Hamberg, L., Haapamäki, H., Liski, J., Kotze, D.J., Lehvävirta, S. and Fritze, H. (2008) Edge effects and trampling in boreal urban forest fragments – impacts on the soil microbial community, Soil Biology and Biochemistry, 40, Issue 7, Pages 1612-1621

4.3.1 Edge Effects - The more fragmented a landscape becomes the greater the number of edges that are created. Edges are associated with higher temperatures and wind speeds, greater disturbance, increased water loss, the presence of non-woodland species all of which impact on the ecology of the woodland concerned.

Herbst et al. (2007) showed that evapotranspiration from trees was significantly higher at edges than in the interior of the woodland. This edge effect can dominate the water use of small woods because the higher the amount of transpiration the lower the rate of groundwater recharge. Therefore, the smaller the wood (and therefore the greater the edge to interior ratio) the lower the soil water recharge rate is expected to be. Changes to transpiration rates are not equal across all tree species with ash being more affected than oak, field maple and hawthorn. The effect of increased water loss only becomes negligible for woods greater than 100 hectares, so it is not unreasonable to assume that this effect impacts on the majority of British woods. (P11)

Source: Herbst, M., Roberts, J.M., Rosier, P.T.W,Taylor, M.E. and Gowing, D.J. (2007) Edge effects and forest water use: A field study in a mixed deciduous woodland, Forest Ecology and Management, 250, pages 176 – 186

Increased exposure to solar radiation at woodland edges decreases soil moisture, due to increased rates of evapotranspiration as demonstrated by Herbst et al. (2007). The decrease in soil moisture leads to decreased decomposition of leaf litter, which in turn leads to reduced nutrient cycling within the wood (Riutta et al. 2012). (P11)

Source: Riutta,T., Slade, E.M., Bebber, D.P.,Taylor, M.E., Malhi,Y., Riordan, P., Macdonald, D.W. and Morecroft, M.D. (2012) Experimental evidence for the interacting effects of forest edge, moisture and soil macrofauna on leaf litter decomposition, Soil Biology and Biochemistry, 49, pages 124 – 131

Work in Finland by Malmivaara-Lämsä et al. (2008) supports the theory that decreased moisture at woodland edges leads to decreased microbial activity. They found that microbial communities were altered up to 50 metres from the edge with the biggest changes being found in the first 20 metres. These changes were strongly associated with decreased soil moisture, and led to decreased nutrient cycling. (P11/12)

Source: Malmivaara-Lämsä, M., Hamberg, L., Haapamäki, H., Liski, J., Kotze, D.J., Lehvävirta, S. and Fritze, H. (2008) Edge effects and trampling in boreal urban forest fragments – impacts on the soil microbial community, Soil Biology and Biochemistry, 40, Issue 7, Pages 1612-1621

Gonzalez et al. (2010) found that the greater the proportion of edge to the interior the more likely the interior was to be colonised by light demanding species (which are more commonly found in edges). Therefore the amount of edge to interior, as well as the structure may be impacting on the species composition of the woodland as a whole. (P12)

Source: Gonzalez, M., Ladet, S., Deconchat, M., Cabanettes, A., Alard, D. and Balent, G. (2010) Relative contribution of edge and interior zones to patch size effect on species richness: An example for woody plants, Forest Ecology and Management, 259, Issue 3, Pages 266-274

Edges may also provide less than perfect habitat for woodland fauna due to other factors such as increased predation. Bird nest predation has been shown to be higher at woodland edges compared to woodland interiors (Ludwig et al. 2012). However, edges have also been shown to contain a higher density of nests that the woodland interior, which indicates that edges may effectively form an ecological trap for some bird species (P12)

Source: Ludwig, M., Schlinkert, H., Holzschuh, A., Fischer, C., Scherber, C., Trnka, A., Tscharntke, T. and Batáry, P. (2012) Landscape-moderated bird nest predation in hedges and forest edges, Acta Oecologica, 45, Pages 50-56

5 Invasion of non-native species

Development adjacent to or within ancient woodland results in disturbance to the soil which can provide ideal conditions for non-native species to establish themselves. Disturbance to the soil releases nutrients and this can favour species not normally seen in British woods. In addition the creation of new edges, the removal of trees and understorey increases light levels and again this can favour the growth of non-native species. Housing developments close to woodland may also act as reservoirs for exotic species that then “escape” the confines of the garden. Open edges around a woodland may also facilitate the invasion of the interior by non- native species due to increased light levels and wind speeds (which may aid dispersal). (P12)

…soil disturbance and vegetation clearance can create conditions that not only have a negative effect on native species by increasing light levels and nutrient availability but that this may then favour non-native species (P13)
]
Source: Hamberg, L., Lehvävirta, S. and Kotze, D.J. (2009) Forest edge structure as a shaping factor of understorey vegetation in urban forests in Finland, Forest Ecology and Management, 257, Issue 2, Pages 712-722

5.1 Recruitment of non-woodland species - …non-woodland species can often out compete woodland species if the conditions are right. Hamberg et al. (2010) showed that trampling on paths cleared vegetation and revealed the hummus layer underneath. This in turn provided ideal conditions for non-woodland species to move from the woodland edge into the interior, because of increased soil pH and nutrient levels associated with the disturbance along the path. In woodland with high levels of trampling there was a significant change in species composition from woodland species to species more typical of open habitats. (P13)

Source: Hamberg, L., Malmivaara-Lämsä, M., Lehvävirta, S., O’Hara, R.B. and Kotze, D.J. (2010) Quantifying the effects of trampling and habitat edges on forest understory vegetation – A field experiment, Journal of Environmental Management, 91, Issue 9, Pages 1811-1820

5.2.1 Roads and urban development - Cumulative effects from roads and urban development include a combination of noise, light, increased mortality due to car collisions and barrier effects preventing normal movement of species. A study of Spanish bird communities (Palomino and Carrascal 2007) showed that the closer a bird community is to urban areas the more homogenised it becomes, and that this homogenisation can spread into adjacent habitats. In order to control this effect, and unlike many similar studies, they have quantified buffer distances for both roads and urban areas to reduce the impact of disturbance on woodland species (330m for roads, 400m for urban areas). (P14)

Source: Palomino, D. and Carrascal L.M. (2007) Threshold distances to nearby cities and roads influence the bird community of a mosaic landscape, Biological Conservation, 140, Issues 1–2, Pages 100-109

The construction and presence of housing is often associated with bird species considered to be urban adapters, which can tolerate disturbances associated with human residential development. However, there are other species known collectively as urban avoiders, which can tolerate only low levels or indeed no disturbance of this type. Work by Merenlender et al. (2009) in California showed that at even very low housing densities (1 house per 4 hectares) bird communities were dominated by species considered to be urban adapters. Ground nesters were particularly negatively impacted upon, probably as a result of the presence of domestic predators such as cats and dogs. (P14)

Source: Merenlender, A.M., Reed, S.E. and Heise, K.L. (2009) Exurban development influences woodland bird composition, Landscape and Urban Planning, 92, Pages 255-263

Work by Gagne and Fahrig (2010) recorded a decline in abundance and species richness of woodland birds as the density of housing increased. However, their results supported those of Merenlender et al. (2009) because they suggested that a clustered housing development actually has less impact on a population of woodland breeding birds, than a more dispersed development (P14)

Source: Gagne, S.A. and Fahrig, L. (2010) The trade-off between housing density and sprawl area: Minimising impacts to forest breeding birds, Basic and Applied Ecology, 11, Pages 723-733

The work by Merenlender et al. (2009) and Gagne and Fahrig (2010) on the effect of housing densities highlight the importance of protecting core woodland areas from even small levels of development (P14)

6 Mitigation and management solutions

The Woodland Trust state: Patch size has been shown to be positively linked with species diversity and abundance, (Gonzalez et al. (2010), Digiovinazzo et al. (2010), Gonzalez-Varo et al. (2012)). This species- area relationship (SAR) is a useful tool but must be used with caution as not all species respond to fragmentation in the same way and there may be a lag between the disturbance occurring and the species composition of an area changing. Furthermore, from a practical point of view the highly fragmented nature of British woodland means that restoration of woodland on a landscape scale is unlikely to be feasible. (P16)

snts note: We would argue that Sandleford provides the ideal area where restoration of woodland on a landscape scale is feasible.

McWilliam et al. (2010) found that boundaries needed to be carefully designed clearly delineate private from public land-uses. Even with this type of control in place encroachment activities continued to impact at the woodland edges and up to 50m into the interior of the wood. They propose the planting of buffer strips 50m wide to protect the more sensitive interior of the wood. (P17)

Source: McWilliam, W., Eagles, P., Seasons, M. and Brown, R. (2010) The housing-forest interface:

Testing structural approaches for protecting suburban natural systems following development, Urban Forestry & Urban Greening, 9, Issue 2, Pages 149-159

Work by McWilliams et al. (2010) recorded different types of encroachment into woodland from nearby housing, including waste disposal, woodland recreation, garden extension and invasion by garden plants. The mean distance of encroachment was 16 m into the woodland and 95% of all activity was measured within 34m of the woodland edge. They found that if the woodland was separated from the housing by a grass strip, there was a tendency for homeowners to incorporate part or all of this strip into the garden. (P18)

If fencing was used, and the fencing belonged to the homeowner, then gates were often put into the fences to allow homeowners unrestricted access to the woods. If the fences remained in the ownership of the local authority the likelihood of gates being installed was reduced. Combinations of two or more restrictive elements (e.g. a fence and a grass strip) were not found to be anymore effective than one element on its own. The most effective way to reduce encroachment from housing developments is to minimise the length of woodland edge exposed to residential land use by designing the development perpendicular to the woodland rather than parallel to it. Planted buffer zones may also be effective in reducing the impact of this kind of development. (P19)

Source: McWilliam, W., Eagles, P., Seasons, M. and Brown, R. (2010) The housing-forest interface: Testing structural approaches for protecting suburban natural systems following development, Urban Forestry & Urban Greening, 9, Issue 2, Pages 149-159

6.1 Buffer Zones

Size of Buffer	Reason for Buffer	Reference
15m (minimum)	To protect woodland from the effects of development such as run-off, noise, damage to tree roots etc. There is no discussion about how the figure of 15m was reached. (UK)	Standing Advice for Ancient Woodland, Natural England, 30 May 2012 (taken from Bolnore Village appeal decision 2007)
50m	To protect woodland from encroachment activities from adjacent housing, such as waste disposal, garden extension. This paper specifies that the buffer should be wooded. (Canada)	McWilliam et al. (2010)
100 – 200m	To protect plant species from the effects of vehicle emissions from roads (UK).	Keely et al. (2008)
300m	To protect woodland bird species from the effects of roads (Spain).	Palomino and Carrascal (2007)
400m	To protect woodland bird species from the effects of urban development (Spain)	Palomino and Carrascal (2007)

(P19)
(*Source: https://www.woodlandtrust.org.uk/media/43619/impacts-of-nearby-development-on-the-ecology-of-ancient-woodland-addendum.pdf)*

vii The crucial link between air pollution and biodiversity loss - airquality news .com

The visual impact that air pollution is having on the natural environment may not be obvious to the untrained eye, but from the abundance of stinging nettles on the side of the road to the lack of bugs splattered on your car windscreen, biodiversity loss is real and it is getting worse.

In the UK alone, 15% of all species are threatened with extinction and 41% of species have declined in abundance since the 1970s.

Scientists cannot come to a unanimous conclusion as to what is causing this 'sixth mass extinction,' but one unavoidable factor is air pollution.

'Air pollution is a major driving force changing the natural environment. It is changing the basic structure and function of ecosystems.' Kevin Hicks, research associate at the Stockholm Environment Institute

Another source of ammonia pollution is from transport emissions, and despite its harmful effect on the environment, as far as vehicle emission legislation goes, ammonia is not a regulated pollutant.

Ben Kite, chartered ecologist and managing director of ecological planning company EPR explained: 'Catalytic converters on vehicles remove pollutants from the exhaust gas by changing nitrogen oxides into reduces forms of nitrogen, like ammonia.'

'These pollutants are less dangerous for humans but much worse for habitats.'

'Ammonia is a particular worry with hybrid cars. When the battery runs out, the motor suddenly kicks in and the car dumps all the ammonia at one point in time. If that happens at a sensitive location for roadside habitats we could end up with a situation where the effects of ammonia pollution become much worse.'

(Source: https://airqualitynews.com/2020/07/03/the-crucial-link-between-air-pollution-and-biodiversity-loss/)

---

viii Statement from the Woodland Trust 19-3-2021

"The Woodland Trust has major concerns regarding the proposed development at Sandleford Park on account of impacts to numerous ancient woodland areas and a number of ancient and veteran trees. In this case, three ancient and veteran trees designated on the Ancient Tree Inventory would be lost as part of the development, identified as trees T1, T34 and T127. The loss of ancient and veteran trees is in direct contravention of national planning policy and must be resisted – considering the population of veteran trees and ancient woods in the area it is highly likely that the area supports an assembly of deadwood dependent invertebrates and other fauna that require different forms of standing deadwood.

Further to the loss of veteran trees, we consider that the development would result in significant impacts to numerous areas of ancient woodland. Where large developments, such as this one, are sited in close proximity to ancient woods, the woodland areas can be subject to indirect impacts that result in a gradual deterioration of the habitat quality over time, unless impacts are appropriately mitigated. While Natural England calls for a minimum buffer size of 15 metres to ancient woodland, they also clarify that larger buffer zones may be required to mitigate adverse impact. In this case, it is apparent that the applicant has not scaled up the size of the buffer zone in line with the size and scale of their development. In this case, a 15m buffer is simply inappropriate and will not be sufficient in reducing the indirect impacts from the proposed development, including noise, light and dust pollution, the collective emissions of nitrogen oxides from household boilers, and the increased recreational activity associated with thousands more people residing in the area. By scaling up the buffer zone, the cores of the ancient woodland areas will be better safeguarded and less vulnerable to external influences, and as such the Trust considers that the ancient woods must be afforded buffers of 50m.

The loss of ancient and veteran trees and increased indirect impacts on the local ancient woods must also be considered in the context of impacts on rare and threatened species known to be present in the local area, including hazel dormouse, birds such as garden warbler, nightingale and lesser spotted woodpecker, bat species including barbastelle, noctule and brown long-eared, and dingy skipper and white admiral butterflies (as recorded on the Sylva Woodland Wildlife Toolkit website). Such species are sensitive to disturbance and the degradation of the habitats they rely on must be avoided.

In summary, the proposals in their current form would result in damage and loss of irreplaceable habitats, and therefore directly contravene national planning policy. As such, we call on the Inspector to reject this appeal and call on the applicant to ensure that any future proposals give appropriate consideration to impacts on ancient woods and veteran trees."

(Source - email received by snts from The Woodland Trust 19/3/2021)

---

ix Spatial extent of road pollution: A national analysis (March 2021)

Highlights - Half of land in Great Britain is less than 216m from a road. (P1)

Abstract - We found that 25% of land was less than 79m from a road, 50% of land was less than 216m and 75% of land was less than 527m. Roadless areas were scarce, and confined almost exclusively to the uplands (mean elevation 391m), with only ca 12% of land in Great Britain more than 1 km from roads and <4% of land more than 2.5 km from roads. Using light, noise, heavy metals, NO2, and particulate matter PM2.5 and PM10 as examples, we estimate that roads have a zone of influence that extends across >70% of the land area. Potentially less than 6% of land escapes any impact, resulting in nearly ubiquitously elevated pollution levels. Generalising from this, we find that, whilst the greatest levels of road pollution are relatively localised around the busiest roads, low levels of road pollution (which may be ecologically significant) are pervasive.

1. Introduction

Roads form vast and pervasive networks across the Earth, with an overall estimated length of 64 million km (van der Ree et al., 2015). The associated pollution and other negative environmental impacts spill out even further, forming a'road-effect zone'. Understanding the extent of these impacts is critical for identifying where environmental protections (e.g. from further roadbuilding), environmental mitigations (e.g. pollution reduction) and environmental enhancements (e.g. habitat creation) will most benefit the health of both people and nature. (P2)

… the intensity of road impacts shows spatial complexity, decreasing with distance from the road and often increasing with traffic volume. Furthermore, the environmental impact of roads is the result of diverse forms of pollution, including light, noise, vibration, de-icing salt, metals, herbicides, and exhaust emissions (e.g. NOx,CO and particulates), alongside other effects (e.g. habitat fragmentation and vehicle-wildlife collisions) (Forman et al., 2003). Of these, noise and air pollution have received by far the most attention due to their impacts on human health, for which they are considered to be the most prevalent environmental risk factors in Europe (Hänninen et al., 2014). Roads are a major contributor to both. In fact, theWorld Health Organization (2011) states that"sleep disturbance and annoyance, mostly related to road traffic noise, comprise the main burden of environmental noise". However, whilst air pollution is regulated in many countries, with strict limits on roadside pollution and emissions from individual vehicles (European Commission, 2021a, 2021b), noise pollution is scarcely regulated or enforced. (P2)

Different forms of road pollution vary in their spatial distributions with respect to roads, in particular how they attenuate over distance. Many pollutants are deposited near to roads, for example metals arising from vehicles and road surfaces are principally found in soils within 15m of roads (Werkenthin et al., 2014). Other pollutants are more far reaching, with many air pollutants found at elevated levels at distances of hundreds of meters from roads (Karner et al., 2010). Whilst

dispersion patterns are highly variable among pollutants, in the broadest sense the way that a pollutant attenuates over distance depends on whether it consists of energy waves (e.g. light and noise) or matter(e.g. metals and air pollutants). Specifically, particle pollution such as metals and air pollutants are largely transported via diffusion, whereas light and noise are energy waves travelling via vibrations. Their patterns of dispersal over distance therefore differ, and in general, can be de-scribed, respectively, by exponential decay and inverse square decay functions (Attenborough, 2014;Karner et al., 2010). (P2)

3 Results

3.2 Spatial distribution of real forms of road pollution - Considering real forms of road pollution for which there were data to estimate their patterns of spread from roads, high levels (e.g. >10% of source strength) are relatively localised (Figs. 2–3). However, elevated levels occur across an estimated 94% of land in Great Britain, especially for NO2,PM2.5, noise and light (Figs. 2–3). Again, the only land to escape pollution from roads is located almost entirely in the uplands (P9)
]
The proportion of land affected by 10% or more of the pollution levels found at the source along the busiest roads amounts to 9% for NO2 and 52% for PM2.5. The respective proportion of land affected by 1% or more of these pollutants is 51% for NO2, 84% for PM2.5, and by 0.1% or more is 77% and 94%. Based on estimated concentrations of these pollutants at roadsides, 45% of land is affected by NO2levels elevated by at least 1.25 ppb due to roads, and 88% of land in Great Britain is affected by PM2.5 levels elevated by at least 0.005 ppb due to roads. Due to the pervasiveness of roads, and of light and noise arising from vehicles on them, most land is likely to be exposed to some pollution. For example, when vehicles pass by on nearby roads, an estimated 70% of land in Great Britain is exposed to elevated light pollution of at least 0.1 lx, and to elevated noise pollution of at least 30 dB (0.001% of the source strength found along the busiest road type–motorways). Taking account of the frequency of light and noise pollution due to intermittent traffic, 16% of land is affected by average light levels from roads of at least 0.1 lx, and 27% of land is affected by average noise levels from roads of above 30 dB (P9)

4 Discussion

Previous studies have emphasised the importance of protecting roadless areas from further road building for nature conservation purposes (Ibisch et al., 2016; Psaralexi et al., 2017; Selva et al., 2011), and our study shows that the rarity of such areas in Great Britain makes them even more important. (P11)

Whilst research is lacking for most forms of pollution and their potential environmental impacts, studies of human health suggest that impacts on people occur across almost the entire range of most air pollutants(e.g. up to 100–400 m from roads for particulate matter and 200–500 m for NO2; Zhou and Levy, 2007), which can have similar respiratory and other impacts on birds (Sanderfoot and Holloway,2017), mammals (Llacuna et al., 1996) and insects (Thimmegowdaet al., 2020). Recent evidence suggests that road impacts can scale up to population-level effects for birds and mammals (Benítez-Lópezet al., 2010;Cooke et al., 2020a, 2020b;Torres et al., 2016), with estimated effects up to distances of 1km and 5 km, respectively, so affecting 55.5% and 97.9% of land across Europe (Benítez-López et al., 2010;Torres et al., 2016) (P11)

(Source: https://reader.elsevier.com/reader/sd/pii/S0048969721006574?token=0A823E14DF9B0596232EF3E6CB7D6A778E870F69135FE1EBACDF6541C1752D32C41A6965419AE0600791D26D309D9026&originRegion=eu-west-1&originCreation=20210407090258)

2 POLLUTION IMPACTS - SITING OF PRIMARY SCHOOLS & MAJOR ACCESS ROADS

i PM2.5 in London - Roadmap to meeting World Health Organization guidelines by 2030 - October 2019

Introduction - "PM2.5, also known as fine particulate matter, refers to particles or liquid droplets in the air that have a diameter less than 2.5 micrometres across (that's one 400th of a millimetre, about 3 per cent of the diameter of a human hair). Some PM2.5 is naturally occurring, such as dust and sea salt, and some is manmade, such as particulates from vehicle exhausts.

Based on current evidence PM2.5 is thought to be the air pollutant which has the greatest impact on human health. Both short and long-term exposure to PM2.5 increases the risk of mortality from lung and heart diseases as well as increased hospital admissions. Children growing up exposed to PM2.5 are more likely to have reduced lung function and develop asthma. The UK government's Committee on the Medical Effects of Air Pollution (COMEAP) estimate exposure to PM2.5 attributes to 29,000 premature deaths in the UK every year." (P5)

(Source: https://www.london.gov.uk/sites/default/files/pm2.5_in_london_october19.pdf)

ii The Mortality Effects of Long-Term Exposure to Particulate Air Pollution in the United Kingdom, A report by the Committee on the Medical Effects of Air Pollutants (2010)

Executive Summary 2C - "The current (2008) burden of anthropogenic particulate matter air pollution is, with some simplifying assumptions, an effect on mortality in 2008 equivalent to nearly 29,000 deaths in the UK at typical ages and an associated loss of total population life of 340,000 life-years. The burden can also be represented as a loss of life expectancy from birth of approximately six months." (P1/2)

(Source: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/304641/COMEAP_mortality_effects_of_long_term_exposure.pdf)

iii Non-Exhaust Emissions from Road Traffic Air Quality Expert Group Report for DEFRA 2019

Executive Summary

"Data from the UK National Atmospheric Emissions Inventory indicate that particles from brake wear, tyre wear and road surface wear currently constitute 60% and 73% (by mass), respectively, of primary PM2.5 and PM10 emissions from road transport, and will become more dominant in the future" (P8)

"The available data indicate that brake, tyre and road-surface wear contribute approximately equally to UK sources of NEE (non Exhaust Emissions), and are predominantly derived from cars because of the much greater vehicle-km travelled for this class of vehicle. NEE particles are also an important source of metals to the atmosphere; the national inventory estimates NEE

contributions of 47% and 21% for Cu and Zn, primarily associated with brake and tyre wear, respectively. The national inventory does not include estimates of road dust resuspension." (P8)

"NEE are especially important in urban environments. The national inventory indicates that half of NEE occurs on urban roads, owing to the greater braking per km than on non-urban roads. Emissions may also be high in areas such as trunk-road exits" (P8)

"Considerable measurement evidence shows NEE increase concentrations of PM10 and PM2.5 and some metals at roadside although precise quantification of the NEE contribution is difficult. Data from London Marylebone Road indicate an NEE contribution (including resuspension) of 4-5 μg m-3 to the roadside increment in PM, mostly in the coarse particle fraction (PM10-2.5). Other studies, including dispersion modelling, also indicate total NEE contributions, including resuspension, of up to several μg m-3 of PM10 at busy roadsides, and in the region 1-2 μg m-3 for urban background in central London." (P9)

"Regenerative braking does not rely on frictional wear of brake materials so vehicles using regenerative braking totally or partially, for example electric vehicles, should have lower brake wear emissions. However, tyre and road wear emissions increase with vehicle mass, which has implications for any vehicle with a powertrain that is heavier (for example due to additional battery and hardware mass) than the equivalent internal-combustion-engine vehicle it replaces." (P9)

1 Introduction

1.2 Why are road traffic non-exhaust emissions important - "Non-exhaust emissions from road traffic contribute to airborne concentrations of both fine and coarse particles and hence to PM2.5 and PM10. The estimates from the National Atmospheric Emissions Inventory outlined in Chapter 2 indicate that the emissions from brake wear, tyre wear and road surface wear collectively now exceed those from the exhaust of the UK vehicle fleet. The Committee on the Medical Effects of Air Pollutants (COMEAP) has estimated that exposure of the UK population to particulate air pollution contributes to an effect equivalent to around 29,000 deaths across the country annually (COMEAP, 2010). COMEAP has also examined the evidence for variations in toxicity between particles of different chemical composition or from different sources and has concluded that present evidence is insufficient to judge whether particles of particular composition or from particular sources have higher toxicity (COMEAP, 2015). This means that COMEAP is unable to recommend differential coefficients for quantification of health effects, and continues to recommend that concentration-response coefficients linking mortality with PM2.5 mass concentration be applied to all particles within the size range. Consequently, on the basis of current emissions inventory estimates and toxicity evidence, non-exhaust particles from the UK road traffic fleet should be considered as potentially having a greater public health impact than the exhaust particles." (P15)

(Source: https://uk-air.defra.gov.uk/assets/documents/reports/cat09/1907101151_20190709_Non_Exhaust_Emissions_typeset_Final.pdf)

---

iv House of Commons Environment, Food and Rural Affairs Committee: Air Quality and coronavirus: a glimpse of a different future or business as usual - Fifth Report of Session 2019-21 (11th February 2021)

Summary

Cleaner air and clearer skies were one of the few positives that many people experienced following the first covid-19 lockdown in March 2020. However, as the pandemic progressed evidence also began to emerge that air pollution might be playing a role in people's susceptibility to, and increased mortality from, covid-19. Air pollution is the largest environmental risk to UK public health and is linked to as many as 64,000 early deaths a year. (P3)

- **Although there is a link between poor air quality and covid-19 mortality and morbidity; a strong and established case already existed for taking action to reduce health inequalities from air pollution**, and the Government's Clean Air Strategy should be amended to include measures to reduce these long-term health inequalities. The Environment Bill should also be amended to include a health inequalities target; require the Secretary of State to take account of human health considerations when setting or reviewing air quality targets; and include a duty on all government departments and local government to work together to deliver these targets. (P3)
- **The Environment Bill does not provide the robust legal framework needed given the scale and urgency of the challeng**e. It should be amended to include a specific target to reduce the annual mean concentration of PM2.5 to under 10μg/m3 by 2030, in line with World Health Organisation-guidelines. The Secretary of State should also use his discretionary powers in the Bill to set additional long-term air quality targets for the other key pollutants that harm human health. (P3)

Introduction

1. Air pollution is classified as the largest environmental risk to UK public health; with, depending on the study, it being linked to around 40,000 or 64,000 early deaths a year. (P4)

(Note 3 - Public Health England Health Matters: Air Pollution (November 2018). The 40,000 deaths figure is cited in Royal College of Physicians and Royal College of Paediatrics and Child Health, Every breath we take: the lifelong impact of air pollution (February 2016), p. xiii. The 64,000 estimate is taken from Jos Lelieveld, Klaus Klingmüller, Andrea Pozzer, Ulrich Pöschl, Mohammed Fnais, Andreas Daiber, Thomas Münzel, "Cardiovascular disease burden from ambient air pollution in Europe reassessed using novel hazard ratio functions", European Heart Journal, vol 40, Issue 20 (May 2019), pp 1590–1596)

1 Changes in UK air pollution

6. Particulate matter (PM) mainly comes from burning fuels, tyre and brake wear, wind-blown soil and dust, sea spray and fires from burning vegetation. PM is classified by size: PM10 are coarse particles <10 microns (μm) in diameter; PM2.5 are fine particles <2.5 μm in diameter; and PM0.1 are ultrafine particles 0.1 μm in diameter. Particles bigger than PM10 are mainly deposited in the nose or throat. Smaller PM are a bigger health risk as they can be drawn deep into the lungs, and long-term exposure increases mortality and morbidity from cardiovascular and respiratory diseases and may cause lung cancer. (P6)

7. Air pollution is known to affect people's health from before birth and to old age. It affects the vital organs including lungs, heart and brain, and is linked to physical and mental health problems including, asthma, lung cancer, heart disease, strokes, dementia, depression, anxiety, and poor concentration in children (P6)

8. It has been estimated that every year up to 64,000 of all premature deaths may be linked to air pollution, with up to 40,000 premature deaths linked to exposure to particulates and nitrogen dioxide.12 This was starkly highlighted by the Coroner's verdict in December 2020, into the death of Ella Roberta Adoo Kissi-Debrah who died aged nine on 15 February 2013 who lived near the South Circular Road in south-east London.13 He concluded that Ella "died of asthma contributed to by exposure to excessive air pollution" and the medical causes of death were recorded as, "acute respiratory failure", "severe asthma", and, for what is believed to be the first time, "air pollution exposure." (P7)

9. PM2.5 concentrations have remained flat as "so many different primary sources and precursor emissions contribute to PM2.5", including new petrol and electric vehicles' brakes and tyres, although different particulates of the same size have different levels of toxicity. (P7)

3 Government strategy

The Clean Air Strategy

38. Proposals in the 2019 Clean Air Strategy included:

- Aiming to “progressively cut public exposure to particulate matter pollution as suggested by the [WHO]”, with a goal to “reduce PM2.5 concentrations across the UK, so that the number of people living in locations above the WHO guideline level of 10 µg/m3 is reduced by 50% by 2025”; and
- Introducing primary legislation via the Environment Bill to give local authorities “new powers to take action in areas of high pollution” (P16)

5 Green economic recovery

School streets

109. Temporary closures to vehicles to streets around a school at the beginning and end of the school day (termed school streets) were cited as one means of encouraging active travel as well as directly improving air quality around schools. According to the Mayor of London, in 2016 every state school in Greater London was in an area that exceeded the WHO guideline for PM2.5 and over 450 were in areas exceeding the legal limit on NO2. (P37)

110. In addition, air pollution levels around school streets would be well-supported by reducing parking outside them and measures to reduce idling (i.e. stationery vehicles leaving their engines running) and 20mph speed limits (P37)

112. In its new strategy for walking and cycling published in July 2020, the Government made a commitment to “increase” the number of school streets, but did not quantify by how many. (P38)

The built environment

121. The Government’s 2020 Planning White Paper aims to speed up the planning process, in part by reducing the discretion of local decision makers in favour of greater certainty for developers. The Chief Executive of the Royal Town Planning Institute, Victoria Hills, suggested that it may provide a “carte blanche” to developments that “perpetuate car dependency”

snts note: Sandleford which is situated at its Monk Lane entrances 30 minutes walk from the train station and 40 minutes walk from the Town Centre is an example of such a development

122. The Right Hon Rebecca Pow MP, Department of Transport Minister, Defra told the committee “If we want to get our PM2.5 down and we do not want big concentrations in certain places where people are living, around schools and hospitals, we have to design the places so that does not happen” (P40)

Conclusions and Recommendations

19. We recognise the efforts of many schools, parents and local councils to improve the air around schools and encourage active travel through introducing school streets. These should also be supported by reducing parking outside schools and measures to reduce idling and 20mph speed limits…*The Government should be ambitious about increasing the number of school streets by working with local authorities, schools and civil society groups to develop a strategy to put them in place for every school where one would be appropriate, including measures to reduce parking and idling outside schools and the introduction of 20mph speed limits.* (P46)

20. The local government leaders we heard from are keen to provide more homes in their city centres alongside more effective public, and active transport networks, reducing air pollution from travel. The Government says it is keen to support these aims through its planning reforms (P46)

(Source: https://publications.parliament.uk/pa/cm5801/cmselect/cmenvfru/468/468.pdf)

v West Berkshire Council - 2020 Air Quality Annual Status Report - June 2020

2 Actions to Improve Air Quality

2.3 PM2.5 - Local Authority Approach to Reducing Emissions and/or Concentrations

As detailed in Policy Guidance LAQM.PG16 (Chapter 7), local authorities are expected to work towards reducing emissions and/or concentrations of PM2.5 (particulate matter with an aerodynamic diameter of 2.5μm or less). There is clear evidence that PM2.5 has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases. (P12)

(Source: https://publicprotectionpartnership.org.uk/media/2041/westberks_asr_2020_v1.pdf)

3 CS3 - SELECTION CRITERIA REVIEW

i Strategic Sites SA-SEA Policy Paper Update (October 2011)

'Reserve' site approach in Newbury/Thatcham
11.16 The 'Options for the Future' consultation asked for views on the 'reserve' site approach to future development in Newbury/Thatcham. The consultation raised some concerns about the 'reserve' site approach as this term was causing some confusion about what was actually meant, and what status a 'reserve' site would have in the Core Strategy. This was subsequently discussed by the Planning Task Group and a decision was made to clarify the position. The

minutes of the Planning Task Group 30 October 2009 (CD 09/48) state that the concept of "reserve sites" was very unpopular due to reasons of uncertainty and that Sandleford Park should be clearly identified as a firm long term strategic allocation to add certainty for the public, developers and the delivery of infrastructure for the future direction of growth for the Newbury area up to and beyond 2026. The site would also have the potential to come forward within the Core Strategy period if other sites did not deliver as expected. The site could begin delivering development later on in the plan period (from 2016 onwards) but with capacity to continue, either after 2026 to provide long term flexibility, or before if land supply monitoring showed that it was necessary, or if the housing requirement increased. This was subject to discussion by members at Planning Task Group which resulted in the minutes of October 2009 stating in a summary of the discussion that "members were supportive of the inclusion of Sandleford as a strategic site to provide certainty for the community". (P16)

11.18 It was agreed by the Planning Task Group that the phasing of the strategic site at Sandleford should be amended to deliver 1,000 units by 2026 but that the overall scale of development should remain the same. This was in order that masterplanning work should reflect the full capacity of the site in order to maximise the long term benefits of the site and to ensure the delivery of the full extent of the critical infrastructure. (P17)

Summary of comments received February 2008 event

Site 13: Sandleford Park

Advantages of this site	Disadvantages of this site
Adjoins existing development and existing services and facilities. Size – strategic opportunity to integrate and provide facilities, services and infrastructure. Potential community benefits from the site. Possible low density/few houses located at the top of the site, not all up the hill. College already looks isolated. College and Rugby Club already there. Could take site onto Andover Road. Good access to the station. Sustainable. Can make public transport more sustainable. Employment. Opportunity for renewables - large scale combined heat and energy biomass. Not in the AONB	Transport infrastructure concerns. Route into Newbury is already busy, especially with Basingstoke developments and the Amenity site. Close to waste transfer site - amenity issues. Parts of the area are of high landscape value and ancient woodland. Historic environment. Relationship of ancient woodland with Sandleford Priory. Loss of views – Sandleford Priory, Capability Brown. Topography – rising land. Requires new access onto the A339. Concern with capacity of A339 Cycle opportunities are poor. Goes quite far south. Potential loss of existing outdoor recreational opportunities.

(P40)

(Source: Strategic_sites_SA-SEA Policy Paper_Update-October 2011.pdf - attached as Appendix B)

ii Combined Strategic Appraisal Document Phase 2

7.16 Highways and traffic are an issue for any strategic site, and the issues associated with Sandleford are no different to any site in terms of traffic generation, highways improvements and mitigation. Given the nature of the site and the number of dwellings proposed the highways issues are resolvable and can be fully mitigated as part of the development of the Sandleford Park site. With regards to the sustainability of the site as assessed by WSP as part of the Transport Assessment undertaken for West Berkshire Council, Sandleford Park was again considered on the basis of the whole red edge of the site, and on the basis of providing 2500 dwellings. This has resulted in it being ranked as mid to lower in terms of sustainability when assessing the sites across the district. However, one of the sites assessed was Newbury Rugby Club, which scored as the fourth most sustainable location for development, and more sustainable than the North Newbury site. The proposed land use plan, submitted as part of the Sandleford Park representations, identifies the majority of the residential development being adjacent to the east and south of Newbury Rugby Club and therefore it would appear more appropriate that the scoring of the proposed development is more akin to the scoring given to the Newbury Rugby site, rather than the scoring based on the centre point of the whole Sandleford Park site.

(Source: Combined Strategic Appraisal Document Phase 2 - attached as Appendix C)

iii Minutes of Sandleford Masterplanning Meeting - 30th March 2010

Derek Carnegie raised a query with the access off Monks Lane creating a huge cul-de-sac and expressed concern that this ma not be the best solution - should not rule out access on A339 too early. Paul Goddard said that he would not be completely opposed to a new access on to the A339; it could help accessibility and relieve pressure on other points. WYG are prepared to look at this in more detail but it would likely be a large roundabout and large access which will impact on the planning delivery of the site, especially in landscape terms which could be very difficult to overcome. WYG would look at Monks Lane access first and then consider alternatives. There is little flexibility with using Warren Road as bus access but may not be suitable as a major route. Highways confirmed that Warren Road has planning permission to bring the road to adoptable standards but it would still not have pavements. Duncan Coe asked whether rather than have the access opposite the school it could run through the college land? WYG raised concerns with running access through the college as it is not land owned by the Sandleford Partnership and therefore cannot rely on delivering something on that that is not in their ownership and control. Derek Carnegie suggested compulsory purchase of some of Newbury College land in order to deliver the access. WYG would not want to use a compulsory purchase order as it could pose question marks over the deliverability of the site as a whole because it could take a long time. Paul Goddard reiterated that an access onto the A339 should not be ruled out as a Monks Lane cul-de-sac is not great. WYG confirmed that they would keep it as an option and explained why it is not shown in the current draft plans for the site. Stuart Goodwill confirmed that they have been speaking to the Rugby Club and the College as they are neighbours to the site. Liz Alexander explained we would need to be clear on deliverability of the site and not flag up options where there were clear concerns over them being realistically delivered. WYG reiterated that they were flagging up the land ownership issue for access as a risk to the site and that we are at the start of the masterplanning process.

(Source: Minutes of Sandleford Masterplanning Meeting - 30th March 2010 - Attached as Appendix D)

iv The Planning Inspector Report on the examination into the West Berkshire Core Strategy (3rd July 2012)

Overall Conclusion and Recommendation

143. The Plan has a number of deficiencies in relation to soundness for the reasons set out above which mean that I recommend non- adoption of it as submitted, in accordance with Section 20(7A) of the Act. These deficiencies have been explored in the main issues set out above.

144. The Council has requested that I recommend main modifications to make the Plan sound and capable of adoption. I conclude that with the recommended main modifications set out in the Annex (and its Appendices) the West Berkshire Core Strategy satisfies the requirements of Section 20(5) of the 2004 Act and, on balance, sufficiently meets the aims of the NPPF to be considered sound. (P35)

Main Modification 5.6

Amend policy as follows:

Within the area identified at Sandleford Park, a sustainable and high quality mixed use development will be delivered including in accordance with the following parameters:

- Phased delivery of up to 2,000 dwellings, of which at least 40% will be affordable and with an emphasis on family housing. ~~Approximately~~ At least half the housing is planned to be delivered by 2026;
- Development to be limited to the north and west of the site in order to respect the landscape sensitivity of the wider site and to protect the historic landscape of Sandleford Priory and the surrounding historic parkland.
- Residential densities on the site to be in an average range of between 30 and 50 dwellings per hectare to reflect the predominant mix of family sized homes;
- Generation of on-site renewable energy.
- Two vehicular accesses will be provided off Monks Lane with an additional sustainable transport link for pedestrians, cyclists and buses provided from Warren Road onto the Andover Road;
- Further infrastructure improvements will be delivered in accordance with the Infrastructure Delivery Plan. Any infrastructure needs which are critical to the delivery of the site are set out in Appendix Cii
- ~~Social and physical infrastructure (including provision for a new primary school and extension of Park House School);~~
- ~~Measures to mitigate the impact of development on the road network;~~
- ~~Measures to improve accessibility by non-car transport modes particularly to Newbury town centre and along the A339 route to Basingstoke;~~
- Provision of a new primary school on site and the extension of Park House School
- Provision for retail facilities in the form of a local centre and business employment;
- A network of green infrastructure to be provided which will:
    - conserve the areas of ancient woodland and provide appropriate buffers between the development and the ancient woodland;
    - mitigate the increased recreational pressure on nearby sensitive wildlife sites, secure strategic biodiversity enhancements;
    - provide a country park or equivalent area of public open space in the southern part of the site; and
    - respect the landscape significance of the site on the A339 approach road into Newbury.

(P73/4)

Main Modification 5.7

Amend Explanatory Text as follows:

Explanation of the Policy

The Sandleford Park site to the south of Newbury comprises approximately 134 hectares of land. It is bordered to the north by existing development along Monks Lane and could accommodate around 2,000 dwellings with associated community facilities and services. Some flexibility in delivery is anticipated, with at least 1,000 dwellings proposed to be delivered by 2026, but with the ability to increase this amount if monitoring or changing circumstances indicate that this is necessary.

A concept plan (set out at Appendix Ci) has been produced which shows how the development on the site could be delivered, taking into account the opportunities and constraints of the site.

Only 39% of the site is proposed for development in this concept plan with the rest taken up by open space and woodland. The concept plan is indicative only and a masterplan or SPD will be prepared to set out the detailed guidelines for the distribution of uses and design of the site.

The area is accessible to facilities and services in Newbury town centre and is also close to other retail and educational facilities. A local centre is proposed for the site to deliver day-to-day shopping needs, and employment provision will be made at the site to assist in the creation of a sustainable community.

The development would need to be designed with significant green infrastructure, taking account of the site's location, topography and landscape importance. The site is located within the Greenham and Crookham Plateau Biodiversity Opportunity Area and will be expected to deliver strategic biodiversity enhancements in line with Policy CS 18. It is also close to the Greenham and Crookham Common SSSI which supports a range of important species including ground nesting birds which are particularly sensitive to disturbance and will be expected to mitigate against increased recreational pressure. Sandleford Park has the potential to form a high quality southern gateway to Newbury

The formation of a country park or equivalent area of public open space in the southern part of the site will protect that sensitive landscape area in perpetuity as well as protecting views and vistas from the former Sandleford Priory. It will also protect the views when approaching Newbury along the A339.

Infrastructure requirements, set out in the Infrastructure Delivery Plan will include junction improvements on the A339 and on Monks Lane/Andover Road, improvements to the bus service and to pedestrian/cycle links and road crossings. A new primary school (one-form entry to accommodate the first 1,000 dwellings to 2026, and expanding to two-form entry to accommodate the rest of the development beyond 2026) will need to be provided along with an increase in early years provision, alterations to Park House School and increased primary health care provision. Green Infrastructure including open space and sports facilities will be incorporated into the masterplanning of the site.

Further details about any non-critical infrastructure which has site specific implications will be set out within an SPD or other supporting document to the Masterplan for the site, as will detailed planning requirements and parameters for the development of the site. The total number of dwellings to be developed will depend on adequately accommodating the other requirements of the policy and the required mitigation.
(P75/6)

(Source: Pubic reports pack 16-07-2012 1900 Council.pdf - attached as Appendix E)

4 OTHER MATTERS

i Planning for the Future - 4th February 2021

Forward from Secretary of State - The Rt Hon Robert Jenrick MP

"Our reformed system places a higher regard on quality, design and local vernacular than ever before, and draws inspiration from the idea of design codes and pattern books that built Bath, Belgravia and Bournville. Our guiding principle will be as Clough Williams-Ellis said to cherish the past, adorn the present and build for the future.

We will build environmentally friendly homes that will not need to be expensively retrofitted in the future, homes with green spaces and new parks at close hand, where tree lined streets are the norm and where neighbours are not strangers."

snts note: there is nothing in the Bloor Homes proposal that refers to the "local vernacular"

Introduction

The challenge we face – an inefficient, opaque process and poor outcomes
"The planning system is central to our most important national challenges: tackling head on the shortage of beautiful, high quality homes and places where people want to live and work; combating climate change; improving biodiversity; supporting sustainable growth in all parts of the country and rebalancing our economy; delivering opportunities for the construction sector, upon which millions of livelihoods depend; the ability of more people to own assets and have a stake in our society; and our capacity to house the homeless and provide security and dignity

To succeed in meeting these challenges, as we must, the planning system needs to be fit for purpose. It must make land available in the right places and for the right form of development. In doing this, it must ensure new development brings with it the schools, hospitals, surgeries and transport local communities need, while at the same time protecting our unmatchable architectural heritage and natural environment."

A new vision for England's planning system
We wish to:

- promote the stewardship and improvement of our precious countryside and environment, ensuring important natural assets are preserved, the development potential of brownfield land is maximised, that we support net gains for biodiversity and the wider environment and actively address the challenges of climate change; and

- create a virtuous circle of prosperity in our villages, towns and cities, supporting their ongoing renewal and regeneration without losing their human scale, inheritance and sense of place. We need to build more homes at gentle densities in and around town centres and high streets, on brownfield land and near existing infrastructure so that families can meet their aspirations. Good growth will make it easier to level up the economic and social opportunities available to communities.

The change we will see – a more engaging, equitable and effective system
And for our children and grandchildren our reforms will leave an inheritance of environmental improvement – with environmental assets protected, more green spaces provided, more sustainable development supported, new homes that are much more energy efficient and new places that can become the heritage of the future, built closer to where people want to live and work to reduce our reliance on carbon-intensive modes of transport."

Pillar 1: planning for development

A new approach to plan-making

“

Proposal 1: The role of land use plans should be simplified

All areas of land would be put into one of these three categories:

- Areas that are Protected – this would include sites and areas which, as a result of their particular environmental and/or cultural characteristics, would justify more stringent development controls to ensure sustainability. This would include areas such as Green Belt, Areas of Outstanding Natural Beauty (AONBs), Conservation Areas, Local Wildlife Sites, areas of significant flood risk and important areas of green space. At a smaller scale it can continue to include gardens in line with existing policy in the National Planning Policy Framework. It would also include areas of open countryside outside of land in Growth or Renewal areas. Some areas would be defined nationally, others locally on the basis of national policy, but all would be annotated in Local Plan maps and clearly signpost the relevant development restrictions defined in the National Planning Policy Framework.”

Proposal 4: A standard method for establishing housing requirement figures which ensures enough land is released in the areas where affordability is worst, to stop land supply being a barrier to enough homes being built. The housing requirement would factor in land constraints and opportunities to more effectively use land, including through densification where appropriate, to ensure that the land is identified in the most appropriate areas and housing targets are met.

It is proposed that the standard method would be a means of distributing the national housebuilding target of 300,000 new homes annually, and one million homes by the end of the Parliament, having regard to:

- the size of existing urban settlements (so that development is targeted at areas that can absorb the level of housing proposed);
- the extent of land constraints in an area to ensure that the requirement figure takes into account the practical limitations that some areas might face, including the presence of designated areas of environmental and heritage value, the Green Belt and flood risk. For example, areas in National Parks are highly desirable and housing supply has not kept up with demand; however, the whole purpose of National Parks would be undermined by multiple large scale housing developments so a standard method should factor this
- the opportunities to better use existing brownfield land for housing, including through greater densification. The requirement figure will expect these opportunities to have been utilised fully before land constraints are taken into account;
- the need to make an allowance for land required for other (non-residential) development;

Pillar 2: planning for beautiful and sustainable places

Overview

…we want to ensure that we have a system in place that enables the creation of beautiful places that will stand the test of time, protects and enhances our precious environment, and supports our efforts to combat climate change and bring greenhouse gas emissions to net-zero by 2050

Too many places built during recent decades fail to reflect what is special about their local area or create a high quality environment of which local people can be proud.

Proposal 14: We intend to introduce a fast-track for beauty through changes to national policy and legislation, to incentivise and accelerate high quality development which reflects local character and preferences.

Effective stewardship and enhancement of our natural and historic environment

The reformed planning system will continue to protect the places of environmental and cultural value which matter to us. Plans will still play a vital role in identifying not just areas of defined national and international importance (such as National Parks and Sites of Special Scientific

Interest), but also those which are valued and defined locally (such as Conservation Areas and Local Wildlife Sites).

However, the planning system can and should do much more than this. In line with the ambitions in our 25 Year Environment Plan, we want the reformed system to play a proactive role in promoting environmental recovery and long-term sustainability. In doing so, it needs to play a strong part in our efforts to mitigate and adapt to climate change and reduce pollution as well as making our towns and cities more liveable through enabling more and better green spaces and tree cover

Proposal 15: We intend to amend the National Planning Policy Framework to ensure that it targets those areas where a reformed planning system can most effectively play a role in mitigating and adapting to climate change and maximising environmental benefits.

These measures, and reform of our policy framework, provide important opportunities to strengthen the way that environmental issues are considered through the planning system. However, we also think there is scope to marry these changes with a simpler, effective approach to assessing environmental impacts.

In doing so, we will want to be clear about the role that local, spatially-specific policies can continue to play, such as in identifying important views, opportunities to improve public access or places where renewable energy or woodland and forestry creation could be accommodated.

Proposal 16: We intend to design a quicker, simpler framework for assessing environmental impacts and enhancement opportunities, that speeds up the process while protecting and enhancing the most valuable and important habitats and species in England.

It is vital that environmental considerations are considered properly as part of the planning and development process. However, the current frameworks for doing so – which include Strategic Environmental Assessment, Sustainability Appraisal, and Environmental Impact Assessment – can lead to duplication of effort and overly-long reports which inhibit transparency and add unnecessary delays. Outside of the European Union, it is also important that we take the opportunity to strengthen protections that make the biggest difference to species, habitats and ecosystems of national importance, and that matter the most to local communities.

Proposal 18: To complement our planning reforms, we will facilitate ambitious improvements in the energy efficiency standards for buildings to help deliver our world-leading commitment to net-zero by 2050.

From 2025, we expect new homes to produce 75-80% lower CO2 emissions compared to current levels. These homes will be ‘zero carbon ready’, with the ability to become fully zero carbon homes over time as the electricity grid decarbonises, without the need for further costly retrofitting work.

(*Source: https://www.gov.uk/government/consultations/planning-for-the-future/planning-for-the-future*)