

Shadow Habitats Regulations Assessment

Recreational Disturbance and Atmospheric Pollution Effects on European Sites

South Wokingham SDL Extension

Land east of Easthampstead Road and west of Old Wokingham Road

May 2026

Ecology | Green Space | Community | GIS

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CONTENTS

	Page(s)
SUMMARY.....	4
2 INTRODUCTION	6
3 IDENTIFICATION OF EUROPEAN SITE AND QUALIFYING FEATURES	8
4 SCREENING FOR LIKELY SIGNIFICANT EFFECTS.....	13
5 APPROPRIATE ASSESSMENT	17
6 IN-COMBINATION EFFECTS	23
7 INTEGRITY TEST AND CONCLUSION	26

SUMMARY

- 1.1 This Shadow Habitats Regulations Assessment (HRA) has been prepared to inform the Appropriate Assessment to be undertaken by Wokingham Borough Council (WBC), as the competent authority, in accordance with the Conservation of Habitats and Species Regulations 2017 (as amended).
- 1.2 The assessment relates to the proposed residential-led mixed-use development at Land east of Easthampstead Road and west of Old Wokingham Road (South Wokingham SDL Extension), comprising up to 1,030 dwellings and associated infrastructure. The Site is located approximately 1.8km from the Thames Basin Heaths Special Protection Area (SPA) and therefore lies within the recognised Zone of Influence for recreational impacts.
- 1.3 The Thames Basin Heaths SPA is designated for its populations of Dartford warbler, nightjar and woodlark, which are ground-nesting bird species sensitive to disturbance. It is well established, through Natural England guidance and Wokingham Borough Council policy, that residential development within 5km of the SPA has the potential to give rise to increased recreational pressure and associated disturbance effects.
- 1.4 In addition to recreational pressure effects, this Shadow HRA also considers the potential for atmospheric pollution effects associated with road traffic emissions arising from the Proposed Development. Atmospheric pollution effects have been considered with reference to the Wokingham Borough Local Plan Update Habitats Regulations Assessment (AECOM, February 2025), associated Air Quality Technical Note (Stantec, January 2025), and supporting evidence base prepared to inform the Local Plan examination.
- 1.5 The Local Plan evidence base assessed the cumulative effects of planned growth across Wokingham Borough, including the South Wokingham Strategic Development Location, together with growth proposed within neighbouring authorities. The assessment concluded that the Local Plan would not result in adverse effects on the integrity of any Habitats Sites as a result of atmospheric pollution effects, either alone or in combination with other plans and projects. Natural England has confirmed agreement with these conclusions through the Local Plan examination process.
- 1.6 The assessment identifies that, in the absence of mitigation, the Proposed Development would be likely to have significant effects on the Thames Basin Heaths SPA through increased recreational pressure. Accordingly, an Appropriate Assessment is required.
- 1.7 The potential for adverse recreational effects is addressed through a comprehensive mitigation strategy comprising:
 - Provision of bespoke Suitable Alternative Natural Greenspace (SANG) of appropriate scale, design and accessibility;

- Delivery of SANG prior to residential occupation;
 - Securing long-term management and maintenance in perpetuity; and
 - Financial contributions towards Strategic Access Management and Monitoring (SAMM).
- 1.8 The proposed SANG extends to approximately 20.17 hectares, exceeding the minimum requirement derived from Natural England standards, and has been designed to function as an attractive and convenient alternative to the SPA. The SANG will provide sufficient capacity, both quantitatively and functionally, to accommodate the recreational needs generated by the development and to intercept routine recreational visits that might otherwise be directed to the SPA.
- 1.9 The mitigation measures are well established, evidence-based and secured through a Section 106 Agreement, ensuring a high degree of certainty in relation to their delivery, effectiveness and long-term management. In combination with the wider strategic SANG and SAMM framework operating across Wokingham Borough, these measures ensure that cumulative recreational effects are appropriately addressed.
- 1.10 On the basis of the assessment presented within this Shadow Habitats Regulations Assessment, it can be concluded that the Proposed Development will not result in an adverse effect on the integrity of the Thames Basin Heaths SPA, or any other relevant European site, either alone or in combination with other plans and projects.
- 1.11 This conclusion applies in relation to both Recreational disturbance effects; and Atmospheric pollution effects associated with road traffic emissions. The conclusion is reached beyond reasonable scientific doubt and in accordance with the requirements of the Habitats Regulations, having regard to the established SANG and SAMM mitigation framework and the conclusions of the Wokingham Borough Local Plan Update Habitats Regulations Assessment and supporting air quality evidence base.

2 INTRODUCTION

2.1 Purpose of report

- 2.1.1 This Shadow Habitats Regulations Assessment (HRA) has been prepared to inform the Appropriate Assessment to be undertaken by Wokingham Borough Council (WBC), in its role as competent authority, under the Conservation of Habitats and Species Regulations 2017 (as amended).
- 2.1.2 The assessment relates to the proposed residential-led mixed-use development at Land east of Easthampstead Road and west of Old Wokingham Road (South Wokingham SDL Extension).
- 2.1.3 This document addresses recreational impact pathways only, in accordance with Natural England and WBC requirements. Air quality effects are addressed separately by the project air quality consultants.

2.2 Atmospheric Pollution

- 2.2.1 The potential for atmospheric pollution effects associated with the Proposed Development has been considered with reference to the Wokingham Borough Local Plan Update Habitats Regulations Assessment (AECOM, February 2025) and supporting Air Quality Technical Note (Stantec, January 2025).
- 2.2.2 These assessments considered the cumulative effects of planned growth across Wokingham Borough, including the South Wokingham Strategic Development Location, together with growth proposed within neighbouring local authorities. The evidence base included strategic traffic modelling and assessment of atmospheric emissions affecting relevant European sites.
- 2.2.3 The Appropriate Assessment concluded that the Local Plan would not result in adverse effects on the integrity of any Habitats Sites, either alone or in combination with other plans and projects, as a result of atmospheric pollution effects.
- 2.2.4 The Proposed Development forms part of the strategic growth scenario assessed through the Local Plan evidence base and does not introduce additional forms of impact beyond those already considered.
- 2.2.5 Natural England has confirmed agreement with the conclusions of the air quality assessments and HRA through the Statement of Common Ground prepared as part of the Local Plan examination process.
- 2.2.6 Accordingly, it can be concluded that the Proposed Development will not result in adverse effects on the integrity of any European site as a result of atmospheric pollution effects, either alone or in combination with other plans and projects.

2.3 Proposed Development

2.3.1 The Proposed Development comprises:

- Up to 1,030 residential dwellings;
- Associated community uses, open space, and infrastructure;
- Provision of a Suitable Alternative Natural Greenspace (SANG).

2.3.2 This represents a net increase of up to 1,030 dwellings within the Thames Basin Heaths SPA Zone of Influence.

3 IDENTIFICATION OF EUROPEAN SITE AND QUALIFYING FEATURES

3.1 European Site

3.1.1 The relevant European site for the purposes of this assessment is the ***Thames Basin Heaths Special Protection Area (SPA)***.

3.1.2 The Thames Basin Heaths SPA is a network of lowland heathland sites distributed across Berkshire, Surrey and Hampshire, comprising a series of component Sites of Special Scientific Interest (SSSIs) which together form a coherent ecological unit.

3.1.3 The Application Site is located approximately 1.8km from the nearest component of the SPA, and therefore:

- Lies outside the 400m exclusion zone, within which residential development is not permitted;
- Lies within the 5km Zone of Influence, within which residential development is considered to have the potential to give rise to recreational impacts;
- Falls within the wider 7km strategic context, where in-combination effects are considered.

3.1.4 Wokingham Borough Council's adopted and emerging policy framework (including Core Strategy, Managing Development Delivery Local Plan and SPA SPD) establishes that net new residential development within 5km of the SPA must provide avoidance and mitigation measures to address recreational pressure.

3.2 Qualifying Features

3.2.1 The Thames Basin Heaths SPA is classified under Article 4 of the Birds Directive (Directive 2009/147/EC) for its internationally important populations of the following Annex I bird species:

- Dartford warbler (*Sylvia undata*)
- Nightjar (*Caprimulgus europaeus*)
- Woodlark (*Lullula arborea*)

3.2.2 These species are:

- Ground-nesting, relying on open heathland habitats;
- Highly sensitive to disturbance from human activity, particularly during the breeding season;
- Dependent on a mosaic of dry and wet heath, acid grassland and scrub habitats.

- 3.2.3 The SPA also supports a wider assemblage of heathland bird species and associated ecological communities, which contribute to the ecological function and integrity of the site.

3.3 Ecological Function and Sensitivity to Recreational Pressure

- 3.3.1 The ecological integrity of the SPA is underpinned by:

- The availability of suitable nesting habitat (open heathland with low vegetation structure);
- The absence of regular disturbance during the breeding season;
- Maintenance of habitat structure, composition and extent;
- The ability of bird populations to successfully breed and maintain favourable conservation status.

- 3.3.2 Recreational activity affects these ecological functions through several well-established mechanisms:

Disturbance

- 3.3.3 The key pathways through which recreational pressure may adversely affect the qualifying features of the SPA are as follows:

- Presence of people and dogs can cause flushing of birds from nests;
- Increased disturbance leads to reduced breeding success and potential nest abandonment;
- Ground-nesting species are particularly vulnerable due to lack of concealment.

Trampling and Path Creation

- 3.3.4 Increased footfall can lead to trampling and the formation of informal desire lines, resulting in:

- Informal path creation and trampling can lead to habitat degradation;
- Loss of suitable nesting vegetation structure;
- Increased fragmentation of habitat.

Urbanisation Effects

- 3.3.5 Increased access can lead to:

- Littering
- Fire risk
- Introduction of predators (e.g. cats)
- Noise and lighting disturbance

- 3.3.6 These effects are cumulative and contribute to long-term declines in habitat quality and species populations.

3.4 Atmospheric Pollution Sensitivities

- 3.4.1 In addition to recreational disturbance effects, European sites may also be sensitive to atmospheric pollution arising from increased road traffic emissions associated with residential and mixed-use development.
- 3.4.2 Atmospheric emissions associated with vehicle movements include oxides of nitrogen (NO_x), ammonia (NH₃) and nitrogen deposition. These pollutants have the potential to affect sensitive habitats through mechanisms including:
- Nutrient enrichment;
 - Acidification;
 - Changes in vegetation composition;
 - Alteration of soil chemistry; and
 - Indirect effects on habitat structure and ecological function.
- 3.4.3 Such effects are of particular relevance to heathland habitats and associated vegetation communities that support the qualifying bird species of the Thames Basin Heaths SPA.
- 3.4.4 However, atmospheric pollution effects are generally assessed strategically at the plan-making level, where cumulative traffic growth associated with multiple allocations and neighbouring authority growth can be robustly modelled and assessed in combination.
- 3.4.5 The Wokingham Borough Local Plan Update Habitats Regulations Assessment (AECOM, February 2025) includes a strategic assessment of atmospheric pollution effects associated with planned growth across the Borough, including the South Wokingham Strategic Development Location. The assessment considered relevant European sites and concluded that the Local Plan would not result in adverse effects on integrity, either alone or in combination with other plans and projects.

3.5 Conservation Objectives

- 3.5.1 The conservation objectives for the Thames Basin Heaths SPA, as set by Natural England, are to ensure that the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Birds Directive, by maintaining or restoring, as appropriate:
- The extent and distribution of qualifying habitats (including lowland heathland and associated mosaic habitats);
 - The structure and function of those habitats, including vegetation composition, age structure, and spatial configuration required to support breeding birds;

- The supporting ecological processes on which the habitats rely, including disturbance regimes, hydrology, and absence of excessive recreational pressure;
- The population, abundance, and distribution of the qualifying bird species, including their ability to successfully breed and sustain favourable conservation status within the SPA.

3.5.2 In addition, the conservation objectives require the maintenance of supporting ecological processes, including air quality conditions necessary to sustain the qualifying habitats and associated ecological communities of the SPA. Atmospheric pollution, including nitrogen deposition and associated acidification effects, has the potential to alter habitat composition and function where critical thresholds are exceeded.

3.5.3 In this context, the concept of site integrity is critical to the HRA process and is defined as ‘the coherence of the site’s ecological structure and function, across its whole area, that enables it to sustain the habitats and populations of species for which it has been classified’.

3.5.4 For the Thames Basin Heaths SPA, this integrity is particularly dependent on:

- The availability of sufficiently large, undisturbed areas of suitable nesting habitat;
- The maintenance of low levels of disturbance during the breeding season, particularly from people and dogs;
- The ability of qualifying species to complete their breeding cycle successfully; and
- The avoidance of incremental degradation arising from increased recreational pressure and atmospheric pollution effects, both alone and in combination with other development.

3.5.5 Accordingly, any increase in recreational activity which disturbs breeding birds; reduces nesting success; or alters habitat condition or function has the potential to undermine the conservation objectives and adversely affect the integrity of the SPA.

3.5.6 This establishes a clear and direct pathway by which residential development within the Zone of Influence, including the Proposed Development, must be appropriately mitigated in order for the competent authority to lawfully conclude no adverse effect on site integrity

3.6 Key Sensitivities Relevant to the Proposed Development

3.6.1 In the context of the Proposed Development, the following sensitivities are of primary relevance:

- Increased recreational pressure arising from new residents;
- Associated disturbance to qualifying bird species;
- Potential traffic-related atmospheric pollution effects associated with road emissions;
- In-combination effects with other residential development within the SPA catchment and wider growth across neighbouring authorities; and

- Potential for incremental degradation of SPA function if mitigation is not provided.

3.6.2 The proximity of the Site (c. 1.8km) places future residents within a distance where:

- The SPA is accessible for routine recreational visits;
- The development would contribute to the established visitor catchment;
- The effect is recognised, through extensive evidence, as a predictable and measurable impact pathway.

3.7 Summary

3.7.1 The Thames Basin Heaths SPA is a highly sensitive European site, designated for disturbance-sensitive ground-nesting bird species and vulnerable to the effects of recreational pressure and atmospheric pollution arising from residential growth and associated traffic movements within the wider area. In accordance with the Habitats Regulations, Natural England guidance, and Wokingham Borough Council policy framework, net new residential development within the SPA Zone of Influence must be appropriately assessed and, where necessary, mitigated to ensure no adverse effect on the integrity of the SPA, either alone or in combination with other plans and projects.

4 SCREENING FOR LIKELY SIGNIFICANT EFFECTS

4.1 Legislative Context

- 4.1.1 Under Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (as amended), a competent authority must determine whether a plan or project is likely to have a significant effect on a European site, either alone or in combination with other plans and projects. This screening stage must apply the precautionary principle, such that:

Where there is uncertainty, or where a significant effect cannot be excluded on the basis of objective information, the proposal must proceed to Appropriate Assessment.

- 4.1.2 In accordance with established case law (including People Over Wind), mitigation measures cannot be taken into account at the screening stage unless they are clearly embedded as part of the project and there is no doubt as to their effectiveness. In practice, for residential development within the Thames Basin Heaths SPA Zone of Influence, Wokingham Borough Council and Natural England require progression to Appropriate Assessment.

4.2 Screening Assessment - Alone

- 4.2.1 The Proposed Development comprises up to 1,030 net additional residential dwellings, located approximately 1.8km from the Thames Basin Heaths SPA. The Site lies within the established 5km Zone of Influence, within which residential development is known, through a robust evidence base (including visitor surveys and Natural England guidance), to contribute to increased recreational use of the SPA. It is well-established that:

- Residents within this zone regularly visit the SPA for day-to-day recreational activities, particularly walking and dog walking;
- Even small increases in population can lead to measurable increases in visitor numbers;
- Recreational pressure is a key impact pathway affecting the SPA's qualifying features.

- 4.2.2 Given the scale of development proposed, the proximity of the Site to the SPA, and the established functional linkage between residential population and visitor pressure, the Proposed Development would:

- Introduce a substantial new residential population within the SPA catchment;
- Increase the likelihood of additional visits to the SPA;
- Give rise to disturbance effects on qualifying bird species through increased human and dog presence.

- 4.2.3 On the basis of this evidence, and in the absence of mitigation, it cannot be excluded that the Proposed Development would result in likely significant effects on the Thames Basin Heaths SPA.

4.3 Screening Assessment - In-Combination Effects

- 4.3.1 In addition to the effects of the Proposed Development alone, Regulation 63 requires consideration of in-combination effects with other plans and projects.
- 4.3.2 The Site is located within the South Wokingham Strategic Development Location (SDL), which forms part of a wider strategic growth area delivering substantial residential development over the plan period.
- 4.3.3 The ES Addendum identifies a number of committed and proposed residential developments within the locality and wider SPA catchment, including:
- Other phases of the South Wokingham SDL;
 - Additional residential allocations and permissions within Wokingham Borough;
 - Strategic growth across neighbouring authorities within the SPA Zone of Influence.
- 4.3.4 These developments will:
- Contribute cumulatively to increased recreational demand;
 - Result in a combined uplift in visitor numbers to the SPA;
 - Exert additional disturbance pressure on qualifying bird species.
- 4.3.5 In the absence of mitigation, these effects are additive and potentially synergistic, and therefore increase the risk of:
- Reduced breeding success;
 - Habitat degradation;
 - Long-term adverse effects on site integrity.
- 4.3.6 Accordingly, it cannot be excluded that the Proposed Development would result in likely significant effects in combination with other plans and projects.

4.4 Atmospheric Pollution Sensitivities

- 4.4.1 In addition to recreational disturbance effects, European sites may also be sensitive to atmospheric pollution arising from increased road traffic emissions associated with residential and mixed-use development.

- 4.4.2 Atmospheric emissions associated with vehicle movements include oxides of nitrogen (NO_x), ammonia (NH₃) and nitrogen deposition. These pollutants have the potential to affect sensitive habitats through mechanisms including:
- Nutrient enrichment;
 - Acidification;
 - Changes in vegetation composition;
 - Alteration of soil chemistry; and
 - Indirect effects on habitat structure and ecological function.
- 4.4.3 Such effects are of particular relevance to heathland habitats and associated vegetation communities that support the qualifying bird species of the Thames Basin Heaths SPA.
- 4.4.4 However, atmospheric pollution effects are generally assessed strategically at the plan-making level, where cumulative traffic growth associated with multiple allocations and neighbouring authority growth can be robustly modelled and assessed in combination.
- 4.4.5 The Wokingham Borough Local Plan Update Habitats Regulations Assessment (AECOM, February 2025) includes a strategic assessment of atmospheric pollution effects associated with planned growth across the Borough, including the South Wokingham Strategic Development Location. The assessment considered relevant European sites and concluded that the Local Plan would not result in adverse effects on integrity, either alone or in combination with other plans and projects.

4.5 Screening Conclusion

- 4.5.1 Applying the precautionary principle, and having regard to:
- The scale of residential development proposed (up to 1,030 dwellings);
 - The Site's location within 1.8km of the Thames Basin Heaths SPA;
 - Its position within the 5km Zone of Influence;
 - The well-established evidence linking residential development to increased recreational pressure;
 - The strategic assessment of atmospheric pollution effects undertaken through the Wokingham Borough Local Plan Update Habitats Regulations Assessment; and
 - The cumulative context of strategic growth within the SPA catchment; it is concluded that:
- 4.5.2 The Proposed Development is likely to have a significant effect on the Thames Basin Heaths SPA, both alone and in combination with other plans and projects, through increased recreational pressure.

- 4.5.3 Potential atmospheric pollution effects have been considered through the strategic Local Plan HRA evidence base, which concludes that no adverse effects on integrity will arise as a result of atmospheric pollution effects, either alone or in combination.
- 4.5.4 In accordance with Regulation 63, the Proposed Development must therefore proceed to Appropriate Assessment.

5 APPROPRIATE ASSESSMENT

5.1 Mitigation Strategy Overview

5.1.1 The potential for adverse effects on the integrity of the Thames Basin Heaths SPA arising from increased recreational pressure is addressed through a comprehensive and policy-compliant mitigation strategy. This follows the established approach adopted across Wokingham Borough and endorsed by Natural England, comprising the provision of Suitable Alternative Natural Greenspace (SANG) in combination with Strategic Access Management and Monitoring (SAMM).

5.1.2 In summary, the mitigation strategy includes:

- Provision of bespoke on-site SANG of appropriate scale and quality;
- Financial contributions towards the SAMM project;
- Securing delivery and long-term management through a Section 106 Agreement; and
- Phased delivery of SANG in advance of residential occupation.

5.1.3 This approach aligns with the Thames Basin Heaths SPA Delivery Framework and the Council's adopted and emerging planning policy framework, and represents a well-established and effective mechanism for avoiding adverse effects on site integrity.

5.2 SANG Provision

Location and Function

5.2.1 The Proposed Development incorporates a substantial area of on-site SANG, which forms an integral part of the wider green infrastructure network. The SANG is located such that it is directly accessible from the residential areas and is designed to function as the primary destination for day-to-day recreational use by future residents.

5.2.2 The parameter plans and masterplanning work demonstrate that the SANG is embedded within a coherent network of open space, pedestrian routes and landscape features, ensuring strong connectivity and ease of access.

5.2.3 In functional terms, the SANG is intended to provide an attractive, convenient and high-quality alternative to the Thames Basin Heaths SPA. Its role is to intercept routine recreational activity, particularly walking and dog walking, which would otherwise be directed towards the SPA.

Size, Capacity and Strategic Context

- 5.2.4 The SANG provision has been designed to accommodate the full recreational demand arising from the Proposed Development, in accordance with Natural England's established standards and Wokingham Borough Council policy.
- 5.2.5 The Proposed Development comprises up to 1,030 dwellings. Applying an average occupancy rate of 2.4 persons per dwelling generates an estimated population of approximately 2,472 residents. On this basis, the minimum SANG requirement equates to 16.32 hectares (based on 8ha per 1,000 population).
- 5.2.6 The proposed SANG extends to approximately 20.17 hectares, following appropriate exclusions for Public Rights of Way and non-functional areas. This represents a significant quantitative surplus over the minimum policy requirement.
- 5.2.7 In addition to overall area, capacity is influenced by the functional characteristics of the SANG, which in this case include:
- A c.2.5km circular walking route, consistent with Natural England guidance and reflective of typical SPA usage patterns;
 - A diverse mosaic of habitats and open space, allowing dispersal of visitors across the site;
 - Dual access points and car parking provision, increasing accessibility and reducing pressure on any single location; and
 - A layout that supports both formal and informal recreation, including off-lead dog walking.
- 5.2.8 These features ensure that recreational activity is not concentrated but distributed across the SANG, thereby increasing its effective capacity.
- 5.2.9 Furthermore, the SANG does not operate in isolation. It forms part of the wider South Wokingham SDL mitigation framework, which includes multiple SANG sites delivered across the allocation. This network-based approach provides additional strategic capacity, ensuring that recreational demand is managed cumulatively across the wider area.
- 5.2.10 The SANG Management Plan confirms that long-term functionality will be maintained through:
- Active management and maintenance regimes;
 - Monitoring of visitor behaviour and usage patterns; and
 - Adaptive management in response to observed pressures.
- 5.2.11 This ensures that the SANG will continue to operate effectively over time and retain sufficient capacity to meet recreational demand.

- 5.2.12 On this basis, it can be concluded that the proposed SANG provides sufficient capacity, both quantitatively and functionally, to accommodate the recreational needs generated by the Proposed Development.
- 5.2.13 Importantly, the SANG does not operate in isolation, it forms part of the wider South Wokingham Strategic Development Location mitigation framework, which includes multiple SANG sites delivered across the allocation. This distributed approach ensures that recreational demand is appropriately managed at both a site-specific and strategic level, avoiding over-concentration of use and maintaining the effectiveness of the mitigation over time.

Compliance with Natural England Design Criteria

- 5.2.14 The design of the SANG has been informed by Natural England's SANG guidelines and reflects the key characteristics required to ensure functional effectiveness.
- 5.2.15 In particular, the SANG will:
- Provide circular walking routes of sufficient length to support meaningful daily exercise;
 - Offer a semi-natural landscape character, incorporating a mix of habitats and variation in structure;
 - Be easily accessible from the development, with clear and convenient entry points; and
 - Include appropriate infrastructure, such as paths, signage and (where required) parking.
- 5.2.16 The Access and Movement Parameter Plan confirms the integration of pedestrian and cycle connections, Public Rights of Way and internal route networks, ensuring that the SANG is readily accessible and well-connected.
- 5.2.17 The ES Addendum also confirms that the SANG design has been subject to iterative refinement, including updates to layout and planting, to ensure compliance with Natural England's requirements.
- 5.2.18 Overall, the design approach ensures that the SANG will provide a recreational experience that is sufficiently attractive to draw users away from the SPA.

Functional Effectiveness

- 5.2.19 The effectiveness of SANG as a mitigation measure is well established through extensive empirical evidence, including visitor surveys and long-standing application across the Thames Basin Heaths SPA.
- 5.2.20 The proposed SANG is expected to function effectively because it will:

- Be located closer and more convenient to residents than the SPA for routine visits;
 - Provide a comparable recreational experience, particularly for dog walking; and
 - Be available from first occupation, ensuring no unmitigated period of use.
- Capacity

5.2.21 As a result, the SANG will intercept a significant proportion of regular recreational trips that might otherwise be directed to the SPA, thereby reducing visitor pressure and associated disturbance effects.

5.3 Timing and Phasing

5.3.1 The timing of mitigation delivery is critical to ensuring that adverse effects do not arise. The ES Addendum confirms that the delivery of SANG forms the first phase of development, with residential development following thereafter.

5.3.2 This ensures that the SANG will be available and operational prior to first occupation (or in accordance with agreed occupation triggers secured through planning obligations). This approach avoids any temporal lag between the introduction of new residents and the availability of mitigation.

5.4 SAMM Contributions

5.4.1 In addition to SANG provision, the Proposed Development will contribute to the Strategic Access Management and Monitoring (SAMM) project. SAMM provides a coordinated, strategic response to recreational pressure across the SPA through measures such as wardening, visitor management, monitoring and education.

5.4.2 These measures address residual effects that cannot be fully mitigated through SANG alone and provide an important layer of strategic mitigation, particularly in the context of cumulative development across the SPA catchment.

5.5 Securing Mechanisms and Long-Term Management

5.5.1 All mitigation measures will be secured through a Section 106 Agreement, ensuring a high level of certainty in relation to delivery, funding and long-term operation.

5.5.2 The agreement will secure:

- Delivery of SANG prior to occupation;
- Long-term management and maintenance in perpetuity;
- A funding mechanism for ongoing management; and
- Payment of SAMM contributions.

5.5.3 Occupation of the development will be linked to the delivery of mitigation through enforceable triggers, ensuring that no residential units are occupied in advance of appropriate mitigation being in place.

- 5.5.4 This framework provides confidence that the mitigation will be delivered as proposed, maintained over the long term, and remain effective throughout the lifetime of the development.

5.6 Atmospheric Pollution

- 5.6.1 The potential for atmospheric pollution effects associated with the Proposed Development has been considered with reference to the Wokingham Borough Local Plan Update Habitats Regulations Assessment (AECOM, February 2025) and supporting Air Quality Technical Note (Stantec, January 2025).
- 5.6.2 These assessments considered the cumulative effects of planned growth across Wokingham Borough, including the South Wokingham Strategic Development Location, together with growth proposed within neighbouring local authorities. The evidence base included strategic traffic modelling and assessment of atmospheric emissions affecting relevant European sites.
- 5.6.3 The Appropriate Assessment concluded that the Local Plan would not result in adverse effects on the integrity of any Habitats Sites, either alone or in combination with other plans and projects, as a result of atmospheric pollution effects.
- 5.6.4 The Proposed Development forms part of the strategic growth scenario assessed through the Local Plan evidence base and does not introduce additional forms of impact beyond those already considered.
- 5.6.5 Natural England has confirmed agreement with the conclusions of the air quality assessments and HRA through the Statement of Common Ground prepared as part of the Local Plan examination process.
- 5.6.6 Accordingly, it can be concluded that the Proposed Development will not result in adverse effects on the integrity of any European site as a result of atmospheric pollution effects, either alone or in combination with other plans and projects.

5.7 Appropriate Assessment Conclusion

- 5.7.1 The Proposed Development has the potential to give rise to increased recreational pressure on the Thames Basin Heaths SPA and to contribute to traffic-related atmospheric pollution effects associated with road transport emissions. However, these effects are appropriately addressed through a combination of established mitigation measures and the strategic evidence base prepared in support of the Wokingham Borough Local Plan Update.
- 5.7.2 Recreational impacts are avoided and effectively managed through the combination of:
- Bespoke SANG of appropriate scale, design and accessibility;
 - Delivery of SANG in advance of occupation;

- Long-term management secured in perpetuity; and
- Strategic SAMM contributions.

- 5.7.3 Potential atmospheric pollution effects have been assessed strategically through the Wokingham Borough Local Plan Update Habitats Regulations Assessment (AECOM, February 2025) and associated Air Quality Technical Note (Stantec, January 2025), which considered the cumulative effects of planned growth across Wokingham Borough and neighbouring authorities.
- 5.7.4 The assessment concluded that the Local Plan would not result in adverse effects on the integrity of any Habitats Sites, either alone or in combination with other plans and projects, as a result of atmospheric pollution effects. The Proposed Development forms part of the strategic growth assumptions underpinning that assessment.
- 5.7.5 Natural England has confirmed agreement with the conclusions of the air quality assessments and Habitats Regulations Assessment through the Statement of Common Ground prepared as part of the Local Plan examination process.
- 5.7.6 Accordingly, it can be concluded that the Proposed Development will not result in an adverse effect on the integrity of the Thames Basin Heaths SPA, or any other relevant European site, either alone or in combination with other plans and projects. This conclusion is reached beyond reasonable scientific doubt and in accordance with the requirements of the Habitats Regulations.

6 IN-COMBINATION EFFECTS

- 6.1 The Proposed Development does not occur in isolation, but forms part of the wider South Wokingham Strategic Development Location (SDL), which is identified through the development plan as a key area for residential-led growth. The SDL, together with other committed and planned development across Wokingham Borough and neighbouring authorities, will deliver a substantial quantum of new housing within the Thames Basin Heaths SPA Zone of Influence.
- 6.2 In this context, Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (as amended) requires the competent authority to consider whether the Proposed Development, in combination with other plans and projects, would adversely affect the integrity of the Thames Basin Heaths SPA or any other relevant European site.
- 6.3 The Environmental Statement Addendum identifies a range of committed and reasonably foreseeable developments within the local area and wider SPA catchment, including multiple phases of the South Wokingham SDL and other residential schemes across Wokingham Borough and neighbouring local authorities. Collectively, these developments have the potential to give rise to cumulative effects associated with both recreational pressure and traffic-related atmospheric emissions affecting European sites.
- 6.4 In relation to recreational effects, residential development within the SPA catchment contributes cumulatively to increased visitor activity at the Thames Basin Heaths SPA. Such effects are inherently additive in nature. Individual developments may generate relatively modest increases in visitor numbers; however, when considered collectively, they result in a measurable uplift in recreational activity, with the potential to increase disturbance pressure on the SPA's qualifying bird species. This includes:
- Increased frequency of recreational visits;
 - Greater spatial distribution of access across SPA components;
 - Increased levels of dog walking activity; and
 - Intensification of disturbance during sensitive breeding periods.
- 6.5 The strategic response to these cumulative recreational effects is embedded within Wokingham Borough Council's established mitigation framework and is underpinned by a comprehensive evidence base. This provides a coordinated approach to mitigation through the combined delivery of Suitable Alternative Natural Greenspace (SANG) and Strategic Access Management and Monitoring (SAMM). Within this framework:
- SANG provision is planned and delivered at both site-specific and strategic scales, ensuring that sufficient alternative recreational space is available to accommodate the needs of new residents arising from multiple developments;

- SAMM operates at the SPA-wide level, providing coordinated management, monitoring and visitor engagement measures to address residual and cumulative effects; and
 - The overall approach is secured through planning obligations, ensuring consistency of delivery and long-term effectiveness.
- 6.6 The SANG associated with the Proposed Development forms part of this wider strategic network and contributes to the overall mitigation capacity available within the South Wokingham SDL and Wokingham Borough as a whole. As set out in Section 4, the SANG is of appropriate scale, design and accessibility to function effectively as mitigation for the Proposed Development, while also contributing to the wider distribution of recreational pressure across the strategic SANG network.
- 6.7 Similarly, the requirement for SAMM contributions ensures that the Proposed Development contributes proportionately towards the strategic management and monitoring of the SPA alongside other developments within the catchment.
- 6.8 In relation to atmospheric pollution, the potential for in-combination effects associated with road traffic emissions has been assessed strategically through the Wokingham Borough Local Plan Update Habitats Regulations Assessment (AECOM, February 2025) and associated Air Quality Technical Note (Stantec, January 2025).
- 6.9 These assessments considered cumulative traffic growth associated with planned development across Wokingham Borough, including the South Wokingham SDL, together with growth proposed within neighbouring authorities. The assessments included strategic traffic modelling and air quality analysis undertaken in accordance with relevant guidance and best practice.
- 6.10 The Appropriate Assessment prepared in support of the Local Plan concluded that the planned growth strategy would not result in adverse effects on the integrity of any Habitats Sites arising from atmospheric pollution effects, either alone or in combination with other plans and projects.
- 6.11 Importantly, the Proposed Development forms part of the strategic growth assumptions underpinning that assessment. No additional or materially different atmospheric pollution effects arise beyond those already assessed through the Local Plan evidence base.
- 6.12 Furthermore, the Statement of Common Ground between Wokingham Borough Council and Natural England prepared as part of the Local Plan examination process confirms Natural England's agreement with the conclusions of the air quality assessment work and associated Habitats Regulations Assessment conclusions.

- 6.13 On the basis of the established strategic mitigation framework for recreational effects, together with the conclusions of the Wokingham Borough Local Plan Update Habitats Regulations Assessment in relation to atmospheric pollution, it can be concluded that the **Proposed Development will not give rise to adverse in-combination effects on the integrity of the Thames Basin Heaths SPA, or any other relevant European site.**

7 INTEGRITY TEST AND CONCLUSION

- 7.1 The Habitats Regulations require the competent authority to determine whether the Proposed Development, either alone or in combination with other plans and projects, would adversely affect the integrity of the Thames Basin Heaths SPA.
- 7.2 As set out in Section 3, the integrity of the SPA is defined by the coherence of its ecological structure and function, which enables it to sustain the habitats and populations of species for which it is designated. In practical terms, this is dependent on:
- The maintenance of viable populations of the qualifying bird species;
 - The availability and quality of suitable, undisturbed nesting and foraging habitat; and
 - The avoidance of increased disturbance pressure that could affect breeding success and long-term population stability.
- 7.3 The Appropriate Assessment has identified that, in the absence of mitigation, the Proposed Development would have the potential to give rise to increased recreational pressure on the SPA, resulting in disturbance effects on qualifying species. However, the assessment has also demonstrated that this impact pathway is fully addressed through a robust and policy-compliant mitigation strategy.
- 7.4 In particular, the Proposed Development:
- Provides bespoke SANG of sufficient scale, design quality and accessibility to function as an effective alternative recreational resource;
 - Ensures that SANG is delivered and operational prior to residential occupation, thereby avoiding any temporal gap in mitigation;
 - Secures the long-term management and maintenance of the SANG in perpetuity through legally enforceable mechanisms; and
 - Contributes to the strategic SAMM programme, ensuring that residual and cumulative effects are addressed at the SPA-wide level.
- 7.5 The mitigation measures are well-established, evidence-based and have been successfully implemented across the Thames Basin Heaths SPA in response to comparable development proposals. Importantly, they are secured through a Section 106 Agreement, providing a high degree of certainty in relation to their delivery, effectiveness and longevity.
- 7.6 In reaching a conclusion under Regulation 63, the competent authority must be satisfied, beyond reasonable scientific doubt, that no adverse effect on site integrity will occur having regard to:
- The scale and nature of the Proposed Development;
 - The identified recreational impact pathway;

- The effectiveness of SANG as an avoidance measure;
- The role of SAMM in addressing residual and cumulative effects; and
- The certainty of mitigation delivery and long-term management.

- 7.7 On the basis of the assessment presented within this Shadow Habitats Regulations Assessment, it is concluded that the Proposed Development will not result in an adverse effect on the integrity of the Thames Basin Heaths SPA, or any other relevant European site, either alone or in combination with other plans and projects. This conclusion applies in relation to both Recreational disturbance effects; and Atmospheric pollution effects associated with road traffic emissions.
- 7.8 The conclusion is reached beyond reasonable scientific doubt, having regard to the established SANG and SAMM mitigation framework, together with the conclusions of the Wokingham Borough Local Plan Update Habitats Regulations Assessment (AECOM, February 2025), supporting Air Quality Technical Note, and agreement from Natural England through the Local Plan examination process.