

Wiltshire Housing Site Allocations Plan
Final Document
Assessment under the Habitats Regulations

February 2020
Wiltshire Council

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Non-Technical Summary

A Habitats Regulations Assessment (HRA) of the Wiltshire Housing Site Allocations Plan has been carried out by Wiltshire Council in accordance with the provisions of Regulation 63 and 105 of the Habitats Regulations 2017. The HRA has been carried out iteratively alongside the development of the plan itself. The steps of the HRA process culminating in this final version of the HRA, have been as follows:

1. Settlement level screening assessment; this was carried out at Stage 3 of the site selection process to inform the sustainability appraisal. This was carried out at a settlement level, rather than individual sites to identify locations where HRA issues were likely to be a significant constraint to growth.
2. Policy Level Screening Assessment: this was carried out at Stages 4 and 6 of the site selection process. Individual policies were screened for likely significant effects alone and in-combination to establish the scope of the appropriate assessment. The application of established mitigation measures was also considered at this stage.
3. Appropriate Assessment: this was carried out at Stages 4 and 6 of the site selection process. The effects of the plan as a whole on the integrity of relevant individual Natura 2000 sites (alone and in-combination) was considered and the need for any additional / updated mitigation measures such as policy caveats and mitigation strategies.
4. Addendum to the HRA dated 4 May 2018: this was prepared to support the Council's Schedule of Proposed Changes
5. Minor Factual Update dated September 2018: this was the Addendum with minor factual changes to support the Council's Schedule of proposed Changes
6. Amended Addendum dated 5 September 2019: this was the Minor Factual Update with further changes to support the Council's Further Main Modifications.
7. Appropriate Assessment (Final) dated February 2020: this is the current document taking into consideration all the above changes made to the plan as a result of the Examination in Public following the first Appropriate Assessment dated 21 June 2017.

The HRA identified the following likely significant effects of the plan that were subject to appropriate assessment.

Salisbury Plain SPA – Recreational Pressure

Allocations at Warminster, Market Lavington, Bratton, Ludgershall and Durrington lie within the visitor catchment of the SPA and will all contribute to increased recreational pressure on Salisbury Plain SPA, particularly when considered in combination with other planned growth and projects such as the Army Basing Programme (ABP). The Council has an existing Salisbury Plain Mitigation Strategy which deals with this issue and was agreed with Natural England in 2012. New evidence indicates that recreational pressure from projected growth up to 2026 would be higher than was originally expected in 2012. However, it is considered that the general approach to mitigation remains effective and that the existing strategy can accommodate any potential uplift in growth during the plan period. As such it can be concluded that the plan would not have an adverse effect on the

integrity of the SPA. It is nonetheless recommended that the Salisbury Plain Mitigation Strategy be updated in light of new evidence and changes to projected growth in the visitor catchment of the SPA.

River Avon SAC – Phosphate

Certain stretches of the River Avon SAC¹ are particularly sensitive to increasing levels of phosphate as a result of both diffuse sources e.g. agriculture, and point sources e.g. sewage treatment plants (STWs). As a consequence several stretches of the SAC are in unfavourable condition and the river is currently failing its conservation targets. Development has the potential to exacerbate this situation and the Council, Natural England and the Environment Agency, have therefore jointly produced a Nutrient Management Plan (NMP), in order to demonstrate how levels of growth proposed by the Core Strategy can be delivered without compromising the conservation targets in the long term.

Modelling undertaken to support this housing allocations document demonstrates that housing delivery has exceeded growth anticipated in the NMP and this is further increased by the proposed allocations at Warminster, Salisbury and Durrington. Further refinement of the model is required in order to identify the implications for the NMP targets in specific stretches of the river but the Lower Avon sub-catchment is anticipated to be particularly vulnerable due to its position at the bottom of the catchment. Mitigation options are available and the Council is working with Natural England and the Environment Agency to develop these as part of an Annex to the NMP. Development will be required to be in accordance with this document which will be finalised before further allocations are approved. It can therefore be concluded that the plan will not compromise the delivery of the NMP targets and that it will not have an adverse effect on the integrity of the SAC through increasing phosphate inputs subject to the effective implementation of the NMP.

River Avon SAC - Abstraction

Certain stretches of the River Avon SAC catchment are particularly sensitive to increasing levels of abstraction. Effects of allocations at Durrington could be significant, particularly when considered in combination with the effects of the Army Basing Programme. It is understood that a review of military and public water abstractions in this area is due to be carried out by the end of 2019, and that abstraction limits are likely to be tightened as a result. If this occurs, it is unlikely Wessex Water would be able to supply the proposed development as an infrastructure solution would probably be implemented during the period 2021-25². It may therefore be concluded that the plan would not have an adverse effect on the integrity of the SAC through increased water abstraction. However it is recommended that the potential need for infrastructure improvements should be recognised in the supporting text to policies H3.5, H3.6 and H3.7.

Bath and Bradford on Avon Bats SAC - Habitat Loss / Deterioration

¹ Please note this relates to the Hampshire Avon catchment in the south of the county, rather than the Bristol Avon catchment in the north of the county

² Most likely to involve an extension to Wessex Water's integrated grid to import water from Amesbury implemented as part of AMP7

Several of the allocations at Trowbridge are within areas likely to be used by bat species which are features of this SAC. The allocations are likely to contain habitat features used by these species and development could lead to their deterioration through physical loss as well as lack of or inappropriate habitat management and higher ambient light levels. These effects become more significant when the effects of the plan are considered as a whole due to the potential for significant loss and deterioration at a landscape scale. It is recommended that the need to protect important habitat features is expressly stated in the relevant policies (H2.1, H2.2, H2.4, H2.5, and H2.6). The Council will also need to develop and implement a Trowbridge Recreation Management Mitigation Strategy before development comes forward to address the residual uncertainty, particularly due to effects of growth at a landscape scale. It may be concluded that the plan would not have an adverse effect on the integrity of the SAC through habitat loss / deterioration, subject to the implementation of these mitigation measures.

Bath and Bradford on Avon Bats SAC – Recreational Pressure

Recent evidence has shown that housing expansion on the eastern edge of Trowbridge is generating increased visitor pressure at ancient woodlands which support an important colony of Bechstein's bats associated with the SAC. Further allocations at the town could exacerbate this, particularly when considered in combination with planned growth such as the Ashton Park Urban Extension. The options closest to the woodlands, and therefore most likely to contribute to the number of visits, have been removed from the plan and the Council is currently preparing a Trowbridge Recreation Management Mitigation Strategy to address any residual effects in relation to this issue. It is therefore concluded that the plan would not have an adverse effect upon the SAC through increased recreational pressure, subject to the implementation of that mitigation strategy.

Introduction

Purpose of the Assessment

As the Local Planning Authority for Wiltshire, the Council is also a competent authority with legal responsibility to undertake Habitats Regulations Assessments (HRA) of any plans or projects which it intends to adopt or consent which may impact on the Natura 2000 network of sites.

The following assessment has been made by the Council to fulfil its statutory obligations under the Habitats Regulations and demonstrate that the Wiltshire Housing Site Allocations Plan (WHSAP) would not have an adverse effect on the integrity of the Natura 2000 network either alone, or in combination with other plans and projects. This assessment is based on the best available scientific knowledge at the time of writing.

The earlier version of the appropriate assessment and various addendum documents were intended to inform the examination of the draft plan by the Secretary of State, particularly to provide the Inspector with all the necessary evidence to demonstrate the Council had adequately fulfilled its statutory duties and the plan was sound in that respect. It was also presented as part of the public consultation on the draft plan in order that statutory consultees and all interested parties could make representations on the effects of the plan as proposed. This final version of the appropriate assessment has been prepared so that the Council itself can be satisfied that the plan would not have an adverse effect upon the Natura 2000 network before the WHSAP is adopted.

The Plan

The subject of this HRA is the Wiltshire Housing Site Allocations Plan, referred to hereafter as 'the plan' or WHSAP. The objectives of The Plan are:

- Objective 1: To ensure there is a clear and accurate definition to the extent of the built up areas at principal settlements, market towns, local service centres and large villages
- Objective 2: To help demonstrate a rolling five year supply of deliverable land for housing development - a duty on each Local Planning Authority required by the National Planning Policy Framework
- Objective 3: To allocate sites in settlements which support the Wiltshire Core Strategy and thereby promote sustainable development of the County

The Plan comprises policies for the allocation of land for housing development. It does not include allocations for other forms of development and does not include policies for the general control of development. Each policy includes:

- A red line boundary which defines the extent of the developable area
- An approximate housing number
- Constraints to the development to be addressed during the planning application process
- Contributions which the development must deliver e.g. infrastructure

It is worth noting that the policies themselves do not grant consent for development; rather they provide policy support for housing delivery at the sites allocated. All sites will be subject to planning applications and require further approvals and detailed assessment before they can be developed. Some aspects of the development such as layout are therefore not specified by the plan but will be determined through the planning application process. The final housing number approved for each site may also vary from the approximate number stated in the policy once the constraints to the site are fully understood, however for the purposes of this assessment the stated approximate housing number for each site has been used.

Structure of the Document

The document is broadly structured in the following sections:

- Methodology
- Settlement Level Screening Assessment
- Policy Level Screening Assessment
- Appropriate Assessment

A summary of the effects considered, and the conclusions of the assessment process are provided at the end of each section.

The appropriate assessment forms the main body of the document and has subsections for each likely significant effect on a designated site. Each of these subsections sets out:

- The information used to support the assessment
- Effects of the plan alone
- Effects of the plan in combination with other plans and projects
- Mitigation Measures
- Conclusions on the integrity test
- Recommendations

The assessments cross-reference many external documents; where these are publicly available web links have been provided, others may be available on request.

Methodology

Legislative Background

Articles 3 and 4 of the European Habitats Directive require member states to identify and designate a series of Special Areas of Conservation (SACs) which are of Community Importance for the conservation of specified natural habitats (Annex I) and species (Annex II). Together with Special Protection Areas (SPAs) classified by the member states under the Birds Directive, this network of sites makes up the Natura 2000 network. In the UK the network is identified and selected by the Joint Nature Conservancy Council³.

The Habitats Regulations (2010) transpose the requirements of the European Habitats Directive into UK law. As Local Planning Authority, the Council is a 'competent authority' for the purposes of Regulation 7 of the Habitats Regulations and must carry out an 'appropriate assessment' of any plan which would have likely significant effects upon a 'European site' (which forms part of the Natura 2000 network) before it can be adopted. The Regulations transpose the requirements of Article 6 of the Directive, with general assessment provisions set out in Regulation 63, while the assessment of local development plans is dealt with specifically at Regulation 105. In carrying out an appropriate assessment, the competent authority must consult and have regard to any representations made by the appropriate 'nature conservation body' which for Wiltshire, is Natural England.

The purpose of Article 6 is to prevent the deterioration of the Natura 2000 network as a result of plans or projects approved by the member states. Both the Directive and the Regulations make it clear that a plan which would have an adverse effect upon the network may not normally be consented unless very strict criteria in relation to alternatives and public interest are met (Regulations 64 and 107). The purpose of an appropriate assessment is therefore to establish whether a plan would have no adverse effects and may be permitted, or where adverse effects cannot be ruled out, whether the strict derogation criteria can be applied.

Guidance

Neither the Directive nor the Regulations prescribe a specific process or procedure for an appropriate assessment and in that respect the competent authority has a degree of discretion as to how they carry out the assessment^{4,5,6}. However, a significant body of domestic case law and rulings by the European Court of Justice has provided clarity on the legal parameters within which the process must be carried out.

The Government published Planning Practice Guidance on Appropriate Assessment⁷ on 22 July 2019 which updates all previous guidance on Appropriate Assessment and encompasses the requirements established by caselaw to date.

³ <http://jncc.defra.gov.uk/page-4>

⁴ *Mynydd Y Gwynt Ltd, R v SoS for Business, Energy and Industrial Strategy* [2016] EWHC 2581 (Admin)

⁵ *No Adastral New Town Ltd (NANT) v Suffolk Coastal District Council* [2015] EWCA Civ 88

⁶ *R (Champion) v North Norfolk District Council* [2015] UKSC 52

⁷ <https://www.gov.uk/guidance/appropriate-assessment>

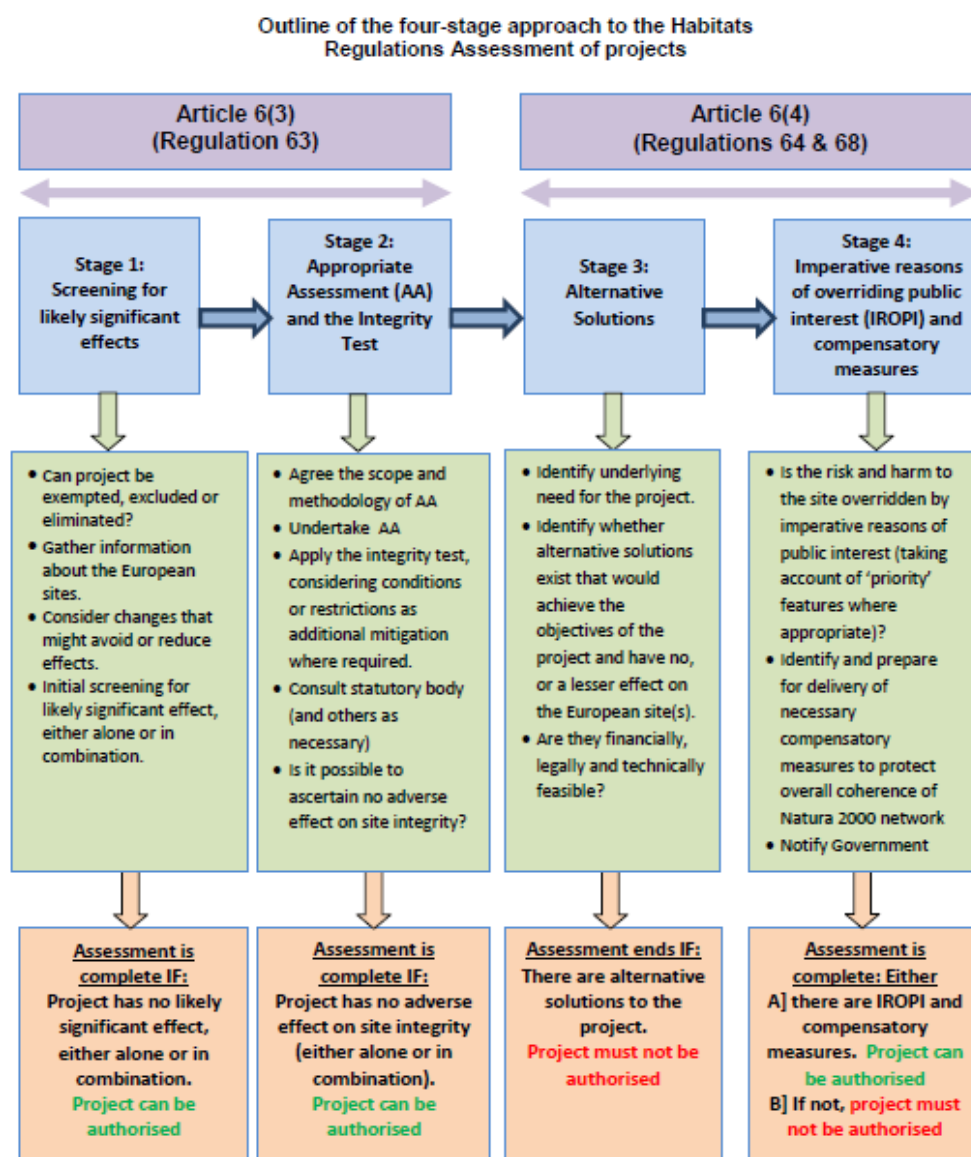
DTA Publications publishes comprehensive online guidance for the HRA of plans and projects⁸. This was developed in consultation with the relevant nature conservation bodies and legal experts and is kept up to date to reflect the latest court rulings of relevance. It is widely accepted by planning and ecological professionals as the authoritative guidance on the assessment of plans and projects under the Habitats Regulations.

The Council has had regard to the DTA guidance, government advice and relevant case law in carrying out this assessment.

⁸ <http://www.dtapublications.co.uk/>

Plan Level Assessment Process

In the UK, it is normal practice to carry out HRA of plans in four stages, as shown in Figure 1 below.



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Figure 1 – Four Stages in the HRA of Plans

This assessment deals with Stages 1 and 2 only. Stages 3 and 4 are rarely required and beyond the scope of this assessment.

Screening Assessment

The Purpose of Screening

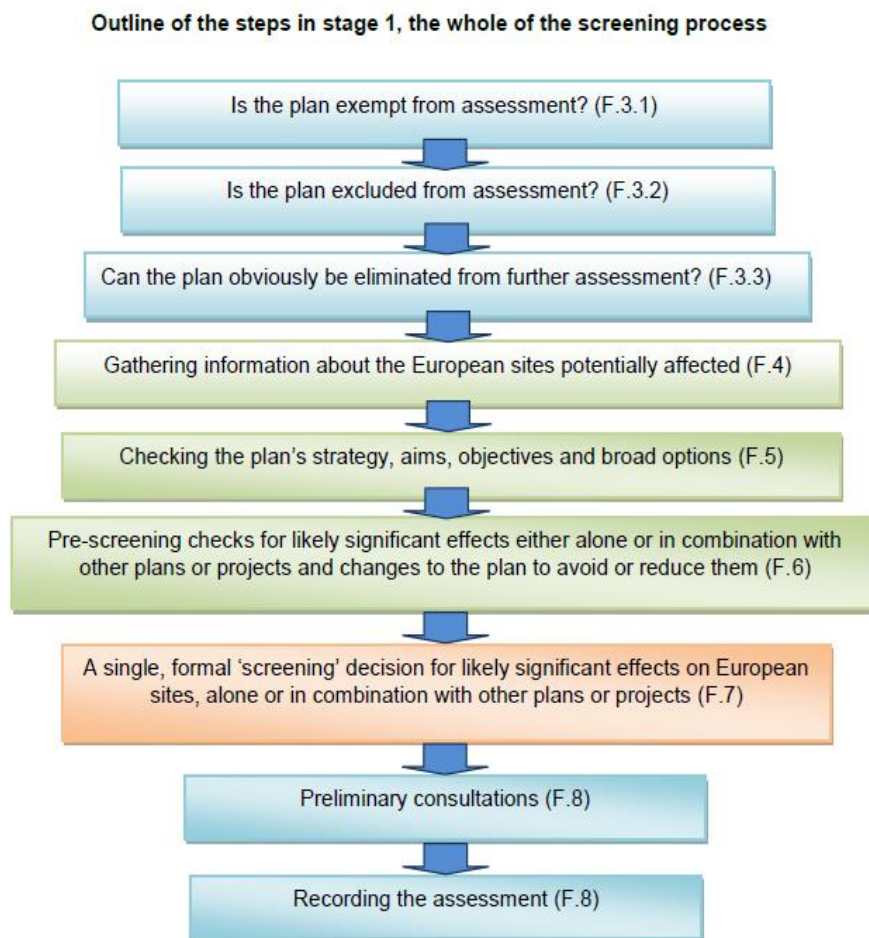
The term 'screening' is not used in the Habitats Regulations however it is typically applied at the beginning of the HRA process to:

- Establish whether the plan requires an appropriate assessment
- Identify parts of the plan which would not have any likely significant effects (LSE), and can therefore be screened out of the appropriate assessment
- Identify those parts of the plan which would have LSE, and thereby focus the scope of the appropriate assessment

Figure 2 summarises the sequence of considerations at the screening stage. Note that the DPD is a 'land use plan' for the purposes of Regulation 102, as defined in Regulation 107(1)(c); it therefore cannot be exempted, excluded or eliminated from the HRA process.

It is worth noting that for the purposes of screening, the term 'likely significant effect' requires some clarification. As Advocate General Sharpson explained in *Sweetman*⁹, with regards to the term 'likely' there need only be a *possibility* of there being a significant effect on the site to generate the need for an appropriate assessment. Also, the requirement that the effect in question be 'significant' exists in order to lay down a *de minimis* threshold. The threshold at which appropriate assessment is needed is thus a very low one and operates merely as a trigger; the screening assessment for this plan has been made on the basis of this interpretation.

⁹ *Sweetman v An Bord Pleanala (C-258-11)* AG Opinion (Para.46-50)



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Figure 2 – Summary of the Stage 1 Screening Process

Gathering Information about the European Sites

<p>The plan has been initially screened for effects on all European sites within 15km of the administrative boundary of Wiltshire, as was agreed with Natural England for the Core Strategy HRA. The full list of sites included in the screening assessment is shown in Table 1 below. Sites Partially or Entirely within Wiltshire</p> <ul style="list-style-type: none"> • Porton Down SPA 	<p>Within 15km of Wiltshire</p> <ul style="list-style-type: none"> • New Forest SPA
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<ul style="list-style-type: none"> • Salisbury Plain SPA • Bath & Bradford on Avon Bats SAC • Chilmark Quarries SAC • Great Yews SAC • Kennet & Lambourn Floodplain SAC • New Forest SAC • North Meadow and Clattinger Farm SAC • Pewsey Downs SAC • Prescombe Down SAC • River Avon SAC • Salisbury Plain SAC 	<ul style="list-style-type: none"> • Dorset Heathlands SPA • Solent & Southampton Water SPA • Avon Valley SPA • Avon Valley SAC • Cotswolds Beechwood SAC • Dorset Heathlands SAC • Emer Bog SAC • Fontmell and Melbury Downs SAC • Hackpen Hill SAC • Kennet Valley Alderwoods SAC • Mells Valley SAC • Mendip Woodlands SAC • Mottisfont Bats SAC • River Lambourn SAC • Rodborough Common • Solent Maritime SAC
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Table 1 – List of European Sites Screened for LSE

Information on the sites was gathered through the JNCC and Natural England websites, which generally includes a list of qualifying features, conservation objectives, Supplementary Advice on the Conservation Objectives, Site Improvement Plan and condition assessments for each site.

Sites Screened Out

A number of Natura 2000 sites have been screened out of the HRA process at an early stage as development in Wiltshire would not have any LSE on them, based on the information gathered for the sites:

- Great Yews SAC – threats / pressures are non-development related and include deer browsing and nitrogen deposition (non-vehicular)
- Pewsey Downs SAC – threats / pressures are non-development related and include habitat fragmentation, over grazing and nitrogen deposition (non-vehicular)
- Prescombe Down SAC – threats / pressures are non-development related and include changes in species distribution and nitrogen deposition (non-vehicular)
- Dorset Heathlands SAC / SPA – a large number of threats / pressures have been identified, the majority of which are not development related. Some pressures including public access and arson are known to be influenced by development, however any significant effects are understood to occur within 5km of the sites¹⁰ (outside the administrative area of Wiltshire)
- Avon Valley SAC / SPA – the majority of threats / pressures to the interest features are not development related. Public access / disturbance is a pressure to Bewick's Swan, however the visitor catchment for the site is believed to be localised and outside of the administrative area of Wiltshire

¹⁰ The Dorset Heathlands Planning Framework 2020-2025 SPD, Consultation Draft 3 January 2020

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- Emer Bog SAC – the only relevant threat/ pressure to the site relates to public access / disturbance to the wet mire communities. However, the visitor catchment for the site is believed to be localised and outside of the administrative area of Wiltshire
 - Rodborough Common SAC - the only relevant threat/ pressure to the site relates to public access / disturbance to the limestone grassland communities. However, the visitor catchment for the site is believed to be localised and outside of the administrative area of Wiltshire
 - Hackpen Hill SAC – currently no identified threats to this site
 - Fontmell and Melbury Downs SAC - threats / pressures are non-development related and include changes in species distribution and nitrogen deposition (non-vehicular)
 - Kennet Valley Alderwoods SAC – inappropriate water levels are a threat at this site, however this relates to channel modifications rather than water abstraction issues
 - Mells Valley SAC – the majority of threats / pressures are non-development related. Public access and arson of the underground mines are a threat, however the visitor catchment for the site is believed to be localised and outside of the administrative area of Wiltshire
 - Cotswold Beechwoods SAC - the majority of threats / pressures are non-development related. While, public access and disturbance are a threat to the woodlands, the visitor catchment for the site is believed to be localised and outside of the administrative area of Wiltshire
 - Mendip Woodlands SAC - threats / pressures are non-development related and include deer browsing, off road vehicles, disease and nitrogen deposition (non-vehicular)
 - Mottisfont Bats SAC - threats / pressures are non-development related and include woodland management, uncertainty about the barbastelle population, and availability of offsite habitat
 - Solent & Southampton water SPA and Solent Maritime SAC – Public access and disturbance is one threat of many to these two sites. Relevant local authorities contribute to an access management and awareness programme. The visitor catchment is believed to be outside the administrative area of Wiltshire
 - Salisbury Plain SAC – threats / pressures are non-development related and include changes in species distribution due to management and nitrogen deposition (non-vehicular)

Screening Criteria

The plan has been screened for the same broad LSEs as the Core Strategy HRA (recreational pressure, water resources, water quality, habitat loss / damage, nitrogen deposition); LSE have been identified using distance criteria based on the proximity of allocations to European sites. However, it is worth noting that for the purposes of this assessment, the screening criteria have been refined in light of best available scientific evidence, local knowledge and the Council's experience of carrying out HRAs in the local area. One additional criterion has been included due to new evidence of visual disturbance effects on stone-curlew caused by built development. Evidence which supports the screening criteria is summarised in the [Settlement Level Screening Assessment \(Stage 3\)](#), where relevant. The refined screening criteria used for this assessment are shown in Table 2 below.

LSE criteria	Justification	Methodology
R1 - Recreation	Visitor access studies have shown that 75% of regular visits to Salisbury Plain SPA originate from within 6.4km ¹¹	Identify locations within a 6.4km radius Salisbury Plain SAC/SPA
R2 - Recreation	Visitor access studies have shown that the majority of regular visits to the New Forest SAC/SPA originate from within 8km ¹²	Identify locations within a 8km radius around the SAC/SPA
R3 - Recreation	Increased public access to the core roosts in woodland associated with the Bath and Bradford on Avon Bats and Chilmark Quarries SACs could result in deterioration of foraging habitats (woodland) and damage or vandalism of the roost structures. Sites closest to the roost will have the <u>most acute impact</u> on the core roosts. Visitor surveys at Trowbridge ¹³ demonstrate that residents within 600m of woodlands make the most regular use of them for recreation.	Identify locations within a 600m radius of publicly accessible core roosts associated with the Bath and Bradford on Avon Bats and Chilmark Quarries SACs
R4 - Recreation	Increased public access to the core roosts in woodland associated with the Bath and Bradford on Avon Bats SAC could result in deterioration of foraging habitats (woodland) and damage or vandalism of the roost structures <u>in-combination</u> . Available evidence indicates that 75% of regular visits to Green Lane Wood and Pickett & Clanger Woods originate from within 2.66km and 3.36 km ¹⁴ . More generally, woodlands in Wiltshire typically have a two mile visitor catchment (75 th percentile) ¹⁵ .	For Trowbridge, identify locations within 2.66km and 3.36 km of Green Lane Wood and Pickett & Clanger Woods respectively. For other settlements, identify locations lying within 3.2 km of publicly accessible core roosts as identified in the Wiltshire Bat SAC Guidance ¹⁶ .
R5 - Recreation	During 2019, Natural England advised that increased recreation pressure at North Meadow and Clattinger Farm SAC is negatively affecting the SAC features and the scope for improvements in	Identify locations within 15km of North Meadow and Clattinger farm SAC

¹¹ Panter, C. & Liley, D. (2015). Salisbury Plain Visitor Survey 2015. Unpublished report by Footprint Ecology for Wiltshire Council.

¹² Sharpe, J., Lowen, J. & Liley, D. (2008). Changing patterns of visitor numbers within the New Forest National Park, with particular reference to the New Forest SPA. Unpublished report by Footprint Ecology for the New Forest National Park Authority, New Forest District Council, Natural England and Forestry Commission.

¹³ Panter C., Lake S. & Liley D. (2018). Trowbridge Visitor Survey and Recreation Management Strategy. Unpublished Report by Footprint Ecology for Wiltshire Council.

¹⁴ Ditto note 13

¹⁵ Ditto note 11 Please note that this is based on a literature review, recent experience of the effects of new development, discussions with Natural England and professional judgement. This represents the best available evidence at the current time.

¹⁶ Bat Special Areas of Conservation (SAC) Planning Guidance for Wiltshire. Issue 3.0 10 September 2015
http://www.wiltshire.gov.uk/bath_and_bradford_on_avon_september_2015_bat_sac_guidance.pdf

LSE criteria	Justification	Methodology
	visitor management is minimal. No visitor survey information available to identify distance within which 75% of visitors originate.	
B1 - Buildings	Buildings within 1.5km of stone-curlew nesting sites could displace the birds (likely to be associated with Salisbury Plain and Porton Down SPAs) ¹⁷	Identify locations within a 1.5km radius around known stone-curlew nest records
H1 – Habitats	Physical damage to supporting habitats for bats and/or interruption of flight lines etc. Proposed allocations could give rise to issues for the Bath and Bradford on Avon Bats and Chilmark Quarries SACs	Identify locations within the Bath and Bradford on Avon Bats SAC and Chilmark Quarries SAC Core Areas, as shown on Wiltshire Council’s guidance document ¹⁸
H2 - Habitats	Development in close proximity to the River Avon SAC could result in damage / degradation to habitats during the construction phase and increased pollution from urban runoff in the long-term.	Identify locations within a 20m radius of the River Avon SAC ¹⁹
W1 – Water resources	Development within the catchment of the River Avon SAC could compromise the delivery of the water quantity and flow regime targets for the River Avon SAC.	Identify locations within the River Avon SAC catchment .
W2 – Water resources	Low flows have previously been recorded on the Upper Kennet which could affect the downstream Kennet and Lambourne Floodplain SAC and River Lambourne SAC and could be exacerbated by development in the catchment.	Identify locations within the River Kennet catchment
P1 – Phosphate	Development within the River Avon SAC catchment could compromise the delivery of the phosphate target for the River Avon SAC. Development at settlements lacking sewage infrastructure will also require full HRA.	Identify locations within the River Avon SAC catchment

Table 2 – Refined Screening Criteria

The approach taken to identifying LSE from nitrogen deposition in the Core Strategy HRA was to identify all European sites within 200m of a main road, the justification for which can be found in the government’s DMRB guidance²⁰. Therefore, unlike other LSE’s, this is not triggered by distance

¹⁷ Clarke, R., & Liley, D. (2013). Further assessments of the relationship between buildings and stone-curlew distribution. Unpublished report by Footprint Ecology for Breckland Council.

¹⁸ http://www.wiltshire.gov.uk/bath_and_bradford_on_avon_september_2015_bat_sac_guidance.pdf

¹⁹ Habitats Regulations Assessments for projects potentially affecting the River Avon Special Area of Conservation: Procedure for Wiltshire’s Development Management Teams

²⁰ Design Manual for Roads and Bridges <http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol11/section4.htm>

criteria relating to the proximity of a development proposal's location to a European site. Although no distance criteria are available, likely significant effects of nitrogen deposition are still considered in the screening assessment.

In-Combination Effects

The in-combination assessment at the screening stage includes consideration of how the effects of individual policies on a European site may act cumulatively such that the plan as a whole would result in LSE upon that site.

The assessment also considers the potential effects of other plans and projects which could act in combination with the plan to result in LSE upon European sites within the scope of the current assessment. Relevant plans and projects include:

- Other development plan documents in Wiltshire e.g. other DPDs, neighbourhood plans etc
- Neighbouring local development plans (draft and adopted)
- Major development proposals, either approved or pending approval

In most cases these plans and projects have been subject to a HRA process, the results of which have been reviewed in order to provide a clear indication of the LSE which might act in combination with this plan.

Settlement Level Screening Assessment

The only timing constraint stipulated in the Regulations is for appropriate assessment to be carried out before deciding to adopt a plan. However, if the assessment process was delayed until the final stages of plan development, significant constraints to policy options could remain unidentified until a late stage risking delays to the plan making process, or even the plan being found unsound at examination. Experience has therefore shown that HRA of plans is most effective when applied in an iterative manner, and indeed the importance of early assessment through plan making has been highlighted by the Advocate General, particularly with regards to choosing alternative policy options²¹.

Article 11 of the Strategic Environmental Assessment (SEA) Directive (2001/42/EC) also sets out an expectation that environmental assessment of plans should be carried out in a coordinated manner, with specific reference to the requirements of the Habitats Directive at Paragraph 19. Indeed, with regards to the current plan there are clear interrelationships between the two assessments through the inclusion of specific SA/SEA questions which refer to the available outputs of the HRA at those stages.

For the purposes of this HRA an initial screening assessment was therefore carried out at Stage 3 of the site selection processes in order to inform the SA/SEA, identify potential constraints, and to influence the emerging plan. Given the scale of the plan this was restricted to a screening of settlements rather than a screening of all policy options. Most of the large number of options under

²¹ *Commission of the European Communities v United Kingdom of Great Britain and Northern Ireland*. (C-6/04)

consideration at that stage would not be included in the final plan and it would not have been possible to carry out a meaningful in-combination assessment, as on a precautionary basis, one would have had to assume all options could potentially come forward, producing an unrealistic assessment which may have resulted in the plan as a whole failing the HRA process. The objectives of the initial screening assessment were to:

- Identify and avoid highly constrained locations at an early stage;
- Provide an early indication of the likely significant effects of the plan as a whole to inform early discussions with statutory consultees;
- Identify issues requiring further assessment, particular those where further evidence or input from statutory consultees was needed; and
- Inform the SA/SEA process.

While there is no prescribed format for the outputs of a HRA screening assessment, typically the assessment would simply determine whether or not there were any LSE on a European site which required appropriate assessment, with the output being a list of LSE and the European sites affected. While the settlement level screening assessment provides this information, it has been expanded to provide additional information to inform Stage 3 of the site selection process.

Risk Rating

HRA can potentially create a significant constraint to the selection of development sites. Therefore, the settlement level screening assessment includes an early indication of delivery risk at each settlement based on the LSE identified through the above screening criteria and two additional factors:

- Availability of adequate scientific information – case law²² has determined that appropriate assessments must be made on the basis of the best available scientific information. In the absence of adequate information to demonstrate that no adverse effect would occur the proposal should, and often does, fail the appropriate assessment. Where the Council is aware that robust scientific information is lacking, this has been highlighted as a risk to delivery.
- In-combination effects – the Council has a good understanding of recent developments arising from the Core Strategy allocations where it has worked with developers on resolving challenging HRA issues. Further development at these settlements will trigger the same LSE and are therefore likely to be problematic to mitigate when considered in-combination.

This information has been used to colour code the results of the HRA screening in Appendix 1, based on a risk rating in Table 3 as follows:

²² *Landelijke Vereniging tot Behoud van de Waddenzee and Nederlandse Vereniging tot Bescherming van Vogels v Staatssecretaris van Landbouw, Natuurbeheer en Visserij (C-127/02)* – Judgement of the Court (Grand Chamber)

LSE have been identified. Appropriate assessment of those effects will be required if options at this settlement are to be taken forward. The Council considers that any appropriate assessment is likely to result in a negative outcome for options at this settlement due to a lack of information or reliable mitigation measures to clearly demonstrate no adverse effect upon site integrity. As a result there is a significant risk that options at this settlement could result in the entire plan failing the HRA process and being found unsound; it is therefore recommended that options at this settlement are removed from the plan at this stage of the process.
LSE have been identified. Appropriate assessment of those effects will be required if options at this settlement are to be taken forward. Mitigation may be required to demonstrate that options at this settlement will have no adverse effect on site integrity. Mitigation measures have not been fully developed and agreed with the statutory consultees, or there are known to be considerable in-combination effects, therefore there is a risk that LSE could be problematic to mitigate.
LSE have been identified. Appropriate assessment of those effects will be required if options at this settlement are to be taken forward. Mitigation may be required to demonstrate that options at this settlement will have no adverse effect upon site integrity. Mitigation measures for the LSE identified are well developed and have been agreed with the statutory consultees, therefore this is a low risk to delivery of options at this settlement.
No LSE have been identified. No appropriate assessment is required. No mitigation is needed to demonstrate that options at this settlement will have no adverse effect upon site integrity. No risk to delivery of options at this settlement.

Table 3 – Explanation of risk rating for the HRA screening assessment (see Appendix 1)

Please note that the results of the risk rating provided represent the assessment by the Council at the time of writing. This may change as new evidence becomes available, in-combination effects change or feedback is received from the statutory consultees. The risk rating does not pre-determine the final outcome of the full HRA process at Stage 4 / 6.

In most cases the risk rating will apply equally to all potential options at a settlement regardless of location, as the issues are spatially wide ranging. However, in some cases the risk may be more spatially specific with some options at a settlement carrying a greater risk than others. In these cases, the distribution of risk at a settlement level will be explained in the accompanying text.

Decision Aiding Questions

The settlement level screening assessment provides a commentary in Appendix 1 on the following decision aiding questions within the SA/SEA:

- **Objective 1, Q.7** - Consider the findings of the HRA in site selection and design?
- **Objective 1, Q.9** – Require that disturbance impacts of proposed development are assessed as part of development proposals, particularly in relation to Salisbury Plain and New Forest SPAs?
- **Objective 1, Q.10** - Consider Wiltshire Council guidance to maintain European Site integrity in relevant areas?

- **Objective 3, Q.6** – Encourage sustainable and efficient management of water resources, including consideration of the potential impact of water usage and discharge on biodiversity, particularly in relation to the River Avon SAC and Kennet and Lambourn Floodplain SAC?
- **Objective 4, Q.5** - Ensure that air quality impacts on local biodiversity sites are avoided?

The commentary includes answers to each of these questions to ensure that the HRA directly informs the SA/SEA in a consistent manner.

At this point it is worth clarifying the terminology used in the HRA and SA/SEA processes in order to avoid confusion. As explained above, the terms ‘likely’ and ‘significant’ have a particular interpretation in the context of the Habitats Regulations. The SEA Directive also makes several references to ‘likely significant environmental effects’, however this phrase should be interpreted in a more literal sense for the purposes of SEA, as the Commission explains:

‘The use of the word ‘likely’ suggests that the environmental effects to be considered are those which can be expected with a reasonable degree of probability.’

The purpose of the SA/SEA is to quantify the significance of environmental effects, typically on a scale of Negligible / Low / Moderate / High. It seeks to evaluate the substantive effects of the development proposals such that they can be compared against each other in decision making, rather than in HRA screening where the purpose is simply to determine whether they meet a low threshold which triggers the need for further detailed assessment.

While there are clear interactions and synergies between the two processes which should be identified as part of a coordinated approach, the reader should bear in mind that the term ‘likely significant effect’ does not translate easily between the two processes when using the results of the settlement level screening assessment to inform the SA / SEA for the plan.

Screening Assessment of Policies

Although the ultimate objective of the screening assessment is to determine the LSE of the plan as a whole, it is widely accepted best practice to initially screen individual elements of a plan separately in order to identify those elements which can be excluded from further consideration and focus the scope of any appropriate assessment on those elements which require more detailed examination. Further to simply identifying whether LSE are triggered or not, policies are characterised as part of the process as follows:

- A. General statement of policy / general aspiration (screened out)
- B. Policy listing general criteria for testing the acceptability / sustainability of proposals (screened out)
- C. Proposals referred to but not proposed by the plan (screened out)
- D. Environmental protection / site safeguarding policy (screened out)
- E. Policies or proposals which steer change in such a way as to protect European sites from adverse effects (screened out)
- F. Policy that cannot lead to development or change (screened out)
- G. Policy that would not have any conceivable effect on a European site (screened out)

-
- H. Policy or proposal, the effects of which (actual or theoretical) cannot undermine the conservation objectives (either alone or in combination with other plans or projects) (screened out)
 - I. Policy or proposal with a likely significant effect on a site alone (screened in)
 - J. Policy or proposal with an effect on a site, but not likely to be significant alone so need to check for likely significant effects in combination
 - K. Policy or proposals not likely to have a significant effect either alone or in combination (screened out after in-combination assessment)
 - L. Policy or proposals likely to have a significant effect either alone or in combination (screened in after in-combination assessment)

Consideration of Strategic Mitigation Measures

A number of mitigation strategies have already been produced by the Council to address commonly occurring HRA issues in the county. These include:

- Salisbury Plain SPA Mitigation Strategy²³
- Planning Guidance for Bat SACs²⁴
- River Avon Nutrient Management Plan²⁵
- Trowbridge Bat Mitigation Strategy²⁶

The Trowbridge bat Mitigation Strategy (TBMS) was prepared to support the WHSAP and was available as a draft which had been out to consultation at the time of the Examination in Public. The strategy has been amended to take comments into account and it will be offered for adoption as SPD by the Council at the same time as the WHSAP.

The Council has had regard to these documents as part of the screening process. In doing so the Council has also considered whether new evidence has become available since their publication which would require them to be re-examined before they could be wholly relied on to mitigate the effects of development.

Each document and its application to the effects of the plan is explained in detail within relevant sections of the appropriate assessment.

Appropriate Assessment

The 'Integrity Test'

The scope of the appropriate assessment is clearly established through the screening process, which identifies policies within the plan that may cause LSE. The appropriate assessment focuses closely on these, having regard to the conservation objectives for the relevant European site and degree to which the plan may undermine achievement of those objectives.

²³ <http://www.wiltshire.gov.uk/guidance-for-developers-hra-mitigation-strategy-salisbury-plain-spa.pdf>

²⁴ http://www.wiltshire.gov.uk/bath_and_bradford_on_avon_september_2015_bat_sac_guidance.pdf

²⁵ <http://www.wiltshire.gov.uk/biodiversity-protecting-river-avon-sac.pdf>

²⁶ Johns Associates Ltd (February 2019) unpublished report for Wiltshire Council. Trowbridge Bat Mitigation Strategy prepared in support of the Wiltshire Housing Sites Allocations Plan February 2019.

The test which must be met is whether or not the scale of the relevant LSE is sufficient to cause an adverse effect on the integrity of the site. An in-depth objective assessment must be made based on the best available scientific information relating to both the LSE and the ecology of the qualifying features.

Draft DEFRA guidance²⁷ defines 'integrity' as follows:

'The authority should take the "integrity" of a European site to mean the coherence of its ecological structure and function across its whole area, that enables it to sustain the habitat, complex of habitats and / or the levels of populations of the species for which the site is (or will be) designated.'

The assessment must include close scrutiny of all mitigation measures on which the conclusions will rely. To be taken fully into account, mitigation measures should be effective, reliable, timely, guaranteed to be delivered and as long-term as they need to be to achieve their objectives. Any doubts about the effectiveness, reliability, timing, delivery or duration of mitigation measures should be taken into account by the competent authority before relying on such measures to determine the integrity test. In plan level HRA, mitigation normally involves the inclusion of policy caveats, modification / deletion of policies, or reference to a mitigation strategy.

The integrity test must be met on a precautionary basis, having established there would be no harm to site integrity before adoption of the plan. The competent authority must be convinced about the lack of effects on integrity, such that no reasonable scientific doubt remains as to the absence of such effects.

'Down the line' assessment

It is often the case that all aspects of a development proposal will not be specified in a plan, and as such the full effects of the development cannot be accurately assessed at the plan making stage. Those further details will typically be determined through a lower level plan and / or subsequent planning application, which would be subject to a further, more detailed HRA of the effects of the development proposal. It is therefore an established principle that the assessment need only assess the effects of the proposal in as much detail as is specified by the plan, as explained by Advocate General Kokott:

*'Many details are regularly not settled until the time of the final permission. It would also hardly be proper to require a greater level of detail in preceding plans or the abolition of multistage planning and approval procedures so that the assessment of implications can be concentrated on one point in the procedure. Rather, adverse effects on areas of conservation must be assessed at every relevant stage of the procedure to the extent possible on the basis of the precision of the plan. This assessment is to be updated with increasing specificity in subsequent stages of the procedure.'*²⁸

²⁷ DEFRA (2013) Habitats Regulations Assessments (July 2013 draft, unpublished)

²⁸ UK v Commission (AG Opinion) C-6-04 (Para.49)

This principle may not be used as a way to defer or delay the assessment process, as the competent authority must still be convinced that an adverse effect on integrity can be avoided through mitigation measures in a lower level plan or later stage assessment. The competent authority can only rely on such measures at a later stage where:

- The higher level assessment cannot reasonably predict any effect on a European site in a meaningful way;
- The lower level plan or later stage assessment will have sufficient flexibility to establish the nature, timing, duration, scale or location of development and thus its potential effects, in a manner that will allow an adverse effect to be avoided; and
- The HRA of the proposal at the later stage or lower level is required as a matter of law or policy.

Adoptions of other decisions by a competent authority

In some cases, the effects of development will need to be assessed by more than one competent authority. The government supports coordination between competent authorities in assessing such effects, as this can simplify the assessment process and reduce its time and costs for both the applicant and the competent authorities involved.

Government guidance states competent authorities may adopt all or part of the conclusions of previous decisions taken by other competent authorities, however they remain responsible for ensuring their decisions are consistent with the Habitats Directive, so must be satisfied:

- No additional material information has emerged, such as new environmental evidence or changes or developments to the plan or project, that means the reasoning, conclusion or assessment they are adopting has become out of date
- The analysis underpinning the reasoning, conclusion or assessment they are adopting is sufficiently rigorous and robust. This condition can be assumed to be met for a plan or project involving the consideration of technical matters if the reasoning, conclusion or assessment was undertaken or made by a competent authority with the necessary technical expertise²⁹

For the purposes of this assessment the Council has referred to previous decisions by other competent authorities, particularly by the Environment Agency with regards to water related issues and adopted part of their reasoning and conclusions to inform its own conclusions in the appropriate assessment, having regard to the above principles.

These principles should also be applied where a competent authority continues to rely on the conclusions of a previous HRA which it has undertaken for further decisions. The appropriate assessment makes references to the conclusions of the Wiltshire Core Strategy HRA process, which is of strategic relevance to the key issues assessed in this document; however, the Council has had regard to the above principles in considering the current relevance of those conclusions to this plan.

²⁹ DEFRA (2012) *Guidance on competent authority coordination under the Habitats Regulations*

Functionally Linked Land

The assessment makes references to the term ‘functionally linked land’; this is land beyond the boundary of a European site which ecologically supports the populations for which the site was designated or classified. Such land is therefore ‘linked’ to the European site in question because it provides an important role in maintaining or restoring the population of qualifying species at favourable conservation status. Case law and appeal decisions have demonstrated that once identified as functionally linked land, the evidence required by decision makers in the Habitats Regulations Assessment process is no different to that which might reasonably be expected in relation to direct or on-site effects on the European site, and that the precautionary principle applies equally to functionally linked land and sea³⁰.

³⁰ (Natural England, 2016) *Functional linkage: How areas that are functionally linked to European sites have been considered when they may be affected by plans and projects –a review of authoritative decisions*

Settlement Level Screening Assessment (Stage 3)

A total of 20 settlements were included in the settlement level assessment carried out at Stage 3 of the site selection process. No LSE were identified at 6 settlements, with LSE identified at the other 14. A summary of the screening assessment is presented in Table 4 below while full details, including the commentary on the decision aiding questions for the SA/SEA, are provided in Appendix 1 (Outputs from the Settlement Level Screening Assessment (Stage 3)).

Settlement	Screening Criteria										
	R1	R2	R3	R4	R5	B1	H1	H2	W1	W2	P1
Market Lavington	Y	N	N	N	N	N	N	N	N	N	N
Ludgershall	Y	N	N	N	N	N	N	N	Y	N	N
Hullavington	N	N	N	N	N	N	N	N	N	N	N
Kington St Michael	N	N	N	N	N	N	N	N	N	N	N
Yatton Keynell	N	N	N	N	N	N	N	N	N	N	N
Crudwell	N	N	N	N	Y	N	N	N	N	N	N
Oaksey	N	N	N	N	Y	N	N	N	N	N	N
Trowbridge	Y	N	Y	Y	N	N	Y	N	N	N	N
Warminster	Y	N	N	N	N	N	N	Y	Y	N	Y
Chapmanslade	Y	N	N	N	N	N	Y	N	N	N	N
Codford	Y	N	N	N	N	N	N	N	Y	N	Y
Heytesbury	Y	N	N	N	N	N	N	Y	Y	N	Y
Bratton	Y	N	N	N	N	N	N	N	N	N	N
Amesbury	Y	N	N	N	N	Y	N	Y	Y	N	Y
Durrington	Y	N	N	N	N	N	N	Y	Y	N	Y
Shrewton	Y	N	N	N	N	N	N	Y	Y	N	Y
The Winterbournes	N	N	N	N	N	N	N	Y	Y	N	Y
Salisbury	N	N	N	N	N	N	N	Y	N	N	Y
Wilton	N	N	N	N	N	N	N	Y	N	N	Y
Fovant	N	N	N	N	N	N	Y	N	N	N	Y

Table 4 – Summary of screening for Likely Significant Effects

Y = screened into Appropriate Assessment

N = screened out

Likely Significant Effects

Recreational Pressure

Salisbury Plain SPA (Criterion R1)

Description of LSE

This site is designated for internationally important populations of breeding stone-curlew and overwintering hen harrier. Other Annex II species include breeding common quail and Eurasian hobby. Ongoing monitoring at the site demonstrates that the stone-curlew population is relatively stable, but that productivity has often fallen below the 0.61 chicks per pair required to maintain a stable population, suggesting that immigration is maintaining numbers on Salisbury Plain. Non-designated land outside the plains (within 5km) has also been found to be of vital importance to maintaining the overall population, with productivity generally higher on the surrounding farmland than within the SPA³¹. The site is understood to be currently in favourable condition for both stone-curlew and hen harrier.

Research has shown that stone-curlews are very sensitive to disturbance, particularly by dog walkers^{32, 33}. Salisbury Plain SPA is known to attract a large number of visitors from a relatively wide catchment area, with the majority of visits (75%) originating from within a radius of 6.4km³⁴. Recreational use is greatest on the eastern plain as public access on much of the central and western plains is limited due to military restrictions. However, the margins of these plains and surrounding land are still widely used by local people for recreation. The vast majority of visits to Salisbury Plain (74%) are for dog walking.

Summary of Screening Assessment Results

Settlements at Stage 3 of the site selection process falling wholly or partly within 6.4km of Salisbury Plain SPA include:

- Market Lavington
- Ludgershall
- Trowbridge
- Chapmanslade
- Warminster
- Codford
- Heytesbury
- Bratton
- Amesbury
- Durrington
- Shrewton

Development at these 11 settlements would contribute to recreational pressure upon the SPA. Sites beyond 6.4km of the SPA are considered unlikely to make a significant contribution to recreational pressure on the stone-curlew population and have been screened out from further assessment on this issue.

In addition to housing planned in the Core Strategy, the MoD has plans to relocate many of its troops and their families to the garrisons of Larkhill, Bulford, Tidworth and Perham Down as part of

³¹ Tomalin, N (2014) *Stone-curlew CIL Monitoring Area Report 2014*

³² Taylor, E, (2006) Stone-curlews *Burhinus oedicnemus* and human disturbance: effects on behaviour, distribution and breeding success. (Doctoral Thesis)

³³ Taylor *et al* (2005) *Dogs, access and nature conservation* (English Nature Research Report 649)

³⁴ Panter, C., & Liley, D. (2015). *Salisbury Plain Visitor Survey 2015*

its Army Basing Programme (ABP). This will require an estimated 1,200 Service Family Accommodation units which will result in additional visits to the SPA and will have in-combination effects with development proposed in this plan and the Core Strategy.

This issue was identified and assessed as part of the Core Strategy HRA, which concluded that planned growth till 2026 would not have an adverse effect on the integrity of the Salisbury Plain SPA provided the Stone-curlew Mitigation Strategy was implemented. However, the conclusions of that assessment and the effectiveness of the mitigation strategy cannot be wholly relied on to screen out this LSE in view of the findings of the latest visitor survey of the plains³⁵ and the change in distribution of planned growth which has occurred since those documents were produced.

New Forest SAC/SPA (Criterion R2)

No settlements were identified in the visitor catchment of the New Forest SPA. No LSE have been identified by the settlement level screening assessment and no further assessment is required for this criterion.

Bath and Bradford on Avon Bats SAC / Chilmark Quarries SAC (Criteria R3 and R4)

Description of LSE

The Bath and Bradford on Avon Bats and Chilmark Quarries SACs comprise a network of underground sites supporting internationally important populations of roosting / hibernating bats. In terms of their qualifying features, both SACs are designated for populations of greater horseshoe bat, lesser horseshoe bat, and Bechstein's bats. Chilmark Quarries is additionally designated for its population of barbastelle bat. Research has shown that the bats rely on a wide range of other non-designated roosts in mines, buildings and woodlands throughout an extensive network of core areas within the surrounding landscape over the course of the year. Unauthorised action and vandalism at underground sites is a known threat / pressure for both SACs, while recent monitoring has demonstrated that recreational pressure is also having a significant effect on core Bechstein's roosts located in woodlands south of Trowbridge. These latter roosts are considered to be functionally linked to the Bath and Bradford on Avon SAC as individual bats have been proved to move between the woodlands and the mines in the SAC through ongoing monitoring studies.

Summary of Screening Assessment Results

Settlements at Stage 3 of the site selection process falling wholly or partly within 600m of any core roosts (R3), or within 3.2 km of a publicly accessible core roost site associated with the Bath and Bradford Bats and Chilmark Quarries SAC include:

- Trowbridge (R3 and R4)

Development at Trowbridge has the potential to bring development within easy walking distance (<600m) of some of the core woodland roosts for Bechstein's bats (R3). Recent experience with new development has demonstrated that mitigation in close proximity to the woodlands cannot be achieved with confidence and any further sites in such positions are likely to fail an appropriate assessment. It was therefore recommended that any allocations within easy walking distance of the

³⁵ Panter, C., & Liley, D. (2015). *Salisbury Plain Visitor Survey 2015*

woodlands should be removed from the site selection process at stage 3 and alternative sites found at Trowbridge as there would be a significant risk to their delivery.

Development elsewhere at Trowbridge would contribute in-combination to the general increase in recreational pressure on the SAC, as additional residents would be within the wider visitor catchment and make at least occasional visits (R4).

No recreational pressure related LSE upon the Chilmark Quarries SAC have been identified by the settlement level screening assessment.

North Meadow and Clattinger Farm SAC (Criterion R5)

Description of LSE

The qualifying feature for this SAC is lowland hay meadow and there are two components to the SAC; the National nature reserve at North Meadow and a Wiltshire Wildlife Trust managed site at Clattinger Farm. Together these components support over 90% of the surviving UK population of snake's head fritillary, *Fritillaria meleagris* which is characteristic of damp lowland meadows in Europe and now rare throughout its range. Recreational pressure is recognised as leading to localised damage of the snake's head fritillary in spring within the Site Improvement Plan. During 2019, Natural England advised that increased recreation pressure at North Meadow and Clattinger Farm SAC is negatively affecting the SAC features and following many years of trying to manage the pressure, the scope for improvements in visitor management is now judged to be minimal.

Summary of Screening Assessment Results

Settlements at Stage 3 of the site selection process falling within 15km of the SAC (this being the default distance where Natural England advises impacts to European sites should be considered):

- Crudwell (5km from Clattinger Farm)
- Oaksey (2km from Clattinger Farm)

Clattinger Farm is closer and benefits from having visitor facilities and therefore is likely to be the most attractive part of the SAC for visitors from these two settlements. 5km is likely considered to be within the distance that 75% of visitors are likely to originate.

Visual Disturbance

Salisbury Plain SPA and Porton Down SPA (Criterion B1)

Description of LSE

Stone-curlews have been shown to breed in much lower densities in close proximity to settlements, with this effect being significant at distances of up to 1,500m. Settlement size also has an influence, with larger settlements generally having a more pronounced effect upon nesting density than smaller settlements. Current research suggests that additional buildings will always be associated with a reduction in stone-curlew nest numbers but that the effect is smaller the more buildings are already present³⁶.

³⁶ Footprint Ecology (2013) *Further assessments of the relationship between buildings and stone-curlew distribution*

Summary of Screening Assessment Results

Settlements at Stage 3 of the site selection process falling wholly or partly within 1.5km of known stone-curlew nests include:

- Amesbury

Development at Amesbury could potentially occur within 1,500m of known stone-curlew nest sites; these nests are not within Salisbury Plain SPA but are considered to be used by the same populations and are therefore treated as being on functionally linked land. Development at Amesbury could therefore cause disturbance of these nest sites, which would result in a likely significant effect upon the Salisbury Plain SPA.

None of the settlements at Stage 3 fall within 1.5km of Porton Down and therefore no LSE are predicted for this SPA.

Habitat Loss / Deterioration

Bath and Bradford on Avon Bats SAC / Chilmark Quarries SAC (Criterion H1)

Description of LSE

The bat species which are features of these SACs use foraging areas surrounding core roosts to sustain their populations. They are reliant on established commuting routes to travel between the various roosts and foraging areas. The core roosts and core areas for the Bath and Bradford on Avon Bats and Chilmark Quarries SACs have been established by the Council, in close consultation with Natural England and local experts, as shown on Figure 3 below.

Allocations within the plan are expected to be largely greenfield sites. Experience has shown that physical loss of these sites to urban development within the core areas is likely to result in the direct loss of foraging habitat and commuting routes including hedgerows, scrub and pastures as well as loss of potential roosting trees. Research has shown that urbanisation can also have indirect negative effects on important foraging habitats even where development is at some distance from the woodlands themselves³⁷. The potential exists therefore for development within the identified core areas to have LSE on the Bath and Bradford on Avon Bats / Chilmark Quarries SACs through habitat loss / deterioration.

³⁷ Corney *et al* (2008) Impacts of nearby development on the ecology of ancient woodland

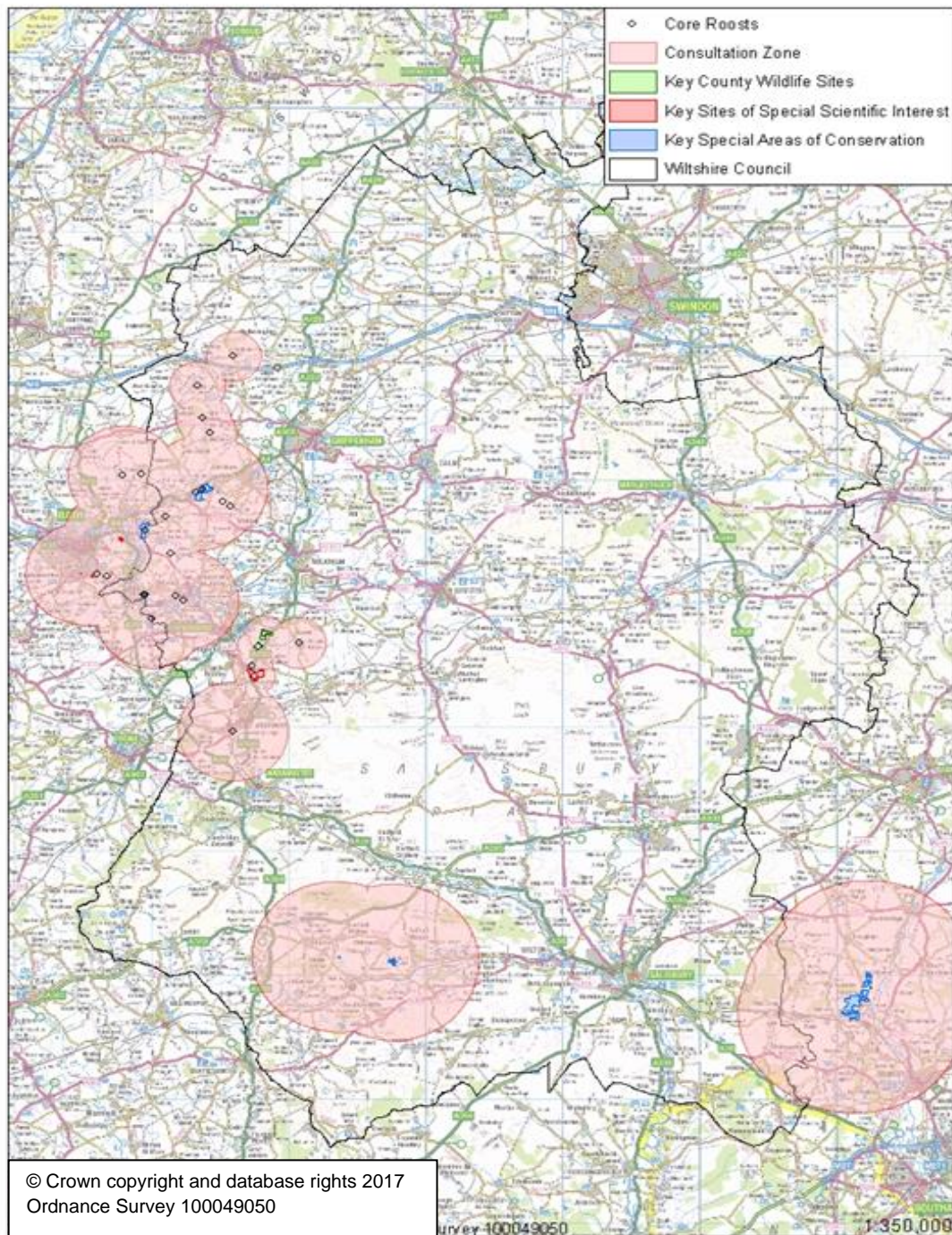


Figure 3 –Core Areas associated with the Bath and Bradford on Avon Bats and Chilmark Quarries SACs taken from Bat Special Areas of Conservation: Planning Guidance for Wiltshire. Issue 3.0. 10 September 2015

Summary of Screening Assessment Results

Settlements at Stage 3 of the site selection process falling wholly or partly within core areas associated with the Bath and Bradford on Avon / Chilmark Quarries SACs include:

- Trowbridge
- Fovant

- Chapmanslade

Development at Trowbridge and Chapmanslade would occur within the core areas associated with the Bath and Bradford on Avon Bats SAC. Development at Fovant would occur within the core areas associated with the Chilmark Quarries SAC.

A large number of recent planning applications within the core areas have been found to have LSE on the Bath and Bradford on Avon Bats SAC, typically through the loss / degradation of foraging and commuting features in the core areas, particularly at Corsham, Bradford on Avon and Trowbridge. The Bath and North East Somerset Core Strategy also identified a number of greenfield sites in relatively close proximity to components of the SAC within the Bath and North East Somerset administrative area. There is therefore potential for considerable further in-combination LSE on this site as a result of other plans and projects.

River Avon SAC (Criterion H2)

Description of LSE

The River Avon SAC is a chalk river system, which comprises the Annex I habitat type, 'watercourses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation (Rivers with floating vegetation often dominated by water-crowfoot)'. It is also designated for supporting internationally important populations of the following Annex II species; Desmoulin's whorl snail, sea lamprey, brook lamprey, Atlantic salmon and bullhead.

Development close to the river has the potential to result in direct loss of valuable marginal habitats as a result of new buildings, hard standing and amenity landscaping. Even if not affected directly, river banks can be vulnerable to damage during the construction phase due to temporary works, pollution and construction activities. The river channel itself is also vulnerable during construction through spills and sediment run-off, which could cause deterioration of aquatic habitats and associated qualifying features. Where marginal habitats become unmanaged through cessation of grazing or neglect, this can lead to development of scrub and shading out of marginal and emergent vegetation.

The Council has identified that these impacts are most likely to occur on developments within 20m of the river and this is recognised through CP69 of the Core Strategy. It is assumed for the current assessment therefore, that development at settlements within 20m of the River Avon SAC could lead to LSE.

Summary of Screening Assessment Results

Settlements at Stage 3 of the site selection process falling wholly or partly within 20m of the River Avon SAC include:

- Warminster
- Heytesbury
- Amesbury

- Durrington
- Shrewton
- The Winterbournes
- Salisbury
- Wilton

The potential impacts of development in these settlements would be entirely site specific therefore no further description of the LSE can be made at this stage.

Water Abstraction

River Avon SAC (Criterion W1)

Description of LSE

Previous studies have shown that existing levels of abstraction for Public Water Supplies (PWS) have the potential to exceed guideline levels on short stretches of the upper reaches of the River Avon SAC including the Upper Avon, Bourne and Wylve, with some uncertainty within the model with regards to the River Till³⁸. Allocations within these catchments would result in increased levels of abstraction from PWS which could potentially exacerbate this situation further and cause greater exceedances and cause LSE through low flows which would impact upon the qualifying features.

Summary of Screening Assessment Results

Settlements at Stage 3 of the site selection process falling wholly or partly within sub-catchments where abstraction from PWS could cause LSE on the River Avon SAC include:

- Warminster
- Codford
- Heytesbury
- Ludgershall
- Amesbury
- Durrington
- Shrewton
- The Winterbournes

Other abstractions for agricultural, commercial and military use have the potential to contribute to low-flows in-combination with the PWS abstractions to cause larger LSE on the qualifying features. In particular the ABP will result in a significant level of increased water use to support intensification at the garrisons and additional Service Family Accommodation which without mitigation would affect the Upper Avon and the River Till.

Recent modelling has shown that existing abstraction is a cause of unfavourable condition on the River Till and that without mitigation, closure of the Larkhill STW would reduce flows on the

³⁸ Wessex Water and Hyder Consulting (2008) *River Avon SAC Low Flow Investigation: Final Report for Steering Group Consultation*

perennial section of the Till yet further causing it to fail its flow targets³⁹. Any further development at Shrewton is therefore likely to contribute towards this effect. Natural England has highlighted that failure along the River Till is for the entire length modelled, from Winterbourne Stoke to its confluence with the River Wylde, while flows on the winterbourne length of the SSSI/SAC above this point cannot be reliably modelled and the impact of abstraction and licensing is uncertain⁴⁰. Given this, it would be difficult to reliably assess the effects of further development at the village. It was therefore recommended that any options for Shrewton be removed from the site selection process at stage 3 as any development here would fail an appropriate assessment on the basis of uncertainty.

Kennet and Lambourn Floodplain SAC and River Lambourn SAC (Criterion W2)

Description of LSE

The Kennet and Lambourn Floodplain SAC and Lambourn River SAC area relatively unmodified river and wetland area which supports an extensive population of the Annex II species Desmoulin's whorl snail in association with chalk stream habitat.

There is known to be limited water available for abstraction in both the Upper Kennet and the Og rivers, and therefore the EA has declared a water resource status of 'Water not available for licensing' for much of these catchments in Wiltshire⁴¹. Both rivers flow into the Kennet and Lambourn Floodplain SAC, several components of which have been assessed as being in unfavourable condition as they fail to meet target moisture levels, which has been attributed to water abstraction⁴².

Summary of Screening Assessment Results

There are no settlements at Stage 3 of the site selection process falling wholly or partly within the catchment of the River Kennet. No further assessment is required for this criterion.

Phosphate

River Avon SAC (Criterion P1)

Description of LSE

Natural England has assessed several stretches of the River Avon SAC as being in unfavourable condition due to elevated phosphate (P) levels and as a result the river is currently failing its conservation targets. Research has shown that elevated P levels can be detrimental to chalk river systems as these typically rely on maintaining nutrient poor conditions to support their special interest including the qualifying features identified under H2 above. It is estimated that projected population growth and development over the period 2018 – 2026 would result in an additional 2,599 kg of P or an average of 371 kg P per year from sewage treatment works (STWs) in the

³⁹ Kelda Water Services (2016) Integrated Water Management Strategy: Army Basing Programme, Salisbury Plain (July 2016, draft)

⁴⁰ Email from Charles Routh to Jon Taylor dated 19th August, 2016

⁴¹ Environment Agency (2012) *Kennet and Vale of the White Horse Catchment Abstraction Licensing Strategy*.

⁴² <https://designatedsites.naturalengland.org.uk/UnitDetail.aspx?UnitId=1027150>

catchment⁴³. Wessex Water strips the vast majority of P from sewage at STWs in accordance with strict EA permit conditions before it is discharged to the river. However, in March 2018, Natural England and the Environment Agency advised the Council that it cannot rely on the Nutrient Management Plan⁴⁴ to offset the remaining P. Going forward therefore, development within the entire catchment must demonstrate it will be P neutral.

Summary of Screening Assessment Results

Settlements at Stage 3 of the site selection process falling wholly or partly within the River Avon SAC catchment include:

- Warminster
- Amesbury
- Durrington
- Shrewton
- The Winterbournes
- Salisbury
- Wilton
- Fovant

Development at these settlements could contribute towards LSE through additional P loading and will therefore require further assessment to determine whether it might compromise the delivery of the NMP reduction targets.

A further two settlements in the catchment are understood to have no mains sewage infrastructure:

- Codford
- Heytesbury

These are located in the Middle Wylve sub-catchment which is highlighted in the NMP as being at moderate risk of not being able to meet the conservation targets. There are no existing EA discharge permits and it is expected that new development would require a package treatment plant, which would typically discharge to the river at much higher P concentrations than mains STW. Recent experience of a development nearby indicates that an EA permit may not be forthcoming as the EA's consultation response to the Plan dated 2 May 2014 confirmed "All proposed allocations must be able to connect to a mains foul sewer". Consequently it has been assumed there would be a high risk that allocations at Codford and Heytesbury could not be delivered and as such it was recommended that any options for these settlements be removed from the site selection process at stage 3. This approach is in line with Natural England's advice that the plan should direct development to larger STWs with higher standards and avoid settlements on the headwaters where mitigation to avoid impacts on the SAC is less certain⁴⁵.

⁴³ River Avon SAC – Phosphate Neutral Development. Interim Delivery Plan. Wood Environment and Infrastructure Solutions UK Ltd January 2019

⁴⁴ <http://www.wiltshire.gov.uk/biodiversity-protecting-river-avon-sac.pdf>

⁴⁵ Letter from Kayleigh Cheese dated 3rd December, 2015

In the Upper Avon sub-catchment, the ABP, due to be completed in 2021, will result in a significant increase in sewage discharges from intensification of use at the garrisons and the additional Service Family Accommodation units. These impacts have been exacerbated by the need to close Larkhill STW and pump both existing and additional sewage flows to Ratfyn STW, which also discharges to the Upper Avon. The uplift in P levels to the river Avon below Amesbury is substantial and the MOD therefore agreed to a five year phosphorus action plan to offset the additional loading up to March 2021. This involved the use of catchment sensitive farming techniques to reduce diffuse agricultural pollution reaching the river. The potential in-combination effects should be considered alongside LSE from this plan. Additional discharges will also result from planned growth in the Lower Avon, as set out in the New Forest District local plan, which may have further in-combination effects with this plan.

Nitrogen Deposition

Guidance contained in the Design Manual for Roads and Bridges identifies that the threshold for scoping a development into appropriate assessment for traffic related nitrogen deposition is where development would result in an increase in Annual Average Daily Traffic (AADT) flows of 1,000 cars or more on roads within 200 m of a European site. A recent court judgement demonstrates that this trigger is relevant to a development plan or project both alone and in-combination⁴⁶.

Nine European sites within the scope of this assessment occur within 200m of a main road but of these only four are understood to be under threat from vehicular air pollution, namely:

- Cotswold Beechwoods SAC
- Rodborough Common SAC
- New Forest SAC
- Salisbury Plain SAC

The Core Strategy HRA did not identify an adverse effect on the integrity of any European sites from nitrogen deposition, subject to the implementation of an air quality strategy for Wiltshire. It is considered that the conclusion of the Core Strategy HRA on this issue can generally be adopted for the purposes of this assessment in relation to the first three sites, as very little has changed since that assessment was made, and the level of growth proposed in those parts of the county closest to those designations remains largely the same and will not be altered by this plan.

In relation to Salisbury Plain SAC additional in-combination effects of development will occur due to additional growth associated with ABP. The MoD's HRA screening assessment for the ABP masterplan did not identify any likely significant effects upon Salisbury Plain SAC either alone, or in combination with the Wiltshire Core Strategy through nitrogen deposition. That assessment was made relatively recently, and was accepted by both the Council and Natural England at the time. No significant changes have occurred since then and therefore it is considered that the conclusions of that assessment may still be relied upon for the purposes of this screening assessment. It is possible that the dualling of the A303 may create further in-combination effects on the SAC in the future, particularly if the northern bypass option at Winterbourne Stoke brings the alignment of the road closer to the Parsonage Down component of the site. However the A303 proposals are not at a

⁴⁶ Wealden v SSCLG [2017] EWHC 351 (Admin)

sufficiently advanced stage to be considered in combination at the current time, although this issue may need to be revisited if those proposals become more advanced during the course of the plan making process.

Policy Level Screening Assessment (Stage 6)

A total of 19 options were identified for the plan, one of which was identified as having no LSE at the settlement screening stage (H2.10 – East of Farrells Farm, Yatton Keynell) and therefore is not considered further in this HRA. The remaining options were carried forward to the policy level screening assessment carried out at Stage 6 of the site selection process.

Options were not identified for twelve settlements; Market Lavington, Hullavington, Kington St Michael, Crudwell, Oaksey, Codford, Heytesbury, Amesbury, Shrewton, The Winterbournes, Wilton and Fovant and no further assessment has therefore been undertaken of these. As Crudwell and Oaksey were the only two settlements screened into assessment for criterion R5 (North Meadow and Clattinger Farm – recreation pressure) this has been removed from the policy screening. Similarly, by removing Amesbury from policy selection, criterion B1 (Salisbury Plain SPA and Porton Down SPA – visual disturbance) is also removed from the policy screening.

No settlements were screened into assessment for criteria R2 (New Forest – Recreation Pressure), R3 (Bath and Bradford on Avon Bats SAC – Recreation pressure within 600m) and W2 (Kennet and Lambourn Floodplain SAC and River Lambourn SAC – water abstraction), these criteria were therefore not taken through to the policy screening.

The full list of policies included in the policy level screening assessment is presented in Appendix 2. A summary of the policy screening assessment is presented in Table 5.

Likely Significant Effects

Recreational Pressure

Salisbury Plain SPA (Criterion R1)

A total of 8 allocations proposed at Stage 4 of the site selection process relate to land within 6.4 km of the Salisbury Plain SPA, as set out in Table 5 below.

Community Area	Settlement	Policy	Site Name	Proposed housing numbers
Tidworth	Ludgershall	H1.1	Empress Way	270
Trowbridge	Trowbridge	H2.2	Land off A363 at White Horse Business Park	175
Warminster	Warminster	H2.7	Bore Hill Farm	70
		H2.8	Boreham Road	30
	Chapmanslade	H2.9	Barthers Farm Nurseries	35
Westbury	Bratton	H2.11	Court Orchard / Cassways	35
Amesbury	Durrington	H3.6	Clover Lane	45
		H3.	Larkhill Road	15

Table 5 – Policies with potential to have LSE on the Salisbury Plain SPA in-combination through recreational pressure

These individual allocations would not have LSE on the SPA through increased recreational pressure when considered alone but could have LSE when considered in-combination with other plans and

projects. This issue will therefore be taken forward for further investigation through the appropriate assessment.

Bath and Bradford on Avon Bats / Chilmark Quarries SACs (Criterion R4)

A total of six allocations relate to land within 2.66 / 3.36 km of a woodland core roost site associated with the Bath and Bradford on Avon Bats SAC (R4), as shown in Table 6 below. No allocations relate to land within 500m of a core roost (criterion R3).

Community Area	Settlement	Policy	Site Name	Proposed housing numbers
Trowbridge	Trowbridge	H2.1	Elm Grove Farm	250
		H2.2	Land off A363 at White Horse Business Park	175
		H2.3	Elizabeth Way	355
		H2.4	Church Lane	45
		H2.5	Upper Studley	45
		H2.6	Southwick Court	180

Table 6 – Policies with potential LSE on the Bath and Bradford Bath SAC in-combination through recreational pressure

These individual policies would not have LSE on the SAC through increased recreational pressure when considered alone but could have LSE when considered in-combination with other plans and projects. Criterion R4 will therefore be taken forward for further investigation through the appropriate assessment.

Habitat Loss / Deterioration

Bath and Bradford on Avon Bats / Chilmark Quarries SACs (Criterion H1)

No allocations are proposed within the recognised Core Areas for the Bath and Bradford on Avon Bats SAC, however following the initial screening assessment based on the distance criteria, a total of six allocations for Trowbridge and one for Chapmanslade have been screened in on the basis of recent evidence that they are likely to be used by bats associated with the Bath and Bradford on Avon Bats SAC (this is explained further in the appropriate assessment section). No allocations are proposed within the Core Areas associated with the Chilmark Quarries SAC.

Community Area	Settlement	Policy	Site Name	Proposed housing numbers
Trowbridge	Trowbridge	H2.1	Elm Grove Farm	250
		H2.2	Land off A363 at White Horse Business Park	175
		H2.3	Elizabeth Way	355
		H2.4	Church Lane	45
		H2.5	Upper Studley	45
		H2.6	Southwick Court	180
Warminster	Chapmanslade	H2.9	Barthers Farm Nurseries	35

Table 7 – Policies with potential LSE on the Bath and Bradford Bath / Chilmark Quarries SACs in-combination through habitat loss / deterioration

The individual allocations in Table 7 above would not have LSE on the SAC through habitat loss / deterioration when considered alone but could have LSE when considered in-combination with other plans and projects. This issue will therefore be taken forward for further investigation through the appropriate assessment.

While Elizabeth Way, Church Lane, Upper Studley and Southwick Court lie outside any of the recognised Core Areas, recent survey evidence is available which shows there is a possibility of them being used by Bechstein's bats. They have therefore been screened into the appropriate assessment.

River Avon SAC (Criterion H2)

No allocations lie within 20m of the River Avon SAC. No LSE on the SAC through habitat loss / deterioration have been identified by the policy level screening process.

Water Abstraction

River Avon SAC (Criterion W1)

A total of five allocations relate to land within the Wylde, Bourne or Upper Avon sub-catchments of the River Avon SAC, which are known to be potentially sensitive to water abstraction pressures, as shown in Table below.

Sub-catchment	Settlement	Policy	Site Name	Proposed housing numbers
Bourne	Ludgershall	H1.1	Land at Empress Way	270
Upper Wylde	Warminster	H2.7	Bore Hill Farm	70
		H2.8	Boreham Road	30
Upper Avon	Durrington	H3.6	Clover Lane	45
		H3.7	Larkhill Road	15

Table 8 – Policies with potential LSE on the River Avon SAC in-combination through water abstraction

While it is considered highly unlikely that any of the individual allocations would have LSE upon the River Avon SAC through increased water abstraction when considered alone, it is not possible to conclude that they would not have LSE when considered in-combination with other commitments,

planned development in the Core Strategy, other local plans / core strategies, and the ABP. This issue will therefore be dealt through the appropriate assessment of the plan.

Phosphate

River Avon SAC (Criterion P1)

A total of nine allocations relate to land within the River Avon SAC catchment, as shown in Table 7 below.
Error! Reference source not found. **Table 9 – Policies with potential LSE on the River Avon SAC in-combination through phosphate loading**

While it is considered highly unlikely that any of the individual allocations would have LSE on the River Avon SAC through increased P loading alone, it is not possible to conclude that they would not have LSE when considered in-combination with other commitments, planned development in the Core Strategy, other local plans / core strategies, and the ABP. This issue will therefore be dealt through the appropriate assessment of the plan.

Nitrogen Deposition

As for the settlement level screening assessment, no likely significant effects upon Natura 2000 network have been identified through the policy level screening assessment. This is largely due to the limited number of designations in the local area which are vulnerable to vehicular nitrogen deposition, and the conclusions of both the Wiltshire Core Strategy HRA and the ABP HRA.

Policy Level Screening Matrix (Table 10)

LSE have been identified for 18 out of the 19 proposed policies. The results of the policy level screening assessment are shown in Table 10 below.

Policy	R1	R4	H1	H2	W1	P1
H1.1 - Land at Empress Way, Ludgershall	Y	N	N	N	Y	N
H2.1 - Elm Grove Farm, Trowbridge	N	Y	Y	N	N	N
H2.2 - Land off the A363 at White Horse Business Park, Trowbridge	Y	Y	Y	N	N	N
H2.3 - Elizabeth Way, Trowbridge	N	Y	Y	N	N	N
H2.4 - Church Lane, Trowbridge	N	Y	Y	N	N	N
H2.5 - Upper Studley, Trowbridge	N	Y	Y	N	N	N
H2.6 - Southwick Court, Trowbridge	N	Y	Y	N	N	N
H2.7 - Land at Bore Hill Farm, Warminster	Y	N	N	N	Y	Y
H2.8 - Boreham Road, Warminster	Y	N	N	N	Y	Y
H2.9 - Barters Farm Nurseries, Chapmanslade	Y	N	Y	N	N	N
H2.10 - East of Farrells Field, Yatton Keynell	N	N	N	N	N	N
H2.11 - Court Orchard/Cassways, Bratton	Y	N	N	N	N	N
H3.1 - Land at Netherhampton Road, Salisbury	N	N	N	N	N	Y
H3.2 - Land at Hilltop Way, Salisbury	N	N	N	N	N	Y
H3.3 - North of Netherhampton Road	N	N	N	N	N	Y
H3.4 - Land at Rowbarrow	N	N	N	N	N	Y
H3.5 The yard, Hampton Park	N			N	N	Y
H3.6 – Clover Lane, Durrington	Y	N	N	N	Y	Y
H3.7 - Larkhill Road, Durrington	Y	N	N	N	Y	Y

Table 10 – Results of the Policy Level Screening Assessment:

Y = screened into Appropriate Assessment,
N= screened out

Appropriate Assessment

Salisbury Plain SPA – Recreational Pressure R1

Information Used in Making the Assessment

In addition to the conservation objectives, SSSI condition monitoring and site improvement plan, the following additional sources of information were used to inform the appropriate assessment.

Salisbury Plain Visitor Survey 2015⁴⁷

This survey was intended to update and extend the scope of a previous study carried out in 2006⁴⁸. Surveyors used driving transects, automated counters, and face to face interviews across the plains to identify patterns in recreational use and behaviour of those visiting the site. As in 2006, the survey showed that the vast majority of people used the plains for dog walking and tended to visit regularly throughout the year. However, the 2015 survey indicated that the visitor catchment was smaller than previously estimated for the eastern plain, but larger for the central and western plains with towns to the west have a much stronger influence on visitor numbers than was previously understood to be the case. As a result of the 2015 survey the radius for 75% of visitors accessing the plain was revised to 6.4km and the percentage of residents visiting the plain was revised to 1%.

Salisbury Plain Mitigation Strategy

The HRA of the emerging Core Strategy identified that planned development in Wiltshire was likely to increase recreational pressure on the Salisbury Plain SPA, particularly through increased levels of dog walking leading to disturbance of nesting stone-curlew. In 2012 the Council therefore developed a mitigation strategy in consultation with Natural England, RSPB and Defence Infrastructure Organisation (DIO) and this was updated in 2018⁴⁹. The mitigation strategy comprises three main elements to secure the conservation status of the stone-curlew populations on Salisbury Plain:

1. Annual monitoring of stone-curlew breeding success – Information about the location of active nests is communicated to DIO and tenant farmers to avoid inadvertently damaging / disturbing nests. Monitoring information is compiled in an annual report, which DIO use to inform future management of the training estate, including stone-curlew plots.
2. Advice to landowners / tenants – nesting opportunities within a 5km functional buffer of the SPA are maintained through collaboration with farmers, ensuring that if breeding birds are disrupted from the plains, alternative opportunities are available nearby.

⁴⁷ Footprint Ecology (2016) *Salisbury Plain Visitor Survey 2015*

⁴⁸ Liley, D., Payne, K. & Peat, J. (2007) *Access Patterns on Salisbury Plain*. Footprint Ecology / Enviro Ltd., Wareham, Dorset

⁴⁹ HRA and Mitigation Strategy for Salisbury Plain SPA (in relation to recreation pressure from residential development). Wiltshire Council May 2018

3. Visitor monitoring – surveys are carried out every five years to help understand if and where recreational pressure is increasing on the plains, and whether this is likely to conflict with areas of known nesting activity.

The Council currently uses the Community Infrastructure Levy to fund annual monitoring and advice to landowners by the RSPB, and to purchase visitor monitoring by a specialist contractor. Information is shared and discussed between all stakeholders (NE/DIO/RSPB/WC), who are in agreement that this is an effective way to monitor and manage the potential effects of residential development on stone-curlew populations. The mitigation strategy was important in allowing Natural England to agree with the conclusions of the Core Strategy HRA, and the Council also relies on it to demonstrate that planning applications for residential development would not have an adverse effect on the integrity of Salisbury Plain SPA.

Stone-curlew Management Plan

The MoD actively manages Salisbury Plain training area for the conservation of stone-curlew in accordance with their Stone-curlew Management Plan. Management measures include the creation, management and maintenance of 35 dedicated nesting plots in appropriate locations to suit the particular requirements of nesting stone-curlwews. When the first management plan was produced in 2000, there were 20 pairs of stone-curlew nesting on the training estate. However, it now regularly supports 26 – 32 pairs, and has proved to be an effective mechanism in increasing both the range and size of the population breeding on the plain. The latest version of the management plan⁵⁰ includes a commitment to maintain 35 plots across the plain and monitor each plot's productivity, investigating the potential to move unsuccessful plots to more appropriate parts of the plain where appropriate. The evidence gathered as part of the Council's mitigation strategy (above), is therefore vital in supporting and informing the MoD's adaptive management of the plain in line the objectives of the management plan.

Stone-curlew Monitoring

A large amount of historical data exists for stone-curlwews at Salisbury Plain and across the Wessex area due to monitoring that was undertaken by the RSPB when funding was available through the EU Life Fund. This data is invaluable for being able to put current monitoring into context. After a few years of poor weather when productivity was below the level required to maintain the population, the most recent monitoring reports show the population is slowly increasing again. Productivity in the surrounding private farmland continues to be generally higher than on MoD land, suggesting that immigration is maintaining numbers in the SPA⁵¹.

Effects Alone

Eight allocations relate to sites within the 6.4 km visitor catchment for Salisbury Plain SPA and could potentially increase recreational pressure on the stone-curlew population, as shown in Table 5. The most recent visitor survey indicates that approximately 1% of residents in this area regularly visit the plains and using the average household size for Wiltshire of 2.27 people per dwelling, it can be

⁵⁰ Ash *et al* (2014) A Progress Report and Management Plan for Stone-curlew; Salisbury Plain Training Area

⁵¹ RSPB (2017) Stone-curlew CIL Monitoring Area Report 2016

estimated that the potential allocations would result in an additional 15.33 visits to the Salisbury Plain SPA per day as shown in 11 below.

Settlement	Policy	Site Name	Proposed housing numbers	Estimated population increase	Estimated Additional Visits
Ludgershall	H1.1	Empress Way	270	613	6.13
Trowbridge	H2.2	Land off the A363 at White Horse Business Park	175	397	3.97
Warminster	H2.7	Bore Hill Farm	70	159	1.59
	H2.8	Boreham Road	30	68	0.68
Chapmanslade	H2.9	Barters Farm Nursery	35	80	0.80
Bratton	H2.11	Off B3098 adjacent to Court Orchard / Cassways	35	80	0.80
Durrington	H3.5	Clover Lane	45	102	1.02
	H3.6	Larkhill Road	15	34	0.34
				Total	15.33

Table 11 – Estimated additional daily visits to Salisbury Plain SPA

In-combination Effects

The Core Strategy HRA considered the potential in-combination effects of the ABP, which at the time was based on a general assumption of 1,200 SFA units, which was estimated to generate approximately an additional 38 visits per day. The potential in-combination effect of this plan with the ABP is therefore an additional 53.3 visits per day to Salisbury Plain SPA. The final housing figures for ABP are less than 1000 so the combined number of daily visits will be proportionally less.

In the HRA of the ABP Masterplan which was updated by the HRA of the final scheme (18 December 2015), DIO committed to providing the following mitigation to reduce residual impacts:

- i. Revision of the Stone-curlew Management Plan to improve the management and number of plots on the plains
- ii. Prepare a Recreation Access Action Plan to review existing Public Rights of Way and accessible open spaces and identify opportunities for additional routes for running and dog-walking which would reduce potential conflict with Stone-curlew plots.
- iii. Provide information on responsible access for service personnel and families. This would include information on existing access arrangements and suggested local walking/ running routes based on the results of the above study, alongside information about the environmental sensitivity of the Salisbury Plain training Area and the importance of keeping to existing tracks.

The Council and NE agreed with the conclusion of the HRA that additional visits generated by SFA would not have an adverse effect on the Salisbury Plain SPA in combination with the Core Strategy

planned development. Measure i. has been completed, and measures ii. and iii. have been secured through a planning condition / obligation. The condition for measure ii has now been discharged.

The effects of in-combination growth arising from the Core Strategy are dealt with in the 'HRA and Mitigation Strategy for Salisbury Plain SPA'. In 2012⁵² this document concluded that the in-combination levels of growth proposed in the Core Strategy had the potential to lead to adverse effects on stone curlew due the fact this ground nesting bird was vulnerable to walkers, particularly dog-walkers. The document went on to provide details of the proposed mitigation strategy to deal with in-combination effects.

Since the HRA for the WHSAP pre-submission document was, the 'HRA and Mitigation Strategy for Salisbury Plain SPA' has been revised⁵³. The revision examines the effectiveness of mitigation to date and assesses the impact of additional housing which is coming forward under the Core Strategy as well as in-combination growth from other plans and projects such as the Army Basing Project.

The review recognises that since 2002 there has been a steady increase in breeding success of stone curlew, measured as numbers of breeding pairs and number of young fledged per breeding pair and the period 2012-2017 also reflects this trend. The conservation target for the SPA is to maintain the breeding population at or above 15 pairs. Over the last ten years the number of pairs has remained fairly stable at around 24 and it can therefore be concluded that the SPA is in favourable condition in respect of this target. Although not a target, the productivity figure of 0.61 birds per pair is used as an indication of whether the population is maintaining itself. In 2017 the productivity on the SPA was 0.65 after a period of 5 years when the figure was about 0.55. It appears that breeding on agricultural land outside the SPA where the productivity is higher is helping to support the SPA population and this has been recognised for a number of years. Overall the revised HRA and Mitigation Strategy concludes that the SPA remains in favourable condition and there is no evidence that increased visitor numbers are having an impact.

Mitigation Measures

If the Council is to continue to rely on the revised HRA and Mitigation Strategy 2018, it must be satisfied that it remains a valid and effective means by which to avoid an adverse effect on the SPA. In order to adopt the conclusion of a previous assessment, the Council must satisfy itself that the principles of the DEFRA Guidance can be met (as set out in the methodology section 'Appropriate Assessment' above):

- 'No additional material information has emerged'

The following matters have emerged since the 2018 review:

- i. Monitoring data are now available for 2018 and 2019. These show that numbers of breeding pairs and the young fledged per breeding pair are within the general range

⁵² HRA and Mitigation Strategy for Salisbury Plain SPA (in relation to recreation pressure from redevelopment). Wiltshire Council March 2012

⁵³ HRA and Mitigation Strategy for Salisbury Plain SPA (in relation to recreation pressure from residential development). Wiltshire Council May 2018

of the 2012 – 2017 period with 2019 being an exceptionally good year for both measures.

- ii. The 2018 monitoring report notes that the new Countryside Stewardship scheme and changes to the regulations regarding Ecological Focus Areas are making it more difficult to achieve the best land management for stone-curlews and this is something that may affect breeding success in the future.
- iii. There is an indication in 2019 data that the distribution of nesting across the three parts of the plain, west, central and east, may be changing. While to date the eastern plain has been the most popular for nesting, 2019 saw the lowest number of pairs there since 2003 while the western plain saw a record high. It is too early to confirm whether this is the start of a long term trend and what the cause may be but there is no suggestion at present that the stone-curlew population is in decline. The mitigation strategy ensures that population trends will be followed until at least 2031.
- iv. Military training activity is increasing across the plain because personnel are being relocated from Germany. The MoD has its own bespoke management plan to control training levels and to provide mitigation in the form of managed breeding plots and the effectiveness of this is being monitored by the MoD.
- v. A few hundred dwellings could come forward as windfall development through neighbourhood plans in addition to those anticipated in the WCS.

It is recognised that the pressures on this species at Salisbury Plain are changing and in the future further mitigation may be necessary. Experience has demonstrated landowners are willing to take up conservation measures and interventions have been proven to be effective at reviving the population. Where such measures may be insufficient, future housing plans may need to refocus housing delivery. For the time being the current strategy is adequate to support housing numbers proposed by the WHSAP in combination with other plans and projects as monitoring will ensure that any necessary review of mitigation measures will be timely.

- 'The analysis underpinning the reasoning, conclusion or assessment they are adopting is sufficiently rigorous and robust'.

The reasoning and conclusions of the 2018 review remain sound and are supported by recent monitoring which shows that the stone-curlew populations are stable despite recent increases in local housing numbers. No plots have repeatedly failed in recent years and the partners have no raised any concerns about the effectiveness of the strategy.

Conclusions on Integrity Test

The patterns of planned growth within the visitor catchment of Salisbury Plain SPA are largely in line those proposed in the Core Strategy, as envisaged when the Stone-curlew Mitigation Strategy was prepared and agreed with Natural England in 2012. The 2018 review concluded that the general approach of the mitigation strategy is still considered to be an effective and reliable means of mitigating the effects of increasing recreational pressure on Salisbury Plain, despite the potentially larger number of additional visits to be generated by new housing development. The RSPB has

continued to give advice to farmers and DIO continue to manage the training area responsibly for the stone-curlew population, and monitoring shows that the population is stable. At the current time therefore, it is considered that continued implementation of the Stone-curlew Mitigation Strategy can be relied upon to conclude that the WHSAP would not affect the integrity of the Salisbury Plain SPA either alone or in combination with other plans or projects.

Recommendations – Salisbury Plain SPA Recreational Pressure

There are no recommendations for changes to policies or supporting text.

River Avon SAC – Phosphate (P1)

In addition to the conservation objectives, SSSI condition monitoring and site improvement plan, the following additional sources of information were used to inform the appropriate assessment.

Information Used in Making the Assessment

River Avon SAC Review of Consents⁵⁴

The ‘Review of Consents’ (RoC) process is an obligation under Regulation 63 of the Habitats Regulations to ensure that competent authorities review any consents which were issued before Natura 2000 designations were formally made, that could affect the integrity of such sites. It is effectively a retrospective HRA of extant consents, which requires the competent authority to affirm, modify or revoke such consents in order to avoid ongoing or future deterioration of the site.

In 2010, the EA carried out a RoC of all of its environmental permits relating to the River Avon SAC. The RoC paid particular attention to STW discharges on P levels in the River Avon and concluded the majority of licences would not affect the integrity of the SAC subject to the implementation of substantial P stripping upgrades to Best Available Technology by Wessex Water under AMP4 at main STWs. This enabled the EA to conclude that discharge consents would not affect the integrity of the River Avon SAC either alone or in-combination. The only exception was at Warminster STW, where additional P stripping measures did not achieve the necessary proportionate reduction in P levels. Having appraised various potential solutions, the EA concluded it would be most appropriate to address this issue through a Nutrient Management Plan (NMP) to reduce diffuse sources of P from elsewhere in the catchment (see below).

At the time of the examination of the Core Strategy a joint ‘letter of intent’ between EA and NE stated these statutory bodies would not object to any development which would discharge to a STW within the permit headroom⁵⁵. This was on the basis that those permits had recently been assessed under the RoC and the forthcoming NMP would secure any necessary further reductions in P to secure the favourable conservation status of the river. The Core Strategy HRA confirmed that planned housing till 2026 could be accommodated within the permitted headroom at each of the relevant STWs and concluded that the total Core Strategy development would not have an adverse

⁵⁴ Environment Agency (2010) River Avon – Site Action Plan

⁵⁵ Nutrient management in the Hampshire Avon catchment – Letter of intent by Environment Agency and Natural England (23rd January, 2013)

effect on the River Avon SAC through additional P loading, on the basis of the conclusions of the RoC, the letter of intent by EA and NE, and production of the forthcoming NMP.

River Avon Nutrient Management Plan⁵⁶

The aim of the NMP in relation to development was to bring phosphate concentrations in the River Avon SAC down to the conservation targets set by Natural England in order to bring the river system into favourable condition as required by the Habitats Regulations. Due to the complex factors influencing phosphate in the Avon, the NMP set interim progress goals which were to be achieved by the end of 2021. The underlying premise of the plan was that increases in sewage derived phosphate would be more than offset by reductions from agricultural sources, such as farming, due to the catchment sensitive farming initiative funded through Defra. However, by early 2018, Natural England and the EA reported that catchment sensitive farming was much less effective than projected in the NMP modelling and unlikely to offset increased phosphates from new development.

Memorandum of Understanding March 2018

In March 2018, the Council was advised by the Environment Agency (EA) and Natural England that it could not rely on the NMP. A joint statement stated:

“Evidence suggests that the targets in the Hampshire Avon nutrient management plan are unlikely to be delivered by 2021. We are modelling what this means for the Nutrient Management Plan and will be providing recommendations in March 2019.

We know that there will be new development and we advise that the new development within the catchment of the Hampshire Avon needs to be “phosphate neutral”. We will work with you to help you demonstrate how that can be best achieved.”

The Council was been advised that in order to comply with the Habitats Regulations, it should demonstrate all development is “phosphate neutral” for an interim period until any necessary permanent reductions can be accommodated in the water company’s asset management plan. During this period, the availability of permit headroom could be taken into consideration. The relevant parties agreed to work under a Memorandum of Understanding (MoU⁵⁷) signed in March 2018 which set out a method for calculating and offsetting phosphate generated by each new development approved in the interim period and committed to identifying measures that would be delivered to reduce phosphates in the catchment. It recognised that the conservation targets will only be met in the long term if measures are taken to reduce runoff from agricultural land and discharge concentrations from sewage treatment works (STW). The MoU was based on the supposition that phosphate neutrality would end after the next water industry Price Review (PR24) as neutrality for developments permitted between 2018 and 2025 would be achieved by measures in Wessex Water’s Asset Management Plan. Beyond this time, spatial planning for the catchment would take account of Water Company planning as well as Government policy and legislation.

⁵⁶ <https://www.gov.uk/government/publications/nutrient-management-plan-hampshire-avon>

⁵⁷ The MoU was submitted with along with the draft Wiltshire Housing Allocations Plan, the Council’s Schedule of Proposed Changes and all other evidence in July 2018

In an email dated 26 March 2019, NE and the EA updated their advice in light of the CJEU ruling in *Coöperatie Mobilisation*⁵⁸.

“There are two key alterations that we wish to make to our previous advice...

1) Phosphate-neutrality commitment

Measures should be in place to ensure P-neutrality of housing growth until a time when additional mechanisms are in place to ensure that P concentrations in the river do not increase unacceptably as a result of development.

2) Temporary impact of phosphorous

Phosphate ‘neutralising’ measures should be deployed in an appropriate spatial and temporal way to reduce the local impacts of growth to an acceptable level to protect the integrity of the SAC, based on in-river P concentration downstream of each STW.”

These statements demonstrate that work to achieve the conservation objectives, and specifically to reduce phosphate to target levels is likely to extend beyond 2025. Until a mechanism is secured to do this effectively, the pattern and rate of housing growth will be heavily influenced by the spatial and temporal distribution of phosphate mitigation measures.

Interim Delivery Plan

In March 2019, Local Authorities in the River Avon catchment, Natural England, the Environment Agency and Wessex Water (the Working Group) agreed an Interim Delivery Plan (IDP)⁵⁹ to support the MoU which set out projections of growth up to 2025 together with the measures that will be implemented to mitigate the associated increase in phosphate. This document is now the basis on which the Council is considering the implications of the Wiltshire Housing Site Allocations Plan for the SAC’s conservation objectives.

The Interim Development Plan (IDP) is currently the agreed mechanism by which windfall and allocated growth in the catchment will be mitigated between 2018 and 2025. Wessex Water has undertaken to partly offset growth for the period 2020 – 2025 by including an Outcome Delivery Incentive (ODI) in its Asset Management Plan for 2020 - 2025. As a result of the ODI the company will seek, where possible, to maintain levels of phosphate discharged from STWs in the River Avon catchment to the average level of the last five years.

For its part, the Council has undertaken to deliver measures from the IDP to cover:

- the load from sewered and unsewered growth permitted in Wiltshire over the period 2018-2020. Even though little of this development will be operational and adding to loads by 2020, these measures are proposed as a precautionary approach;

⁵⁸ *Coöperatie Mobilisation for the Environment UA and Others v College van gedeputeerde staten van Limburg and Others (C-293/17 & C-294/17)*

⁵⁹ River Avon SAC – Phosphate Neutral Development. Interim Delivery Plan, January 2019. Wood Environment and Infrastructure Solutions UK Ltd for Wiltshire Council

- the load from unsewered growth in Wiltshire between 2020 and 2025, and;
- any under-delivery by the ODI in Wiltshire over the period 2020-2025

Army Basing Integrated Water Management Strategy⁶⁰

The HRA for the ABP identified that the proposals would result in increased P loading to the Upper Avon due to:

- Increased provision of Service Living Accommodation within the garrisons
- Delivery of substantial numbers of Service Family Accommodation (SFA) outside the garrisons
- The closure of Larkhill STW due to limited capacity, resulting in all existing discharge from the garrison (to ground) being pumped to Wessex Water's Ratfyn STW on the Upper Avon

NE considered that the P loading resulting from the proposals could compromise the delivery of the NMP targets for the Upper Avon despite being a medium risk sub-catchment, and therefore P offsetting would be required in accordance with the requirements of the NMP and CP69. The MoD has therefore produced a water management strategy which clearly sets out the total uplift in P loading from ABP and a Phosphate Management Plan including measures to offset the P loading from the ABP. DIO also funds a CSF officer dedicated to the Upper Avon catchment, to offset the effects of additional P loading from ABP development; at the time NE agreed this would be sufficient to conclude that ABP would be P neutral.

Effects Alone

In view of NE and the EA's advice, all allocations in the catchment must be assumed to give rise to effects alone as the River is already not achieving its conservation objectives. Unless mitigation is secured to achieve phosphate neutrality, each allocation will take the river further away from favourable condition.

In-combination Effects

By ensuring that every allocation and residential planning permission is phosphate neutral, the Council will ensure there will be no residual impacts of development and thus no scope for the WHSAP to lead to impacts in combination with other plans and projects.

Mitigation Measures

The IDP identifies a range of capital works and shorter term measures that can be delivered on site, off site within catchment, and within the remit of Water Companies. A combination of the first two approaches is being used.

Firstly, a condition is currently being applied to all permissions granted in the catchment requiring dwellings to comply with the optional Building Regulations Requirement of maximum water use of 110 litres per person per day. The only other time when mitigation measures might need to be

⁶⁰ Kelda Water Services (2016) Integrated Water Management Strategy – Southern Salisbury Plain Area

secured for individual planning permissions would be in the rare and currently unforeseen circumstances when alternative off site measures are unavailable. These measures may comprise, for example, on site package treatment plants and infiltration systems.

Secondly, cessation of agriculture will reduce phosphate inputs permanently when green field land is developed. This is calculated to offset the load from unsewered growth in the catchment between 2020 and 2025.

However, the bulk of the Council's phosphate mitigation is anticipated to be delivered off site within the catchment through an online trading platform being set up by Wessex Water. This will be used by both Wessex Water and the Council to purchase phosphorus reduction interventions with the Council's purchases being funded through CIL. Examples include:

- creation of on-farm silt traps to reduce diffuse pollution from agricultural yards etc;
- new wetlands at strategic locations alongside the river to intercept flows and treat water through sedimentation / nutrient uptake by plants;
- conversion to less intensive use on a temporary basis where short term reductions are required to bridge a gap before longer term measures come on line;

In order to comply with NE and the EA's advice from 26 March 2019, the Council must ensure the relevant quantum of phosphate reduction is purchased and starts to be delivered before a development becomes occupied. None of the allocations in the catchment are expected to have been occupied before the trading platform is operating and phosphate reduction measures have been purchased. The trading platform will employ a member of staff to undertake compliance checks so that the trajectory of reduction measures can be matched to housing delivery on an annual basis with any shortfall being made up in the following year.

Phosphate reduction measures must also be located upstream of the relevant STWs. Allocations in the WHSAP will require all the mitigation to be achieved upstream of Petersfinger STW (located on the south side of Salisbury) with a small proportion delivered upstream of Ratfyn STW (located on the south side of Durrington). Figures in the IDP, discussed in section 4.4 of that document, show that such a distribution can be readily achieved.

Phosphate projections for sewered development are around 85 kg P/year in the financial year 2018 / 2019 and 155 kg P/year for 2019 / 2010. Approximately two thirds of this will occur in Wiltshire and there will be a small additional contribution from employment provision over these two years of about 30 kg. The IDP demonstrates these reductions can be readily achieved⁶¹. Further measures are available⁶² should it be necessary for the Council to make up any shortfall should the ODI fail to deliver some of the benefit intended but this will be capped by the sum allocated to the scheme in CIL. Any subsequent shortfall may need to be funded through S106 developer contributions. Sensitivity testing in the IDP demonstrates that the phosphate calculations for 2018-2025 are likely

⁶¹ For example at paragraph 5.5.4 of the IDP installing wetlands on 12 dairy farms could yield a reduction in loading of 156 kg P/year and would cost £16,400 equivalent annualised cost. Also para 5.5.5 Changing land use from intensive grazing to extensive grass production on 7 farms would yield a reduction in loading of 161 kg P/year, estimated at £84, 240 per year.

⁶² For example at paragraph 5.5.14 of the IDP 5.5.13 Changing land use from intensive grazing to extensive grass production on 24 farms would yield a reduction of 552 kg P/year costing £295,680 per year. Agriculture census data identifies 100 intensive grazing holdings in the Avon, mainly in the upper catchment.

to be an over-estimate as Wessex Water currently discharges water considerably below the permit level. The extent to which bespoke arrangements would be required if the ODI is not met is therefore unlikely to compromise delivery of the WHSAP.

The MoU will be reviewed annually by the Working Group to ensure the housing trajectory matches phosphorus reductions achieved on the ground and to ensure it remains fit for purpose as a result of the growing evidence base.

Conclusions on Integrity Test

The Working Group has a continuing role overseeing the possibility of adverse effects and managing phosphate discharge from new development.

An Action Plan lists individual projects and measures to take the IDP forward, including funding, timescales and responsibilities for delivery. The Plan has a formal role in respect of monitoring and reviewing performance, matching information on housing delivery in the catchment against the effectiveness of the ODI and mitigation measures. It clarifies ownership of actions from the IDP in more detail to ensure actions are completed appropriately. Action planning therefore provides further certainty for the years ahead.

Currently, the trading platform is being finalised and Wiltshire Council is negotiating a contract with Wessex Water to purchase phosphate reductions for permissions granted in 2018/2019. None of the allocations in the WHSAP have started to be built yet. To date outline permission has been granted for Land at Hilltop Way (10 dwellings) and applications for outline permission are in the planning system for 754 dwellings. In addition, a reserved matters application is being determined for Boreham Road (35 dwellings). It is evident therefore that no more than a very few dwellings at WHSAP allocation sites would be occupied before the end of the current financial year. By that time the Council expects to have purchased phosphate reductions for 2018/2019 and to be auctioning phosphate reductions for the post 2019 period in readiness for delivery from spring 2021.

The Working Group provides opportunity for the statutory agencies and Wessex Water to discuss fresh evidence relating to SAC condition and the implications of changes in the water industry. Likewise, planning authorities are able to provide feedback on the progress of development, spatial plans and to resolve cross boundary matters. A transparent arrangement for matching phosphate reductions against annual housing delivery will be resolved before the end of 2020 so that the effectiveness of the mitigation can be tracked and adjusted as necessary for the following year.

In view of the fact the Working Group continues to work effectively to deliver the MoU and the IDP, the Council is able to conclude beyond reasonable scientific doubt that the WHSAP will not have an adverse effect on the River Avon SAC through phosphate loading, either alone or in-combination with other plans and projects.

Recommendations – River Avon SAC Phosphate

Supporting text should be added to the Plan explaining the implications of the NMP and subsequent documents for new development at Warminster, Salisbury and Durrington. These implications are that all development must be phosphate neutral until such time that the Council is advised otherwise by statutory bodies. Reduced water consumption will be required as a condition of all development in the catchment and bespoke mitigation may be required at specific allocation sites where deficiencies in mitigation provision arise.

River Avon SAC - Abstraction

In addition to the conservation objectives, SSSI condition monitoring and site improvement plan, the following additional sources of information were used to inform the appropriate assessment.

Information Used in Making the Assessment

Low Flows Investigations (2008)⁶³

This report summarises the work carried out in the Low Flow investigation of the impact of public water supply (PWS) sources on the River Avon SAC in order to inform the EA's RoC (see below). Potential exceedances were identified against Natural England guidelines as those causing 10% reduction of natural flow at summer low flow conditions (Q95). The report identified exceedances, modelled on the basis of full permit operation, on the rivers Bourne and Wylde. The representation of the River Till in the hydrological model was not as good as the rest of the catchment, and some doubt remained as to the effects of abstraction on that waterbody. The effects of abstraction were found to have only a weak causal relationship with the condition of fish and macroinvertebrates.

River Avon SAC Review of Consents (2010)

The RoC reviewed existing consents for abstractions in the River Avon catchment and their effects on the SAC through low flows both alone and in-combination. The EA found that it was not possible to conclude that a number of consents for fish farms and PWS would not have an adverse effect on the integrity of the SAC through low flows, particularly on the Bourne, Wylde and Till. The EA therefore modified the relevant consent conditions to secure tighter restrictions on timing and volumes of abstractions in order to achieve acceptable minimum flows in line with Natural England guidelines (see above). This resulted in an overall reduction in abstraction of 23.5 MI/d within the Hampshire Avon catchment and allowed the EA to conclude that the revised consents would not have an adverse effect on the SAC alone or in-combination. However, it is worth noting that the RoC assessments did not take account of MoD abstractions, which are exempt from permitting.

In order to comply with these revised licence restrictions significant infrastructure improvements were required by Wessex Water, including in particular their proposed Wessex grid project which allows bulk transfers across their resource area during dry periods; this infrastructure has largely been funded and delivered as part of AMP4 and AMP5.

⁶³ Wessex Water (2008) *Low Flows Investigation: River Avon SAC*

Hampshire Avon Management Area Abstraction Licensing Strategy (2012)⁶⁴

This Licensing Strategy sets out how water resources are managed in the Hampshire Avon catchment. The resource availability assessment shows that there is no water available for abstraction across the catchment during low flow (Q95) conditions, with parts of the Upper Wylde, Bourne and Upper Avon being restricted, even during more normal flow conditions. As a result, resource reliability on these waterbodies is also limited to <50% of the time. The strategy also highlights that new applications for abstraction in a SAC catchment will be subject to HRA, which may require that abstractions are limited by time / volume, or even refused in order ensure that they don't have an impact on the SAC.

Wessex Water's Water Resource Management Plan (2014)⁶⁵

This Water Resource Management Plan (WRMP) sets out the company's approach to meeting increasing demands for water resources in their area (which includes the Hampshire Avon) until 2040. The demand forecast took account of planned growth in emerging and adopted local plans and core strategies, including the Wiltshire Core Strategy, in addition to examining local trends and population projections based on established methods. The plan includes a clear commitment to reduce leakage in their network by 25% by 2040 in order to reduce impacts on river flows while still continuing to meet rising demand from an increasing population.

The company has also recently completed construction of a regional grid of pipelines across their operational area which allows them to bulk transfer large volumes of water to sensitive catchments experiencing low flows during periods of drought and peak demand, which gives them significant flexibility to meet demand and comply with new licence conditions which were tightened through the RoC process (see above) without putting sensitive stretches of river at risk. The WRMP has been signed off by DEFRA and OFWAT as a robust plan which demonstrates that Wessex Water can continue to sustainably meet demands for PWS in their area till 2040 despite the revised abstraction licences.

As a competent authority under the Habitats Regulations, Wessex Water carried out a HRA of their WRMP⁶⁶. The HRA concluded that the plan would not have any likely significant effects on any Natura 2000 site, including the River Avon SAC. Both Natural England and the EA were consulted on both the WRMP and the accompanying HRA and were broadly satisfied with its conclusions.

Wiltshire Core Strategy HRA (2014)

The Core Strategy HRA confirmed that planned housing till 2026 could be accommodated within the headroom of the revised abstraction consents following the RoC. The HRA therefore relied on the conclusions of the RoC and Wessex Water's WRMP to demonstrate that the Core Strategy would not have an adverse effect upon the River Avon SAC through low flow conditions, the conclusions of which were accepted by EA and NE at that time.

⁶⁴ <https://www.gov.uk/government/publications/hampshire-avon-abstraction-licensing-strategy>

⁶⁵ Wessex Water (2014) Final Water Resource management Plan (2015-40)

⁶⁶ Cascade Consulting (March 2013). Draft Water Resources Management Plan 2013 Habitats Regulations Assessment Stage 1 – Screening

Army Basing Programme – Groundwater Model Update

This is a recent study commissioned by the MoD as part of the ABP⁶⁷, which updates the Wessex Basin Groundwater Model used in the RoC with more recent information accounting for the first time, existing MoD abstractions and the additional effects of ABP once complete. Although ABP will result in a relatively modest increase in overall abstraction due to reduced leakage within the garrisons, the closure of Larkhill STW will have significant effects on recharge rates to the Till and the Upper Avon. Larkhill STW is a groundwater discharge, providing recharge to both the upper reaches of the Till and a stretch of the Upper Avon upstream and downstream of Ratfyn STW. Following closure of the Larkhill STW, all discharges will be pumped to Ratfyn STW as a surface water discharge to the Upper Avon. The model shows that following ABP, flows will be lower upstream of Ratfyn due to groundwater abstraction, and higher downstream due to the increased surface discharge from the STW.

Army Basing Integrated Water Management Strategy⁶⁸

This strategy shows that the impact of ABP on the SAC and Nine-Mile river can be removed (and flows improved) if the Larkhill abstractions are reduced from 1.4 to 0.8Ml/ day and the Round 'O' abstractions are reduced from 1.1 to 0.7Ml/ day, with the shortfall drawn from the existing Wessex supply to the Camp. By 2018, MOD will therefore increase the use of the existing Wessex Water supply to Larkhill and install a new supply to Bulford Camp. These supplies will provide up to 100% of the potable demand at both sites, which will allow the local MOD abstractions to be reduced or turned off as required during key periods of low flow in the Avon, without affecting supply to either site. To protect river flows in the interim, the Larkhill STW soakaway will not be turned off and MOD will not abstract water above current monthly peak volumes from the Larkhill, Bulford or Round 'O' boreholes, until the Wessex Water secondary supplies are secured and operational. It is understood that the Wessex Water secondary supplies can be provided within existing licence headroom and imported from other catchments using the integrated grid when necessary.

Both the EA and NE have accepted that this strategy will avoid any adverse effects on the River Avon SAC from ABP.

⁶⁷ AmecFW, 2016. Army Basing Programme – Groundwater Model Update: Briefing note on Groundwater Model Scenario Output

⁶⁸ Defence Infrastructure Organisation (2017). Army Basing Programme, Salisbury Plain, Integrated Water Management Strategy February 2017

Consultation Responses

NE has raised concerns about potential effects of abstraction on certain upper reaches of the River Avon SAC. They highlighted a recent investigation (modelling) on the western arm of the Upper Avon commissioned by Wessex Water⁶⁹. This identified that naturally low (dry weather) flow in combination with Wessex Water groundwater abstractions (actual abstraction), would reduce by 20-36% near the upstream limit of the SSSI declining to 12-26 % at the downstream end of the western arm, which therefore fails the accepted flow guidelines (10% reduction of natural flow at Q95).

NE also highlighted the updated Wessex Basin Groundwater Model and potential in-combination effects of PWS and military abstractions on the River Till and a stretch of the Upper Avon during naturally low (dry weather) flow conditions (see above). On the Upper Avon there is a risk of failing one of the SAC favourable condition standards near the Nine-Mile River during naturally low flow conditions. They also highlighted a failure along the entire length of the River Till modelled from Winterbourne Stoke to its confluence with the River Wylfe and advised that flow on the winterbourne length of the SSSI/SAC above this point cannot be reliably modelled; the impact of abstraction and licensing is therefore uncertain.

The EA has advised that water supply capacity for all sites must be assessed in consultation with the relevant suppliers.

Wessex Water highlighted specific sites within the River Avon SAC catchment where there is limited supply capacity available from the local distribution network, however they have not highlighted any areas where supplies could not be met within existing abstraction licences.

Effects Alone

Although water supplies are clearly limited in several parts of the catchment, particularly during dry weather conditions, the EA's RoC process has ensured that the majority of licences in the most sensitive parts of the catchment were modified to the extent that they could no longer have an adverse effect on the SAC through low flows and were deemed to be HRA compliant at that time. Based on responses received from Wessex Water to date, it appears that sufficient water resources are available to supply all current allocations within those modified abstraction licences. It is considered that the conclusions of the RoC can still be relied upon in the majority of areas on the basis that there is no more recent evidence to call the assessment into question, and therefore it can be concluded that the majority of allocations in the catchment would not have an adverse effect on the integrity of the SAC through abstractions and low flows.

The only exceptions are areas where new evidence has come to light, including settlements on the following watercourses:

- River Till – The updated Wessex Basin Groundwater Model highlighted failure against flow guidelines along most of its length where it could be reliably modelled, while the impacts of abstraction upstream of Winterbourne Stoke (including Shrewton) remain uncertain. This

⁶⁹ Cascade Consulting, 2013. AMP5 Western Arm Water resources investigation.

issue was highlighted early in the site selection process / settlement level HRA screening assessment, and no allocations are currently proposed at Shrewton.

- Upper Avon – The updated Wessex Basin Groundwater Model demonstrates that the existing PWS and military abstractions on the Upper Avon are having a significant effect on low flows causing more than a 10% reduction of natural flows at Q95 along a stretch of the river from upstream of Durrington to downstream of Amesbury. The Durrington PWS exacerbates these low flows, causing a >15% reduction on natural flows at Q95 for a stretch downstream as far as Ratfyn STW. A previous policy option for Amesbury was excluded at an earlier stage in the site selection process, however further abstraction (even within headroom) to supply the two proposed allocations at Durrington could exacerbate any adverse effects on the SAC. These three allocations would deliver an estimated 60 dwellings, which would use an estimated 15,000 litres/day assuming that usage is limited to 110 litres/person/day by planning condition.

Figure 4 – Full Licence (Run 296) Impact of abstraction as a % of Natural Flow (Run 251) at Q95

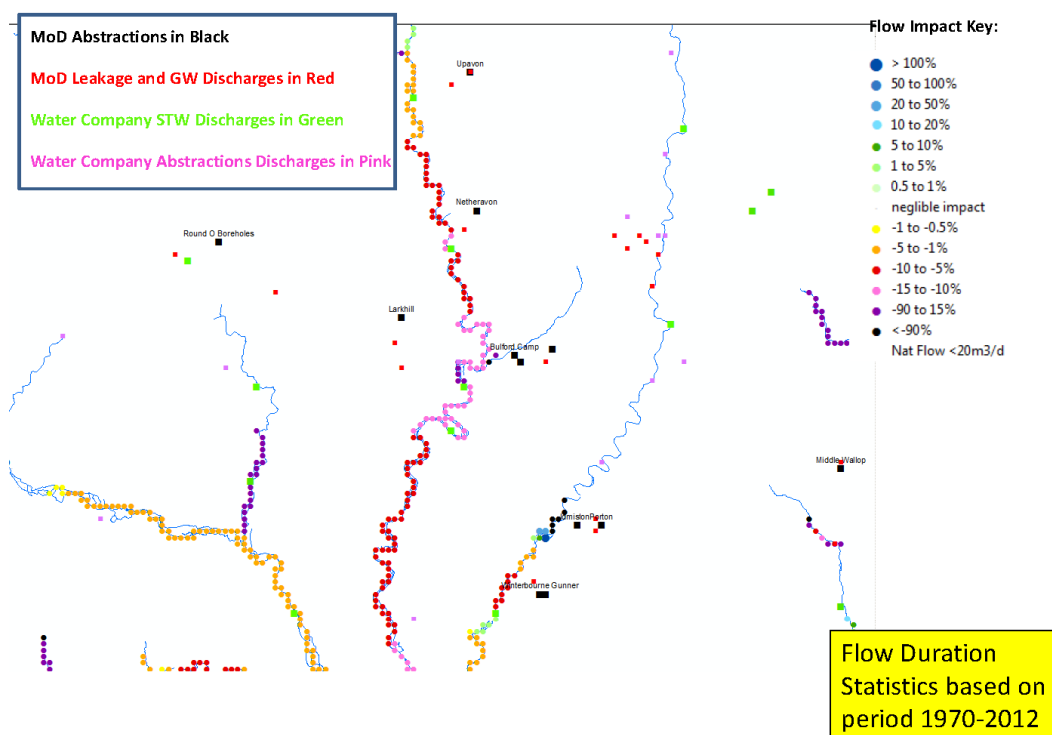


Figure 4 – Extract from the Wessex Ground Water Model

In-combination Effects

The updated Wessex Basin Groundwater Model has shown that the effects of abstraction at Larkhill on the Upper Avon (upstream of Ratfyn STW) will be exacerbated by the closure of Larkhill STW as a result of ABP, which has an impact of around 400m³/day. In order to mitigate the effects of this reduced recharge to the river, MoD groundwater abstractions at Larkhill and Round'O will both be

reduced significantly and the Larkhill Water Resource Zone supplemented by an additional 1.162ML/day imported from the Wessex Water PWS at Durrington. The Wessex Basin Groundwater Model shows that following completion of ABP and the associated changes in the distribution of water supply and discharge, flows in the Upper Avon will not be significantly worse than the current situation. However local abstractions in this area will continue to impact significantly upon flows in this stretch of the Upper Avon with continued reductions >15% of natural flows at Q95 downstream of the Durrington PWS abstraction. This situation was deemed to be acceptable as the ABP would not make the modelled situation any worse due to a commensurate reduction in MoD abstractions, and it could all be delivered within the headroom of Wessex Water's existing abstraction licence, which had been subject to the RoC process.

The in-combination effects of ABP and the site allocations plan is therefore an additional 1.177ML/day to be abstracted from the Durrington PWS. It is understood that Wessex Water's recent actual abstraction at Durrington PWS is 2.25 ML/ day against a licensed limit of 5 ML/day, therefore the in combination effects of development could easily be accommodated within the headroom of this licensed abstraction.

Mitigation Measures

It is widely accepted among the relevant stakeholders (MoD/Wessex Water/EA/NE) that the fully licensed scenario shown by the Wessex Basin Groundwater Model would be unsustainable and would have an adverse effect on the SAC if it were to be fully implemented. Investigations are currently underway to establish the need for further sustainability reductions for Durrington PWS and other local abstractions. These would be implemented through licensing of MoD abstractions when exemptions end in 2020, and through the PR24 process. If the investigations reveal that Wessex Water are unable to meet local demands through sustainable levels of local abstraction it may be necessary to extend their grid from Amesbury in order to transfer water in bulk from less sensitive abstraction licences. It is expected that any such infrastructure would be funded and delivered as part of AMP8 (2025-30). It should therefore be noted that the timescale for delivery of housing at Durrington may rely on such infrastructure improvements being in place.

Conclusions on Integrity Test

For the purposes of this assessment, the Council has reviewed the conclusions of the EA's RoC and WW's HRA of their WRMP in relation to water abstraction impacts on the River Avon SAC. Having regard to DEFRA guidance on adopting the conclusions of other competent authorities, the Council is satisfied that the conclusions of those assessments remain valid and robust across the majority of the Hampshire Avon catchment, and as such it is relatively straightforward to conclude that the majority of proposed allocations in the catchment (including those initially screened in at Warminster and Ludgershall) would not have an adverse effect on the integrity of the River Avon SAC.

New evidence gathered through a recent update to the Wessex Basin Groundwater Model (2016), has revealed that the in combination effects of existing MoD and PWS abstractions may impact on the Upper Avon and River Till through low flows, although it should be noted that the model run was based on an assumption of full uptake of PWS licenced abstractions, which does not reflect the

recent actual abstraction rates in this area. Nonetheless, it casts a degree of uncertainty on the conclusions of the RoC for those local abstraction licences, including Durrington PWS, which in turn has implications for the following allocations at Durrington:

- Clover Lane
- Larkhill Road

The abstraction required as a result of these options is less than 1% of the licensed headroom and arguably negligible when considered alone. The in combination effects of ABP and this plan will be an additional 1.177ML/day which is a significant increase of 24% of the licensed headroom, however that is almost entirely offset by reductions from MoD abstractions; indeed the HRA for the ABP, which was recently accepted by NE and EA, concluded that it would have no residual likely significant effects in relation to water abstraction. Even the in-combination effects following completion of ABP will be considerably lower than the fully licensed scenario which was modelled, with only 67% of the licensed headroom actually required to meet demand. It is therefore currently possible to conclude that the plan would not have an adverse effect on the integrity of the River Avon SAC through water abstraction, either alone or in combination with other plans and projects.

Subject to the review of local abstractions, there is a risk that infrastructure improvements may be required to accommodate new growth. It will be the responsibility of Wessex Water to implement those upgrades which would probably be during the period 2025-30. This should be referred to in the supporting text for the Durrington allocations.

Recommendations – River Avon SAC Abstraction

It is recommended that the following wording is included in the supporting text to policies H.3.5 and H3.6: *“Upgrades to the local water supply network may be required to accommodate further growth at Durrington, pending a review of local abstraction licences due to be completed in 2025. It is possible that such upgrades may need to be completed before development at this site can commence.*

Bath and Bradford on Avon Bats SAC - Habitat Loss / Deterioration

In addition to the conservation objectives, SSSI condition monitoring and site improvement plan, the following additional sources of information were used to inform the appropriate assessment.

Information Used in Making the Assessment

Wiltshire Core Strategy

During the course of the examination process, it became necessary to significantly increase the proposed housing numbers for Trowbridge by an additional 950 dwellings. This proposed modification was subject to HRA, which identified these additional dwellings would increase recreational pressure on the woods to the south east of the town. The HRA concluded:

At the current time it is not possible to accurately assess the effects of the additional 950 houses at Trowbridge upon the Bechstein’s populations, as this will be dependent upon

the location, size and nature of the relevant development sites. Nonetheless, the general quantum of proposed development at Trowbridge does have the potential to affect the Bechstein's populations, particularly if this is delivered to the south east of the town. Nonetheless, it is considered that the additional housing could feasibly be delivered without the need to develop any further to the south east by resolving transport issues to the north east, releasing Greenbelt land to the west of the town or adopting a dispersed option involving multiple smaller sites around the town. It is also worth noting that the housing figures for each community area have now been relaxed from 'at least' to 'approximately', therefore if the 950 houses cannot be sustainably delivered at the town there is the option to deliver some of this requirement in surrounding community areas within the wider HMA. Nonetheless it is important that potential effects upon the Bechstein's populations are given due regard and attention throughout the site selection process. While CP29 only sets a strategic target for housing at Trowbridge rather than a specific location, it also now includes a clear requirement for the protection of bats and their habitats to be a key determinant in the allocation of sites through the forthcoming Site Allocations DPD.

CP29 of the Wiltshire Core Strategy was also amended to reflect the recommendations and conclusions of the HRA by the inclusion of the following text:

An additional 950 dwellings will then be developed at the town once improved secondary school provision is in place towards the end of the plan period and there has been a further assessment of the effects on protected bat species and their habitats to ensure that they are properly safeguarded.

The assessment clearly highlighted the location of development (specifically proximity to the woods) as a key determinative factor in the likely significance of any effects and advocated avoiding development close to the woods in favour of other locations at a greater distance, or even at other towns if necessary. The final distribution of sites was therefore to be determined through the current plan in line with this recommendation following a fuller assessment of the potential site options.

Ashton Park Appropriate Assessment

The Council undertook an appropriate assessment of the Ashton Park outline planning application, which comprises 2,500 homes, employment land, school provision, a local centre and country park in close proximity to Biss Wood and Green Lane Wood. Extensive baseline surveys were carried out to inform the assessment which showed that Bechstein's bats also use the wider landscape surrounding the woods including hedgerows, isolated mature trees, small woodlands and the River Biss and its tributaries. A review of previous bat monitoring surveys and recent emergence surveys in the woods has also been used to provide a provisional population estimate of 350-700 individuals, which would make this one of the largest known Bechstein's breeding colonies in the UK and could represent 23-47% of the reported UK population. As a result of extensive habitat creation measures secured for Ashton Park, including an extension to the Green Lane Nature Park, provision of a 100m buffer zone next to Biss Wood and enhancement along the River Biss Corridor, this appropriate

assessment was able to conclude there would be no adverse effects of the Ashton Park development alone on the Bats SAC

Wiltshire Bats SAC Guidance⁷⁰

The Core Strategy HRA identified the potential for development in the landscapes surrounding the Bath and Bradford on Avon Bats SAC to affect the associated bat populations through loss, damage and deterioration of roosts, commuting routes and foraging areas through urbanisation of greenfield and derelict sites, and associated disturbance such as lighting. However, those effects are very difficult to predict at a strategic scale, as they depend on the particular habitat features used by the qualifying bat species, the extent to which those features would be affected by the specific development proposals, and the nature and scale of mitigation measures proposed to avoid or reduce impacts. It was therefore considered that these issues would need to be assessed on a site by site basis through HRA of individual planning applications. In addition, it was proposed that guidance for developers and planners would help to identify those sites where HRA is most likely to be a constraint to development at an early stage in order to ensure that appropriate mitigation measures were fully incorporated into schemes coming forward. The Council therefore produced the Wiltshire Bats SAC Guidance document in consultation with NE, Bath and North East Somerset Council and local experts and researchers. The document identifies 'Core Roosts' associated with the SACs and 'Core Areas' surrounding those roosts which are important for the sustenance of the SAC populations and where development has the potential to trigger likely significant effects on the SAC. The document also describes the general type of onsite 'Sensitive Features' which are likely to be used by the qualifying features, the presence of which increases the potential to trigger likely significant effects on the SAC.

NE confirmed it was satisfied that the document provided an appropriate mechanism to avoid and reduce potential impacts of development for the purposes of the Wiltshire Core Strategy HRA. The document has been in use by the Council for three years and was reviewed and updated in 2015.

Trowbridge Bat Mitigation Strategy

The Draft Trowbridge Bat Mitigation Strategy for the Bath and Bradford on Avon Bats SAC (TBMS) went to public consultation in February 2019. The strategy supports development coming forward under the WHSAP and Core Strategy including; allocations, neighbourhood plan housing, rural exception sites and development within the settlement boundaries.

The Draft TBMS referenced a considerable body of research in relation to greater horseshoe bats, lesser horseshoe bats and Bechstein's bats in order to arrive at an approach for protecting land affected by development which is functionally linked to the SAC. The elements of the document particularly relevant to habitat loss and / or deterioration are as follows:

- Maps – These show zones of high and medium sensitivity where development could impact bat habitat. Within the zone of high sensitivity, the 'red zone', there is a

⁷⁰Bat Special Areas of Conservation (SAC) Planning Guidance for Wiltshire. Issue 3.0 10 September 2015
http://www.wiltshire.gov.uk/bath_and_bradford_on_avon_september_2015_bat_sac_guidance.pdf

presumption against all but the most minor development (i.e. householder applications). This affects land within 600m of woodlands open to the public. Development occurring in the 'yellow zone' beyond this must meet set standards to ensure no adverse effects on the SAC.

- Survey specifications – These set out the survey requirements for development proposed in the yellow zone
- Requirements for information to be submitted with planning applications
- Standards for demonstrating that habitats will be protected, buffered and mitigated within greenfield application sites
- Standards for assessing and mitigating impacts from lighting
- Provision for off-site mitigation to address in-combination effects on bat habitats through Section 106 contributions.
- Provision for off-site mitigation to address in-combination effects of recreational pressure on publicly accessible woodlands funded through CIL contributions
- Provision of a project delivery officer funded through S106 contributions.

Thirty seven representations were made on the draft plan, mostly by landowners, developers and the public. For the most part comments related to matters of clarity. The Council is publishing a report on the outcome of the consultation and key matters raised will be addressed in the final version of the TBMS. Both documents will be presented to the Council with the WHSAP for adoption.

Natural England has been a key stakeholder in preparation of the TBMS and has commented on the draft as follows:

“Natural England has been involved with the development of this strategy and welcomes it as a significant step forward in enabling development whilst protecting the designated bat populations in the area.

Given the link to the Bradford on Avon and Bath Bat SAC, uncertainties associated with Bechstein’s bat ecology and the precautionary principle embedded in the Habitats Regulations, we believe this plan is proportionate in terms of the level of site-based survey required, the approach to onsite mitigation and the quanta of off-site mitigation required to address risks of residual impacts. A high level of site survey effort is needed given the importance of the area to the designated bat species, and uncertainty around Bechstein’s bats ecology. We feel the quantum of mitigation is appropriate both in terms of the justification put forward in the Strategy, but also on the basis of our professional judgement.

Whilst different developments may have different levels of impact per dwelling, and there will be uncertainties around the levels of impact, this strategy will ensure that there is a high level of certainty that development in aggregate will not cause the area to be a poorer habitat for this bat species. The strategy also mitigates for the wider landscape scale change arising from development in this area.

Our primary concern now is that of delivery. In particular, it is important that there is not a long lag between development occurring and mitigation being implemented. Once a project officer is in place it is likely that the project will take on its own momentum, and we urge you to employ a project officer as soon as funding allows. Once in post, we would like the officer to agree with Natural England an appropriate reporting mechanism, so we can understand how the strategy is being implemented.”

Recent bat surveys

Recent surveys carried out by ecological consultants, Wiltshire Wildlife Trust, Wiltshire Council and Wiltshire Bat Group have established that woodlands on the south east of Trowbridge support one of the largest populations of breeding Bechstein’s bats in the UK. During the breeding season, the colony appears to regularly split and regroup occupying a range of tree roosts and artificial bat boxes within the woodlands. In addition, a number of trees outside the woodlands themselves have been identified as roosts contrary to previous research which suggested the species was largely confined to woodland, particularly ancient woodland sites. Surveys have now confirmed the presence of several roosts around the periphery of the town including a field hedgerow tree a few hundred metres from Green Lane Wood has been used by the maternity colony based in that wood⁷¹. Surveys also reveal the bats regularly travel considerable distances through the surrounding agricultural landscapes to forage and drink beyond previously assumed Core Areas for this population. All of this survey work has been considered by the TBMS.

Aerial Photography

Wiltshire was subject to an aerial photography survey in 2014. This has been used to help identify potential Sensitive Features on the proposed allocation sites.

⁷¹ Cohen, K. (2016) Castlemead s.106 Ecology Monitoring Report: Green Lane & Biss Woods. A report to Wiltshire Wildlife Trust. Keith Cohen Ecology.

Population Monitoring

Counts have been made of Bechstein's bats using bat boxes in Green Lane Wood since 1999⁷²⁷³. These show that the maternity colony in this wood regularly stood at 17 to 71 bats between 2004 (average 44 bats). Numbers fell dramatically in 2012 to 2014 to an average of two bats which coincided with the peak period of construction and occupation for the two nearby development sites. In 2015 the maximum maternity colony size returned to 39. In 2016 the maternity colony (108 bats), was at one point found to have left Green Lane Wood in order to roost in a field hedgerow tree several hundred metres to the north. This behaviour was repeated in 2017⁷⁴. In 2018, the main maternity colony was found to be in a tree outside the woodland 200m to the east⁷⁵.

Bechstein's are notoriously difficult to monitor with any reliable degree of certainty due to their roosting ecology which involves regular switching between roosts mainly within the same wood and sometimes between woods, of which there are several in the vicinity of Green Lane Wood. In the absence of data for all woods, it is difficult to draw clear conclusions on the status of the colony from the above results. However, the monitoring results clearly do not provide any confidence that the population is stable or currently at a favourable conservation status and this seems likely to be related to increasing recreational pressure on the woods.

Response from Natural England

In their response to the emerging plan, NE expressed concerns about the proposed options to the south east of the town and their potential effects on the woods and associated bat populations, including the ability to mitigate those effects:

Trowbridge North and South – bat impact

Allocations 292 and 256 in the North and 613 and 3418 in the South all have the potential to impact upon bat habitat. Recent surveys have discovered high numbers of Bechstein's bats within the woods to the South of Trowbridge – these sites are particularly close to Green Lane Wood which is also a Local Nature Reserve and Biss Wood, where many were counted. Therefore, further allocations in these areas will require substantial surveys and impacts on bats could prove difficult to mitigate.

NE has also raised specific concerns about the scale and proximity of development to the woods in relation to the Ashton Park planning application. As a result, two of the options closest to Green Lane Woods, options 292 and 256, were removed from the plan at an earlier stage in the site selection process.

⁷² Ecological Monitoring at Green Lane Wood, Trowbridge: Survey Results 2014, prepared by Dani Linton for Wiltshire Wildlife Trust

⁷³ Ecological Monitoring at Green Lane and Biss Wood, Trowbridge: Survey Results 2015, prepared by Elizabeth Weidt for Wiltshire Wildlife Trust.

⁷⁴ Cohen, K. (2018) Castlemead s.106 Ecology Monitoring Report, Green Lane and Biss Woods 2017. A report to Wiltshire Wildlife Trust. Keith Cohen Ecology. Finalised version.

⁷⁵ Cohen, K. (2019) Castlemead s.106 Ecology Monitoring Report, Green Lane and Biss Woods:2018 surveys. A report to Wiltshire Wildlife Trust. Keith Cohen Ecology. Final.

Effects Alone

The TBMS identifies a high risk zone where developments within approximately 600m of the core Bechstein's breeding sites are likely to lead to impacts on the SAC both alone and in-combination as a result of habitat loss. None of the allocation sites lie within this zone. However, the six proposed allocations on the periphery of Trowbridge lie within the zone of medium sensitivity. In addition, a further allocation, Barbers Farm Nursery at Chapmanslade, lies within the Core Area of a Core Roost for greater horseshoe bats in Westbury.

Church Lane / Upper Studley/ Southwick Court

A Bechstein's roost has recently been identified in a tree roost on the northern edge of Southwick Country Park, within approximately 100m of all three allocations and this finding opens the possibility of many more potential roost sites in the area. The bats using this tree almost certainly form part of the same population which breeds in the woodlands south of Trowbridge and they probably land on this edge of the town for foraging and commuting. A likely significant effect through habitat loss / deterioration has therefore been assumed for these allocations.

Sensitive Features include the adjacent property 'Framfield' on Church Lane, the garden of which appears to include a large number of old trees which may form part of an old orchard; this could provide suitable roosting and foraging habitat for Bechstein's and although it would not be directly affected by the development, it could be affected by light pollution and become functionally isolated from the wider network of Bechstein's habitat. Southwick Court includes a complex of old buildings which could support roosting horseshoe bats. Several of the boundary features including strong hedgerows, old lanes, Lambrook Stream and moat at Southwick Court also provide suitable commuting / foraging features and could include mature trees suitable for roosting Bechstein's bats.

Land off A363 at White Horse Business Park / Elm Grove Farm

Radio tracking studies have recorded at least one Bechstein's bat from the Green Lane Wood complex both foraging and night roosting in woodland associated with White Horse Business Park to on the southern boundary of the Elm Grove Farm site which could be impacted by development encroaching into this area and associated lighting.

In addition, there are almost certainly strategic commuting routes through these two options linking the Green Lane Wood complex and Picket and Clanger Woods with tree roosts to the northwest at Southwick and other Core Roosts west of the town. Much of the landscape south of the town has been significantly fragmented and degraded by urban development at White Horse Business Park, North Bradley, Yarnbrook and Southwick, and these allocations therefore represent two of the few dark areas of semi-natural habitat to provide an east-west link for bats moving through this landscape. Given that these options would cause coalescence of White Horse Business Park with Trowbridge and North Bradley, they have the potential to entirely sever important east-west commuting routes on the southern edge of the town which link breeding roosts with the wider countryside and the SAC underground sites at Bradford on Avon and Bath.

Important commuting routes / foraging areas through 'Elm Grove Farm are likely to include Drynham Lane, the railway line, woodland belts associated with the White Horse Business Park, and a small tributary to the River Biss, which provide a strong network of local landscape features. There is a risk that Drynham Lane would become part of the site access from the A363 and would require substantial widening and upgrading with attendant vegetation removal and lighting which would significantly affect its use as a commuting route. Buildings at Elm Grove Farm could also support bat roosts. These buildings could be demolished or become isolated by development as part of the site proposals. Boundary features and woodland could also support Bechstein's tree roosts.

Important commuting routes and foraging areas through 'Land off A363 at White Horse Business Park' are likely to include woodland belts associated with the White Horse Business Park, a strong network of hedgerows, and the farmland setting of Willow Grove, the latter of which could include tree roosts for Bechstein's bats.

Elizabeth Way

The southern end of this allocation lies within 1.5 km of Green Lane Wood and radio-tracking of two bats in 2016 identified one bat as flying off in the direction of the Hilperton Gap⁷⁶. This area comprises grazed pasture and arable fields which are delineated by hedgerows, including a stream which drains the northern part of the site toward the Kennet and Avon canal, the Canal Industrial Estate and open farmland beyond. The gap itself represents poor foraging habitat for Bechstein's and bats would need to cross areas of street lighting to access it. While it seems unlikely this species would make regular use of the gap, conceivably it may be used, for example by non-breeding bats, if foraging resources were limited but it seems unlikely that it would comprise a resource critical to the population.

Barthers Farm Nursery

This allocation site lies in the Westbury Community Area, outside the TBMS zone of medium sensitivity but within the Core Area of a Core Roost for greater horseshoe bats. As part of a tree and plant nursery, it is essentially a brownfield site but is bounded on two sides by hedgerows. Only the latter are likely to be of potential value to bats as foraging and / or commuting habitat. While the any application coming forward for the site would be assessed against the Wiltshire Bats SAC Guidance, as informed by the TBMS, it would not be expected to contribute to the offsite habitat mitigation scheme.

Effects of the Plan as a Whole

Development in the plan will result in the loss / deterioration of substantial areas of open countryside comprising Sensitive Features likely to be used by the SAC qualifying features for roosting, foraging and commuting. It will also lead to coalescence of existing urban areas, which could result in the loss of some strategic links between the ancient woodlands to the southeast of the town and the underground SAC sites to the northwest of the town. It is considered that in the

⁷⁶ Cohen, K. (2016) Castlemead s.106 Ecology Monitoring Report: Green Lane & Biss Woods. A report to Wiltshire Wildlife Trust. Keith Cohen Ecology.

absence of mitigation measures the effects of the plan alone could have an adverse effect on the integrity of the SAC through habitat loss and deterioration, particularly for Bechstein's bats.

In-combination Effects

Several other pending applications and extant permissions at Trowbridge will potentially result in the urbanisation of a significant part of the Core Areas of key roosts to the east of the town. These are likely to contribute to effects on the integrity of the SAC in combination with this plan. In particular, Ashton Park could potentially affect the local Bechstein's population through fragmentation of commuting routes and habitat loss / deterioration. Although the developer aims to ensure these effects are mitigated as far as possible to the extent they would not adversely affect the SAC alone, it is not possible to discount residual effects which would need to be considered in combination with this plan.

HRAs have been undertaken for several developments, now permitted, within the wider Core Areas identified in the Wiltshire bat SAC guidance. The effects of those developments relate predominately to horseshoe bats. Core Areas for horseshoes do not currently extend across the WHSAP allocations. Horseshoes may nevertheless use them for commuting and foraging and there are many records of horseshoes in the general area, for example near Southwick where commercially led surveys have been undertaken. It is possible therefore for these applications to act in combination with the effects of allocations in this plan to a degree.

Bath and North East Somerset has carried out a HRA of their Core Strategy which concluded that allocations within that plan would not have any likely significant effects the Bath and Bradford Bats SAC on the basis of policy restrictions incorporated into the plan, and this was affirmed by Natural England⁷⁷. It is therefore considered that the Bath and North East Somerset Core Strategy would not have any in-combination effects with this plan.

Mitigation Measures

It is worth noting that two policy options adjacent to Green Lane Wood were removed from the plan at an earlier stage in the site selection process due to concerns about impacts on the Bechstein's population roosting in that wood and using the surrounding landscape.

From aerial photographs covering the allocation sites it is evident they are dominated by agricultural fields of improved / semi-improved pastures and arable crops. Experience with applications on sites of this nature has shown that they can generally accommodate a degree of residential development without triggering an adverse effect on the integrity of the SAC. However, in most cases it has been necessary to retain and buffer key flight lines (typically hedgerows and riparian habitats) within dark corridors and / or incorporate substantial areas of native landscaping in order to compensate for unavoidable losses of foraging habitat or commuting routes.

The TBMS is a strategy specifically scoped to address the needs of this appropriate assessment in relation to allocations and other planned development at Trowbridge. It sets out the policy and legislative background, the evidence base underpinning the plan and what is known of the ecology

⁷⁷ Bath and North East Somerset (2014) *Habitats Regulations Assessment of the Bath and North East Somerset Core Strategy (Local Plan Part 1)*

of the SAC bat species both nationally and locally. Bringing this evidence together it sets out an approach which the Council can rely on to demonstrate that planned development across the community area will not lead to adverse effects on the SAC either alone or in-combination. The approach relies on avoiding high risk zones and taking a precautionary approach to mitigating development within medium risk zones. The TBMS sets a standard for planning applications, which if met, expedites appropriate assessment at the application stage. Where standards are not met, the TBMS is potentially undermined which can be expected to considerably delay or prevent planning permission being granted.

In the strategy Core Bat Habitat is defined as:

Habitat which has been shown through surveys, or is otherwise assumed, to be used by one or more of the SAC bat species and which is therefore being retained, protected and buffered in accordance with this strategy. It also includes habitat which is proposed to be created as a mitigation or enhancement for SAC species.

In the TBMS, avoidance of impacts alone is achieved through:

- Mitigating for all habitat lost to development through the creation of new Core Bat Habitat within the allocation site boundary.
- Using best practice survey methods to defining Core Bat Habitat and ensuring this is retained and buffered in the site masterplan.
- Meeting criteria to ensure Core Bat Habitat has the best possible chance of being used by SAC bats when the development is completed.

Avoidance of residual impacts which could act in-combination with other plans and projects is achieved by:

- Contributions towards 'The Batscape'; habitat mitigation measures to be delivered at offsite locations through a scheme administered by the Council. Details of the proposals are contained in the TBMS. Contributions will be secured from developers through legal agreement.

To ensure a co-ordinated approach by different developers on the same allocation, a single masterplan will be required for each allocation to demonstrate that enough land will be available for mitigation after the footprint of the proposed quantum of development is accounted for. This will ensure mitigation is not "squeezed out" by phased reserved matters applications. Applications must be informed by bat and lighting surveys, standards for which are set out in the TBMS to ensure the specific surveys needs of SAC bats are addressed as these species are generally more difficult to detect. Submission documents must include an Ecological Mitigation Plan meeting the criteria specified in the TBMS in order to demonstrate how habitats will be protected, buffered and mitigated. A substantial proportion of each allocation site will need to be assigned to

mitigation to achieve 100% mitigation for the footprint of development and this must be supported by calculations in accordance with the emerging Biodiversity Metric published by NE⁷⁸.

When reviewing submissions, the Council will need to ensure that vegetation which is required for mitigation purposes is not under the control of individual householders whose amenity requirements become increasingly at odds with aging trees and hedgerows demanding of maintenance. It must therefore be incorporated into communally held land with appropriate measures in place to fund and implement in-perpetuity management. This would normally be secured by conditioning the submission of a Landscape and Ecology Management Plan and this is included as a provision of the TBMS. Note should also be taken of the fact that the shrinkable clays in Trowbridge considerably increase the distance that must be retained between vegetation and the nearest built development if the Council is to be able to rely on tree planting it as mitigation for the lifetime of the scheme.

Barbers Farm Nursery at Chapmanslade does not come under the TBMS and therefore this site will be expected to deliver a bespoke, onsite mitigation scheme to address impacts alone and in-combination.

Relevant guidance⁷⁹ advises that caveats or restrictions can be acceptable in order to conclude beyond reasonable doubt that a plan or project would not have an adverse effect on the integrity of a European site provided the caveats or restrictions were met before the project proceeded. This is not an uncommon approach in a multi-stage consent process, and the Advocate General has made clear that *'adverse effects on areas of conservation must be assessed at every relevant stage of the procedure to the extent possible on the basis of the precision of the plan'*⁸⁰. Consequently, this assessment recommends that compliance with the TBMS is included in each of the Trowbridge policy options.

Conclusions on Integrity Test

The allocations proposed in the plan are likely to have significant effects on the local Bechstein's population associated with the Bath and Bradford on Avon Bats SAC, particularly when the effects of the plan are considered as a whole, as this cluster of sites will coalesce the urban landscape south of Trowbridge, which could sever strategic flight routes between the key roosts to the east of the town and the underground sites west of the town. The TBMS provides a scheme of mitigation which addresses impacts from each of the allocations in the plan alone and the in-combination impacts of these in combination with other development coming forward through neighbourhood plans, as rural exception sites and development within the settlement boundary. In view of the uncertainty surrounding bat use of the landscape, the strategy takes a precautionary approach to allow appropriate assessments for individual applications to be concluded favourably without delay, provided the principles are followed.

⁷⁸ <http://publications.naturalengland.org.uk/publication/5850908674228224>

⁷⁹ DTA Publications. Essential guidance for the assessment of plans and projects under the UK Habitats Regulations (published online)

⁸⁰ UK v Commission (C-6/04) - Advocate General's Opinion

It is therefore concluded that the plan would not have an adverse effect on the integrity of the Bath and Bradford Bats SAC alone or in combination with other plans or projects, subject to the policy recommendations made in this assessment, and adoption and delivery of the finalised TBMS.

Recommendations – Bath and Bradford on Avon Bats SAC Habitat Loss / Deterioration

It is recommended the following is included in the policy wording for policies H2.1 – H2.6

Development at the allocation site will be subject to an approved masterplan and will meet the following requirements:

Core bat habitat will be protected and enhanced. Design and layout will be informed by appropriate surveys, impact assessments and the Trowbridge Bat Mitigation Strategy.

Appropriate mitigation to protect bats, including financial contributions towards management, monitoring and offsite measures as necessary, as informed by the Trowbridge Bat Mitigation Strategy.

Bath and Bradford on Avon Bats SAC – Recreational Pressure

In addition to the conservation objectives, SSSI condition monitoring and site improvement plan, the following additional sources of information were used to inform the appropriate assessment.

Information Used in Making the Assessment

Wiltshire Core Strategy

Refer to text above under Bath and Bradford on Avon Bats SAC – Habitat Loss / Deterioration.

Ashton Park Appropriate Assessment

In addition to the impact this development would have on bat habitat (see text under Bath and Bradford on Avon Bats SAC – Habitat Loss / Deterioration), a key consideration in the Ashton Park assessment was the potential effects of increased recreational pressure on the woods resulting from the residential development. Potential effects include:

- damage to and loss of foraging habitats such as ground flora and understorey as a result of trampling and fires
- damage and destruction of roosting features as a result of fires and vandalism
- disturbance, killing and injury of roosting bats as a result of vandalism, particularly maternity colonies using bat boxes
- general disturbance from walkers, dogs, fires etc.

The anticipated risk of these effects actually occurring as a result of the Ashton Park development has been exacerbated by a recent review of impacts and mitigation measures associated with the recently built Castlemead development (see below).

As a result of the issues highlighted by the appropriate assessment and concerns raised by Natural England, housing has been avoided in close proximity to the woods (replaced by employment land) and the site has been designed in a manner that will prevent new residents readily accessing Biss Woods on foot. A bespoke package of access management and wardening has been agreed with the Wiltshire Wildlife Trust (WWT) sufficient for the Council to conclude that recreational pressure from this development will not have an adverse effect on the integrity of the SAC. However, some residual effects are anticipated, and these will need to be considered in combination with the effects of the current plan.

Castlemead

This is a development of 650 dwellings located approximately 100m from Green Lane Woods which commenced construction in 2011, with approximately 550 dwellings having been constructed when the site was inspected by Council Ecologists in summer 2016. The presence of Bechstein's bats was known when permission was granted but the size and significance of the population was not fully understood at that time. A Habitat Creation Mitigation and Monitoring Plan (HCMMP) was drawn up and secured by S106 with the developer. The plan was considered to be exceptionally rigorous at the time and relied on the developer creating new habitats prior to first occupation of the development which would be managed in-perpetuity by Wiltshire Wildlife Trust. The aim of the new habitats was to distract residents away from Green Lane Wood.

The inspection found that habitat creation and planting did not take place until at least three years after first occupation, some mitigation measures had still not yet been implemented, and the agreement with WWT had not been signed to allow the trust to take over management of nature conservation land. An inspection of Green Lane Wood accompanied by WWT confirmed that visitor access to the wood had increased significantly since construction commenced at both Castlemead and another nearby residential development site North of Green Lane. Damage to ground flora was already apparent and WWT also reported increasing problems with fires, rubbish and vandalism of bat boxes, including some known to be used by the Bechstein's maternity colony. The site has been a Trust reserve for many years without problems, and while WWT are not opposed to the principle of increased visitors to their site, they consider that more resources will be needed to manage this pressure in the future, particularly the more damaging effects of vandalism and fires, which have only emerged since development commenced at Castlemead and North of Green Lane.

The inspection also revealed that Biss Wood, identified within the HCMMP as an area from which the public would be excluded, had since been bequeathed to WWT and was now being promoted for public access with gates, interpretation boards and way-markers.

It was evident from the site inspection that the S106 agreement had been insufficient to secure the requirements of the HCMMP and that recreational pressure from new developments close to the woods was already having a tangible effect on the foraging and roosting habitat of the Bechstein's population in Green Lane Wood. As those developments are largely complete they would normally not be included in any in-combination assessment as part of this HRA, however the negative effects of those developments are clearly ongoing and likely to be permanent and will therefore be taken into account as part of the baseline for the purposes of the current assessment.

With reference to the case of Bagmoor Wind, it is also appropriate for the Council to take account of difficulties in the delivery of similar mitigation measures at other sites. The uncertainties in the success of the agreed mitigation measures at the nearby Castlemead development will therefore be a relevant consideration in assessing the efficacy of potential mitigation measures at other sites in this area which might give rise to similar effects, particularly in relation to recreational pressure.

Recent HRA's of Planning Applications

See Bath and Bradford on Avon Bats SAC – Habitat Loss / Deterioration

Footprint Visitor Survey

Footprint Ecology undertook a visitor survey of publicly accessible woodlands and open spaces in Trowbridge in 2017⁸¹. This provided information on current levels of use, why people chose different sites and what management might work to influence peoples' access patterns. It included face to face interviews with visitors and interviews with selected stakeholders as well as a literature review. The report put forward several recommendations. It advised that a 600m wide zone should be established around the woodlands as an exclusion zone where new development is limited. It also recommended that other green spaces sites should be improved and enhanced to absorb recreation and other pressures from new development. Both of these recommendations have been taken forward through the TBMS. The Footprint report also advised that the woodlands should have measures in place to ensure they are robust in terms of future recreational use, without overly attracting new visitors. This latter recommendation will be largely implemented for Green Lane and Biss Woods through the Ashton Park planning permission and legal agreement.

Trowbridge Bat Mitigation Strategy

Preparation of the TBMS was commissioned by the Council in 2017. In developing the strategy, consultants Johns Associates had regard to evidence taken from:

- the scientific literature
- the Wiltshire and Swindon Biological records Centre database, consultants' reports
- work undertaken in relation to Ashton Park strategic allocation
- bat strategies developed by other local authorities
- from lighting engineers
- evidence and views from a small consultative group organised to bring together local bat workers and ecologists with expertise on the ecology of the SAC bat species in Wiltshire
- Footprint Ecology visitor survey 2017⁸²

In relation to recreational pressure, the TBMS picks up on evidence from the visitor survey to demonstrate that development closest to the woods should be resisted due to its potential to lead to effects alone and in-combination. Beyond this, the strategy identifies a zone of medium sensitivity

⁸¹ Panter, C., Lake, S. & Liley, D. (2017). Trowbridge Visitor Survey and Recreation Management Strategy. Unpublished report by Footprint Ecology for Wiltshire Council

⁸² Panter, C., Lake, S. & Liley, D. (2017). Trowbridge Visitor Survey and Recreation Management Strategy. Unpublished report by Footprint Ecology for Wiltshire Council

where a degree of new development would be acceptable provided measures are taken to offset the recreational pressure it will generate.

Population Monitoring

See Bath and Bradford on Avon Bats SAC – Habitat Loss / Deterioration

Response from Natural England

See Bath and Bradford on Avon Bats SAC – Habitat Loss / Deterioration

Effects Alone

The TBMS includes a thorough review of the literature in relation to all three SAC bat species. However, in terms of recreational pressure, it is the Bechstein's bat which is particularly vulnerable to effects from the plan due to the proximity of its breeding woodlands to areas of proposed housing in Trowbridge. The salient aspects of its ecology in this locality are discussed below.

The breeding population of Bechstein's bats in woodlands south of Trowbridge is known to be linked to the Bath and Bradford on Avon Bats SAC sites⁸³. Little is known about the tolerance of this species to different forms of human disturbance, however NE has raised concerns that it is likely to be sensitive to lighting, noise, habitat fragmentation/degradation and severance of commuting routes and, impacts are more likely to occur where the effects are cumulative. Indeed, individual and small groups of Bechstein's bats are likely to be particularly vulnerable to disturbance given that natural roost features often tend to include features such as flaking bark and rotten limbs of old trees, which are inherently vulnerable to damage and disturbance. Bats are known to be sensitive to many forms of anthropogenic disturbance, although the exact causal mechanism is currently unknown due to a lack of scientific evidence. Bechstein's are thought to be particularly sensitive as they are very rarely recorded in urban locations.

Larger groups of Bechstein's bats are frequently recorded occupying the wooden bat boxes erected on trees in the woods. These are particularly vulnerable to vandalism, with seven out of 18 boxes having been damaged / destroyed in the past few years since nearby developments have become occupied and, probably as a consequence, numbers in the remaining boxes dropped markedly between 2012 and 2014. In 2016 the maternity colony was also found to have left Green Lane Wood in order to roost in a hedgerow tree in open farmland. This is the first time the colony has been recorded roosting outside the woods in any significant numbers, and although it may have happened in the past, it is considered to be atypical behaviour for this species based on the literature and raises questions as to whether disturbance might be causing them to alter their behaviour. Similar behaviour was observed in 2017 and in 2018 as noted above.

Maternity colonies of Bechstein's tend to be focussed around blocks of high quality ancient woodland. There tends to be a high degree of resource partitioning and competition between the females; the most dominant females defend the best foraging resources in the woodland core while sub-dominant females, juveniles and males forage within lower quality habitats, often outside of the

⁸³ Bats ringed in Green Lane Woods have been trapped while swarming at Box Mine SSSI

main woodlands. It is therefore likely that the carrying capacity of woodlands south of Trowbridge is dependent upon the quality of their sensitive ancient woodland habitats and the resulting biomass of invertebrate prey items which it can support. Research has shown that increased disturbance can damage such habitats through trampling of vegetation, soil compaction and vandalism⁸⁴. Urbanisation is also known to have negative effects on invertebrate populations, with complex causal factors ranging from small scale vegetation structure and management within habitat patches, to larger scale effects including changes in surrounding land uses^{85,86}. It is therefore feasible that loss of ground flora and understory in the woods through recreational pressure and urbanisation of the surrounding landscape might result in a reduction in the diversity and abundance of invertebrate prey for the Bechstein's population and a corresponding reduction in the carrying capacity of the woods. This could increase the population's reliance on the surrounding sub-optimal farmland habitats. Trapping and radio-tracking studies of the population have already shown that a proportion of adult female Bechstein's bats currently forage in farmland surrounding the woods, indicating that the woods might already be at their carrying capacity. A reduction in the quantity and quality of farmland habitats close to the woodlands due to further development could force bats to forage yet further afield with unknown consequences for the population's status in south Trowbridge.

Development within the zone of high sensitivity for recreational pressure

It is generally accepted that recreational pressure from residential development tends to increase closer to recreational sites and this is evident from the visit rate curves for visitors arriving at Trowbridge recreational sites⁸⁷ both on foot and by car. The most obvious difference in the curves for interviewees arriving on foot (Figures 4, 5 and 6 in the visitor report) is the relatively high proportion of residents around Green Lane Wood who were interviewed in comparison to the other non-woodland sites. This suggests a large proportion of people who live close by are visiting this wood, more so than those who lived within walking distance of the other sites. Comparison of visit rate curves for sites which had a significant proportion of visitors arriving by car (Figure 7 in the visitor report) showed that Picket and Clanger Woods had a much stronger draw, attracting more visits per resident compared to Southwick Country Park and the other sites.

The Footprint visitor survey found that dog walking was the main activity across all locations (79% of interviewees) and this was roughly the same at the woodland bat sites (80%) and other greenspace sites (78%). Overall, 'being close to home' was the most common reason cited by people for choosing the site they were interviewed at. While most sites had been visited by interviewees for some years, Green Lane Wood was significantly different with 39% of its visitors saying they had been visiting for less than 2 years. This is thought to reflect the proximity of Castlemead which was completed in 2018. The typical visitor to this wood was estimated to make 192 visits annually.

⁸⁴ Corney *et al* (2008) *Impacts of nearby development on the ecology of ancient woodland*

⁸⁵ Lintott, P.R. *et al* (2014) *Moth species richness, abundance and diversity in fragmented urban woodlands: implications for conservation and management strategies*

⁸⁶ Jones, E.L. and Leather, S.L. (2012) *Invertebrates in urban areas: A review*

⁸⁷ Panter, C., Lake, S. & Liley, D. (2017). *Trowbridge Visitor Survey and Recreation Management Strategy. Unpublished report by Footprint Ecology for Wiltshire Council*

Taken together, the findings of the visitor survey suggest that woodlands are highly valued recreational sites by local residents and there is a high risk they would be more heavily used if the location of new development enabled them to be readily accessed on foot.

Through discussions with Natural England, it was agreed that development in close proximity to the woods would be higher risk and more difficult to mitigate than development further away. Risks would be greatest where development would be built out prior to or concurrently with Ashton Park, before mitigation measures for that scheme have been fully implemented and shown to be effective which is likely to be after the end of the currently plan period. Avoidance of development in the “red zone” is therefore likely to be a key principle of the TBMS and on this basis policy options closest to the woodlands were removed from the plan. In this way all development sites at risk of causing adverse recreational impacts on their own were removed from the plan.

Development within the zone of medium sensitivity for recreational pressure

Beyond the high sensitivity zone, the wider visitor catchment of the woodland sites has been derived from visitor data in the Footprint report. These show that 75% of the nearest interviewees came from within 3.36km of Pickett and Clanger Wood and 2.66km of Green Lane Wood. These distances have been used to generate a zone of medium sensitivity for recreational pressure shown as a ‘grey hatched’ zone (Tables 2 and 3 and Figure 5 in the TBMS). All six of the proposed allocations for Trowbridge fall within this medium sensitivity zone, generating an additional 2384 additional residents (1050 dwellings x occupancy of 2.27 people per dwelling) which would contribute to recreational pressure on the woods.

This figure indicates that although individual options within the zone of medium sensitivity are likely to have variable, and in some cases fairly minimal effects upon visitor pressure at the woods, the effects of the plan as a whole would be significant. It is therefore not possible to conclude that the plan would not have an adverse effect on the integrity of the SAC when considered alone through increased disturbance and a reduction in the ecological carrying capacity of the woods as a result of further habitat degradation. These effects could impact on the following conservation objectives for the site:

- The extent and distribution of the habitats of qualifying species
- The structure and function of the habitats of qualifying species
- The supporting processes on which the habitats of qualifying species rely
- The populations of qualifying species

The allocation at Barbers Farm Nurseries, Chapmanslade, falls outside the medium sensitivity zone and therefore is not considered to lead to effects in-combination with allocations at Trowbridge.

In-combination Effects

The key plans and projects acting in-combination with the WHSAP for recreational pressure on woodlands used by breeding Bechstein’s are as follows:

- 2005/02104/OUT Castlemead, Green Lane (100m from Green lane Wood. Although built out the impacts of this scheme still need to be taken into account in this assessment as the mitigation was not fully effective)
- 15/04736/OUT Land South East of Trowbridge – 2,500 dwellings (750m from Biss Wood)
- 16/00547/FUL Land to the West of Drynham Lane and to the east of Eagle Park, Southview Farm, Drynham Lane – 91 dwellings (1.8km from Biss Wood)
- Wiltshire Core Strategy: Indicative remaining requirement minus housing allocated by the WHSAP – 1057 dwellings

On this basis, other plans and projects would result in an additional 3,648 dwellings in the zone of influence of the woods, equivalent to 8,281 additional residents. The total in-combination effects of growth currently proposed at Trowbridge is therefore 4,698 additional dwellings, equivalent to 10,664 additional residents potentially visiting the woods.

These figures demonstrate that the in-combination effects of growth at Trowbridge would potentially have a significant effect on visitor pressure at the woods, and therefore in the absence of mitigation it is not possible to conclude that the plan would not have an adverse effect upon the integrity of the SAC when considered in combination with other plans and projects.

Mitigation Measures

In order to address the effects of increased recreational pressure, the TBMS⁸⁸ identifies the following approach to mitigation:

- It uses data from the 2017 visitor survey to identify zones of potential recreational impact. A zone of high sensitivity has been identified where recreational impacts may lead to impacts alone and / or in-combination, and only development of a very minor nature (e.g. householder applications) would be permitted. A medium risk zone has also been identified, based on the distance that 75% of visitors travel to reach the woodlands. Planned development will be acceptable here provided facilities can be created to secure new recreation sites and / or improve existing recreational facilities beyond the woodlands in such a way as to minimise any net increase in visitor numbers to the woodlands used by SAC bats for roosting. These mitigation measures will be funded through the Community Infrastructure Levy (CIL).
- In order to understand the scale of contribution required from CIL, the plan sets out a costed plan (Appendix 2 of the TBMS) for establishing a new Suitable Area of Natural Greenspace (SANG). This is based on the ratio of 8 ha per 1000 new residents in order to calculate the size of SANG. It is expected this would represent the maximum expenditure scenario.
- It identifies a wide range of other measures that would reduce public pressure and its impact on the woodlands, some of which will be delivered through the Ashton Park planning permission, others through CIL.
- The project commits to employing a CIL Delivery Officer and the final balance between provision of SANG and provision of other measures will be determined once this officer is in post.

⁸⁸ Trowbridge Bat Mitigation Strategy (February 2020)

Monitoring

A programme of monitoring is to be required through the TBMS to demonstrate that measures are being delivered as proposed, assess the effects of recent growth and inform future assessment work at the town. It is envisaged that the monitoring programme would comprise the following elements:

- Resources available – S106 contributions pending and received
- Capital works – money spent, infrastructure delivered, woodland planted etc
- Visitor surveys – at woodland sites and SANGs
- Habitats / invertebrate monitoring – early indicators of foraging resources
- Bat surveys – colony numbers / locations, targeted radio-tracking

Conclusions on Integrity Test

The plan could have an adverse effect on the integrity of the SAC both alone and in-combination with other planned development through increased recreational disturbance. The TBMS has been out to consultation and is supported by Natural England who consider the strategy is sufficient but not excessive as a means of protecting the features of the SAC. The strategy is fully costed and has been demonstrated through consultation and the examination in public for the WHSAP to be achievable and deliverable within an appropriate timescale.

On this basis, it is considered that the Council may rely on the TBMS for the purposes of this appropriate assessment, and as such it can be concluded that the plan would not have an adverse effect on the integrity of the Bath and Bradford on Avon Bats SAC alone or in-combination with other plans or projects subject to the following recommendation.

Recommendations – Bath and Bradford on Avon Bats SAC Recreational Pressure

Policy text recommendations under the heading “Recommendations – Bath and Bradford on Avon Bats SAC Habitat Loss / Deterioration” above, include wording to ensure that the site allocations will be required to contribute proportionately to the Trowbridge Bat Mitigation Strategy. No further changes are required.

Conclusions of Appropriate Assessment

The appropriate assessment has fully considered all likely significant effects upon the Natura 2000 network as a result of the plan, both alone and in combination with other plans and projects, as summarised in Table 4 below.

Site	LSE	Conclusion
Salisbury Plain SPA	Salisbury Plain SPA – Recreational Pressure	No adverse effect on integrity subject to the ongoing implementation of the Salisbury Plain Mitigation Strategy.

River Avon SAC	River Avon SAC – Phosphate	No adverse effect on integrity subject to policy wording to require all development to be phosphate neutral with compliance achieved through the implementation of the Interim Delivery Plan.
	River Avon SAC - Abstraction	No adverse effect on integrity, subject to review of abstractions on the Upper Avon through PR19 and implementation of any necessary infrastructure improvements required under AMP7.
Bath and Bradford Bats SAC	Bath and Bradford on Avon Bats SAC - Habitat Loss / Deterioration	No adverse effect on integrity subject to compliance with the TBMS
	Bath and Bradford on Avon Bats SAC – Recreational Pressure	No adverse effect on integrity subject to compliance with the TBMS

Table 4 – Summary of the Conclusions of the Appropriate Assessment

Appendix 1 – Outputs from the Settlement Level Screening Assessment (Stage 3)

Settlement	HRA Screening Result	Objective 1 – Q7	Objective 1 – Q9	Objective 1 – Q10	Objective 3 – Q6	Objective 4 – Q5
Market Lavington	<p>LSE triggered:</p> <ul style="list-style-type: none"> Salisbury Plain SPA – recreation <p>Further assessment required if options taken forward .</p> <p>A mitigation strategy for recreational pressure on Salisbury Plain SPA has been agreed with Natural England</p>	The HRA screening assessment has identified that development at the settlement could contribute towards recreational impacts on the Salisbury Plain SPA through increased recreational pressure.	The settlement falls within the visitor catchment of Salisbury Plain SPA. Further assessment of the potential effects of recreational disturbance is required.	Not applicable – the settlement does not fall within one of the Council’s current guidance areas.	Not applicable – the settlement does not fall within the Hampshire Avon or River Kennet catchments.	While development of the settlement may lead to an increase in vehicular movements, these are unlikely to denigrate local air quality to the extent that this would impact on local biodiversity sites. Where necessary, air quality strategies will be developed and implemented in accordance with CP55 to address environmental impacts.
Ludgershall	<p>LSE triggered:</p> <ul style="list-style-type: none"> Salisbury Plain SPA – recreational disturbance River Avon SAC – Water Abstraction 	The HRA screening assessment has identified that development at the settlement could contribute towards the Salisbury Plain SPA	The settlement falls within the visitor catchment of Salisbury Plain SPA. Further assessment of the potential effects of recreational	Not applicable – the settlement does not fall within one of the Council’s current guidance areas.	The settlement falls within the catchment of the Hampshire Avon. Potential impacts of increased water abstraction will	While development of the settlement may lead to an increase in vehicular movements, these are unlikely to denigrate local air quality to the extent that this would impact

Settlement	HRA Screening Result	Objective 1 – Q7	Objective 1 – Q9	Objective 1 – Q10	Objective 3 – Q6	Objective 4 – Q5
	Further assessment required if options taken forward . In-combination effects of the army basing programme could make mitigation of these effects problematic	through increased recreational disturbance. It has also identified potential for impacts on the River Avon SAC through increased water abstraction.	disturbance is required.		need to be considered further	on local biodiversity sites. Where necessary, air quality strategies will be developed and implemented in accordance with CP55 to address environmental impacts.
Hullavington	No LSE triggered	The HRA screening assessment has not identified any likely significant effects triggered by development at the settlement	Not applicable – the settlement does not fall within the visitor catchments of the New Forest or Salisbury Plain SPAs.	Not applicable – the settlement does not fall within one of the Council’s current guidance areas.	Not applicable – the settlement does not fall within the Hampshire Avon or River Kennet catchments.	While development of the settlement may lead to an increase in vehicular movements, these are unlikely to denigrate local air quality to the extent that this would impact on local biodiversity sites. Where necessary, air quality strategies will be developed and implemented in accordance with CP55

Settlement	HRA Screening Result	Objective 1 – Q7	Objective 1 – Q9	Objective 1 – Q10	Objective 3 – Q6	Objective 4 – Q5
						to address environmental impacts.
Kington St Michael	No LSE triggered	The HRA screening assessment has not identified any likely significant effects triggered by development at the settlement	Not applicable – the settlement does not fall within the visitor catchments of the New Forest or Salisbury Plain SPAs.	Not applicable – the settlement does not fall within one of the Council’s current guidance areas.	Not applicable – the settlement does not fall within the Hampshire Avon or River Kennet catchments.	While development of the settlement may lead to an increase in vehicular movements, these are unlikely to denigrate local air quality to the extent that this would impact on local biodiversity sites. Where necessary, air quality strategies will be developed and implemented in accordance with CP55 to address environmental impacts.
Yatton Keynell	No LSE triggered	The HRA screening assessment has not identified any likely significant effects triggered	Not applicable – the town does not fall within the visitor catchments of the New Forest	Not applicable – the settlement does not fall within one of the	Not applicable – the settlement does not fall within the Hampshire Avon	While development of the settlement may lead to an increase in vehicular movements, these are unlikely to denigrate local air

Settlement	HRA Screening Result	Objective 1 – Q7	Objective 1 – Q9	Objective 1 – Q10	Objective 3 – Q6	Objective 4 – Q5
		by development at the settlement	or Salisbury Plain SPAs.	Council's current guidance areas.	or River Kennet catchments.	quality to the extent that this would impact on local biodiversity sites. Where necessary, air quality strategies will be developed and implemented in accordance with CP55 to address environmental impacts.
Crudwell	<p>LSE triggered:</p> <ul style="list-style-type: none"> North Meadow and Clattinger Farm SAC - Recreational disturbance <p>Further assessment required if options at this settlement are taken forward. In-combination effects</p>	The HRA screening assessment has identified that development at the settlement could contribute towards recreational impacts on North Meadow and Clattinger farm SAC through increased	Not applicable – the town does not fall within the visitor catchments of the New Forest or Salisbury Plain SPAs.	Not applicable – the settlement does not fall within one of the Council's current guidance areas.	Not applicable – the settlement does not fall within the Hampshire Avon or River Kennet catchments.	While development of the settlement may lead to an increase in vehicular movements, these are unlikely to denigrate local air quality to the extent that this would impact on local biodiversity sites. Where necessary, air quality strategies will be developed and implemented in accordance with CP55

Settlement	HRA Screening Result	Objective 1 – Q7	Objective 1 – Q9	Objective 1 – Q10	Objective 3 – Q6	Objective 4 – Q5
	with housing development in Swindon. No mitigation strategy in place.	recreational pressure.				to address environmental impacts.
Oaksey	LSE triggered: <ul style="list-style-type: none"> North Meadow and Clattinger Farm SAC - Recreational disturbance Further assessment required if options taken forward. In-combination effects with housing development in Swindon	The HRA screening assessment has identified that development at the settlement could contribute towards recreational impacts on North Meadow and Clattinger farm SAC through increased recreational pressure.	Not applicable – the town does not fall within the visitor catchments of the New Forest or Salisbury Plain SPAs.	Not applicable – the settlement does not fall within one of the Council’s current guidance areas.	Not applicable – the settlement does not fall within the Hampshire Avon or River Kennet catchments.	While development of the settlement may lead to an increase in vehicular movements, these are unlikely to denigrate local air quality to the extent that this would impact on local biodiversity sites. Where necessary, air quality strategies will be developed and implemented in accordance with CP55 to address environmental impacts.

Settlement	HRA Screening Result	Objective 1 – Q7	Objective 1 – Q9	Objective 1 – Q10	Objective 3 – Q6	Objective 4 – Q5
	No mitigation strategy in place.					
Trowbridge	<p>LSE triggered:</p> <ul style="list-style-type: none"> • Bath and Bradford on Avon Bats SAC– recreational disturbance • Bath and Bradford on Avon Bats SAC– habitat loss / deterioration <p>Sites closest to Green Lane and Biss Woods core roosting area are particularly likely to result in an increased risk of disturbance which cannot be readily avoided or mitigated. Early discussions with Natural England indicate that growth</p>	The HRA screening assessment has identified that development at the settlement could contribute towards impacts upon the Bath and Bradford Bats SAC through habitat loss and disturbance. The HRA advises that development within easy walking distance of the Biss / Green Lane Woods core roosting area is at high risk of failing an appropriate assessment, and	While New Forest SPA is well beyond the impact range of the New Forest, land near White Horse Business Park falls within the visitor catchment of the Salisbury Plain SPA..	Sites at this settlement fall within core areas identified in the Council’s guidance on bat related SACs as well as the TBMS. Development should be designed in accordance with both sets of guidance, which may constrain the development capacity of the site.	Not applicable – the site does not fall within the Hampshire Avon or River Kennet catchments.	While development of the site may lead to an increase in vehicular movements, these are unlikely to denigrate local air quality to the extent that this would impact on local biodiversity sites. Where necessary, air quality strategies will be developed and implemented in accordance with CP55 to address environmental impacts.

Settlement	HRA Screening Result	Objective 1 – Q7	Objective 1 – Q9	Objective 1 – Q10	Objective 3 – Q6	Objective 4 – Q5
	<p>at the town should be directed further from the woods where possible. Experience has also shown that development within easy walking distance of the woods is at highest risk of failing an appropriate assessment on this issue. Development within approximately 600m of the woods is most likely to fall into this higher risk category and consideration should be given to removing those options from the plan at this stage.</p> <p>Development within the wider Trowbridge area, may also make a</p>	<p>consideration should be given to removing these options from the plan at this stage. Options further from the woods are lower risk but will require some mitigation. All options at the town to be taken forward to Stage 4 will require further assessment.</p>				

Settlement	HRA Screening Result	Objective 1 – Q7	Objective 1 – Q9	Objective 1 – Q10	Objective 3 – Q6	Objective 4 – Q5
	<p>small contributions to recreational pressure at the woods, however early discussions with Natural England indicate that these lower impacts might be addressed through an emerging mitigation strategy for the town.</p> <p>Further assessment required if options taken forward .</p>					
Warminster	<p>LSE triggered:</p> <ul style="list-style-type: none"> • River Avon SAC – habitat loss/deterioration • River Avon SAC – phosphate • River Avon SAC – water abstraction 	The HRA screening assessment has identified that development at the settlement could contribute towards impacts upon the Salisbury Plain SPA through	The settlement falls within the visitor catchment of Salisbury Plain SPA. Further assessment of the potential effects of recreational	Not applicable – the settlement does not fall within one of the Council’s current guidance areas.	The settlement falls within the catchment of the Hampshire Avon. Potential impacts of increased water abstraction and discharge will	While development of the settlement may lead to an increase in vehicular movements, these are unlikely to denigrate local air quality to the extent that this would impact on local biodiversity

Settlement	HRA Screening Result	Objective 1 – Q7	Objective 1 – Q9	Objective 1 – Q10	Objective 3 – Q6	Objective 4 – Q5
	<ul style="list-style-type: none"> Salisbury Plain SPA – recreational disturbance <p>Further assessment required if options taken forward .</p> <p>Phosphate loading from Warminster STW is known to have an adverse effect on the integrity of the River Avon SAC alone.</p>	increased recreational disturbance. It has also identified potential for impacts on the River Avon SAC through increased water abstraction, habitat loss/degradation and increased discharges of sewage to the river.	disturbance is required.		need to be considered further	sites. Where necessary, air quality strategies will be developed and implemented in accordance with CP55 to address environmental impacts.
Chapmanslade	<p>LSE triggered:</p> <ul style="list-style-type: none"> Salisbury Plain SPA – recreational disturbance Bath and Bradford on Avon SAC – 	The HRA screening assessment has identified that development at the settlement could contribute towards impacts upon the Salisbury Plain SPA through	The settlement falls within the visitor catchment of Salisbury Plain SPA. Further assessment of the potential effects of recreational	Sites at this settlement fall within core areas identified in the Council's guidance on bat related SACs. Development should be	Not applicable – the settlement does not fall within the Hampshire Avon or River Kennet catchments.	While development of the settlement may lead to an increase in vehicular movements, these are unlikely to denigrate local air quality to the extent that this would impact on local biodiversity

Settlement	HRA Screening Result	Objective 1 – Q7	Objective 1 – Q9	Objective 1 – Q10	Objective 3 – Q6	Objective 4 – Q5
	<p>Habitat loss / deterioration</p> <p>Further assessment required if options be taken forward.</p> <p>A mitigation strategy for recreational pressure on Salisbury Plain SPA has been agreed with Natural England</p>	increased recreational pressure and the Bath and Bradford on Avon SAC through habitat loss / deterioration.	disturbance is required.SPAs.	designed in accordance with this guidance, which may constrain the development capacity of the site.		sites. Where necessary, air quality strategies will be developed and implemented in accordance with CP55 to address environmental impacts.
Codford	<p>LSE triggered:</p> <ul style="list-style-type: none"> • River Avon SAC – phosphate • River Avon SAC – water abstraction • Salisbury Plain SPA – recreational disturbance <p>There is no mains sewage infrastructure at the settlement.</p>	The HRA screening assessment has identified that development at the settlement could contribute towards impacts upon the River Avon SAC through phosphate loading as it is not currently served	The settlement falls within the visitor catchment of Salisbury Plain SPA. Further assessment of the potential effects of recreational disturbance is required (if	Not applicable – the settlement does not fall within one of the Council’s current guidance areas.	The settlement is within the Hampshire Avon which is particularly vulnerable to phosphate loading and is not served by mains sewerage systems. Package treatment would	While development of the settlement may lead to an increase in vehicular movements, these are unlikely to denigrate local air quality to the extent that this would impact on local biodiversity sites. Where necessary, air quality strategies will be developed and

Settlement	HRA Screening Result	Objective 1 – Q7	Objective 1 – Q9	Objective 1 – Q10	Objective 3 – Q6	Objective 4 – Q5
	Discharges are likely to require onsite treatment through a package plant and EA consent. The effects on P loading cannot be assessed on the basis of available information and may be a major barrier to delivery. It is recommended that options at the settlement are removed from the process at this stage.	by mains sewage infrastructure. The potential to impact upon the integrity of the SAC cannot be discounted, and the issue could be a significant risk to delivery of options at this settlement. The HRA therefore recommends that options for this settlement are removed from the process at this stage.	options are taken forward).		be required, which is a less sustainable solution (than connections to a mains STW) and would require EA consent.	implemented in accordance with CP55 to address environmental impacts.
Heytesbury	LSE triggered: <ul style="list-style-type: none"> River Avon SAC – habitat loss/deterioration River Avon SAC – phosphate 	The HRA screening assessment has identified that development at the settlement could contribute	The settlement falls within the visitor catchment of Salisbury Plain SPA. Further assessment of the	Not applicable – the settlement does not fall within one of the Council’s current guidance areas.	The settlement is within the Hampshire Avon which is particularly vulnerable to	While development of the settlement may lead to an increase in vehicular movements, these are unlikely to denigrate local air

Settlement	HRA Screening Result	Objective 1 – Q7	Objective 1 – Q9	Objective 1 – Q10	Objective 3 – Q6	Objective 4 – Q5
	<ul style="list-style-type: none"> River Avon SAC – water abstraction Salisbury Plain SPA – recreational disturbance <p>There is no mains sewage infrastructure at the settlement. Discharges are likely to require onsite treatment through a package plant requiring EA consent. The effects on P loading cannot be assessed on the basis of available information and may be a major barrier to delivery. It is recommended that options at the settlement are</p>	<p>towards impacts upon the River Avon SAC through phosphate loading as it is not currently served by mains sewage infrastructure. The potential to impact upon the integrity of the SAC cannot be discounted, and the issue could be a significant risk to delivery of options at this settlement. The HRA therefore recommends that options for this settlement are removed from the process at this stage.</p>	<p>potential effects of recreational disturbance is required (if options are taken forward).</p>		<p>phosphate loading and is not served by mains sewerage systems. Package treatment would be required, which is a less sustainable solution (than connections to a mains STW) and would require EA consent.</p>	<p>quality to the extent that this would impact on local biodiversity sites. Where necessary, air quality strategies will be developed and implemented in accordance with CP55 to address environmental impacts.</p>

Settlement	HRA Screening Result	Objective 1 – Q7	Objective 1 – Q9	Objective 1 – Q10	Objective 3 – Q6	Objective 4 – Q5
	removed from the process at this stage.					
Bratton	<p>LSE triggered:</p> <ul style="list-style-type: none"> Salisbury Plain SPA– recreation <p>Further assessment required if options taken forward .</p> <p>A mitigation strategy for recreational pressure on Salisbury Plain SPA has been agreed with Natural England</p>	The HRA screening assessment has identified that development at the settlement could contribute towards recreational impacts on the Salisbury Plain SPA through increased recreational pressure.	The settlement falls within the visitor catchment of Salisbury Plain SPA. Further assessment of the potential effects of recreational disturbance is required.	Not applicable – the settlement does not fall within one of the Council’s current guidance areas.	Not applicable – the settlement does not fall within the Hampshire Avon or River Kennet catchments.	While development of the settlement may lead to an increase in vehicular movements, these are unlikely to denigrate local air quality to the extent that this would impact on local biodiversity sites. Where necessary, air quality strategies will be developed and implemented in accordance with CP55 to address environmental impacts.
Amesbury	<p>LSE triggered:</p> <ul style="list-style-type: none"> Salisbury Plain SPA – recreational disturbance 	The HRA screening assessment has identified that development at the settlement could contribute	The settlement falls within the visitor catchment of Salisbury Plain SPA. Further assessment of the	Not applicable – the settlement does not fall within one of the	The settlement falls within the Upper Avon sub-catchment of the Hampshire Avon. Potential impacts	While development of the settlement may lead to an increase in vehicular movements, these are unlikely to denigrate local air

Settlement	HRA Screening Result	Objective 1 – Q7	Objective 1 – Q9	Objective 1 – Q10	Objective 3 – Q6	Objective 4 – Q5
	<ul style="list-style-type: none"> Salisbury Plain SPA – visual disturbance River Avon SAC – Water Abstraction River Avon SAC – Habitat loss / deterioration River Avon - Phosphate <p>Further assessment required if options taken forward .</p> <p>In-combination effects of the army basing programme could make mitigation of these effects problematic</p>	towards impacts upon the Salisbury Plain SPA through increased recreational disturbance and displacement of stone-curlew from known nesting sites near the settlement. It has also identified potential for impacts on the River Avon SAC through increased water abstraction and habitat loss / deterioration and increased sewage inputs.	potential effects of recreational disturbance is required.	Council's current guidance areas.	of increased water abstraction and effects of discharges on water quality will need to be considered further	quality to the extent that this would impact on local biodiversity sites. Where necessary, air quality strategies will be developed and implemented in accordance with CP55 to address environmental impacts.
Durrington	LSE triggered:	The HRA screening assessment has identified that	The settlement falls within the visitor catchment	Not applicable – the settlement does not fall	The settlement falls within the Upper Avon sub-	While development of the settlement may lead to an increase in

Settlement	HRA Screening Result	Objective 1 – Q7	Objective 1 – Q9	Objective 1 – Q10	Objective 3 – Q6	Objective 4 – Q5
	<ul style="list-style-type: none"> Salisbury Plain SPA – recreational disturbance River Avon SAC – Water Abstraction River Avon SAC – Habitat loss / deterioration River Avon - Phosphate <p>Further assessment required if options taken forward .</p> <p>In-combination effects of the army basing programme could make mitigation of these effects problematic</p>	development at the settlement could contribute towards impacts upon the Salisbury Plain SPA through increased recreational disturbance. It has also identified potential for impacts on the River Avon SAC through increased water abstraction and habitat loss / deterioration and increased sewage inputs.	of Salisbury Plain SPA. Further assessment of the potential effects of recreational disturbance is required.	within one of the Council's current guidance areas.	catchment of the Hampshire Avon. Potential impacts of increased water abstraction and effects of discharges on water quality will need to be considered further	vehicular movements, these are unlikely to denigrate local air quality to the extent that this would impact on local biodiversity sites. Where necessary, air quality strategies will be developed and implemented in accordance with CP55 to address environmental impacts.
Shrewton	LSE triggered:	The HRA screening assessment has identified that development at	The settlement falls within the visitor catchment of Salisbury Plain	Not applicable – the settlement does not fall within one of the	The settlement falls within the catchment of the Hampshire Avon.	While development of the settlement may lead to an increase in vehicular movements,

Settlement	HRA Screening Result	Objective 1 – Q7	Objective 1 – Q9	Objective 1 – Q10	Objective 3 – Q6	Objective 4 – Q5
	<ul style="list-style-type: none"> • Salisbury Plain SPA – recreational disturbance • River Avon SAC – Water Abstraction • River Avon SAC – Habitat loss / deterioration • River Avon SAC - Phosphate <p>Impacts through existing public water abstractions are known to have a significant effect on flows in the Till. Impacts of further abstraction at Shrewton cannot be modelled at the current time, therefore it will not be possible to rule out an adverse effect on</p>	the settlement would contribute towards impacts upon the River Avon SAC through increased water abstraction. It will not be possible to exclude the potential for an adverse effect upon the integrity of the SAC through the HRA process, therefore it is recommended that options at the town are removed from the plan at this stage of the process.	SPA. Further assessment of the potential effects of recreational disturbance is required.	Council's current guidance areas.	Current public water abstraction at Shrewton is known to impact on flows in the River Till. In addition, potential impacts of discharges on water quality will need to be considered further	these are unlikely to denigrate local air quality to the extent that this would impact on local biodiversity sites. Where necessary, air quality strategies will be developed and implemented in accordance with CP55 to address environmental impacts.

Settlement	HRA Screening Result	Objective 1 – Q7	Objective 1 – Q9	Objective 1 – Q10	Objective 3 – Q6	Objective 4 – Q5
	site integrity through the HRA process. It is therefore recommended that options at the settlement are removed from the plan at this stage of the process.					
The Winterbournes	<p>LSE triggered:</p> <ul style="list-style-type: none"> • River Avon SAC – Water Abstraction • River Avon SAC – Habitat loss / deterioration • River Avon SAC - Phosphate <p>Further assessment required if options taken forward.</p>	The HRA screening assessment has identified that development at the settlements could contribute towards impacts upon the River Avon SAC through abstraction and habitat loss / damage.	Not applicable – the settlements do not fall within the visitor catchments of the New Forest or Salisbury Plain SPAs.	Not applicable – the settlements do not fall within one of the Council’s current guidance areas.	The settlements fall within the catchment of the Hampshire Avon. Potential impacts of increased water abstraction and effects of discharges on water quality will need to be considered further	While development of the settlements may lead to an increase in vehicular movements, these are unlikely to denigrate local air quality to the extent that this would impact on local biodiversity sites. Where necessary, air quality strategies will be developed and implemented in accordance with CP55

Settlement	HRA Screening Result	Objective 1 – Q7	Objective 1 – Q9	Objective 1 – Q10	Objective 3 – Q6	Objective 4 – Q5
						to address environmental impacts.
Salisbury	<p>LSE triggered:</p> <ul style="list-style-type: none"> • River Avon SAC – Habitat loss / deterioration • River Avon SAC – phosphate <p>Further assessment required if options taken forward.</p> <p>Significant in-combination effects may make mitigation for phosphate challenging at this location</p>	The HRA screening assessment has identified that development at the settlement could contribute towards impacts upon the River Avon SAC through increased phosphate loading, and habitat loss / damage.	Not applicable – the city does not fall within the visitor catchments of the New Forest or Salisbury Plain SPAs.	Not applicable – the city does not fall within one of the Council’s current guidance areas.	<p>The city falls within the catchment of the Hampshire Avon and in a high risk catchment for phosphate loading which will need to be considered further.</p> <p>The Lower Avon sub-catchment is not understood to be at risk of low-flows from abstraction</p>	While development of the city may lead to an increase in vehicular movements, these are unlikely to denigrate local air quality to the extent that this would impact on local biodiversity sites. Where necessary, air quality strategies will be developed and implemented in accordance with CP55 to address environmental impacts.
Wilton	<p>LSE triggered:</p> <ul style="list-style-type: none"> • River Avon SAC – Habitat loss / deterioration 	The HRA screening assessment has identified that development at the settlement	Not applicable – the town does not fall within the visitor catchments of the New Forest	Not applicable – the town does not fall within one of the Council’s	The town falls within the catchment of the Hampshire Avon and in a high risk	While development of the town may lead to an increase in vehicular movements, these are unlikely to denigrate

Settlement	HRA Screening Result	Objective 1 – Q7	Objective 1 – Q9	Objective 1 – Q10	Objective 3 – Q6	Objective 4 – Q5
	<ul style="list-style-type: none"> River Avon SAC – phosphate <p>Further assessment required if options taken forward.</p> <p>Significant in-combination effects may make mitigation for phosphate challenging at this location</p>	could contribute towards impacts upon the River Avon SAC through increased phosphate loading, and habitat loss / damage.	or Salisbury Plain SPAs.	current guidance areas.	catchment for phosphate loading which will need to be considered further. The Lower Avon sub-catchment is not understood to be at risk of low-flows from abstraction	local air quality to the extent that this would impact on local biodiversity sites. Where necessary, air quality strategies will be developed and implemented in accordance with CP55 to address environmental impacts.
Fovant	<p>LSE triggered:</p> <ul style="list-style-type: none"> Chilmark Quarries SAC – habitat loss / deterioration River Avon SAC - Phosphate <p>Further assessment required if options taken forward.</p>	The HRA screening assessment has identified that development at the settlement could contribute towards impacts upon the Chilmark Quarries SAC through habitat loss / damage.	Not applicable – the settlement does not fall within the visitor catchments of the New Forest or Salisbury Plain SPAs.	Sites at this settlement fall within core areas identified in the Council’s guidance on bat related SACs. Development should be designed in accordance with that guidance,	The Nadder sub-catchment is not understood to be at risk of low-flows from abstraction. Potential impacts of increased discharges on water quality will	While development of the settlement may lead to an increase in vehicular movements, these are unlikely to denigrate local air quality to the extent that this would impact on local biodiversity sites. Where necessary, air quality strategies will be developed and

Settlement	HRA Screening Result	Objective 1 – Q7	Objective 1 – Q9	Objective 1 – Q10	Objective 3 – Q6	Objective 4 – Q5
	Potential habitat loss / deterioration associated with the Chilmark Quarries SAC may be avoided through masterplanning in accordance with the TBMS.			which may constrain the development capacity of the site.	need to be considered further	implemented in accordance with CP55 to address environmental impacts.

Appendix 2 – Policies Considered in the Policy Level Screening Assessment and Appropriate Assessment

Community Area	Policy Ref	Site Name	Approx No. dwellings
Tidworth	H1.1	Empress Way, Ludgershall	270
Trowbridge	H2.1	Elm Grove Farm,	250
	H2.2	Land off A363 at White Horse Business Park	175
	H2.3	Elizabeth Way	355
	H2.4	Church Lane	45
	H2.5	Upper Studley	45
	H2.6	Southwick Court	180
Warminster	H2.7	Bore Hill Farm, Warminster	70
	H2.8	Boreham Road, Warminster	30
	H2.9	Barters Farm Nurseries, Chapmanslade	35
Chippenham	H2.10	East of Farrells Field, Yatton Keynell	30
Westbury	H2.11	Off B3098 adjacent to Court Orchard / Cassways, Bratton	35
Salisbury	H3.1	Netherhampton Road, Salisbury	640
	H3.2	Hilltop Way	10
	H3.3	North of Netherhampton Road	100
	H3.4	Land at Rowbarrow	100
	H3.5	The Yard, Hampton Park	14
Amesbury	H3.6	Clover Lane, Durrington	45
	H3.7	Larkhill Road, Durrington	15