

HABITATS REGULATIONS ASSESSMENT

ASHTON PARK

27 FEBRUARY 2018 (FINAL VERSION)

Planning application 15/04736/OUT incorporating revised masterplan dated August 2017

BACKGROUND

This document represents Wiltshire Council's final appropriate assessment (AA) under Section 63 of the Habitats Regulations 2017 for the mixed use urban extension and relief road at land to the south east of Trowbridge, known as "Ashton Park".

In carrying out this assessment the Council has had regard to the following documents:

- Shadow Appropriate Assessment under the Habitats Regulations of Ashton park planning application 15/04736/OUT, DTA Ecology for Wiltshire Council, 7th October 2016 ("Shadow HRA 2016")
- Shadow Appropriate Assessment under the Habitats Regulations of Ashton park planning application 15/04736/OUT, ADDENDUM, DTA Ecology for Wiltshire Council, 5th July 2017 ("Shadow HRA Addendum 2017")
- January 2016 consultation draft HRA by DTA Ecology for Wiltshire Council
- Environmental Statement Addendum Volume 1 – Main Text, August 2017
- Environmental Statement Addendum Volume 2 – Appendices, including Ecological Baseline Assessment (Aspect Ecology August 2017), Information for Habitats Regulations Assessment (HRA) with regard to potential effects upon European designations (Aspect Ecology, September 2017, Report in respect of Bechstein's Bats (including results of the 2013 radio-tracking study) (Aspect Ecology, August 2017)
- Green Infrastructure and Biodiversity Strategy September 2017
- Wiltshire Council Screening decision dated 18 September 2015
- Wiltshire Council rescreening decision dated 29 December 2017
- Technical Notes submitted by the developer in February 2017 including TN1, TN3, TN6, TN8, TN9 and supporting plans contained therein
- Correspondence with Natural England

DTA's Shadow HRA Addendum 2017 recommended that 15 provisions (further details of the proposed mitigation measures and their implementation) should be fully secured before the Council could conclude that Ashton Park would not adversely affect the Bath and Bradford on Avon Bats SAC alone¹. This document sets out how each of these 15 provisions have been / will be secured and represents the final stage of the appropriate assessment for Ashton Park (15/04736/OUT). Natural England has been consulted throughout the HRA

¹ Section 5.9 of Shadow Appropriate Assessment under the Habitats Regulations of Ashton park planning application 15/04736/OUT, ADDENDUM, DTA Ecology for Wiltshire Council, 5th July 2017

process and regard has been given to their written representations on the final draft version dated 29 December 2017, in accordance with Regulation 63(3).

Following on from the Council's rescreening decision of 29 December 2017, this appropriate assessment also considers the effects of the scheme on lesser horseshoe bats.

SHADOW HRA 2016

In 2015, the Council commissioned DTA Ecology (DTA) to undertake a shadow assessment of Ashton Park under the Habitats Regulations following the Council's conclusion that the scheme could have likely significant effects on the Bath and Bradford on Avon Bats SAC. In October 2016, DTA's initial assessment advised that on the basis of scientific evidence, the Council could not rule out adverse effects on the SAC. The assessment focused on a detailed consideration of the extent to which the proposed mitigation measures could be relied upon to avoid or reduce effects on site integrity to acceptable levels. The appropriate assessment took account of the Council's original screening decision, the developers' application documentation, further information provided by the developer in Technical Notes dated August 2016 (see Para 1.1.19) and other sources of published research, reviews, appraisals and case law, listed at Para 4.1.5 and in Appendix 1.

The Shadow HRA 2016 discussed how the significance of the local Bechstein's bat population should be considered by the Council. DTA advised that for the purpose of the appropriate assessment "it is considered most appropriate, with reference to the recently published Site Improvement Plan², to refer to the SAC as having an 'internationally significant population' of Bechstein's bats with the woodlands to the south of Trowbridge being 'functionally linked' to the maintenance of the population for which the SAC has been designated", because this functionally linked land is necessary for the sustenance of the population and therefore must be linked to the SAC's site integrity. DTA also highlighted recent case law which demonstrated that adverse effects occurring indirectly as a result of impacts on functionally linked land should be considered in the same way as direct effects on land within the SAC itself. Analysis of the available data and expert opinion by DTA also confirmed that the population estimate of 350-700 bats identified in the submitted ES Volume 2 (based on a sex ratio of 1:1) is a precautionary, but reasonable assumption for the purposes of the HRA.

The Oct 2016 report found there was residual uncertainty in relation to the mitigation proposed to deal with 5 key effects of development, therefore the HRA process could not be concluded. These 5 effects are discussed below in order to provide a resume of the issues which are central to this appropriate assessment.

1. Recreation pressure (section 4.8 in Shadow HRA 2016)

The anticipated scale of increase in visitor numbers (up to 6000 people) and the proximity of the development (up to 100m from Biss Wood) will potentially have a range of negative effects which could undermine the extent to which the woodlands continue to contribute

² Natural England (2015) Site Improvement Plan: Bath and Bradford on Avon Bats SAC

towards achievement of the SAC's conservation objectives. DTA demonstrated limited confidence could be placed on the ability of proposed woodland management mechanisms to control impacts from residents within easy access to the woodlands on foot. This conclusion took into account evidence from the newly built development at Castlemead where there had been:

- Substantial delays in delivery of the Habitat Creation Mitigation and Management Plan (HCMMP) for Castlemead
- Work undertaken to make Biss Wood accessible for visitors in contravention of the HCMMP
- Evidence of intentional vandalism of bat boxes at Green Lane Wood
- Increased occurrence of informal fires in Green Lane Wood
- Insufficient emphasis placed by the Council on compliance and enforcement.

2. Severance and degradation of commuting routes (section 4.9)

Concerns over the effects of lighting in the residential development and along the YWARR had been addressed following submission of further information by the developer. However reasonable doubt remained over the effectiveness of hop-overs and the design of underpasses along the YWARR resulting in a potential threat to the extent to which the local population could continue to contribute to the conservation objectives of the SAC. The concerns were as follows:

- Underpasses / hop-overs did not meet with Defra best practice guidelines in terms of their height and vertical alignment
- There could be conflicting effects of providing hop-overs and underpasses at the same locations
- There was potential for complete abandonment of a historically significant flight line which would be crossed more than once by the road scheme
- The combined effect of a high total number of flight lines being severed could affect the way Bechstein's bats use the local landscape.

3. Loss or degradation of roosts (section 4.10)

Doubt was cast over the adequacy of resources being allocated to manage visitor pressure such that significant risks of vandalism of existing bat boxes, new boxes, replaced/relocated boxes and tree roosts remained.

4. Increased mortality and injury (section 4.11)

The potential for the YWARR to lead to an increase in the number of bat casualties due to increased traffic generated by the development was considered in detail. DTA recalculated the mortality rates submitted by the developer to include the cumulative year on year mortality effects on the viability of the local population over time. This revised the estimate from 39 bats to a minimum of 66 bats that would be killed per year across all species. Although the proportion that would be Bechstein's was unknown, the proximity of maternity roosts in the woodlands, position of the YWARR between some woodlands and the River

Biss and increased road width until highway vegetation grew up, were all factors which would tend to increase the risks for Bechstein's bats.

Mortality could also occur as a result of vandalism of bat boxes and through the effects of informal fires, which could be expected to increase in frequency with increasing visitor pressure if, as DTA argued, management resources were inadequate.

In considering the effect of the scheme on the conservation objectives for the SAC, DTA took into consideration that Bechstein's bats have low reproduction rates and that year on year mortality could therefore represent a real risk for the long term viability of the population.

5. Increased disturbance (section 4.12)

To the extent that commuting routes would be severed and degraded, vandalism and other visitor behaviour would not be adequately controlled and green infrastructure would not provide effective buffers, DTA concluded that there would be a risk of causing disturbance to Bechstein's bats over and above current levels.

Outline Monitoring and Review Frameworks

Having examined the scientific doubt surrounding the proposed mitigation measures, DTA reviewed whether it would be possible to rely on the two Outline Monitoring and Review Frameworks (TN6 and TN3) submitted by the developer in August 2016 to overcome the uncertainties identified. While in principle it can be possible to rely on such an approach, DTA identified that some of the measures in these frameworks did not meet the objective tests necessary to assure their effectiveness in meeting the SAC's conservation objectives. For the YWARR it was evident that monitoring could not be used to establish how effective the hop-overs were because of the difficulty in detecting Bechstein's using bat detectors and in any case, no remedial measures were likely to exist that could be relied on if they proved to be ineffective. Likewise for the woodlands, regular roost switching which is a feature of Bechstein's would limit the value of monitoring bat boxes to identify changes in the breeding population and, in addition, remedial measures were inadequately defined.

Interim HRA conclusion

In view of the uncertainty surrounding the mitigation proposed by the developer and the inability of monitoring and remediation to reduce this, DTA advised it was not possible to ascertain that the scheme alone would have no adverse effect upon the integrity of the Bath and Bradford on Avon Bats SAC. The '*scale, proximity and rate of delivery of the development*' were primary reasons leading to this conclusion as well as the effects of severance from the road. In making its judgement DTA considered:

- Case law demonstrating that the woodlands and their surrounding should be considered as functionally linked land which contributes to the SAC's site integrity
- A precautionary approach in relation to the extent to which the local Bechstein's population contributes to achieving the SAC's conservation objectives
- The relative importance of the local population to achieving favourable conservation status for Bechstein's at a UK level

- The difficulties in achieving effective, reliable, timely and guaranteed mitigation measures for an adjacent development site at Castlemead
- Uncertainty resulting from the range and extent of predicted impacts, the effectiveness of mitigation measures and the risk of population scale adverse impacts arising if mitigation measures prove not to be effective
- The threat presented to achieving the SAC's conservation objectives
- The long timescale over which the site would be built out
- The proposed London to Midlands HS2 scheme where greater certainty could be attached to mitigation proposals for Bechstein's bats despite the fact that the local population was not linked to a SAC.

Finally, DTA considered whether conditions or restrictions could be imposed by planning conditions and/or obligations to address the outstanding concerns. However, the use of a Grampian style condition to hold back the quantum of housing subject to favourable monitoring outcomes proved to be impractical, probably unviable and possibly *ultra vires*. There were no measures which could overcome the potential severance issues identified in connection with the YWARR.

SHADOW HRA ADDENDUM 2017

Following the interim assessment in 2016, fundamental changes were made to the masterplan for mixed residential development and the YWARR was redesigned. The effects of these changes were considered and the HRA findings reviewed in the Shadow HRA Addendum 2017.

The main changes to the masterplan were:

- Reducing the area of land allocated for housing on the east side of West Ashton Road from 21ha to 7.47ha which would reduce the number of dwellings to about 300 from a previously estimated 700.
- Relocating employment land to the east side of West Ashton Road to form a buffer between housing and Biss Wood thus extending the distance residents must walk before reaching the wood
- Including design measures to prevent residents taking short cuts to the woodland, namely an impenetrable attenuation feature on the north eastern boundary of the residential development and a 15m wide buffer with a 2m bund, impenetrable planting and a 1.8m fence to prevent residents gaining access to Biss Wood through the employment land
- Removing the previously proposed pedestrian and cycle path through the 100m buffer adjacent to Biss Wood
- Strengthening the hedgerow on the east side of West Ashton Road to prevent short cuts developing from residents living to the east of the River Biss.

These measures would significantly reduce the scale and magnitude of recreational pressure and would prevent unintended short cuts from occurring over time.

The changes to the road scheme were:

- Altering the road design to include 7 underpasses which would be designed to meet Defra best practice guidelines. In principle, all underpasses would be in alignment with existing flight lines, at least 3m high and up to 5m wide allowing for a 2m wide hedgerow and 1.5m clearance either side.
- Removing roadside planting to avoid the risk of encouraging bats to foraging along the road and increasing their risk of being hit by traffic.

Shadow HRA Addendum 2017 conclusion

DTA Ecology concluded that, in view of the conservation objectives for the Bath and Bradford on Avon Bats SAC, the changes put forward had the potential to enable the Council to be satisfied that no reasonable scientific doubt remained as to the absence of adverse effects on the integrity of this SAC. However at the time of drafting there remained several important matters to be addressed. Consequently, the conclusion of no adverse effect was caveated by 15 provisions which the council would need to satisfy itself had been met before adopting the provisional conclusions of the Shadow HRA Addendum 2017. Addressing these provisions is therefore the focus of the Council's appropriate assessment below.

THE COUNCIL'S APPROPRIATE ASSESSMENT

Outcome of rescreening

In view of the time elapsed between the application initially being screened and the final submissions being made, the Council chose to rescreen the application in order to test the implications of new information becoming available during this period. Details of the rescreening can be found in Appendix 1.

The rescreening established that no further likely significant other than those identified in the original screening assessment would arise in relation to Bechstein's bats. However, in light of new information about lesser horseshoe bats roosting close to Green Lane Wood, likely significant effects on this species could not be excluded beyond reasonable doubt. This species has therefore been included in the appropriate assessment below.

Securing the provisions identified in the Shadow HRA Addendum

In line with NPPF 2016, planning conditions will be used wherever necessary to secure the mitigation measures required on land within the red line boundary of this application. These will apply to the development of the land regardless of ownership. Where mitigation measures are required on land outside the red line, or involve land transfer or financial arrangements with a third party, or are not strictly related to land use, they will be secured by Legal agreement. One or more legal agreements will not only secure obligations from the developer and its successors in title, but will also secure obligations from the Wiltshire Wildlife Trust in relation to land which it owns outside the application boundary.

The Council has reviewed each of DTA's 15 provisions in light of the further information submitted by the developer in its Environmental Statement Addendum, August 2017. The discussion below considers the extent to which each provision (*in italics*) can now be considered to have been met. Reference is made throughout to Appendix 2 which contains a numbered list of conditions and legal agreement clauses e.g. PC1 = planning condition 1, LA2 = Legal Agreement issue 2.

1. *The revisions to TN1, TN3 and TN6 fully reflect the revisions to the Masterplan and the YWARR design and the notes of the meeting at Wiltshire Council dated 13th January 2017 and related comments from Natural England.*

TN1, TN3 and TN6 were Technical Notes prepared by Aspect Ecology on behalf of the developer dated 20 February 2017 upon which DTA based its revised assessment. The Council has checked the revised scheme and the Environmental Statement Addendum August 2017 to ensure these documents have fully incorporated the commitments given in the TNs. The following table records the mechanism by which each measure will be secured. Items raised in the notes of the meeting at Wiltshire Council dated 13th January 2017 and related comments from Natural England not covered thus far are considered at the end of the table. Any discrepancy between the TNs and the Environmental Statement Addendum is also noted and its relevance discussed.

Many of the monitoring items under TN3 and TN6 are not now relevant to the appropriate assessment, because there is sufficient confidence in the effectiveness of the measures that they could not result in the need for remedial measures. However monitoring may nevertheless be required through a condition for a Mitigation and Monitoring Implementation and Review Plan to inform on-going research of local bat populations and to comply with good practice.

Abbreviations

GI – Green Infrastructure

LEMP – Landscape and Ecology Management Plan

CEMP – Construction Environment Management Plan

WWT – Wiltshire Wildlife Trust

Man Co – Management Company

PC – planning condition

LA – Matter to be considered as part of a Legal Agreement

DETAILS OF MEASURES REQUIRED	SECURE BY:
TECHNICAL NOTE 1 – MITIGATION incorporating additions from ES Addendum Volume 1	
<p>1. Biodiversity Management Plan</p> <ul style="list-style-type: none"> • Write plan • Phasing plan for GI including advance planting • 100m buffer and Country Park delivered before 1st occupation of land to east of West Ashton Road • Early provision of circular route 	<ul style="list-style-type: none"> • Planning condition for Biodiversity Management Plan (PC1) • Planning conditions for LEMP and CEMP (PC3 and PC4) • Planning condition for phasing plan for provision of all GI (PC5). This must require 100m buffer and Country Park to be delivered before first occupation of development on land to the east of West Ashton Road and provide for a circular route for

	<p>dog walkers incorporating the river.</p> <ul style="list-style-type: none"> • Management of GI by developer and then WWT/ManCo with oversight by steering group secured under legal agreement (LA2)
<p>2. Creation and management of extension to Biss Meadows CWS and Country Park (i.e. Green Lane Nature Park)</p> <ul style="list-style-type: none"> • Transfer land to Management Company at early stage • Implement habitat creation measures 	<ul style="list-style-type: none"> • Planning condition for phasing plan for delivery of these features (PC5) • Planning condition for landscape scheme of works (PC6) • Planning condition for LEMP (PC3) • Management of GI by developer and then WWT/ManCo with oversight by steering group secured under legal agreement (LA4, LA1, LA2 and LA3)
<p>3. Visitor Management Facility</p> <ul style="list-style-type: none"> • Base for warden • Allow engagement 	<ul style="list-style-type: none"> • Designed, provided, maintained and overseen by steering group under legal agreement (LA2 and PC13)
<p>4. Habitat creation and management of River Biss Corridor</p> <ul style="list-style-type: none"> • Maintain strong habitat corridor • Enhance foraging and commuting 	<ul style="list-style-type: none"> • Planning condition for phasing plan (PC5). • Planning condition for landscape scheme of works, (PC6) • Planning condition for LEMP (PC3) • Management of GI by developer and then WWT/ManCo with oversight by steering group secured under legal agreement (PC4, LA1, LA2 and LA3)
<p>5. 100m buffer to Biss Wood</p> <ul style="list-style-type: none"> • Minimise disturbance and degradation • Enhance connectivity (for wildlife) • Minimise visitor use of Biss Wood 	<ul style="list-style-type: none"> • Planning condition for phasing plan (PC5). • Planning condition for landscape scheme of works (PC6) • Planning condition for LEMP (PC3) • Managed by WWT/ManCo with oversight by steering group secured under legal agreement (PC4, LA1, LA2 and LA3)
<p>6. Erect small numbers of bat boxes onto retained trees within southern green infrastructure / Biss Wood / Green Lane Wood (referred to several times in TN1)</p> <ul style="list-style-type: none"> • Enhanced roosting opportunities 	<ul style="list-style-type: none"> • Provision, maintenance and monitoring agreed under legal agreement (PC3 and LA3)
<p>7. Management of off-site Woodlands</p>	<ul style="list-style-type: none"> • Revise and implement management

<ul style="list-style-type: none"> • Zoning of woods • Minimise vandalism • Warden presence • Remedial actions • Monitoring • Phased funding mechanism 	<p>plan under legal agreement (LA3)</p> <ul style="list-style-type: none"> • Provide full time warden from first occupation under legal agreement (LA2) • WWT to undertake management, monitoring and remedial measures with funding mechanism and oversight arrangements agreed under legal agreement (LA2 and LA3)
<p>8. Monitoring mitigation success</p> <ul style="list-style-type: none"> • Implementation of measures • Success of mitigation • Feedback to remediation 	<ul style="list-style-type: none"> • In accordance with Shadow HRA Addendum Appendix 1 (page 67), monitoring of mitigation success is no longer necessary under the Habitats Regulations (though may be required for other ecological reasons)
<p>9. Retention of dark corridors (foraging and commuting) at levels of 1 lux or below (Residential and employment areas including railway line and dark corridors from railway to the River Biss (north and south))</p> <ul style="list-style-type: none"> • Retain permeability / connectivity • Ensure continued functionality of commuting routes • Avoid disturbance to bats 	<ul style="list-style-type: none"> • Planning condition to secure Green Infrastructure parameters Plan Rev M together with Figures 6.4, 6.18 and 6.19 of the ES Addendum Volume 1 (PC2 and PC6) <p>The dark corridor along the railway has been significantly widened in the revised masterplan for noise mitigation purposes which increases the benefit for bats.</p> <p>NB There is a disparity between Figure 6.4, which shows dark corridors north and south, and Figure 6.17 which only shows a dark corridor in the south. Both corridors will be required and must therefore be secured.</p>
<p>10. Management of lighting within development site to reduce light spill and disturbance</p> <ul style="list-style-type: none"> • Minimise effects on surrounding habitats • Avoid lighting which attracts insects • NB Highways Authority has confirmed that footpaths and cycleways will not require lighting (TN4, dated 4 August 2016, para 2.13) 	<ul style="list-style-type: none"> • Planning condition for detailed lighting design to demonstrate compliance with 'Interim Guidance Recommendations to help minimise the impact of Artificial Lighting' (Bat Conservation Trust 03/06/14) and 'Guidance Notes for the Reduction of Obtrusive Light GN01:2011' published by the Institute of Lighting Professionals, Figures 6.4, 6.18 and 6.19 of the ES Addendum Volume 1 (PC7)

11. Retain majority of hedgerows	<ul style="list-style-type: none"> To be demonstrated through Biodiversity Management Plan and landscape schemes for green infrastructure and reserved matters applications (all of which will be secured through planning conditions, as described above)
12. Restore / enhance hedgerows	
13. Replace hedgerows lost to development	
14. Replacement tree planting	
15. Hop overs / Underpasses beneath YWARR at key habitat links <ul style="list-style-type: none"> At cross overs 1, 2, 3, 4, 5, 7, 11 Appropriate height and width Manage hedgerows on approaches Unlit / reduced lighting depending on location Hop overs at cross overs 6 and 8 with 4m high fencing 	<ul style="list-style-type: none"> Planning condition to secure PFA drawing Yarnbrook and West Ashton Relief Road P480/106 Rev F dated 18/08/17, PFA Highway Longsection Drawings P480/117 Rev A dated 07/07/17 and P480/114 Rev A dated 07/07/17 and PFA Typical Section H-H through Relief Road with Elevation of Culvert (Drawing P480/108) Rev B dated 07/07/17 (PC8) Planning condition to secure LEMP for management of YWARR after construction (by Highway Authority) (PC9) Planning condition for no lighting except at roundabouts in accordance with Figure 6.17 and 6.20 of the ES Addendum Volume 1 (PC11)
16. Open –span road bridges (B1, B2 and B3) to be constructed over the River Biss <ul style="list-style-type: none"> Bridges to be unlit, or where lit a dark corridor to be maintained below bridges at 1 lux or less 	<ul style="list-style-type: none"> Planning condition for no lighting above or beneath bridges except at B3 where lighting will be in accordance with Figure 6.17 and 6.20 of the ES Addendum Volume 1 (PC7)
TECHNICAL NOTE 3 – MONITORING	
1. Retention of habitats	<ul style="list-style-type: none"> Planning condition for CEMP for residential, employment and informal open space areas; this would: identify frequency of monitoring, thresholds, remedial measures and timescales for remediation during the construction phase; Identify compliance procedures including liaison with appointed compliance officer (PC4)
2. Stand-off widths (maintenance of construction buffer distances)	
3. Lighting (fixed point lux levels in residential and employment areas during construction period)	
4. Underpass construction and hedgerow	<ul style="list-style-type: none"> Planning condition for separate

<p>management (YWARR)</p> <ul style="list-style-type: none"> • In compliance with underpass design parameters 	<p>CEMP for YWARR; this would identify those construction works which are to be overseen by an ecologist, including in relation to underpasses, hop-overs, planting, lighting, hedgerow approaches to underpasses (PC10)</p>
<p>5. Habitat Creation completion (in accordance with plans)</p> <ul style="list-style-type: none"> • In compliance with Biodiversity Management Plan 	<ul style="list-style-type: none"> • Planning condition for CEMP (residential areas of site); this would identify frequency of monitoring, thresholds, remedial measures and timescales for remediation during the construction phase. Identify compliance procedures including liaison with project appointed compliance officer (PC4)
<p>6. Aftercare management completed</p>	<ul style="list-style-type: none"> • Planning condition for CEMP (PC4)
<p>7. Management Company in place</p>	<ul style="list-style-type: none"> • Secure though legal agreement, management to be undertaken in accordance with LEMP (LA1)
<p>8. Lighting (fixed point lux levels measurements)</p>	<ul style="list-style-type: none"> • Planning condition for CEMP (residential areas of site); this would identify requirement for testing and adjusting lighting in accordance with condition requirements and within fixed timescale (PC4)
<p>9. Record Visitor usage of Green Lane Nature Park Extension, Visitor Centre and Green Lane Wood</p>	<ul style="list-style-type: none"> • Not required to demonstrate no adverse effects (Shadow HRA Addendum 2017, Appendix 5)
<p>10. Record any negative physical effects on Biss Wood and Green Lane Wood e.g. new path creation, new woodland access points, damage / destruction of infrastructure</p>	<ul style="list-style-type: none"> • Although this monitoring is not considered to be strictly necessary to avoid adverse effects in the Shadow HRA Addendum 2017, nevertheless on a precautionary basis the Council will obtain and agree threshold(s) and remedial measures under legal agreement (LA3)
<p>11. Record habitat structure/composition – understory coverage to be reviewed against management practices (i.e. frequency / rotation of coppicing)</p>	<ul style="list-style-type: none"> • Threshold(s) and remedial measures to be agreed under legal agreement (see discussion under provision 15) (LA3)
<p>12. Monitor Bechstein's bat population use</p>	<ul style="list-style-type: none"> • Although this monitoring is not

<p>of bat boxes and trees with bat potential (Biss Wood only, monitoring already being undertaken at Green Lane Wood)</p>	<p>considered to be strictly necessary to avoid adverse effects in the Shadow HRA Addendum 2017, nevertheless on a precautionary basis the Council will obtain and agree threshold(s) and remedial measures under legal agreement (LA3)</p>
<p>13. Measure vegetation height / monitor establishment (hop-overs YWARR and residential)</p>	<ul style="list-style-type: none"> Although this monitoring is not considered to be strictly necessary to avoid adverse effects in the Shadow HRA Addendum 2017, nevertheless on a precautionary basis the Council will require this information to be collected as part of the monitoring requirements of the CEMPs (PC4 and PC 10)
<p>14. Measure Crossing Gap (residential, employment and YWARR)</p>	<ul style="list-style-type: none"> Although this monitoring is not considered to be strictly necessary to avoid adverse effects in the Shadow HRA Addendum 2017, nevertheless on a precautionary basis the Council will require this information to be collected as part of the monitoring requirements of the CEMPs (PC4 and PC10)
<p>TECHNICAL NOTE 6 – MONITORING BAT USE OF YWARR</p>	
<p>1. Bat use of targeted crossing points – static detectors</p>	<ul style="list-style-type: none"> Although this monitoring is not required to demonstrate no adverse effects (Shadow HRA Addendum 2017 para 4.8.3), it will be secured by condition in order to provide an evidence base for the use of underpasses and to inform on-going research of the local Bechstein's population (PC10 and LA3)
<p>2. Bat use of targeted crossing points – radio tracking</p>	
<p>3. Bat use of targeted crossing points - trapping</p>	
<p>MEETING ON 13 JANUARY 2017 AND NATURAL ENGLAND COMMENTS</p>	
<p>Optimise functionality of land south of R2 for Bechstein's bats</p> <ul style="list-style-type: none"> Strengthen existing landscape features within application red line, e.g. planting poplars and show these on submitted plans 	<p>This information is not shown on the submitted plans, specifically P480/101 Rev G (sheet 2 of 4) dated 18/08/17 but can be obtained by condition. (LK phoned Alistair Baxter on 21/12/17 regarding this – either new plans will be submitted or Council will apply a specific condition requiring developer to submit</p>

	these details.) (PC12)
Remove extensive planting along the YWARR and hop-overs from crossings with underpasses	Shown on all relevant revised plans
Indicative details of “wet” attenuation ponds to demonstrate how they would deter people crossing	The masterplan shows the position of these. Details provided in Figure 6.1 and para 6.5.55 of the ES Addendum Volume 1 (PC2). See provision 9 below.
15m wide buffer including 2m high landscaped bund and fencing between housing an employment to be provided before occupation of land to the east of West Ashton Road	The masterplan shows the buffer to be approximately 10m wide. Details provided in Figure 6.2 and para 6.5.55 of the ES Addendum Volume 1, see also provision 9 below. Full details of the buffer design will be obtained and assessed at the reserved matters stage but in principle the Council considers that an effective buffer can be achieved at 10m wide (PC15)
Planting in the 100m buffer should follow the principles of the GI strategy	Details to be obtained by planning condition (PC6).
Landowner to restrict public access to agricultural land before implementation of employment development	Restriction to be included in legal agreement (LA5)

2. *A commitment to establishing a steering group once the application has been determined and before work commences on site to have oversight of delivery of mitigation provided for in TN1, TN3, and TN6. The membership and terms of reference of that group should be agreed with Wiltshire Council (in consultation with Natural England)*

This requirement is taken from the principles agreed between Wiltshire Council, WWT and the developers in a document dated 10/03/17³. The document sets out the mitigation measures that WWT have agreed to help deliver on land in their ownership as well as the facilities and contributions that will be provided by the developer in order to enable the trust to meet these obligations. The document notes that the membership and terms of reference of the steering group will be agreed before commencement of development. The broad remit of the steering group will be to oversee the implementation and monitoring of the mitigation and remediation measures (if needed) agreed with the Council in relation to the Ashton Park development. In order to secure this, the Council will require these details, as agreed by Natural England to be included in a legal agreement between the WWT and the Council and for the inaugural meeting to be held before works commence.

³ A copy of which is contained in Appendix 3 of the Shadow HRA Addendum (DTA Ecology July 2017)

3. *Funding to implement the mitigation measures is secured and ring-fenced.*

Further to the arrangement for agreements set out for provision 2 above, one or more legal agreements will secure (LA2):

- specification for the ecological visitor facility;
- provision and funding for visitor facility and its reasonable maintenance;
- land transfer arrangements for the visitor facility and newly created habitat;
- funding for replacement of capital works;
- funding for long term management of newly created habitat;
- funding for agreed management, monitoring and remedial works triggered by the monitoring scheme;
- provision of full time warden;

For mitigation proposed within the application boundary, planning conditions will be used to secure the following before commencement of development:

1. Delivery of the submitted indicative masterplan as shown on drawing A.0223_77-01 Rev W (PC2)
2. Delivery of the green infrastructure plan as shown on drawing A.0223_16-1M and supported by the Green Infrastructure and Biodiversity Strategy Sept 2017 (PC6)
3. Delivery of mitigation in accordance with the ES Addendum Volume 1 – Main Text August 2017 and ES Addendum Volume 2 – Technical Appendix August 2017 (PC2)
4. Submission, approval and delivery of:
 - An overarching Strategy for Biodiversity Mitigation and delivery of green infrastructure covering land within and outside the application boundary (PC1)
 - A Landscape and Ecology Management Plan, possibly separate plans for the YWARR and mixed residential development (PC3 and PC9)
 - Construction Environment Management Plans, one for the YWARR and one for the mixed residential development (PC4 and PC10)
5. Revised plans submitted in October 2017 for the YWARR (PC8)
6. Lighting proposals for all residential / mixed development areas and the YWARR in accordance with details submitted in the ES Addendum Volume 1 (PC7 and PC11))

The above approach is normal practice in granting planning permission and has been proven to be effective for obtaining delivery against approved drawings. It will be an effective way to obtain further documents as required under item 4 above.

Experience at Castlemead, Trowbridge has demonstrated that implementation of works against approved documents can be difficult to achieve whether by planning condition or S106. In view of this, the developers have agreed to provide a Compliance Ecologist on approval of the first reserved matters application for the duration of the construction period⁴ and this will be secured by S106. This person will regularly report back to the Council on progress against a schedule of delivery requirements which will be scored in

⁴ Refer to "Principles agreed between Wiltshire Council, the Applicants and Wiltshire Wildlife Trust over mitigation and monitoring to offset the effects of recreational pressure on Bechstein's bats", agreement between Wiltshire Council, version dated 10/03/17

terms of their priority for achieving compliance with the Habitats Regulations. Developers will be informed of the Council's intended approach to enforcement for the different priority categories with the strongest action taken for non-compliance which threatens to delay delivery of measures required to secure favourable conservation status of the SAC. A bond will be retained by the Council so that where the delivery of these measures exceeds a predefined period the Council will engage a third party to deliver the mitigation at the developers' expense (LA4 and LA7).

Within the application boundary, implementation of the LEMP will either be delivered by a management company, or by a combination of WWT and a management company. The allocation of these long term management responsibilities will be resolved by the time the legal agreement(s) is completed and be clearly specified in that document. The specific financial arrangements relating to WWT's future responsibilities will be set out in a legal agreement with the Council (LA1).

Mitigation beyond the application boundary, i.e. on land owned by WWT will be delivered by WWT in accordance with a legal agreement (LA3).

4. *A full time warden is appointed and will start work before the occupation of the first dwelling. The warden must be engaged full time in activities within the woodlands and associated greenspace provision and should not be employed in respect of other sites owned/managed by the Trust. (NB Although Feb 2017 version of TN1 has not been altered to this effect, the ES Addendum Volume 1 identifies that the warden will be full time from first occupation)*

The Shadow HRA Addendum 2017 recognised that the commitment to a full-time warden was an important change to the original submission. Their presence can be expected to have a positive impact on emerging usage patterns and more effective at delivering management options given the reduced scale of pressure now anticipated.

This provision will be achieved through appropriate wording of one or more legal agreements. The appointment and role of the full time warden will be included as an item in the terms of reference of the Steering Group with funding for the post secured in perpetuity. While the warden will be in place before 1st occupation, it would be unreasonable to require a visitor centre to be in place by this stage. However as the centre will provide the base for the warden to work out of, it cannot be excessively delayed. A two year delay would roughly correspond to 300 dwellings and it is proposed to require the centre to be handed over to WWT before occupation of the 300th dwelling or within two years of 1st occupation whichever is the sooner (LA2).

5. *The Management Plan for Green Lane Wood and Biss Wood is amended to fully reflect the updated versions of TN1 and TN3 and include all the commitments referred to in the Agreement with Wiltshire Wildlife Trust. In particular the management plan must be clear that informal fires of any kind within the woodlands will never be tolerated.*

The Agreement with the WWT will be secured through one or more legal agreements which will make provision for revising the management plan for the woods⁵ and obtaining approval of the Planning Authority to the revisions before works commence (LA3)

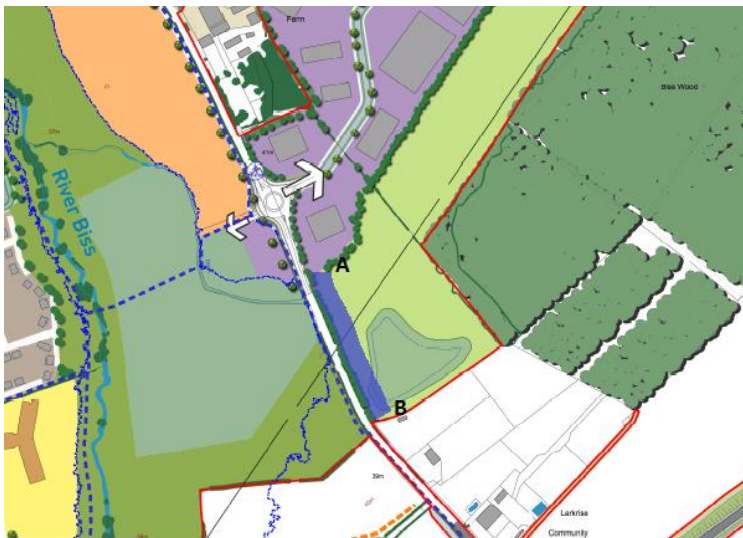
⁵ Current management plan is the Green Lane Wood and Biss Wood Forestry Commission Management Plan (Draft 2016) prepared by WWT and emailed to Wiltshire Council on 05/12/16

6. *The S106 agreement to include an obligation on the applicant for the business park to be effectively marketed.*

This provision (which is also a requirement of the Wiltshire Core Strategy) will be achieved through a planning condition for implementation of a scheme of marketing and construction of a roundabout junction into the employment land before occupation of 25% of dwellings being occupied (PC17)

7. *The proposed strengthening of the existing hedgerow along the road to the south west corner of Biss Wood with thorny species and fencing is secured and delivered in a timely manner such that the vegetation is established and the barrier is fully effective before occupation of houses to the west of the River Biss.*

This provision relates to an impenetrable width of thorny planting between points A and B in the masterplan extract below. The Shadow HRA Addendum 2017 identified that it would be “critical to ensure that the barrier to public access is effective upon occupation of the housing to be built to the west of the River Biss”. In view of this, the timeframe for ensuring this measure is in place needs to be carefully constrained by the planning condition. Wording in PC15 would ensure and provide the maximum possible time for hedgerow planting to development before houses to the west of the river were occupied. It will be imperative that this planting connects tightly with planting along the boundary of the employment land and the 100m buffer.



8. *The provision of a public access route to the south of Leap Gate to link the River Biss corridor with the Green Lane Nature Park to minimise the likelihood of calls for provision of a circular access route and the likelihood of the hedgerow strengthening and fencing not being effective over the long term. The location of the public access route will need to be subject to agreement with the Council (in consultation with Natural England).*

This requirement stems from a careful analysis in the Shadow HRA Addendum 2017 of the benefits and drawbacks of providing a circular leisure route. On balance, provision of the route was considered to have the potential to draw users into new greenspace

provision and away from the woods provided that effective barriers across the attenuation pond and employment land could be secured (see provision 9 below). The route should ideally be designed to give the best possible pedestrian experience in terms of green space. While it would be unnecessary to have the route in place before first occupation, it would need to be established before a significant proportion of the dwellings to the east of West Ashton Road were occupied and before there was significant opportunity for unacceptable routes to form. It is proposed to meet this requirement through a carefully worded planning condition (PC14).

9. *The use of S106 to a) prevent public access to the employment allocation land until such time that the land is developed and over the long term if the employment land is not developed, and b) provide a post and wire fence with thorny planting in the 100m buffer between Biss Woods and the employment provision.*

In respect of point a) above, the S106 will include a requirement to prevent public access to those parts of the employment land that remain undeveloped through effective fencing, gates and signage and other means where appropriate (LA5).

Regarding point b), in its letter dated 30 January 2017⁶, Natural England provided strong support for a “*series of barriers which together are considered to be an effective part of a mitigation strategy to manage recreational and disturbance pressures on the woods*” and it provided broad details of the type of boundary treatments that would be required. Figures 6.1 and 6.2 in the ES Addendum Volume1 provide landscape buffer details. As there is little doubt effective barriers are feasible, the Council considers that full details of these can be obtained by planning condition. (PC15).

In Natural England’s response to the Final Draft version of this HRA, it noted there is planned pedestrian connectivity between the employment land and the adjoining housing (blue dotted line on masterplan extract below) and that, “Due to concerns about access to the woods, this access must not be provided (indeed must be prevented via an impenetrable barrier) prior to the development of all (or certainly most) of the employment land.”



This point will be specifically recognised in the S106 (LA5).

⁶ Appendix 2 Shadow HRA Addendum, DTA Ecology July 2017

10. *The number of dwellings to be provided to the east of the West Ashton Road is considered by the Council (in consultation with Natural England) to be acceptable in principle, without compromising the ability of the mitigation measures to be regarded as effective and reliable.*

The Shadow HRA Addendum 2017 was undertaken on the basis of having been advised by the developer that “in the order of 300 homes” will be provided to the east of the River Biss. This redistribution of housing was critical to the HRA’s revised conclusion. The impacts of this quantum in combination with the remaining 2200 dwellings to the west and the Wiltshire Housing Site Allocations Plan needs to be fully monitored and understood before any further housing is allocated to the east of the river. Planning condition PC16 will be used to limit the quantum of housing on the east side of West Ashton Road.

11. *All other commitments in the Agreement with Wiltshire Wildlife Trust are fulfilled.*

The only outstanding commitments in the agreement not already dealt with above are:

- a) “A timetable for all green infrastructure planting will be agreed before the first reserved matters application is submitted and will be secured by relevant planning conditions / S106”

This matter can be dealt with by condition (PC5)

In addition, further landscaping conditions will be required for submission of planting details and aftercare of the above features (PC6)

- b) “The Applicants will provide a Compliance Ecologist on approval of the first reserved matters application for the duration of the construction period.”

- a. This requirement will be resolved in the S106 with the developer. Details to be resolved include the amount of resource required, recruitment and line management arrangements. The Council considers this post to be critical and will only agree to arrangements which it considers to be workable and adequate to fulfil the requirements of the HRA (LA4).

12. *Advance planting is delivered as soon as reasonably practicable following determination, and before work commences on the road, to strengthen the proposed hop-overs at crossings 6 and 8.*

Following redesign of the YWARR, four of the six known Bechstein’s crossing points will include an underpass designed to best practice standards. However underpasses will not be provided at bat crossing positions 6 and 8. The Shadow HRA Addendum concluded at paragraph 4.3.16 that “...if underpasses are provided at crossing points 1, 3, 5 and 7, having regard to the advice provided by Natural England as quoted at 4.3.13 above, and in the absence of cogent and compelling reasons for departing from that advice, the Council can have sufficient confidence that the use of a hop over at crossing points 6 and 8 would not represent reasonable scientific doubt as to the absence of adverse effects from severance of flight lines.”

The principles of the provision at all 4 hop-overs is discussed in the ES Addendum Volume 1 para 6.5.147 – 6.5.151 and they are shown on PFA drawings Yarnbrook and West Ashton Relief Road P480/100 Rev F dated 18/08/17, P480/101 Rev G 18/08/17,

P480/102 Rev F 28/07/17 and P480/103 Rev E 18/08/17 which will be secured by condition (PC8).

4 m high fencing will be erected on the roadside of the hop-overs to discourage bats from flying straight across but no information has been provided regarding timing of advance planting outside the highway fencing.

This issue will be further resolved by planning condition (PC15)

13. *With reference to 1878/CUL1 (rev B) the detailed design for the underpasses conforms with Defra Best Practice guidelines in terms of the height of the underpass (at least 3m) and agreement is reached with Natural England that any change in flight height is not sufficient to raise reasonable scientific doubt over their effectiveness.*

The position of all cross-overs and their treatment (i.e. as a hop-over or underpass) is shown on PFA drawing Yarnbrook and West Ashton Relief Road P480/106 Rev F dated 18/08/17. This complies fully with figure 1878/CUL1 (rev B) in terms of the locations of underpasses.

The Highway Long Section Drawings P480/117 Rev A dated 07/07/17 and P480/114 Rev A dated 07/07/17 submitted with the revised scheme show the height and vertical position of the 7 proposed underpasses in relation to existing ground level. All the underpasses are 3.125m in height and all sit on existing ground level with the exception of underpass 11 approximately half of which is below existing ground level. Bechstein's bats have not been recorded at crossing point 11 and therefore this underpass is provided as an enhancement for bats crossing the existing West Ashton Road towards the south east corner of Biss Wood.

It is clear that no change in flight height is required by the bats to access the underpasses, and all underpasses meet the minimum height requirement. Underpass 11 will not be full height during periods of high rainfall if groundwater levels rise but this is unlikely to affect use of the culvert to any great extent during the main breeding season.

Typical Section H-H through Relief Road with Elevation of Culvert (Drawing P480/108) Rev B dated 07/07/17 suggests that the hedgerows will be retained in their existing positions as far as the headwalls. However further details will be obtained through the CEMP for the YWARR to provide full assurance that this requirement can be met (PC10).

While the culverts meet best practice guidelines, further details are required of how the works will be implemented in the vicinity of the culverts, including the timing of the placement of culverts and subsequent earthworks, in order to minimise disruption during the main bat breeding period. The ES Addendum Volume 1 para 6.5.155 suggests the culverts could be put in place shortly after the hedgerow sections are removed. Further details will be obtained through the CEMP (PC10).

14. *Further mitigation measures are provided to strengthen the existing landscape features within the green infrastructure provision and the Green Lane Nature Park Extension and, in particular, along the River Biss corridor and existing flight lines to enhance the foraging opportunities for the local population of Bechstein's bat. These measures should be agreed with Wiltshire Council in consultation with Natural England but could include:*

- i. *Planting of a woodland corridor between Biss Woods and the River Biss corridor, designed to increase connectivity to key foraging habitat and encourage the crossing of the West Ashton Road at a safe height once mature.*
- ii. *Tree planting between Green lane Wood and Biss Wood*
- iii. *Woodland corridors along the River Biss to enhance the landscape and foraging opportunities.*
- iv. *New woodland (or enhancement of existing tree planting areas) within the Green Lane Nature Park Extension and along the 100m buffer between Biss Wood and the employment allocation.*

This requirement stems from the need to offset the landscape scale loss of habitat over the 71 ha of urban development. Insufficient detail has been provided in the application to date to demonstrate where and how this will be offset. However, given the scale of informal open space provision, there is no doubt this mitigation requirement can be achieved (PC5 and PC6).

15. *The threshold for observed changes in habitat structure/composition within the woodlands to trigger remedial measures is subject to review and an alternative approach is agreed with the Council (in consultation with Natural England)*

The purpose of this provision is to ensure that the Council can be alerted to anything that presents a risk to site integrity before it occurs and for the developer to demonstrate that suitable remedial measures exist and can be employed in a timely manner. This requirement affects land outside the application boundary and will have implications for how Green Lane and Biss Woods are managed by WWT. For these reasons, while details of thresholds and remedial measures can be obtained by condition as part of the condition for the CEMP (PC4), delivery of monitoring needs to be secured as part of the legal agreement(s) (LA3).

In order to ensure thresholds and suitable remedial measures are meaningful and effective, the Council will first expect the developers' ecologists to test and finalise a methodology for monitoring habitat structure / composition (item 11 of Table 1 in TN 3 which is more broadly referenced in the ES Addendum Volume 1 at paragraph 6.5.202) with WWT. The legal agreement(s) will require monitoring results to be reviewed by the Steering Group and amendments to the protocol agreed as necessary against the overall objectives of the management plan (LA3).

Assessment of effects on Lesser Horseshoe Bats

Background

The ES Addendum Volume 2 (Ecological Baseline Assessment) provides an in depth assessment of the value of the application site to lesser horseshoe bats. In summary, the use of the habitats within the survey area by lesser horseshoe bats was considered to be of low to moderate conservation value. While low levels of activity were recorded across the survey area throughout the majority of the season, there were occasional and localised bursts of activity. The rate of detection of this species is inherently low due to the nature of its echolocation calls and it is in any case much rarer than other species such as pipistrelles which make up the bulk of detector recordings during bat detector surveys. Therefore,

despite low levels of activity, repeated use of the area throughout the survey season was considered to be of some significance.

The majority of the application site lies within 2km of the maternity roost at Rood Ashton Manor. While records indicate this roost does not meet the threshold for being included as a core roost⁷ for lesser horseshoe bats, it is reasonable and in accordance with the precautionary principle to presume this roost is functionally linked to the SAC⁸. Several other smaller day and maternity roosts have been recorded for this species in the local area at West Ashton, Steeple Ashton, including a roost at Armouracre Farm at the south end of Green Lane Wood. Other roosts connected to the SAC include a maternity in Bradford on Avon (150-180 females) and several underground sites across Bradford on Avon, Corsham, and Bath and Box. Together the underground sites in the Wiltshire part of the SAC support upwards of 250 bats based on autumn counts taken under a project licence held by Fiona Mathews. These counts are made by trapping at selected sites and represent a considerable underestimate as they omit the following: counts made at sites in Bath and North East Somerset; unknown roosts; smaller known roosts; and bats which escape being caught in the traps.

The quality of foraging across the application site is likely to be relatively poor for this species due to the lack of woodland which is its strong preference. While single bats undoubtedly use the hedgerows and river corridor on a regular basis it seems unlikely that the site contributes significantly to the sustenance of more than a few bats.

Although the River Biss may be expected to be one of several sites offering drinking water to the local population few records derive from the river corridor, most records during the developer surveys were close to the woodlands outside the application site.

Severance and degradation of commuting routes

The use of the site by lesser horseshoes bats is summarised in Plan 1878/EB9⁹. Key locations for lesser horseshoe activity were as follows:

Along a hedgerow which will be breached by the YWARR at bat crossing point 9¹⁰. The static detector at P6 recorded 103 lesser horseshoe passes over 4 days between 5 and 8 August with 78 passes on 8 August 2013 alone.

Along a hedgerow between Biss Wood and Biss Farm which will be breached by a road leading off West Ashton Road into the proposed Business Park. Static detector P2 recorded 30 passes over three nights from 5 to 7 August, 55 passes over 4 nights from 24 to 28 September and 14 passes over 4 nights from 3 to 6 October.

Crossing West Ashton Road between West Ashton cross roads and proposed roundabout 3. There is no obvious feature here to act as a flight line and bats may therefore cross West Ashton Road at a number of positions where conditions are dark. At static detector P8 between 4 and 10 lesser horseshoes were recorded here each month between June and October.

⁷ Special Areas of Conservation Planning Guidance for Wiltshire, Wiltshire Council, September 2015

⁸ See rescreening assessment in Appendix 1. A recovered ringed lesser horseshoe bat now links Gripwood and land to the north of the application site.

⁹ Environmental Statement Addendum Volume 2 – Ecological Baseline Assessment (Aspect Ecology August 2017)

¹⁰ See PFA drawing P480/101 Rev G for location of crossing point 9 (Bat Hop-over 9-BHO9)

Crossing the A350 from Biss Wood to Castle Lane Wood in the area where the proposed relief road will join the existing A350. At static detector P5, 15 lesser horseshoe passes were recorded in September and 13 in October. There is no obvious single commuting route in this area and it seems likely that bats cross at a range of locations between these two woodlands.

The hedgerow breached by the YWARR at bat crossing point 9 does not lie on an obvious flight line from Rood Ashton Manor or any other known maternity roost within 2km of the application site. This lends weight to the view expressed in the ES Addendum Volume 2¹¹ that the records relate to “sustained foraging activity by the detector from one or a small number of bats (rather than commuting activity from a large number of bats).” This can be justified because early August is the peak of the breeding season.

The YWARR will incorporate a hop-over rather than an underpass at this location. Each hop-over is specified with a 4m high close mesh fence in line with guidance¹² in Limpens 2005 serving to lift the bats up before they attempt to cross over the carriageway before planting at the hop-over becomes established. Advance planting of the hop-over may also be possible at this location within the red line boundary. As discussed in the Shadow HRA 2016, the effectiveness of hop-overs is untested¹³ and it is possible that lesser horseshoe bats will drop down to the carriageway regardless of fencing and tree planting either side. However as this section of the road is unlit, bats are unlikely to be deterred from continuing to cross it except at busy periods when headlights may act as a deterrent.

The hedgerow between Biss Wood and Biss Farm seems to be a commuting route for lesser horseshoes, and could be a route to a possible mating roost at the farm, although no evidence has been presented to this effect. Removal of a section of the hedgerow would be necessary for the access road to the employment site. This is unlikely in itself to deter bats but severance effects could occur if the new access road is insensitively lit. This could cause any mating roost, if present, to be abandoned. The conservation status of the SAC population is unlikely to depend to any significant extent on a mating roost at this particular location.

At West Ashton Road, the YWARR works will deter lesser horseshoe bats from crossing in the vicinity of the new roundabout which will be lit. However bats will be able to continue to cross to either side of the roundabout. A new footway/cycleway running from Trowbridge to West Ashton on the west side of West Ashton Road will entail removal of one of the roadside hedgerows. However, as this roadside hedgerow was not recorded as being used by lesser horseshoes, it seems unlikely this would affect these bats. Any lighting scheme for the path would need to be sensitively designed to provide lighting at a low level with no upward reflection of light. Replacement planting should also be provided where land take allowed.

The road section between Biss Wood and Castle Lane Wood will remain unlit and the scheme will in effect move the existing A350 closer to Biss Wood; the existing stretch from West Ashton Road will be dismantled and planted up. As there is only a marginal additional width in the new road, the long term consequences are expected to be of low significance. The location where the two woods are at their closest will remain unaffected by the scheme

¹¹Information for Habitats Regulations Assessment (HRA) with regard to potential effects upon European designations (Aspect Ecology, September 2017)

¹² H.J.G.A Limpens, P. Twisk and G. Veenbaas, 2005. Bats and Road Construction, Rijkswaterstaat

¹³ A. Berthinussen and J. Altringham. Development of a cost-effective method for monitoring the effectiveness of mitigation for bats crossing linear transport infrastructure. Final report 2015

and reinforcement planting of the hedgerow along Biss Wood track¹⁴ will provide a potential commuting route when it becomes established.

To the extent that lesser horseshoes commute across other parts of the application site, the measures incorporated into the scheme as mitigation for Bechstein's bats will also provide mitigation for lesser horseshoes. In particular the 7 underpasses which will be 3m in height and located along the line of existing hedgerows can be expected to maintain flight lines used by lesser horseshoes as they meet best practice principles for bat mitigation along linear transport routes¹⁵ and have been shown to be effective for this species¹⁶. New planting in the Nature Park Extension and along the River Biss will provide enhanced foraging opportunities. Dark corridors through residential parts of the site will also cater for this species.

Recreational Pressure

There are no detailed studies of how this species uses Green Lane and Biss Woods but they are occasionally caught during trapping surveys for Bechstein's. The only mechanism by which lesser horseshoes could be impacted by increasing recreational pressure is through changes in the structure and composition of the woodland habitat which, if significant, could compromise the quality of foraging habitat. The potential for this to occur was examined in the Shadow HRA 2016 and was largely removed as an impact in the Shadow HRA Addendum 2017 as a result of changes to the masterplan and provision of a full time warden post.

Monitoring has been identified as an acceptable mitigation measure for any residual impacts to woodland composition and structure as thresholds for unacceptable change can be set and remedial measures identified and put in place as necessary. The habitat requirements for lesser horseshoes are similar to those of Bechstein's and the thresholds and remedial measures derived for Bechstein's are not expected to conflict with those required for lesser horseshoes.

It is possible that with increasing numbers of visitors there may be a tendency for people to access Green Lane Wood along the track to Armouracre Farm. This would not cause disturbance to the horseshoe roost unless people left the track and entered private buildings. Unauthorised access is unlikely to be acceptable to the landowner who would quickly seek to resolve the matter with WWT. A padlocked fence between the woodland and the track would be an obvious and practical solution.

Mortality and Injury

The risk of mortality and injury can be expected to reduce in the section of the YWARR between roundabouts 1 and 2 where the speed limit will be reduced to 40 mph (from 50mph on the existing A350) and along the section of West Ashton Road between the existing cross roads and roundabout 3 where the limit will be reduced to 30 mph (from 40mph). In addition, roundabouts 2 and 3 will serve to reduce speeds as cars approach and leave these junctions. Underpasses will bring bats out of the path of traffic completely. Overall therefore bat mortality can be expected to be reduced compared to the existing situation.

¹⁴ Shown on PFA drawing P480/103 Rev E

¹⁵ A. Berthinussen and J. Altringham. Development of a cost-effective method for monitoring the effectiveness of mitigation for bats crossing linear transport infrastructure. Final report 2015

¹⁶ See discussion in ES Addendum Volume 1 at 6.5.116

Traffic along the new access road into the business park can be expected to be travelling at below 30 miles an hour as it approaches the hedgerow forming the bat commuting route which lies less than 100m from the roundabout junction. Traffic volumes will be comparatively low especially at night. These two factors considerably reduce the risk of bat fatalities from collisions along this new road.

The hedgerow breached by the YWARR at bat crossing point 9 lies between roundabouts 2 and 3 where the speed limit will be 50 mph. Although not all traffic will reach this speed, a proportion will and there will be a risk of injury or mortality if bats drop down to carriageway level at the hop-over.

Mitigation

The residual risks of the scheme to lesser horseshoe bats arising out of the above analysis are as follows:

- Abandonment of commuting route between Biss Wood and Biss Farm if lighting along the employment access road affects the hedgerow between these two woods
- Reduced use of flight routes across West Ashton Road depending on the extent to which the footway / cycleway between Trowbridge and west Ashton is lit.
- An increased risk of mortality and injury at bat crossing point 9 on the YWARR if bats drop down to carriageway level.

The following additional mitigation would address these issues:

- A planning condition requiring the road to remain unlit other than in accordance with a lighting scheme approved by the Council (PC7) which demonstrates no additional light spill above background levels onto the hedgerow between Biss Wood and Biss Farm
- A planning condition requiring the footway / cycleway to remain unlit other than in accordance with a scheme of lighting and planting approved by the Council which demonstrates minimal increase in light levels over background levels.

No further mitigation can be put forward to remove the residual risks of low levels of mortality and injury at YWARR crossing point 9. These arise due to the uncertainty surrounding the response of lesser horseshoe bats to the hop-over design.

Council appropriate assessment conclusion in relation to Ashton Park alone

As competent authority under the Habitats Regulations, the Council accepts the reasoning and findings of the DTA's shadow HRA which represent independent analysis of the available information without prejudice or bias in light of best practice, case law and relevant policy and guidance.

The Council considers that the provisions on which the conclusion of the Shadow HRA is based can be effectively secured through planning conditions and S106 clauses as specified above. The Council is therefore confident that all necessary mitigation measures for Bechstein's bats will be delivered in an effective and timely manner and that the scheme would not therefore lead to adverse effects on the Bath and Bradford on Avon Bats SAC in respect of its conservation objectives for Bechstein's bats.

The Council considers that impacts to lesser horseshoe bats can be avoided, mitigated and offset by the measures primarily intended for Bechstein's bat and by the incorporation of two additional conditions to minimise the effects of highway lighting.

Residual effects remain at crossing point 9 of the YWARR where there is a low risk that low numbers of lesser horseshoe bats may be killed or injured by traffic depending on how bats respond to the hop-over design. This route is considered to be used by one or a small number of bats for foraging and is not a regular commuting route nor located within the core area for lesser horseshoe bats. Any loss should be balanced against the reduced risks which will be experienced by the reduced car speeds and underpasses elsewhere along the scheme and the habitat gains which will increase foraging resources across the application site. On balance the Council considers that these residual effects are below the threshold that would lead to an adverse effect on the integrity of the Bath and Bradford on Avon Bats SAC in respect of its conservation objectives for lesser horseshoe bats.

In-combination Assessment

Although it has been demonstrated above that planning conditions and obligations can be applied to the Ashton Park permission to ensure no adverse effects alone, there are nevertheless residual impacts below this threshold which could have significant effects in combination with other plans and projects. The approach to the in-combination assessment is detailed in the Shadow HRA Addendum 2017 in section 6 and is modified here as necessary to take account of the latest situation with regards to plans and projects which could act in-combination and to take account of the inclusion of lesser horseshoe bats in the appropriate assessment.

Since the Shadow HRA Addendum 2017 was completed, further information has become available to demonstrate how far visitors are prepared to travel for recreation and this is relevant to the in-combination assessment. A visitor survey of open spaces and woodlands used by roosting Bechstein's bats in the Trowbridge area was commissioned by the Council in 2017¹⁷. This indicated that all development in Trowbridge and Westbury has the potential to give rise to increased recreational pressure on publicly accessible woodlands either directly or indirectly. While the majority of visitors on foot tend to live within 0.6km of the woodlands, people living beyond 0.6km access recreation sites by car if no closer alternatives are available.

The four key areas of in-combination effects are as follows:

- Recreational pressure
- Severance/degradation of commuting routes
- Mortality / injury
- Loss / degradation of foraging habitat

Plans and projects relevant to in-combination assessment

Key plans and projects are discussed below while a full list is provided in the Rescreening Assessment in Appendix 2.

¹⁷ Panter, C., Lake, S. & Liley, D. (2017) Trowbridge Visitor Survey and Recreation Management Strategy. Unpublished report by Footprint Ecology for Wiltshire Council

- Wiltshire Housing Site Allocations Plan, pre-submission draft June 2017 allocates 6 sites at Trowbridge with a combined total of 800 dwellings. The Council's HRA identified impacts on the SAC from these developments alone and in-combination with other plans and projects. Mitigation included revisions to the wording of policies to ensure existing bat habitat is protected within the development sites and a commitment to offsetting recreational pressure and loss of habitats through the preparation and implementation of a Trowbridge Recreation Management and Mitigation Strategy.
- Hilperton Neighbourhood Plan 2017-2026 submission draft is currently at the formal consultation stage prior to independent examination. This plan identifies that the landscape setting of the Hilperton Gap should be protected from development but that development may come forward as a rural exemption site. It also proposes improved links that facilitate safe foot or cycle journeys to and from Trowbridge. Both policies have potential implications for the SAC as they could lead to disruption of commuting and foraging routes used by SAC species and potentially affect Bechstein's tree roosts.
- Biss Farm, Trowbridge application 17/09961/OUT for 267 dwellings, a school, extra care facility and a pub/restaurant. Council HRA yet to be completed
- Elizabeth Way, Trowbridge, application 16/00672/OUT for 180 dwellings, screened in, favourable HRA dependant on adequate mitigation coming forward
- Wynsome Street, Southwick, application 17/03269/OUT for 140 dwellings, appropriate assessment identified potential for adverse effects
- Drynham Lane, Trowbridge, application 16/00547/OUT for 91 dwellings (part of the strategic allocation for 2600 dwellings), screened in, favourable HRA dependant on adequate mitigation coming forward
- Land South West of Ashton Road, Trowbridge, application 16/04468/OUT for 200 dwellings, appropriate assessment identified potential for adverse effects
- Land at the Junction of Westbury Road and Phillips Way, Yarnbrook, application 16/12347/FUL for a petrol filling station. No likely significant effects subject to conditions. Application approved
- Land North of Bitham Park, Westbury, application 17/01643/REM for 300 dwellings, approved
- Land at Westbury Sailing Lake, application 15/12551/OUT for up to 300 dwellings, approved
- Land North of Holt Road and Cemetery Lane, Bradford on Avon, application 17/03844/REM for 60 dwellings, Council HRA yet to be completed
- Conversion of Building A at Kingston Mills, Bradford on Avon, application 17/03162/FUL, conversion of carpenters workshop into two dwellings, appropriate assessment concluded no adverse effects subject to conditions.

Analysis of effect mechanisms

a) *Recreational pressure*

The Council considered the effects of recreational pressure through the HRA for the Wiltshire Core Strategy and concluded that effects could be avoided provided that an

appropriate mitigation strategy was provided for Ashton Park. A further 950 houses at Trowbridge on top of the allocation of 5860 would only come forward once further assessment had resolved this could be mitigated.

The table below provides a comparison of delivery during the period 2006 – 2017 against housing allocations in CP 1 and CP 29.

	Core strategy housing allocations	Potential for additional housing provided certain conditions are met	Completions to March 2017
Trowbridge town	5860 (including 2500 for Ashton Park)	950	3093
Trowbridge remainder	165		260
Westbury town	1500		940
Westbury remainder	115		51

It is evident that Ashton Park will not exceed the total allocation figure for Trowbridge (i.e. 3093 + 2500 + 260 = 5853) but completions which are forecast for March 2017-2018 are likely to mean the allocation will be met quickly if Ashton Park is approved, well before Ashton Park is completed. As recognised in the core strategy HRA, there is a potential for impacts to arise if development exceeds the allocation.

Both the visitor survey and the Shadow HRA Addendum identify two zones of potential impact: a zone within close proximity to the woodlands where people may be expected to make frequent visits and a zone where access on foot or by car would be reduced. Development in close proximity will be inherently more difficult to mitigate as there will be limited options for directing people to alternative sites.

Outside the zone of easy access, further development beyond the core strategy allocation would be possible, provided that it was located and designed to avoid key potential flight lines / foraging habitat and measures were put in place to offset residual cumulative impacts which would otherwise occur from a progressive increase in recreational pressure and degradation of habitats.

b) Severance / degradation of commuting routes

There is potential to cause in-combination effects on commuting corridors where Ashton Park lies close to other applications. The Shadow HRA Addendum 2017 considered two such applications; Drynham Lane (16/00547/FUL) and Land South West of Ashton Road (16/04468/OUT). At Drynham Lane the Council will require retention of dark corridors along the hedgerows which will minimise the potential for degradation of flight lines on the boundary between it and Ashton Park, while Land South West of Ashton Road has the potential to impact on current and further Bechstein's habitat if it is permitted. A third application in proximity to Ashton Park has been submitted since the Shadow HRA Addendum was completed. Land West

of Biss Farm has the potential to maintain the most likely bat flight line as the application buffers Blackball Brook with an undeveloped corridor of a minimum 50m in width.

c) *Mortality / injury*

The Shadow HRA Addendum considered that such effects were less likely to be cumulative and there was no potential for cumulative effects to arise in respect of mortality from the YWARR.

Vandalism of bat boxes / trees which could lead to mortality effects for Bechstein's bats come under consideration of the effects of increased recreational pressure above.

d) *Loss / degradation of foraging habitats*

These effects would be cumulative if the plans and projects identified above were added to the losses expected at Ashton Park.

In conclusion all four effect mechanisms have the potential to give rise to cumulative effects.

Wiltshire Housing Site Allocations Plan

This plan identifies specific development sites in order to provide greater certainty that the quantum of housing proposed in the core strategy housing allocations can be achieved before 2026. In relation to Trowbridge the plan aims to provide the necessary evidence to demonstrate that additional housing over and above the allocation of 6025 can come forward. The plan is informed by a HRA prepared by the Council¹⁸. This sought to remove applications which would cause the greatest number of recreational visits at an early stage of the plan process. Consequently sites within 500m of Green Lane and Biss Woods were removed at the site selection stage. This is consistent with the approach taken by the Shadow HRA Addendum 2017 and the recommendations of the visitor's survey.

As a consequence, development at Land South West of Ashton Road which lies well within 500m of Green Lane Wood was excluded from the plan. This site is currently the subject of application 16/04468/OUT for 200 dwellings where the Council's appropriate assessment concluded adverse effects would arise due to recreational pressure and loss of landscape features to support continuity of bat habitat in the long term. It is also evident that development at this location would reduce options available to maintain and / or restore the population if such a need arises in the future.

The Plan took the six sites at Trowbridge which remained after the screening stage to a full appropriate assessment¹⁹ which concluded that adverse effects on site integrity could be avoided from the developments alone provided that policy wording was inserted to ensure key flight lines and foraging habitat would be retained as dark corridors. However the assessment concluded that "*...there is likely to be an unavoidable residual cumulative effect of ongoing urbanisation at a Landscape scale around Trowbridge.*" In order to address this the Council has committed to developing a Trowbridge Recreational Management and Mitigation Strategy (TRMMS). Phase 1 of the strategy will support the Wiltshire Housing Site Allocations Plan through Examination in Public in summer 2018. Phase 2 will deal with housing numbers over and above 6975 (i.e. the total allocation for Trowbridge in the

¹⁸ Wiltshire Housing Site Allocations Plan (pre-submission draft Plan) Habitats Regulations Assessment June 2017

¹⁹ Wiltshire Housing Site Allocations Plan (pre-submission draft Plan) Habitats Regulations Assessment June 2017

Wiltshire Core Strategy 2006-2016) as the Council moves forward with its Local Plan (Core Strategy) Review.

The TRMMS will provide mitigation to offset the cumulative effects identified above. In particular it will offset:

- any residual impacts arising from Ashton Park which are below the threshold for adverse effects on site integrity
- the unavoidable increase in visitor pressure on publicly accessible woodlands arising from developments located beyond easy walking distance
- unavoidable changes in the landscape arising from developments beyond 500m which cumulatively would lead to degradation and loss of foraging habitats and commuting routes

The TRMMS will be informed by evidence of existing bat surveys and records and by evidence and views from consultative groups formed of local bat experts, developers and local community groups. The first consultative meetings with bat experts and Natural England have been fixed for January 2018. A robust monitoring scheme will be required in order to assess the effectiveness of the mitigation and feedback into future assessments. Implementation of the plan will be paid for through developer contributions; i.e. S106 obligations and CIL.

Until the TRMMS phase 1 is available, applications for new housing (not including Ashton Park which has its own bespoke mitigation package) will only be approved if:

- a) a bespoke mitigation package is provided which Natural England agrees is likely to be equivalent to that proposed by the TRMMS, and;
- b) the total quantum of housing does not exceed the allocation in the Wiltshire Core Strategy or, once TRMMS Phase 2 is completed, the allocation in the Local Plan review

It is relevant to note that at this point in time there are no permissions yet to be implemented which have the potential for in-combination effects on Bechstein's bat through recreational pressure in the Trowbridge area. Therefore while this appropriate assessment considers the effects of pending plans and projects, none of these with potential for effects on Bechstein's could be implemented until the TRMMS is approved or conditions a) and b) above are met.

Council appropriate assessment conclusion in relation to Ashton Park in-combination with other plans and projects

In conclusion, the Council considers that the approach established above, of excluding development within easy walking distance of Green Lane and Biss Woods and having a strategy approved by Natural England to address impacts arising from developments further afield, will address the residual cumulative effects of all four effects mechanisms discussed above. Where applications for development are submitted within the zone of easy walking distance developers will need to demonstrate beyond reasonable scientific doubt that informal access routes to the woodland will not develop in further decades and that the habitat requirements for Bechstein's bats will not be compromised now or in the long term.

Integrity test

In considering whether Ashton Park would adversely affect the Bath and Bradford on Avon Bats SAC, the Council has had regard to principles identified in the DTA guidance²⁰ in relation to the integrity test. A site's integrity relates to its capacity for meeting the SAC Conservation Objectives as well as its capacity for self-repair and self-renewal under dynamic conditions with a minimum of external management support. Any proposals that reduce these capacities can be considered to affect site integrity. Effects may become manifest in the short, medium and long term, may be of short or long duration and may or may not be reversible. In considering these effects the Council must adopt the precautionary principle and be certain the project will not have an adverse effect on site integrity. This will only exist where the Council is convinced there is no reasonable scientific doubt as to the absence of effects on site integrity.

While development at Ashton Park would be reliant on increasing the level of management at Green Lane and Biss Woods, the Council must take into consideration their small size and edge of urban location of the woodlands which significantly compromises their ability to be managed with minimum external management support. The package of measures which would be secured from the developer and the Wiltshire Wildlife Trust will focus greater attention on the needs of Bechstein's bats such that it will become possible to track short, medium and long term effects and use identified oversight mechanisms to bring about timely and effective remedial measures as deemed appropriate. The underpasses at the YWARR are capable of maintaining connectivity across the landscape used by Bechstein's and lesser horseshoe bats for the lifetime of the road scheme. The range of mitigation and the mechanisms proposed to secure it are sufficient to remove any doubt that the Council may otherwise have had as to the absence of adverse effects on the integrity of the Bath and Bradford on Avon Bats SAC. As such, the Council concludes that the project (as proposed in planning application 15/04736/OUT) would not have an adverse effect on the integrity of the Bath and Bradford on Avon Bats SAC, either alone or in combination with other plans and projects.

²⁰ Essential guidance for the assessment of plans and projects under the UK Habitats Regulations
<https://www.dtapublications.co.uk/>

APPENDIX 1

HABITATS REGULATIONS ASSESSMENT ASHTON PARK, TROWBRIDGE

Rescreening for likely significant effects July 2017

The Council's screening assessment for planning application 15/04736/OUT under Regulation 61 of the Habitats Regulations 2010 (as amended) considered the various elements of the scheme as submitted in May 2015. The assessment identified uncertainty with respect to the mitigation proposed for Bechstein's bats, a species with several maternity roosts close to the application site which are considered to be functionally linked to the Bath and Bradford on Avon Bats SAC.

Consequently, the Council appointed DTA Ecology to undertake a Shadow Appropriate Assessment²¹ in order to identify whether the scheme would lead to adverse effects on the SAC's integrity in view of the sites conservation objectives as far as they relate to Bechstein's bats, using the Council's screening assessment as the starting point for the appropriate assessment. Further to an iterative assessment process, sources of potential adverse impact have been removed and reduced through revisions to the masterplan layout and the design of the relief road. In July 2017 DTA Ecology advised the Council that these changes, together with a number of other specific provisions which can be secured by planning conditions and legal agreements could be sufficient to allow the Council to conclude no adverse effects on the integrity of the Bath and Bradford on Avon Bats SAC²².

In light of the time which has elapsed since the screening assessment and the considerable changes that have occurred resulting in the submission of revised plans and a revised Environmental Statement (August 2017), the Council has taken this opportunity to rescreen the application for potential effects on European Sites.

The purpose of this rescreening judgement is to determine whether there are any further issues that should be screened into the appropriate assessment in addition to those already dealt with by DTA's shadow HRA. These might include:

- European sites other than the Bath and Bradford on Avon SAC
- other features of the Bath and Bradford on Avon Bats SAC
- additional aspects of Bechstein's ecology

These may give rise to the potential for significant effects either alone or in-combination with other plans or projects.

Changes since the initial screening in 2015

The scheme

²¹ Shadow Appropriate Assessment under the Habitats Regulations of Ashton Park planning application 15/04736/OUT, 7 October 2016, Confidential Final Draft. DTA Ecology for Wiltshire Council

²² Shadow Appropriate Assessment under the Habitats Regulations of Ashton Park planning application 15/04736/OUT, Addendum July 2017, Final. DTA Ecology for Wiltshire Council

Details of how the scheme has changed since May 2015 are described in a letter from Pegasus to the Council dated 28th September 2017. Key changes which could have a bearing on ecology are as follows:

- Detailed plans for the Yarnbrook / West Ashton Relief Road have been revised. The road will be raised between R1 and R2 by approximately 4m in order to accommodate 7 bat underpasses.
- Business park relocated to land on the east side of West Ashton Road with a corresponding reduction in the area of land allocated for housing from approximately 25 ha to 11 ha. Although the amount of housing east of the Biss was unspecified in the original submission, the shadow HRA has been undertaken on the basis that the maximum number of dwellings will be approximately 300.
- Specific measures incorporated east of the Biss to prevent easy access to Green Lane and Biss Wood. Measures include planting, fencing and housing layout.
- 100m ecological buffer to Biss Wood laid out to discourage it becoming part of a well-used circular walk.
- Ecological Visitors Facility relocated to Leap Gate
- Displaced housing relocated adjacent to the railway where the business park was previously proposed.
- Footpath links to direct pedestrians to two existing railway underpasses rather than at-grade crossings and foot/cycle link added on the west side of West Ashton Road and along the section of the existing A350 which will be bypassed.

The following reports have also been revised and taken into account in this rescreening assessment.

ES Addendum Volume 1 Main Text (August 2017)

ES Addendum Volume 2 Technical Appendix (August 2017) including Ecological Baseline Assessment (August 2017), Report in Respect of Bechstein's Bats (including results of the 2013 radio-tracking study) (August 2017) and Information for Habitats Regulations Assessment (HRA) with regard to potential effects upon European designations (Sept 2017)

SAC bat surveys

Since the 2013 Ashton Park bat surveys, further survey work has been undertaken at Green Lane and Biss Woods in 2014, 2015, 2016 and 2017 to fulfil the requirements for Castlemead planning permission.

Some key findings from these studies are:

- The main Bechstein's maternity roost for Green Lane Wood appears to be an ash tree 500m north of the wood.

- Recovery of ringed Bechstein's bats has altogether found 4 bats in Green Lane or Biss Wood which were ringed in the SAC at Box. A further bat ringed in Green Lane Wood was recaptured at Gripwood.
- The Bechstein's population estimates for Green Lane and Biss Woods currently stand at 56 and 45 female bats respectively. In addition other large roost records include 58 bats at Clanger and Picket, 45 at Flowers Wood and 30 at Church Lane Wood at. Assuming a sex ratio of 1:1, the population dependant on this group of woodlands may be in the order of 400 bats.
- A maternity roost of lesser horseshoe bats was found in a building close to Green Lane Wood in 2016. The roost was also present in 2017.
- A lesser horseshoe bat trapped during surveys for planning application 16/04468/OUT between Green Lane Wood and Ashton Road was found to have been ringed at Gripwood. Although not included in the SAC, Gripwood is functionally linked to it. It supports large numbers of hibernating greater and lesser horseshoe bats and is used by *Myotis* sp. bats for swarming.

Other plans and projects

The following applications are in the planning process:

- 180 dwellings at Land of Elizabeth Way (16/00672/OUT)
- 91 dwellings at Drynham Lane (16/00547/FUL)
- 200 dwellings at Land South West of Ashton Road (16/04468/OUT)
- 140 dwellings at Wynsome Street (17/03269)
- Up to 100 dwellings at Blind Lane (16/12279/OUT)
- 79 dwellings at Former Council Officers, Bradley Road (17/05669/FUL)
- Mixed use development including 267 dwellings at Land West of Biss Farm (17/09961/OUT).
- 26 dwellings at P8 and P9b Castlemead (15/11267/FUL)
- 47 dwellings at Land at Bratton Road, Westbury, (16/06413/OUT). Refused, Public Inquiry set for 2018.
- 60 dwellings at Land North of Holt Road and Cemetery lane, Bradford on Avon (17/03844/REM)
- Conversion of Building A at Kingston Mills, Bradford on Avon (17/03162/FUL)
- Mixed development and 170 dwellings at Land at Bradford Road Corsham (17/11032/REM)

The following applications have been approved:

- Land at the junction of Westbury Road and Phillips Way, Yarnbrook, application 16/12347/FUL for a petrol filling station
- 300 dwellings at Land North of Bitham Park, Westbury, 17/01643/REM
- Up to 300 dwellings at Land at Westbury Sailing Lake, application 15/12551/OUT
- 138 dwellings at Kingston Farm, Bradford on Avon (15/04134/VAR)

- 150 dwellings at Land North of Bath Road Corsham (16/03721/REM)
- Up to 180 dwellings at Former MoD Rudloe No. 2 Westwells Road, Rudloe (14/11354/OUT)
- Mixed development and up to 170 dwellings at Land at Bradford Road Corsham (17/06091/VAR)
- 2 data centres, Spring Park, Corsham (17/08760/FUL)
- Retirement Care Village at Royal Arthur Park, Westwells Corsham (N/10/04093/FUL)
- 39 dwellings at former Bath and Portland Stoneworks, Westwells, Corsham (14/03177/REM)
- Business and Technology park, Spring Park, Westwells Road, Corsham, (N/11/02034/S73)

The following developments have recently been completed:

- 650 dwellings at Castlemead (W/04/2105/OUTES)
- 174 dwellings at Land North East of Green Lane Farm (W/11/01932/REM)

The following applications have been withdrawn / lost at appeal:

- Up to 26 dwellings at The Grange, Trowbridge (16/01633/OUT)
- 272 dwellings at Land South of Green Lane (16/03420/FUL)

The following spatial planning documents are relevant:

- Wiltshire Core Strategy 2006-2016 adopted January 2015
- Wiltshire Housing Site Allocations Plan (pre-submission draft June 2017)
- The Hilperton Neighbourhood Plan 2017-2016 (submission draft)

Other matters

The Council has maintained regular dialogue with Natural England over the Ashton Park application since it was first submitted in 2015. Natural England's local team and national mammal specialist have been consulted on iterations of the HRA and mitigation design and on the significance of the local Bechstein's population, while the developer has sought advice through Natural England's Discretionary Advice Service.

A visitor survey of open spaces and woodlands used by roosting Bechstein's was commissioned by the Council in 2017²³. This examined the patterns of use of informal recreation sites in Trowbridge including local publicly accessible woodlands with a view to identifying measures to avoid and mitigate the impacts of further housing growth on Bechstein's bats.

A small piece of oak woodland next to Biss Farm, known as Biss Barn Wood, was illegally felled in 2017. The woodland is believed to have been ancient and had been contiguous with Biss Wood until large scale felling took place in the twentieth century. A lesser horseshoe bat was caught in a trap at the corner of Biss Barn Wood during developer surveys in August 2013.

²³ Panter, C., Lake, S. & Liley, D. (2017) Trowbridge Visitor Survey and Recreation Management Strategy. Unpublished report by Footprint Ecology for Wiltshire Council

Other European Sites

Using the screening criteria set out Table 2 of the HRA for the Wiltshire Housing Site Allocations Plan, the only other sites which could be affected by the plan are Salisbury Plain SPA and Salisbury Plain SAC.

Salisbury Plain SPA

Recreational Pressure

The HRA screening undertaken for the Wiltshire Housing Site Allocations Plan confirmed that the screening criterion for Salisbury Plain SPA has changed from 4 km to 6.4 km since the Ashton Park planning application was first screened. Approximately half of the residential development at Ashton Park would lie within this distance while none lay within the previously identified limit of 4 km as established in the HRA and Mitigation Strategy for Salisbury Plain SPA²⁴.

Salisbury Plain SPA is designated for 4 species of bird listed on Annex II of the Habitats Directive but only the breeding population of stone curlew has been identified as being sensitive to urbanisation as proposed by the core strategy. Research has shown stone curlews are sensitive to disturbance, particularly by dog walkers^{25, 26} and also to structures built in the landscape²⁷. The 2015 visitor's survey demonstrates that Salisbury Plain SPA attracts a large number of visitors, with the majority of visits (75%) originating from a radius of 6.4 km²⁸. 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. 74% of visits are for dog walking.

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 within the SPA. Non-designated land outside the SPA (within 5km) has been found to be of vital importance to maintaining the overall population, with productivity generally higher on the surrounding farmland than within the SPA itself²⁹. The site is currently understood to be in favourable condition.

Following the analysis set out in the HRA for the Wiltshire Housing Site Allocations Plan, the whole of the Ashton Park development of 2500 dwellings would lead to approximately 56.7 additional visits to Salisbury Plain every day. This is likely to be an overestimate as the development is at the outer limit of the 6.4 km zone, with half lying beyond 6.4 km, and residents will have a number of other, closer and / or equally interesting sites to use for daily dog walking activities. The 2015 visitor's survey demonstrates that Trowbridge residents comprised a small percentage of visitors interviewed with most visitors to the western part of

²⁴ HRA and Mitigation Strategy for Salisbury Plain SPA in relation to recreational pressure from redevelopment, Wiltshire Council March 2012

²⁵ Taylor, E. (2006) Stone curlews *Burhinus oedicnemus* and human disturbance: effects on behaviour, distribution and breeding success. (Doctoral Thesis)

²⁶ Taylor *et al* (2005) *Dogs, access and nature conservation* (English Nature Research Report 649)

²⁷ Clarke, R., & Liley, D. (2013). Further assessments of the relationship between buildings and stone curlew distribution. Unpublished report by Footprint Ecology for Breckland Council.

²⁸ Panter, C., & Liley, D. (2015). *Salisbury Plain Visitor Survey 2015* Unpublished report by Footprint Ecology for Wiltshire Council

²⁹ Tomalin, N (2014) *Stone Curlew CIL Monitoring Area Report 2014*

the plain travelling from Westbury and Warminster. Westbury White Horse was the most frequented site across the entire survey and this is the closest part of the plain to Trowbridge. Routes recorded of people visiting this site suggest they make very limited use of the SPA. Most people stay within the near vicinity of the White Horse and the Mid Wilts Way, both of which are off the SPA. The only route recorded on the SPA is a path across the Thirteen Hundred Down towards Upton Scudamore where there have only been 2 recorded stone curlew breeding attempts since 2000.

While the increase in visitors on foot is likely to be relatively low, it is not possible to predict the impact of people intending to drive 4X4's across the plain. The 2015 survey included limited data from the off-roading community, as they were difficult to interview, but surveyors noted several parties of 4X4s at different locations throughout the survey. The MoD is aware of the issue with increasing numbers of 4X4s but so far there is no data on the scale of the issue or the impact it might be having relative to military activity.

The number of visitors arising from the Wiltshire Housing Site Allocations Plan and Army Basing Plan together is 52.4 visits per day. Mitigation for Army Basing outlined in the HRA for the Site Allocations Plan is progressing as developments come forward. The Recreation Access Action Plan is virtually complete with a few details to be agreed before this is finalised and all actions will be in place before 130 dwellings are occupied. Information packs encouraging responsible access will be available before first occupation.

The mitigation strategy³⁰ which the Council is implementing to offset impacts from the core strategy as agreed with Natural England, is progressing as intended and the approach is still considered to be an effective and reliable means for ensuring the favourable conservation status of the stone curlew population on Salisbury Plain. The strategy will need to be revised to take the latest visitor survey results into account, particularly the change in the distance from which 75% of visitors are predicted to arrive from 4 to 6.4 km. Although the numbers will increase as the new limit takes in Devizes, Pewsey and more of Warminster, at present, the evidence of the annual stone curlew surveys suggests that effects will not be significant. Considering Ashton Park alone and in combination with development proposed in the Wiltshire Core Strategy, the Sites Allocations Plan and Army Basing Plan, the scheme is unlikely to lead to significant effects while the mitigation strategy agreed with Natural England is being implemented.

Visual disturbance

Ashton Park is unlikely to lead to significant visual disturbance effects as new development will be at least 5km away from the SPA and therefore beyond the 1.5km where buildings have been shown to affect breeding densities. There are no records of breeding stone curlew between the plain and Ashton Park and the birds are therefore not expected to be traversing this area. The main areas they use off the SPA are to the south and east of the plain where farmland is more suitable for breeding and land is within the flightpaths to other SPA breeding sites at Porton Down and further east.

Salisbury Plain SAC

Nitrogen pollution

³⁰ HRA and Mitigation Strategy for Salisbury Plain SPA in relation to recreational pressure from redevelopment, Wiltshire Council March 2012

The Site Improvement Plan for Salisbury Plain SAC / SPA identifies atmospheric nitrogen deposition as a pressure on two of the qualifying features of the SAC; juniper formations and marsh fritillary butterfly.

Best practice guidance indicates that the effects of NO_x and nitrogen deposition can be significant up to 200m from a main road (a road or motorway). Nitrogen deposition effects fall off rapidly within the verge and typically can extend up to approximately 20m from the road. Atmospheric nitrogen (NO_x) can be carried further but typically occurs within 100m of a main road. Potential effects of atmospheric nitrogen include direct phytotoxic effects as well as eutrophication and acidification of soils due to deposition.

Although the vast majority of the SAC lies more than 200m from main roads, there are four areas where the SAC boundary lies within 200m of a main road:

- The A360 to the north and south of Tilshead, located 16-20km from Ashton Park;
- The A342 located 29km from Ashton Park; and
- The A303 located 22km from Ashton Park.

In Local Plan HRAs, 15km (as the crow flies) is typically used as the distance for screening sites for potential effects of traffic related atmospheric nitrogen, unless there are local reasons to look beyond this distance. In Wiltshire, the average distance travelled to work is 18.9km³¹, however the distance from Trowbridge to Tilshead by road is 29.2km, therefore it can reasonably be concluded that effects of proposed growth at Ashton Park on traffic flows through the SAC at Tilshead and elsewhere would be *de minimis* and can be screened out of this HRA.

Other features of the Bath and Bradford on Avon Bats SAC

The primary reasons for designation of the SAC are:

- Bechstein's bat, small numbers of which have been recorded hibernating in abandoned mines in the area; and,
- greater horseshoe bats, the site being associated with 15% of the UK population and supporting an exceptionally large overwintering population
- lesser horseshoe bats, the site supports a significant presence but this species is not the primary reason for site selection.

The Council's screening assessment of December 2015 concurred with Aspect Ecology's HRA report³² in its conclusion that the HRA need only consider Bechstein's bats. Although greater horseshoe and lesser horseshoe bats were recorded in the study area, they were present in low numbers and the Application Site did not lie within the Core Area for any roosts of these species in the Council's planning guidance³³. Accordingly the Council scoped these two species out of the assessment.

Since then, further information has come to light to demonstrate that a maternity roost of lesser horseshoe bats is using buildings at Armouracre Farm close to the southern end of Green Lane Wood. The maternity was recorded with up to 22 mothers and 16 young during

³¹ Official Labour Market Statistics accessed on 21/12/17 at

http://www.nomisweb.co.uk/census/2011/QS702EW/view/1946157357?rows=cell&cols=rural_urban

³² Information for Habitats Regulations Assessment (HRA) with regard to Potential Effects upon European Designations" ECO-1878.HRA.vf (May 2014)

³³ Bat Special Areas of Conservation, Planning Guidance for Wiltshire, Version 3.0 10 September 2015

surveys undertaken by Keith Cohen Ecology in 2016 (Keith Cohen pers. com.). It was not recorded during Aspects surveys in 2013 as there were no systematic checks for horseshoe roosts at that time. However a volunteer warden for WWT has confirmed “We first noticed them about five years ago and there have generally been between 5 and 12...”³⁴ It can be assumed therefore that the roost was in existence at the time of the 2013 surveys.

In addition an adult female lesser horseshoe was caught on 20-21 August 2015 in fields north of Green Lane Wood which had been ringed at Gripwood in 2011 (Keith Cohen pers. comm.). Although not part of the SAC, Gripwood supports large numbers of horseshoe bats and is functionally linked to the SAC. It is reasonable, and in accordance with the precautionary principle, to assume the maternity colony is linked to the SAC and it has been suggested that the roost may be a satellite to the maternity roost at Rood Ashton Manor which was recorded in 2006 as a nursery colony with at least 60 bats in an outbuilding³⁵.

The question for this re-screening assessment is does the presence of this roost alter the conclusion of the screening assessment that lesser horseshoe bats should NOT be screened into the appropriate assessment?

Manual transect surveys and static detector surveys by Aspect Ecology in 2013 found generally low numbers of greater and lesser horseshoe crossing the site. Aspect’s HRA report contains Figure 1878/HRA2 which summarises the results of the static detector survey. The number of lesser horseshoe passes was low except at two detectors³⁶.

P6; positioned on a hedgerow which will be breached by the relief road at crossing point 9. This crossing point will be mitigated by inclusion of a hop over rather than an underpass. Notably this detector recorded 103 lesser passes over 4 days between 5 and 8 August with 78 passes on 8 August 2013 alone.

P2; positioned on the hedgerow between Biss Wood and Biss Farm which will be breached by a road leading off West Ashton Road into the proposed Business Park. This detector recorded 30 passes over three nights from 5 to 7 August, 55 passes over 4 nights from 24 to 28 September and 14 passes over 4 nights from 3 to 6 October.

The report notes that these peaks were likely to represent “regular or sustained foraging activity by the detector from one or a small number of bats (rather than commuting activity from a large number of bats).” This can be justified at P6 because early August is the peak of the breeding season. However at P2 the pattern of bat passes in September may represent commuting activity connected to mating or hibernation sites. This hedgerow is not on a direct route from the roost to swarming sites in the SAC but as it connects Biss Wood with Biss Farm, it possibly points to there being a mating roost in Biss Farm buildings. In addition, the adjacent Biss Barn Wood, now felled by the owner and recently subject to a restocking notice³⁷, could have been used by small numbers of lesser horseshoe bats for foraging.

It is impossible to directly link the Armouracre maternity roost with Aspect Ecology’s bat surveys in 2013 but the roost lends greater weight to the importance of the landscape

³⁴ Email from Mark Newbery to Ashley White dated 31 October 2017

³⁵ Report on a study of bats by radio-tracking at Westbury Wiltshire and along the route of the proposed Westbury Eastern Bypass. Draft Version 8 November 2006. Green Ecological Consultancy

³⁶ Information for Habitats Regulations Assessment (HRA) with regard to potential effects upon European designations” ECO-1878.HRA2017.dv2 (September 2017)

³⁷ Confirmed in email from Mark Malins, Woodland Officer, Forestry Commission 24/10/17) to Louisa Kilgallen, Wiltshire Council

surrounding Green Lane Wood for sustaining lesser horseshoes and suggests the bats commute across the landscape for breeding, mating and foraging.

In making a judgement as to whether lesser horseshoe bats should now be included in the appropriate assessment, the following factors have been taken into account:

1. The Shadow HRA has not examined the extent to which the extensive range of mitigation and habitat creation and management measures which are being proposed for Bechstein's bat will also be relevant to lesser horseshoes.
2. While the development site lies outside the core area for lesser horseshoe bats identified in the Council's guidance document³⁸, the roost suggests that land within the application boundary for Ashton Park may be of particular significance to a small number of lesser horseshoes linked to the SAC.
3. Annual counts from hibernation sites and other roost sites show the lesser horseshoe population in England and Wales is increasing and in England this is considered to be a significant increase against the 1999 population³⁹. The current population estimate is considered to be in the order of 50,000 bats⁴⁰ compared with a population estimate of 18,000 in 1999⁴¹. The reason for the increase is considered to be partly genuine and partly due to better data.
4. Although in favourable condition, the SAC is subject to pressures which are recorded in the Site Improvement Plan as: changes to grazing / agricultural land-holdings and urbanisation. In addition the SIP identifies the following threats: use of biocides and chemicals, changes, forest and plantation management and use and urbanisation including the effect of artificial lighting.
5. Biss Barn Wood was unlawfully felled in the last 12 months and although a restocking notice has been issued, it is unclear how this might affect bats. Lesser horseshoes are known for being particularly faithful to commuting routes. It seems reasonable to assume they will continue to commute to Biss Farm if indeed the farm is a mating roost. However any foraging activity is likely to cease, at least until the new woodland has been established long enough to support sufficient invertebrate biomass to make foraging energetically worthwhile. It may be several decades before it supports biomass equivalent to that lost.
6. The development has the potential to cause severance of commuting routes, in particular through construction of the access road into the employment area and through construction of the YWARR. The extent to which these effects may be significant has been raised by the finding of a maternity roost next to Green Lane Wood.
7. The development would not impact on lesser horseshoe roosts in underground sites as these are several kilometres from the development nor have any direct effect on other roosts for this species including the newly discovered maternity roost as all roosts are on privately owned land.

³⁸ Bat Special Areas of Conservation, Planning Guidance for Wiltshire, Version 3.0 10 September 2015

³⁹ National Bat Monitoring Programme Annual Report 2016, Lesser Horseshoe Bat Trends, accessed from the Bat Conservation Trust website on 26 October 2017 http://www.bats.org.uk/pages/results_and_reports.html

⁴⁰ Third report by the United Kingdom under Article 17 on the implementation of the Directive from January 2007 to December 2012 Conservation status assessment for S1303 Lesser horseshoe bat (*Rhinolophus hipposideros*)

⁴¹ The current status and distribution of EC habitat directive features, Lesser Horseshoe bat, accessed from the JNCC website on 26 October 2017 <http://jncc.defra.gov.uk/publications/JNCC312/species.asp?FeatureIntCode=S1303>

8. Lesser horseshoe roosts are not expected to be impacted by recreational pressure as roosts are located outside the publicly accessible woodlands. The roost at Armouracre Farm is on private land and there are no public rights of way from the woodland to the farm.
9. Lesser horseshoe bats forage in Green Lane and Biss Wood and their foraging activity may therefore be affected by changes in habitat brought about by intense recreational pressure in the same way that Bechsteins' bats were considered to be vulnerable to such effects in the Shadow HRA.

Taking these factors into account, it is not possible to exclude the risk of likely significant effects and the following impacts will therefore be carried through to the appropriate assessment:

- Severance and degradation of commuting routes (including the effects of lighting)
- Recreational pressure to the extent that foraging habitat may be degraded
- Mortality and injury

Additional aspects of Bechstein's ecology

Nitrogen Pollution

Since the original screening assessment was made, the woodlands to the south of Trowbridge have assumed increased importance for Bechstein's bats as their significance to the SAC population has become more evident. The Council has therefore taken this opportunity to re-examine the air quality effects of the scheme for the local Bechstein's population.

The effect of the proposed development on levels of atmospheric nitrogen and nitrogen deposition loadings was considered in the ES Addendum Volume 1 sections 6 (Ecology) and 9 (Air Pollution). The assessment considered the cumulative air quality effects of traffic emissions generated by other committed schemes in the area for the future baseline year of 2020.

The air quality assessment has taken a precautionary approach to screening for potential impacts by applying the more stringent criterion of 1% across all potential woodland receptors rather than restricting it to national and European sites. Consequently further assessments were conducted as follows:

- Nitrogen oxides: Picket and Clanger Woods SSSI, Green Lane Wood, Biss Wood and Round Wood
- Nitrogen deposition: Picket and Clanger Woods SSSI, Green Lane Wood, Biss Wood

The assessment of impacts of the scheme on particulate matter was restricted to looking at effects on human health only as there are no ecosystem standards for particulate matter. Dust generated by construction is unlikely to be significant due to the limited duration of road construction and the distance from the development site to the woodlands.

In the further assessment of nitrogen oxides concentrations, the site was examined with the proposed development in place in 2020 (using traffic flows for 2026) under two scenarios; "in-line with Defra's forecasts" and "worst-case sensitivity test". The latter takes account of the fact that reductions in nitrogen oxides have been slower than Defra's predictions. Annual mean concentrations at three of the woods were found to be below the critical level and the impacts of development thus judged to be insignificant in accordance with Environment

Agency guidance. Only at Green Lane Wood would the critical level be exceeded in the worst-case sensitivity test.

In the further assessment of nitrogen deposition, all three sites exceeded critical loads in both scenarios. This is primarily due to the fact that background levels at all three sites are already approximately 400% above the critical loads. However, even in the worst case scenario, the 2020 loads will remain below the baseline loadings in 2015 due to the ongoing improvement in vehicle emissions.

The available evidence on the ecological effects of nitrogen deposition relates almost entirely to plant species and habitat composition, with no evidence identified which has recorded any direct effects on animal species. At significant levels, long-term nitrogen deposition can lead to changes in the species composition of lower plants and ground flora, however there would need to be major shifts in species composition to result in an impact on its value for foraging bats. Given that the woodlands are currently well used by Bechstein's bats, it can be assumed they provide high quality bat foraging habitat despite existing high levels of background nitrogen deposition. As the overall rates of nitrogen deposition are predicted to decrease despite increasing traffic levels due to planned growth, it is highly unlikely that traffic related nitrogen deposition due to Ashton Park could result in any likely significant effects upon the Bechstein's population using the woods.

The air quality assessment demonstrates that even with the road in place increases in atmospheric nitrogen levels will be insignificant for Picket and Clanger Woods, Biss Wood and Round Wood. The potential for significant adverse effects at Green Lane Wood is likely to be localised to the near vicinity of the road and would at least be partially offset by significant beneficial effects at Woodside Wood and Flowers Wood where the scheme will take traffic further away. The contribution of the scheme to nitrogen deposition is for the most part well below 1% of baseline loadings. As discussed in the ES air quality assessment vehicle related pollutant emissions can be expected to decline in the long term due to more stringent emission standards and the uptake of low and zero-emission vehicles.

In conclusion, the air quality assessment demonstrates that the road would not trigger a likely significant effect in the medium to long term due to the fact that:

- The total annual mean contribution of nitrogen deposition loading would for the most part be less than 1% of 2015 baseline loadings.
- Effects of increased atmospheric nitrogen at Green Lane Wood would be partially offset by reductions at Woodside Wood and Flowers Wood
- Government policy shift towards more stringent emission standards which will encourage the uptake of zero and low emission vehicles.

Conclusion of rescreening assessment

The conclusion of this rescreening is as follows:

European sites other than the Bath and Bradford on Avon SAC – there are no likely significant effects on any European sites other than the Bath and Bradford on Avon Bats SAC

Other features of the Bath and Bradford on Avon Bats SAC – in addition to Bechstein's bats, likely significant effects cannot be excluded from occurring in relation to lesser horseshoe bats. Both species should be carried forward to an appropriate assessment.

Additional aspects of Bechstein's ecology – there are no additional aspects of Bechstein's ecology that could give rise to significant effects.

APPENDIX 2

SUMMARY OF RECOMMENDED CONDITIONS AND ISSUES TO BE SECURED BY LEGAL AGREEMENT(S)

Wording to be finalised with case officer and where possible the number of conditions will be reduced by amalgamation of similar conditions. The Council would be pleased to consult Natural England on further iterations of draft wording for specific conditions on request.

CONDITONS

PC1	Biodiversity Management Plan to be approved before commencement to demonstrate habitats to be retained, restored, enhanced and replaced. Also to summarise approach and delivery mechanisms for all off site measures.
PC2	Mixed use development to be delivered in accordance with the Indicative Masterplan A.0223_77-01 Rev W , the ES Addendum Volume 1 – Main Text August 2017 and ES Addendum Volume 2 – Technical Appendix August 2017
PC3	<p>LEMP (long term management of on-site habitats) for mixed use development site to include:</p> <ul style="list-style-type: none"> • River Biss corridor • 100m buffer • Green Lane Nature Park extension • Dark corridors through residential areas • Barriers to control access to Biss wood including attenuation ponds and hedgerow/planting barriers
PC4	<p>CEMP for mixed use development site to cover:</p> <ol style="list-style-type: none"> a) protection of retained habitats; b) creation of new habitats including provision of bat boxes; c) management and monitoring of created and retained habitats (until taken over by Man Co); d) precautionary working method statements and works to be overseen by an ecologist; monitoring requirements and details of frequency of monitoring, thresholds, remedial measures and timescales for remediation e) monitoring requirements for habitats, mitigation features and species including details of frequency of monitoring, thresholds, remedial measures and timescales for remediation (to cover amongst other things, establishment / width of hop-overs and habitat structure / composition of woodland in Biss and Green Lane Woods); f) testing and adjusting lighting in accordance with condition requirements g) compliance procedures including liaison with appointed compliance officer; aftercare management during the construction phase

PC5	<p>Phasing Plan for delivery of GI including advance planting of hop-overs and barriers to control access to Biss Wood</p> <p>“Prior to the submission of any reserved matters application, separately detailed location plans and an order of delivery schedule for non-phase specific ecology mitigation measures shall be submitted to and approved in writing by the local planning authority. These shall specify where and when the non-phase specific ecology mitigation measures will be provided and/or constructed. The non-phase specific ecology measures are:</p> <ul style="list-style-type: none"> • Enhanced planting between Biss Wood and the River Biss • Planting within the Biss corridor • Planting within the Green Lane Nature Park extension <p>The development shall be carried out strictly in accordance with the approved phasing plan / location plan and order of delivery schedules”</p>
PC6	<p>Landscape scheme of works for informal open space to be submitted in accordance with:</p> <ul style="list-style-type: none"> • Green Infrastructure and Biodiversity Strategy (Sept 2017); • ES Addendum Volume 1 Figures 6.1 and 6.2 showing details of design of attenuation ponds and buffer between employment and residential land; • Green Infrastructure parameters plan Rev M; • ES Addendum Volume 1 Figures 6.4, 6.17, 6.18 and 6.19 showing details of dark corridors through mixed use development. <p>A further standard condition will be required to secure the implementation, aftercare and maintenance of the approved landscape schemes.</p>
PC7	<p>Reserved matters applications to include detailed lighting design to demonstrate compliance with:</p> <ul style="list-style-type: none"> • ‘Interim Guidance Recommendations to help minimise the impact of Artificial Lighting’ (Bat Conservation Trust 03/06/14); • ‘Guidance Notes for the Reduction of Obtrusive Light GN01:2011’ published by the Institute of Lighting Professionals; • ES Addendum Volume 1 Figures 6.4, 6.18 and 6.19 showing principles of lighting design; <p>In addition there will be no lighting above or beneath bridges except at B3 where lighting will be in accordance with Figure 6.17 and 6.20 of the ES Addendum Volume 1.</p> <p>The access road into the employment site will remain unlit other than in accordance with a scheme approved by the Council demonstrating through detailed design and lux plots, that there will be no additional light spill above background levels onto the hedgerow between Biss Wood and Biss Farm.</p> <p>The footway / cycleway between Trowbridge and West Ashton will remain unlit other than in accordance with a scheme approved by the Council demonstrating through detailed design and lux plots, that there will be minimal increase in light levels over background levels.</p>

PC8	<p>Development of the road to be in accordance with the submitted plans:</p> <ul style="list-style-type: none"> • Yarnbrook and West Ashton Relief Road P480/106 Rev F dated 18/08/17 (and the 4 detailed design plans West Ashton Relief Road P480/100 Rev F dated 18/08/17, P480/101 Rev G 18/08/17, P480/102 Rev F 28/07/17 and P480/103 Rev E 18/08/17) • Highway Longsection Drawings P480/117 Rev A dated 07/07/17, P480/114 Rev A dated 07/07/17 and Typical Section H-H through Relief Road with Elevation of Culvert (Drawing P480/108) Rev B dated 07/07/17
PC9	<p>LEMP (long term management of on-site habitats) for YWARR to include:</p> <ul style="list-style-type: none"> • Hop-overs including 4m high fencing and hedgerows within highway fence • Underpasses including hedgerows within highway fence • Dark corridors (i.e. between roundabouts)
PC10	<p>CEMP for YWARR to cover:</p> <p>“No development shall take place for the relief road (including demolition, ground works, vegetation clearance) until a Construction Environmental Management Plan (CEMP) has been submitted to and approved in writing by the local planning authority to cover the works associated with construction of the relief road. The ‘relief road CEMP’ shall include, but not necessarily be limited to, the following:</p> <ol style="list-style-type: none"> a) protection of retained habitats; b) creation of new habitats; c) management of created and retained habitats (until taken over by Highways Authority); d) monitoring requirements for habitats, mitigation features and species including details of frequency of monitoring, thresholds, remedial measures and timescales for remediation (to cover amongst other things, establishment and width of hop-overs and bat use of underpasses); e) testing and adjusting lighting in accordance with condition requirements monitoring; f) compliance procedures including liaison with appointed compliance officer; aftercare management during the construction phase g) precautionary working method statements and works to be overseen by an ecologist, h) the following specific works in relation to underpasses and hop-overs; <ol style="list-style-type: none"> i. Long and cross sections for each underpass based on site based measurements showing the relative positions of hedgerows, existing ground level, earthworks and underpass ii. The timetable of works required to complete the culvert works incorporating the seasonal ecological constraints iii. A protocol for constructing underpasses and hop-overs including exact timescales, demonstrating removal of as little hedgerow as possible, erection of 4m high bat fencing and establishing new

	<p>planting.</p> <p>iv. The programme of construction works to demonstrate how the ecological constraints of the culverts works have been fully integrated into the project programme (i.e. Gantt chart) and how it affects the critical path.</p> <p>The approved CEMP shall be adhered to and implemented throughout the construction period strictly in accordance with the approved details.</p> <p>A report prepared by the Ecological Clerk of Works certifying that the required mitigation and/or compensation measures identified in the CEMP have been completed to their satisfaction, and detailing the results of site supervision and any necessary remedial works undertaken or required, shall be submitted to the Local Planning Authority for approval within 3 months of the date of substantial completion of the development or at the end of the next available planting season, whichever is the sooner. Any approved remedial works shall subsequently be carried out under the strict supervision of a professional ecologist following that approval.”</p>
PC11	Scheme to be submitted for lighting of YWARR, to be in accordance with Figure 6.17 and 6.20 of the ES Addendum Volume 1.
PC12	Submit revision of PFA drawing P480/101 Sheet 2 of 4 to demonstrate strengthened landscape features on land south of R2 in accordance with NE’s DAS advice. (no need for this condition if information is submitted in advance)
PC13	Design for Visitors Centre to be submitted for approval with the first reserved matters application.
PC14	Before the first reserved matters application for land to the east of the River Biss is approved, details of a circular pedestrian footpath route which will be at least 3km long linking the Green Lane Nature Park with the River Biss and minimising the use of roads, will be submitted for planning authority approval. Details of the footpath will include the route taken through the development, its width, fencing requirements, surfacing, signposting and phasing. The Works will be completed in accordance with the details thus approved and before 50% of the dwellings included in the first reserved matters application on land to the east of the River Biss are occupied
PC15	<p>Prior to the submission of any reserved matters application, details of the location, design, species, planting layout, fencing and aftercare requirements of the following ecological protection and mitigation features will be submitted to and approved by the local planning authority:</p> <ul style="list-style-type: none"> • attenuation ponds; • boundary between residential and employment land; • boundary between employment land and the Green Lane Nature Park / 100m ecological buffer; • boundary between Biss Wood and the 100m ecological buffer; • provision of planting and fencing for bat hop-overs along the YWARR • Strengthening the existing hedgerow alongside West Ashton Road on the south west side of Biss Woods with thorny planting and fencing

	The development will be carried out strictly in accordance with the approved details within the first available planting season following approval and before first commencement. Once in place, the ecological protection features will be maintained at all times to provide an effective barrier to public access.
PC16	The outline element of development hereby approved shall make provision for the following: Up to 2,500 dwellings of which no more than 300 (including within the local centre) are to be provided on the north-east side of West Ashton Road
PC17	Submission and implementation of a scheme to be approved by the planning authority demonstrating effective marketing of the employment site.
PC18	Mitigation and Monitoring Implementation and Review Plan to be provided before works commence

LEGAL AGREEMENT(S)

LA1	Establishment, role and duties of management company to take over management of informal open space including GI which is not conveyed to WWT. Depending on final funding arrangements, clauses required to secure adequate funding for WWT to deliver management on land which is transferred to it under the agreement.
LA2	Secure all items in agreement between WWT, developers and the Council dated ** including: <ul style="list-style-type: none"> • specification for the ecological visitor facility and delivery timescale before occupation of the 300th dwelling or within two years of 1st occupation whichever is the sooner; • provision and funding for visitor facility and its reasonable maintenance; • land transfer arrangements for the visitor facility and land identified for transfer to WWT • funding for replacement of capitol works; • funding for long term management of newly created habitat; • funding for agreed management, monitoring and remedial works triggered by the monitoring scheme; • provision of full time warden
LA3	Management plan for Green Lane and Biss Woods to be revised to include: <ul style="list-style-type: none"> • Include an account of the role the site plays in achieving the conservation objectives of the Bath and Bradford on Avon Bats SAC, and a specific objective to maintain the population of Bechstein's bats through maintenance of the structure and function of the habitats within the plan area • Incorporate all relevant land transfers to WWT and commit the trust to managing these in line with the objectives of the revised plan • Define the operating constraints for the ecological visitor centre and car

	<p>parking arrangements which arise from the potential for recreational pressure to reduce the value of the site for Bechstein's bats</p> <ul style="list-style-type: none"> • Set out types and levels of acceptable amenity and educational use and the means by which these will be monitored and reviewed. • Set out what constitutes acceptable and unacceptable fire making and a protocol to be followed to minimise and deal with the latter. • Include an objective regarding the maintenance, and where necessary, replacement, redesign and / or repositioning of bat boxes for Bechstein's bat use. • Recognise the role of the Steering Group in reviewing the implementation of relevant aspects of the management plan, monitoring results and implementation of remedial measures. • Anticipate the potential effects of increased visitor numbers and identify monitoring to be undertaken, thresholds for unacceptable change and remedial measures. Most of this information will be contained in information to be submitted by the developer to fulfil planning conditions and will cover monitoring Bechstein's bat population, negative physical effects in the woodlands and habitat structure / composition. <p>Management Plan to be implemented by WWT with governance of relevant elements by the steering group.</p>
LA4	<p>Provide compliance officer (ecologist) on approval of the first reserved matters application or before works commence (i.e. road) whichever is the sooner. The legal agreement will identify the recruitment and employment arrangements for this post and the Councils approach to enforcement in relation to matters required to ensure compliance with the Habitats Regulations. A bond will be retained against non-delivery of high risk mitigation measures against an agreed timeframe consistent with the phasing plan.</p>
LA5	<p>No public access to be granted to, within or through agricultural land identified for employment use other than to areas which have been developed for that purpose. Appropriate measures to be used at all times including effective fencing, gates, signage and other means as necessary to deter the public from gaining access. An impenetrable barrier will be maintained between housing and employment land on the east side of West Ashton Road until at least 75% of the employment site has been completed at which point a public footpath will be provided between the two which will breach the impenetrable barrier at a single point.</p>
LA6	<p>Details of Steering Group including terms of reference, membership and frequency of meetings to be set out in the legal agreement with inaugural meeting held before works commence. Terms of reference to include reviewing work programme for the full time warden and the results of monitoring.</p>
LA7	<p>Bond secured against non-delivery / delays of works required to secure favourable conservation status of the SAC under the appropriate assessment dated 29 December 2017 i.e. all GI, measures to minimise severance and measures manage public access to the woodlands</p>

