

**CRITIQUE OF THE HABITATS  
REGULATIONS ASSESSMENT FOR  
THE NATHANIEL LICHFIELD &  
PARTNERS HOUSING STUDY**

Prepared for:

**West Midlands Regional Assembly**

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## Summary

- TEC were commissioned by West Midlands Regional Assembly (WMRA) to undertake a review of a 'mini' HRA undertaken by Baker Shepherd Gillespie (BSG). The results will be used to inform the preparation of the Assembly's representations to the EiP Panel.
- This report presents initial findings. A more detailed gap analysis will be carried out as a second step.
- Baker Shepherd Gillespie (BSG) identified 27 European sites where the 3 growth scenarios would either have an adverse effect on site integrity or where they could not conclude that there would not an adverse effect on site integrity. These are listed in Appendix 1.
- The BSG report reinforces the issues identified in the Phase Two Revision HRA but does not distinguish clearly between the effects of the different growth scenarios or demonstrate whether any of these issues become substantially worse under the 3 growth scenarios.
- New mitigation does not seem to be proposed beyond what had already been identified in the Phase II HRA. As the degree of confidence in their likely success has not been tested it is difficult to conclude that they will be effective in nullifying the additional impact associated with the 3 higher growth scenarios.
- There is no definite statement to indicate whether proposed mitigation would result in no adverse effect on the integrity of each of these European sites.
- There is a disconnect between the BSG HRA and the findings of the NLP main report (see section 3.3). To be able to conclude no adverse impact it is necessary to provide strong reassurance that there will be effective application and comprehensive monitoring of mitigation, much of which needs to be delivered at the regional level. The need for any mitigation and the potential uncertainty associated with it should be presented as a key point within the Main study report.
- Further information and evidence is required before it would be possible to determine whether or not any of the three growth scenarios would have a significant adverse effect on the integrity of any European sites. If changes were incorporated into the RSS further formal HRA would be required and, as required by the Habitats Regulations 85C(1), there will be a need consider alternative solutions.
- There is currently insufficient evidence available which would allow potential constraints associated with European Sites to have been taken into account in developing and appraising the scenarios.
- There are several issues affecting European sites which need to be investigated in more depth. For example, changes in water supply and demand associated with growth could have significant implications for water supply to European sites. This issue does not appear to have been analysed in any depth, or comprehensively considered as a constraint.

## 1 Introduction

The study undertaken by Nathaniel Lichfield and Partners (NLP) for Government Office for the West Midlands (GOWM) considers how the housing supply range for the West Midlands identified by the National Housing and Planning Advice Unit Report (NHPAU) could be delivered in the West Midlands. It considers a range of options and presents three potential growth scenarios proposing between 417,100 and 445,600 additional housing units up to 2026. These represent housing allocations which build on, and are between 51,500 and 80,000 higher, than the draft West Midlands Phase 2 Regional Spatial Strategy Revision.

The study by NLP included an “appropriate assessment in line with the Habitats Regulations”. It is not presented as a formal HRA as the “new housing options are not a plan or project in terms of the Habitat Regulations<sup>1</sup>”. Rather, the HRA was intended “to provide information to support the study and to enable easy comparison with the preferred option<sup>2</sup>”. NLP commissioned Baker Shepherd Gillespie (BSG) to undertake the HRA work and for clarity we refer to it as the BSG HRA hereafter.

TEC were commissioned by West Midlands Regional Assembly (WMRA) to undertake a review of the HRA of the BSG HRA to inform the preparation of the Assembly’s representations to the EiP Panel. The work has been commissioned in two stages. This report presents the results of the first stage, in which a preliminary critique of the BSG HRA was carried out. The second stage will take the form of a more detailed ‘gap analysis’ to examine the sites that are most likely to be affected by the increased housing numbers and to identify what additional work might be needed to assess whether critical thresholds have been exceeded.

This report:

- summarises the requirements for ‘appropriate assessment’ of plans in the UK;
- presents the results of a critique to test whether the requirements of the Habitats Directive have been met;
- considers how this HRA proposes to mitigate or avoid adverse effects associated with the housing options proposed; and
- concludes with a summary of the main issues raised by the NLP report and identifies whether any of these represent fundamental barriers that might prevent development from being able to proceed.

The methodology proposed by Professor Riki Therivel and publicly available on [www.levett-therivel.fsworld.com](http://www.levett-therivel.fsworld.com) has been adapted and applied in this critique to test whether the strict requirements of the Habitats Directive have been met.

## 2 Habitats Regulations Requirements

This report assumes that the reader is familiar with the European Habitats Directive’s<sup>3</sup> and requirements for ‘appropriate assessment’ of plans under the UK

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<sup>1</sup>Nathaniel Lichfield and Partners (2008) Development of Options for the West Midlands RSS in Response to the NHPAU Report. Volume 1 Main report.

<sup>2</sup> Nathaniel Lichfield and Partners (2008) Development of Options for the West Midlands RSS in Response to the NHPAU Report. Volume 1 Main report.

<sup>3</sup> European Community Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, <http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1992/L/01992L0043-20070101-en.pdf>.

Habitats Regulations<sup>4</sup>. Box 1 provides key excerpts from the regulations. In brief, they impose a sequential assessment process of up to four stages: 1. screening, 2. appropriate assessment, 3. assessment of alternative solutions, and 4. assessment of compensatory measures.

**Box 1. Appropriate assessment for land use plans for England and Wales: Requirements of the Habitats Regulations: excerpts**

**85B.** —(1) Where a land use plan—

(a) is likely to have a significant effect on a European site in Great Britain or a European offshore marine site (either alone or in combination with other plans or projects), and  
(b) is not directly connected with or necessary to the management of the site,

the plan-making authority for that plan shall, before the plan is given effect, make an appropriate assessment of the implications for the site in view of that site's conservation objectives.

(2) The plan-making authority shall for the purposes of the assessment consult the appropriate nature conservation body and have regard to any representations made by that body within such reasonable time as the authority specifies.

(3) They shall also, if they consider it appropriate, take the opinion of the general public, and if they do so, they shall take such steps for that purpose as they consider appropriate.

(4) In the light of the conclusions of the assessment, and subject to regulation 85C (considerations of overriding public interest), the plan-making authority or, in the case of a regional spatial strategy, the Secretary of State shall give effect to the land use plan only after having ascertained that it will not adversely affect the integrity of the European site or the European offshore marine site (as the case may be)...

**85C.** —(1) If the plan-making authority is satisfied that, there being no alternative solutions, the land use plan must be given effect for imperative reasons of overriding public interest (which, subject to paragraph (3), may be of a social or economic nature), they may give effect to the land use plan notwithstanding a negative assessment of the implications for the European site or the European offshore marine site (as the case may be).

(2) In relation to a regional spatial strategy under Part 1 (regional functions) of the 2004 Planning Act, paragraph (1) applies to the Secretary of State as it applies to a plan-making authority in the case of any other land use.

(3) Where the site concerned hosts a priority natural habitat type or a priority species, the reasons referred to in paragraph (1) must be either—

(a) reasons relating to human health, public safety or beneficial consequences of primary importance to the environment, or

(b) any other imperative reasons of overriding public interest, provided that the competent authority has had due regard to the opinion of the European Commission in satisfying themselves that there are such reasons....

A key principle to be applied in appropriate assessment is the precautionary principle. The European Commission guidance<sup>5</sup> on appropriate assessment notes that:

*“Implicit in the habitats directive is the application of the precautionary principle, which requires that the conservation objectives of Natura 2000 should prevail where*

<sup>4</sup> The Conservation (Natural Habitats, &c) (Amendment) Regulations 2007, S.I. 2007 No. 1843, Part IVA ‘Appropriate assessments for land use plans for England and Wales’, <http://www.opsi.gov.uk/si/si2007/20071843.htm>.

<sup>5</sup> European Commission (2001) Assessment of plans and projects significantly affecting Natura 2000 sites

*there is uncertainty... This means that the emphasis for assessment should be on objectively demonstrating, with supporting evidence, that*

- there will be no significant effects on a Natura 2000 site (Stage One: Screening); or*
- there will be no adverse effects on the integrity of a Natura 2000 site (Stage Two: Appropriate Assessment); or*
- there is an absence of alternatives to the project or plan that is likely to have adverse effects on the integrity of a Natura 2000 site (Stage Three: Assessment of alternative solutions); or*
- there are compensation measures which maintain or enhance the overall coherence of Natura 2000 (Stage Four: Assessment of compensatory measures)."*

The residual uncertainty associated with implications of the housing options for European Sites therefore needs to be considered.

### **3 The HRA Screening Report & HRA Assessment Report (7<sup>th</sup> October 2008)**

The BSG HRA is contained in two volumes:

- a screening note; and
- a main assessment report.

The publication of two reports follows the sequential sequence suggested above and is in line with both European Commission<sup>6</sup> and other UK guidance<sup>7</sup>.

The approach allowed for consultation on the findings of the screening stage with key stakeholders, though subsequent consultation concerning significant impacts on the integrity of sites does not appear to have been carried out<sup>8</sup>.

This chapter looks at the general methodology applied, and certain aspects of the approach including application of the precautionary approach and how in combination effects have been considered.

#### **3.1 Review of the Methodology**

##### **3.1.1 What methodology has been used and whether it is fit for purpose, including whether it is site- or policy-based and how it compares with other RSS HRAs;**

This approach is consistent with that taken for most other RSSs. We endorse the following aspects of the approach taken:

- A focus on European sites and key drivers which may result in impacts on each individual site as a result of alternative scenarios.
- No over-reliance on caveats to RSS policies which devolve issues to local-level plans, based on the assumption that development will be promoted

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<sup>6</sup> European Commission (2001) Assessment of plans and projects significantly affecting Natura 2000 sites

<sup>7</sup> DCLG (2006) Planning for the Protection of European Sites: Appropriate Assessment. Guidance For Regional Spatial Strategies and Local Development Documents (consultation draft) & RSPB (2007) The Appropriate Assessment of Spatial Plans in England. A guide to why, when and how to do it.

<sup>8</sup> Volume 2 Appendices to .the Development of Options for the West Midlands RSS in Response to the NHPAU Report, Government Office for the West Midlands, 7th October, 2008

“unless it is likely to have a significant impact on the integrity of European sites”. This removes opportunities for avoidance of impacts at source and contradicts the whole point of carrying out HRA for RSSs.

The approach taken sets out to document (in a series of matrices) how different housing options would affect sites by changing key drivers affecting their integrity

The Methodology used for the HRA broadly follows the approach taken for HRA of the West Midlands Regional Strategy Phase Two Revision and directly incorporates much of the material obtained.

Indeed the wording in the BSG HRA screening report states that:

*The Phase 2 preferred options were subjected to a formal HRA carried out in consultation with statutory and non-statutory Consultees..... The findings of the HRA were accepted by the consultees. The additional housing options that are being explored here constitute an addition to the housing options that were considered by the Phase 2 HRA. No other policy changes are being considered as part of this process.....The new housing options are not a “plan or project” in terms of the Habitat Regulations and this assessment does not constitute a formal HRA. Further work will be required to fulfil the Habitat Regulations following the EIP and the details chosen of the housing provision are decided. For this reason it is not intended to revisit the Phase 2 HRA. There is however a need to consider how the nine options, which have been outlined might affect the European sites within the region and beyond. **The approach to this assessment has therefore been to rely heavily upon the Phase 2 HRA and to examine how the new housing figures might impact upon that assessment.***

It is important to note, however, that there were some significant areas of uncertainty identified in the Phase Two Revision HRA which remained to be addressed before it could be concluded that the Phase Two Revision would not have a significant adverse effect on the integrity of any European Site. These areas of uncertainty have important implications for development of any additional housing in the Region as they relate to water supply, water quality, air pollution, disturbance issues and land use changes. It is not consistent with the precautionary approach to assume that the housing options assessed through the Phase 2 HRA could therefore be considered ‘safe’ with respect to impacts on integrity of European sites. It is also not possible at this point to conclude that consultees had accepted the housing options set out in the RSS Phase 2 as significant areas of uncertainty remain to be resolved. All parties concerned recognised that there were residual areas of uncertainty and their acceptance of the HRA findings was based on the assumption that these would be addressed.

The columns in the HRA impact tables don’t explain how the different alternative scenarios play out in terms of implications for site integrity/ designated interest features: they are more akin to a relatively detailed screening table. It would have been useful to have had an explanation or summary of significant adverse effects identified in the report (particularly where these are in addition to those already identified through the Phase 2 HRA) and also for areas of residual uncertainty to be clearly identified as some may require further study. It is not easy to tease this out from the tables. The report is inconsistent in how it builds on phase two HRA conclusions and showing how these would change under the various scenarios. More importantly new mitigation doesn’t seem to be proposed beyond what had already been identified. This is discussed further in section 3.3

### **3.1.2 Whether the precautionary approach has been appropriately applied;**

The European Commission guidance on HRA states that, in cases of uncertainty, the precautionary principle should be invoked, and the conservation objectives of Natura 2000 should prevail where there is uncertainty. The Waddenzee ruling on cockle fishing confirmed that, in HRA, “no reasonable scientific doubt [should remain] as to the absence of such effects”. Further details on the precautionary principle were included within Section 2.

In undertaking the screening stage BSG have updated the impact tables that were presented in the HRA of the Phase II Revision and have undertaken further consultation with Natural England, the Countryside Council for Wales and the Environment Agency before any sites were screened out. For the majority of sites it was concluded that a “likely significant effect arising from the new housing options could not be ruled out...alone or in combination”.

In addition BSG conclude following the Stage 2 AA that it is not possible to conclude that the 3 growth scenarios will not have an adverse effect on European sites. This is in line with the precautionary principle given the inherent uncertainties and lack of evidence to conclude that “*there will be no adverse effects on the integrity of a Natura 2000 site*”. However, following this point in the assessment there does not seem to be the same strict adherence to the precautionary principle. There is no guarantee given that the mitigation measures adopted from Phase II will eradicate negative effects completely under the new growth scenarios or sufficiently reduce them so that an adverse impact on the integrity of the European site can be nullified. This needs to be clearly documented in the BSG report and reflected in the Main study report.

### **3.1.3 Whether there is an over-reliance on general policies that seek to protect European sites; and**

This not an issue for the BSG as mitigation measures are only considered for potential impacts from changes to six ‘key drivers’. The failure to consider whether the proposed mitigation measures will act holistically to avoid adverse impacts on the integrity of each individual European site is discussed in section 3.3

### **3.1.4 How in-combination impacts have been considered.**

The BSG HRA considers ‘in combination effects’ within the matrices provided in Appendix 3 of the Screening Report and HRA Assessment Report. It is assumed that the original text of the HRA of the Phase II Revision has been updated where applicable. Although not a legal requirement it would be clearer for the reader if a list of additional plans, programmes and projects considered was provided with a breakdown of the aspects which might contribute to ‘in-combination’ effects. It is assumed that the HRA authors turned to the SA report for this information.

In addition, although the legal requirement to consider in combination effects is, in theory, met within the matrices, this information is not consistently applied through the report. The Chapter on “effects on the integrity of European sites” does not reflect the information provided with the matrices and SA report. For example, the SA report provides the following comments with regard to the in combination effect of housing growth in surrounding regions:

*Draft East Midlands Regional Plan Proposed Modifications, 2008 – “Increase in housing growth in both the East Midlands and West Midlands regions likely to lead to general intensification of effects on emissions, water consumption and congestion, particularly in those areas along major routes. Could lead to need for improvements*

*to water supply and quality to be addressed sooner due to cross-regional demands on limited resources – particularly in the Severn Trent WRZ'*

Draft North West RSS, Further Proposed Changes, 2008 – *“Increase in housing growth in both the North West and West Midlands regions likely to lead to general intensification of effects on emissions, water consumption and congestion, particularly in those areas along major routes”*

South East Plan, Proposed Changes, 2008 - *Increase in housing growth in both the South East and West Midlands regions could lead to general intensification of effects on emissions, water consumption and congestion, particularly in those areas along major routes*

This information and the analysis of the effect is not presented in Chapter 4 “Effects on the Integrity of the European sites”. The additional growth that has also recently been proposed in the adjacent regions will place increase pressure on water resources and add to issues such as diffuse air pollution. Analysis of these in combination pressures is needed to be able to ascertain if the mitigation measures proposed will avoid adverse effects on the integrity of the European sites.

## **3.2 Findings of the reports**

### **3.2.1 How the BSG HRA deals with issues identified in the Phase Two Revision HRA report;**

The structure of the report mirrors the HRA undertaken for the RSS Phase II. Following the screening stage and the identification of likely significant effects the report looks at the issues affecting the integrity of the European sites. In line with the work done in the Phase II HRA the BSG report examines the effects of the following on the European sites.

- Air Quality
- Water Quality
- Water Supply and Hydrology
- Disturbance caused by Recreation/Amenity and Tourism
- Land Use Change and fragmentation.

The issue of invasive species is not considered by the BSG report.

For each of the “drivers” examined the BSG report repeats the evidence presented in the Phase II HRA reports. For air quality additional work was undertaken by Mott MacDonald testing the projected increase in traffic levels from two of the nine initial housing options. This information was concerned most with journey times, did not assess the resultant impacts on local air quality and this doesn't appear to have given any specific consideration to implications for European Sites.

Through consultation with CCW, BSG have also identified there are issues affecting the Usk SAC due to the potential limits on water transfer from the Wye imposed on Welsh Water.

For the other issues it seems that little additional evidence has been gathered and/or presented that enables an understanding of whether the additional housing will cause additional impacts to that identified in the HRA of the Phase II Revision.

Further information is available for which to make an analysis of potential impact under each scenario. For example:

For water supply the NLP Sustainability Appraisal sets out: '*Following the baseline, further information from the Environment Agency has been published (including analysis of the likely effect of growth identified in the Phase 2 Preferred Option) as well as **draft water resource management plans (WRMP) for both Severn Trent and South Staffordshire Water.***' It is not clear whether or how this information has been used by BSG to further inform the debate on water resource capacity. In addition, it would be possible to work out approximate increases in water demand from the domestic sector by water resource zones under the new housing scenarios as they are spatial specific but this does not appear to have been attempted within the HRA.

For air quality, the SA report states that 'generally, air quality issues would be worse with the higher growth scenario 3 than scenarios 1 and 3'. Achievement of a 'pollution neutral' approach and avoidance of local emission increase will be harder under the higher growth scenario and this should be reflected in the HRA report and the Main NLP study.

The BSG HRA report endorses the fact that these issues listed above are affecting, and will continue to affect multiple sites but does not attempt to quantify whether any of these issues are substantially worse under the new housing scenarios.

### **3.2.2 Whether environmental capacity limits will be exceeded;**

There is no recognition in the Main NLP report that environmental limits represent a constraint on delivery. The Main Report admits that there are local hydrology and "other issues" to resolve but states that there is "no evidence that these can't be addressed through investment". However, the HRA report has concluded that there may be an adverse affect on the integrity of multiple European sites and has suggested mitigation measures which are likely to be difficult to achieve successfully, especially under the highest growth levels.

The lack of constraint to growth does not appear to be reflected in the summaries of consultation carried out. The issue of water deficit is flagged, particularly by Severn-Trent Water. Severn-Trent suggest that water supply is unlikely to be a major constraint under Scenario 1 and in the shorter term, but that means of delivery are unclear in the longer term and for all other Scenarios/options.

Issues raised appear to include (from meeting with Severn Trent Water on 30<sup>th</sup> April 2008):

- Insufficiency of water supply to meet demand in the Severn Trent part of the region without mitigation
- Although there are no fundamental barriers, costs and timescales could pose risk
- RSS preferred option increases customers by 30-40%, - likely to be significant
- The further in the future, the less certainty about what the headroom might be

Although Severn Trent Water did not consider there to be any major barriers to growth, a subsequent seminar in May 2008 (which focused on Transport, Utilities and Hydrology) discussed the following key issues:

- That water can become a 'show stopper' if not mitigated
- That other regulators like the EA may produce barriers, increased abstraction can affect other environmental interests

- That some current sustainability issues might be increased by increased housing.

In July, Severn Trent Water Severn Trent suggested lower numbers (option 1) over this time period would be unlikely to have major impact on infrastructure; but that higher growth particularly in Severn Zone may bring about a requirement to bring forward investment in supply, with questions over the mechanism for this.

It is important to note that discussions concerning the HRA process only took place in July, meaning that there was little opportunity to incorporate its findings until relatively late in the process of reviewing options. Given the BSG HRA findings that “it is not possible to conclude that the Water Companies will be able to provide water to meet the increase associated with housing growth with abstracting from systems that will adversely affect the integrity of certain European sites” it is surprising that this is portrayed in the Main Report as a local hydrology issue that is surmountable at a local level.

It is most appropriate to deliver mitigation at the scale at which key decisions are made and it can be difficult or impossible or achieve effective mitigation at a lower level if decisions taken at regional level have significant implications for supply and demand at that level. Recent evidence issued by the Environment Agency suggests that climate change could have significant implications for water supply in the midlands and the extent to which this has been factored in to assessment of environmental constraints is unclear.

The HRA concludes that the following issues are problems affecting European sites in this and other regions:

- Changes in Air Quality
- Changes in Water Quality
- Increased demand for water
- Disturbance caused by Recreation/Amenity and Tourism
- Land Use Change and fragmentation

The omission of this information within the Main Report is a problem. Although there is no quantified evidence presented in the HRA to suggest that the Housing Scenarios will tip the balance and should be regarded as a limit to growth, conclusion of ‘no adverse impact’ relies on very effective application of the mitigation and this should be presented as a ‘key point’ within the main study.

### **3.3 Conclusions and the approach to mitigation;**

The HRA identifies that adverse effects on a number of European sites cannot be ruled out, as the environmental conditions required to maintain their integrity may be affected by changes in:

- Air Quality
- Water Quality
- Water Supply and Hydrology
- Disturbance caused by Recreation/Amenity and Tourism
- Land Use Change and fragmentation.

The analysis is limited and doesn’t do any more than identify a potential risk. Information is not provided to enable comparison of options/ implications of quantum leaps in housing provision.

Using the terminology of the Regulations the BSG report has *not ascertained that it* (the three scenarios) *will not adversely affect the integrity of the European sites.*

3 questions need to be answered:

- 1). Can suitable mitigation be found to remove this adverse effect?**
- 2). Is a firm conclusion given that implementation of proposed mitigation would result in no significant adverse effect on the integrity of the European sites in the region?**
- 3). Does the main report reflect the conditions set out in the HRA report?**

#### **1). Mitigation**

A range of guidance exists on what constitutes adequate mitigation for Habitats Directive purposes and how to deal with uncertainty in decision-making. These all relate to whether RSSs will not give rise to significant adverse impacts on the integrity of European sites.

The European Commission guidance on appropriate assessment is oriented primarily towards projects, and proposes an approach to mitigation which arguably expects levels of certainty and detail that are not possible at the RSS level. However it does give an indication of the kind of issues that need to be considered when determining whether mitigation measures will reduce impacts to an insignificant level, namely:

“Mitigation measures need to be assessed against the adverse effects of the project or plan is likely to cause... To assess mitigation measures, the following tasks must be completed:

- list each of the measures to be introduced (e.g. noise bunds, tree planting)
- explain how the measures will avoid the adverse impacts on the site;
- explain how the measures will reduce the adverse impacts on the site.

Then, for each of the listed mitigation measures, provide evidence of:

- how they will be secured and implemented and by whom;
- the degree of confidence in their likely success;
- a timescale, relative to the project or plan, when they will be implemented;
- evidence of how the measures will be monitored and, should mitigation failure be identified, how that failure will be rectified” (Sec. 3.2.5).

The DCLG draft guidance on appropriate assessment echoes the European Commission’s messages:

“The primary aim of the mitigation of an option should be to cancel out any adverse effects fully. Where it is not possible to eradicate negative effects completely, there should be a sufficient reduction so that an adverse impact on the integrity of the European site can be nullified... Mitigation measures need to be viable, timely and possible to implement” .

As new mitigation does not seem to be proposed beyond what had already been identified in the Phase II HRA it is difficult to have confidence in the success they will have in nullifying the adverse effect on the Integrity of the European sites from either of the 3 growth scenarios. Especially as there were previously uncertainties about the deliverability of these measures.

## 2. Firm conclusions

The BSG HRA report does not state whether the mitigation is considered sufficient to nullify the adverse effect on the Integrity of the European sites from either of the 3 growth scenarios. Without this conclusion and agreement from the competent authority this is a legal showstopper. The Assessment would need to move to Stage 3 “alternatives” unless it could be said that there was no adverse affect on the integrity of European sites.

## 3. Application of findings and mitigation conditions within the Main study

There is inconsistency and conflict between the findings of the HRA report and the conclusions of the main study. Whether the findings of the assessment under the Habitats Regulations are a fundamental barrier to delivery does not seem to have been properly considered. We would suggest that in their current state the findings of the BSG HRA are a barrier to the delivery of these higher growth scenarios.

## 4 Conclusions

The HRA is intended to strengthen the evidence base for considering new housing options with respect to their implications for the integrity of European Sites in the Region.

The HRA of the West Midlands RSS Phase Two identified several cases where significant adverse impacts on the integrity of European sites were considered likely unless certain mitigation measures were taken. It also identified key areas of uncertainty relating to, air quality, water supply and quality, disturbance and land use change. Clearly, in the absence of any further evidence to demonstrate ‘no effect on integrity’, it has to be assumed that these impacts and areas of uncertainty remain, and that any further increase in housing will exacerbate them further.

There is little analysis and comparison of growth scenarios. There is the impression given is that Scenario 1 (the lowest) would be best, but otherwise nothing much changes from the conclusions of the Ph2 HRA. The NLP Main study states that ‘the types of impact are shared with the RSS Phase 2 Revision Preferred Option and are not new impacts’. Rather than shared we would suggest that additional housing would exacerbate the impacts already identified.

If to be used as evidence, a stronger evidence base should have been gathered to review implications of step changes/ help to identify critical thresholds or limits to growth and the results should have been taken on board in identifying key constraints in the main study.

## Appendix 1

European sites where the 3 growth scenarios would either have an adverse effect on site integrity or where it was not possible for BSG to conclude that there would not be an adverse effect on site integrity.

SACs & cSACs	SPAs	Ramsars
Brown Moss	Humber Flats, Marshes and Coast (Phase 2)	Humber Estuary
Cannock Chase	Peak District Moors (South Pennine Moors Phase 1)	Midlands Meres and Mosses Phase 1
Cannock Extension Canal	Severn Estuary	Midlands Meres and Mosses Phase 2
Downton Gorge	South Pennine Moors Phase 2	
Fenn's Wixhall, Bettisfield, Wem and Cadney Mosses		
Fens Pool		
Humber Estuary		
Pasturefields Salt Marsh		
Peak District Dales		
River Clun		
River Dee and Bala Lake		
River Mease		
River Usk		
River Wye		
Severn Estuary		
South Pennine Moors		
The Stiperstones and the Holley		
West Midlands Mosses		
Wye Valley and Forest of Dean bat sites		
Wye Valley Woodlands		

**[Note that this is in addition to the findings of the Phase 2 HRA ]**