

# **Bexhill to Hastings Link Road**

## **Addendum to the Environmental Statement**

### **Supplementary Information - Hydrology**

**August 2008**

East Sussex County Council  
County Hall  
St Anne's Crescent  
Lewes  
East Sussex



# **Bexhill to Hastings Link Road**

## **Addendum to the Environmental Statement**

### **Supplementary Information - Hydrology**

#### **Issue and Revision Record**

<b>Rev</b>	<b>Date</b>	<b>Originator</b>	<b>Checker</b>	<b>Approver</b>	<b>Description</b>
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A	August 2008	AH	LH	GPH	Final Issue

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## 1 Introduction

### 1.1 Context

- 1.1.1 This report provides supplementary information to the Addendum to the Environmental Statement (AES) (August 2008) prepared for the Bexhill to Hastings Link Road (BHLR) Scheme, promoted by East Sussex County Council (ESCC).
- 1.1.2 The Environmental Statement (ES) (April 2007) reports the findings of the Environmental Impact Assessment (EIA) for the Scheme and forms part of a detailed Planning Application for the Scheme prepared by ESCC Transport and Environment Department.
- 1.1.3 The purpose of the AES is to address the requirements for missing or additional environmental information required by the Planning Authority as being essential to the determination of the Planning Application for the Scheme.
- 1.1.4 This supplementary Hydrology Report must be read in conjunction with the ES and the AES.
- 1.1.5 The following documents have already been submitted to the Development, Minerals and Waste Group of ESCC in their capacity as the Determining Authority for the Scheme under Regulation 3 of the Town and Country Planning General Regulations 1992:
  - Environmental Statement;
  - Non – Technical Summary (NTS);
  - Traffic and Transport Report;
  - Regeneration Statement;
  - Design and Access Statement;
  - Project-level Sustainability Appraisal;
  - Waster Management Strategy;
  - Scheme Design Drawings and associated supporting information;

- The Planning Statement;
  - The Addendum to the Environmental Statement;
  - The Addendum Design and Access Statement;
  - The Flood Risk Assessment;
  - The Regeneration Statement Addendum; and,
  - The Travel and Transport Addendum.
- 1.1.6 In addition, this Supplementary Hydrology Report has been submitted to the Determining Authority for the Scheme in support of the Planning Application.
- ## 1.2 Consultation
- 1.2.1 The Supplementary Hydrology Report addresses outstanding issues relating to Hydrology that are not addressed in the AES. These outstanding issues have been raised as part of the consultation process with the Statutory Environmental Bodies of Natural England (NE) and the Environment Agency (EA). The report should be read alongside the AES. Relevant records of meetings are contained in Appendix A of this report and include:
- Meeting held at Natural England offices, Lewes, on Tuesday 22<sup>nd</sup> July 2008, between the Planning Authority, NE in their capacity as Planning Consultee, and ESCC and associates as the Project Design Team: To discuss the ES Chapter and draft AES chapter of Nature Conservation.
  - Meeting held at County Hall, Lewes on Tuesday 22<sup>nd</sup> July 2008, between the Planning Authority, the EA in their capacity as Planning Consultee, and ESCC and associates as the Project Design Team: To discuss the ES Chapter and draft AES chapter of Nature Conservation.
- 1.2.2 The two meetings held on 22.07.08 followed a review of the draft AES by NE and EA. The review prompted a number of comments, which were made in addition to the original Regulation 19 queries which the AES addresses. Regulation 19 issues are established in letters from Statutory Consultees following their review of the published ES. All correspondence can be found in Appendix A.1 Regulation 19 Letters of the AES.
- 1.2.3 A Schedule of Additional Comments raised by NE and EA is included in Appendix B of this report. The majority of these issues have been addressed within the AES. However, there are three outstanding issues that have not been addressed in the

AES. These issues form the basis for this Supplementary Hydrology Report and are summarised as follows:

- Additional information to be provided to support the creation of the replacement wetland habitats, particularly relating to the suitability of the Powdermill borrow pit;
- A Spillage Risk Assessment and review of surface water runoff pollution for the Queensway Road to be undertaken; and,
- Discharge points to be mapped in relation to sensitive habitats.

## 2 Outstanding Issues

- 2.1 **Additional information to be provided to support the creation of the replacement wetland habitats, particularly relating to the suitability of the Powdermill borrow pit.**
- 2.1.1 As a part of the BHLR Scheme it would be necessary to create a new wetland habitat within the valley of the Powdermill Stream. This habitat would have the following objectives:
- To accommodate flood water which would be displaced by the construction of the embankments across the valleys, associated with the Scheme;
  - To act as a borrow pit so as to provide soils to help achieve the extensive landscape earthworks associated with environmental mitigation for the Scheme;
  - To act as a receptor site for ditch reedbed communities removed for the Scheme;
  - To provide additional wetland wildlife areas, to help compensate for the loss of wetland habitats which would result from the construction of the proposed Scheme; and,
  - To help compensate for the effect that the Scheme would have upon local landscape character.
- 2.1.2 It would be necessary to strike a balance between all objectives to enable each to be achieved in appropriate measure.
- 2.1.3 At this preliminary stage in the Scheme design, it is not possible to be definitive regarding the final form of the Powdermill Valley wetland. Such detail will become clear at the detailed design stage of the Scheme. Figure 2 contained in Appendix E to this report provides an indicative illustration of Powdermill Valley borrow pit in cross section.
- 2.1.4 In order to maximise flood storage capacity, the whole of the Powdermill Valley area would need to be excavated to 1.9mAOD. This depth is the normal ground water level, and exhibits only marginal seasonal fluctuations, as demonstrated through groundwater monitoring. Appendix C of this report containing Figure 9.3 (taken from Volume 3 Part 1 of the ES) identifies all borehole locations for the Scheme. Boreholes 14 and 15 are located within the Powdermill Valley area. Graph 1 contained in Appendix D illustrates the recorded groundwater levels for these boreholes between March 2006 and June 2007. The data shows that over the course of 15 months groundwater only fluctuated by a maximum of 10cm.
- 2.1.5 Water depth and bank slope profile of the proposed borrow pit will define the character and biodiversity of the wetland. The borrow pit will be designed where appropriate with a sloping profile and varying depths. Marginal depths will remain shallow in order to support common reed communities grading into drier reedbeds and wet grassland rush pasture communities.

- 2.1.6 Reedbeds are able to tolerate eutrophic still waters with a substrate of clay, silt and peat. Reedbeds will thrive in depths of up to 1.0m (Newbold, C and Mountford, O, 1997) and can tolerate periodic inundation.
- 2.1.7 It is anticipated that a greater amount of soil than derived from a 1.9m AOD excavation would be needed for the construction works. Therefore, in order to generate a good quality reed bed, it would be appropriate to excavate to an undulating depth, generally up to 600mm deep and no more than 1m, to create standing water beneath the reeds. As a minimum, such a reed bed would be created on a shallow “shelf” around the inside perimeter of the area to create a marginal reedbed habitat. The surface of this area would be left as a rough scrape to aid reedbed and marginal emergent macrophyte establishment. The primary reed donor source would come from the dredging of ditch banks which would be removed by the Scheme, and translocated into the newly created marginal “shelf”.
- 2.1.8 Reedbeds provide an important habitat for a range of over wintering, breeding birds such as the nationally scarce bittern. Reedbeds also provide an important habitat for a range of invertebrates. The depth and ultimate extent of these open water areas would be influenced by the need to generate an increased amount of soils for construction work, as well as balance the biodiversity gains from creating such a wetland habitat.
- 2.1.9 It is anticipated that the combination of open water and marginal mosaic of habitats grading into adjacent wet grassland communities around the perimeter would not only be of wildlife benefit. The existing arable fields which are of low biodiversity status would be improved by increasing UKBAP habitat types of high biodiversity value. This would encourage UKBAP species such as the bittern to potentially inhabit the locality.
- 2.1.10 In addition, the Powdermill Valley borrow pit would help to reduce the environmental effects of the road through generating flood water storage and soils for environmental earthworks, as well as creating a local landscape feature which would enhance the valley and help compensate for the effects of the Scheme upon local landscape character. It is anticipated that the pond would become a landscape feature which would be valued both by wildlife and local people.
- 2.2 A Spillage Risk Assessment and review of surface water runoff pollution for the Queensway Road to be undertaken.**
- 2.2.1 The DMRB (HA216/06) requires that for any proposed new highway, quantitative assessments of the potential effects on surface water quality are carried out. The DMRB methods assess the potential impact of a scheme on the water environment from routine runoff (through Method A Simple Assessment and Method B Detailed Assessment) and from the risk of a spillage on the highway that could lead to a serious pollution event (Method D of HA216/06).
- 2.2.2 The ES assesses the operational impacts that may be caused by the proposed Scheme. The results of the assessment was that the Scheme would not have a

significant impact on water quality of receiving watercourses from routine runoff, nor from the possibility of a spillage on the highway. The drainage design for the Scheme includes measures to treat routine runoff and to contain spillages should they occur. Please refer to Chapter 9 Water Quality of the ES and the AES.

- 2.2.3 Runoff from the B2092 Queensway Road has been raised as an additional concern by NE following their review of the draft AES (May 2008). NE's concern relates to a potential significant increase in run off from the existing Queensway Road into Marline Valley Woods due to the expected increase in traffic feeding through from the proposed Scheme. NE would expect the existing drainage measures to be upgraded or an assurance to be made that the existing measures have sufficient capacity to deal with the increased levels of pollution.
- 2.2.4 Predicted traffic flows for the Design Year (2025) without the Scheme along the B2092 to the north of the proposed Scheme show approximately 13,000 vehicles per day with approximately 3% HGVs. To the south of the Scheme alignment, predicted traffic flows for 2025 show approximately 9,500 vehicles per day with approximately 2.5% HGVs.
- 2.2.5 With the Scheme the Annual Average Daily Traffic (AADT) south of the Scheme would remain unchanged, although the percentage HGV would increase to around 5.5%. For the north along the B2092 Queensway, the AADT would increase to approximately 25,000 vehicles with 3.5% HGVs. This represents a net increase of approximately 12,000 vehicles per day for Queensway.
- 2.2.6 To model the effect of the increased traffic flows on routine runoff and spillage risk requires information on the drainage provision, existing treatment, outfall location and water quality of the receiving watercourse. Much of this information is unavailable at the time of writing. However, a qualitative assessment suggests that it is unlikely that the additional traffic associated with the Scheme would lead to a significant change in the water quality of the receiving watercourse, or in the spillage risk along Queensway Road.
- 2.2.7 From discussions with Hastings Borough Council (HBC) it is believed that runoff from the B2092 is collected by a positive drainage system and drains via an attenuation pond at TQ 780 106 prior to discharge to a small stream and ultimately to the Combe Haven. It is therefore considered that there is no hydrological pathway in which runoff or spillages along the B2092 can interact and pollute Marline Valley Woods SSSI or the ghyll that flows through it. The attenuation pond would provide some treatment of routine runoff and containment of any potential spillage. In addition, it is likely (and recommended) that such a facility would also have a penstock or similar valve that could be closed to prevent a spillage propagating. This provision will be incorporated at the detailed design stage of the Scheme.
- 2.2.8 Potential impacts on surface and groundwater and mitigation measures to manage and treat contaminated runoff, and to prevent spillages during construction, have been assessed in Chapter 9 Water Quality of the ES. Good practice guidance documents have also been detailed, along with the need for licences and consents

from the EA. The construction site is also downstream of the SSSI and would therefore not affect the ghyll as it flows through the SSSI. This ghyll will be subject to the same stringent mitigation measures as described in Chapter 9 of the ES. Although the B2092 will have a dedicated drainage system that is likely to drain down hill towards the attenuation pond located at TQ 780 106, mud from construction vehicles may be deposited on the road. The ES makes the requirement for wheel washes to be installed on the exit and entrance points to the construction site.

## 2.3 Discharge points to be mapped in relation to sensitive habitats.

- 2.3.1 The impact from runoff containing de-icer salts has been discussed at both meetings held on 22.07.08 between ESCC and associates, NE and EA. During the meeting held with EA, it was stated that the original ES addresses the impact from de-icer salts. The ES states that due to the high dilution capacity from SUDs and overflows, and the low concentrations of salts for this location, the impact from salt run-off will not be significant (Section 9.5 of the ES).
- 2.3.2 During this meeting, the EA made a commitment to providing some additional information on potential methodologies for modelling salt impacts, and additional guidance for mitigating the long-term accumulation of salts. Such information has been included in the AES (Sections 12.5.55 to 12.5.59).
- 2.3.3 EA also suggested that mitigation could include diverting outflows away from sensitive habitats where possible. A commitment was subsequently made to map the discharge points in relation to sensitive sites.
- 2.3.4 Figure 3 contained in Appendix F of this report identifies the drainage outfalls and sensitive environmental sites within the Scheme alignment.
- 2.3.5 The Soft Engineering solution would comprise the following:
  - Kerbs and gullies in the more urban areas and on embankments;
  - Shallow grass swales to collect the highway run-off elsewhere;
  - Carrier pipes to collect the run-off past the first swale run; and,
  - Inlet/Inspection chambers at approximately 80m intervals.
- 2.3.6 Pollution risk is reduced by inclusion of the following:
  - By-pass interceptors to collect hydrocarbon pollutants and silts; and,
  - Grassed bunding or embankments to form a flow dissipation device to store and discharge the 100yr (+20%) event with reed-beds incorporated within the design.

- 2.3.7 The scheme consists of 5 major hydraulic catchments, as detailed in Table 1 below. The rural sections models B to E are of relevance in discussions of runoff and de-icer salts in relation to sensitive habitats.

**Table 1: Hydraulic Catchments**

Catchment/ Model	Start	End	Point of Discharge from carriageway	Point of Discharge into receiving waters	Receiving waters
A	0000	1500	150	150	Egerton Stream
			685	685	
B	1500	2700	2285	2295	Combe Haven
			2310	2285	
C	2700	3850	3110	3120	Combe Haven and Watermill Stream
			3850	3520	
D	3850	4330	3950	3880	Diverted Powdermill Valley Stream and Combe Haven
E	4330	5500	4480	4540	New drainage ditch leading to Combe Haven

- 2.3.8 Model B links two local high-points along the route. The low-point is located at Combe Haven stream/river and consists of two sub-catchments that are required to accommodate the stream crossings. The drainage design would comprise a grass swale which would run the length of the catchment on both sides with a carrier drain below to collect and transport the flows. Grass swales are an important alternative soft engineering feature that can be integrated into the landscape design and planted with an appropriate grassland community, avoiding the use of dished concrete channels. The model would discharge via interceptors and two vegetative treatment systems within drainage ponds to Combe Haven floodplain. A combined filter drain in each verge would collect the surface water run-off from the cuttings. This would discharge directly into the stream since flows from this source are considered clean.
- 2.3.9 Model C links three local high-points along the route. The low-point/discharge is located at Watermill Stream and consists of three sub-catchments to accommodate the stream crossings and the vertical alignment. The drainage design would comprise a grass swale, which would run the length of the catchment on both sides (as required) with a carrier drain below to collect and transport the flows. The model would discharge via by-pass interceptors to three vegetative treatment systems within drainage ponds. The western pond would discharge to adjacent ditches and then the Watermill Valley Stream and the eastern two would discharge into adjacent ditches and then into the Combe Haven. The EA and landowners would be consulted prior to the proposal being adopted. A combined filter drain in each verge would collect the surface water run-off from the cuttings, which would discharge directly into the stream since flows from this source are considered clean.

- 2.3.10 Model D falls easterly to Powder Mill Stream. This drainage option would comprise a grass swale that would run the length of the catchment on both sides (as required), with a carrier drain below to collect and transport the flows. By increasing the width of the swale to approx. 3.5m and avoiding the need for a carrier pipe, it is believed that the swale can cross over the restriction allowing the model to discharge into the floodplain via a by-pass interceptor using the vegetative treatment systems within drainage ponds described earlier. A filter drain in each verge would collect the surface water run-off from the deep cuttings. This would discharge directly into the stream since flows from this source are considered clean.
- 2.3.11 Model E falls southwards to Decoy Pond Stream. Chainage 5250 onwards is designed as an urban drainage scheme to use kerbs and gullies to collect the carriageway run-off (as with Model A). Chainage 4400 to 5200 consists of a grass swale that would run the length of the catchment on both sides (as required) with a carrier drain below to collect and transport the flows. The model would discharge via a by-pass interceptor and a vegetative treatment system within a drainage pond on the north side of the proposed Scheme to adjacent ditches and ultimately into the Combe Haven. It should be noted that the Preliminary Scheme Layout, Plan Number 208/31/6 submitted with the Planning Application, erroneously shows the Decoy Pond as a drainage outfall and wetland area. A combined filter drain in each verge would collect the surface water run-off from the deep cuttings. This would discharge directly into the stream since flows from this source are considered clean.
- 2.3.12 In conclusion, discharge to receiving waters would not be concentrated at any one location but spread across a variety of rivers, streams and ditches. Discharges in the rural section of the Scheme would first be directed through vegetative treatment systems within drainage ponds. Discharges to sensitive ecological receptors such as the fish spawning and nursery sites within the Powdermill Stream would be avoided.

### **3 Conclusions**

- 3.1 Outstanding issues and commitments that have been agreed with NE and EA which are not included in the AES are addressed within this Supplementary Hydrology Report.
- 3.2 Additional information has been provided to support the creation of the replacement and additional wetland habitats, particularly relating to the suitability of the Powdermill borrow pit. An additional Figure in Appendix E shows a cross section of the proposed borrow pit, and a discussion of the suitability of this site for wetland habitat creation has been included in this report.
- 3.3 It is considered unlikely that the increase in traffic as a result of the Scheme would lead to a significant change in the water quality of the receiving watercourse, or in the spillage risk along Queensway. There is no hydrological pathway in which runoff or spillages along the B2092 can interact and pollute Marline Valley Woods SSSI or the ghyll that flows through it. Potential impacts on surface and groundwater and mitigation measures to manage and treat contaminated runoff have been adequately assessed within Chapter 9 Water Quality of the ES.
- 3.4 Discharge points have been mapped in relation to sensitive habitats illustrating that sensitive ecological receptors such as the fish spawning and nursery sites within the Powdermill Stream would be avoided where possible. Further information from the preliminary drainage design has been added to this report to support the conclusion within the ES that due to the high dilution capacity from SuDs and overflows, and the low concentrations of salts for this location, the impact from salt run-off will not be significant (Section 9.5 of the ES).

## **4 References**

Newbold, C and Mountford, O (1997). Water level Requirements of selected plants and animals. English Nature.

## **Appendix A Records of Consultation**

## Notes of Meeting



**Theme:** BHLR: Addendum to the ES Additional Comments – Environment Agency Consultation

**Location:** County Hall, Lewes

**Meeting Date** 22.07.08

**Present:**

Sally Chadwick (SC)	EA
Hannah White (HW)	EA
Rosie Piper (RP)	EA
Hugh Coakley (HC)	ESCC
Nigel Marshall (NM)	ESCC
Artemis Christophi-Turner (ACT)	ESCC
Giles Hewson (GH)	MM
Lisa Huckstep (LH)	MM
Julia Barrett (JB)	MM

**Notes Taken by:** JB

Item	Text	Action	Target Date
1.0 <b>Meeting Agenda</b>	<ul style="list-style-type: none"><li>- Introductions</li><li>- Purpose of the Meeting: to agree the content of the Addendum to the ES (AES) for the proposed Bexhill to Hastings link Road</li><li>- Confirmation that the Regulation 19 Issues raised by Natural England have been addressed, with the exception of those raised as Additional Comments</li><li>- Confirmation that the Additional Comments raised by Natural England have been addressed</li><li>- Any other business</li></ul>		
2.0 <b>Introductions and notes</b>	All present were introduced with their roles in relation to the Scheme.  Noted that Kate Entwistle is the key contact for the EA with regards to BHLR at present. She is unavailable for this meeting. Sally Chadwick is present in her absence.  Artemis Christophi-Turner is the Principal Planner, representing Tony Cook of ESCC.  Dr. Alex Tait, ESCC County Ecologist could not be present due to long term illness.  GH requested clarification of which version of the Nature Conservation chapter has been reviewed by EA and has given rise to their additional comments. SC confirmed that the first of two versions was reviewed. GH stated that this version was an initial draft and has been significantly amended by subsequent reviews.  Clarity over the authors of the first and second set of comments from EA is sought. The first set of Regulation 19 comments were		

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	compiled by Sarah Warris, who has since left the EA. The second set were compiled by SC.		
<b>3.0 Purpose of the meeting</b>	The aim of the meeting is to close off, as far as possible, the additional issues raised so that a response to the queries is provided. Where the issue cannot be closed off, a clear method to address the issue should be developed.		
<b>4.0 Confirmation that the Regulation 19 Issues raised by Natural England have been addressed, with the exception of those raised as Additional Comments</b>	GH suggests that the meeting should focus on the additional comments received from EA. A Schedule of these additional comments was provided in the information pack issued to the EA prior to this meeting. This Schedule will be included as an Appendix to the AES. These minutes will also be included as an Appendix to the AES.		
<b>5.0 Confirmation that the Additional Comments raised by Natural England have been addressed</b>	<p><b>5.1 Mitigation and compensation for ecological impacts</b></p> <p>GH confirmed that the mitigation design had been developed in consultation with the English Nature, the Countryside Agency, NE and EA. Grant Moffatt was the key contact for this purpose, and the 2:1 habitat replacement was developed with his knowledge and input.</p> <p>Natural England (NE) have been consulted regarding biodiversity mitigation. MM and ESCC had a successful meeting with NE on 22.07.08, the minutes of which will be added as an appendix to the AES.</p> <p>GH requested an overview from EA as to why it is thought that the mitigation proposed is not adequate.</p> <p>SC commented that there is doubt to the feasibility of the wetland habitats such as the borrow pit in Powdermill Valley. Is this wetland habitat at this location sustainable?</p> <p>SC also raised the point that the 2:1 habitat replacement must be appropriate in relation to habitat loss.</p> <p>NM made reference to the Addendum Design and Access Statement (ADAS). This is amended to contain a schedule showing loss/ gain habitat. Overall, there is a greater amount of replacement habitat than the 2:1 requirement. Figure 208/31/60 of the ADAS showing Habitat Loss, identifies that much of the habitat lost as a result of the Scheme is of low biodiversity value.</p> <p>Note: NM to provide a printed copy of the ADAS to EA.</p>	<b>NM</b>	<b>ASAP</b>
	<p><b>5.2 Unknown Impacts:</b></p> <p><b>5.2.1 Noise –</b></p> <p>GH queried whether the noise chapter of the ES (Chapter 11) has been reviewed. This chapter assesses noise impacts for human health. It is accepted that there will be a moderate adverse impact as a result of the Scheme in relation to noise, as stated in the ES. However, the impacts will be significantly ameliorated as a result</p>		

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Item	Text	Action	Target Date
	<p>of noise mitigation such as bunding and noise fencing. However, it is noted that there will be some residual impacts after mitigation in relation to potential impacts upon over wintering birds.</p> <p><b>5.2.2 Nitric acid –</b></p> <p>The AES includes a report on the assessment of AQ effects on designated sites. The impact of Acidification is confirmed here, in accordance with DMRB, as a regional issue and therefore is not significant for this Scheme.</p> <p>The AQ report contained as Appendix G of the Draft AES backs up the original findings of the ES to state that there is a potentially significant impact from atmospheric NOx and NO<sub>2</sub> deposition. The updated assessment does not alter this conclusion. The query is how the additional exceedence over and above that which is occurring without the Scheme will impact the designated sites. This will be done by applying the lower threshold, and assessing the impact of this change on the communities present at the locations where the AQ assessment identifies an exceedence.</p> <p>GH states that MM will include a section within the Draft AES to outline the mitigation strategy for managing and reducing the impact of NO<sub>2</sub> deposition (principally thorough land management). Whilst EA reserve their position until they review the final submission, EA expressed agreement to this approach.</p> <p><b>5.2.3 Discharge of Road Drainage and Leachates –</b></p> <p>As requested by NE, additional detail for surface water runoff pollution from Queensway into Marline Woods SSSI will be added to the AES.</p>		
	<p><b>5.3 Salts:</b></p> <p>The original ES addresses the impact from de-icer salts. It states that due to the high dilution capacity from SUDS and overflows, and the low concentrations of salts for this location, the impact from salt run-off will not be significant. NE have asked for an attempt to quantify the amount of salts entering watercourses at peak flows. The DMRB provides some guidance, but not to the level of detail being requested.</p> <p>EA will consult with colleagues and provide some further information on potential methodologies for modelling salt impacts), and additional guidance for mitigating the long-term accumulation of salts. One suggestion (SC) could be to divert outflows away from sensitive habitats where possible. To do this, MM will map the discharge points in relation to the habitats and identify any locations where there is conflict with sensitive habitats.</p> <p>In addition, current codes of practice for the application of de-icer salts will be referenced in the AES. Recommendations for minimum applications, without compromising safety, will be made. HC to contact Area Manager for ESCC with regards to this information. Whilst EA reserve their position until they review the final submission, EA expressed agreement to this approach.</p>	<p>EA MM HC</p>	<p>ASAP</p>
	<p><b>5.4 Mitigation –</b></p> <p>GH confirmed that the ES highlighted an initial concern regarding</p>		

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Item	Text	Action	Target Date
	<p>mitigation proposals. These concerns have subsequently been resolved in the revised Environmental Design proposals.</p> <p>Additional information which is provided in the DAS and ADAS for funding of long-term management (through ring-fenced and additional monies) will be adequately summarised and cross referenced in the AES so that there is no uncertainty over the long-term feasibility of the proposed mitigation.</p> <p>EA query whether the habitat creation of replacement habitats would take place in advance of the main works. The AES will investigate this, with a caveat stating that where possible, mitigation will be brought forward so that any ecological enhancement commences as early as possible. Whilst EA reserve their position until they review the final submission, EA expressed agreement to this approach.</p> <p>Note: the 2:1 habitat replacement for ditches is now confirmed in the ADAS.</p>	MM	
	<p><b>5.5 Habitat Severance</b></p> <p>SC summarises the concerns that the very nature of a road scheme will mean that habitat severance will occur. However, the AES states that mobile species are unlikely to be affected. Less mobile species may be affected, but the addition of mitigation such as Dormouse underpasses will ensure this impact is mitigated to a certain extent. The revised Environmental Design contained within the ADAS includes mitigation for habitat severance.</p>		
	<p><b>5.6 Clear Span structures</b></p> <p>The incorporation of clear span structures for the Scheme has been developed through consultation with Grant Moffatt of the EA. A 2m buffer zone on either side of the watercourse has been agreed. EA currently suggest that this 2m corridor is not wide enough to ensure the ecological functionality of the valley. GH confirmed that a wider corridor would result in a larger structure, and this has implications for visual impact and landtake. A balance is therefore required.</p> <p>GH confirmed that ESCC as Scheme Promoters will not be amending the current design for clear span structures. Given this, the EA agree that the 2m corridor should be developed to the best advantage, such as through suitable planting and potential green engineering. Therefore, the AES will develop a set of principles on how to plant and manage a softbank option, with an aim of maintaining the biodiversity value along the riparian edge. These principles will consider erosion and siltation.</p> <p>The Design and Access Statement currently shows an engineering solution in regards to bank and bed options.</p> <p>GH asked if the EA would maintain their objections to the Scheme on the grounds of the clear span bridges if the green engineering options are investigated and subsequently conditioned. EA state that this would be reviewed upon receipt of the additional information.</p> <p>SC stated that works over the watercourses would have to be licensed and subject to Land Drainage Consent in any event. It is</p>	NM/ MM	

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Item	Text	Action	Target Date
	likely that a green solution would be conditioned at this stage.		
	<p><b>5.7 Species isolation</b></p> <p>It is agreed that should a green engineering solution be adopted, the concerns over barriers to movement for species such as watervoles and otters would be negated. In addition, the design should ensure that the water environment is not hostile for species.</p> <p>LH stated that a watervole strategy is currently being developed by EPR for the Scheme. This is in line with the EA's future goals of re-colonising the valley. Information about this strategy is unlikely to be available prior to submission of the AES, but GH confirmed a commitment to providing EA with a survey and mitigation review report by September 2008.</p>	MM	September 2008
	<p><b>5.8 PPS9 and other Planning Policy</b></p> <p>It is agreed that this is addressed through the additional information contained in the ADAS for habitat loss, habitat replacement and habitat management, and through the discussions held today.</p>		
	<p><b>5.9 FRA</b></p> <p>EA have received and reviewed the FRA for the Scheme.</p> <p>EA have subsequently removed their objection to the Scheme on the grounds of Flood Risk.</p> <p>CLOSED</p>		

# Notes of Meeting



**Theme:** BHLR: Addendum to the ES Additional Comments – Natural England Consultation

**Location:** Natural England Offices, Lewes

**Meeting Date** 22.07.08

**Present:**

Marian Ashdown (MA)	NE
Louise Bardsley (LB)	NE
Hugh Coakley (HC)	ESCC
Nigel Marshall (NM)	ESCC
Artemis Christophi-Turner (ACT)	ESCC
Giles Hewson (GH)	MM
Lisa Huckstep (LH)	MM
Julia Barrett (JB)	MM

**Notes Taken by:** JB

Item	Text	Action	Target Date
1.0 Meeting Agenda	<ul style="list-style-type: none"><li>- Introductions</li><li>- Purpose of the Meeting: to agree the content of the Addendum to the ES (AES) for the proposed Bexhill to Hastings link Road</li><li>- Confirmation that the Regulation 19 Issues raised by Natural England have been addressed, with the exception of those raised as Additional Comments</li><li>- Confirmation that the Additional Comments raised by Natural England have been addressed</li><li>- Any other business</li></ul>		
2.0 Introductions and notes	All present were introduced with their roles in relation to the Scheme.  Noted that Marian Ashdown is the key point of contact for NE in relation to BHLR.  Artemis Christophi-Turner is the Principal Planner, representing Tony Cook of ESCC.  Dr. Alex Tait, ESCC County Ecologist could not be present due to long term illness.  GH requests clarification of which version of Draft AES Nature Conservation Chapter has been reviewed by NE and has given rise to their additional comments. MA confirmed that it is the second of three versions was reviewed.		
3.0 Purpose of the meeting	The aim of the meeting is to close off, as far as possible, the additional issues raised so that a response to the queries is provided. Where the issue cannot be closed off, a clear method to address the issue should be developed.  MA: raised a concern that the AES might be submitted prior to the		

## Notes of Meeting



Item	Text	Action	Target Date
	completion of ongoing and additional surveys. MA believes that should this happen, NE would uphold their objections unless they can be satisfied that the Scheme promoter's legal obligations through the CRoW Act (as amended through the NERC Act), have been met with respect to biodiversity.		
<b>4.0 Confirmation that the Regulation 19 Issues raised by Natural England have been addressed, with the exception of those raised as Additional Comments</b>	<p>LB confirmed NE's difficulties with reviewing the Draft AES documents caused by a lack of navigating contents pages and document tracking.</p> <p>GH confirmed that this information is contained in the full Addendum which NE received a copy for initial review. A Schedule of Regulation 19 issues and their location in the text is also included in this document. This Schedule should form the basis for navigating the document.</p> <p>MA and LB confirmed that the Schedule of Regulation 19 issues has not been originally received by NE. However, a subsequent Schedule for Additional comments raised by NE has been produced, and was provided in the information pack submitted to NE prior to this meeting and this had been reviewed and welcomed by NE.</p> <p>GH confirmed that the remainder of this meeting focuses on these additional comments, and shall follow the structure of this Schedule. This Schedule will be included as an Appendix to the AES. These minutes will also be included as an Appendix to the AES.</p>		
<b>5.0 Confirmation that the Additional Comments raised by Natural England have been addressed</b>	<p><b>5.1 Marline Woods SSSI:</b></p> <p><b>5.1.1 Shading –</b></p> <p>At the point where a bridge is proposed over the southern tip of Marline Woods SSSI, NE would like to see shading contours to show the extent of the shading from this bridge. MM will produce an illustrative Figure to show the bridge with extent of shading in relation to plant communities present.</p> <p>NE concerned that alterations to the microclimate caused by the bridge will affect habitat connectivity. Mitigation may include introducing another link elsewhere in the Scheme or by replacement habitat. The under-bridge planting should also be reviewed. In addition the connectivity of the woods in general and mitigation for that connectivity will be reviewed (where this is not addressed elsewhere this will be addressed).</p> <p>MM will therefore explore alternative ways to provide linking habitat and maintain the ecological functionality of the corridor. Cross reference to mitigation elsewhere in the Scheme will be made, such as existing plans for linking habitat across the road. Whilst NE reserve their position until they review the final submission, NE expressed agreement to this approach.</p> <p><b>5.1.2 Run-off –</b></p> <p>Drainage at Queensway will be investigated during the detailed design stage of the Scheme.</p>	MM MM	

## Notes of Meeting



Item	Text	Action	Target Date
	<p>LB mentions that there is additional development approved at the Queensway North location. This development has the potential to effect surface water runoff pollution. Much mitigation has been included in the plans for this development. NE require the same level of mitigation to ensure consistency between proposals.</p> <p>MM will instruct Faber Maunsell to review the Spillage Risk Assessment (SRA) and surface water runoff pollution for Queensway using existing traffic data for this road.</p> <p>LB confirmed her agreement to this approach and will await the results of this further assessment.</p>	<b>MM/FM</b>	
	<p><b>5.1.3 Air Quality –</b></p> <p>The standard NE response to Air Quality affects on all designated sites would be for the Precautionary Principle to be applied. Therefore, the AES will look at the lower thresholds for critical loads of NO<sub>2</sub>. The AQ report contained as Appendix G of the Draft AES backs up the original findings of the ES to state that there is a potentially significant impact. The updated assessment does not alter this conclusion. The query is how the additional exceedence over and above that which is occurring without the Scheme will impact the designated sites. This will be done by applying the lower Critical Load threshold, and assessing the impact of this change on the communities present at the locations where the AQ assessment identifies an exceedence.</p> <p>GH states that MM will include a section within the Draft AES to outline the mitigation strategy for managing and reducing the impact of NO<sub>2</sub> deposition (principally thorough land management). and/or possibly through additional off-set land if necessary.</p> <p>Note: the word “marginal” within the Draft AES and with respect to areas where NO<sub>x</sub> concentrations show potentially significant changes is misleading. This word should read “peripheral” or “on the margins of”. It is not intended to indicate significance. This will be confirmed within the AES.</p>	<b>MM</b> <b>MM</b>	
	<p><b>5.2 Combe Haven SSSI:</b></p> <p><b>5.2.1 Noise –</b></p> <p>LH confirmed over wintering bird surveys have been completed, but further information is to be added to the AES from additional baseline data. No further surveys are programmed with respect to wintering birds.</p> <p>Noise impacts should address both the construction and operation stages of the Scheme, as has been done in the AES as amended. This information needs to be supplemented with additional data from Local Records and the existing baseline. The additional and existing data will be re-summarised in terms of what bird species are present, what the impacts are likely to be and what mitigation is proposed. Whilst NE reserve their position until they review the final submission, NE expressed agreement to this approach.</p> <p>MA to confirm which Biodiversity officer should be contacted with respect to Combe Haven SSSI.</p>	<b>MM</b> <b>MA</b>	<b>ASAP</b>

## Notes of Meeting



Item	Text	Action	Target Date
	<p><b>5.2.2 Visual impact -</b></p> <p>NM raised the point that further information on visual and noise impacts and the proposed mitigation is contained in the original ES, the Design and Access Statement (DAS) and Addendum Design and Access Statement (ADAS).</p> <p>GH also confirms that many of the issues being discussed today are detailed elsewhere in the ES. Satisfactory cross reference to these locations will be made in the AES, such as to Noise contour mapping contained in the ES.</p> <p>MA requested site of the CEMP prior to submission of the AES with respect to mitigation and working practices for noise impacts on birds within Combe Haven SSSI. GH confirmed that the CEMP will be developed by contractor as and when the successful contractor is appointed. An outline CEMP is also included in the ES for review. LH confirmed that best practice in relation to construction noise control will be included within the AES. Whilst NE reserve their position until they review the final submission, NE expressed agreement to this approach.</p>	<b>MM</b>	
	<p><b>5.2.3 Run-off –</b></p> <p>Chapter 9 of the ES addresses salt run-off from de-icing salts. It states that due to high dilution capacities and low concentrations, the impact from salt run-off is not thought to be significant. However, there is likely to be a residual impact which cannot be avoided due to safety requirements for applications of salt on roads. Standard winter applications are adopted by the Local Highways Authority, and additional detail on the local application will be added to the AES. HC to contact relevant ESCC Area Manager for this information.</p> <p>LB suggested that a quantified amount of salt entering water environments at peak times should be included in the AES. However, LB is not aware of any methodology to do this at the moment. It was agreed that recommendations for how to assess and mitigate this should be sought from the Environment Agency (EA).</p>	<b>HC</b>  <b>MM/ EA</b>	<b>ASAP</b>
	<p><b>5.2.4 Mitigation proposals –</b></p> <p>GH states that all mitigation has been predicated on discussions with NE and EA where a 2:1 strategy was agreed. Please refer to meeting summary notes contained in Appendix I.3 to the AES.</p> <p>LB requested a brief verbal summary of the mitigation proposed for the Scheme.</p> <p>NM summarised the Environmental Design contained in the DAS and the ADAS which details habitat loss, habitat severance and replacement habitats. The Schedule of Wildlife Areas contained in the ADAS details the extent of habitat loss and habitat replacement, and clearly demonstrates that the Scheme will meet (and exceed in certain incidences) its 2:1 requirements.</p> <p>LB noted that NE were now requesting recommended replacement habitat for direct loss of Ancient Woodland at a ratio of 10:1. LB notes that there will be no direct loss of ancient woodland habitat in this case (except the small area of Marline</p>		

## Notes of Meeting



Item	Text	Action	Target Date
	<p>Valley SSSI for which the bridge passes over).</p> <p>NM confirmed that all 2:1 mitigation was included within the proposed CPO for the Scheme to ensure deliverability.</p> <p>LB requested confirmation that aquatic habitat creation is deliverable and sustainable. LB suggested a basic water budget is produced for the site.</p> <p>NM confirmed that groundwater levels within Powdermill Valley are suitable for the development of wetland habitats at these sites.</p> <p>GH states that Faber Maunsell have developed the water quality and drainage assessment, and additional information can be added to the AES to support the creation of the replacement wetland habitats. LH to provide additional information in the AES with regards to wetland creation habitats. Whilst NE reserve their position until they review the final submission, NE expressed agreement to this approach.</p>	MM/FM MM	
	<p><b>5.3 Statements made by the applicant in sections 12.4.9, 12.4.10 and 12.4.12 in the ES expressing uncertainty over the feasibility of the proposed mitigation –</b></p> <p>GH confirmed that the ES highlighted an initial concern regarding mitigation proposals. These concerns have subsequently been resolved in the revised Environmental Design proposals.</p> <p>Additional information which is provided in the DAS and ADAS for funding of long-term management (through ring-fenced and additional monies) will be adequately summarised and cross referenced in the AES so that there is no uncertainty over the long-term feasibility of the proposed mitigation.</p>	MM	
	<p><b>5.4 Protected Species:</b></p> <p><b>5.4.1 Dormouse -</b></p> <p>NE are satisfied with the Dormouse mitigation and the additional plans that have been provided through the AD&amp;S. MA states her interest to see the results from such mitigation and requests follow up reports within the 7 year aftercare and monitoring period.</p> <p>GH states that this could be written into the contract documents for the Scheme and that NE would be kept informed on an annual basis.</p> <p><b>5.4.2 GCN –</b></p> <p>NE are satisfied with the level of information and mitigation provided.</p> <p><b>5.4.3 Reptiles –</b></p> <p>Surveys to identify suitable receptor sites are ongoing. NE require this information. NE requested details of proposed receptor sites and their suitability. LH to provide outline information within the AES and, if unavailable prior to the publication of the AES this information will be provided within a survey and mitigation update</p>	MM	

## Notes of Meeting



Item	Text	Action	Target Date
	<p>report at the end of the first week in September 2008.</p> <p><b>5.4.4 Bats –</b></p> <p>NE require information on ongoing surveys. LH to supply this information from EPR within the survey and mitigation update report.</p> <p>It is suggested that the Kennels area of concern is not a suitable roost site. However, LH will confirm this following discussions with EPR.</p> <p>Suitable mitigation for roost must also be included within the AES. LH to discuss with NM and EPR.</p>	<b>MM/EPR</b>	
<b>6.0 Any other business</b>	<p><b>6.1 Reporting –</b></p> <p>The AES will confirm a commitment to provide a survey and mitigation update report to NE by the end of the 1<sup>st</sup> week of September for their review prior to Planning Committee in October. This report will be for all ongoing survey work. Mitigation will also be discussed in this report. Monthly reports are currently being provided by EPR and will be added as appendices to this document.</p>	<b>MM/ EPR</b>	<b>September 2008</b>

## **Appendix B Schedule of Additional Comments: Nature Conservation**

### Schedule of Additional Comments: Nature Conservation (Environment Agency)

Nature Conservation Chapter Section	Comment	Initial Response <sup>1</sup>	Additional Actions/ Addressed – Included within the Nature Conservation Chapter <sup>2</sup>
12.5.25 to 12.5.30	<p>Inadequate consideration of, and mitigation and compensation for, ecological impacts.</p> <p>The Environmental Statement (ES) concludes that the overall impact of the scheme on nature conservation and biodiversity interest would be 'slight adverse and therefore not significant'. However, the ES identifies several significant deficiencies in the identification and mitigation of impacts. It recognises that the route will result in the loss and disruption of ecologically valuable and UK Biodiversity Action Plan habitat including floodplain grassland and fen, ditches and streams, hedgerows with wet ditches, ancient woodland associated with ghylls, plus their various associated wildlife species. We do not consider that adequate mitigation has been proposed.</p>	<p>The extent of the mitigation proposed has been discussed through consultation meetings with NE and EN and CA before them. They jointly set the standard with EA and County Ecologist. There may be a misunderstanding in that all the extent of the planning application area will be acquired as a part of the Scheme to meet the standards which they help to set.</p> <p>Reference is made to the Schedule of Wildlife Areas within the Design and Access Statement and amended in the Addendum Design and Access Statement for the extent of habitat loss and replacement as a result of the Scheme and mitigation to address this loss, which is developed through these documents. This Schedule identifies that there will be a biodiversity net gain due to the compulsory purchase of land which will then be managed for improved biodiversity value for BAP habitats.</p>	Addressed as per initial response.
12.5.31 to 12.5.50	<p>Unknown impacts</p> <p>In several areas the impacts are considered to be</p>	<p>Additional information for these "unknown" impacts has been included in the revised draft at EA's request. Impacts of noise have been revisited,</p>	Addressed Statement within the AES to

<sup>1</sup> Initial response prior to the meeting held 22.07.08 between EA, ESCC and MM. Please see Appendix B.1 for records of this meeting.

<sup>2</sup> Additional actions and responses to arise following the meeting held 22.07.08 between NE, ESCC and MM.

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Nature Conservation Chapter Section	Comment	Initial Response <sup>1</sup>	Additional Actions/ Addressed – Included within the Nature Conservation Chapter <sup>2</sup>
and 12.5.52 to 12.5.59  and 12.5.952 to 12.5.107	<p>unknown and therefore not addressed. For example, the scheme identifies that there would be a risk that increased noise and vehicle emissions may have some influence upon habitats. Although noise impacts have been acknowledged, the lack of understanding regarding noise impacts means that they have not been taken into account or mitigated for. It is suggested that there are 'potential impacts from the discharge of road drainage, leachates from construction materials and alteration of air quality and the chemical environment near the road'. There will be significant increases in nitric acid deposition within areas adjacent to the road, including two SSSIs, but there is 'some uncertainty as to the effect of this on habitats and species'. Without being fully understood and investigated, the impacts cannot be mitigated adequately.</p>	<p>particularly with regards to the impacts and mitigation for breeding birds.</p> <p>Methods to address potential impacts from the discharge of road drainage and leachates from construction materials are referenced. A CEMP would be developed so as to manage those elements of construction works that have potential to cause adverse effects on the water environment, and these measures will be agreed with the EA and other statutory consultees. A temporary site drainage system would be developed to implement the appropriate mitigation measures detailed in the CEMP.</p> <p>The impacts from vehicle emissions are detailed. The Air Quality assessment and impact on Designated Sites has been re-assessed following new DMRB guidance (May 07), which was published after the ES. A report titled "Assessment of Air Quality Effects on Designated Sites" (Appendix G.1 of the Addendum to the ES), has been produced. This assessment does not alter the significance of impact as "potentially significant" as detailed in the ES. Further assessment of this significance on the designated sites will be added to the Nature Conservation chapter, based on the site designation information, NVC communities present and from the Lower Plants of Marline Woods survey.</p>	<p>state that where possible, mitigation will be brought forward so that any ecological enhancement commences as early as possible has been included.</p>
12.5.52 to 12.5.59	<p>Though it is stated that impacts of leachate and salt spray are unlikely to have significant impacts on the habitats and species of the SSSIs, it is stated that</p>	<p>The statement 'leaching of salt into watercourses may have a significant impact on riverine species' has been removed from the draft. Additional</p>	<p>Addressed. Statement within the AES to</p>

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Nature Conservation Chapter Section	Comment	Initial Response <sup>1</sup>	Additional Actions/ Addressed – Included within the Nature Conservation Chapter <sup>2</sup>
	'leaching of salt into watercourses may have a significant impact on riverine species.' The addendum states (12.5.27) that the exact levels of salt leachate would be required in order to assess the impact. As a potential impact has been identified, it should be demonstrated that this impact will be avoided in the first instance, with mitigation if any impacts cannot be avoided. This has not yet been done.	information with regards to the drainage mitigation which has the specific aim of ensuring that the significance of impact from salt spray is considered to be minor adverse without mitigation and neutral with mitigation (Section 9.7.15 of the ES) has been included in the revised Nature Conservation chapter.	state that where possible, mitigation will be brought forward so that any ecological enhancement commences as early as possible has been included.  Further information on potential methodologies for modelling salt impacts), and additional guidance for mitigating the long-term accumulation of salts has been included.  Current codes of practice for the application of de-icer salts have been referenced in the AES. Recommendations for minimum applications, without compromising safety, have been made.
12.5.25 to 12.5.30	<p>The scheme does not mitigate adequately for disturbance of habitats and acknowledges that there will be an ongoing effect upon wildlife, particularly that the scheme will 'create noise and visual disturbance arising from vehicles and users of the greenway'.</p> <p>The replacement of lost habitats with a 2:1 ratio, as mitigation, 'assumes that the whole of the borrow pit in the Powdermill Valley would be sufficiently</p>	The extent of the mitigation proposed has been discussed through consultation meetings with NE and EN and CA before them. They jointly set the standard with EA and County Ecologist. There may be a misunderstanding in that all the extent of the planning application area will be acquired as a part of the scheme to meet the standards which they help to set. Reference is made to the Schedule of	Addressed as per initial response.

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Nature Conservation Chapter Section	Comment	Initial Response <sup>1</sup>	Additional Actions/ Addressed – Included within the Nature Conservation Chapter <sup>2</sup>
	<p>shallow to enable wet reedbeds and similar habitats to be created'. Furthermore the ES recognises that there is no reliable information on whether the areas proposed for habitat re-creation would be significantly large to retain significant biodiversity in the long term, and states that 'there is some uncertainty over whether the measures proposed would fully compensate or mitigate the impact on the actual and potential biodiversity of the floodplain'. Thus the actual extent of mitigation and the likely effectiveness of proposed habitat re-creation is unknown. It must be clearly demonstrated that compensatory habitat creation will be on a like-for-like basis, since creation of, for example, open water ponds/lakes cannot be considered as compensation for wet grassland and ditch habitats.</p>	<p>Wildlife Areas within the Design and Access Statement and amended in the Addendum Design and Access Statement for the extent of habitat loss and replacement as a result of the Scheme and mitigation to address this loss, which is developed through these documents. This Schedule identifies that there will be a biodiversity net gain due to the compulsory purchase of land which will then be managed for improved biodiversity value for BAP habitats. Chapter 13, Section 13.5.32 of the Addendum to the ES gives additional information about the resources to be allocated for management measures. The time period to which the commitment would apply is 7 years.</p>	
12.5.108 to 12.5.112	<p>Compensatory habitats for those being lost must not be created on existing ecologically valuable habitats. Furthermore, the feasibility of mitigation options must be demonstrated. According to the ES part of the mitigation strategy may involve working with landowners to improve water levels and habitats in the valley. This is not confirmed and therefore cannot be considered as part of the currently proposed mitigation.</p>	<p>Details of how funding will be secured and the feasibility of the management and monitoring of habitats is included. To secure funding for the management and monitoring of habitats, there are areas within the Scheme which could use some degree of agricultural land resources as a means of meeting the wildlife management requirements. It would be the intention of the Highway Authority to retain ownership of all of this land and charge a rent for its agricultural use. This income would then be "ring fenced" for wildlife and landscape management of those areas which cannot be managed through agricultural uses. It would be the Highway Authority's intention to maximise income from land or property in its ownership, where this is compatible with the objectives of the Scheme or</p>	Addressed as per initial response.

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Nature Conservation Chapter Section	Comment	Initial Response <sup>1</sup>	Additional Actions/ Addressed – Included within the Nature Conservation Chapter <sup>2</sup>
		<p>mitigation measures.</p> <p>The statement “According to the ES part of the mitigation strategy may involve working with landowners to improve water levels and habitats in the valley. This is not confirmed and therefore cannot be considered as part of the currently proposed mitigation” is accurate. This mitigation is considered as aspirational mitigation. The Scheme mitigation strategy is not reliant on such mitigation.</p>	
12.5.25 to 12.5.30	<p>The ES confirms that there would be actual and potential indirect impacts on the SSSIs, including impacts from increased noise levels and from visual disturbance, and that ‘the route would sever the SSSI from floodplain grassland and fen’. This has not been adequately addressed. Furthermore the scheme does not take into account the medium-term loss in habitats until newly created habitats are established. The length of ditch re-creation, for example, does not appear to be on a 2 for 1 replacement ratio as stated and is therefore inadequate, and the overall impacts are likely to result in a deterioration of the ecological quality of watercourse habitats, contrary to the requirements of the Water Framework Directive.</p>	<p>Section 12.5.22 to 12.5.26 of the revised text details the medium-term loss in habitats until newly created habitats are established. Additional information has been added, to address indirect impacts. Section 12.5.12 states that: "Indirect impacts from noise at the construction and operational stage in Scheme development are likely to be on breeding birds. Mitigation would include noise fencing and natural screening. The impact significance is not altered from minor adverse, as stated within Chapter 12 Nature Conservation of the ES". Additional information to address the impacts of noise, particularly on wintering birds and with reference to local records will also be included once additional data has been received.</p>	<p>Addressed</p> <p>Additional and existing data has been re-summarised.</p> <p>Best practice in relation to construction noise control has been included.</p>
12.5.16 to 12.5.24	<p>Habitat severance</p> <p>The ES recognises that the value of some habitats in the area will be significantly degraded by severance from other complementary areas. It</p>	<p>The revised Addendum to the ES gives additional assessment to address the issues of habitat fragmentation. Reference to the revised Environmental Design Figures, contained in Appendix J.3 Figures (Additional Habitat Continuity</p>	<p>Addressed as per initial response.</p>

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Nature Conservation Chapter Section	Comment	Initial Response <sup>1</sup>	Additional Actions/ Addressed – Included within the Nature Conservation Chapter <sup>2</sup>
	<p>states that the proposed road will 'create a barrier between habitats, possibly isolating smaller areas of habitat to the extent that they would be unable to support viable populations of some species of biodiversity significance' and 'sever habitat links, particularly the network of hedges, copses and ditches, and specific links for badgers, bats and common dormice'.</p> <p>However, the mitigation strategy focuses on mitigation and compensation of impacts on individual species and habitat types. It fails to address the significance of severance of ecologically valuable and priority UK BAP habitats, causing disruption of ecological networks, and habitat isolation and fragmentation.</p> <p>The scheme will result in severance of both existing and newly created wetlands, and watercourses, from the Combe Haven SSSI and other wetland habitats. This will prevent migration and transfer of species and reduce the suitability of severed areas for wildlife. On this large scale the scheme will alter the ecological function of the whole valley.</p> <p>With the currently proposed road design the impacts of severance can not be unmitigatable.</p>	<p>Plans, 13.23 to 13.23K), has also been made through the text, and additional text to support these Figures has been added. Reference has also been made to the ongoing survey works that will inform protected species licensing and the Ecological Masterplan. This work is being carried out by EPR consultants and is separate to the Planning Application. Surveys are currently being undertaken which will fully ascertain the extent and nature of this mitigation; additional specific species mitigation measures will be incorporated in to a mitigation strategy for the Scheme. A detailed ecological Master Plan is in production. Outline mitigation for protected species would include the measures described in Table 12.1.</p>	
12.5.19 to 12.5.24	<p>The watercourse crossings, which have the potential to lessen the impacts of severance by providing wildlife corridors, are inadequate for a road scheme of this size. The clear span crossings are inadequate in size and the impacts of culverts including loss of bankside habitat and disruption of</p>	<p>The Addendum addresses the issue of severance caused and severance relieved by the watercourse crossings: There are five river crossings proposed within the Combe Haven valley, one over the Combe Haven itself, two over the Powdermill Stream, one over the Watermill Stream and a final</p>	<p>Addressed.                      Statement within the AES to state that where possible, mitigation will be brought forward so that any ecological</p>

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Nature Conservation Chapter Section	Comment	Initial Response <sup>1</sup>	Additional Actions/ Addressed – Included within the Nature Conservation Chapter <sup>2</sup>
	watercourse continuity, have not been addressed. Furthermore the road will restrict the creation of necessary wetland habitats and strengthening of ecological networks in the future.	crossing over the Decoy Stream. The bridges would have set-backs from the watercourse bank tops to the base of the structure of 2m. Therefore there would be a ledge of 2m between the watercourse and the bridge that could be utilised by dispersing animals. Beneath these bridges it is not anticipated that there would be any significant vegetation cover and therefore fragmentation of grazing marsh habitat would occur, with the exception of species carried by the watercourses. However, it would be possible for species of greater mobility to travel beneath these bridges and it is not anticipated that a barrier would be created to the movement of mammals such as badger, otter, water vole and water shrew.	enhancement commences as early as possible has been included.  A set of principles on how to plant and manage a softbank option for the clear span structures has been developed, with an aim of maintaining the biodiversity value along the riparian edge.
12.5.16 to 12.5.24	<p>Species isolation</p> <p>This has not been adequately considered by the ES, even though it states that the road 'may be a barrier to the free movement of wildlife between the land north of the road and the land to the south'. Of particular concern to the Agency, although the ES acknowledges that otters have previously been recorded in the vicinity of the scheme, and that it is possible water voles are still present in the valley, impacts of the scheme on these species have not been fully considered. No specific mitigation measures have been proposed, and specifically the restrictive effects of the proposed road on potential future re-colonisation of the valley by these species, has not been addressed</p>	Species of greater mobility, such as birds and otter and plants with wind dispersed seeds should not be subject to significant levels of fragmentation. Less mobile species such as molluscs may experience fragmentation of populations. However, areas of land isolated to the south and north of the Scheme are considered to be sufficiently large in area to maintain viable populations of these less mobile species.	Addressed, as per initial response. Some additional text has been included.
12.5.25 to	Failure to address requirements of PPS9 & other planning policy.	The requirements of PPS1 and PPS9 have been developed and reported through the Design and	Addressed as per initial

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Nature Conservation Chapter Section	Comment	Initial Response <sup>1</sup>	Additional Actions/ Addressed – Included within the Nature Conservation Chapter <sup>2</sup>
12.5.30	<p>This is a large scale development and ecological enhancements must be an intrinsic part of the plans. This is in keeping with PPS1 'Delivering sustainable development', PPS9 'Biodiversity and Geological Conservation' and the South East Plan. Policy NRM4 of the South East Plan seeks to avoid a net loss of biodiversity and to actively pursue opportunities to achieve a net gain of biodiversity across the region. PPS1 states that planning authorities should seek to enhance the environment as part of development proposals. PPS9 describes how planning decisions should maintain, enhance, restore, and add to biodiversity interests, and recognises that development proposals provide opportunities for including beneficial biodiversity features as part of good design.</p> <p>Furthermore, PPS9 recognises the need to protect, strengthen and integrate networks of natural habitats within development. Fragmentation and isolation of habitats should be avoided.</p> <p>The proposal does not provide adequate mitigation and compensation for ecological impacts and it fails to address the planning requirement for provision of ecological enhancements above and beyond that mitigation and compensation.</p>	<p>Access Statement and the Design and Access Statement Addendum. The requirements are thus made through the Scheme design and the extent of the mitigation proposed, such as the 2:1 habitat replacement that has been developed through consultation with EA and NE and extent of habitat management proposed. Additional details on the management and provision of BAP habitats has also been added. This will detail the approach to increasing BAP habitats, land management and sensitive planting.</p>	<p>response.</p>

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 Addendum to the ES  
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Nature Conservation Chapter Section	Comment	Initial Response <sup>1</sup>	Additional Actions/ Addressed – Included within the Nature Conservation Chapter <sup>2</sup>
	<p>Overall the current submission does not address our objections to the scheme. These objections may be overcome given some careful consideration to the road scheme design and the specific mitigation and enhancement measures that are proposed.</p> <p>This should include:-</p> <ul style="list-style-type: none"> <li>• Consideration and improvement to the design of the clear span bridges to provide a greater width on either side of the watercourse. This in itself might help to minimise the requirements of mitigation and enhancement for the watercourses;</li> <li>• Studies to assess and prove the mitigation options are feasible and workable; &amp;</li> <li>• Consideration of further mitigation and enhancement options (these may already be under discussion).</li> </ul>	<p>The issue of habitat severance was the subject of a number of discussions with the SEBs during the scheme development stage, both through the SEBs liaison group and specific meetings for the purpose. Agreement was reached between the design team, EA, NE (previously EN) and the County Ecologist about the appropriate design for the river crossings. It was agreed that free span structures should be used in preference to culverts, in order to strike a reasonable balance between minimising landscape effects and impact upon wildlife. Agreement was also reached over both vertical and horizontal clearance for wildlife and water movements through the structures. It was agreed that a 2m wide strip of land would be allowed on both sides of the water courses, beneath the bridges between the top edge of the watercourse bank and the bridge structure. One of the drivers for this measure was the need to retain options for water voles to re-colonise the valley from the north and it was accepted that free span structures built to this standard would present no obstruction to the passage of such creatures. Throughout these deliberations the size of the road Scheme has remained constant.</p> <p>Works to inform the protected species licensing and Ecological Masterplan are ongoing. Results from these will further inform mitigation and further demonstrate the feasibility of mitigation options.</p>	<p>Addressed as per initial response and additional actions. In addition, outstanding issues relating to water as discussed in the meeting of 22.07.08 to be addressed in a stand alone document to be submitted alongside the AES.</p>

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 Addendum to the ES  
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<b>Nature Conservation Chapter Section</b>	<b>Comment</b>	<b>Initial Response<sup>1</sup></b>	<b>Additional Actions/ Addressed – Included within the Nature Conservation Chapter<sup>2</sup></b>
	<p>Flood Risk</p> <p>Within section 9.2.2 of the Addendum to the Environmental Statement it is noted that reference is made to a revised Flood Risk Assessment. Unfortunately the Agency has yet to be consulted on this revised document and as such we are unable to comment on the flood risk or drainage at this time.</p>	FRA issued to EA: 02.07.08	Objection on the grounds of Flood Risk has been removed.

### Schedule of Additional Comments: Nature Conservation (Natural England)

Nature Conservation Chapter Section	Comment	Initial Response <sup>1</sup>	Additional Actions/ Addressed – Included within the Nature Conservation Chapter <sup>2</sup>
	<b>Marline Valley Woods SSSI:</b>		
12.5.113 to 12.5.121	<p>Shading</p> <p>Natural England consider that the effect of the bridge over the southern tip of Marline Valley Woods SSSI is of sufficient impact to be considered land take as the habitat below the bridge will be permanently shaded and significantly altered. We note that shade tolerant planting will be used but this is considered to be of limited use for linking habitat and is unlikely to enhance the interest features of the site as these are due to its microclimate.</p> <p>We do not consider that the effects of shading on wider areas of Marline Valley Woods have been fully assessed. We welcome the lichen survey in Appendix I.4 of the addendum but this does not address the impacts of shading as no contour maps have been supplied with estimated areas of shading, what the potential effects are likely to be and how this will be mitigated.</p> <p>Natural England cannot find details regarding the mitigation for the loss of woodland within the SSSI. We would generally expect mitigation to include woodland planting adjacent to the designated site.</p>	<p>The area of concern, where the proposed road will pass over the London to Hastings railway line, is the tip of Marline Woods SSSI. This area is recorded as being NVC community W24, which is described as Bramble – Yorkshire Fog underscrub. Species of this vegetation community are relatively resilient to shade. The height of the bridge will also mean that the effect of oblique shading on the retained areas of the SSSI adjacent to the bridge will be minimal. Planting will include shade tolerant species which is in keeping with NVC W24.</p>	<p>Addressed.</p> <p>Additional field survey carried out by MM to identify plant communities present at Marline Valley Woods SSSI. Additional text added in sections 12.5.113 to 12.5.121.</p> <p>Figure 12.2 in Appendix I.2 has been produced, to illustrate the bridge with extent of shading in relation to Marline Valley Woods SSSI and the plant communities present.</p>

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<sup>1</sup> Initial response prior to the meeting held 22.07.08 between NE, ESCC and MM. Please see Appendix B.1 for records of this meeting.

<sup>2</sup> Additional actions and responses to arise following the meeting held 22.07.08 between NE, ESCC and MM.

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Nature Conservation Chapter Section	Comment	Initial Response <sup>1</sup>	Additional Actions/ Addressed – Included within the Nature Conservation Chapter <sup>2</sup>
12.5.52 to 12.5.54	<p>Run off</p> <p>There is likely to be a significant increase in run off from the existing Queensway road onto Marline Valley Woods due to the expected increase in traffic feeding through from the new link road. Natural England would expect the existing drainage measures to be upgraded or an assurance that the existing measures have sufficient capacity to deal with the increased levels of pollution. We would recommend that this is made a condition of planning.</p>	<p>There will not be significant increases in runoff from the existing Queensway road onto Marline Valley Woods as a result of the scheme; drainage will not be altered for this road. Issues in relation to potential additional pollution contained in runoff have not been modelled as the drainage system has not been checked for capacity or for the suitability of the pollution control measures. This query is in addition the original Regulation 19 issues raised in Natural England's letter dated 31<sup>st</sup> July 2007.</p> <p>Additional detail for drainage mitigation and adequacy has however been added to the addendum. In addition, this information is present within Chapter 9 of the ES. The drainage design has been developed to EA flooding standards.</p>	<p>Outstanding issues relating to runoff and Queensway as discussed in the meeting of 22.07.08 to be addressed in a stand alone document to be submitted alongside the AES. Faber Maunsell will review the Spillage Risk Assessment (SRA) and surface water runoff pollution for Queensway using existing traffic data for this road.</p>

Bexhill to Hastings Link road

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Nature Conservation Chapter Section	Comment	Initial Response <sup>1</sup>	Additional Actions/ Addressed – Included within the Nature Conservation Chapter <sup>2</sup>
12.5.31 to 12.5.50	<p>Air Quality</p> <p>Section 12.5.32 of the addendum states that the area to be affected by the significant increase in NOx is marginal. Natural England would disagree with this; the areas to be affected are on the margins of Marline Valley Woods but are not marginal in terms of importance. This area includes neutral meadow which is mentioned on the SSSI citation and is particularly vulnerable to increased deposition.</p> <p>The nature of the science of air quality is such that there is uncertainty in the value of the critical load so a range is given rather than a value. Natural England would normally expect exceedence when the lower range is exceeded rather than the upper range as has been used in this instance. Page 11 of Appendix G of the Addendum show that the critical load is predicted to be 3.3% for Combe Haven and 5.4% for Marline Valley Woods. As 1% or more of exceedence is considered to be significant, this is a significant issue that has not been adequately addressed.</p>	<p>The Air Quality assessment and impact on Designated Sites has been re-assessed following NE and EA requests, and new DMRB guidance (May 07), which was published after the ES. A report titled "Assessment of Air Quality Effects on Designated Sites" (Appendix G.1 of the Addendum to the ES), has been produced. This assessment does not alter the significance of impact as "potentially significant" as detailed in the ES. Further assessment of this significance on the designated sites has been added to the Nature Conservation chapter. The threshold critical load that has been used in the Air Quality Assessment is the upper limit. If the precautionary principle is applied and the lower limits are used, then the exceedences remain the same for the same locations, but the % that the critical load is being exceeded by is greater, both with the Scheme and without the Scheme. The lower critical load is used within the Ecology assessment. If the "1%" significance threshold is applied (as required for EA IPPC Environmental Assessment for Designated Sites, but not for road schemes; there are no significance thresholds within the DMRB), then the likely impacts at the locations of Marline Woods and</p>	<p>Addressed.</p> <p>Lower critical load thresholds have been applied; assessment of the impact of this change on the communities present at the locations where an exceedence has been identified.</p>

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Nature Conservation Chapter Section	Comment	Initial Response <sup>1</sup>	Additional Actions/ Addressed – Included within the Nature Conservation Chapter <sup>2</sup>
		Combe Haven SSSI need to be assessed, with additional detail on the likely impact as a result of this % change at these locations. This work is currently being undertaken, based on the site designation information, NVC communities present and from the Lower Plants of Marline Woods survey.	
	<p><b>Coombe Haven SSSI:</b></p> <p>Noise and visual effects</p> <p>Natural England can find no evidence that the impact of noise and visual disturbance to birds on the SSSI has been addressed. The addendum acknowledges that noise disturbance is likely to result in displacement but the northern edge of the SSSI is currently subject to less</p>	<p>The impact of noise on bird populations has been addressed for both the construction and operation stage of the scheme in the revised addendum. To date, accurate ornithological surveys have been completed along the route of the</p>	<p>Addressed.</p> <p>Additional and existing data has been re-summarised.</p> <p>Best practice in relation to construction noise control has been included.</p>

Bexhill to Hastings Link road

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Nature Conservation Chapter Section	Comment	Initial Response <sup>1</sup>	Additional Actions/ Addressed – Included within the Nature Conservation Chapter <sup>2</sup>
12.5.92 to 12.5.107	<p>ongoing disturbance and may be seen as a refuge against the more disturbed southern side of the SSSI. Therefore noise and visual disturbance within the northern part of the site is significant</p> <p>.</p> <p>Chapter 11 of the ES assesses the impacts on noise on humans but the details appear irrelevant to the SSSI. The mitigation proposed for noise during the constructional stage is for works to take place outside of the bird breeding season but this does not mitigate for the impact on wintering birds within the SSSI. Natural England requires that specific mitigation is proposed for both construction and operational impacts on the SSSI.</p>	<p>proposed Scheme (2006 and 2007 survey seasons). These surveys have informed mitigation. In addition, bird surveys are currently being undertaken for the 2008 season. Breeding bird surveys were undertaken on the 17<sup>th</sup> April 2008 and 8th May 2008 by an experienced ornithologist. The purpose of the survey was to detect and identify all breeding birds within 100m of the Scheme footprint.</p> <p>The preliminary findings (May 2008) suggest that the study area contains common and widespread breeding birds indicative of open countryside and urban environments. In addition, a further two surveys are planned for June 2008, with the objective of recording all late migrant species. These surveys will include a single evening survey to record crepuscular and nocturnal birds.</p> <p>A phased construction programme that includes specific working restrictions will be required in order to avoid short-term displacement impacts to over-wintering birds identified within the Coombe Haven SSSI is referenced (as identified in paragraph 12.3.130 of the ES).</p>	

Bexhill to Hastings Link road

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Nature Conservation Chapter Section	Comment	Initial Response <sup>1</sup>	Additional Actions/ Addressed – Included within the Nature Conservation Chapter <sup>2</sup>
12.5.52 to 12.5.59 and Water Quality Chapter	<p>Run off</p> <p>Given the significance of the downstream aquatic and wetland biology and sensitivity, particularly dragonflies; Natural England would expect the applicant to demonstrate that water quality will be maintained in terms of chemistry and lack of pollutants. We can find no evidence to suggest that there has been an attempt to model or predict water quality or monitoring of existing water quality despite the number of watercourses the road will pass directly over which flow into the SSSI.</p> <p>The leaching of salt into watercourses still remains a concern as section 12.5.43 states that “the high dilution capacity and treatment of flows provided by the proposed drainage mitigation (Section 9.5 of the ES)...”. We are not aware of any drainage mitigation that would remove salt from solution in order to mitigate for this.</p> <p>There is no confirmation as to the placing and frequency of sediment traps, spillage tanks and petrol interceptors and the location of the detention ponds (this relates to both SSSI sites).</p>	<p>The Water Framework Directive identifies Combe Haven, Watermill Stream and Powdermill Stream as at High Risk (Highly Modified Water Bodies). This been included in the ES in Chapter 9 of the ES. In addition, Chapter 9 of the ES and ES Addendum assesses Water Quality and Drainage impacts as a result of the Scheme.</p> <p>Additional information regarding the leaching of salt into watercourses is to be added following consultation with Drainage specialists and Natural England.</p> <p>Precise locations of the placing and frequency of sediment traps, spillage tanks and petrol interceptors and the location of the detention ponds is shown on the Preliminary Drainage Design Figures. This query is in addition the original Regulation 19 issues raised in Natural England’s letter dated 31<sup>st</sup> July 2007.</p>	<p>Addressed.</p> <p>Statement within the AES to state that where possible, mitigation will be brought forward so that any ecological enhancement commences as early as possible has been included.</p> <p>Further information on potential methodologies for modelling salt impacts), and additional guidance for mitigating the long-term accumulation of salts has been included.</p> <p>Current codes of practice for the application of de-icer salts have been referenced in the AES. Recommendations for minimum applications, without compromising safety, have been made.</p>

Bexhill to Hastings Link road

Addendum to the ES

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Nature Conservation Chapter Section	Comment	Initial Response <sup>1</sup>	Additional Actions/ Addressed – Included within the Nature Conservation Chapter <sup>2</sup>
12.5.108 to 12.5.112	<p>Location, nature and feasibility of mitigation proposals.</p> <p>In particular, Natural England has previously raised the issue of securing land for mitigation. This was also included in the minutes of the meeting dated 12 June 2006 with some potential actions to address this. The original ES raised queries as enhancement works will require the co-operation of a number of landowners but no further information has been provided as to the feasibility of this.</p>	<p>This has been addressed in the revised Nature Conservation chapter, to provide a strategy for securing funding for management and monitoring of habitats following NE's concerns: To secure funding for the management and monitoring of habitats, there are areas within the Scheme which could use some degree of agricultural land resources as a means of meeting the wildlife management requirements. It would be the intention of the Highway Authority to retain ownership of all of this land and charge a rent for its agricultural use. This income would then be "ring fenced" for wildlife and landscape management of those areas which cannot be managed through agricultural uses. It would be the Highway Authority's intention to maximise income from land or property in its ownership, where this is compatible with the objectives of the Scheme or mitigation measures.</p>	<p>Addressed as per initial response.</p>
	<p>Several of the points raised in our previous letter dated 31 July 2007 have not yet been addressed. These points referred to statements made by the applicant in sections 12.4.9, 12.4.10 and 12.4.12 expressing uncertainty over the feasibility of the proposed mitigation as follows:</p> <ul style="list-style-type: none"> <li>• Whether the areas would be sufficiently large enough to retain significant biodiversity;</li> </ul>	<p>For the fragmentations of habitats, we refer to the revised Environmental Design Figures, contained in Appendix J.3 Figures (Additional Habitat Continuity Plans, 13.23 to 13.23K). Additional text to support these Figures has been added. Reference has also been made to the ongoing</p>	<p>Addressed as per initial response.</p> <p>Outstanding issues relating to the suitability of the Powdermill borrow pit to support the creation of wetland habitats as discussed in the meeting of 22.07.08 to be addressed in a stand alone</p>

Bexhill to Hastings Link road

Addendum to the ES

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Nature Conservation Chapter Section	Comment	Initial Response <sup>1</sup>	Additional Actions/ Addressed – Included within the Nature Conservation Chapter <sup>2</sup>
	<ul style="list-style-type: none"> <li>• Whether the whole of the borrow pit in the Powdermill Valley is sufficiently shallow;</li> <li>• Uncertainty over whether the measures proposed would fully compensate or mitigate the impact on the actual and potential biodiversity of the floodplain.</li> </ul>	<p>survey works that will inform protected species licensing and the Ecological Masterplan. This work is being carried out by EPR consultants and is separate to the Planning Application. Surveys are currently being undertaken which will fully ascertain the extent and nature of this mitigation; additional specific species mitigation measures will be incorporated in to a mitigation strategy for the Scheme. A detailed ecological Master Plan is in production. Outline mitigation for protected species would include the measures described in Table 12.1.</p>	<p>document to be submitted alongside the AES.</p>
12.5.72 to 12.5.82	<p>Dormice</p> <p>As discussed in previous meetings, our concerns regarding dormice relate specifically to the potential for small populations south of the road that may be isolated from wider habitat by the proposed road scheme in combination with waterways. We are satisfied in principle with the proposals to mitigation for this by providing habitat connectivity alongside waterways and other underpasses and in respect of shrub and tree planting close to these areas as detailed in section 12.5.64 of the addendum. We are however concerned that the finer detail for this has not yet been provided as dormice isolation is a particular issue with this development. We would require assurances that this will be submitted and adhered to.</p>	<p>The Dormouse Strategy has been developed following additional consultation with NE and by employing a Dormouse specialist (Dr. Paul Chanin). For the finer details on dormouse mitigation, we refer to Section 13.5.70 and the Environmental Design, which details dormouse underpass locations, planting and scrub planting extensions. Additional information to inform the Ecological Masterplan is also being collated through the ongoing surveys (which will inform the licensing and Ecological Masterplan), and further details will be available in the addendum.</p>	<p>Addressed.</p> <p>Additional information from ongoing surveys has been added to the AES. In addition, MM will provide a survey and mitigation update report at the end of the first week in September 2008.</p>

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Nature Conservation Chapter Section	Comment	Initial Response <sup>1</sup>	Additional Actions/ Addressed – Included within the Nature Conservation Chapter <sup>2</sup>
		Statement Addendum to be published alongside the Addendum to the ES.	
12.5.83 to 12.5.87	<p>Great Crested Newts</p> <p>We are pleased that the surveys are being updated and are unable to fully comment on the mitigation proposals until the results of these surveys become available.</p>	<p>Additional surveys to inform the licence process and Ecological Masterplan are currently being undertaken. Best Practice methodology has been referenced in the Addendum to the ES.</p>	<p>Addressed.</p> <p>Additional information from ongoing surveys has been added to the AES. In addition, MM will provide a survey and mitigation update report at the end of the first week in September 2008.</p>
12.5.88 to 12.5.91	<p>Reptiles</p> <p>We are satisfied in principle with the reptile translocation methodology as long as this is undertaken in accordance with the HGBI guidelines but are concerned that the location of the reptile receptor sites has still not been finalised. Please note that selection of suitable receptor sites would generally require surveys to ensure that the areas do not already contain a high population of reptiles. We look forward to the results of the updated surveys so we may comment further.</p>	<p>Best practice methodology (HGBI) has been referenced and will be adhered to. Surveys to inform licences and the Ecological Masterplan are also ongoing. Additional text with regards to the translocation sites has been added: Selection of receptor sites local to the proposed Scheme have been identified so that animals may colonise the road embankments once complete. Suitable areas under consideration include: the grassland along the disused Crowhurst, Sidley and Bexhill Branch railway line; the</p>	<p>Addressed.</p>

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<b>Nature Conservation Chapter Section</b>	<b>Comment</b>	<b>Initial Response<sup>1</sup></b>	<b>Additional Actions/ Addressed – Included within the Nature Conservation Chapter<sup>2</sup></b>
		All potential receptor would be surveyed to identify existing reptile populations. Receptor sites will be protected during the proposed Scheme construction.	Additional information from ongoing surveys has been added to the AES. In addition, MM will provide a survey and mitigation update report at the end of the first week in September 2008.

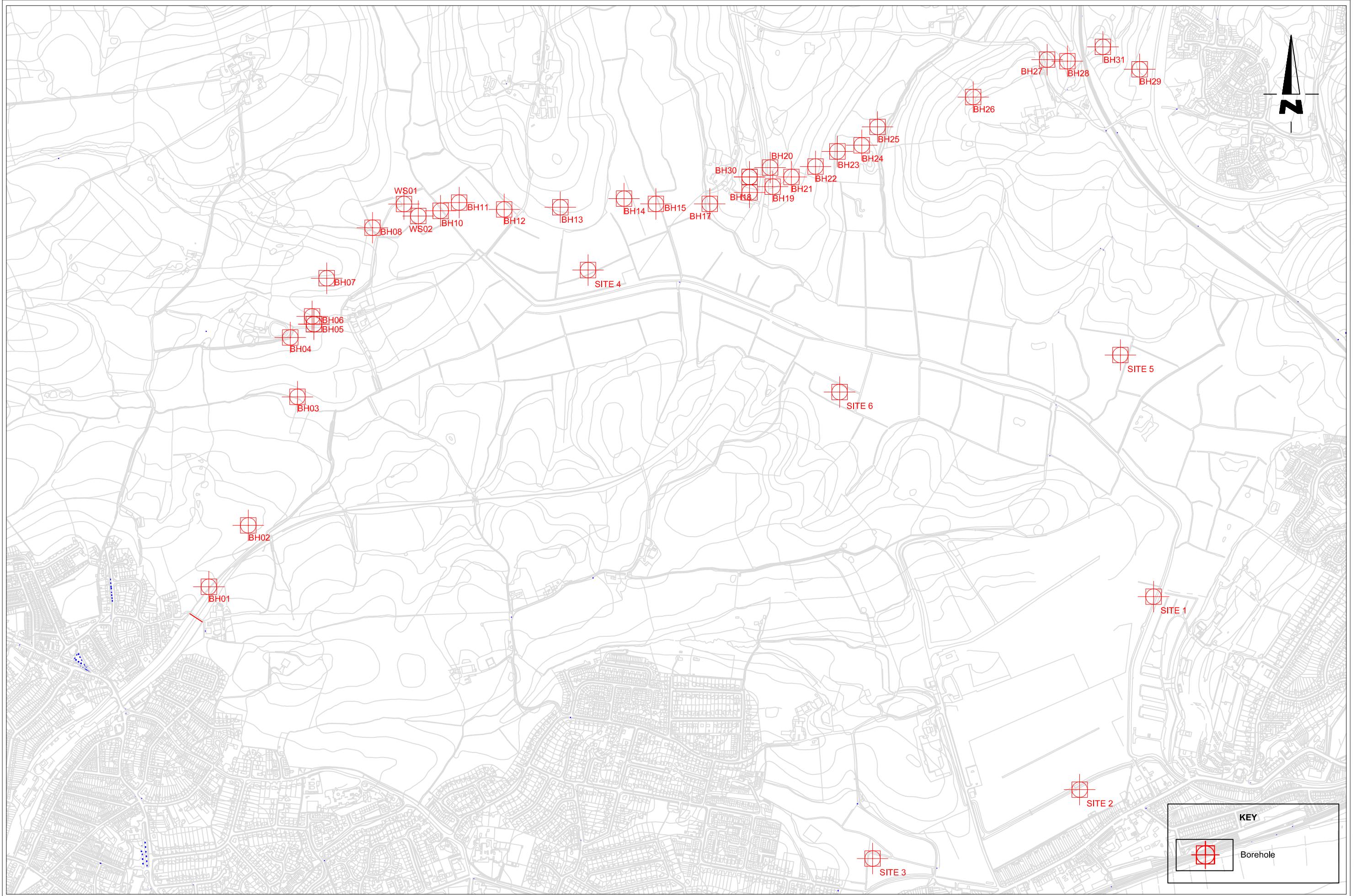
Bexhill to Hastings Link road

Addendum to the ES

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Nature Conservation Chapter Section	Comment	Initial Response <sup>1</sup>	Additional Actions/ Addressed – Included within the Nature Conservation Chapter <sup>2</sup>
12.5.60 to 12.5.71	<p>Bats</p> <p>We note that further survey work is being undertaken during 2008 in order to survey those buildings where access was previously denied. One of the buildings that could not be accessed previously was “The Kennels” but this has not been mentioned in the addendum as one that is due to be surveyed. If an impact is likely on this building then a survey will be required in order to determine any suitable mitigation.</p> <p>We would like to reiterate that Natural England consider that the use of bat boxes to mitigate for a brown long eared bat maternity roost is not acceptable and is not in accordance with the Bat Mitigation guidelines (English Nature 2004). Mitigation for a roost of this type would require like for like replacement roost with good linkages to surrounding foraging habitat.</p> <p>We note that it is proposed to survey those trees with high potential for bats before felling but would like the applicant to be aware that if roosts are found then a licence may be required from Natural England. In order to take account of bats at an early stage, we would recommend that these surveys are undertaken in advance so that time is allowed to obtain any necessary licences</p> <p>We welcome the proposals to provide cavities within some of the bridges, adjacent planting to guide bats to these areas and to provide mature planting adjacent to where commuting lines have been severed.</p>	<p>Further surveys are currently being undertaken to inform the licence process and Ecological Masterplan. Additional detail following these surveys, with reference to the Kennels and Brown Long Eared bats at NE's request will be added once a summary report for surveys has been complete. Potential sites for a replacement roost will then be discussed to mitigate for the potential loss of brown Long Eared Bat roost.</p>	

## **Appendix C Borehole Locations**



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## BEXHILL TO HASTINGS LINK ROAD

Figure : 9.3

Borehole Locations

Scale

NTS

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Sheet

1 of 1

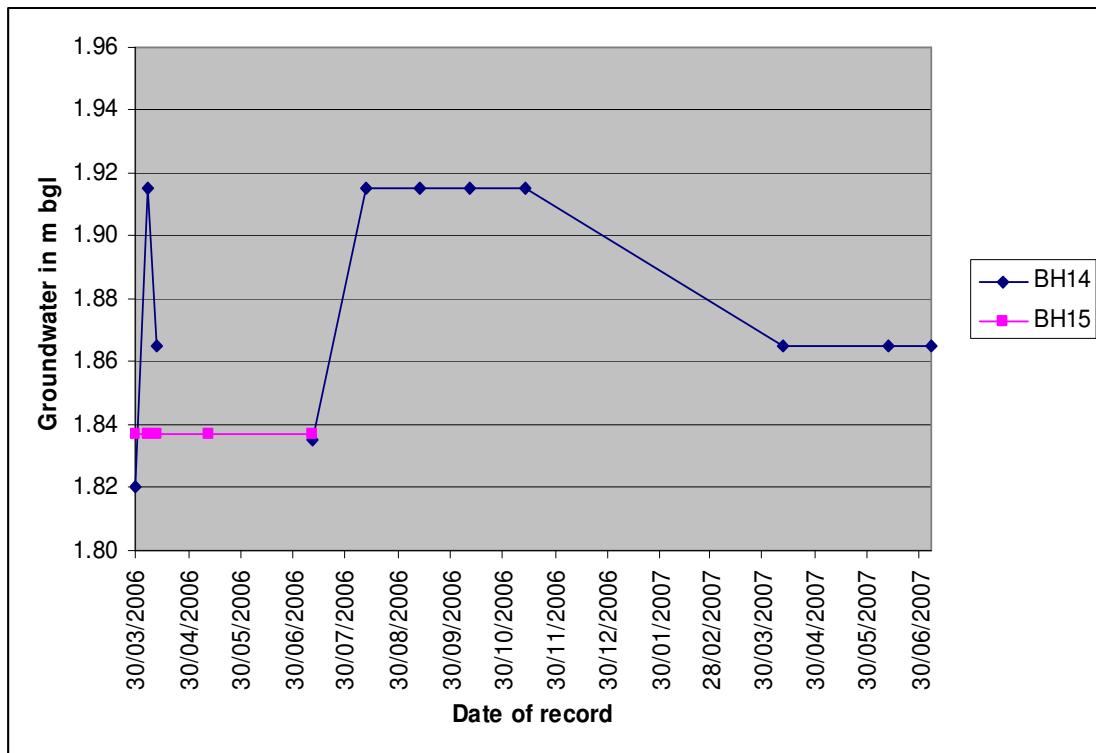
Revision

0 April 2007

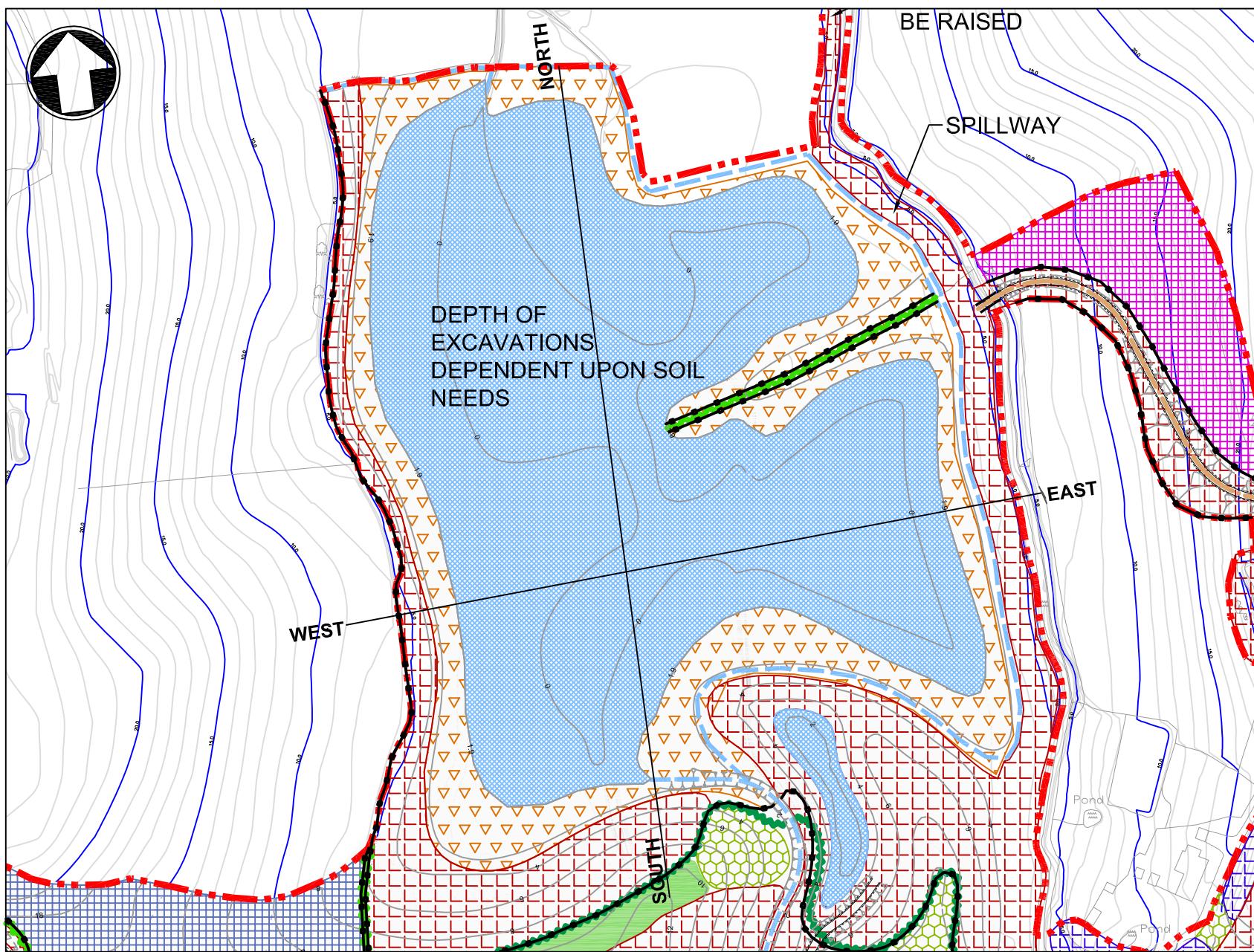
Transport &  
Environment

## **Appendix D Groundwater Monitoring at Powdermill Valley**

**Graph 1: Groundwater Monitoring: Powdermill Valley**



## **Appendix E Powdernill Valley Wetlands: Cross Section**



**KEY**

**Grassland LE1.**

- [Blue dotted pattern] Neutral grassland with scrub LE1.3.1
- [Green dotted pattern] Open grassland (badger foraging) LE1.6.1
- [Purple dotted pattern] Open grassland (improved) LE1.6.2
- [Blue grid pattern] Arable LE1.7

**Woodlands LE2.**

- [Green hexagonal pattern] New woodland and copses LE2.1
- [Blue grid pattern] Existing woodland to be managed LE2.1.1
- [Green solid pattern] New shaws LE2.4.1

**Hedges LE4.**

- [Yellow wavy pattern] Native species hedgerows LE4.3
- [Green wavy pattern] Native hedgerows with trees LE4.4
- [Green dashed pattern] New woodland edge LE4.4.1

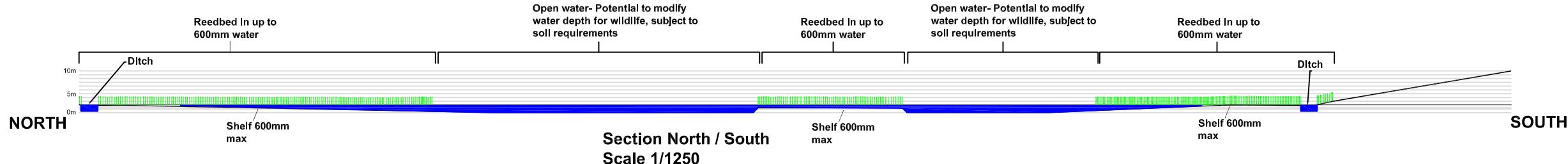
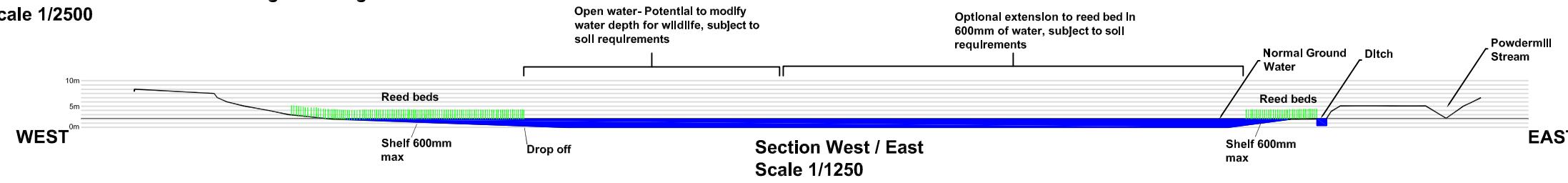
Earthwork Contours

- [Red dashed box] Planning Application Area
- [Orange dashed line] Agricultural Access

**Water Bodies LE6**

- [Blue dotted pattern] Water bodies and associated plants LE6.1
- [Blue dashed line] Banks and ditches LE6.2
- [Orange triangle pattern] Marsh, wet grassland and fen LE6.4.1

**Powdermill Valley Pond**  
Extract from Environmental Design Drawing 208/31/13  
Scale 1/2500



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**BEXHILL TO HASTINGS LINK ROAD**

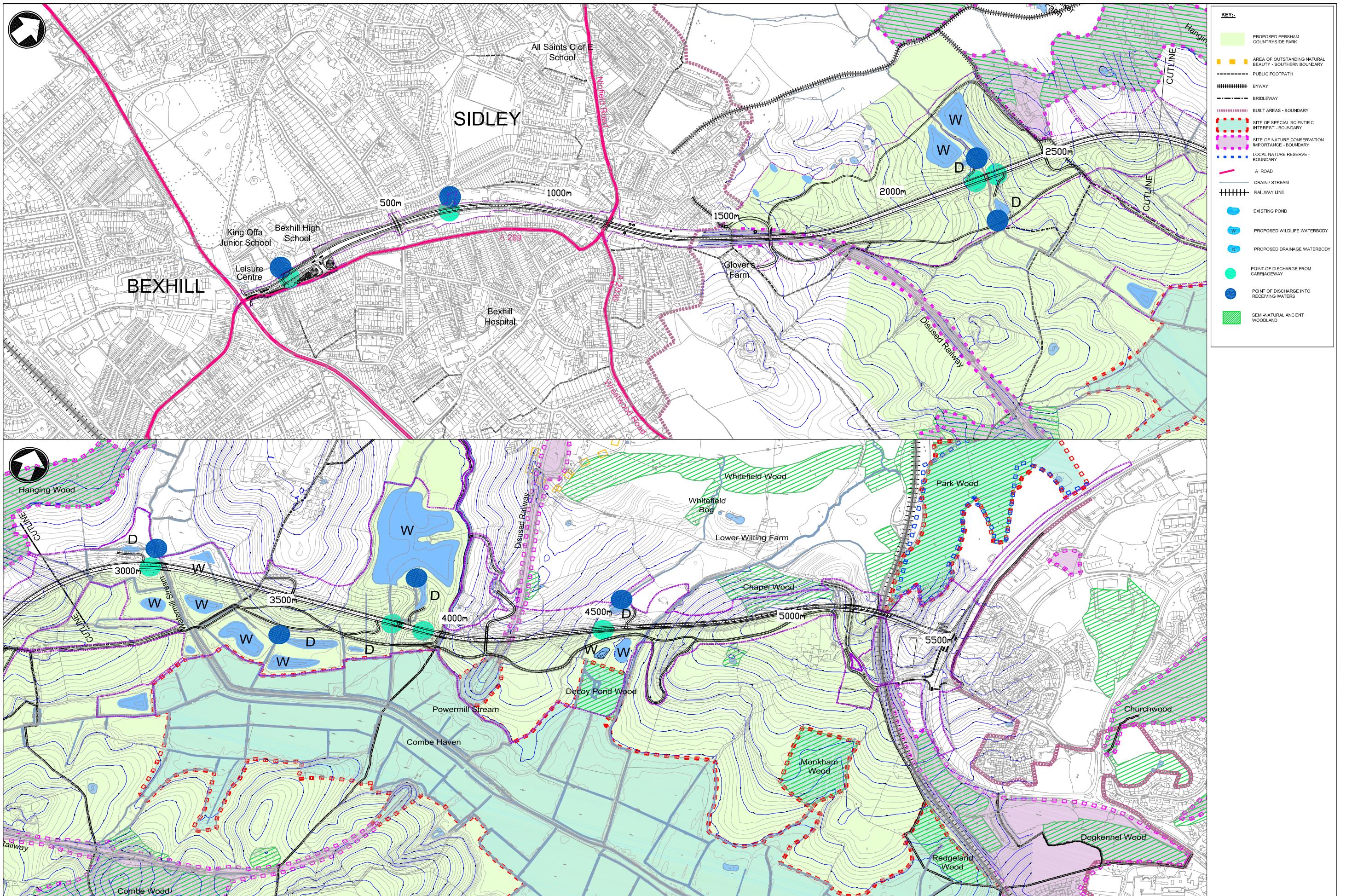
**Figure 2**  
Indicative Cross Sections  
Powdermill Valley Pond

Scale	AS NOTED
Sheet	1 of 1
Revision	August 2008

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**Transport & Environment**

## **Appendix F Drainage outfalls and sensitive environmental sites**



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## BEXHILL TO HASTINGS LINK ROAD

Dwg No: Figure 3

Drainage Outfalls and  
Sensitive Environmental  
Sites

Scale

1:5000

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Sheet

1 of 1

Revision

A

August 2008

Transport &  
Environment