

FINAL VERSION

WILTSHIRE COUNCIL RECORD OF LIKELY SIGNIFICANT EFFECTS ON EUROPEAN SITES

This is a record of the judgement of Wiltshire Council required by Regulation 48 of the Habitats Regulations 1994 as to the “likely significant effect”, if any, of a proposed development on one or more European protected sites.

PART A: BACKGROUND INFORMATION	
Application reference	Stonehenge Visitor Centre, Airmans Corner, Land south east of the junction of the A360 and A344, Salisbury (S/2009/1527)
Purpose of the development	The development is for social and economic reasons. None of the proposals detailed below are directly connected with, or necessary to the nature conservation management of a European Site
National Grid Reference (site centre)	SU 098 429
Brief description of the development	Construction of New Visitor Facilities on land adjacent to the existing A360/A344/B3086 road junction at Airman’s Corner and provision of a Visitor Transit System to provide access to the Stonehenge Monument along the route of the current A344 road; construction of a New Roundabout junction at Airman’s Corner, including realignment of the B3086 to its original (pre-1964) route where it joins the junction; decommissioning and removal of Existing Visitor Facilities, including car parking, near the Stonehenge Monument leaving only a minimal Operations Facility and emergency toilets; and decommissioning and removal of the A344 road between Byway 12 and Stonehenge Bottom. The Project also involves improvements to the roundabout at Longbarrow Crossroads; and restricting motorised recreational vehicles on Byways within the WHS.
European Sites that could be affected by the proposals	<ol style="list-style-type: none"> 1. Salisbury Plain SAC (about 400m to the north at its closest point) 2. Salisbury Plain SPA (about 400m to the north at its closest point) 3. River Avon SAC (River Avon lies about 1km to the east at its closest point, River Till lies about 750m to the west at its closest point)
List of European Site interest features	<ol style="list-style-type: none"> 1. <i>Juniperus communis</i> formations on heaths or calcareous grasslands (Salisbury Plain SAC) 2. Semi-natural dry grasslands and scrub facies: on calcareous substrates (<i>Festuco-Brometalia</i>) (Salisbury Plain SAC) 3. Semi-dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) (important orchid sites) * priority feature (Salisbury Plain SAC) 4. Marsh fritillary butterfly (<i>Eurodryas aurinia</i>) (Salisbury Plain SAC) 5. Stone curlew (<i>Burhinus oediconemus</i>) (Salisbury Plain SPA) 6. Hen harrier (<i>Circus cyaneus</i>) (Salisbury Plain SPA) 7. Quail (<i>Coturnix coturnix</i>) (Salisbury Plain SPA) 8. Hobby (<i>Falco subbuteo</i>) (Salisbury Plain SPA) 9. Watercourses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation 10. Atlantic salmon <i>Salmo salar</i> (River Avon SAC)

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	<p>11. Bullhead <i>Cottus gubio</i> (River Avon SAC)</p> <p>12. Brook lamprey <i>Lampetra planeri</i> (River Avon SAC)</p> <p>13. Sea lamprey <i>Petromyzon marinus</i> (River Avon SAC)</p> <p>14. Desmoulin's whorl snail <i>Vertigo moulinsiana</i> (River Avon SAC)</p>
<p>Details of projects and plans which may have in-combination effects</p>	<p><u>South Wilts Core Strategy – Proposed Submission Document July 2009</u></p> <p>This document proposes that 2650 new homes and 17 ha of employment land will be required to meet the needs of the Amesbury Community Area over the next 20 years. The location of the Strategic Allocation (1300 new dwellings) is at Kings Gate to the south of Amesbury while employment land will be provided at Porton Down and Boscombe Down. Sections of the Habitats Regulations Assessment Report (July 2009) which accompanies the core strategy document are relevant here, in particular assessment of:</p> <p>The River Avon SAC and treated waste water discharges</p> <p>The River Avon and water abstraction</p> <p>Recreational disturbance at Salisbury Plain SAC/SPA</p>
	<p><u>Salisbury Super Garrison</u></p> <p>New facilities will be built across Wiltshire over the next few years to cater for personnel being relocated from Germany. The Military Civilian Integration Programme has been set up to positively influence these changes where possible. Amesbury and Bulford are 2 of the 7 communities that are expected to contribute to the new super garrison.</p>

PART B: ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS	
What potential hazards are likely to affect the interest features?	
Juniper	<p>No direct loss of habitat – the site is 400m away from the SAC.</p> <p>Indirect effects from any increase in recreational pressure unlikely to affect juniper</p>
Calcareous grassland including important orchid sites	<p>No direct loss of habitat – the site is 400m away from the SAC</p> <p>Indirect effects from any increase in recreational pressure unlikely to affect juniper</p> <p>Loss of agricultural land is not expected to lead indirectly to changes in the way habitat in SAC/SPA habitat is managed.</p>
Marsh fritillary	<p>No direct loss of habitat - the site is 400m away from the SAC.</p> <p>No indirect changes to habitats that might affect marsh fritillary e.g. loss of food plants, changes in distribution of scrub (see above)</p>
Stone curlew	<p>No direct loss of breeding/foraging habitat.</p> <p>Visual intrusion caused by traffic and people at the new visitor centre, along the downgraded A344 and the emergency toilet block unlikely to be greater than existing disturbance.</p> <p>Light spill from development leading to reduced area for feeding and breeding – the study area does not currently support breeding stone curlew but was assessed in the ES as being of regional importance due to the potential for the area to be used by commuting stone curlew. Inappropriate lighting could lead to impacts of low significance in the long term. Planning conditions for lighting design required.</p>

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Hen harrier	New visitor arrangements would not be expected to create any new impacts for hen harriers compared with the existing situation. No impact on conservation objectives of SPA.
Quail	2 pairs of quail have been recorded breeding within the study area. Low risk of indirect impacts on the SPA. In any case, the ES proposes an Access Visitor Management Strategy and Construction Environment Management Plan which will be able to prevent impacts on this species. Planning conditions required.
Hobby	New visitor arrangements would not be expected to create any new impacts for hobby compared with the existing situation. No impact on conservation objectives of the SPA.
<i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation	<p>An assessment was made of likely significant effects following procedures laid down in "Habitat Regulations Assessment of planning applications that could potentially affect the River Avon Special Area of Conservation (SAC)" (unpublished draft 06/08/09). The following issues have been flagged for further consideration:</p> <p>2. Discharges may affect water quality of surface water or groundwater during the OPERATIONAL phase of the development. Further assurance required on the implications of the ground source heat pump for water quality in the SAC</p> <p>3. Changes in river water quality because development not linked to main sewer or package plant is unacceptable. Foul water will be treated on site by soak away. No information to indicate whether this will have impacts on the water quality of the SAC.</p> <p>5. Water demand of the development is inconsistent with that predicted in spatial plans. Water will be abstracted by dedicated borehole. No information supplied to indicate the volume that will be taken and the effect this will have on groundwater recharge for the River Avon SAC.</p> <p>9. Alterations to groundwater flows (caused for example by deep excavations, piling or water abstraction).</p> <p>11. Adverse impacts during the CONSTRUCTION phase e.g. surface run-off, solid debris falling into river, damage to banks, water abstraction, soil disturbance encouraging the spread of invasive non-native plants. Further assurance required on the ability of the Construction Environment Management Plan to prevent impacts to the SAC during the construction phase.</p>
Atlantic salmon	
Bullhead	
Brook lamprey	
Sea lamprey	
Desmoulin's whorl snail	
Is the potential scale or magnitude of any effect likely to be significant:-	
a) Alone?	Impacts to River Avon SAC are possible alone. Impacts to Salisbury Plain unlikely provided measures put in place to control visitor access, impacts during construction and impacts arising from external lighting.
b) In combination	Impacts to River Avon SAC are possible in combination with the

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with other plans or projects as listed above?	South Wilts Core Strategy In-combination impacts to Salisbury Plain unlikely – mitigation for recreational impacts arising from South Wilts Core Strategy to be provided under policy 23 (Green infrastructure)
Is there a likely significant effect?	Likely significant effect to the River Avon SAC
Name of Officer(s) making the assessment	Louisa Kilgallen, Council Ecologist
Natural England Comment	See Natural England's consultation response dated 24 November 2009 which is consistent with the above assessment. Natural England's letter of 11 January 2010 confirms it has withdrawn its objection following clarification from the applicant and the Environment Agency on issues raised in the previous letter.
Name of Natural England Officer	Stephanie Payne, Conservation and Land Management Adviser, Natural England

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PART C: APPROPRIATE ASSESSMENT MATRIX – RIVER AVON SAC			
Qualifying feature being assessed:			
<p>Conservation objective: To maintain the River Avon System SSSI habitats in favourable condition, with particular reference to relevant specific designated interest features. Favourable condition is defined at this site in terms of the site-specific standards listed in table 3a(i) of Conservation objectives and definitions of favourable condition for designated features of interest (Natural England, 2008).</p> <p>Attributes:</p> <p>Target:</p>			
Predicted impacts	Likely significant effect alone	Likely significant effects in combination	Conclusions
<p>2. Discharges may affect water quality of surface water or groundwater during the OPERATIONAL phase of the development</p>	<p>Facilities on the existing car park and visitor's centre and car park will use existing surface water drainage facilities. Car park for coaches and delivery vehicles will have oil interceptors. Car park and access roads will drain into SUDS where multistage treatment system will provide opportunity for dealing with serious spills. Operation and maintenance system to minimise risk of any failure in the drainage system.</p> <p>Ground source heat pump may be used for the heating/cooling system depending on the results of an initial investigation. Potential for impacts on water quality identified in Environment Agency letter dated 19 November 2009.</p> <p>NLSE</p> <p>For treatment of foul water see below.</p>	<p>No pollution issues identified in combination.</p> <p>NLSE</p>	<p>Surface water drainage strategy to be made a condition of planning and agreed with the Environment Agency and Natural England.</p> <p>Investigation boreholes for the ground source heat pump will require consent from the Environment Agency. Discharge consent will be required for re-injecting ground water and this method of heating/cooling system will not be used unless the applicant can demonstrate to the Environment Agency that the discharge will not lead to deterioration of ground water quality and no significant change in ground / groundwater temperature. Abstraction consent required if abstraction for ground water heat pump needs to be over 20m³/d.</p> <p>Potential for impacts controlled through</p>

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			Environment Agency consent system. No loss of site integrity.
3. Changes in river water quality because development not linked to main sewer or package plant is unacceptable	<p>Foul water will be treated on site by an on-site treatment plant and soak away (designed to Best Available Techniques). The ES confirms that there is hydrological continuity between the proposed discharge and the River Till (component of River Avon SAC). However there would be no phosphate component to the treated effluent discharged from the proposed on-site treatment plant. In addition, only phosphate-free detergents would be used on site.</p> <p>NLSE</p>	<p>Effluent from sewage treatment plants and small point discharges when combined with other sources of phosphate (P) (e.g. agricultural sources), are still contributing a significant threat to site integrity. The SAC presently exceeds the Conservation Objective target of a P level of 0.06mg/l (0.04 for the River Till), although the levels are improving following AMP4 improvements (phosphate stripping plant) to STWs on the river. In order to address this the Environment Agency, Natural England and Wiltshire Council are in the process of developing a River Avon Catchment Phosphates and Flows Action Plan; the implementation of which, it is hoped, will ensure that there is a trend of reduced P concentration supported through developer contributions, and that this would satisfy the requirement of Article 6.1 of the EU Habitats Directive</p> <p>NLSE</p>	<p>As discussed in the Water and Waste Water Strategy (ES Vol 1 10.7.3), the quality of the treated effluent will be regularly monitored for a suite of determinants, including the unlikely presence of phosphate. Effluent would be discharged under consent from the Environment Agency.</p> <p>A scheme for the disposal of waste water to be made a condition of planning and agreed with the Environment Agency.</p> <p>No loss of site integrity.</p>
5. Water demand of the development is inconsistent with that predicted in spatial plans	<p>Water will be abstracted by dedicated borehole limited to less than 20m³ of water per day.</p> <p>There would be no additional demand for water as a result of the proposals. Sections 4.1 and 4.2 of the Water and Waste Water Strategy (Appendix A10.1 of the Environmental Statement) states that the current visitors centre uses in the region of 85,000 litres on a peak day. (200,000 litres including irrigation at the Stones and the over flow car park) The Strategy states the proposed development is expected to use 24,000 litres on a peak day (84,000 litres including irrigation at the Stones). Comparing</p>	<p>The email from the Environment Agency dated 8 January 2010 states that "the site is a considerable distance from the nearest consented abstraction and therefore no derogation or indeed impact should occur. Talking to our groundwater teams, we believe that the level of change would be undetectable by groundwater loggers, should they be placed in these consented boreholes, and would be masked by logger error.</p> <p>In terms of the Avon SAC, as stated above the scale of this abstraction means that any fluctuation on the Till or other designated water course would be undetectable and therefore</p>	<p>Abstraction quantity is too low to require licensing by the Environment Agency and the scale of this abstraction means that any fluctuation on the Till or other designated water course would be undetectable and therefore would not give rise to any alone or in-combination effect on the SAC.</p> <p>However, due to the sensitivity of the River Till, the installation and long term effects of this abstraction would be monitored in liaison with the Environment Agency.</p>

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	<p>the proposed with the existing usage, there will be a saving of 69% on the water consumption (this rises to 81%, taking into account that the non potable requirements are to be met by water recycling and rainwater harvesting). Therefore the proposals would result in a net overall reduction in abstracted volume of water of approximately 116,000 litres on a peak day. It is intended that full use would be made of rainwater from roof areas to augment water supply.</p> <p>There is a risk that it will not be possible to sink a new borehole and potable water will therefore be brought to site by a new pipeline. Conditions therefore required to ensure developer is committed to water efficiency measures.</p> <p>An email from the Environment Agency dated 8 January 2010 states “every effort has been made to make the development as environmentally sensitive as possible from an abstraction viewpoint. All fixtures and fittings are highly water efficient, down to the choice of vacuum toilets over low flush alternatives. Through an analysis of visitor numbers and efficiency of the site, the consultant has identified that any new borehole at the site will be required to provide less than 20M3/d of potable water. This abstraction is therefore outside of the abstraction licence consenting procedure as it is less than the minimum volume which would require licensing, namely over 20M3/d.</p> <p>If one temporarily ignores the fact that this is outside of our control, we believe that in balance, the borehole option is the least environmentally damaging way of supplying</p>	<p>would not give rise to any in-combination concerns.”</p> <p>NLSE</p>	<p>Planning condition to require submission of scheme for water efficiency measures.</p> <p>No loss of site integrity.</p>
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	<p>water to this site"</p> <p>Scale of this abstraction means that any fluctuation on the Till or other designated water course would be undetectable therefore NLSE.</p>		
<p>9. Alterations to groundwater flows (caused for example by deep excavations, piling or water abstraction) EA</p>	<p>The surface water drainage system will use a potential combination of permeable paving below, swales and soakaways to redirect any runoff to the underlying aquifer. Losses due to water harvesting from roofs will be offset by some discharge of treated wastewater to soakaway (i.e.e that which is in excess of requirements for toilet flushing etc). The net effect is likely to be little change to the amount of recharge to the aquifer.</p> <p>NLSE.</p> <p>See above for abstraction of potable water.</p>	<p>NLSE.</p>	<p>No loss of site integrity.</p>
<p>11. Adverse impacts during the CONSTRUCTION phase</p>	<p>In their letter of 19th November 2009, the Environment Agency states that adoption of measures for controlling pollution highlighted in section 10.4.1 of the ES and Apendix 2.2 will ensure appropriate protection of controlled waters.</p> <p>NLSE.</p>	<p>No in-combination effects.</p> <p>NLSE</p>	<p>Construction Environment Management Plan, Ecological Construction Monitoring and Management Plan to be made conditions of planning permission.</p> <p>No loss of site integrity.</p>

PART D: OVERALL CONCLUSION

<p>Vulnerability of European sites</p>	<p>See above assessment, proposal will lead to no loss of River Avon SAC site integrity.</p>
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Existing Condition	The existing condition of the River Avon System SSSI and River Avon SAC is unfavourable, no change (Condition Assessment 2008). However, this proposal will not lead to any further deterioration of the site or any loss of site integrity.
Alternative locations	Locations limited by the need to have facilities within reasonable reach of Stonehenge but not so close as to affect their historical setting.
Conclusions	<p>The conclusion of this assessment is that the construction and operation of the Stonehenge visitors centre at Airman's corner will not adversely affect the integrity of the River Avon SAC either alone or in combination provided that the following measures are required as planning conditions:</p> <ul style="list-style-type: none">• A waste water and surface water drainage strategy to be submitted and agreed with the planning authority before works begin on site.• Scheme for water efficiency measures to be submitted and agreed with the planning authority before works begin on site.• Construction Environment Management Plan (CEMP) and Ecological Monitoring and Management Plan (EMMP) to be submitted to and agreed by the planning authority before works begin on site.• A scheme for the disposal of waste water to be submitted and agreed with the planning authority before works begin on site. <p>In addition, conditions will be required for a visitor access management strategy and a final lighting design in order to protect the Salisbury Plain SAC as discussed in the likely significant effects test above</p>