

RSPB (403), Matter 4/7 Bournemouth and Poole HMA sub-region

**South West Regional Spatial Strategy
Examination in Public**

Matter 4/7

Bournemouth and Poole HMA Sub-Regional Strategy

Written Statement of the RSPB



Executive Summary

1. The RSPB firmly believes that environmental limits, in particular the need to protect the Dorset Heathlands Special Protection Area (the SPA) and Ramsar site and the Dorset Heaths Special Area of Conservation (the SAC) have not been adequately taken into account in the Draft RSS.
2. Specifically, the proposals as drafted would, in our view, adversely affect the integrity of those sites and therefore be in conflict with the Habitats Directive.
3. In general (and subject to minor proposed amendments), we support the text and policy proposed in the Habitats Regulations Assessment (the HRA)¹ which, if adopted, should enable compliance with the Habitats Directive. However, we consider that further work is required to ensure the policy provides the necessary level of confidence that suitable mitigation can and will be provided to meet the strict tests of the Habitats Directive.

In setting out policies and proposals for the HMA sub-region, does the draft RSS adequately deal with the following questions:

d) Have environmental limits arising from matters such as flood risk and the protection of environmental assets been adequately taken into account and in particular do the proposals reflect the need to avoid any impact on the integrity of the important nature conservation areas around the conurbation?

4. As set out in our response to the Draft RSS on Policies SR28, 29, and paragraphs 4.3.12 and 4.3.13, the RSPB considers that both the overall increase in housing development proposed in the Draft RSS for south east Dorset and specific proposals, summarised in the bullet points below, risks damage to nationally and internationally important heathland habitats:
 - 4.1 Area of Search M (Christchurch) is within several kilometres of the Avon Valley SPA and Ramsar site, the New Forest SPA, SAC and Ramsar site and parts of the Dorset Heathlands SPA and Ramsar site and Dorset Heaths SAC, as well as very close to Burton Common SSSI.
 - 4.2 Area of Search N (Corfe Mullen) is within 1 kilometre of parts of the Dorset Heathlands SPA and Ramsar site and Dorset Heaths SAC.
 - 4.3 Area of Search O (Wimborne Minster) is within several kilometres of parts of the Dorset Heathlands SPA and Ramsar site and Dorset Heaths SAC.

¹ LUC (2007) Habitats Regulations Assessment of the Draft Regional Spatial Strategy for the South West. FINAL REPORT. Prepared for the South West Regional Assembly.

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4.4 Area of Search P (Ferndown) is adjacent to Parley Common SSSI, part of the Dorset Heathlands SPA and Ramsar Site and Dorset Heaths SAC.

5. This view is supported by the HRA, at 4.85 (p.50), 4.110 (p.63), and 4.137 (p.70) and appears to be recognised at 4.3.12 of the Draft RSS, which identifies a need for a '*strategic approach to mitigation measures*'. Furthermore, the report *Evidence to support Appropriate Assessment of development plans and projects in south-east Dorset* (Liley et al, 2006)² provides further support for the RSPB's view and furthermore concludes (p.5) that:

'The current levels of visitor pressure on Dorset's heathlands are having an impact on the conservation of the European designated sites ...

We tentatively suggest that visitor levels to the heaths may increase by a total of 13% as a result of new housing ... with potential increases in visitor pressure of up to 30% in some areas. ...

We cautiously suggest that a further 1400ha of access land would be necessary to maintain comparative visitor levels as they are''

6. We provide a summary of the ecological research that supports the conclusion that without appropriate mitigation in the RSS, additional residential developments within 5km of the Dorset Heathland SPA and Ramsar site risks an adverse effect upon those sites, below.

Impacts of residential development on the Annex I³ species for which the SPA is designated

7. Residential development within a 5-km zone around the edge of the SPA and Ramsar site, and the associated effects and activities that result from it, are currently harming the qualifying interests of those designations, to the extent that they are not in favourable conservation status.
8. Appendix 1 (Part A) to this submission provides an objective audit of the most authoritative and relevant research findings arising from the detailed scientific research carried out on the three heathland bird species for which the SPA has been designated. Table 1 in Appendix 1 (Part B) summarises the potential negative impacts of housing developments on

² Liley, D., Clarke, R., Tyldesley, D., Underhill-Day, J. & Lowen, J. (2006). Evidence to support Appropriate Assessment of development plans and projects in south-east Dorset. Unpublished report, Footprint Ecology. Dorset County Council/Footprint Ecology Ltd.

³ Annex I of the EC Directive on the Conservation of Wild Birds 79/409/EEC.

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heathland European sites⁴. Essentially, the effects on the heathland Annex I birds of on-site recreational activity are:

- 8.1 Lower densities of breeding nightjars with higher predation rates to nests closer to paths;
 - 8.2 Lower densities (or an absence) of breeding woodlarks associated with higher levels of disturbance by humans and dogs, and up to a third reduction in overall predicted productivity; and
 - 8.3 Delayed breeding by Dartford warblers leading to an absence of multiple broods, higher failure rates and reduced productivity in some territories associated with higher disturbance levels.
9. In respect of nightjar, the Footprint Ecology Report to the Draft SE Plan EiP Thames Basin Heaths Technical Meetings⁵, which summarises the latest research on both the Thames Basin and Dorset heaths shows that:
- 9.1 There is a negative correlation between nightjar densities on a site and the amount of housing in distance bands up to 5km from the heathland areas of the Dorset heaths;
 - 9.2 Using predictions of visitor pressure, nightjar territories occur at lower densities in areas with high predicted levels of visitor pressure and thus appear to avoid areas of high human disturbance within sites;
 - 9.3 That nightjars show a preference for parts of the heaths away from access points.
10. These results are consistent with earlier research by Liley and Clarke in Dorset, and with detailed species-specific studies relating to nightjar.
11. It is the RSPB's view that, taken as a whole, the ecological evidence demonstrates:
- 11.1 Cumulative effects of recreational disturbance from residential developments located up to 5km from the SPA are having an adverse effect on SPA integrity;
 - 11.2 In terms of cumulative recreational pressure, there is no justification to distinguish between residential developments of different sizes or distances from the SPA (up to 5km); and
 - 11.3 Visitor pressure causes nightjars to avoid suitable SPA areas, and recreational disturbance and associated factors reduces productivity in all three species.

⁴ European sites are defined in Regulation 10 of the Conservation (Natural Habitats, &c) Regulations 1994. In a Dorset context, we refer to SPAs and SACs.

⁵ Liley, D., Clarke, R. T., Mallord, J. W., & Bullock, J. M. (2006) The effect of urban development and human disturbance on the distribution and abundance of nightjars on the Thames Basin and Dorset Heaths. . Unpublished report, Footprint Ecology / Natural England. © Natural England / Footprint Ecology Ltd.

12. In addition, we conclude that the Footprint Ecology findings mean that on distribution alone, nightjars are at an unfavourable conservation status within the SPA as they are not occupying their full potential area of distribution due to recreational disturbance, compounding any problems associated with habitat quality. Clearly, this undermines the site integrity of the SPA as the nightjar population is unable to maintain itself as a viable component of its natural habitat across the whole site, and its natural range (at site level) is being reduced. Consistent with Liley *et al* 2006, the RSPB submits that without mitigation of the additional recreational pressures arising from new residential development, the natural range is likely to be further reduced, thereby further damaging site integrity.

Environmental limits and Habitats Directive compliance

13. In respect of the conservation of European Sites and Ramsar Sites (the Dorset Heathland international sites), the Habitats Directive and Regulations establish a framework for defining environmental limits. A fundamental test of acceptability of the environmental effects of the RSS is compliance with the Habitats Directive. In this context, and that of the ecological research summarised above and at Appendix 1, the decision-making tests of the Directive offer two solutions to the issue of Draft RSS housing provision and its impacts on the Dorset Heathlands international sites:

Solution 1: Secure a scale and distribution of housing at the sub-regional level (with appropriate mitigation as necessary) that avoids an adverse effect on the Dorset Heathland international sites.

In respect of mitigation measures, we consider there will need to be the following basic response aimed at reaching a conclusion of no adverse effect on the Dorset Heathland international sites:

- i. Review, identify and implement appropriate legal and policy mechanisms to secure the level of relevant mitigation measures, both in time and space, to enable the proposed housing requirements to be met;
- ii. If (i) is not possible, then consider the following options in respect of the housing allocation for the sub-region:
 - a. redistribute current housing requirements within the sub-region so that residential development within 5km of relevant Dorset Heathland international sites matches the available mitigation measures; or
 - b. reduce the overall housing requirements for the affected Councils, matched to the available mitigation measures.

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- iii. Review the housing requirements for the region as a whole such that those for the Bournemouth and Poole HMA sub-region match the available mitigation measures.

The aim at this stage is to enable (i) to be achieved. However, as we explain below (paragraphs 20-29 and Recommendations), we consider amendments to the RSS are required to achieve this.

Solution 2: Conclude that an adverse effect of the sub-regional housing allocation and distribution on the Dorset Heathland international sites cannot be avoided and invoke the strict tests of Article 6(4) of the Habitats Directive by demonstrating at the RSS level that there are:

- a. no less damaging alternative solutions to the current sub-regional housing allocation and distribution;
 - b. imperative reasons of overriding public interest that justify the damage; and
 - c. habitat compensation measures that can be secured to offset the damage caused to the Dorset Heathland international sites and to protect the overall coherence of the Natura 2000 network.
14. While some forms of development e.g. major container ports, may be capable of passing these extremely strict tests, the RSPB does not accept that housing development is one of them as invariably there will always be less damaging alternative solutions available.
 15. Notwithstanding this position, the tests in complying with the requirements to secure habitat compensation under Article 6(4) are stringent. It is Government policy that compensation measures:
 - should be provided as close as practicable to the affected Dorset Heathland international sites;
 - must be provided in time to provide fully the ecological functions they are intended to compensate for; and
 - be designated as SPA within a reasonable timescale.
 16. This raises considerable challenges in respect of heathland compensation for damage to the Dorset Heathlands SPA:
 - the spatial distribution of soil with heathland potential means that new habitat is likely to become subject to the same urban pressures as the SPA;

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- ahead of any damage, creation of suitable heathland habitat to provide the full ecological functions could take up to 10-15 years in the case of Dartford warbler; and
 - designation of the compensatory habitat as SPA could extend the area of the 5-km zone.
17. We doubt that it would be possible to secure such compensation measures in compliance with the legal and policy requirements.
 18. Combined with the difficulty in passing the tests on alternative solutions and IROPI, this means that a thorough exploration of the options available under Route 1 should be the starting point.
 19. Before adopting the SW RSS, the Secretary of State will need to be satisfied that its housing allocations for south-east Dorset can be achieved without damaging these international sites. This will require the RSS to set out a clear mitigation policy framework to be implemented at LDF level.

Is the Dorset Interim Planning Framework (IPF) an adequate basis for a long-term RSS mitigation strategy?

20. The RSPB has been involved in developing the Dorset Heaths Interim Planning Framework, which seeks to mitigate for the impacts of housing on Dorset's heathland European and Ramsar sites over a 3-year period to 2009. We support the approach that has been adopted, but we consider that this approach, which was necessarily adopted in haste, is unlikely give the necessary level of certainty that adequate mitigation can be provided for the longer term strategy essential over the plan period. In particular, adopting such an approach over a 20 year period would in our view fail to give the necessary level of confidence that adequate mitigation will be delivered.
21. Given the nature of the adverse effects on the international sites arising from new residential development (see above and Appendix 1), the Plan needs to set out a clear policy framework to deliver an integrated mitigation strategy comprising:
 - Suitable Alternative Natural Green Space (SANGS) available in sufficient quantity and quality at the right time and in the right place;
 - Access management measures;
 - Visitor management measures; and
 - Public education measures.

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22. The RSPB welcomes the policy and text suggested by Natural England at p.52&53 of the HRA. We urge the Panel to recommend in its report that this is adopted in the final RSS. This in our view would go a long way to securing the appropriate level of confidence that a sufficiently robust strategy to mitigate the potential harm from the RSS' housing allocations could be put in place.
23. However, we consider that the mitigation framework contained in IPF is relatively weak in respect of the provision of SANGS. This is a key weakness the RSS must address to satisfy the need for a robust, long-term mitigation strategy.
24. The provision of new access land or enhancing existing access land in advance of new residential development is critical to the mitigation strategy. Located appropriately, these would provide attractive areas as alternatives to the heaths for people to visit for dog walking, jogging, informal recreation, etc. Diverting the additional recreational pressures associated with residential development is the most certain means of mitigating potential adverse effects from new residents. The Assessor's Report to the South East Plan EiP concluded that the other mitigation measures on their own were unlikely to avoid or mitigate any harm arising from new development: SANGS are a critical element.
25. To ensure the necessary legal confidence that the risk of an adverse effect on the international sites will be avoided, an appropriate standard of new accessible land provision per new residence needs to be established. The RSPB's submission in response to the Assessor's report to the SE RSS EiP on this matter has been submitted as an appendix to the RSPB's submission on Matter 1/2 *Appropriate Assessment*. We are keen to draw the Panel's attention to areas of the Assessor's recommendations that the RSPB and others strongly disagree with, including suggesting reduced standards for SANGS provision (from that proposed by Natural England), because we believe that they are inconsistent, impractical and/or unlawful. The Report *Evidence to support Appropriate Assessment of development plans and projects in south-east Dorset* suggests that a further 1400ha of access land would be necessary to maintain comparative visitor levels as they are.

Need for an audit of potential open space

26. In order to have confidence that the necessary scale of provision can be delivered through the LDF system over the lifetime of the RSS:
 - a) Evidence is needed to demonstrate that sufficient appropriate SANGS land to accommodate the additional pressures resulting from the

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RSS housing allocation currently exists or can be made available over the next 20 years. This will require an audit of appropriate land, including both public and privately owned land meeting pre-defined criteria to ensure that only suitable land (in terms of geography, land-use and management) is identified.

b) Mechanisms to enable the land identified to be brought forward at the appropriate times to contribute to the mitigation strategy will need to be defined and agreed.

27. We envisage that such an audit would form part of the implementation plan for the SWRSS to inform the LDF process and ensure the appropriate balance of mitigation measures is brought forward over time to secure the protection of European and Ramsar sites from potential adverse effects.

The need for monitoring

28. This approach to strategic planning for, and provision of, mitigation is novel and untested. Although we consider the mitigation strategy as whole will be capable of mitigating the predicted harm, there must be a commitment in the RSS to monitoring the effects of new housing and the effectiveness of the mitigation measures.

29. This will need to be backed up with a commitment to review the mitigation strategy and, if necessary, the RSS, in the light of feedback from monitoring.

h) Does the draft RSS set out adequate guidance on the provision of Green Infrastructure?

30. Whilst the RSPB welcomes the inclusion of green infrastructure provision at 4.3.14, given the issues described above, we consider that the RSS needs to provide a clear policy direction to LDFs to identify and provide sufficiently large areas of greenspace to divert recreational pressures from the international heathlands sites. This will require an extremely rigorous approach to Green Infrastructure in order to satisfy the Habitats Directive tests.

31. Provided such open space is located and managed in a way to meet the Habitats Directive tests, its provision can also support central and regional Government sustainable development and sustainable community objectives on green infrastructure to promote more and better publicly accessible green space in and around communities, as a means of increasing physical and mental well-being of the local community.

RSPB recommendations

R1 We recommend the following amendments to the *“Draft Text and Policy suggested by Natural England for the Dorset Heaths”* on pages 52-53 of the HRA:

- In paragraph 6 make the following amendments:
“Mitigation set out in the DPD must be appropriate, ~~and~~ sufficient **and** **timely** to ~~remove~~ **avoid** effects on integrity...”

Purpose: to emphasise need for mitigation to be fully functioning before residents occupy new dwellings and that its purpose is to avoid adverse effects occurring rather than remove them once they have occurred.

- In part (i) of the “Possible Policy” make the following amendments:
“New residential development in the sub-region will be ~~facilitated~~ **enabled** by measures to secure **the** effective avoidance and mitigation ~~policy~~ of the potential adverse effects on the ecological integrity of the Dorset Heathlands internationally designated sites.”

Purpose: to make clear that new residential development can only go ahead (i.e. are enabled) if effective mitigation measures are put in place. Also, to clarify the meaning of the policy by deleting the word “policy”.

R2 Clarification is needed over the meaning of para 6(ii) and the mitigation mechanisms envisaged under this section.

APPENDIX 1

SUMMARY OF ECOLOGICAL EVIDENCE RELATING TO THE IMPACTS OF DEVELOPMENT CLOSE TO INTERNATIONALLY IMPORTANT HEATHLAND SITES

A. Summary of research on the effects of disturbance on nightjars, woodlarks and Dartford warblers

Nightjars

A significant negative relationship between the extent of urban development and nightjar density was found by Liley & Clarke (2002, 2003) for 36 heathland patches in Dorset. Liley et al (2006), also found significant negative correlations between nightjar density and the amount of housing in distance bands from 200m to 5km from the edge of 58 heathland patches on the Dorset heaths SPA. They also found that nightjar territories were further from access points onto the heaths than predicted by chance, and that territories also tended to be away from areas with high predicted visitor pressure.

Nightjar territory centres were located significantly further away from houses and built-up areas (Liley & Clarke 2002, Murison 2002), and with lower numbers of paths within 100m (Liley & Clarke 2002) than expected by chance. Murison (2002) found nests significantly further away than random points from roads and built up areas. A possible interpretation of these results is that nightjars may set up territories and nest close to paths and access points as these activities take place largely between dusk and dawn, when few people are using the heaths. Noise and light from built up areas (and possibly roads) will, however, take place during the hours of darkness, and could affect nightjar territory and nest location.

The assessment of path use used in studies of nightjar, woodlark and Dartford warblers (Mallord 2005, 2006, Murison 2002, 2006) was based on walked transects carried out on each study area covering periods throughout the day, and undertaken regularly through the season. Murison (2002) found that nightjar nests that failed were closer to paths and had greater lengths of paths overall within 100m and 500m of nest sites, with greater lengths of medium and high use paths within 500m. Murison (2002) also found that nests which were predated were significantly closer to paths, were surrounded by a greater length of path within 50m, 100m and 500m, and had greater lengths of medium and high use path within 500m than un-predated nests. These results provide substantial evidence that recreational disturbance from path use is linked to lower breeding success by nightjars, and that the ultimate cause of nest failure is predation. The results also strongly suggest that the effects are greatest with medium and high use paths, and therefore that the intensity of use is relevant to nightjar nest survival.

Woodfield & Langston (2004), estimated that between 1/3 and 1/20 of incubating nightjars (mean 1/8) could be flushed each day, and recorded rapid predation by

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crows following a flushing event. Flushing rates increased with vegetation height, presumably as birds are more likely to remain on the nest where vegetation is low and they can see the cause of disturbance and rely on their cryptic colouring until the last moment. These results would also be consistent with the observations that almost all nightjar nest failures are at the egg stage, as eggs are pale coloured and easy to see, compared to chicks which are cryptically coloured and hard to see. Murison (2002) concluded that distance to the nearest path was the most significant predictor of nest success. The suspicion is that more intensive path use leads to more frequent flushing of incubating nightjars which in turn leads to higher rates of predation.

Woodlarks

Studies by Mallord (2005) and Mallord *et al* (2006) found there was a significant increase in the level of measured recreational disturbance as the percentage urban cover within 500m of site boundaries increased ($p=0.001$). (This confirms the validity of using the extent of urban development around heathlands as a surrogate for people pressures on the heaths). Mallord also found that territory occupancy was negatively correlated with higher levels of recreational disturbance ($p=0.02$). In other words, the more housing surrounding the site, the higher the levels of disturbance and the fewer suitable breeding sites occupied by woodlarks. He found that measures of recreational activity were shown to provide a significant predictor of woodlark occupancy of suitable habitat within sites. There were no significant associations between woodlark breeding success and disturbance levels, or path distances. These studies showed that woodlark densities were significantly reduced by recreational disturbance, but that nest survival was not linked to measures of disturbance. He concluded that woodlarks avoid settling to breed in suitable habitat in areas of higher disturbance (his model predicts between 6 and 11 disturbance events/hour with a mean of 8.3). The results of these studies of direct disturbance and territory occupancy are particularly relevant, as woodlarks will typically only occupy particular habitats (areas of open, rather bare ground) within heathland sites, and the distribution and size of these bare areas may have only a loose relationship to the shape and size of individual sites.

Mallord (2005) has also shown that clutch size, chick weight, seasonal productivity and post fledging survival are all negatively related to nesting density and that the higher the density, the greater the number of chicks that starved. Thus, lower densities of breeding woodlarks resulting from high levels of disturbance result in better breeding success by surviving pairs. Despite this density dependent increased breeding success, overall productivity was reduced by up to 34% compared to that predicted in the absence of disturbance (Mallord 2005, 2006). The finding that woodlarks are more likely to nest on sites within 4km of other woodlarks is also of interest as this suggests that where recreational disturbance is above the threshold levels for woodlarks to breed so that some sites remain unoccupied, that this could have an effect on surrounding sites by reducing the probability of occupancy.

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Taylor (2002) carried out a detailed study of predation using artificial woodlark nests and eggs on heathlands in Dorset. An important finding from this work was that there was a significant relationship between corvid numbers and recreational disturbance, independent of the work on artificial nests. As site use by people increases, so does use by crows and magpies. (This finding may help to explain the results from Murison (2002) noted earlier, that heavier path use led to higher rates of nest failure in nightjars due to predation).

Dartford warbler

Murison's (2006) results show clear associations between Dartford warbler breeding parameters and levels of disturbance by humans and their pets. She also showed that these effects are moderated by habitat variables, with heather dominated territories more clearly affected than gorse territories. Later nesting warblers are significantly less successful than earlier nesters, and the effect of disturbance is to significantly delay the onset of breeding, and for birds nesting on territory edges, to significantly increase the chance of failure. She suggests that the main mechanism for delayed breeding is disturbance to nest building pairs, and that there is evidence for a disturbance threshold, which will affect more pairs if disturbance levels increase.

A wider study which looked at Dartford warbler breeding distribution across Dorset in relation to heathland vegetation and adjacent land use was carried out by van Den Berg et al (2001). This analysis showed positive associations with a number of habitat types including dry heath and mature European gorse, but negative responses to heathland fragmentation and the proximity of woodland, urban areas and intensive agriculture.

B. Summary of key negative impacts of development close to heathland European sites.

Effect	Description	Species / species group affected	Key references ⁶
Fragmentation	Loss of supporting habitats Lack of connectivity between sites preventing movement / genetic exchange between sites Smaller site size increases edge effects from non-heathland species	Nectar feeding invertebrates; nightjar, woodlark Invertebrates, plants, reptiles, birds and mammals Invertebrates and plants	Alexander & Cresswell 1990 Webb 1989, Webb & Vermaat 1990.
Predation and increased mortalities	Access by pet cats, some of which feed on the heath Increase in crows and magpies on sites with greater human activity	Birds, invertebrates, reptiles and amphibians Birds, invertebrates, reptiles and amphibians	Woods et al 2003, Barratt, 1995 Taylor 2002
Roads	Road kills from traffic Increased levels of noise and light pollution Roads are barriers to species mobility	Birds, invertebrates, reptiles and amphibians Birds, Invertebrates Invertebrates	 Mader et al 1990
Disturbance to birds	Areas with high visitor pressure not settled by breeding birds, resulting in low densities Adults flushed from the nest by people / dogs Pairs breed later and fewer times, resulting in reduced breeding success. Disturbance linked to higher levels of predation.	Nightjar, woodlark and Dartford warbler Nightjar Dartford warblers Nightjars	Liley & Clarke 2002, 2003. Mallord 2005, 2006 Woodfield & Langston 2004 Murison 2002, 2006
Pollution	Ground and surface water pollution from roads and hard surfaces, spills and dumping. Air pollution from industrial uses, fires and vehicles		
Trampling	Soil compaction Soil erosion from walkers, cyclists and horse riders Damage to breeding and wintering sites Creation of extensive path network increases spatial disturbance	Plant communities and species. Invertebrates Plant communities and species, some invertebrates benefit Invertebrates and reptiles Birds, reptiles	Underhill-Day in Taylor et al 2006 Underhill-Day in Taylor et al 2006
Vandalism	Damage to signs, fences, gates		

⁶ This table is principally taken from Underhill-Day (2005), key references are highlighted here only where particularly relevant

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Effect	Description	Species / species group affected	Key references ⁶
Eutrophication	<p>Enrichment of soils from dog excrement. Dumping of household and garden rubbish.</p> <p>Enrichment along road corridors, effects of dust, salt, run-off</p>	<p>Plant communities and species, invertebrates</p> <p>Plant communities and species, invertebrates</p>	<p>Bonner & Agnew 1983</p> <p>Angold 1997</p>
Fires	<p>High fire incidence on urban heaths. Direct mortality of fauna. Temporary removal of breeding and foraging habitat</p> <p>Long term vegetation change from repeated fires</p>	<p>Birds, invertebrates, reptiles and amphibians</p>	<p>Kirby & Tantram 1999</p>
Restrictions on management	<p>Stock grazing, gates left open, dogs chasing animals, injury to stock</p> <p>Objections to management e.g. tree clearance</p> <p>Increased costs of wardening</p>		<p>Woods 2002</p> <p>Woods 2002</p>