APPENDIX 4

Habitat Regulations Assessment

Cairngorms National Park Authority

Habitats Regulations Assessment Report:

An Camas Mor

Planning Application No: 09/0155/CP

Planning Permission in Principle for a Development of new community (Up to 1500 houses; associated business, community facilities and provision of infrastructure)

August 2013

Habitats Regulations Assessment Report: An Camas Mor

Contents

August 2013

Summary

Habitats Regulations Assessment Report: An Camas Mor August 2013

Introduction

This is a record of the assessment under regulation 48 of the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) for the planning application 09/0155/CP made by An Camas Mor LLP. The development is for a new community of up to 1500 houses; associated business, community facilities and provision of infrastructure

Methodology

There is no prescribed methodology within Scotland for HRAs for projects. The CNPA has based its methodology on those prepared by D Tyldesley Associates for the Welsh Assembly Government, together with the European Guidance on 'Managing Natura 2000 Sites' and the 'Assessment of Plans and Projects Significantly affecting Natura 2000 Sites' and associated methodology , both of which are referred to in the references below. in. We have derived a 10 stage process from the initial decision to assess a project to section 49 derogation procedures; though these are not needed in this case.

Screening

The screening exercise looks at which Natura sites may be affected by the development. It then considers what effects there may be and if they are a "likely significant effect" (LSE). This showed that there were LSEs on seven Natura sites:

- Abernethy Forest SPA
- Anagach Woods SPA
- Cairngorms SPA
- Craigmore Wood SPA
- Kinveachy Forest SPA
- Cairngorms SAC
- River Spey SAC

Lastly the screening considered the possible combination of effects between the proposal and other plans and projects. None were found to be likely significant effects.

Appropriate Assessment

The appropriate assessment considered in more detail the nature of the effects identified in the screening process. Its purpose is to determine if there are any adverse effects upon the conservation objectives for the Natura sites and then to see if there was an adverse effect upon the integrity of any of these sites. The Appropriate assessment found several such adverse effects and then identified mitigation measures to address them.

The most complicated effect identified was the disturbance to capercaillie from recreational use of the habitats by new residents from the development. The complicated interrelationships of habitat networks and the dispersal of the birds meant that the whole meta-population had to be considered across the area. This showed that there were a number of direct and indirect effects upon capercaillie across Badenoch

and Strathspey and that they were not restricted to the SPAs or the development site itself.

The mitigation identified is the requirement for a recreation management plan and a careful monitoring of recreation and species dynamics linked to the phases of development. This is to ensure that an adaptive management approach will be possible to change measures to ensure no additional disturbance.

Other mitigation measures were also put forward to protect other species such as freshwater pearl mussel, sea lamprey, salmon and otter.

Conclusion

The assessment shows that, with the additional mitigation measures, there is no likely significant effect from the proposed development upon the qualifying features or the conservation objectives for any Natura sites. We conclude therefore that there is no adverse effect upon the integrity of any Natura site.

Section One

Introduction

This is a record of the assessment under regulation 48 of the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) for the planning application 09/0155/CP made by An Camas Mor LLP. These regulations are otherwise known as "the habitat regulations". It is the purpose of this assessment to inform the decision making body (the CNPA) on the effects of the above development upon the relevant Natura sites to allow them to determine the application in accordance with the European Habitat Directive 92/43/EEC.

European Directive 92/43/EEC is transposed into law in Scotland by the habitat regulations. This requires that plans and projects considered by competent authorities that could have a likely significant effect on a Natura site, should be subject to an assessment of their potential impacts upon the site. Regulation 48 directs that:

"48.-(1) A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which–
(a)is likely to have a significant effect on a European site in Great Britain (either alone or in combination with other plans or projects), and
(b)is not directly connected with or necessary to the management of the site,
shall make an appropriate assessment of the implications for the site in view of that site's conservation objectives. "

It further states that:

"48 - (5) In the light of the conclusions of the assessment, and subject to regulation 49, the authority shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site. "

The Cairngorms National Park Authority, as the determining and therefore competent authority, is therefore required in law to undertake this assessment in order to comply with these regulations.

Within the Habitats and Birds Directives there are two categories of protected sites, both of which are found within the Cairngorms National Park. In addition, in Scotland, sites designated for protection under the Ramsar Convention (1971) are also Natura sites and/or Sites of Special Scientific Interest and are protected under the relevant statutory regimes . Sites put forward for designation under Natura (provisional sites) are also fully protected until the time when the designation is either confirmed or refused. The types of site considered for this appraisal are therefore:

- Special Area of Conservation (SAC and pSAC) – a European designation which protects natural habitats and wild flora and fauna other than birds
- Special Protection Area (SPA and pSPA) – a European designation which protects wild birds

- Ramsar Site –Sites designated under the Ramsar Convention 1971 which protects wetlands

This process of assessment is known formally as a Habitats Regulations Assessment (HRA). This is not to be confused with an Appropriate Assessment (AA), which is one component of the process of the HRA.

Background to the assessment

The proposed development which is the subject of this assessment is for planning Permission in Principle for a development of new community (up to 1500 houses; associated business, community facilities and provision of infrastructure). This is a revised HRA assessment. An earlier assessment was carried before the planning committee first considered the application and resolved to grant approval in June 2010. The decision notice has not been released pending resolution of a number of issues including finalising the section 75 agreement. Since that time further relevant information has become available through HRA work on other proposals and the Proposed Local Development Plan.

An Camas Mor is contained within the Strategic Settlements section of the Cairngorms National Park Local Plan 2010, which also identifies an indicative settlement boundary for the site. This was subject to a Habitats Regulations Appraisal (HRA) and Appropriate Assessment (AA). An allocation for An Camas Mor is also contained within the Proposed Cairngorms National Park Local Development Plan and its associated HRA (approved for consultation on 1st March 2013). In preparing both the adopted Local Plan and the Proposed Local Development Plan a range of issues were considered through HRA and appropriate assessment, and these inform the assessment of this application for planning permission in principle.

The principle documents which have been taken into account for this assessment are:

- Planning application
- Planning statement
- Indicative land use planning strategies
- Design and access statement
- Masterplan report and supplementary information
- Environmental Statement and appendices
- Additional information report June 2009
- Block Plan of application
- Confidential reports and surveys on capercaillie distribution in Rotheimurchus, Inshriach, Abernethy and Craigmore Wood. (T.Poole, FCS and RSPB 2013)*

* Within this report the details of locations of capercaillie and their Lekking sites is generalised and the surveys above are not within the public domain. This is to protect the birds from possible disturbance that may result from this information being widely distributed. Consultees have been given access to all information.

Section Two

Methodology

There is no prescribed method for a Habitats Regulations Assessment. The CNPA has therefore consulted the guidelines prepared by David Tyldesley and Associates for the Welsh Assembly Government. These are contained within TAN 5 "Nature conservation and Planning" and where necessary they have been adapted for the situation in Scotland. In addition EU guidelines on 'Managing Natura 2000 sites' and the 'Assessment of Plans and Projects Significantly affecting Natura 2000 Sites' have also been consulted in this process, see references for details.

Table 1 Stages of Assessment

Stages of Assessment	
Stage 1	Decide whether proposal is subject to HRA
Stage 2	Identify Natura Sites that should be considered and gather information about the Natura Sites
Stage 3	Consultation on the method and scope of the appraisal with SNH and others. Request additional information from applicant if required.
Stage 4	Screening the proposal for likely significant effects on Natura sites including mitigation measures included within the proposal
Stage 5	Screen for "in combination effects" with other plans or projects
Stage 6	Appropriate Assessment to determine effect upon conservation objectives. Preliminary conclusion about adverse effect upon the integrity of any site.
Stage 7	Consultation with SNH (and others if considered appropriate)
Stage 8	Apply additional mitigation measures, if required, via conditions or agreements to ensure that there is no adverse effect on site integrity
Stage 9	Conclusion on Integrity test
Stage 10	Regulation 49 derogation procedures. This only applies if adverse effects remain and Competent Authority still wishes to approve the application

Further details of the methodology applied during screening and appropriate assessment are given in the relevant sections.

Section Three

Stages 1-5 describing the Natura sites and Screening

Stage 1: The development proposal and the decision to screen

The proposal for the new community at An Camas Mor is close to a number of Natura sites and is within the definition of a project under Regulation 54 of the Natura regulations.

Regulation 54(2) states that:

"Regulations 48 and 49 (requirement to consider effect on European site) apply, in Scotland, in relation to–

(a)granting planning permission on an application under Part III of the Town and Country Planning (Scotland) Act 1972."

The proposed development is not wholly concerned with the necessary management of a European site for nature conservation and requires planning permission and so the plans must be subject to assessment under the terms of Directive 92/43/EEC.

Stages 2: Identification of Natura Sites and gathering their details

An assessment of all possible sites affected by the proposed development has been undertaken. This has considered any possible outcomes of the development together with any conceivable effect. The list below is those sites that have been taken forward to screening for likely significant effects. See Appendix 1 for details on each site and its qualifying features.

Other sites were considered but have not been taken forward. For example the Insh Marshes SAC was considered to be too far upstream to be affected by any aspect of the development.

Special Area of Conservation (SAC)

Cairngorms
Kinveachy Forest
River Spey

Special Protection Area (SPA)

Abernethy Forest
Anagach Woods
Cairngorms
Cairngorms Massif
Craigmore Wood
Kinveachy Forest
Loch Vaa

Stage 3: Discussions on the method and scope of the appraisal and requests for additional information

Advice has been sought from SNH in relation to this application, and in relation to this and other allocations in the Local Plan and Proposed Local Development Plan, on matters including otter, golden eagle and capercaillie impacts. A discussion on the specific effects on capercaillie was held with a number of contributors, including Rothiemurchus Estate, Scottish Natural Heritage and RSPB on 30/10/2012. Meetings have also been held subsequently with the Capercaillie Project officer, Rothiemurchus Estate and SNH between March and May 2013.

The CNPA has requested additional information from the applicant regarding distribution of capercaillie in the vicinity of the site and recreational use of foot and cycle paths. The former was undertaken by the capercaillie project officer and the latter was submitted by Rothiemurchus Estate on 22/5/2013.

Stage 4: Screening the proposal for likely significant effects

The test in regulation 48 is whether the proposal is likely to have a significant effect, either alone or in combination with other plans or projects, on the Natura sites identified in stage 2 above. This clearly requires an initial assessment, or screening, for which interest features of any Natura site, may be affected and if it is likely or significant.

In considering what is 'likely' the CNPA is mindful of existing case law in relation to the application of the habitats regulations. The CNPA notes the ruling of the ECJ in case C-127/02 (often known as the Waddenzee judgement). This rules (in paragraph 45) that an appropriate assessment must be undertaken if "it cannot be excluded, on the basis of objective information, that it will have a significant effect on that site, either individually or in combination with other plans or projects". Consequently we take the word 'likely' not to mean 'probable' but 'possible'.

The ruling also gives useful clarification for the word 'significant'. In Paragraph 47 it states that: "where such a plan or project has an effect on that site but it is not likely to undermine its conservation objectives, it cannot be considered likely to have a significant effect on the site concerned." The CNPA draws from this that it must be confident that any significant effects can be excluded on the basis of objective information in order to conclude that there will be no effect on the conservation objectives.

In considering the part of the test which is "alone or in combination with other plans or projects" we understand that this refers to proposed or incomplete plans or projects. Completed developments will also be considered but as part of the baseline for assessment if they have continuing effects on any site and "point to a pattern of progressive loss of site integrity ". If a development would have a possible likely significant effect alone then it is to be assessed alone. An in combination assessment is therefore not required, until it is no longer considered to have an effect alone.

When considering in combination tests only projects and plans that are relevant to the effected sites will be included. Furthermore they will be excluded unless the effects they have are related to the effects of the development being assessed here.

The first step of the screening process will consider what the level of any effect these may be: no effect, likely insignificant or likely significant. If likely insignificant effects are found they will be further screened at stage 5 in combination with other plans or projects. If there are any significant effects found, either alone or in combination, then these will be considered in detail within an Appropriate Assessment.

Table 2; the four possible outcomes from the screening process

Screening outcome	Description	Stage of process outcome found
No effect	there is no effect at all upon the qualifying interests	Stage 4
No likely significant effect in combination	there is an insignificant effect from the development itself and even in combination with other plans and projects does not amount to a significant effect.	Stage 5
Likely significant effect in combination	there is an insignificant effect from the development itself but in combination with the insignificant effects of other plans and projects becomes significant.	Stage 5
Likely significant effect alone	there is a possible significant effect from the development by itself	Stage 4

The adopted Local Plan and the Proposed Local Development Plan HRAs both identify that development at An Camas Mor has the potential to affect the qualifying features on the sites listed above. The effects identified were, in summary, as follows:

Water abstraction
Pollution and siltation from construction sites
Pollution from wastewater
Requirement for SUDS
Disturbance to otters
Disturbance to capercaillie
Disturbance to golden eagle
Distribution of qualifying habitats

Screening of this application considers these and any additional possible effects that would arise from the grant of planning permission in principle for development at An Camas Mor.

Table 3: Screening for LSE from An Camas Mor

Abernethy Forest SPA					
Qualifying Feature Affected	**Possible effect of development**	**Likely significant effect**	**Duration**	**Screening assessment**	**Screening outcome**
Capercaillie	Increase in recreational activity from residents of new development within the SPA (direct effect)	Disturbance to lekking, brood rearing and feeding habitats from recreational activity.	permanent	An increase in occasional use of the SPA on western side of the SPA by weekend use, including with dogs. This part of the SPA already attracts approximately 40,000 visitors per annum to visitor centre. More cyclists are likely to use the tracks through the SPA to Ryvoan pass. The area is managed by RSPB to minimise effects by visitors, as far as possible, through encouraging use of promoted paths which are out with key habitat and lekking sites. The RSPB currently deploys Trail Wardens to raise awareness of these issues on the Loch Mallachie trails with a particular emphasis on dog ownership and recreation. Lodge road is closed to vehicular traffic early in mornings during lekking season. The effects are considered to be general and largely on brood rearing habitat. However there are two lekking sites within 100m of main paths.	**Likely Significant Effect Alone**
	Increase in recreation within other SPAs that support caper meta-population from residents of	A reduction in productivity in other SPAs reducing the viability of the meta population through decreased migration and in effect increased habitat	permanent	Where there is a likely significant effect identified upon one or more of the other four SPAs (for Capercaillie) within the area this may also have an effect for this SPA. A reduction in productivity within another SPA may restrict movement of birds, especially females, between sites. This could	**Likely Significant Effect Alone**

	new development (indirect effect)	fragmentation.		reduce the numbers within this SPA and its genetic diversity, both affecting its distribution and viability of the SPA population. Direct effects have been found in the following SPA Cairngorms – LSE NB – indirect effects are also LSE but are not noted here for clarity. However they are considered automatically as they are picked up within each SPA screening matrix.	
	Increase in recreation within non SPA habitat that supports caper meta-population from residents of new development (indirect effect)	Reduction in productivity within undesignated part of Inshriach, population reducing the viability of meta-population though decreased migration and in effective increased habitat fragmentation	permanent	Northern part of wood is adjoining the SPA. Birds in area have good productivity and likely to 'export' to SPA and other areas. Path network is quite dense so refuge areas between relatively small. Area likely to see a rise in the numbers of users from the development because of relative proximity. However area is beyond daily walking zone so longer weekend and evening walks most likely. Increase in numbers of cyclists too. Reduced productivity may reduce dispersal to other areas and reduce their population overall. If displacement is cause adjacent areas already have good population. Southern parts of woodland less likely to see significant increase as northern section encountered first and therefore most likely absorb rise in numbers of users.	**Likely Significant Effect Alone**
	Increase in recreation within non SPA habitat that supports caper meta-population from	Reduction in productivity within Glen Feshie, Boat woods, and Carrbridge woods, population reducing the viability of meta-population though	permanent	Glen Feshie (woods outside SPA) – increase in occasional use, path and woodland networks are separated. Carr Bridge woods – ACM may result in more use by walkers of promoted paths around village ,	**No effect**

	residents of new development (indirect effect)	decreased migration and in effective increased habitat fragmentation		Dalnahatnaich and Sluggan Bridge. However the more sensitive woodland areas are not core for walkers , being relatively remote with Leks >500m from tracks. Brood areas are more extensive with more people doing the cycle routes and tracks through Kinveachy and nearby undesignated woods where capercaillie live, but SNH advise that cycling is considered to have less of a disturbing effect.. Boat woods – mitigation measures are being implemented to alleviate existing identified pressures and will mitigate any increase in occasional use from ACM. Current housing application will add to these measures AA 6/2013 did not identify any residual effects. Pityoulish – recent inspection shows no evidence of use of these woods by capercaillie. Infrequent migratory use may occur. Glenmore/Rothiemurchus – non designated woodland around the settlement is not core habitat frequently used by capercaillie. Nearest area is less accessed due to few paths and private area of dwelling. Kinveachy face – increase use by cycles of tracks at base of hill Cycles less disturbing so unlikely to have an effect. Downhill trails unlikely to increase in level of activity significantly. These tend to be ephemeral lasting until riders become bored and seek alternatives. But these may last longer with phased uptake from few ACM residents	
	Occupation of	N/A	N/A	The development Site is too far from the SPA to	**No effect**

	new housing			have any possible effects	
	Construction activity	N/A	N/A	N/A The development Site is too far from the SPA to have any possible effects	**No effect**
Scottish Crossbill	Increase in recreational activity from residents of new development within the SPA	Disturbance to nesting sites and feeding habitat	permanent	There is no evidence that species affected by disturbance; species does not nest on the ground. Therefore birds within SPA are unlikely to be affected.	**No effect**
Osprey	Increase in recreational activity from residents of new development within the SPA	Disturbance to nesting sites	permanent	Nest sites are managed and protected by RSPB. Visitor centre provides opportunity for viewing without disturbance. General recreation managed by RSPB to minimise effects, as far as possible, by providing promoted paths away from nest sites.	**No effect**

Anagach woods SPA					
Qualifying Feature Affected	**Possible effect of development**	**Likely significant effect**	**Duration**	**Screening assessment**	**Screening outcome**

Capercaillie	Increase in recreational activity from residents of new development within the SPA (direct effect)	Disturbance to lekking, brood rearing and feeding habitats from recreational activity.	permanent	SPA is already well used from Grantown residents (circa 2,200). Woodlands are more than 10km from development and unlikely to be a significant target destination. Increase in users is likely to be small. Woodlands already have well used promoted paths with signage about capercaillie requesting responsible access. However population has low productivity and site is considered a 'sink'. Likely access points to woodlands mostly away from key capercaillie areas.	**No effect**
	Increase in recreation within other SPAs that support caper meta-population from residents of new development (An indirect effect)	A reduction in productivity in other SPAs reducing the viability of the meta population through decreased migration and in effect increased habitat fragmentation.	permanent	Where there is a likely significant effect identified upon one or more of the other four SPAs (for Capercaillie) within the area this may also have an effect for this SPA. A reduction in productivity within another SPA may restrict movement of birds, especially females, between sites. This could reduce the numbers within this SPA and its genetic diversity, both affecting its distribution and viability of the SPA population. Direct effects have been found in the following SPA. Anagach is particularly dependent upon immigration of young birds from surrounding areas and so is very sensitive to a reduction in dispersal. Abernethy Forest - LSE Cairngorms – LSE NB – indirect effects are also LSE but are not noted here for clarity. However they are considered automatically as they are picked up within each SPA screening matrix.	**Likely Significant Effect Alone**
	Increase in recreation within	Reduction in productivity within Glen Feshie, Boat	permanent	Glen Feshie (woods outside SPA) – increase in occasional use, path and woodland networks are	**No effect**

	non SPA habitat that supports caper meta-population from residents of new development (indirect effect)	woods, and Carrbridge woods, population reducing the viability of meta-population though decreased migration and in effective increased habitat fragmentation		separated. Carr Bridge woods – ACM may result in more use by walkers of promoted paths around village , Dalnahatnaich and Sluggan Bridge. However the more sensitive woodland areas are not core for walkers , being relatively remote with Leks >500m from tracks. Brood areas are more extensive with more people doing the cycle routes and tracks through Kinveachy and nearby undesignated woods where capercaillie live, but SNH advise that cycling is considered to have less of a disturbing effect. Boat woods – mitigation measures are being implemented to alleviate existing identified pressures and will mitigate any increase in occasional use from ACM. Current housing application will add to these measures AA 6/2013 did not identify any residual effects. Pityoulish – recent inspection shows no evidence of use of these woods by capercaillie. Infrequent migratory use may occur. Glenmore/Rothiemurchus – non designated woodland around the settlement is not core habitat frequently used by capercaillie. Nearest area is less accessed due to few paths and private area of dwelling. Kinveachy face – increase use by cycles of tracks at base of hill Cycles less disturbing so unlikely to have an effect. Downhill trails unlikely to increase in level of activity significantly. These tend to be ephemeral lasting until riders become bored and seek alternatives. But these may last longer with	

				phased uptake from few ACM residents	
	Occupation of new housing	N/A	N/A	The development Site is too far from the SPA to have any possible effects	**No effect**
	Construction activity	N/A	N/A	The development Site is too far from the SPA to have any possible effects	**No effect**

Cairngorms SPA					
Qualifying Feature Affected	**Possible effect of development**	**Likely significant effect**	**Duration**	**Screening assessment**	**Screening outcome**
Capercaillie	Increase in recreational activity from residents of new development within the SPA (Direct effect)	Disturbance to lekking, brood rearing and feeding habitats from recreational activity.	permanent	Extensive SPA with lek sites in Rothiemurchus, Glenmore and Inshriach. Lek sites around SPA are generally remote or in quieter areas away from footpaths. However two are <100m from footpaths. Brood rearing habitats more extensive though generally away from busy areas. Well established footpath network around SPA means that informal paths are unlikely to be developed. River Luineag blocks easy access from Ski road, except at few key points on promoted trails routes. FCS manages woodland to benefit capercaillie. Both FCS and Rothiemurchus manage visitor access through signage, path location and other promotion to avoid key areas for birds. SPA	**Likely significant effect alone**

				is within frequent walking radius (<2km), though Lek sites are not. Increase in early and later access is likely due to greater population relatively close.	
	Increase in recreation within other SPAs that support caper meta-population from residents of new development (An indirect effect)	A reduction in productivity in other SPAs reducing the viability of the meta population through decreased migration and in effect increased habitat fragmentation.	permanent	Where there is a likely significant effect identified upon one or more of the other four SPAs (for Capercaillie) within the area this may also have an effect for this SPA. A reduction in productivity within another SPA may restrict movement of birds, especially females, between sites. This could reduce the numbers within this SPA and its genetic diversity, both affecting its distribution and viability of the SPA population. Direct effects have been found in the following SPA Abernethy Forest - LSE NB – indirect effects are also LSE but are not noted here for clarity. However they are considered automatically as they are picked up within each SPA screening matrix.	**Likely Significant Effect Alone**
	Increase in recreation within non SPA habitat that supports caper meta-population from residents of new development (indirect effect)	Reduction in productivity within Glen Feshie, Boat woods, and Carrbridge woods, population reducing the viability of meta-population though decreased migration and in effective increased habitat fragmentation	permanent	Glen Feshie (woods outside SPA) – increase in occasional use, path and woodland networks are separated. Carr Bridge woods – ACM may result in more use by walkers of promoted paths around village, Dalnahatnaich and Sluggan Bridge. However the more sensitive woodland areas are not core for walkers , being relatively remote with Leks >500m from tracks. Brood areas are more extensive with more people doing the cycle	**No effect**

				routes and tracks through Kinveachy and nearby undesignated woods where capercaillie live, but SNH advise that cycling is considered to have less of a disturbing effect. Boat woods – mitigation measures are being implemented to alleviate existing identified pressures and will mitigate any increase in occasional use from ACM. Current housing application will add to these measures AA 6/2013 did not identify any residual effects. Pityoulish – recent inspection shows no evidence of use of these woods by capercaillie. Infrequent migratory use may occur. Glenmore/Rothiemurchus – non designated woodland around the settlement is not core habitat frequently used by capercaillie. Nearest area is less accessed due to few paths and private area of dwelling. Kinveachy face – increase use by cycles of tracks at base of hill Cycles less disturbing so unlikely to have an effect. Downhill trails unlikely to increase in level of activity significantly. These tend to be ephemeral lasting until riders become bored and seek alternatives. But these may last longer with phased uptake from few ACM residents	
	Occupation of new community	Disturbance from normal occupation of housing and other activity from the new community	permanent	The development is approximately 1.1km from the nearest point of the SPA. This western side shows less use by capercaillie and the nearest lek is over 2km away. The site itself will be screened by planting belts reducing visual and to a lesser extent noise impacts.	**No effect**

	Construction activity	Disturbance from construction on site and use of B992 for construction traffic	Construction phase 1 only	The development is approximately 1.1km from the nearest point of the SPA. This western side shows less use by capercaillie and the nearest lek is over 2km away. The site itself is screened by existing planting belts reducing visual impact and to a lesser extent noise impacts. Access will be limited to a single point on the B992 for first phase only.	**No effect**
Scottish Crossbill	Increase in recreational activity from residents of new development within the SPA	Disturbance to nesting sites and feeding habitat	permanent	There is no evidence that species affected by disturbance; species does not nest on the ground. Therefore birds within SPA are unlikely to be affected.	**No effect**
Osprey	Increase in recreational activity from residents of new development within the SPA	Disturbance to nesting sites	permanent	Nest sites are well managed and monitored by Rothiemurchus Estate. General recreation managed by FCS and Rothiemurchus to encourage recreational access to promoted paths away from nest sites.	**No effect**
Dotterel	Increase in recreational activity from residents of new development within the SPA	Increase disturbance to nesting from more visitors to relevant habitats in the SPA	permanent	Nest sites are in remote uplands. The number of likely visits generated by new development too small to have an effect.	**No effect**
Golden eagle	Increase in recreational activity from residents of new development	Increase disturbance to nesting from more visitors to relevant habitats in the SPA	permanent	Nest sites are in remote uplands. The number of likely visits generated by new development to the SPA is small and restricted to walkers and a very few cyclists. Eagle nests are already in view of footpaths so some habituation is likely. One recently relocated nest may be vulnerable but is	**Likely Insignificant effect** (taken to Stage 5 in

	within the SPA			away from promoted paths. The SPA is very large covering the whole central plateau however a small localised effect is possible.	combination screening)
Merlin	Increase in recreational activity from residents of new development within the SPA	Increased disturbance to nesting sites	permanent	Nest sites are in remote upland sites in heather moorland. Increased numbers in these areas is not thought to be significant from ACM.	**No effect**
Peregrine	Increase in recreational activity from residents of new development within the SPA	Increased disturbance to nesting sites	permanent	Nest sites are usually on inaccessible cliff faces away from footpaths, though sometimes within sight. Tolerance to people varies between individual birds but habituation is significant in other sites near to Aviemore.	**No effect**

Cairngorms SAC					
Qualifying Feature Affected	**Possible effect of development**	**Likely significant effect**	**Duration**	**Screening assessment**	**Screening outcome**
Qualifying habitats (there are 19 qualifying habitats – see Appendix 1 for a complete list)	The increase in recreational activity will result in higher pressure on the path networks creation of	Effects may lead to erosion of habitats along pathways and if new routes cross qualifying habitats these may become eroded and reduced in extent.	permanent	Rotheimurchus and Glenmore both have well established paths ways for walkers and cyclists. The network is both well promoted and extensive and there not considered any need for additional paths ways to be created. The distance from the development to the SAC means it is unlikely to facilitate informal path being established as	**No effect.**

	informal route ways			current path ways are sufficient for anticipated recreational requirements.	
	Loss of habitat extent	The proposals include a 78ha area of upland woodland, this could be located upon qualifying habitats thus reducing their extent	permanent	The area proposed for the planting which compensates for the loss of habitat on the development site lies within the upland zone of the SAC. It is possible that this could occur over one or more of the QHs. There is no survey data or planting plan to delineate the distribution of the new woodland	**Likely significant effect alone**
Otter	Increase in recreational activity derived from larger local population	Disturbance to holts and resting places	permanent	Despite the increase in numbers it is considered that most otters will avoid existing areas of disturbance and that the pattern of use is unlikely to change with the increase in resident populations because path network will remain unchanged. No effect is therefore anticipated.	**No effect**
Green shield-moss	The increase in recreational activity will result in higher pressure on the path networks creation of informal route ways	Effects may lead to erosion of habitats along pathways and if new routes cross qualifying habitats which include this species it may be damaged by the erosion.	permanent	Rotheimurchus and Glenmore both have well established paths ways for walkers and cyclists. The network is both well promoted and extensive and there not considered any need for additional paths ways to be created. It is not likely that the species will be damaged because their supporting habitats are not considered at risk from erosion.	**No effect**

Cairngorms Massif SPA					
Qualifying Feature Affected	**Possible effect of development**	**Likely significant effect**	**Duration**	**Screening assessment**	**Screening outcome**
Golden eagle	Increase in recreational activity from residents of new development within the SPA	Increase disturbance to nesting from more visitors to relevant habitats in the SPA	permanent	Nest sites are in remote uplands. The number of likely visits generated by new development to the SPA is small and restricted to walkers and a very few cyclists. Eagle nests are already in view of footpaths so some habituation is likely. One recently relocated nest may be vulnerable but is away from promoted paths. The SPA is very large covering the whole central plateau however a small localised effect is possible.	**Likely Insignificant effect** (taken to Stage 5 in combination screening)

Craigmore wood SPA					
Qualifying Feature Affected	**Possible effect of development**	**Likely significant effect**	**Duration**	**Screening assessment**	**Screening outcome**
Capercaillie	Increase in recreational activity from residents of new development within the SPA	Disturbance to lekking, brood rearing and feeding habitats from recreational activity.	permanent	SPA is not a popular destination with one promoted path which skirts southern edge and no core paths. ACM in unlikely to generate significant increase in users to paths. RSPB management strategy is to keep numbers low by promoting other less sensitive areas and not promoting access and car parking.	**No effect**

	(direct effect)				
	Increase in recreation within other SPAs that support caper meta-population from residents of new development (indirect effect)	A reduction in productivity in other SPAs reducing the viability of the meta population through decreased migration and in effect increased habitat fragmentation.	permanent	Where there is a likely significant effect identified upon one or more of the other four SPAs (for Capercaillie) within the area this may also have an effect for this SPA. A reduction in productivity within another SPA may restrict movement of birds, especially females, between sites. This could reduce the numbers within this SPA and its genetic diversity, both affecting its distribution and viability of the SPA population. Direct effects have been found in the following SPA Abernethy Forest - LSE Cairngorms – LSE NB – indirect effects are also LSE but are not noted here for clarity. However they are considered automatically as they are picked up within each SPAs own screening matrix.	**Likely Significant Effect Alone**
	Increase in recreation within non SPA habitat that supports caper meta-population from residents of new development	Reduction in productivity within Glen Feshie, Boat woods, and Carrbridge woods, population reducing the viability of meta-population though decreased migration and in effective increased habitat	permanent	Glen Feshie (woods outside SPA) – increase in occasional use, path and woodland networks are separated. Carr Bridge woods – ACM may result in more use by walkers of promoted paths around village, Dalnahatnaich and Sluggan Bridge. However the more sensitive woodland areas are not core for walkers, being relatively remote with Leks >500m	**No effect**

	(indirect effect)	fragmentation		from tracks. Brood areas are more extensive with more people doing the cycle routes and tracks through Kinveachy and nearby undesignated woods where capercaillie live, but SNH advise that cycling is considered to have less of a disturbing effect. Boat woods – mitigation measures are being implemented to alleviate existing identified pressures and will mitigate any increase in occasional use from ACM. Current housing application will add to these measures AA 6/2013 did not identify any residual effects. Pityoulish – recent inspection shows no evidence of use of these woods by capercaillie. Infrequent migratory use may occur. Glenmore/Rothiemurchus – non designated woodland around the settlement is not core habitat frequently used by capercaillie. Nearest area is less accessed due to few paths and private area of dwelling. Kinveachy face – increase use by cycles of tracks at base of hill Cycles less disturbing so unlikely to have an effect. Downhill trails unlikely to increase in level of activity significantly. These tend to be ephemeral lasting until riders become bored and seek alternatives. But these may last longer with phased uptake from few ACM residents	
	Occupation of new housing	N/A	N/A	The development Site is too far from the SPA to have any possible effects	**No effect**
	Construction	N/A	N/A	The development Site is too far from the SPA to	**No effect**

	activity			have any possible effects	

Kinveachy Forest SPA					
Qualifying Feature Affected	**Possible effect of development**	**Likely significant effect**	**Duration**	**Screening assessment**	**Screening outcome**
Capercaillie	Increase in recreational activity from residents of new development within the SPA (direct effect)	Disturbance to lekking, brood rearing and feeding habitats from recreational activity.	permanent	The increase in population and the relative proximity which is approximately3.5km are significant However walking, or cycling, through Aviemore is less attractive than using adjacent areas and this is likely to limit the overall increase to well below that expected for this distance. There is a well-developed estate path and track network which is used by walkers. Cyclists are largely kept away from the SPA from Aviemore side because of large deer fence that is crossed by stiles rather than gates. Alternative routes through Craigellachie NNR are well promoted and would 'intercept' a significant proportion of potential walkers from ACM. NCN7 runs below Kinveachy face outwith of SPA in this area.	**No effect**
	Increase in recreation within other SPAs that	A reduction in productivity in other SPAs reducing the viability of the meta	permanent	Where there is a likely significant effect identified upon one or more of the other four SPAs (for Capercaillie) within the area this may also have an	**Likely Significant Effect Alone**

	support caper meta-population from residents of new development (indirect effect)	population through decreased migration and in effect increased habitat fragmentation.		effect for this SPA. A reduction in productivity within another SPA may restrict movement of birds, especially females, between sites. This could reduce the numbers within this SPA and its genetic diversity, both affecting its distribution and viability of the SPA population. Direct effects have been found in the following SPA Abernethy Forest - LSE Cairngorms – LSE NB – indirect effects are also LSE but are not noted here for clarity. However they are considered automatically as they are picked up within each SPAs own screening matrix.	
	Increase in recreation within non SPA habitat that supports caper meta-population from residents of new development (indirect effect)	Reduction in productivity within Glen Feshie, Boat woods, and Carrbridge woods, population reducing the viability of meta-population though decreased migration and in effective increased habitat fragmentation	permanent	Glen Feshie (woods outside SPA) – increase in occasional use, path and woodland networks are separated. Carr Bridge woods – ACM may result in more use by walkers of promoted paths around village, Dalnahatnaich and Sluggan Bridge. However the more sensitive woodland areas are not core for walkers, being relatively remote with Leks >500m from tracks. Brood areas are more extensive with more people doing the cycle routes and tracks through Kinveachy and nearby undesignated woods where capercaillie live, but SNH advise that cycling is considered to have less of a disturbing effect. Boat woods – mitigation measures are being implemented to alleviate existing identified pressures and will mitigate any increase in occasional use from ACM. Current housing	**No effect**

				application will add to these measures AA 6/2013 did not identify any residual effects. Pityoulish – recent inspection shows no evidence of use of these woods by capercaillie. Infrequent migratory use may occur. Glenmore/Rothiemurchus – non designated woodland around the settlement is not core habitat frequently used by capercaillie. Nearest area is less accessed due to few paths and private area of dwelling. Kinveachy face – increase use by cycles of tracks at base of hill Cycles less disturbing so unlikely to have an effect. Downhill trails unlikely to increase in level of activity significantly. These tend to be ephemeral lasting until riders become bored and seek alternatives. But these may last longer with phased uptake from few ACM residents	
	Occupation of new housing	N/A	N/A	The development Site is too far from the SPA to have any possible effects	**No effect**
	Construction activity	N/A	N/A	The development Site is too far from the SPA to have any possible effects	**No effect**
Scottish Crossbill	Increase in recreational activity from residents of new development within the SPA	Disturbance to nesting sites and feeding habitat	permanent	There is no evidence that species affected by disturbance; species does not nest on the ground. Therefore birds within SPA are unlikely to be affected.	**No effect**

Kinveachy Forest SAC					
Qualifying Feature Affected	**Possible effect of development**	**Likely significant effect**	**Duration**	**Screening assessment**	**Screening outcome**
Bog Woodland	Increase in recreational activity from residents of new development within the SAC	Erosion of habitat from over use of existing paths and tracks and formation of new informal paths	permanent	The increase in population and the relative proximity which is less that 2km are significant However walking, or cycling, through Aviemore is less attractive than using adjacent areas and this is likely to limit the overall increase to well below that expected for this distance. There is a well-developed path network already within the SAC for cyclists and walkers and additional informal paths are unlikely to be made as a consequence of the development.	**No effect**
Caledonian Forest	Increase in recreational activity from residents of new development within the SAC	Erosion of habitat from over use of existing paths and tracks and formation of new informal paths	permanent	The increase in population and the relative proximity which is less that 2km are significant However walking, or cycling, through Aviemore is less attractive than using adjacent areas and this is likely to limit the overall increase to well below that expected for this distance. There is a well-developed path network already within the SAC for cyclists and walkers and additional informal paths are unlikely to be made as a consequence of the development.	**No effect**

Loch Vaa SPA					
Qualifying Feature Affected	**Possible effect of development**	**Likely significant effect**	**Duration**	**Screening assessment**	**Screening outcome**
Slavonian grebe	Increase in recreational activity from residents of new development within the SPA	Disturbance to the birds during breeding and brood rearing	permanent	The Grebe is not generally very sensitive to disturbance. The main risk comes from disturbance on the nest; if parents are scared off the nest the eggs or young are vulnerable to predation. This disturbance is most likely from fishermen and there is a management agreement to keep them from the sensitive area. The nesting area is away from general recreation usage and is quite inaccessible. Other types of recreation of concern have been photographers and bird watchers. Walkers, and even dog walkers, are of less concern, given that they are unlikely to venture far into the wet areas frequented by the birds. Outwith nesting season the birds can escape onto the water. It is not a well-used site for recreation nor is it promoted as a destination.	**No effect**

River Spey SAC					
Qualifying Feature Affected	**Possible effect of development**	**Likely significant effect**	**Duration**	**Screening assessment**	**Screening outcome**
Otter	Increase in recreational activity adjacent to the SAC from residents of new development	Disturbance to otters resting and breeding sites. Disturbance to otters feeding	permanent	The proximity of development to the SAC means impacts from users on new paths may be significant. Will include walkers and cyclists with dogs. Bridge proposals will also allow Aviemore residents to access eastern bank more easily	**Likely significant effect alone**
	Construction activity close to water courses	Pollution from chemical leakage and siltation clouding water. Disturbance to holts and resting places from plant and workers	Construction period	There are two bridges associated with the development and other works close to watercourses. Footpaths may need to be constructed within 30m of Spey. Spillage of chemicals, physical damage and siltation may occur from operations close to river.	**Likely significant effect alone**
	Construction of road bridge over the Druie	Loss of supporting habitat	permanent	The bridge across the Druie would result in the loss of a section of riparian woodland (approx 0.2ha). This woodland supports the otter by proving foraging habitat as well as potential cover along the river banks.	**Likely significant effect alone**
Sea Lamprey	Construction activity close to water courses	Pollution from chemical leakage and siltation clouding water	Construction period	There are two bridges associated with the development and other works close to watercourses. Footpaths may need to be constructed within 30m of Spey. Spillage of chemicals, physical damage and siltation may	**Likely significant effect alone**

				occur from operations close to river.	
	Lighting to bridges and areas close to water courses	Light levels may be high enough to prevent Lamprey from migrating upstream to spawning area.	Permanent and/or during construction period	Evidence from Canada suggests that under bridge lighting may have a detrimental effect upon lamprey by deterring migration at night. Both bridges are for public access and so are likely to require lighting. Footpaths are also likely to be near to river and there may be a requirement for this to be lit. Other construction activity may require lighting at some point.	**Likely significant effect alone**
	Pollution from waste water	Increased nutrient levels in the water may affect Sea Lamprey	permanent	Aviemore WWTW currently treats WW from Aviemore and vicinity – circa 2397 people. The Addition of ACM will more than double the inputs to the system. Sea Lamprey may be sensitive to increased nutrient levels.	**Likely significant effect alone**
Freshwater Pearl Mussel	Pollution from waste water	Increase phosphorous levels in the water may affect FWPM	permanent	Aviemore WWTW currently treats WW from Aviemore and vicinity – circa 2397 people. The Addition of ACM will more than double the inputs to the system. FWPM is particularly sensitive to phosphorous levels.	**Likely significant effect alone**
	Construction activity close to water courses	Pollution from chemical leakage and siltation clouding water	Construction period	There are two bridges associated with the development and other works close to watercourses. Footpaths may need to be constructed within 30m of Spey. Spillage of chemicals, physical damage and siltation may occur from operations close to river.	**Likely significant effect alone**
Atlantic Salmon	Construction activity close to water courses	Pollution from chemical leakage and siltation clouding water	Construction period	There are two bridges associated with the development and other works close to watercourses. Footpaths may need to be constructed within 30m of Spey. Spillage of	**Likely significant effect alone**

				chemicals, physical damage and siltation may occur from operations close to river.	
	Construction of road bridge over the Druie	Loss of supporting habitat	permanent	The river embankment provides cover to salmon where woodland and small groups of trees overhand the river. In addition the trees can be a source of inertibrates falling into the water which is food for young fish. However the section where the road bridge is proposed does not have any overhanging trees.	**No effect**
	Lighting to bridges and areas close to water courses	Light levels may be high enough to prevent Salmon from migrating upstream to spawning area.	Permanent and/or during construction period	Latest advice from SNH specialists suggest that Salmon may be affected in a similar manner to Sea Lamprey. Both bridges are for public access and so are likely to require lighting. Footpaths are also likely to be near to river and there may be a requirement for this to be lit. Other construction activity may require lighting at some point.	**Likely significant effect alone**
	Pollution from waste water	Increased nutrientlevels in the water may affect Atlantic Salmon	permanent	Aviemore WWTW currently treats WW from Aviemore and vicinity – circa 2397 people. The Addition of ACM will more than double the inputs to the system. Atlantic Salmon may be sensitive to increased nutrient levels.	**Likely significant effect alone**
All qualifying features	Abstraction of water for domestic supply	Reduction in water level and volume leading to changes in temperature increases in chemical concentrations and altered flow dynamics.	permanent	The capacity of the new Water Treatment Works near Aviemore has been sized to meet Scottish Water estimation of demand up to 2030. Scottish Water has projected an increase in abstraction from 7.1 million litres per day at 2008 levels to an estimated 10.25 million litres per day by 2030 based on increased development within the local area (this included all of ACM). The abstraction of 7.1 million litres per day had been calculated to result in a 7mm lowering of water level in a roughly 1 km stretch of the River Spey	**No effect**

				downstream of Kinakyle until flow levels were replenished by compensation flow from the River Druie which would then no longer be subject to abstraction. SNH concluded in 2009 there would be no impact on the integrity of populations of Atlantic salmon, sea lamprey, and freshwater pearl mussel in the River Spey from the scale of water level reductions suggested by projected water use at the Aviemore WTW. CNPA AA also concluded no effect upon integrity of designation. Average household consumption is 150lt per day (DEFRA 2011)	

Stage 5: In-combination effects

Regulation 48(1)a. is clear in setting out a requirement to include the assessment of the impacts of any development *in combination* with other plans and projects. This is to ensure that any cumulative and synergistic effects that are likely to be significant to the conservation objectives are identified. The plans and projects in Table 4 have been searched for any likely insignificant effects that may combine with those identified in the proposed development.

Three plans and policies were found to have likely insignificant effects on Natura sites: the National Transport Strategy, Strategic Transport Projects Review and the Cairngorms National Park Proposed Local Development Plan. In the first two cases the potential effects are from the dualling of the A9 on the River Spey SAC. However there is no likely insignificant effect identified upon this Natura site from the ACM development and so an in combination effect is not possible. Further consideration of this is not required, however because a likely significant effect alone has been identified on this site this will be included within the appropriate assessment.

The Proposed Local Development Plan identifies several likely insignificant effects (called Minor residual effects there) upon the Cairngorms Massif SPA arising from housing allocations near to the site. The screening exercise has also identified such an effect from the proposed development. These likely insignificant effects are set out in Table 5 below. It has been concluded that these combined effects do not create a likely significant effect and so this have not been taken forward to the appropriate assessment.

A likely insignificant effect alone was identified on golden eagle within the Cairngorms SPA. However no other such effect has been identified from other plans or projects and so there is no possible likely significant effect in combination. Consequently this has not been taken forward into the appropriate assessment.

Table 4: Other Plans, Policies and Strategies

Policy Plan or Project	Aspect	MRE
Scotland's National Transport Strategy 2006	A9 widening	River Spey SAC
Transport Scotland Strategic Transport Projects Review	A9 widening	River Spey SAC
Cairngorms National Park Partnership Plan 2012-2017		No relevant effects
Cairngorms National Park Local Plan - October 2010		No relevant effects
Cairngorms National Park Local Development Plan - draft March 2013	Settlement allocations	• Cairngorms Massif SPA • Abernethy Forest SPA • Loch Vaa SPA • Craigmore wood SPA • Anagach SPA • Cairngorms SPA • Kinveachy Forest SPA
Cairngorms Nature Action Plan 2013-2017		No relevant effects
River Spey Catchment Management Plan		No relevant effects
Cairngorms National Park Outdoor Access Strategy		No relevant effects
Strategy and Action Plan for Sustainable Tourism in the Cairngorms		No relevant effects
Cairngorms Core Paths Plan		No relevant effects
Cairngorms Forest and Woodland Framework		No relevant effects
Highland Structure Plan		No relevant effects
Highland wide Local Development Plan		No relevant effects
Moray Structure Plan		No relevant effects
Moray Local Plan		No relevant effects
Cragg strategy		No relevant effects

Table 5 In combination effects

Natura Site: Cairngorms Massif SPA							
Aspect of plan (Source)	Description of source of effect	Qualifying feature potentially effected	Nature of effect: Recreational disturbance	Nature of effect: Pollution of water course	Nature of effect: Siltation of water course	Nature of effect: Loss of habitat	Nature of effect: Loss of supporting habitat
An Camas Mor new Community 09/0155/CP	Recreational disturbance on from long distance walkers	Golden Eagle	Nest sites are in remote uplands. The number of likely visits generated by new development to the SPA is not significant and restricted to walkers and fewer cyclists. Eagle nests are already in view of footpaths so some habituation is likely. One recently relocated nest may be vulnerable but is away from promoted paths. The SPA is very large covering the whole central plateau however				

			a small localised effect is possible.				
Cairngorms Local Development Plan: Aviemore and Vicinity settlement statement	Disturbance from low frequency longer distance recreation arising from new residents of development.	Golden Eagle	The number of likely visits generated by new development to the SPA is not significant and restricted to walkers and fewer cyclists.				
Cairngorms Local Development Plan: Ballater settlement statement	Disturbance from low frequency longer distance recreation arising from new residents of development.	Golden Eagle	The number of likely visits generated by new development to the SPA is not significant and restricted to walkers and fewer cyclists.				
Cairngorms Local Development Plan: Braemar settlement statement	Disturbance from low frequency longer distance recreation arising from new residents of development.	Golden Eagle	The number of likely visits generated by new development to the SPA is not significant and restricted to walkers and fewer cyclists.				
Cairngorms Local Development Plan: Killiecrankie settlement statement	Disturbance from low frequency longer distance recreation arising from new residents of development.	Golden Eagle	The number of likely visits generated by new development to the SPA is not significant and restricted to walkers and fewer cyclists.				
Cairngorms Local Development Plan: Nethybridge settlement statement	Disturbance from low frequency longer distance recreation arising from new residents of development.	Golden Eagle	The number of likely visits generated by new development to the SPA is not significant and restricted to walkers and fewer cyclists.				

Cairngorms Local Development Plan: Kincraig and vicinity settlement statement	Disturbance from low frequency longer distance recreation arising from new residents of development.	Golden Eagle	The number of likely visits generated by new development to the SPA is not significant and restricted to walkers and fewer cyclists.				
Cairngorms Local Development Plan: Tomintoul settlement statement	Disturbance from low frequency longer distance recreation arising from new residents of development.	Golden Eagle	The number of likely visits generated by new development to the SPA is not significant and restricted to walkers and fewer cyclists.				
Is combination likely to be a significant effect? Why?		There will be an overall increase in the number of users on all sides of the SPA. However the AA of the LDP ruled out any LSE due to the size of the Natura site and consequently the dispersed nature of the effects. The ACM development was included within this assessment and this conclusion remains valid. In considering more localised effects on the western side of the plateau the eagle nests are within sight of footpaths and therefore the birds are habituated sufficiently to the presence of walkers on the paths. Recently one nest has relocated to a more accessible location. This is by younger birds and they reared a single chick in 2013. It is also within an area that is not promoted and not well used. Additional measures are being undertaken to reduce current potential disturbance on this site. The small addition from the combination of developments will not result in an effect that is likely to be significant.					
Conclusion: is an Appropriate Assessment required?		**No**					

Section Four

Stages 6–10 Assessment and Conclusions

Stage 6: Appropriate Assessment

The proposals have been screened in Stages 4 and 5. It was found that for some Natura sites there were likely significant effects upon the qualifying interests. Consequently the following appropriate assessment is required to ascertain the implications for the conservation objectives for each site. The affected sites identified are:

- Abernethy Forest SPA
- Anagach Woods SPA
- Cairngorms SPA
- Craigmore Woods SPA
- Kinveachy Forest SPA
- Cairngorms SAC
- River Spey SAC

Cairngorms SPA
Qualifying species and conservation status Capercaillie Dotterel, 1999. Favourable maintained Golden eagle, 2003. Favourable maintained Merlin Osprey, 2006. Favourable maintained Peregrine, 2002. Favourable maintained Scottish Crossbill – not monitored to date
Conservation objectives To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and To ensure for the qualifying species that the following are maintained in the long term: Population of the species as a viable component of the site Distribution of the species within the site Distribution and extend of habitats supporting the species Structure, function and supporting process of habitats supporting the species No significant disturbance of the species

Effect on conservation objectives

Dotterel (Charadrius moninellus) – no effect; see table 3
Golden eagle (Aquila chrysaetos) – likely insignificant effect; see table 5
Merlin (Falco columbarius) – no effect; see table 3
Osprey (Pandion haliaetus) – no effect; see table 3
Peregrine (Falco peregrinus) – no effect; see table 3
Scottish crossbill (Loxia scotica) – no effect; see table 3

Capercaillie (Tetrao urogallus) – Likely significant effect alone; see table 3

Capercaillie

For more background information on Capercaillie within the UK and the significance of Badenoch and Strathspey see appendix 4.

It was concluded in the screening stage that there is a likely significant effect alone arising from the development on the population of capercaillie within this SPA. The following section considers the nature of this effect against the conservation objectives.

Will the development adversely affect the sites conservation objectives?

In this assessment, the implications of the planning application for the sites' conservation objectives are assessed in order to answer the question: "Can it be ascertained that the proposal will not adversely affect the integrity of the sites?"

The over-arching conservation objective of SPAs is to avoid deterioration of the habitats of the qualifying species, or significant disturbance to the qualifying species, thus ensuring that the integrity of the sites is maintained. This over-arching conservation objective can be broken down into the following detailed elements:

To ensure that the following are maintained in the long term for the qualifying species:

- Population of the species as a viable component of the sites
- Distribution of the species within sites
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species
- No significant disturbance of the species

In combination effects

As described at Stage 5 (screening); identification of in combination effects is required to identify where cumulative and synergistic effects are likely to be significant. The screening did not identify any in combination of effect upon the Cairngorms SPA that are likely to be significant.

Assessment against the Conservation Objectives

Capercaillie

1. Population of capercaillie as a viable component of the sites and distribution of

capercaillie within the Special Protection Areas

The development site is not within the SPA and does not have any habitat that is used by capercaillie. There are surrounding woodlands but those to the north and south do not show use by the species (Survey; Poole 2013). However the woodland to the east lies within the SPA and survey shows use to some level in many of these areas. The area closest to the site does not appear to be used by capercaillie however beyond that the level rises significantly.

Capercaillie will move from site to site, sometimes over large distances (Moss et al, 2006). The development site is not considered an important element in the distribution network for the species that includes Abernethy Forest, Anagach Woods, Cairngorms, Craigmore Woods and Kinveachy SPAs, as well as other non designated woodlands, all of which support significant elements of the Strathspey meta-population.

It is concluded that the population of capercaillie as a viable component of the SPA and the distribution of capercaillie within the SPA could be directly affected by the development. In addition it could be indirectly affected by the proposals if the meta population using the Abernethy SPA were to be subject to an increase in disturbance as a result of this development. This is also discussed in point 3 below.

2. Distribution and extent of habitats supporting capercaillie and structure, function and supporting processes of habitat supporting capercaillie

The proposed development lies out with the SPA and does not include any habitat used by capercaillie. There is therefore no effect upon the distribution, extent or function of supporting habitat.

It is concluded that there will be no effect upon this conservation objective.

3. No significant disturbance of capercaillie

There are three ways in which the proposed housing development could cause increased disturbance to capercaillie:

- Disturbance during construction.
- Disturbance arising directly from the housing site once it is occupied.
- An increased number of people recreating within the SPA.

Disturbance during construction

It was concluded at screening in table 3 that there is no effect from this source.

Disturbance arising directly from the housing site once it is occupied

It was concluded at screening in table 3 that there is no effect from this source.

An increased number of people recreating within the SPA

The SPA occupies much of the Glenmore area. The number of people using this area is estimated at around 400,000 pa annum, this is a cumulative total including resident and visitors to the area. Counters along the old logging way cycle way, the main cycle route into Glenmore from Aviemore confirm that approximately 60,000 use this track per annum.

The maximum number of houses at ACM will be 1500. Using a standard 2.1 modifier (a predicted occupancy rate for dwellings in the late 2020s) this give a population estimate of 3150 for the completed development. The population of Aviemore and vicinity in 2001 was 2397, however there has been a significant increase in housing since then and it is estimated that then population of

Aviemore is now around 3000. The increase in resident population of this central strath area will increase by approximately 100%. However this does not necessarily mean that the number of visits to the SPA will increase by this number. The overall figure includes visitors to the Park; the total for the CNP is approximately 1.4m per annum. It is generally agreed that Glenmore, Cairngorm and Rothiemurchus area is a major attraction to visitors and attracts a significant proportion of these. This 'base load' will be largely unaffected by the development. The development is for a new community and this include outdoor recreational facilities, such as foot and cycle paths and public open spaces, within the site and close to it nearer the river Spey and the proposed community park. This is likely to attract much of the daily walking for resident, especially those with dogs. However the SPA is within a 2km radius – considered to be the distance for average daily dog exercise.

The disturbance effects can be divided into direct and indirect effects and are discussed below.

Direct effects.

It has been determined within the screening stage that there are direct effects upon this SPA from the development. These effects are caused by the relationship of the patterns of recreation of residents and the distribution of birds within the area.

Recent survey and site inspection work undertaken by T. Poole (Capercaillie Project Officer) around the site and close parts of the Rothiemurchus estate and by the FCS and by the RSPB in Inshriach and Abernethy respectively has shown a distinct pattern of habitat use by capercaillie. To ensure the protection of the birds the description below is generalised and the surveys themselves are not in the public domain. However the information has been available to all consultees. The development site is not used by the birds and Callart Hill and Pityoulish Craig show no evidence of being used either. Similarly to the south and around the village of Coylumbridge. Other areas within the SPA show varying levels of activity with higher use found in good habitat that is difficult to access; this includes areas to the north of the Ski road.

Recreational activity in the Rothiemurchus area is managed by a well-defined network of footpaths and cycleway. There is very little unofficial route way creation. There are distinct foci around places such as the Coylumbridge facilities, Caravan and camp site, Badaguish, and Loch an Eileen. In addition there are some particularly well know routes for example the old logging way cycle track, the Sluggan and the main track towards the Lairig Ghru. It is anticipated that this pattern of use will remain largely unaltered by the development due to the well established path networks and visitor facilities and flows however the levels of use will increase as the residential population increases.

The most significant rise in access is likely to be daily walks of short duration, usually exercising dogs. This will be generally within a 2km radius of the development and much of it is likely to be focused upon the new facilities within the site. This would also include the 'country park' area to the west and the provision of the footbridge is likely to further encourage use in this area because it offers the prospect of short to medium length walks on a circular route through a variety of habitats, open farmland, woodland and adjacent to the river itself. These are away from key capercaillie areas. In addition walkers from Aviemore may also use these areas but are unlikely to go beyond the development area regularly because this would be beyond the 2km radius.

It is clear that the birds generally use areas less well used by people. This is often good habitat, for example bog woodland areas which are particularly difficult to access. In other places large core refuge areas exist where there are few paths and the distances between them are greater giving large coherent refuge areas. Only in two areas are leks within 100m of tracks and one of these may have recently moved further away.

Inshriach forest, shows distinct clusters of use, probably associated with better quality habitat. However the location of lek sites is relatively close to the extensive network of tracks (100-150m). Much of the area is also used for brood rearing. The increase within the woodland from the

development is likely to be greater in the northern section and less in the higher eastern areas or further south. It will remain focused upon the car parking provision for walkers but cyclists are more likely to use the track directly from the development itself. This distance from the development is such that the increase in activity will be focused upon weekend use for longer walks and rides. There is also likely to be a smaller rise in evening activity during the summer months with lighter evenings. The effect of increased disturbance here may be to reduce productivity at lekking and brood rearing phases, in addition frequent winter disturbance may reduce breeding condition of birds. Displacement due to disturbance is likely to be away from SPA and into less favourable habitat. Existing birds also occur in adjoining areas which in turn may be displaced. The relative high productivity of this area means it is likely to be a source of young birds to other areas through dispersal. A reduction means fewer available young birds and this may affect population levels within SPAs.

It is recognised that some woods are used by individual birds as 'stepping stones'; moving between designated woodlands. However this activity is by its nature infrequent and so there is little or no evidence showing this use. The low frequency means that disturbance is less likely in these areas. These effects have been considered for key woodlands in the screening matrix.

Indirect effects

The screening exercise identifies a direct likely significant effect upon Abernethy Forest SPA. This could potentially cause a loss of productivity within this SPA. Abernethy Forest is within the dispersal distance of the Cairngorms SPA. This may result in fewer birds dispersing from that SPA to the Cairngorms SPA. This may lead to a reduction in the overall population within the Cairngorms SPA and a loss of genetic diversity which could in theory lead to a further loss of population vitality.

It is concluded that there is likely to be an adverse effect upon this conservation objective. Additional mitigation is therefore required.

Additional mitigation

For Dotterel, golden eagle, merlin, osprey, peregrine and Scottish crossbill there are no likely significant effects; either alone or in combination. Consequently no further mitigation is required.

Capercaillie

From the assessment against the conservation objective is it apparent that issue of concern is recreational disturbance from the occupants of the development. This finding is consistent with those of the HRA for the draft Local Development Plan. Accordingly mitigation measures must address this issue and this can be delivered though the production of a recreation management plan (RMP) for capercaillie.

The HRA for the consultation draft of the Local Development Plan identified 10 criteria for RMPs. These were devised by CNPA in consultation with SNH and are designed to provide a robust and adaptable framework for the development of RMP that will give sufficient certainty of outcomes regarding the integrity of SPAs. These criteria were used to assess the housing development proposals at Boat of Garten. This was granted planning permission on 21/6/2013.

The requirement for the proposed development will follow similar lines and the criteria below have been adapted to the specific circumstances in this case.

It must be a condition of any consent that the master plan must include a recreation management plan that fulfils all of the criteria below. The RMP must contain mitigation measures to manage the recreation activity of the area to ensure no increase in

disturbance to the capercaillie. It will include physical measures within and out with the development site to facilitate this outcome. It must set out the mechanism(s) to deliver the RMP, within the application site, on other land in the control of the applicant, and for all other locations where recreational management measures will be required.

Criterion 1 - Current and estimated recreational use and provision: The mitigation measures must be based on a detailed and evidence-based understanding of current recreational use of the SPA and surrounding area where it is identified to be significant, (both spatially and temporally) in terms of numbers, distribution, behaviour and reasons and take account of the predicted future recreation demand arising from the proposed development. This must be included within the RMP

Criterion 2 - Best practice: The mitigation measures must be built on best practice and scientific evidence and reference should be made to relevant examples locally and elsewhere in UK or Europe where similar approaches have been proven to be effective in such situations

Criterion 3 - Location and time-specific: The mitigation measures must be designed to avoid an increase in disturbance throughout the Strathspey part of the SPA and other woods (including other SPAs and Inshriach Forest) where the development will cause disturbance effects to birds supporting the meta population. They must analyse information on the sensitivity of different parts of the woods for Capercaillie, and the sensitivity of different times of the day and year, alongside consideration of current and likely future levels and patterns of recreational use.

Criterion 4 - Paths and peoples' use: The mitigation measures must consider the network of paths, which meets the needs of the community and addresses the management needs of Capercaillie and are practical and enforceable. This will include provision within the development as well as possible changes to the network outwith the development area. The measures must demonstrate how they will ensure that there is no increase in recreational disturbance that might affect SPA by people and dogs off paths, or on minor / informal paths, as a result of this development and that how the proliferation of new informal paths will be avoided.

Criterion 5 - Community engagement and support: The measures must demonstrate effective engagement with the existing community, the future community of the development and recreational users with a sufficient degree of support to ensure the proposals are effective.

Criterion 6 - Alternative recreational provision: The mitigation measures must demonstrate how any predicted increases in the types of recreational use that are likely to disturb Capercaillie (e.g. dogs ranging off paths) will be catered for and diverted to a suitable location that won't disturb Capercaillie.

Criterion 7 - Any Screening measures, if required, may include planting and vegetation management. They must be effective and commensurate with the phasing of the development, including the construction phase.

Criterion 8 - Practical enforcement: The mitigation measures must demonstrate that the measures will be practically enforceable and maintained for the lifetime of the development.

Criterion 9 - Phasing: The RMP must identify how mitigation measures will be effective at the appropriate time in line with the construction and development phasing. Each phase must demonstrate that it will not adversely affect the integrity of the SPA alone or in combination with previous phases. It must be a condition of planning that there is no presumption of development of any phase unless this can be demonstrated to the satisfaction of CNPA and SNH.

Criterion 10 - Monitoring, review and adaptive management: The mitigation and management measures must be monitored and reviewed to ensure effectiveness for the lifetime of the development and a mechanism put in place to take further management measures to reduce

disturbance if necessary. A full monitoring programme must be included within the RMP.

Monitoring will be undertaken by the applicant, Rothiemurchus estate and the CNPA. It is likely to comprise a combination of the following techniques:

- Lek and Brood counts
- Dropping surveys
- People monitoring though counters, trail cameras and direct survey
- Other means as considered necessary by the CNPA and SNH.

The method and frequency of monitoring will be agreed by the CNPA and SNH.

An adaptive management approach must be taken by the CNPA and SNH. This uses the outcomes of monitoring to determine if additional management measures are required to prevent an increase in disturbance over the 2012 level. Additional options, including path closures or by-laws must be held in reserve as a last resort option. Management approaches are more likely to succeed over restrictive ones.

Minor residual effects

There is a minor residual effect remaining on golden eagle within this site. There are no other minor residual effects.

Conclusion on site integrity

With the mitigation, there will be no adverse effect upon the integrity of the Cairngorms SPA.

Abernethy Forest SPA

Qualifying species and conservation status

Capercaillie – 2009 Favourable maintained
Osprey – 2007 Favourable maintained
Scottish crossbill – not monitored to date

Conservation objectives

To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and

To ensure for the qualifying species that the following are maintained in the long term:

Population of the species as a viable component of the site
Distribution of the species within the site
Distribution and extend of habitats supporting the species
Structure, function and supporting process of habitats supporting the species
No significant disturbance of the species

Is the operation likely to have a significant effect on the qualifying interest? Consider each qualifying interest in relation to the conservation objectives

Capercaillie –Likely significant effect alone – see table 5
Osprey – no effect see table 3
Scottish crossbill – no effect see table 3

Capercaillie

It was concluded in the screening stage that there is a likely significant effect alone arising from the development on the population of capercaillie within this SPA. The following section considers the nature of this effect against the conservation objectives.

Will the development adversely affect the sites conservation objectives?

In this assessment, the implications of the planning application for the sites' conservation objectives are assessed in order to answer the question: "Can it be ascertained that the proposal will not adversely affect the integrity of the sites?"

The over-arching conservation objective of SPAs is to avoid deterioration of the habitats of the qualifying species, or significant disturbance to the qualifying species, thus ensuring that the integrity of the sites is maintained. This over-arching conservation objective can be broken down into the following detailed elements:

To ensure that the following are maintained in the long term for the qualifying species:

- Population of the species as a viable component of the sites
- Distribution of the species within sites
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species
- No significant disturbance of the species

In combination effects

The screening did not identify any in combination effect upon the Abernethy Forest SPA.

Assessment against the Conservation Objectives

Capercaillie

1. Population of capercaillie as a viable component of the sites and distribution of capercaillie within the Special Protection Areas

The development site is not within the SPA and does not have any habitat that is used by capercaillie. However survey records from the RSPB show that there are leks and brood rearing areas close to the path network and in such areas an increase in visitors here may directly affect the birds.

Capercaillie will move from site to site, sometimes over large distances (Moss et al, 2006). The development site is not considered an important element in the distribution network for the species that includes Abernethy Forest, Anagach Woods, Cairngorms, Craigmore Woods and Kinveachy SPAs, as well as other non-designated woodlands, all of which support significant elements of the Strathspey meta-population. However impacts upon these woodlands may have an indirect effect

upon the capercaillie within this SPA.

It is concluded that the population of capercaillie as a viable component of the SPA and the distribution of capercaillie within the SPA could be directly affected by the development. In addition it could be indirectly affected by the proposals if the meta population using the Cairngorms SPA were to be subject to an increase in disturbance as a result of this development. This is also discussed in point 3 below.

2. Distribution and extent of habitats supporting capercaillie and structure, function and supporting processes of habitat supporting capercaillie

The proposed development lies out with the SPA and does not include any habitat used by capercaillie. There is therefore no effect upon the distribution, extent or function of supporting habitat.

It is concluded that there will be no effect upon this conservation objective.

3. No significant disturbance of capercaillie

There are three ways in which the proposed housing development could cause increased disturbance to capercaillie:

- Disturbance during construction.
- Disturbance arising directly from the housing site once it is occupied.
- An increased number of people recreating within the SPA.

Disturbance during construction

It was concluded at screening in table 3 that there is no effect from this source.

Disturbance arising directly from the housing site once it is occupied

It was concluded at screening in table 3 that there is no effect from this source.

An increased number of people recreating within the SPA

The Abernethy Forest SPA is a large area and the distribution of birds within it is uneven. However there are points that are particularly well inhabited by the birds and these areas also contain key path routes well used by visitors.

There is likely to be a rise of recreation from the development of two main types. Walkers arriving by car and cyclists.

Walkers

Walkers arriving by car will use current car parking provision. These are focused upon the western side of the SPA around lochs Garten and Mallachie. There is a well know lek to the north of loch Garten and this is monitored closely by RSPB staff. Access is managed through the visitor centre where observation is possible without disturbing the birds. Approximately 40,000 visitors use this centre annually though this also includes osprey viewing. The RSPB also deploy ranger staff in this area to increase awareness of responsible dog walking. These measures are to some extent successful however incidents of irresponsible behaviour still occur.

The use of this area by capercaillie is lower than in the core forest areas however records do exist in this part. It is considered that the pattern of recreation around these facilities will remain unaltered but there will be an increase in levels of use.

Another car park exists around Forest lodge. This is not promoted to the general public though some use is made by them. It is possible that there will be a slight increase at this area too. The access road is shut to visitors in the mornings at during the lekking period to reduce any potential disturbance. However this does not address disturbance to brood rearing later in the season. The core woodlands are accessed by a network of paths and tracks. These are particularly popular with residents and visitors to Nethybridge.

Cyclists

There are a number of routes promoted for cycling within the area. Although the effect of cyclists is considered to be lower on the birds than walkers, especially walkers with dogs there is still some potential. There are many paths used regularly by cyclists, especially residents of Nethybridge and a smaller number from Boat of Garten. There is in addition a long route that runs through the SPA and connects Ryvoan Pass to the Pityoulish area via the Sluggan. This is used by residents along the route and the development will be similarly positioned. CNPA access officers advise that as a long distance route and across a variety of surfaces, not all of them easy, it suits occasional use but is unlikely to be used by residents frequently. The development is split into phases and it is likely that there will be an initial rise in users of the route following each phase but that this will reduce in time to a lower residual level. This level will however increase with each additional phase.

Additional mitigation

The mitigation measures described for the Cairngorms SPA section must cover all the effects upon this SPA. To be clear all the criteria for assessment of that RMP will be considered in relation to the Abernethy Forest.

Minor residual effects

There is no minor residual effect remaining on this site.

Conclusion on site integrity

With the mitigation, there will be no adverse effect upon the integrity of the Abernethy Forest SPA.

Anagach woods SPA

Qualifying species and conservation status

Capercaillie (Tetrao urogallus); not monitored to date

Conservation objectives

To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and

To ensure for the qualifying species that the following are maintained in the long term:

Population of the species as a viable component of the site
Distribution of the species within the site
Distribution and extend of habitats supporting the species
Structure, function and supporting process of habitats supporting the species
No significant disturbance of the species

Is the operation likely to have a significant effect on the qualifying interest? Consider each qualifying interest in relation to the conservation objectives

Assessment against the Conservation Objectives

Capercaillie

1. Population of capercaillie as a viable component of the sites and distribution of capercaillie within the Special Protection Areas

The development site is not within the SPA and does not have any habitat that is used by capercaillie. The development is 22km from this SPA and so the likely hood of significant numbers of visitors from the development sufficient to displace the capercaillie is thought to be low. It is concluded that there are no direct effects.

The Anagach woods are an important element in the distribution network for the species that includes Abernethy Forest, Cairngorms, Craigmore Woods and Kinveachy SPAs, as well as other non-designated woodlands, all of which support significant elements of the Strathspey meta-population. It has been discussed above that an effect on one or more of these components may have an indirect effect on the dispersal of birds around the Strath. This in turn may affect the viability of the population in this SPA.

It is known that the population of capercaillie within the woods has very low productivity. The numbers of birds within the woods is low and in decline. It depends largely upon the dispersal of birds from other areas. This potentially makes it more vulnerable to secondary effects arising from a reduced immigration from other parts of the Strath.

It is concluded that the population of capercaillie as a viable component of the SPA and the distribution of capercaillie within the SPA could be directly affected by the development. In addition it could be indirectly affected by the proposals if the meta population using the Cairngorms SPA were to be subject to an increase in disturbance as a result of this development. This is also discussed in point 3 below.

2. Distribution and extent of habitats supporting capercaillie and structure, function and supporting processes of habitat supporting capercaillie

The proposed development lies out with the SPA and does not include any habitat used by capercaillie. There is therefore no effect upon the distribution, extent or function of supporting habitat.

It is concluded that there will be no effect upon this conservation objective.

3. No significant disturbance of capercaillie

There are three ways in which the proposed housing development could cause increased

disturbance to capercaillie:

- Disturbance during construction.
- Disturbance arising directly from the housing site once it is occupied.
- An increased number of people recreating within the SPA.

Disturbance during construction

It was concluded at screening in table 3 that there is no effect from this source.

Disturbance arising directly from the housing site once it is occupied

It was concluded at screening in table 3 that there is no effect from this source.

An increased number of people recreating within the SPA

The distance from the development site combined with the availability of other equally attractive alternative walking areas between the two means that it is considered unlikely that a significant number of residents from the development are likely to use Anagach woods.

The location of the car parks (with one exception) lies to the south and west of the woodlands which is away from key habitat. There is one car park (Poor House) that lies closer however this is less well known as it lies on the minor road accessed through the town away from the direction of the Development. It is less likely that any visitors will use this car park than the others.

It is concluded that there is no effect of disturbance and consequently to this conservation objective

Additional mitigation

The mitigation measures described for the Cairngorms SPA section must cover the effects upon this SPA. To be clear all the criteria for assessment of that RMP will be considered in relation to the Anagach Woods SPA.

Minor residual effects

There are no minor residual effects remaining upon this site.

Conclusion on site integrity

With the mitigation, there will be no adverse effect upon the integrity of the Anagach Woods SPA.

Craigmore wood SPA

Qualifying species and conservation status

Capercaillie (Tetrao urogallus); unfavourable – no change

Conservation objectives

To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and

To ensure for the qualifying species that the following are maintained in the long term:

Population of the species as a viable component of the site
Distribution of the species within the site
Distribution and extend of habitats supporting the species
Structure, function and supporting process of habitats supporting the species
No significant disturbance of the species

Is the operation likely to have a significant effect on the qualifying interest? Consider each qualifying interest in relation to the conservation objectives

Capercaillie – Likely significant effect alone; table 3

Assessment against the Conservation Objectives
Capercaillie

1. Population of capercaillie as a viable component of the sites and distribution of capercaillie within the Special Protection Areas

The development site is not within the SPA and does not have any habitat that is used by capercaillie. The SPA lies to the North of Nethybridge approximately 15km from the development site. The site is not promoted to the public and levels of use are very low, mainly by residents. There are two possible car parking areas, neither of which is promoted. There is a single promoted footpath that runs through the southern section of the wood. This is away from the core area but it is known that birds do occasionally use this section. It is unlikely that the number of users to the wood will increase significant because of the lack of promotion and that the wood, a scots pine plantation, is less attractive than others closer to the development site.

Craigmore wood is an important element in the distribution network for the species that includes Abernethy Forest, Anagach Woods, Cairngorms and Kinveachy SPAs, as well as other non-designated woodlands, all of which support significant elements of the Strathspey meta-population. It has been discussed above that an effect on one or more of these components may have an indirect effect on the dispersal of birds around the Strath. This in turn may affect the viability of the population in this SPA.

It is known that the population of capercaillie within the wood is low and in decline. It depends largely upon the dispersal of birds from other areas. This potentially makes it more vulnerable to secondary effects arising from a reduced immigration from other parts of the Strath.

It is concluded that the population of capercaillie as a viable component of the SPA and the distribution of capercaillie within the SPA could be directly affected by the development. In addition it could be indirectly affected by the proposals if the meta population using the Cairngorms SPA were to be subject to an increase in disturbance as a result of this development. This is also discussed in point 3 below.

2. Distribution and extent of habitats supporting capercaillie and structure, function

and supporting processes of habitat supporting capercaillie

The proposed development lies out with the SPA and does not include any habitat used by capercaillie. There is therefore no effect upon the distribution, extent or function of supporting habitat.

It is concluded that there will be no effect upon this conservation objective.

3. No significant disturbance of capercaillie

There are three ways in which the proposed housing development could cause increased disturbance to capercaillie:

- Disturbance during construction.
- Disturbance arising directly from the housing site once it is occupied.
- An increased number of people recreating within the SPA.

Disturbance during construction

It was concluded at screening in table 3 that there is no effect from this source.

Disturbance arising directly from the housing site once it is occupied

It was concluded at screening in table 3 that there is no effect from this source.

An increased number of people recreating within the SPA

The distance from the development site combined with the availability of other more attractive alternative walking areas and the lack of promotion for recreation means that it is considered unlikely that a significant number of residents from the development are likely to use Craigmore wood.

The location the car parks do not take walkers immediately into the most highly used area though there are connections. A promoted path takes uses though the southern part of the wood.

It is concluded that there is no effect of increased disturbance and consequently no effect on this conservation objective

Additional mitigation

The mitigation measures described for the Cairngorms SPA section must cover the effects upon this SPA. To be clear all the criteria for assessment of that RMP will be considered in relation to the Craigmore Wood SPA.

Minor residual effects

There are no minor residual effects remaining upon this site.

Conclusion on site integrity

With the mitigation, there will be no adverse effect upon the integrity of the Craigmore Wood SPA

Kinveachy Forest SPA

Qualifying species and conservation status

Capercaillie (Tetrao urogallus); 2009 Favourable maintained
Scottish crossbill – not monitored to date

Conservation objectives

To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and

To ensure for the qualifying species that the following are maintained in the long term:

Population of the species as a viable component of the site
Distribution of the species within the site
Distribution and extend of habitats supporting the species
Structure, function and supporting process of habitats supporting the species
No significant disturbance of the species

Is the operation likely to have a significant effect on the qualifying interest? Consider each qualifying interest in relation to the conservation objectives

Capercaillie – Likely significant effect alone; see table 3
Scottish Crossbill - no effect; see table 3

Assessment against the Conservation Objectives

Capercaillie

1. Population of capercaillie as a viable component of the sites and distribution of capercaillie within the Special Protection Areas

The development site is not within the SPA and does not have any habitat that is used by capercaillie. The development is approximately 3.5km from this SPA at its closest footpath connection. This is beyond the regular short term daily walking radius of 2km and so it is likely that any increase in walkers is likely to be medium and long distance walking of a less frequent nature. In addition the SPA lies beyond Aviemore and this may act as a disincentive for walkers who prefer a more direct connection with the open countryside. The SPA is also uphill of the development site by approximately 225-275m and this may also act as a disincentive.

It is possible that some Aviemore residents who currently use the SPA for walking will be attracted to the development site and its footpath network especially with the new bridge providing easier more direct access to the site and Pityoulish area. This may reduce pressure from the village on the SPA. There may be some displacement of walkers who currently use the development site. It is thought that for the reasons above this will not mean a significant increase in the numbers using the SPA itself.

The SPA is not easily accessed from the Aviemore area by bike. The deer fence that forms the boundary is only crossed by high stiles over which it is difficult to take a bike. The area between the

SPA and the A9 does have regular cycle activity on the existing estate tracks. Additional cycle users are not thought to make a significant effect. The informal tracks developed for downhill mountain bike by local riders extend from the High Burnside area uphill broadly following the Milton Burn. This activity takes place in areas outwith the SPA but that is frequently used by capercaillie. The current activity is relatively low levels due to the technical difficulty of the track and that it is not promoted and therefore only used by local riders. Advice from CNPA access officers suggest that such tracks are generally used for finite periods of time as the pool of local riders eventually seeks new challenges. This may take years however. It is possible that the development may introduce more riders to the current track so that it will have greater longevity rather than increase the overall number of users at any one point in time.

The Kinveachy Forest SPA are an important element in the distribution network for the species that includes Abernethy Forest, Anagach Woods, Cairngorms, Craigmore Wood SPAs, as well as other non-designated woodlands, all of which support significant elements of the Strathspey meta-population. It has been discussed above that an effect on one or more of these components may have an indirect effect on the dispersal of birds around the Strath. This in turn may affect the viability of the population in this SPA. The likely significant effect on Abernethy Forest and the Cairngorms SPA means that there is an indirect effect upon Kinveachy Forest.

It is concluded that the population of capercaillie as a viable component of the SPA and the distribution of capercaillie within the SPA could be indirectly affected by the development if the meta population using the Abernethy Forest and Cairngorms SPA were to be subject to an increase in disturbance as a result of this development. This is also discussed in point 3 below.

2. Distribution and extent of habitats supporting capercaillie and structure, function and supporting processes of habitat supporting capercaillie

The proposed development lies out with the SPA and does not include any habitat used by capercaillie. There is therefore no effect upon the distribution, extent or function of supporting habitat.

It is concluded that there will be no effect upon this conservation objective.

3. No significant disturbance of capercaillie

There are three ways in which the proposed housing development could cause increased disturbance to capercaillie:

- Disturbance during construction.
- Disturbance arising directly from the housing site once it is occupied.
- An increased number of people recreating within the SPA.

Disturbance during construction

It was concluded at screening in table 3 that there is no effect from this source.

Disturbance arising directly from the housing site once it is occupied

It was concluded at screening in table 3 that there is no effect from this source.

An increased number of people recreating within the SPA

In section 1 above the direct effects of the development were considered and it was shown that there relate to the potential for disturbance from recreational activity. It was concluded

that there was no effect.

It is concluded that there is no effect of disturbance and consequently to this conservation objective

Additional mitigation

The mitigation measures described for the Cairngorms SPA section must cover the effects upon this SPA. To be clear all the criteria for assessment of that RMP will be considered in relation to the Kinveachy Forest SPA.

Minor residual effects

There is no minor residual effect remaining upon this site.

Conclusion on site integrity

With the mitigation, there will be no adverse effect upon the integrity of the Kinveachy Forest SPA.

Cairngorms SAC

Qualifying habitats and conservation status

Acid peat-stained lakes and ponds, 2004. Favourable maintained
Acidic scree, 2007. Favourable maintained
Alpien and subalpine heaths, 2007. Unfavourable no change
Blanket bog, 2004. Unfavourable no change
Bog woodland, 2002. Favourable maintained
Caledonian forest, 2009. Unfavourable declining
Hard-water springs depositing lime*
Clear water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels, 2004 Favourable maintained.
Dry heaths, 2007. Unfavourable no change
High-altitude plant communities associated with areas of water seepage, 2006. Unfavourable no change
Juniper on heaths or calcareous grasslands, 2007. Favourable maintained
Montane acid grasslands, 2006. Unfavourable recovering
Mountain willow scrub, 2007. Unfavourable no change
Plants in crevices on acid rocks, 2007. Favourable maintained
Plants in crevices on base-rich rocks, 2007. Unfavourable no change
Tall herb communities, 2007. Favourable maintained
Very wet mires often identified by an unstable 'quaking' surface, 2007. Favourable maintained
Wet heathland with cross-leaved heath, 2007. Unfavourable no change
(*indicates priority habitat)

Qualifying species and conservation status

Green-shield moss, 2006. Favourable maintained
Otter, 2004. Favourable maintained

Conservation objectives

To avoid deterioration of the qualifying habitats (listed above) thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and

To ensure for the qualifying habitats that the following are maintained in the long term:

Extent of the habitat on site
Distribution of the habitat within the site
Structure and function of the habitat
Process supporting the site
Distribution of typical species of the habitat
Viability of typical species as components of the habitat
No significant disturbance of typical species of the habitat

To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and

To ensure for the qualifying species that the following are maintained in the long term:

Population of the species as a viable component of the site
Distribution of the species within the site
Distribution and extend of habitats supporting the species
Structure, function and supporting process of habitats supporting the species
No significant disturbance of the species

Effect on conservation objectives

Off –site habitat creation measures have been identified to compensate for the loss of woodland habitat within the development site. This is proposed for a 78ha upland site within the SAC. A detailed survey of habitat within the recipient site has not been undertaken and it is possible that qualifying habitats will be lost by the new planting and/or natural regeneration. The 78ha area represents 0.1% of the area of the Cairngorms SAC. Native tree and shrub planting will increase the coverage of some of the other qualifying features e.g. Caledonian Forest (a priority habitat) and mountain willow scrub, however this could be at the expense of other qualifying features.

Habitats with no likely significant effect:
Caledonian forest*
Mountain willow scrub
Hard-water springs depositing lime*
High-altitude plant communities associated with areas of water seepage*
Juniper on heaths or calcareous grasslands
Montane acid grasslands
Bog Woodland*
Clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels
Dry grasslands and scrublands on chalk or limestone
Acid peat-strained lakes and ponds

Plants in crevices on base-rich rocks
Species-rich grassland with mat-grass in upland areas*
Tall herb communities
Very wet mires often identified by an unstable 'quaking' surface

Habitats with a likely significant effect upon the distribution and extent of habitat on the site:

Acidic scree
Alpine and subalpine heaths
Blanket bog*
Dry heaths
Plants in crevices on acid rocks
Wet heathland with cross-leaved heath

(*indicates priority habitat)

Qualifying species

Green shield-moss (Buxbaumia viridis) – no effect see table 3
Otter (Lutra lutra) – no effect see table 3

Additional mitigation

The application must have a condition that requires a full survey and detailed planting plan. This must be agreed with the CNPA as part of the master plan application and prior to any development occurring on site. The information provided must clearly show that the extent of tree cover within the site will not adversely affect any qualifying habitats. This will eliminate the likelihood of effecting qualifying habitats

Minor residual effects

There is no minor residual effect remaining upon this site.

Conclusion on site integrity

Following mitigation, there will be no adverse effect upon the integrity of the Cairngorms SAC.

River Spey SAC

Qualifying species and conservation status

Atlantic salmon, 2005. Unfavourable recovering
Freshwater pearl mussel, 2005. Unfavourable recovering
Otter, 2007. Favourable maintained
Sea lamprey, 2007. Favourable maintained

Conservation objectives

To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained and

the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and

To ensure for the qualifying features that the following are maintained in the long term:

Population of the species, including range of genetic types for salmon, as a viable component of the site
Distribution of the species within site
Distribution and extent of habitats supporting the species
Structure, function and supporting processes of habitats supporting the species
No significant disturbance to the species
Distribution and viability of freshwater pearl mussel host species
Structure, function and supporting processes of habitats supporting freshwater pearl mussel host species

Effect on conservation objectives

There are two bridges associated with the development and other works close to watercourses. Footpaths may need to be constructed within 30m of Spey. In addition compensation planting works are proposed for areas close to watercourses. Spillage of chemicals, physical damage and siltation may occur from these operations close to river.

The use of hard impervious surfaces within development is likely to increase the speed with which rainfall enters watercourses. This can increase flood events causing damage to river habitats. This rainfall may also bring particles from these surfaces which may cloud water and reduce its quality.

Qualifying species

Freshwater pearl mussel (Margaritifera margaritifera)
Physical damage from construction of structures or unplanned events during the construction and accidental chemical pollution arising from incidents during construction phase may affect the distribution of the species and its supporting habitats.

FWPM is susceptible to levels of phosphorous levels as MRP (molybdate-reactive phosphorus) within the water. The effect of MRP is to encourage algal growth especially within interstitial spaces in river bed substrate; this may lead to the suffocation of juveniles and inhibit their recruitment to existing or new beds. The safe limit varies from river to river as water chemistry and population characteristics are not uniform across the UK. Currently a limit of 0.03mg/l is recommended. Data from SEPA shows that during the period of 2000 – 2006 this level was breached on four occasions in the Aviemore area, more recent data is not available. The River Basin Management Plan 2010 has classified this water body as having an overall status of Moderate with Medium confidence in 2008 with overall ecological status of Moderate and overall chemical status of – "Pass". The safe limit for juvenile FWPM is considered below that for adults. There is no European standard for MRP and juvenile recruitment is recorded at different levels across the continent with a lowest figure in Ireland at 0.005mg/l and the highest figure being in Norway at 0.015mg/l. SNH will be carrying out Site Condition Monitoring on the River Spey in 2013 and this will provide an up to date assessment of the conservation status of the qualifying species, including in relation to nutrient pollution. Once available, this data will be used to ascertain the appropriate thresholds and inform the necessary further conditions to be imposed on the development at the masterplan and subsequent stages, which are referred to more fully below. In addition, this data will be used by SNH and SEPA to agree appropriate thresholds that maintain the favourable status of Natura species that will be used when setting discharge licences.

A major source of phosphorous is from waste water being discharged into water course either treated or untreated. SNH identified (2007) that the main pressure on MRP levels on the river Spey is from point source associated with WWTW. The proposal for ACM is to take all waste water to the public treatment works at Aviemore. There is insufficient capacity at present for the predicted additional volume of WW from ACM.

This application does not include the upgrade of the WWTW at Aviemore but indicates the intention to take WW to that source. The WWTW will require upgrading and this would be subject to a separate planning application. This would be subject to its own HRA. There would be two competent authorities in this situation, the Planning authority and SEPA. Where there are two such authorities the regulation requires the most relevant one to undertake the HRA. In this case this would be SEPA as the issue is water quality arising for the development. The application would also be subject to a licence from SEPA under CAR.

Atlantic salmon (Salmo salar)

Physical damage from construction of structures or unplanned events during the construction phase may lead to the disturbance and/or the distribution of the species and its supporting habitat.

Accidental chemical pollution arising from incidents during construction may affect the distribution of the species and its supporting habitats.

Atlantic Salmon can also be affected by levels of soluble nutrients, particularly at egg stage, which can affect habitat quality and the levels of algae and macrophytes in the water. Based on advice from SNH, Atlantic Salmon are considered less sensitive to changes in nutrient levels than freshwater pearl mussel. The same issues in terms of data in relation to juveniles of the species apply as freshwater pearl mussel and the same process of using forthcoming data to ascertain the appropriate thersholds and inform the necessary further conditions will be employed as per freshwater pearl mussel.

Otter (Lutra lutra)

Physical damage and normal activity from construction of structures or unplanned events during the construction phase may lead to the disturbance and/or the distribution of the species and its supporting habitat.

Accidental chemical pollution arising from incidents during construction may affect the distribution of the species either directly from toxic effects on individuals or through affects upon food source.

Recreational activity in or near the riparian zone from occupants of ACM may lead to increase in disturbance to otter. The new bridge may in addition encourage more existing resident to recreate close to the water on both sides of the river. This may affect the distribution of the species within the site as well as being significant disturbance.

The road bridge is likely to result in the loss of approximately 0.2ha of riparian woodland. This is supporting habitat as it provides potential cover for otter as well as foraging habitat. However in this case the river banks are not well suited for riverside resting places due to bank morphology and lack of cover. In addition both sides are currently close to public access and so disturbance is likely to dissuade otter from using the area regularly. The design of the bridge will not affect that banks and will allow clear passage of animals underneath. This means there is no disruption to either the connectivity or the distribution of the habitat. There will never-the-less be a small loss of supporting habitat but it is not considered to be of sufficient magnitude to affect the integrity of the designated site. Therefore no further mitigation is required for natura purposes. That notwithstanding we also note that additional planting of riparian woodland is being undertaken by the applicant of 1.0ha of riparian woodland in an area that is not subject to disturbance. This is within the development proposals but unconnected to Natura.

Sea lamprey (Petromyzon marinus)

Physical damage from construction of structures or unplanned events during the construction phase may lead to the disturbance and/or affect the distribution of the species and its supporting habitat.

Accidental chemical pollution arising from incidents during construction may affect the distribution of the species and its supporting habitats.

Sea Lamprey can also be affected by levels of soluble nutrients, particularly at egg stage, which can affect habitat quality and the levels of algae and macrophytes in the water. Based on advice from SNH, Sea Lamprey are considered less sensitive to changes in nutrient levels than freshwater pearl mussel. The same issues in

terms of data in relation to juveniles of the species apply as freshwater pearl mussel and the same process of using forthcoming data to ascertain the appropriate thresholds and inform the necessary further conditions will be employed as per freshwater pearl mussel.

Canadian research indicates that Sea Lamprey are susceptible to bright lighting on the water course during migration. Lighting at these times of year from construction plan or to site works, permanently installed on bridges or footpaths close to water courses may inhibit the movement of the species. This may affect the distribution of the species within the site.

Additional mitigation

There are a number of mitigations required for the above effects:

1. Construction method statement

A condition must be applied to a permission that requires a construction method statement (CMS) to be agreed with the CNPA prior to the start of construction on site for each phase of construction. The CMS must clearly demonstrate that risks to watercourses and ground water are eliminated through application of good site management in accordance with accepted best practice and guidelines. This must be in accordance with recognising best practice guidelines in particular SEPA PPG 1, 5 and 6. Where required through statute, Controlled Activity Regulations (CAR) must be complied with. Development must not commence until it has been demonstrated to the planning authority that the measures in the CMS have been adopted for onsite management.

This is a well-practiced approach that is applied to many construction projects and it will effectively manage these risks. This will mitigate the effects upon Otter, Atlantic salmon, sea lamprey and freshwater pearl mussel and ensure that there will be no effect upon the distribution of the species or their supporting habitats

2. Lighting detail approval

A condition must be applied to the permission for a requirement that all bridges and footpaths within 30m of water courses must demonstrate that there will be no direct light fall on the water surface. This must be agreed with the CNAP at detail planning consent stage.

This will eliminate the likelihood of light fall preventing migration of sea lamprey.

3. Otter survey and footpath/bridge location approval

A condition must be applied that requires at Master plan stage a full survey, appraisal and species protection plan (SPP) for otter. This must be undertaken in accordance with recognised methodology. The detail footpath and bridge location must clearly demonstrate by reference to the survey that there will be no disturbance to any holts or resting places.

The appraisal must address construction activity, design and use of the development to see if there would be any effect upon otters. Any identified effects must be eliminated through modifications to proposals and detailed within the SPP. If otters are present, measures will include: covering excavations when not in use to ensure otters do not become trapped, the siting of development, such as bridges, roads and paths, more than 30 metres away from active places of rest, screening planting and removing lighting that may cause nocturnal disturbance. The survey must be submitted with the master plan planning application.

This is a well-practiced approach this will mitigate likely significant effects upon the distribution and disturbance to the species within the site.

4. SUDS

A condition must be applied requiring fully detailed SUDS at master plan and detailed planning permission stages. This must clearly demonstrate that flooding and particle discharge into the river arising for the site will be prevented. The SUDS must be fully implemented prior to the point it is required for effective operation.

An approved scheme will prevent run-off from the site and its required implementation prior to development will ensure compliance.

5. Waste Water

A condition must be applied to this application preventing occupation of any dwelling until the development is connected to the public waste water system. It must be clearly demonstrated that this system is capable of handling the additional waste water, at the time of connection, and treating it to the required standards appropriate to freshwater Pearl Mussel, Atlantic Salmon and Sea Lamprey prevalent at that time taking account of the up to date Site Condition Monitoring data.

This will prevent an increase in pollutant arising from the development by ensuring it is treated to acceptable standards. This will mitigate likely significant effect affecting the distribution and supporting habitat for freshwater pearl mussel, atlantic salmon and sea lamprey.

Minor residual effects

There is no minor residual effect remaining upon this site.

Conclusion on site integrity

Following mitigation, there will be no adverse effect upon the integrity of the River Spey SAC.

Stage 7: Consultation

Regulation 48(3) requires the authority to consult with the appropriate conservation body and to have regard to their representations. In Scotland this is SNH. This report and its conclusion have been subject to such consultation.

Wider consultation of the draft report is at the discretion of the competent authority. In the case of An Camas Mor it was decided that consultation with the RSPB should be undertaken because of their central interest and data in the main subject of the assessment. In addition CNPA has consulted with Rotheimurchus Estate and Forest Enterprise because of their role in managing a significant part of the Cairngorms SPA.

The consultation was undertaken in and June and July of 2013. This report incorporates the representations of the consultees where the CNPA concluded it was appropriate to do so. There were over 100 separate comments from the consultees which makes full reporting

here impractical. However a summary of the representations and the CNPA response to them is included in Appendix 5 at the end of this report.

Stage 8: Additional mitigation

Natura site regulation 48(6) requires the competent authority to:

"(6) In considering whether a plan or project will adversely affect the integrity of the site, the authority shall have regard to the manner in which it is proposed to be carried out or to any conditions or restrictions subject to which they propose that the consent, permission or other authorisation should be given"

In cases where significant effects have been identified upon the qualifying features the authority must give consideration to what additional measures may be applied by way of a condition or agreement to ensure that there are no adverse effects so that the integrity of the site is maintained.

The appropriate assessment identified a number of additional mitigation measures that are required in addition to the development proposals. These have been detailed within the assessment for each Natura site however they are summarised below. They must be subject to a condition to the application to be delivered at the stage identified:

Cairngorms SPA

- Recreation Management Plan for capercaillie – to be included at master plan stage and delivered post application and at individual development phases

Abernethy Forest SPA – to be included within the RMP for capercaillie above

Anagach Woods SPA – to be included within the RMP for capercaillie above

Craigmore Wood SPA – to be included within the RMP for capercaillie above

Kinveachy Forest – to be included within the RMP for capercaillie above

Cairngorms SAC

- Habitat Survey and planting plan for compensation planting within SAC – to be included at master plan stage

River Spey SAC

- Construction method statement – at each phase application, approved prior to on site works
- Lighting detail consent – at each phase application
- Otter species protection plan – at master plan stage
- SUDS – at master plan and each phase stage
- Waste water treatment – at master plan stage and for each phase

Stage 9: Conclusion on the integrity test

This assessment based upon the best available scientific evidence and advice offered from SNH and others has shown that, with the additional mitigation measures, there is no likely significant effect from the proposed development upon the qualifying features or the conservation objectives for the following Natura sites:

- Cairngorms SAC
- Kinveachy Forest SAC
- River Spey SAC
- Abernethy Forest SPA
- Anagach Woods SPA
- Cairngorms SPA
- Cairngorms Massif SPA
- Craigmore Wood SPA
- Kinveachy Forest SPA
- Loch Vaa SPA

We therefore conclude that the proposed development, subject to the mitigation measures identified in this appropriate assessment and applied to any consent, will not adversely affect the integrity of any of these sites.

Stage 10: Section 49 (derogation)

The conclusion that there is no adverse effect upon the integrity of any of the Natura sites covered in this report means that regulation 49 is not relevant.

Summary of Residual Effects

In order to make it easier for future HRAs to access information on minor residual effects those found within this HRA have been summarised in the table below:

Table 6 Summary of minor residual effects

Natura Site	Qualifying interest	Effect
Cairngorms SPA	Golden eagle	Disturbance from recreational access
Cairngorms Massif SPA	Golden eagle	Disturbance from recreational access

References

Habitat Regulations process

Council Directive 92/43/EEC "the Habitats Directive" EEC adopted 1992

"Managing Natura 2000 sites: The Provisions of Article 6 of the 'Habitats' Directive 92/43/EEC" – EU communities 2000

"Assessment of Plans and Projects Significantly Affecting Natura 200 Sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC" – European Commission, November 2001

Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC - EC 2007

The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)

Welsh Assembly Government TAN 5: Nature Conservation and Planning - 2009

Habitat Regulations Appraisal of Plans – Guidance for Plan Making Bodies in Scotland SNH/DTA August 2012 (Version 2.0)

Other sources

Cairngorms National Park Core Paths Plan2010 – CNAP - 2010

Cairngorms Outdoor Access Strategy 2007-2012 – CNPA 2007

Census data 2001 – General Census Office for Scotland

National Travel Survey 2010 Statistical release Department of Transport. 2011

Scottish Recreation Survey, Annual Summary report 2011. CR No. 535 SNH 2012

Capercaillie Impacts

Eaton, M.E., Marshall, K.B. & Gregory, R.D. (2007). Status of Capercaillie *Tetrao urogallus* in Scotland during winter 2003/4. Bird Study 54: 145 – 153.

Ewing, SR, Eaton, MA, Poole, T, Davies, M, & Haysom, S. (2010). The size of the Scottish population of capercaillie Tetrao urogallus: results of the fourth national survey. Bird Study Vol.59, Issue 2, pp 126 – 138.

Fernandez-Juricic, E, Jimenez, MD & Lucas, E. (2001). Alert distance as an alternative measure of bird tolerance to human disturbance: implications for park design. Environmental Conservation 28(3): 263 – 269.

Jenkinson, S. (2011). People and Dogs in the Outdoors. Report for CNPA.

Hjelford, O., Wegge, P, Rolstad, J. Ivanova, M & Beshkarev, A.B. (2000). Spring-summer movements of the male capercaillie *Tetrao urogallus*: A test of the 'landscape mosaic' hypothesis.

Marshall K. (2005). Capercaillie and recreational disturbance study. Unpublished report for CNPA, FCS and SNH.

Moss, R., Oswald, J. & Baines, D. (2001). Climate change and breeding success: decline of the capercaillie in Scotland. *J.Anim.Ecol.,* 70, 47-61.

Moss, Robert; Picozzie, Nicholas; Catt, David C. (2006). Natal dispersal of capercaillie *Tetrao urogallus* in northeast Scotland. Wildlife Biology, 12 (2). 227 – 232.

Moss, R. (2008). The distribution of capercaillie droppings in relation to sources of disturbance: a pilot study at Anagach Woods. Draft progress report to Capercaillie BAP Group.

Moss, R. (2009). The distribution of capercaillie droppings in relation to sources of disturbance: Part II, Boat of Garten Wood. Draft progress report to Capercaillie BAP Group.

Moss, R. (2010). The distribution of capercaillie droppings in relation to sources of disturbance: Part II, Boat of Garten Wood. Draft progress report to Capercaillie BAP Group, Version 2.

Moss, R. (2010). The distribution of capercaillie droppings in relation to sources of disturbance: Part III, Glenmore Forest Park. Draft progress report to Capercaillie BAP Group.

Poole, T. (2010). Capercaillie conservation in Scotland – importance of Strathspey metapopulation. Unpublished Report.

Scottish Settlements: Urban and Rural Areas in Scotland. http://www.gro-scotland.gov.uk/files/00settle.pdf

Storch, I (1995). Annual home ranges and spacing patterns of capercaillie in Central Europe. Journal of Wildlife Management 59(2): 392 – 400.

Storch, I. & Segelbacher, G. (2000). Genetic correlates of spatial population structure in central European capercaillie *Tetrao urogallus* and black grouse *T. tetrix*: a project in progress. Wildlife Biology 6(4): 305 – 310.

Summers, R.W., McFarlane, J & Pearce-Higgins, J.W. (2007). Measuring avoidance by capercaillies *Tetrao urogallus* of woodland close to tracks. Wildlife Biology 13(1): 19 – 27

Sutherland, W.J., Newton, R. & Green, R.E. (2004). Bird Ecology and Conservation: A Handbook of Techniques. Oxford University Press.

Thiel, D., Jenni-Eiermann, S. & Palme, R. (2005). Measuring corticosterone metabolites in droppings of capercaillie. *Annals of the New York Academy of Sciences*, 1046, 1-13.

Thiel, D., Menoni, E., Brenot, J.B. & Jenni, L. (2007). Effects of recreation and hunting on flushing distance of capercaillie. The Journal of Wildlife Management 71(6): 1784 – 1792.

Thiel, D., Jenni-Eiermann, S., Braunisch, V., Palme, R. & Jenni, L. (2008**).** Ski tourism affects habitat use and evokes a physiological stress response in capercaillie *Tetrao urogallus*: a new methodological approach. *J. Appl.Ecol*., 45 (3), 845-853**.**

Watson, A & Moss, R 2008. Grouse. London: Collins.

Wegge, P., Rolstad, J., & Gjerde, I. (1992). Effects of boreal forest fragmentation on capercaillie grouse: empirical evidence and management implications. In McCullough, D.R. & Barret, R.H. (Eds.) Wildlife (2001): Populations. Elsevier, New York, pp. 738 – 749.

Wegge, P., Finne, M.H. & Rolstad J. (2007). GPS satellite telemetry provides new insight into capercaillie *Tetrao urogallus* brood movements. Wildlife Biology 1:Suppl.1

Zeitler, A. (2000). Human disturbance, behaviour and spatial distribution of black grouse in skiing areas in the Bavarian Alps. *Cahiers d'Ethologie*, 20, 1-22.

Freshwater pearl Mussel

Young, M. (2005). A literature review of the water quality requirements of the freshwater pearl mussel (Margaritifera margaritifera) *and related freshwater bivalves. Scottish Natural Heritage Commissioned Report No. 084 (ROAME No. F01AC609d).*

Moorkens, E. A. (2006). Irish non-marine molluscs – an evaluation of species threat status. *Bulletin of the Irish Biogeographical Society* **30**, 348–371

Törnblom, J., Degerman, E. Angelstam, P., Henrikson, L., Söderberg, H., Norrgrann, O., Andersson, K. 2008. Predicting occurrence of viable populations of freshwater pearl mussels, *Margaritifera margaritifera* (L.), in Swedish boreal forest. In Törnblom, J. A Landscape Approach towards Ecological Integrity of Catchments and Streams. Doctoral Thesis No.2008:70. Faculty of Forest Sciences, SLU

Langan, S, Cooksley, S, Young, M, Stutter, M, Scougall, F, Dalziel, A, Feeney, I, Lilly, A and Dunn S. (2007). The management and conservation of the freshwater pearl mussel in Scottish catchments designated as Special Areas of Conservation or Sites of Special Scientific Interest. Scottish Natural Heritage Commissioned Report No.249 (ROAME No. F05AC607).

RBMP Water body information sheet for water body 23097 (River Spey; River Feshie to River Nethy) in North East Scotland. SEPA 2010

Sea Lamprey

Fredricks K. et al. The feasibility of using strobe lights to direct Sea Lamprey movement. National Biological Service 1996.

Appendix 1 –
Details of Natura 2000 sites within, or adjacent to, the proposed development site

Name of European Site	Abernethy Forest
Site Type	**Special Protection Area**
Conservation Objectives	To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and To ensure for the qualifying species that the following are maintained in the long-term: Population of the species as a viable component of the site Distribution of the species within the site Distribution and extent of habitats supporting the species Structure, function and supporting process of habitats supporting the species No significant disturbance of the species
Qualifying Species	Capercaillie (Tetrao urogallus) Osprey (Pandion haliaetus) Scottish crossbill (Loxia scotica)
Site Condition	Capercaillie, breeding, 2009. Favourable maintained. Osprey, breeding, 2007. Favourable maintained. Scottish crossbill, not monitored to date.
Factors currently influencing site	In terms of development, no factors currently influencing site
Vulnerabilities to change/potential effects of the Plan	Disturbance from construction and recreation arising from neighbouring development Relevant settlements: Boat of Garten, Nethy Bridge

Name of European Site	Anagach Woods
Site Type	**Special Protection Area**
Conservation Objectives	To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and To ensure for the qualifying species that the following are maintained in the long-term: Population of the species as a viable component of the site Distribution of the species within the site Distribution and extent of habitats supporting the species Structure, function and supporting process of habitats supporting the species No significant disturbance of the species
Qualifying Species	Capercaillie (Tetrao urogallus)
Site Condition	Breeding capercaillie, not monitored to date.
Factors currently influencing site	Impact from disturbance from adjacent village and footpaths within the wood
Vulnerabilities to change/potential effects of the Plan	Disturbance from construction and recreation arising from neighbouring development Relevant settlements: Grantown-on-Spey

Name of European Site	Cairngorms
Site Type	**Special Area of Conservation**
Conservation Objectives	To avoid deterioration of the qualifying habitats (listed below) thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and To ensure for the qualifying habitats that the following are maintained in the long-term: Extent of the habitat on site Distribution of the habitat within the site Structure and function of the habitat Process supporting the site Distribution of typical species of the habitat Viability of typical species as components of the habitat No significant disturbance of typical species of the habitat
Qualifying Habitats	Acid peat-strained lakes and ponds Acidic scree Alpine and subalpine heaths Blanket bog* Bog woodland* Caledonian forest* Clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels Dry grasslands and scrublands on chalk or limestone Dry heaths Hard-water springs depositing lime* High-altitude plant communities associated with areas of water seepage* Juniper on heaths or calcareous grasslands Montane acid grasslands Mountain willow scrub Plants in crevices on acid rocks Plants in crevices on base-rich rocks Species-rich grassland with mat-grass in upland areas* Tall herb communities Very wet mires often identified by an unstable 'quaking' surface Wet heathland with cross-leaved heath (*indicates priority habitat)
Site Type	**Special Area of Conservation**
Conservation Objectives	To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained and the

	site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and To ensure for the qualifying species that the following are maintained in the long-term: Population of the species as a viable component of the site Distribution of the species within the site Distribution and extent of habitats supporting the species Structure, function and supporting process of habitats supporting the species No significant disturbance of the species
Qualifying Species	Green shield-moss (Buxbaumia viridis) Otter (Lutra lutra)
Site Type	**Special Protection Area**
Conservation Objectives	To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and To ensure for the qualifying species that the following are maintained in the long-term: Population of the species as a viable component of the site Distribution of the species within the site Distribution and extent of habitats supporting the species Structure, function and supporting process of habitats supporting the species No significant disturbance of the species
Qualifying Species	Capercaillie (Tetrao urogallus) Dotterel (Charadrius moninellus) Golden eagle (Aquila chrysaetos) Merlin (Falco columbarius) Osprey (Panion haliaetus) Peregrine (Falco peregrinus) Scottish crossbill (Loxia scotica)
Site Condition	Acid peat-stained lakes and ponds, 2004. Favourable maintained. Acidic scree, 2007. Favourable maintained. Alpien and subalpine heaths, 2007. Unfavourable no change. Blanket bog, 2004. Unfavourable no change. Bog woodland, 2002. Favourable maintained. Caledonian forest, 2009. Unfavourable declining. Clear water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels, 2004. Favourable maintained. Dry heaths, 2007. Unfavourable no change. Green-shield moss (Bauxbaumia viridis), 2006. Favourable maintained. High-altitude plant communities associated with areas of water seepage, 2006. Unfavourable no change.

	Juniper on heaths or calcareous grasslands, 2007. Favourable maintained. Montane acid grasslands, 2006. Unfavourable recovering. Mountain willow scrub, 2007. Unfavourable no change. Otter, 2004. Favourable maintained. Plants in crevices on acid rocks, 2007. Favourable maintained. Plants in crevices on base-rich rocks, 2007. Unfavourable no change. Tall herb communities, 2007. Favourable maintained. Very wet mires often identified by an unstable 'quaking' surface, 2007. Favourable maintained. Wet heathland with cross-leaved heath, 2007. Unfavourable no change. Breeding dotterel, 1999. Favourable maintained. Breeeding golden eagle, 2003. Favourable maintained. Breeding osprey, 2006. Favourable maintained. Breeding peregrine, 2002. Favourable maintained.
Factors currently influencing site	In terms of development, none at present
Vulnerabilities to change/potential effects of the Plan	Recreational disturbance to species from neighbouring development Relevant settlements: An Camus Mòr, Boat of Garten – also developing of, or extension of existing, recreational facilities Wind farms could impact on young golden eagles, given their mobility

Name of European Site	Cairngorms Massif
Site Type	**Special Protection Area**
Conservation Objectives	To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and To ensure for the qualifying species that the following are maintained in the long-term: Population of the species as a viable component of the site Distribution of the species within the site Distribution and extent of habitats supporting the species Structure, function and supporting process of habitats supporting the species No significant disturbance of the species
Qualifying Species	Golden eagle (Aquila chrysaetos)
Site Condition	Golden eagle – not monitored to date
Factors currently influencing site	In terms of development, none at present
Vulnerabilities to change/potential effects of the Plan	No specific vulnerabilities identified

Name of European Site	Craigmore Wood
Site Type	**Special Protection Area**
Conservation Objectives	To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and To ensure for the qualifying species that the following are maintained in the long-term: Population of the species as a viable component of the site Distribution of the species within the site Distribution and extent of habitats supporting the species Structure, function and supporting process of habitats supporting the species No significant disturbance of the species
Qualifying Species	Capercaillie (Tetrao urogallus)
Site Condition	Capercaille, 2009. Unfavourable no change.
Factors currently influencing site	In terms of development, none at present
Vulnerabilities to change/potential effects of the Plan	Recreational disturbance from development in neighbouring areas Relevant settlements: Boat of Garten, Nethy Bridge

Name of European Site	Kinveachy Forest
Site Type	**Special Area of Conservation**
Conservation Objectives	To avoid deterioration of the qualifying habitat (listed below) thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and To ensure for the qualifying habitats that the following are maintained in the long-term: Extent of the habitat on site Distribution of the habitat within the site Structure and function of the habitat Process supporting the site Distribution of typical species of the habitat Viability of typical species as components of the habitat No significant disturbance of typical species of the habitat
Qualifying Habitats	Bog woodland* Caledonian forest* (* indicates priority habitat)
Site Type	**Special Protection Area**
Conservation Objectives	To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and To ensure for the qualifying species that the following are maintained in the long-term: Population of the species as a viable component of the site Distribution of the species within the site Distribution and extent of habitats supporting the species Structure, function and supporting process of habitats supporting the species No significant disturbance of the species
Qualifying Species	Capercaillie (Tetrao urogallus) Scottish crossbill (Loxia scotica)
Site Condition	Bog woodland*, 2009. Unfavourable recovering. Caledonian forest*, 2009. Unfavourable recovering. Capercaillie (Tetrao urogallus), 2009. Favourable maintained. Scottish crossbill (Loxia scotica), not monitored to date.
Factors currently influencing site	In terms of development, none at present.

Vulnerabilities to change/potential effects of the Plan	Recreational disturbance from development in neighbouring areas Relevant settlements: Boat of Garten

Name of European Site	Loch Vaa
Site Type	**Special Protection Area**
Conservation Objectives	To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and To ensure for the qualifying species that the following are maintained in the long-term: Population of the species as a viable component of the site Distribution of the species within the site Distribution and extent of habitats supporting the species Structure, function and supporting process of habitats supporting the species No significant disturbance of the species
Qualifying species	Slavonian grebe (Podiceps auritus)
Site Condition	Slavonian grebe (Podiceps auritus), 2010. Unfavourable no change.
Factors currently influencing site	In terms of development, none at present
Vulnerabilities to change/potential effects of the Plan	Effects on water quality including sewerage treatment, release of minerals, contamination or other waste

Name of European Site	River Spey
Site Type	**Special Area of Conservation**
Conservation Objectives	To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and To ensure for the qualifying habitats that the following are maintained in the long-term: Population of the species, including range of genetic types for salmon, as a viable component of the site Distribution of the species within site Distribution and extent of habitats supporting the species Structure, function and supporting processes of habitats supporting the species No significant disturbance to the species Distribution and viability of freshwater pearl mussel host species Structure, function and supporting processes of habitats supporting freshwater pearl mussel host species
Qualifying Interest(s)	Atlantic salmon Freshwater pearl mussel Otter Sea lamprey
Site Condition	Atlantic salmon, 2005. Unfavourable recovering. Freshwater pearl mussel, 2005. Unfavourable recovering. Otter, 2007. Favourable maintained. Sea lamprey, 2007. Favourable maintained.
Factors currently influencing site	In terms of development, none at present
Vulnerabilities to change/potential effects of the Plan	Effects on water quality including sewerage treatment, release of minerals, contamination or other pollution and waste Functioning of flood plains and the river system Abstraction of water Relevant settlements: Dalwhinnie, Newtonmore, Kingussie, An Camus Mòr, Aviemore, Inverdruie, Kincraig, Insh, Boat of Garten, Carr-Bridge, Dulnain Bridge, Nethy Bridge, Grantown-on-Spey, Cromdale

Appendix 2

Methodology for screening likely disturbance effects on capercaillie

The same methodology used in the HRA for the Proposed Local Development Plan is used here. Screening for LSEs on capercaillie considers the relationship between the size of housing developments and their distance from the Natura site. Table 2 below is from the draft LDP HRA and sets out the significance of effect in relation to the size of development and proximity to the site. Dog walking is considered to be the most significant potential source of recreational disturbance to capercaillie.

For the purposes of screening, thresholds based on evidence of recreational behaviour were used to determine LSEs:

2 km threshold reflects the distance around settlements where most dog-walking is likely to take place.

Thresholds of 5 and 10 km were also used to assess the impact of increasing distance between a settlement and a site.

Beyond the distance of 10 km from a settlement, it is considered that the volume of people would be so low as to be negligible.

The same thresholds have been adopted for this HRA.

Table 1: Screening thresholds for capercaillie SPAs and housing development

No. units /distance from site	Less than 2 km	2-5 km	5-10 km	More than 10 km
Less than 100 houses	LSE	MRE*	MRE*	No effect
100-300 houses	LSE	LSE	MRE*	No effect
More than 300 houses	LSE	LSE	LSE	No effect

*The term MRE is used within the LDP HRA and is synonymous with insignificant effect as used within this assessment.

Appendix 3

Glossary of terms and abbreviations

Appropriate Assessment (AA)	The part of the Habitats Regulations Assessment process that considers the effects of an aspect of a plan upon the conservation objectives for a Natura site.
CNPA	Cairngorms National Park Authority
CNAP	Cairngorms Nature Action Plan
Competent Authority	The decision making body required under the Habitats Directive to undertake HRA. This includes Scottish Government, National Park Authorities, SNH , SEPA or Local Authorities.
CPP	Core Paths Plan
Habitats Regulation Assessment (HRA)	The whole appraisal process for determining effects upon Natura Sites. It includes Appropriate Assessments. It is a requirement by the Habitats Directive that competent authorities carry out HRAs where a plan or project affects a Natura site.
CLDP	Draft Cairngorms National Park Local Development Plan
Likely Significant Effect	An adverse effect of the development upon a qualifying interest or conservation objective that is considered to be potentially severe enough as to threaten the integrity of the Natura site itself.
Natura Sites	Collective term for Special Protection Areas and Special Areas of Conservation
Ramsar sites	Ramsar sites are wetlands of international importance designated under the Ramsar Convention 1971. Not technically Natura sites they are however usually also SPAs. They are included within the HRA process by policy.
Special Area of Conservation (SAC)	An area designated for the protection of habitats and species. Authorised under Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (commonly called the "Habitats Directive"). One of three designation to be considered in a HRA
Special Protection Area (SPA)	An area designation for the protection of birds. Authorised by the Directive 2009/147/EC of the European Parliament and of the Council (commonly called the "Birds Directive"). One of three designation to be considered in a HRA

Appendix 4
Capercaillie; background information

The Scottish capercaillie population declined significantly between the 1970s and 1990s. From an estimated 20,000 birds in 1970, numbers fell to 2189 birds in the first national survey in 1993/94. A survey in 1998/99 estimated a population of just 1073 birds (95% C.L.549-2041) - a decline of 51% between the two surveys. The 2003/04 survey gave an estimate of 1980 birds, which could potentially to be considered an overestimate in light of results developing from the 2009/10 survey which indicates a population size of 1285 (a non-statistically significant decline) (Ewing et al. 2012). Despite this uncertainty, it is considered that the national population of capercaillie is currently stable after a period of rapid and significant decline (Eaton *et al*, 2007). However, the national population is still small (the UKBAP target for the species was 5000 birds by 2010 and this target has clearly not been met) and its range is contracting significantly. The 2003/04 Capercaillie national survey suggested that the range of Capercaillie had contracted into core habitat, with over 60% of all birds recorded occurring in Strathspey (Eaton *et al*, 2007). This figure has recently been estimated to now be c.75% in Strathspey (Poole, 2010) due to reductions elsewhere. 77% of Capercaillie cocks observed during lek surveys from the spring of 2012 were in Strathspey (Table 9.). Although capercaillie numbers have held up in Strathspey, the population is now extremely vulnerable elsewhere. Capercaillie persist in other areas (Deeside, Donside, Easter Ross, Moray and Perthshire) but these populations are more fragmented, numbers are lower and breeding success poorer. The Strathspey capercaillie population is crucial to the long-term survival of the species in the UK.

Table 1. Summary of total and average number of cocks on active leks in Scotland in 2012:

Region	**No. of active leks**	**Min No. of cocks**	**Mean cocks/lek**
Perthshire and Loch Lomond	2	3	1.50
Deeside and Donside	12	19	1.58
Moray and Nairnshire	9	12	1.33
Easter Ross	6	13	2.17
Strathspey	42	155	3.69
TOTAL	**71**	**202**	**3.00**

The Cairngorms SPA is one of five SPAs in Badenoch and Strathspey. Together with a number of undesignated woodlands they form a network of habitat for the species that contains the meta-population described above. The other SPAs are Abernethy Forest, Kinveachy Forest, Craigmore Wood and Anagagh Wood. The network of habitat is functional because of the relative proximity of the SPAs to the other woodlands which often act as stepping stones between them. The distance capercaillie will disperse has been subject to a number of studies. Storch (1995) radio-tracked 40 capercaillie in the Bavarian Alps and found that throughout the year distances of females from the leks they attended in spring averaged 1.3 km (Standard Error = 0.1 km). In winter and spring males aggregated within a 1 km radius of the lek, but dispersed within a 3 – 4 km radius during summer. Storch (2001 cited in Moss et al 2006) concluded that most males settle close to their chick range but young female dispersal distances were typically 5 – 10 km. A radio-tracking study of males at leks in Russia and Norway recorded average dispersal distance of males to summer range of 2.3 km, SE = 0.37 (Russia 2.2.km, SE = 0.70; Norway 2.4 km, SE = 0.43) (Hjelford *et al.* 2000). Storch &

Segelbacher (2000) summarised known movements as average seasonal movements of 1 – 2 km for adults and median dispersal distances of < 10 km for juveniles. The distances recorded in a Scottish study (Moss *et al.* 2006) are somewhat longer than those above, which may be related to the fragmented nature of Scottish forests. This study showed first-winter dispersal distances of 13 hens radio-tracked ranged within 1 – 30 km (median: 11, mean 12.3, SD 9.8).

Habitat suitable for capercaillie in Scotland is heavily fragmented into comparatively small areas of forest. None of the capercaillie populations in these individual woodlands have the capability to be self-sustaining in the long term. For genetic diversity to prevent inbreeding depression, discrete groups of birds must be linked with nearby groups (i.e. recruiting and exporting birds) forming a meta-population. Conservation of capercaillie requires consideration at this meta-population scale as well as at the scale of individual sites.

Sensitivity of capercaillie to disturbance

Capercaillie is listed in Schedule 1 Part I of the Wildlife and Countryside Act 1981 and Annex 1 of the EU Birds Directive. It is a criminal offence to intentionally or recklessly disturb leking or breeding capercaillie. According to Article 6.2 of the EU Habitats Directive: 'Member States shall take appropriate steps to avoid, in the special areas of conservation, the deterioration of natural habitats and the habitats of species as well as disturbance of the species for which the areas have been designated, ***in so far as such disturbance could be significant in relation to the objectives of this Directive***.' Article 7 of the Habitats Directive states that Article 6.2 applies to the Birds Directive.

There is a growing body of evidence indicating capercaillie and other grouse species are adversely affected by disturbance resulting from human recreational activities. Our knowledge on the impacts of recreational disturbance has increased during the last few years due to the increasing body of research undertaken, although it is difficult to measure scientifically. Human disturbance and disturbance by dogs can affect capercaillie by reducing the availability of otherwise suitable habitat (including habitat used for roosting, feeding, nesting and brood rearing), displacing the birds from leks, disrupting behaviour patterns, increasing the risk of predation, separating chicks from hens and the direct killing of chicks and adult birds. These effects can occur separately or additively. Capercaillie are sensitive to disturbance at all life stages but especially so when attending leks, incubating eggs (late April to mid June) or rearing broods (late May - late August but critically during June and July when the chicks are small and dependent on the hen for warmth), which coincides with when people are mostly likely to be using the woods. Reported responses to disturbance include a decline in local capercaillie numbers (Brenot et al. 1996 cited in Thiel et al. 2007) and abandonment of lek sites (Labigand & Munier 1989 cited in Thiel et al. 2007).

Capercaillie have been shown to avoid habitat close to tracks, which may reduce overall carrying capacity in forests with a high density of tracks. Fewer droppings are found in areas of woodland close to heavily used tracks. A study in neighbouring Abernethy Forest estimated that 21-41% of suitable woodland habitat at Abernethy could be lost due to avoidance of tracks by capercaillie (Summers et al., 2007). The studies looking at the distribution of capercaillie droppings on transects in Boat of Garten woods found that droppings were sparser within 700 m of a much-disturbed zone near the village (significantly so up to 250 m), and within 250 m of tracks (significantly so up to 120 m). Results were consistent with those from other studies at Anagach Woods and Glenmore Forest. Distances between tracks of > 500 m are be required to provide capercaillie with relatively peaceful havens between tracks. Cocks' droppings were about twice as common as hens, suggesting a sex ratio skew (consistent with evidence that suggests hens are more susceptible to disturbance than cocks). In the most recent Strathspey study at Glenmore, findings indicated that capercaillie avoid areas around busy entry points (Moss et al, 2010).

A study in Central Europe showed that flushing distance was greater in the presence of regular disturbance events (Thiel et al, 2007). Flushing distances are greater in open forests where the availability of cover is low (Thiel et al, 2007). Other European studies show that raised stress hormone metabolite levels were noted in capercaillie regularly disturbed by off-piste skiers, (Thiel et al., 2005, 2008). Repeated flushing, such as could occur due to increased disturbance caused by new residents, increases the energy burden. This impact is likely to be of greatest significance in very cold weather, when birds are already close to their physiological limit (Zeitler, 2000). Disturbed capercaillie are also likely to be more visible and will need to spend more time feeding to counteract the increased energy losses, possibly increasing exposure to predators. It has been recommended that the establishment of regulations requiring hikers to stay on trails and closing trails where inter-trail distances fall below 100m (Thiel et al, 2007). An example of such management in the Bayerischer Wald National Park, Bavaria, resulted in capercaillie returning to the surrounding woodland (Scherzinger 2003 cited in Summers et al. 2007).

Habitat structure has been shown to modify the alert distance of a number of bird species, with increasing bird tolerance associated with greater availability of escape cover (Fernandez-Juricic *et al.* 2001). In the specific case of capercaillie, Thiel *et al.* (2007) recommended planting or preserving evergreen conifer trees along track verges thus reducing the degree of visibility between capercaillie and recreationists. This could increase the habitat available to capercaillie in forests with predictable recreation activities.

Grouse experts questioned as part of the Delphi study (Marshall, 2005) suggested that dogs off leads during the breeding season were the most significant issue for capercaillie in Scotland. Dogs off-lead can have a greater impact by flushing birds further away from paths, so further limiting the amount of available habitat; can separate broods from the hen which could result in chicks becoming cold and wet; and dogs can catch and kill both chicks and adult birds. Due to the large size, especially of males, chicks require a large amount of energy to grow to adult size during a short period. Due to poor nutritional qualities of their food, they are more susceptible to the effects of disturbance than smaller birds and have a higher mortality rate over a longer period. Chicks are more robust, and therefore more likely to survive, if a hen has good energy reserves during egg development.

The main period of sensitivity for breeding capercaillie in relation to dogs has been defined by the Caper BAP Group as between 1st April and 15th August. This is currently being reconsidered following a recommendation from the Caper BAP Group to extend the end date. CNPA, as the Access Authority, has sought further advice from the Cairngorms Local Outdoor Access Forum, who have recommended that the dates are not altered until further work on a CNPA led Strathspey-wide capercaillie framework considering habitat management, recreation and development management is complete.

In summary, capercaillie are very vulnerable to disturbance. They are ground nesting and are therefore most vulnerable at the early part of their lifecycle as eggs or chicks. At this stage, they can be directly killed by dogs, or killed by predators such as crows or foxes when the hen is flushed from the nest or brood, or killed by exposure if a hen is flushed. Capercaillie is also very vulnerable to disturbance on the lek. While some cock birds become over-aggressive, the vast majority of males are very easily driven away. Although capercaillie is vulnerable to disturbance at all times of year, they are especially so in spring and summer. The Capercaillie BAP (Biodiversity Action Plan) Group highlight the period between 1 April – 15 August as the most critical period. It is concluded that capercaillie are sensitive to disturbance by people and dogs, and that dogs off leads present the greatest risk. Off-path recreational use is likely to be more disturbing than on-path use because it is less predictable and birds are less likely to habituate to it. Evidence from Boat of Garten woods shows that use by capercaillie of the parts of the woods within 125 m of paths and tracks is reduced and that this disturbance has a significant impact on their behaviour.

Loss of capercaillie habitat

It is reasonable to assume that the existing level of disturbance means that apparently suitable habitat for capercaillie is effectively unavailable to them. Research on habitat use through analysis of droppings suggests that there is an avoidance of certain areas. This is probably attributable to the disturbance experienced from existing sources and cumulatively creates a larger area of unavailable habitat. Capercaillie need large areas of habitat. Chicks require high quality protein food to grow rapidly, which can be distributed patchily over a wide area. Chicks are born precocial and move constantly over a big area to find food and avoid predation (Wegge *et al,* 2007).

As highlighted above, capercaillie have declined significantly in recent times. Studies have suggested that the national decline was driven by low productivity (Moss *et al.*, 2001). A programme of targeted habitat management in capercaillie core areas seems to have halted the population decline in Strathspey. Among the factors that may limit capercaillie populations in Scotland are habitat fragmentation and limited habitat availability. In order to address this conservation groups including the Caper BAP group are seeking to ensure opportunities to increase the amount of habitat that is available are developed to ensure that connectivity is increased. This is also a key priority for the CNPA as set out in the National Park Plan and in the new Cairngorms Nature Action Plan. Additional effort needs to focus on increasing productivity and addressing issues that may impact upon it i.e. reducing disturbance.

As already highlighted, Strathspey is the most important area of woodland in the UK for capercaillie, holding c.75% of the population (Poole, 2010). The species requires large, connected areas of woodland for the meta-populations to function effectively. Therefore, the woodlands of Strathspey need to be considered as one ecological unit for the purposes of capercaillie management. Any Appropriate Assessment needs to be as certain beyond reasonable scientific doubt that direct habitat loss and/or reduction in available habitat through habitat avoidance by capercaillie due to disturbance do not result from any development.

Appendix 5
Consultation responses

Summarised comment	CNPA response	Action taken
Scottish Natural heritage		
The indirect effects of recreational disturbance between Natura sites have not been included. They should be considered in the same manner as the indirect effects from non-designated woodlands.	We agree with this observation	These effects have been added to the screening matrix. The inter-relationship means that this has means a LSE in each case. These have been added to the Appropriate Assessment and covered explicitly in the mitigation measures.
Latest information on capercaillie distribution suggests stronger clusters in a few locations. This changes the potential level of effect to LSE for Abernethy and Cairngorm SPA	We agree with these reviewed assessments	The increased level of effect has been screened in and shown to have LSE for Abernethy Forest and Cairngorms SPA. These have been included within the AA. Abernethy has been remove from the in combination assessment because it is a direct LSE alone.
More non designated woods should be included within the screening matrix	We agree with this observation	Glenmore, Rothiemurchus, Pityoulish , Glen Feshie and Kinveachy Face have been added
Level if effect to otter and Golden eagle have been confirmed	We agree with this observation	Agreed effect included
Lighting may effect Atlantic Salmon following recent advice from SNH specialists	We agree with these reviewed assessments	Included within the Screening table and the appropriate assessment. Conditions already proposed for management of lighting near to rivers
Background information on capercaillie is useful but could be placed in a separate appendix to facilitate reading of the main report.	We agree with this observation	This information is now in appendix 5
More detail on location specifics for capercaillie and recreational use.	We agree with this observation	This has been added following additional information from Rothiemurchus estate , recent survey information

		and discussion with CNPA access officers.
Mitigation criteria should be even more site specific and cover all SPAs.	We agree with this observation	The criteria have been reworded accordingly and cross referenced within the AA
Several qualifying habitats within the Cairngorms SAC are unlikely to be affected	We agree with this observation	The relevant QHs have been included and others removed from effects.
Several corrections to locations and detail items	We note these corrections	Corrections have been made
Rothiemurchus Estate		
Concern was raised that screening appeared to imply that Boat of Garten housing mitigation was a pre requisite for the development, and that it was suggested that it could not go ahead without the Boat development taking place	We note this interpretation however the mitigation at Boat addressed several issues of existing pressure on the capercaillie and it is assessed this was sufficient to also deal with any small increase in use from ACM. Mitigation for the housing per se only tackled the effects from the Boat housing	We have changed the wording in the screening matrices to make this clear.
Reference to River Druie in screening matrix is incorrect and should be the river Luineag	we agree with this correction	This has been corrected in this report
Some of the background information within the Appropriate Assessment on capercaillie could be in a separate annex and submitted by SNH	We agree with the wish to simplify the AA by removing some of the background information however it is reasonable for the CNPA to present this information.	This is now in appendix 5
Inclusion of the use of local experience into the criteria for mitigation	We agree with this observation	This has been reworded accordingly
Questioned the reference to the whole of the SPA as this included area of Deeside	For clarity we do not think there are LSE from the development on the Deeside capercaillie population. The two populations do not act as a meta-population	This has been reworded to make clear this geographical limitation
Reference to the public expense is unclear about what this includes	We have decided that this is a policy criteria and not one of mitigation. We have removed the reference accordingly	This has been reworded accordingly

Several points of detail and minor clarification	We have noted these	These have been corrected where appropriate
RSPB Scotland		
They are content with the approach to the HRA, the scope of the Natura sites and treatment of mechanisms for addressing potential impacts. However they consider the Recreational Management Plan approach is insufficiently precautionary to provide a guarantee of complete mitigation	The approach cannot truly guarantee such mitigation however the test of certainty we apply is that of the Waddenzee ruling which requires there to be no remaining reasonable scientific doubt. We have sought advice from SNH regarding these matters and we are clear that we have this level of certainty.	We have not made any change to the overall mitigation approach.
They agree with the adaptive management approach put forward in the mitigation however they feel that there should be no presumption that permission at this stage automatically allows for the full development regardless of if the mitigation measures proving to be successful or not.	We agree with this position and indeed consider that this would be contrary to the Natura regulations.	We have made changes to make it explicit within the criteria that each phase must demonstrate that it will not affect the integrity of any site. This has also been added to the revised planning condition so that there will be no presumption for any future development phase unless it is shows at each one that it will have no such adverse effects.
The effects on Abernethy have been downgraded from the LDP HRA; no reason has been given for this change. Too much emphasis on lek sites and not on brood rearing habitat. Management arrangements are not guaranteed into the future. The area of loch Garten and Mallachie is improving habitat for capercaillie and should not be 'sacrificed' for the development.	Change was based upon discussion with SNH and capercaillie project officer in May. However recent information on distribution has led to reversing this and reinstatement of LSE on this SPA. We have not underestimated the effect on brood habitats though we acknowledge that the report does give this impression. We have to consider the current regime and its effectiveness. We understand that management arrangements may not be guaranteed but we understand that there are no plans to stop them in the immediate future. However if this were to change then this would be	Changes have been made in this report. Abernethy is now LSE and taken to AA. It has been removed from in combination assessment.

	part of the base line for future phases of HRAs and tested accordingly.	
Anagach woods effects are significant despite it being already heavily used. Poor house car park is closer to capercaillie areas.	We are aware of the pressure on the SPA. We have considered these points and still do not feel that the numbers of extra visitors from ACM will be significant. However this is likely to be considered within the CNAP framework and if monitoring shows an effect then this can be addressed through future phases.	No change to the report is considered necessary
The Cairngorms SPA has two leks closer that 100m from paths. It would only take a small number of irresponsible actions by dog owners to cause a significant problem for the birds.	We agree with this concern and this is something that we anticipate being addressed explicitly within the RMP	No change to the report is considered necessary
Increased pressure on golden eagle may be irreversible	We have taken advice from SNH who have considered this issue. This is why the residual effect is remaining and this will act as a que to consider this further. Known eagle nest sites are monitored and changes in behaviour will be noted	No change to the report is considered necessary
A possible new lek is closer than 2km from the development site	This is very recent information and we shall consider this. Confirmation will be required and possible further action taken to protect if it is confirmed	No change to the report is considered necessary but we shall liaise with the Capercaillie Project officer on this matter and consider if there are further implication for the RMP at the masterplan stage.
Craigmore Wood is very vulnerable because of low productivity and current very low numbers of users.	We agree with this statement and will consider this within the RMP. However we do not feel that there is a direct LSE, though there is an indirect one from the LSE on Abernethy and Cairngorms SPAs	We have revised the wording of the screening exercise to reflect this additional concern.
Kinveachy is already under some pressure and there is concern that ACM will add significantly to the numbers using the site. The development may displace Aviemore residents who recreate in the	We have considered this and feel that it likely that the displacement of Aviemore residents may be more than	Changes have been made to report to make the reasoning clearer.

Rotheimurchus area.	balanced by an increase in their use of the ACM facilities by them. The new footbridge will be central to this providing an off road access for NMUs	
Non designated woods to the north the site may act as stepping stones in the habitat network supporting the meta population. Detailed dropping surveys should be undertaken on advice of R. Moss and T. Poole	We agree with this observation.	The report recognises this possibility and we will ensure these surveys are considered as part of the monitoring regime required as part of the RMP.