

URS

Blubberhouses
Quarry

Breeding Bird Addendum

Prepared for:
Hanson Aggregates

UNITED
KINGDOM &
IRELAND



REVISION SCHEDULE					
Rev	Date	Details	Prepared by	Reviewed by	Approved by
1	4th October 2012	Final	Paul Benyon Technical Director	David Campbell Senior Ecologist	Paul Benyon Technical Director
2	22 nd October 2012	Minor changes at request of client	Paul Benyon Technical Director		Paul Benyon Technical Director

URS Infrastructure & Environment UK Limited
 12 Regan Way, Chetwynd Business Park
 Chilwell, Nottingham
 NG9 6RZ
 United Kingdom
 Tel: +44 (0)115 907 7000
 Fax: +44 (0)115 907 7001
 www.ursglobal.com

Limitations

URS Infrastructure & Environment UK Limited ("URS") has prepared this Report for the sole use of **Hanson Aggregates Limited** ("Client") in accordance with the Agreement under which our services were performed. No other warranty, expressed or implied, is made as to the professional advice included in this Report or any other services provided by URS. This Report is confidential and may not be disclosed by the Client nor relied upon by any other party without the prior and express written agreement of URS.

The conclusions and recommendations contained in this Report are based upon information provided by others and upon the assumption that all relevant information has been provided by those parties from whom it has been requested and that such information is accurate. Information obtained by URS has not been independently verified by URS, unless otherwise stated in the Report.

The methodology adopted and the sources of information used by URS in providing its services are outlined in this Report. The work described in this Report was undertaken between [March 2011] and [July 2012] and is based on the conditions encountered and the information available during the said period of time. The scope of this Report and the services are accordingly factually limited by these circumstances.

Where assessments of works or costs identified in this Report are made, such assessments are based upon the information available at the time and where appropriate are subject to further investigations or information which may become available.

URS disclaim any undertaking or obligation to advise any person of any change in any matter affecting the Report, which may come or be brought to URS' attention after the date of the Report.

Certain statements made in the Report that are not historical facts may constitute estimates, projections or other forward-looking statements and even though they are based on reasonable assumptions as of the date of the Report, such forward-looking statements by their nature involve risks and uncertainties that could cause actual results to differ materially from the results predicted. URS specifically does not guarantee or warrant any estimate or projections contained in this Report.

Where field investigations are carried out, these have been restricted to a level of detail required to meet the stated objectives of the services. The results of any measurements taken may vary spatially or with time and further confirmatory measurements should be made after any significant delay in issuing this Report.

Copyright

© This Report is the copyright of URS Infrastructure & Environment UK Limited. Any unauthorised reproduction or usage by any person other than the addressee is strictly prohibited.

TABLE OF CONTENTS

1	INTRODUCTION	6
2	SCOPING	6
3	PLANNING POLICY CONTEXT	7
3.1	National Legislation.....	7
3.2	National Planning Policy	8
3.2.1	<i>National Planning Policy Framework</i>	8
3.3	Local Planning Policy.....	8
3.3.1	<i>North Yorkshire County Minerals Local Plan (adopted 1997)</i>	8
3.3.2	<i>Harrogate District Local Plan</i>	8
3.4	Biodiversity Action Plans	8
3.4.1	<i>UK Biodiversity Action Plan</i>	8
3.4.2	<i>Harrogate Biodiversity Action Plan</i>	8
4	ASSESSMENT METHODOLOGY AND SIGNIFICANCE CRITERIA	9
5	BASELINE CONDITIONS	10
5.1	Consultations with Statutory & Non-Statutory Bodies	10
5.1.1	<i>Statutory Designated Sites & Species</i>	10
5.1.2	<i>Non-Statutory Designated Sites</i>	11
5.1.3	<i>Protected and Notable Species</i>	11
5.2	Breeding Bird Survey	11
5.2.1	<i>Methodology</i>	11
5.2.2	<i>Vantage Point Surveys</i>	12
5.2.3	<i>Results</i>	13
5.2.4	<i>Summary</i>	19
6	ASSESSMENT OF NATURE CONSERVATION VALUE	20
6.1	Statutory Sites of Nature Conservation Value.....	20
6.1.1	<i>Non-Statutory Sites of Nature Conservation Value</i>	21
7	KEY ISSUES	27
8	POTENTIAL IMPACTS OF DEVELOPMENT	27
8.1	Development Proposals	27
8.2	Statutory Sites of Nature Conservation Importance & Species	28
8.2.1	<i>The North Pennine Moors SPA</i>	29
8.2.2	<i>West Nidderdale, Barden and Blubberhouses SSSI</i> ..	32
8.2.3	<i>Birds</i>	33
9	AVOIDANCE/REDUCTION/MITIGATION & COMPENSATION MEASURES	34
9.1	Birds.....	34
9.2	Management Plan and Committee	34
10	ISSUES & BALANCES	35
11	REFERENCES	39
	APPENDIX 1	
	APPENDIX 2	

BLUBBERHOUSES QUARRY: Breeding Bird Addendum**1 INTRODUCTION**

The purpose of this document is to re-examine the breeding bird issues arising out of the application for a renewal of time to the current planning permission for Blubberhouses Quarry, situated just north of the A59 between Harrogate and Skipton in North Yorkshire.

A breeding bird survey was undertaken in spring/summer 2011 and the results and assessment of impacts presented in the original ecological chapter within the Environmental Statement accompanying the planning application (Chapter 5). Consultees including Natural England (NE), Royal Society Protection for Birds (RSPB) and North Yorkshire County Council (NYCC) provided comments that raised concerns over the number of survey visits and hence the robustness of the data collected and the impact assessment, particular on the North Pennine Moors Special Protection Area for Birds (SPA).

Following a meeting with the landowner, Hanson Aggregates and their consultants, NE, RSPB and NYCC it was agreed that a further breeding bird survey would be undertaken in 2012 to supplement the results from 2011 and then be used to reassess the predicted scale of impacts from the development.

The survey in 2012 included the area covered in 2011 but also an area of land to the north of the site that comprised wet pastures (Figure 1).

Details of the development scheme remains as dealt with in Section 2 of the Environmental Statement and within the Planning Application synopsis. In summary the planning permission boundary extends to approximately 84ha, 38.7ha being the extraction area. The permitted area (here on in referred to as the Site) comprises a plant site area situated between the A59 and the Kex Gill Road, a small area opposite the site entrance, previously quarried and storage areas on either side of the Kex Gill/Upper Moor Road and a large area of land as yet unworked (Figure 1). Part of the permission includes the relocation of the Kex Gill/ Upper Moor Road to facilitate full working of the Site but this has not yet been undertaken.

This Addendum is presented as a stand-alone document to make it easier for the reader, rather than cross referencing back to original chapter. It deals solely with breeding birds, the principal ecological issue raised.

2 SCOPING

A scoping opinion was sought from North Yorkshire County Council (NYCC) through submission of a scoping report for the project in September 2011. There was a commitment in the scoping report to include a chapter on Nature Conservation within the ES that would include:

- Appropriate protected species surveys including in particular a range of bird surveys given the proximity of the site to the North Pennine Moors Special Protection Area (SPA); and
- An assessment of the impact of the development with measures to avoid/minimise/mitigate and compensate for any identified significant adverse impacts.

The following responses were received by NYCC from statutory and non-statutory consultees with respect to breeding birds:

- Natural England provided a response that stated the ES should consider all relevant matters relating to Statutory and non-statutory nature conservation sites and protected/notable species;
- The Civil Aviation Authority noted the site to be within the statutory safeguarding area of Leeds Bradford Airport. They referred to ODPM Circular 1/2003 to ensure that the statutory obligations described therein are met at the time of formal application;
- The Royal Society of the Protection of Birds noted the site to be adjacent to the North Pennine Moors SPA and Special Area of Conservation (SAC) and the West Nidderdale, Barden and Blubberhouses Moors Site of Special Scientific Interest (SSSI). They noted concern of the potential that the development could have on these sites directly or indirectly, particularly birds and especially those for which the SPA is designated; breeding peregrine, merlin, golden plover and hen harrier and other upland species for which the SSSI is designated. They expressed particular concern over diversion of the Kex Gill Road that results in it being adjacent to the SPA boundary. They indicated to the MPA that an Appropriate Assessment could be required with respect to the potential for significant impacts on the SPA; and
- NYCC County Ecologist stated that the assessment should include an up to date desk study; field surveys including a Phase 1 habitat survey and protected species surveys; assessment in accordance with the Institute for Ecology and Environmental Management (IEEM) Guidelines for Ecological Impact Assessment in the United Kingdom (2006); information sufficient for the MPA to determine whether there will be a significant impact on the SAC/SPA (Appropriate Assessment); assessment of cumulative impacts; consideration of restoration and long term monitoring and management of the restored site.

3 **PLANNING POLICY CONTEXT**

This section lists the legislation and planning policy relevant to the protection and enhancement of breeding birds.

The framework for the assessment of the potential ecological effects of the proposed development is based on current legislation and UK government and local authority policies that relate to nature conservation.

Mineral Planning is dealt with at County level but the quarry falls within Harrogate District Council, which has a Local Biodiversity Plan and which will have to be considered.

See Appendix 1 for summary of the relevant legislation and planning policies.

3.1 **National Legislation**

The main relevant legislation for the protection of wildlife and ecology including birds in the UK comprises;

- The Wildlife and Countryside Act (WCA), 1981 (as amended)
- The Countryside and Rights of Way (CroW) Act, 2000
- The Natural Environment and rural Communities (NERC) Act 2006
- The Conservation of Habitats & Species Regulations 2010 (as amended)

3.2 National Planning Policy

3.2.1 *National Planning Policy Framework*

There has been a recent change in National Planning Policy. Planning Policy Statement 9 (PPS9); Biodiversity and Geological Conservation was replaced in March 2012 by relevant sections within the National Planning Policy Framework (NPPF).

There are a number of references and sections pertinent to ecology and biodiversity (see Appendix 1).

3.3 Local Planning Policy

3.3.1 *North Yorkshire County Minerals Local Plan (adopted 1997)*

This was due to expire in September 2007 and be replaced by the Minerals and Waste Development Framework but until such time that this is ratified, a number of the policies in the Minerals Local Plan are still extant and this includes a number of policies relevant to the proposed development; 4/6a Nature Conservation and Habitat Protection – Local and 4/20 Aftercare (see Appendix 1).

3.3.2 *Harrogate District Local Plan*

This has a number of extant policies until such time as the Harrogate District Local Development Framework is approved. Two policies are relevant to nature conservation; Policy NC3 and Policy NC4 (see Appendix 1)

The draft Harrogate District Local Development Framework Core Strategy (2009) includes a relevant policy; EQ1 Reducing risks to the environment (see Appendix 1)

3.4 Biodiversity Action Plans

3.4.1 *UK Biodiversity Action Plan*

A key outcome of the convention on Biological Diversity in 1992 is a requirement by the UK government to halt, and if possible reverse, the steady decline of species and natural habitats. To this aim, Biodiversity Action Plans (BAPs) are produced at national, regional and local levels. They contain plans to protect and enhance species and natural habitats, with targets against which progress can be measured. The UK BAP reviews the status of species and habitats on a national scale. It sets out targets for a number of Priority Species and Habitats as well as for broad habitat types and these were most recently reviewed in 2007 (Biodiversity Reporting and Information Group, 2007).

3.4.2 *Harrogate Biodiversity Action Plan*

The Harrogate Biodiversity Action Plan is still in draft form but was due for publication in 2010. There are 15 priority habitat plans and 7 priority species action plans. Over 100 local priority species have been recorded in the 15 habitats.

Habitats included in the LBAP potentially relevant to this application include: -

Blanket bog; upland heathland; standing water; flowing water;

One bird species included as a priority in the LBAP potentially relevant to this application is hen harrier.

ASSESSMENT METHODOLOGY AND SIGNIFICANCE CRITERIA

The methodology used to assess the significance of impacts on ecological receptors is based on the Guidelines for Ecological Impact Assessment (EclA) published by the Institute of Ecology and Environmental Management (IEEM) (Institute of Ecology and Environmental Management, 2006).

Areas and/or species of ecological value within the site area identified and the main factors contributing to their value are described. An ecological resource or feature is considered to be valuable (or have potential value) at the following scales:

International; UK; National (i.e., England/Northern Ireland/Scotland/Wales); Regional; County; District (or Unitary Authority, City or Borough); Local (or Parish); or within immediate zone of influence* only.

For the purposes of this study, the zone of influence within which potential direct effects on flora and fauna may be reasonably anticipated is considered to be the planning application boundary and an approximate 2km radius around the proposed development. Whilst the impacts expected are all largely confined within the footprint of the working quarry, a buffer is included to provide confidence in any assessment of impacts in the wider area and in particular any hydrology related impacts on a number of wetland sites and indirect impacts on birds within the adjacent SPA.

The impact on a feature has a number of characteristics that need to be fully described before significance can be assessed. A number of factors need to be considered when describing and assessing impacts, which include:

Direction (positive, negative or neutral impact); Magnitude (the amount or level of impact); Extent (area in hectares, linear metres, etc); Duration (in time or related to species life-cycles); Reversibility (i.e. is the impact permanent or temporary); Timing and frequency (e.g. related to breeding seasons); and Cumulative effects (between impacts from a number of sources).

IEEM guidance states that impacts should be determined as being significant when they have an adverse or positive effect “on the integrity of a defined site or ecosystem and/or the conservation status of habitats or species within a given geographical area”. Such impacts may be significant at the level of importance defined in the Evaluation section or, for habitats and species, at a lesser geographical scale. For example, limited impacts on woodland of County importance might be assessed as being significant at a District level of importance.

Using this information and judgement, it is determined whether the effects will be significant or not on the integrity (of site/ecosystems) or conservation status (of habitats/species) of each ecological feature and the impact significance is determined at the appropriate geographical scale.

Where possible, levels of certainty are given to indicate the likelihood that both the predicted activity/impact and the associated ecological effect will occur. The IEEM guidance suggests using the following four-point scale to identify the levels of confidence arrived at by professional judgement:

- Certain/High
- Probable/Moderate
- Unlikely/Low
- Extremely unlikely/Negligible

5 BASELINE CONDITIONS

5.1 Consultations with Statutory & Non-Statutory Bodies

An information search was undertaken for a defined search area during 2011. Records of statutory and non-statutory sites and records of protected and notable species were sought for an area of 2km radius for statutory sites and 1km radius for non-statutory sites and protected/notable species beyond the Site boundary (Appendix 2). The organisation consulted was North and East Yorkshire Ecological Data Centre (NEYEDC). Web based sites used included:

- Multi Agency Geographic Information for the Countryside (MAGIC) for statutory sites, habitats and ancient woodland
- Joint Nature Conservation Committee (JNCC) website for Information on European designated sites
- National Biodiversity Network (NBN) Gateway for information on species
- LBAP website for Harrogate

5.1.1 *Statutory Designated Sites & Species*

Information was obtained from NEYEDC and the JNCC website of two internationally designated sites (Appendix 2); these two sites are:

North Pennine Moors Special Area for Conservation (SAC)

This site is very large (approximately 103,000ha) and comprises a number of sites of special scientific interest (SSSIs). Six habitats listed on Annex 1 of the EC Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora) are the primary reasons for designation (Appendix 2); these include European dry heath, blanket bog and old sessile oak woods.

North Pennine Moors Special Protection Area (SPA)

This site is also very large (approximately 147,000ha) and includes much of the land included within the SAC; it also encompasses a number of SSSIs (Appendix 5.1). The site qualifies under Article 4.1 of the European Commission Directive on the Conservation of Wild Birds (79/409/EEC) in supporting populations of European importance of golden plover, hen harrier, merlin and peregrine falcon during the breeding season. It also qualifies under Article 4.2 because of having high numbers of breeding curlew and dunlin during the breeding season (Appendix 2).

Information was obtained from MAGIC and NEYEDC of one nationally designated site (Appendix 2); this site is:

The West Nidderdale, Barden and Blubberhouses SSSI

This large (13,418ha) site is one component SSSI of the North Pennine Moors SPA and SAC and is important for heather moorland, blanket bog vegetation and breeding bird populations. Details are provided in Appendix 2.

The locations of these sites in relation to the Site are shown on Figure 1.

5.1.2 *Non-Statutory Designated Sites*

There are no Sites of Interest for Nature Conservation (SINC) within the area of search but there is one site just outside to the southeast (Appendix 2). This site is called West End Marsh SINC.

5.1.3 *Protected and Notable Species*

NEYEDC provided records of a number of protected/notable bird species within approximately 1km of the Site (Appendix 2). The species listed below in Table 1 are those accurate to six figure OS coordinates or are identifiable by a site name.

TABLE 1: Records of Protected/Notable Bird Species

Species	Grid Reference/Site Name	Approximate Distance from Site (m)	Legal Status
Merlin	SE148543	1.4km south	Birds Directive Annex 1 W&C Act 1981 (Schedule 1 Part 1)
Curlew	SE154555	600m south east	Birds Directive Annex 2. W&C Act 1981 (Schedule 1 Part 1)
Oystercatcher	SE154555	600m south east	Birds Directive Annex 2.2

In addition to the above, all bird species receive protection from harm whilst nesting or attempting to nest under the W&C Act 1981 (as amended). Bird species records provided by NEYEDC but only to tetrad level included snipe, spotted flycatcher, grey partridge, whinchat, redshank, blackbird, ring ouzel and lapwing (Appendix 1).

There were no further records on the NBN Gateway beyond those provided by NEYEDC.

5.2 **Breeding Bird Survey**

5.2.1 *Methodology*

Breeding Birds

Breeding Bird Surveys (BBS) following the standard Common Bird Census (CBC) methodology (Bibby, C.J., Burgess, N.D., Hill, D.A., and Mustoe, S.H., 2000) were carried out on five occasions between March and July 2011 (following BBS methodology) and on 10 occasions between March and July 2012 (following CBC methodology).

Surveys undertaken in 2012 included transects running east and west and an additional transect 250 metres north of the site boundary to include birds, particularly waders breeding on the wet pastures (Figure 1). Simultaneously the Brown and Shepherd methodology (Brown, A.F. & Shepherd, K.B., 1993) for surveying upland waders was employed to maximise the efficiency of the survey for wading birds such as golden plover and curlew.

In 2011, the BBSs were begun half an hour after dawn and took between four and six hours depending on weather conditions and levels of activity recorded.

In 2012, seven of the CBC surveys began half an hour after dawn, the other three began in the mid-afternoon to allow the surveys to finish at dusk to gather data on crepuscular species. The enlarged study area in 2012 meant the surveys took on average eight hours so the site was split early in the season to ensure the site was covered before 11am. Later in the season, early sunrise, improved ground conditions and familiarity meant the site could often be covered completely in one visit.

Where possible split site visits were performed on consecutive days however poor weather in 2012 meant this was not always possible, surveys were then undertaken at the earliest suitable opportunity. Data on bird activity in the evening and for crepuscular birds was also collected following a modified BBS methodology during site surveys for other species and used to supplement the BBS. Table 2 below shows the weather conditions at the time of each survey.

Table 2: Dates of Survey and Weather Conditions

Date of Survey	Weather Conditions
24 th March 2011	12°C, 10% Cloud, Wind SE 1, bright sun
20 th April 2011	<i>Dusk Survey</i> 12°C, 60% Cloud, Wind SE 1
3 rd May 2011	7°C, 0% Cloud, Wind SE 1
24 th May 2011	<i>Dusk Survey</i> 7°C, 90% Cloud, Wind E 3
7 th July 2011	12°C, 60% Cloud, Wind SW2-1
9 th March 2012 9 th March 2012	7°C, 90% Cloud, Sunny spells, Wind E 2 <i>Dusk Survey</i> 8°C, 100% Cloud, Wind E4-2
22 nd March 2012 23 rd March 2012	7°C, 80% Light Cloud, Bright, No Wind <i>Dusk Survey</i> 10°C, 100% Light Cloud, Wind SW 1
11 th April 2012 12 th April 2012	7-10°C, 100% Cloud, Wind 3-2, Showers
20 th April 2012 25 th April 2012	3°C, 100% Cloud, Wind W 1 11°C 70% Cloud, Misty & bright sun, Wind E 1
1 st May 2012 8 th May 2012	<i>Dusk Survey</i> 12°C, 100% Cloud, Wind E 2, Drizzle <i>Dusk Survey</i> 11°C, 100% Cloud, Wind E 3-2, Drizzle
9 th May 2012 23 rd May 2012	8°C, 100% Cloud, Wind E 2, Showers 12°C, 0% Cloud, No wind, sunny
20 th June 2012 21 st June 2012	12-16°C, 0% Cloud, No Wind, Sunny 12°C, 60% Cloud, Wind 1, Sunny spells
3 rd July 2012	18°C, 90% Cloud, Wind 1, Sunny spells
17 th July 2012	14°C, 100% Cloud, Wind W 3-2
26 th July 2012	<i>Dusk Survey</i> 20°C, 100% Cloud, No Wind

In 2011, entry into the Site and wider survey area was restricted for a period during June at the request of the gamekeeper. This problem was overcome in 2012 by arrangement with the gamekeeper to accompany the surveyor to ensure the welfare of red grouse fledglings, which are particularly vulnerable at this time when disturbed from the nest.

5.2.2 Vantage Point Surveys

Vantage point surveys were performed from a location to the west of the existing quarry area (Figure 1). The position, while not permitting a view of the ground of the entire Site and wider survey area

allowed a full view of the air space above it. In 2011 six, six-hour surveys were carried out each occasion split into two three hour periods during the same day (except in the case of the 12th and 13th May when surveys were performed in the late evening and the following morning). In 2012 six vantage point surveys were undertaken. Half of these began half an hour after sunrise and three beginning approximately three hours before sunset to capture data on evening bird movements and movements of crepuscular birds.

The Vantage point surveys were concerned with the movement of raptors across the site and the movement of waterfowl and waders to and from the site and the SPA. Bird flights were recorded on maps to ascertain levels of activity, favoured routes and directions.

Table 3 below shows the weather conditions at the time of each survey.

Table 3: Dates of Survey and Weather Conditions

Date of Survey	Weather Conditions
25 th March 2011	12°C, 10% Cloud, Wind SE 1, bright sun
26 th April 2011	7°C, 100% High Cloud, Wind E 4-5, light rain.
12 th May 2011	8°C, 100% Cloud, Wind E 4-5, light rain
13 th May 2011	7°C, 100% Cloud, Wind E 3, Heavy showers
3 rd June 2011	17°C, 0% Cloud, Wind W 1-2
8 th July 2011	12°C, 100-50% Cloud, Wind S/SW 1
22 nd March 2012	5-10°C, 100% Cloud, No Wind, light rain,
24 th March 2012	5-12°C, 100% Cloud, Wind E 4-5, heavy rain showers
21 st April 2012	4-11°C, 100% Cloud, Wind NE 2-1, rain
26 th May 2012	12-20°C, 60-40% Cloud, Wind W 2, dry & bright
17 th June 2012	8-15°C, Cloud 70-100%, Wind 4-2 NE, rain
26 th July 2012	12-20°C, Cloud 100-80%, Wind 2-1 W

5.2.3 *Results*

The following species accounts relate firstly to those breeding species for which the North Pennine Moors SPA has been designated, followed by species listed on the citation for the West Nidderdale, Barden and Blubberhouses SSSI and then other species recorded within the Site and the wider survey area.

The breeding bird survey results for 2011 and 2012 are presented on Figures 2 & 3 for SPA species and Figures 4 & 5 for selected other species, largely those listed on the SSSI citation and waders. Figures 6 - 17 show the results of the vantage point surveys undertaken in 2012.

North Pennine Moors SPA Qualifying Species

Golden Plover - In 2011, two pairs of golden plover are likely to have bred just outside the Site, a pair being seen in late March in the managed heather to the east in the wider survey area (Figure 2). Individual birds were also recorded on the same day in late March, amongst areas of managed heather west of the Site within the SPA and again in early May. Only two golden plover flights were observed; a bird was seen arriving at the silt lagoon from the north and leaving again in the same direction on 12th May.

In 2012, three pairs were recorded breeding; two within the site boundary, to the east of Kex Gill Road and a third outside the site to the west (Figure 3). Birds were observed moving about the survey area from March and were then seen to remain close to their nesting locations until June when small post breeding flocks were observed west of the survey area.

Birds were observed during the vantage point surveys in May and June making flights to and from the silt lagoon from their nest sites east of Kex Gill Road. The breeding pair in the west was not recorded visiting the lagoon.

A post breeding flock of 20 birds was observed outside the Site to the northwest within the SPA in July 2011.

Hen Harrier - In 2011, hen harrier was not seen.

In 2012, a single hen harrier was seen on one occasion east of the survey area in March 2012. This has been the only sighting of this species between winter 2010 and late summer 2012. Anecdotal evidence from the gamekeeper indicates that he has not seen hen harrier in the area previously.

Merlin - In 2011, a single merlin was seen during a vantage point survey in May 2011 hunting across the heather in the wider survey area to the west of the Site. Anecdotal evidence from the gamekeeper indicated that he had seen merlin over the wider area but was not aware of any breeding.

In 2012, a pair of merlin is believed to have bred in the wider survey area east of the Site amongst managed heather (Figure 3). Birds, likely a pair, were observed on five occasions, 20th April, 17th June (VP), 20th June, 3rd July and 17th July (VP).

Peregrine Falcon - In 2011, one observation of peregrine was made over the southeast corner of the wider survey area in February 2011.

In 2012, no peregrines were recorded.

Other SPA Qualifying Species

Curlew - In 2011, the first record was in February when two birds were heard calling from locations in the southeast of the wider survey area. Numbers of birds and levels of activity then increased through March and into the summer months when activity levels peaked with numerous display and diversionary flights across the survey area. Nine pairs of curlew were likely to have bred across the wider survey area with three of these within the Site (Figure 2).

In 2012, twenty-one pairs of curlew are believed to have bred within the enlarged survey area (Figure 3). Four pairs were considered to have bred within the Site on the east side of Kex Gill Road with the other breeding locations being to the west in the SPA (8 pairs) and north in the wet pastures (9 pairs). Curlews were often recorded in flight during surveys, predominantly display or alarm flights. Vantage point surveys recorded regular movements to and from the silt lagoon and nesting sites within the east and west of survey area. As many as nine birds were recorded on the evening of 21st April and 26th May 2012 with other waders at the silt lagoon after making flights from nest sites located to the east and west.

Dunlin - In 2011, there was no evidence that dunlin bred within the Site but low numbers were recorded March - July usually on land to the north west of the wider survey area.

In 2012, there was no evidence that dunlin bred within the Site but a maximum count of six birds was recorded making flights to the lagoon from the west within the SPA occasionally in the evenings and three birds were recorded leaving the lagoon in the early morning on 26th July.

No birds are believed to have bred within the Site although the focus of activity in both years suggests that dunlin does breed at low densities somewhere to the northwest of the wider survey area.

The West Nidderdale, Barden and Blubberhouses SSSI Species

The SSSI citation includes many of the above species but also notes the following species:

Short-eared Owl - In 2011, short-eared owls (*Asio flammeus*) were recorded on the Site in May. Further surveys confirmed that a pair was breeding near the western limit of the wider survey area (Figure 4). The exact location was not found but the birds were observed patrolling at dusk near to the quarry entrance and Kex Gill Road.

In 2012, birds were seen regularly in the early mornings during March and April on the western section of the Site. However, the birds were not seen after April and it is considered that they did not breed within the wider surrounding area.

Snipe - In 2011, three snipe (*Gallinago gallinago*) had been seen in February and one in March over the wider survey area but there was no subsequent evidence of breeding.

In 2012, two pairs were recorded in the southwest in of the wider survey area around Kex Gill Tarn. Another three pairs were recorded in the area to the the northeast, near Burnt Hill not surveyed in 2011 (Figure 5).

Redshank - In 2011, two redshank (*Tringa totanus*) were seen on the wetter areas of heath at the west end of the wider survey area during November 2010 and redshank was one of the first wader species to return in spring 2011. A pair probably bred on the edge of the worked quarry area west of the Kex Gill Road (Figure 4) and both were seen making regular flights to the silt lagoon and displaying across the quarry.

In 2012, redshank were again recorded regularly around the lagoons and other flooded sections of the quarry (Figure 5). Breeding however was only confirmed in the rush pasture to the north east of the Site in the Burnt Hill area not covered by the 2011 survey.

Vantage point surveys in both years did not show obvious trend in the direction of flights to and from the lagoons. Birds were recorded arriving from the northeast, northwest and from the south.

Occasional display flights were made around the quarry workings but no breeding took place. Up to five birds were observed around the lagoons in mixed wader flocks during dusk surveys.

Buzzard - Buzzards (*Buteo buteo*) were infrequent foraging visitors to the wider survey area in both years. They were seen ranging over a wide area, entering the wider survey area from the east.

Teal - In 2011, a pair of teal (*Anas crecca*) was recorded breeding by the pond outside of the Site in the west part of the wider survey area (Figure 4).

In 2012, teal were not recorded breeding on the Site or the wider survey area, although birds were seen by the smaller worked quarry lagoons on 20th April and by the pond at the western edge of the wider survey area where they bred in 2011 on 25th April.

Common Sandpiper - In 2011, common sandpipers (*Actitis hypoleucos*) were regular visitors in low numbers to the silt lagoon area and it is likely they bred in the wider survey area but no nest location was found.

In 2012, a pair bred on the gravel area near to the lagoons (Figure 5). Flights recorded during vantage point surveys were restricted to short flights within the quarry area.

Lapwing - In 2011, lapwing (*Vanellus vanellus*) was the most commonly recorded wading species, making display flights within the Site and over the moor grass dominated areas in the wider survey area to the north and west and to a lesser degree over the pasture in the southeast. A pair bred on the banks of the main quarry pool with hatchlings observed as early as 20th April and a second pair nested on the upper area of the main quarry near the silt lagoon (Figure 4). Two more pairs were believed to have bred amongst the shorter vegetation immediately north of the quarry west of Kex Gill Road and another pair in the pasture in the south east quarter of the wider survey area (Figure 4).

A flock of over 100 lapwings was seen in February 2011 to the north of Ramsgill Beck over sheep grazed pasture. A flock of 37 was seen nearby in the same area in July 2011.

In 2012, three pairs of lapwing bred within the Site in proximity to and on the quarry area. One pair bred amongst rushes north of the silt lagoon, another in short ephemeral and ruderal vegetation south of the lagoon and the third amongst cotton grass and rushes north of the smaller worked area (Figure 5).

Also in 2012, two pairs bred in the burnt heather in the wider survey area south of Ramsgill Beck opposite Spittle Ings and another pair bred in pasture in the south west of the wider survey area at Foul Causeway Slack.

Lapwing was the most commonly recorded wading species, making display flights within the Site, and wider survey area in both years. Whilst small numbers bred in the Site on the bare and sparsely vegetated areas of the quarry, breeding was focussed outside the Site and particularly on the improved pastures to the north around Spittle Ings House, Burnt Hill and Ramsgill Beck and to the south near Moorcock Hall (Figure 5).

Vantage point surveys did not record lapwing movements to and from the lagoons. Lapwing movements observed were display or alarm flights performed by birds nesting within the quarry area.

Red Grouse - Both Blubberhouses and Kex Gill Moors, in which the Site lies are both managed grouse moors. Red grouse (*Lagopus lagopus*) were therefore present across the Site and wider survey area in 2011 and 2012, even during the worst winter weather.

In 2011, six pairs are likely to have bred within the Site in areas of taller heather with a further 10 pairs breeding in the wider survey area (Figure 4).

In 2012, approximately 33 pairs were recorded breeding within the wider survey area, spread across the extensive heather moor to the east and west (Figure 5). Within the western part of the Site, management is less intensive and few pairs were recorded here.

Whinchat - Whinchat (*Saxicola rubetra*) was not recorded in 2011 but in 2012, one pair bred by Hall Beck next to the A59 in the south west of the survey area.

Ring Ouzel - Ring ouzel (*Turdus torquatus*) was not recorded in 2011 but in 2012 a pair were recorded on 20th April by the Plant Site area and on the 1st May 2012 west of Spittle Ings, north west of the Site. There was no evidence of breeding of this species and it was not seen at any other time.

Wheatear (*Oenanthe oenanthe*) and twite (*Carduelis flavirostris*) two other species noted on the SSSI schedule, were not recorded in either 2011 or 2012.

Other species recorded during the surveys are listed below.

Skylark - In 2011, skylarks (*Alauda arvensis*) were recorded on the Site from March in 2011 and activity across the whole wider survey area indicated that there were likely to be six breeding pairs (Figure 4).

In 2012, birds were again present from early March and activity across the whole wider survey area indicates that seven pairs bred, one pair within the Site either side of Kex Gill Road with the remainder outside of the Site to the West (Figure 5).

Greylag Goose - In 2011, four pairs of greylag goose (*Anser anser*) were observed arriving throughout the day on 24th March from the SPA to the west and a flock of 17 were seen on 13th May on the largest pool, also from the direction of the SPA in the west. It is likely that of these birds, two pairs bred, having been seen with young on the main pool and a third pair is likely to have bred nearby (Figure 4). Two other pairs were regularly seen around the pool but are thought to have been non-breeders. Greylag goose movements across the wider survey area were most commonly low level short flights between the pools and feeding locations on the moor.

In 2012, four pairs are thought to have bred successfully within the wider survey area (Figure 5), mainly in areas of variable heather structure near to waterbodies. Frequent flights were made between the nest sites and the lagoon prior to hatching after which birds were observed walking their young to and from the lagoons and apparent roosting areas on the moor. Groups of nine, five, four and two chicks were observed on the lagoon on 20th June

Greylag flights to and from the lagoon and within the survey area are dominated by flights made by locally resident or breeding birds located within the immediate area. Flights to and from the northwest section of moorland, south of Spittle Ings were regular, throughout March and April, decreasing in May and stopping in June when birds began to be recorded with young on the lagoon. Occasional irregular flights by pairs or small groups of birds arriving from further afield in the northwest were recorded, again dropping off as the season progressed.

Canada Goose - In 2011, a pair of Canada geese (*Branta canadensis*) nested on the edge of the largest pool in the small worked quarry area east of Kex Gill Road.

In 2012, two pairs of Canada Geese bred; one pair by the pond at the west of the wider survey area and another pair close to Ramsgill Beck in the Spittle Ings area to the north west.

Canada geese flights were similarly distributed and timed to greylag flights with regular flights to and from the lagoon and the northwest moorland section of the wider survey area. Canada geese appeared to favour the pastures around Spittle Ings and a pair bred close to this on the side of Ramsgill Beck.

Red Kite - Red kites (*Milvus milvus*) were not recorded breeding on the Site or wider survey area in 2011 or 2012. They were however regular visitors with individual birds observed foraging over the wider survey area throughout the winter and spring of 2010/11 and spring and summer 2012.

Kestrel - In both 2011 and 2012, kestrels (*Falco tinnunculus*) were infrequent visitors, foraging across the wider survey area, where they were seen to favour the moor grass areas in the east of the wider survey area and the pasture to the southeast.

Little ringed Plover - In 2011, one pair of little ringed plover (*Charadrius dubius*) were recorded breeding in the quarry area and were observed feeding consistently at the edge of the silt lagoon from April 2011 (Figure 4).

In 2012, two pairs were recorded breeding; one pair again in the quarry area and one pair in the plant site area. Both pairs were observed feeding regularly at the edge of the silt lagoon from April (Figure 5).

Oystercatcher - In 2011, oystercatchers (*Haematopus ostralegus*) were first seen in March when 10 individuals were recorded in flight around the quarry area and south towards the Hall Beck. Three pairs bred or attempted to breed within the Site, one pair in the Plant Site area, another pair near the silt lagoon and a third on the banks of the small pools, east of the road (Figure 4).

In 2012, only one pair bred, north of the silt lagoon. Four more pairs bred in the Spittle Ings area, outside the Site to the north west (Figure 5).

Oystercatcher flights were predominantly made from the nest sites to and from the pools with some display flights made from the nest sites south and out over the gorge on the southern boundary.

Meadow Pipit - In both years, meadow pipits (*Anthus pratensis*) bred abundantly across most of the wider survey area and the Site. Twenty-eight pairs are believed to have bred in 2011 and in 2012 in excess of 30 pairs.

Cuckoo - Not recorded in 2011, a cuckoo was heard calling from May 2012 and seen in the southeast part of the Site in June. Breeding could have occurred, probably taking advantage of the high density of meadow pipits.

Reed Bunting - Not recorded in 2011, three pairs of reed bunting (*Emberiza schoeniclus*) are thought to have bred in the wider survey area in 2012. One pair was confirmed breeding on the rough grassland on Kex Gill opposite the plant site entrance and another two pairs are thought to have bred within the extensive stands of bracken above Cat Crag just north of the A59 in the south east corner of the wider survey area.

Lesser Redpoll - Not recorded in 2011, five pairs of lesser redpoll (*Carduelis cabaret*) were suspected to have bred outside the Site, primarily in the bracken covered steep slopes down to the A59, south of the Plant Site. One pair was also recorded in woodland along to the north along Redshaw Gill Beck.

Other Passerines - In the wooded areas at the northern end of the Site and wider survey area, a number of common resident and migratory species were recorded in 2011 and 2012. These wooded areas included a small immature cover plantation immediately south of the Plant Site, an area of newer plantation on either side of road along Redshaw Gill beck at the northern end of the Site, a similar area at the very eastern end of the wider survey area and a narrow area of willow carr along Hall beck to the south.

Wintering activity recorded during 2010/11 was limited to the wooded and lower areas of the site until March when numbers and distribution increased across the wider survey area. The wintering passerine species recorded included blue tit (*Parus caeruleus*), great tit (*Parus major*), long-tailed tit (*Aegithalos caedatus*), blackbird (*Turdus merula*), robin (*Erithacus rubecula*), mistle thrush (*Turdus viscivorus*), goldfinch (*Carduelis carduelis*), greenfinch (*Carduelis chloris*), chaffinch (*Fringilla coelebs*) and bullfinch (*Pyrrhula pyrrhula*). There were also visits from flocks of migratory species in autumn/ early winter. Redwing (*Turdus iliacus*) and fieldfare (*Turdus pilaris*) were recorded in a mixed flock of around 30 birds in December 2010.

Species that bred in the woodland areas in 2011 and/or 2012 included blue tit, great tit, mistle thrush, song thrush (*Turdus philomelos*), blackbird (*Turdus merula*), wren (*Troglodytes troglodytes*), robin, goldfinch, greenfinch, chaffinch, goldcrest (*Regulus regulus*) whitethroat (*Sylvia communis*) blackcap (*Sylvia atricapilla*). In 2012, a single pair of garden warblers (*Sylvia borin*) is believed to have bred just outside the survey area in woodland by Redshaw Gill Beck. Willow warbler (*Phylloscopus trochilus*) was the commonest recorded non-resident.

Other Waterfowl - In 2011, fourteen mallard (*Anas platyrhynchos*) were recorded on the large pool in the quarry in February 2011. Other species were recorded in low numbers on or around this pool in February and March 2011 and included a single goldeneye (*Bucephala clangula*) and four pochards (*Aythya farina*). None of these bred here in 2011.

In 2012, a skein of 80 hooper swans was observed flying north over the survey area's eastern extremity in early March. A pair of tufted duck (*Aythya fuligula*) bred successfully on the lagoon. A pair of mallard (*Anas platyrhynchos*) bred successfully on the lagoon and mallards were recorded in numbers in winter and early in spring. Shelduck (*Tadorna tadorna*) was recorded in April and June 2012, a pair on the silt lagoon and a single bird by the pond over at the western end of the wider survey area.

5.2.4 **Summary**

One of the points raised by RSPB in particular to the original survey undertaken in 2011 was the number of visits. It was agreed at the site meeting to increase the survey visits to ten and also undertake further vantage point surveys. The survey area was also enlarged to include an area of wet pastures to the north of the site.

Table 4 below provides a comparison of the number of breeding pairs recorded in 2011 within the Site and the wider survey area and in 2012 within the Site and the comparable wider survey area from 2011.

The biggest difference between the two years is the number of pairs of red grouse detected. This appears to be a result of undertaking surveys during June 2012, something that did not happen in 2011 at the request of the gamekeeper because it is a sensitive time for the red grouse, as the young are vulnerable to the weather. The June visits were also something the RSPB had asked to be undertaken.

For the other species recorded, there are small increase/decreases in the number of pairs but these year-to-year fluctuations are expected. The only significant record in 2012 compared to 2011 was the recording of breeding merlin on the grouse moor to the east. Birds had been seen during 2011 but nesting was not proved.

The data from both years has been used to assess the value of the Site for relevant species and for assessment of impact on the SPA in particular.

TABLE 4: Breeding Pairs Recorded 2011 and 2012 within Site and Comparable Wider Survey Area

	2011	2012	2011	2012
SPA				
Golden Plover	0	2	1	1
Hen Harrier	0	0	0	0
Merlin	0	0	0	1
Peregrine	0	0	0	0
Curlew	3	4	6	8
Dunlin	0	0	0	0
SSSI				
Short eared owl	0	0	1	0
Snipe	0	0	0	2
Redshank	1	0	0	1
Buzzard	0	0	0	0
Teal	0	0	1	0
Common sandpiper	0	1	0	0
Lapwing	2	3	2	6
Red grouse	6	6	10	27
Whinchat	0	0	0	1
Ring Ouzel	0	0	0	0
Wheatear	0	0	0	0
Twite	0	0	0	0
Other Noted Species				
Skylark	2	2	4	4
Greylag goose	2	2	0	2
Canada goose	1	0	0	2
Red kite	0	0	0	0
Kestrel	0	0	0	0
Little ringed plover	1	2	0	0
Oystercatcher	3	1	0	2
Reed bunting	0	1	0	0

6 ASSESSMENT OF NATURE CONSERVATION VALUE

6.1 Statutory Sites of Nature Conservation Value

From the available plans, it appears that the boundary of the SPA/SAC/SSSI is coincident with the western and southern boundaries of the planning permission boundary and hence there are no parts of any statutory sites of nature conservation value within the Site boundary. It would appear that the boundaries of the statutory sites were drawn to be coincident with the quarry boundary, which had permission before the sites were designated. The immediately adjacent sites are: -

The North Pennine Moors SAC is designated as of International importance based on the presence of six habitats listed on Annex 1 of “the EC Habitats Directive” (Council Directive 92/43/EEC); these include European dry heath, blanket bog and old sessile oak woods.

The North Pennine Moors SPA for birds is designated of International importance as it qualifies under Article 4.1 of the European Commission Directive on the Conservation of Wild Birds (79/409/EEC) in supporting populations of European importance of golden plover, hen harrier, merlin and peregrine falcon. It also qualifies under Article 4.2 because of having high numbers of breeding curlew and dunlin during the breeding season.

The West Nidderdale, Barden and Blubberhouses SSSI is one component SSSI of the North Pennine Moors SPA and SAC and is designated of National importance for heather moorland, blanket bog vegetation and breeding bird populations.

6.1.1 ***Non-Statutory Sites of Nature Conservation Value***

The West End Marsh SINC is designated as being of County Importance as one or more features present in the site meets the criteria for qualification set out in the Sites of Importance for Nature Conservation in North Yorkshire – Guidelines for Site Selection (North Yorkshire SINC Panel, 2008) and has been through the selection panel. The site is located approximately 600m to the south east of the planning permission boundary.

Protected/Notable Bird Species

All species of bird receive protection from harm whilst nesting or attempting to nest. However certain species receive additional protection under Schedule 1 of the Act and are protected from disturbance. Species recorded during the bird surveys listed on Schedule 1 include little ringed plover, red kite, peregrine falcon and merlin.

One pair of merlin was recorded breeding within managed heather just outside the eastern boundary of the Site on Hall Moor in 2012. One pair of little ringed plover bred on bare ground in the quarry in 2011 and 2012 with a further pair breeding within the plant site area in 2012. None of the other species were recorded breeding within or adjacent to the Site in 2011 or 2012 and save for red kite were only recorded once over the wider area around the Site.

Merlin, red kite and golden plover are also on the amber list of Birds of Conservation Concern (Eaton, Brown, Noble, Musgrove, Hearn, Aebischer, Gibbons, Evans & Gregory, 2009); red kite as it is of European Conservation Concern, merlin because whilst there is a historic decline in numbers there has been an at least doubling of the population over the last 25 years and golden plover as there is at least 20% of the European breeding and non breeding population found in the UK.

Merlin and Peregrine Falcon

In the case of merlin and peregrine, the adjacent land has been included within the North Pennine Moors SPA partly because of the presence of breeding numbers of both species; for merlin 136 pairs and for peregrine 15 pairs (information from Joint Nature Conservation Committee SPA list). This is however across the whole of the North Pennine Moors SPA, which extends to over 147,000ha.

The Site does not have suitable cliff-nesting habitat for peregrine; its sole value being as adjacent foraging habitat of which it forms but a small part and the Site is assessed to be of Local importance.

Merlin nests on the ground in managed grouse moorlands and as such the Site, particularly the east side of the road and the wider area provides suitable habitat. There was no evidence breeding in 2011 and the area of managed heather moorland to the east of the Kex Gill road was considered to be probably too small and isolated to support a breeding pair. This was reinforced by the fact there

were no recent records from the area according to the local gamekeeper. It was assessed in 2011 that the Site's value was as foraging habitat but only as a small part of a large suitable area and hence it was assessed to be of Local importance for the species.

The survey in 2012 has found that a pair bred outside of the Site to the east in 2012. The presence in 2012 could be a reflection of growing numbers of the species in the wider area, the habitat being at a particularly suitable stage of its management cycle (the location and extent of suitable habitat changes over time, as the heather is managed for grouse by a cycle of burning) or chance. Whichever the case, the presence of a breeding pair confers a higher value on the area within which the Site is located and this is revised to be of County importance for the species.

Hen Harrier

Hen harrier, one of the other five species for which the SPA has been designated, which is listed on Schedule 1 of the W&C Act 1981 (as amended); the red list of species of Conservation Concern (Eaton *et al*, 2009) and the LBAP was not recorded at all during the surveys undertaken in 2010/11 and 2012. The Site represents suitable breeding and foraging habitat but is a very small area set within a much larger landscape of suitable habitat including the SPA and as such is assessed to be of Local importance.

Golden Plover

In 2011, two pairs of golden plover were considered to have bred in the managed heather to the east outside the Site boundary. Small numbers may also have bred amongst managed heather west of the Site boundary within the SPA. Activity within the Site was low; a post breeding flock of 20 birds was observed outside the Site boundary to the northwest within the SPA in July 2011. It was assessed in 2011 that whilst there was no breeding within the Site, there was no particular reason why the species could not breed within the Site, as the habitat present was suitable.

In 2011, using evidence presented in a study by Tharme, Green, Baines, Bainbridge & O'Brien (2001) who found average number of breeding pairs/km² between 0.2 - 1.6 on managed and unmanaged grouse moor, it was concluded that it may be expected that the Site could hold one or two breeding pairs in some years and this is assessed to be of County importance. In 2012, two pairs have been recorded breeding within the Site east of the Kex Gill Road, with a third pair breeding at the western end of the wider survey area within the SPA. The assessment in 2011 took this into account and so there is no change to the County importance assigned originally.

Curlew

Around nine pairs of curlew were considered to have bred across the wider survey area in 2011 with three of these likely to have been within the Site boundary. Curlews were often recorded in flight across the Site and wider area including flights to and from the silt lagoon. Twelve pairs were recorded breeding over the same area in 2012 with four of these within the Site. Nine pairs were recorded breeding in the wet pastures not surveyed in 2011, outside of the Site to the north. Higher numbers were recorded breeding within the SPA west of the Site in 2012 but none on the land to the east of the Site. Within the Site itself all four pairs were recorded to the east of the Kex Gill Road and none on land on the west side.

In 2011, based on evidence presented in a study by Tharme *et al* (2001), who found average number of breeding pairs/km² to be 1.2 - 3.3 on managed and unmanaged grouse moor, it was considered that the Site might be expected to hold two or three breeding pairs in some years and this was assessed to be of District importance. The Site held four pairs in 2012 and the moorland within the wider survey area eight pairs, which is what would be expected from Tharme *et al* (2001). Annual fluctuations in numbers are to be expected, the results obtained in 2012, which had

substantially more survey effort, did not lead to significantly higher numbers being recorded and it is considered that there does not need to be a change to the assessed value of District importance for the Site.

Dunlin

Dunlin is on the red list of Species of Conservation Concern because of the severe decline (>50%) in breeding and non breeding populations over the last 25 years and because at least 50% of the breeding and non-breeding populations are restricted to a small number of locations and at least 20% of the European non-breeding population is found in the UK (Eaton *et al.*, 2009).

Dunlin was not recorded breeding within the Site boundary in 2011 but at least six birds were seen in a mixed flock of waders around the silt lagoon to the west of the road on the evening of 20th April 2011. Other observations suggest that it is likely a pair bred outside the Site boundary to the northwest. However, it was considered that there did not appear to be any particular reason why the species could not breed within the Site in future years, as the habitat present is suitable and as such its value was assessed to be of District importance. In 2012, the results were very similar and small numbers may have bred outside of the Site to the north west. Based on this it is considered that there does not need to be a change to the assessed value of District importance.

Red Kite

Red Kite is not a species for which the SPA is designated but the species receives protection on Schedule 1 of the W&C Act 1981 (as amended). It is also on the amber list of Species of Conservation Concern as it is a species categorised as being of European concern (Eaton *et al.*, 2009). In recent years it has been the subject of a number of re-introductions, the nearest to the Site being the Harewood House Estate in 1999 and it is reported that there are now upwards of 300 birds in Yorkshire. It was considered that the birds recorded across the area in 2011 were foraging over a wide area and the Site itself did not provide suitable nesting habitat for the species and so as a small part of a wide foraging range was assessed to be of District Importance. The level of activity recorded during 2012 was very much the same as in 2011 and so it is considered that there does not need to be a change to the assessed value of District importance.

Little Ringed Plover

Little ringed plover receives protection on Schedule 1 of the W&C Act 1981 (as amended). In 2011, a pair likely bred on the bare ground to the south of the large pool and were often seen feeding along the edge of the silt lagoon in the Site. The species is migratory and arrives around March, leaving again after breeding in July. It has increased in numbers over the years as a result of exploiting man made habitats such as gravel pits and other areas of bare ground including demolition sites and colliery tips and it was considered that the bare spoil and the silt lagoon had attracted them to the Site in 2011 and the habitat was assessed to be of District importance. Two pairs were recorded in 2012, one pair in generally the same location as 2011 and one pair on bare ground within the Plant Site area. Based on this it is considered that there does not need to be a change to the assessed value of District importance.

Short-eared Owl

This species is on the amber list of species of Conservation Concern as it is a species categorised as being of European concern (Eaton *et al.*, 2009). A pair bred towards the western end of the wider survey area in 2011 and it was considered in 2011 that the Site provides suitable nesting habitat but this is a small part of a large expanse of suitable habitat and the same is true of foraging habitat. Based on this the Site was assessed not to be of any significant value to the species and was

assessed to be of Local importance. The results in 2012; no breeding and few sightings mean that there is no need to change the assessed value of Local importance.

Snipe

This species is on the amber list of species of Conservation Concern as it is a species categorised as being of European concern (Eaton *et al.*, 2009). There was no evidence of breeding of this species in the wider survey area in 2011, the only sightings being of single birds during the winter. It was considered the Site provides suitable nesting habitat but is but a small part of a large expanse of suitable habitat and the same is true of foraging habitat and as such was assessed to be of Local importance. In 2012, two pairs were recorded in the south west of the wider survey area and a further three pairs well to the north of the Site in an area not surveyed in 2012. None were recorded within the Site. Based on these results, it is considered that there is no reason to change the assessment and it remains as of Local importance.

Redshank

This species is on the amber list of species of Conservation Concern as a result of a 25% decline in the species over the last 25 years (Eaton *et al.*, 2009). In 2011, a pair appeared to have bred around the worked quarry area to the west of the road and as the species breeds and forages in wet grasslands, washland and moorland; it was considered that it was attracted to the Site by the silt lagoon and open water areas for feeding. Foraging habitat also occurs to the north and east where there are extensive wet pastures. Based on this the Site was assessed to be of Local importance for the species.

The results in 2012, did not record any breeding within the Site but a pair bred well to the north at Burnt Hill but birds were recorded flying to and from the lagoons and as such it is considered that there is no reason to change the assessment and it remains as of Local importance.

Buzzard

The 2011 and 2012 results show the Site forms but a small part of a foraging territory for this species, which will be breeding in the woodlands in the wider area, and it is assessed to be of Local importance.

Teal

This species is on the amber list of species of Conservation Concern because the UK holds at least 20% of the European non-breeding population (Eaton *et al.*, 2009). One pair were recorded breeding at the far western end of the wider survey area in 2011 and it was considered that whilst the Site itself provides suitable breeding and foraging habitat it was assessed to be of Local importance for this species. The results of the survey undertaken in 2012; no breeding on Site infrequent foraging/passage do not change the assessment and it remains as of Local importance.

Common Sandpiper

This species is on the amber list of species of Conservation Concern because it is of European concern and there has been a moderate decline in the breeding population over the last 25 years (Eaton *et al.*, 2009). In 2011, the silt lagoon attracted small numbers of birds that appeared to have bred within the wider survey area but not the Site itself. The silt lagoon and the flooded quarry pits were considered to be attractive to this species and the Site was assessed to be of Local importance for this species. In 2012, one pair bred on the edge of the lagoon but no significant change occurred and it is considered that there does not need to be a change to the assessment from 2011, which was that it is of Local importance.

Lapwing

Lapwing is on the red list of birds of Conservation Concern because there has been a severe decline (>50%) in the breeding population over the last 25 years; it is of European Concern and the UK holds at least 20% of the European non-breeding population. The species is also listed on the UKBAP. The assessment in 2011 was that the habitat around the quarry pools and the silt lagoon and the short vegetation is suitable for the species but the pastures to the north and south east were preferred and as such the Site was assessed to be of Local importance for this species. The survey in 2012 confirmed that the locus for breeding is the wet pastures to the north, north west and south of the Site but three pairs bred within the Site around the lagoons. Based on these results, it is considered that there does not need to be a change to the assessment from 2011, which was that the Site is of Local importance for the species.

Red Grouse

Red grouse is on the amber list of birds of Conservation Concern because there has been a moderate decline (25% - 50%) in the breeding population over the last 25 years, however here the grouse are managed for shooting. The habitat within the Site particularly east of the road forms part of a large managed grouse moor and as such is suitable for this species. Six pairs are likely to have bred within the Site in 2011 and 2012 with higher numbers in the managed moorland to the east and west. As part of the managed estate the Site is assessed to be of Local importance for this species.

Skylark

This species is on the red list of birds of Conservation Concern because there has been a severe decline (>50%) in the breeding population over the last 25 years and it is also of European concern. It is also identified as a priority species for conservation in England on Section 41 of the NERC Act 2006 and the UKBAP.

In 2011 and 2012, two pairs were recorded breeding. The management of the moor within which the Site is located means that suitable habitat for this species changes pattern regularly and at any one time areas of suitability for the species change in extent and the Site is assessed to be of Local importance for this species.

Greylag Goose

This species is on the amber list of birds of Conservation Concern because at least 50% of the non-breeding population is found on 10 or fewer sites and at least 20% of the European non-breeding population is found in the UK. However, this refers to those identified as being relic native populations, most are feral populations as is the case here. Three pairs bred close to the large flooded quarry west of the road in 2011 and in 2012 there were four pairs.

Kestrel

This species is on the amber list of bird species of Conservation Concern because it is of European concern. The species was noted foraging in the wide area and the Site in both 2011 and 2012. The Site holds nothing significant for the species and it is assessed to be of Local importance for this species.

Oystercatcher

This species is on the amber list of bird species of Conservation Concern because at least 20% of the European breeding and non-breeding population is found in the UK and also at least 50% of the breeding population is found in 10 or fewer sites. In both 2011 and 2012, the water bodies appear

to have attracted small number of pairs for breeding (3 pairs in 2011, 1 pair 2012) and the Site is assessed to be of Local importance for this species.

Whinchat

This species is on the amber list of bird species of Conservation Concern because of a recent population decline. It was not recorded in 2011 but in 2012 one pair bred near to the A59 in the south west corner of the wider survey area. The species favours moorland and heathland and is a migrant species. There is suitable habitat for the species throughout the wider area, the Site holds nothing significant for the species, and it is assessed to be of Local importance for this species

Ring Ouzel

This species is on the red list of bird species of Conservation Concern because of a recent population decline and is also a priority species on the UK BAP. It is a migrant breeder and nests generally on or close to the ground, typically in heather and one of its strongholds is the Pennine moors. In 2012, a pair was seen on one occasion near the Plant Site area and on the second occasion to the north west at Spittle Ings. There was no evidence that the pair bred in the area but there is suitable habitat for the species throughout the wider area and the Site holds nothing significant for the species and it is assessed to be of Local importance for this species.

Lesser Redpoll

This species is on the red list of bird species of Conservation Concern because of a recent population decline and is also a priority species on the UKBAP. Five pairs were thought to have bred in the area to the south and south east of the Plant Site nearby the A59 in 2012. The Site does not hold habitat suitable for the species; it breeds in woodland and the Site is considered not to hold anything significant for the species and the wider area is assessed to be of Local importance for this species.

Reed Bunting

This species is on the amber list of bird species of Conservation Concern because of a recent population decline and is also a priority species on the UKBAP and a priority species for conservation in England on Section 41 of the NERC Act 2006.

Other Passerines

Two species recorded as winter flocks; fieldfare and redwing, are on the red list of birds of Conservation Concern because of the severe decline in breeding numbers over the last 25 years but neither breed in the area (Eaton *et al.*, 2009). A number of other species are on the amber list of birds of Conservation because of decline in breeding numbers over the last 25 years (Eaton *et al.*, 2009). However most were recorded as winter flocks with a smaller number of resident species breeding in the area including the Site. None of these are amber listed. Breeding of these species is restricted largely to the small planted woodland areas to the south of the Plant site and along the Ramsgill and Redshaw Gill Becks at the northern boundary.

Other Waterfowl

In 2011, no species were recorded breeding and the Site was assessed to be of Local importance for waterfowl, as it was used by a small number of species during winter. In 2012, a pair of tufted duck and pair of mallard bred successfully on the lagoon and mallards were recorded in numbers in winter and early in spring. Shelduck (*Tadorna tadorna*) was recorded in April and June 2012, a pair on the silt lagoon and a single bird by the pond over at the western end of the wider survey area and

they may have bred there. The results in 2012 do not change the assessment in 2011, which was that the Site is of Local importance for wildfowl.

7 KEY ISSUES

From the baseline survey and desk study, a number of receptors that could be sensitive to the proposals have been identified. These are:

North Pennine Moors SPA

The West Nidderdale, Barden and Blubberhouses SSSI

Breeding birds including SPA Qualifying Species

In addition, one issue raised by the Civil Aviation Authority is the potential for attracting large flocks of birds and the planning permission area falls within the “safeguarding” zone for birdstrike of Leeds Bradford Airport.

8 POTENTIAL IMPACTS OF DEVELOPMENT

8.1 Development Proposals

The details of the development are given in Chapter 2 of the Environmental Statement.

In summary, the proposals are to work the Site in 5 phases as detailed in the revision to the original planning permission in 1991. Phase 1 was worked largely prior to mothballing of the quarry and so four phases remain, each phase programmed to take around four years.

Phase 2 will be worked south to north and then east to the extraction boundary. The remainder of Phase 1 will also be worked at an early stage during Phase 2. Most of the area of Phase 2 and Phase 1 once worked will form silt lagoons.

Phase 3 will be worked from west to east and during this period Phase 1 and the eastern part of Phase 2 will be restored.

Phase 4 will commence prior to completion of Phase 3 and during this period the Phase 3 void will be used for silting and the rest of Phase 2 restored.

Phase 5 will be worked west and then north and during this time Phase 3 will continue to be used for silting as will the southern half of Phase 4. The northern half of Phase 4 will be restored.

Final restoration will be Phase 3, the southern half of Phase 4 and Phase 5.

The current restoration is for an approximate 2ha lake to be created at the northern end of Phase 5 with the rest of the Site restored to upland heath to be managed as grouse moor.

The extraction area is approximately 39ha; the road diversion will impact on a further 1.8ha based on a construction wayleave of 20m although it will narrow to around 9m once constructed; this means that of the approximately 54ha of undisturbed habitat within the Site boundary currently, 13.2ha will remain un-worked. This is land around the periphery of the north, east and west between the extraction limit and Site boundary.

The Plant site area already exists and the banks surrounding it have been re-vegetated since 1990 either naturally or through addition of heather material as part of a trial into techniques to restore heather moorland vegetation.

Working of the Site has the potential for both direct impacts through loss of habitat and indirect impacts through dust, noise and changes to surface and ground water levels and volumes.

8.2 Statutory Sites of Nature Conservation Importance & Species

Impacts on European designated sites are required to be tested through the process that could lead to an Appropriate Assessment. An Appropriate Assessment is only required where there is the likelihood of significant effects. Implicit within the wording of the habitats directive is the precautionary principle, whereby if an effect upon a designated site is inconclusive or uncertain, a full assessment should still be made. Only where it can be stated conclusively that there will be no likely significant adverse effects on designated sites will it be deemed unnecessary to undertake a full assessment.

The approach is stepwise and involves a preliminary consideration of whether there is likely to be either directly or indirectly affected; if the answer to this is yes then a fuller consideration is required to ascertain whether this is the case and if the conclusion is a "likely significant effect" then a formal Appropriate Assessment is required.

To determine if the proposal is likely to have any significant effects on European designated sites the following issues are considered:

- could the proposals affect the qualifying interest and are they sensitive to the effect;
- the probability of the effect happening;
- the likely consequences for the site's Conservation Objectives if the effect occurred;
- and the magnitude, duration and reversibility of the effect.

The aim of the Habitats Regulations process is to demonstrate that the proposals will not have an adverse effect on the integrity of the site. Site integrity is defined as:

"the coherence of its structure and function across its whole area that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified".

Even if a significant effect is concluded Article 6(4) states:

"If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest".

The decision on whether the site integrity could be adversely affected by the proposals should focus on and be limited to the site's Conservation Objectives.

The assessment presented here has drawn on the following information:

- description of the Natura 2000 sites and the qualifying interest features for which the sites are designated;

- details of the development, highlighting possible effects on the qualifying interest features of the Natura 2000 sites;
- identification and evaluation of impacts on the ecology and nature conservation value of the Natura 2000 sites;
- and the potential for in-combination effects when considered along with other existing and proposed schemes.

The site that requires the above consideration is; The North Pennine Moors SPA

8.2.1 ***The North Pennine Moors SPA***

The SPA is an extensive tract of land; 147,246.71ha across four counties; Cumbria, Durham, North Yorkshire and Northumberland (Appendix 2).

The site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European Importance of the following species on Annex 1 of the Directive:

During the breeding season:

Golden Plover *Pluvialis apricaria*, 1,400 pairs representing at least 6.2% of the breeding population in Great Britain

Hen Harrier *Circus cyaneus*, 11 pairs representing at least 2.2% of the breeding population in Great Britain (Estimated population)

Merlin *Falco columbarius*, 136 pairs representing at least 10.5% of the breeding population in Great Britain

Peregrine *Falco peregrinus*, 15 pairs representing at least 1.3% of the breeding population in Great Britain

This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species:

During the breeding season;

Curlew *Numenius arquata*, 3,930 pairs representing at least 3.3% of the breeding Europe - breeding population (1992/3/4 survey)

Dunlin *Calidris alpina schinzii*, 330 pairs representing at least 3.0% of the breeding Baltic/UK/Ireland population (Estimate based on 92-94 counts)

Direct Impacts

The Site lies outside of the SPA (Figure 1) and as such the development does not lead to direct loss of habitat defined within the SPA boundary, although the habitat present is similar to and contiguous with land that is within the SPA. As such, the development would not have a significant adverse impact on the land enclosed by the SPA boundary.

However the development does not have to be located within the SPA. Significant effects may occur even if the development is some distance away and the assessment must consider potential indirect, temporary or permanent, beneficial or harmful impacts.

Indirect Impacts

Disturbance - Impacts on the features for which the SPA is designated could occur from relocation of the road; noise and disturbance generated from the quarry; loss of foraging habitat.

The Kex Gill/Upper Moor road is a metalled single track with verges and ditches and is approximately 9m in width. This road is required to be moved at an early stage in the development to allow full working of the quarry. The re-alignment of the road between the extraction boundary and western Site boundary places it within 30m of the SPA boundary towards the south but generally northwards to where it re-joins the original road it is between 80m - 150m from the SPA boundary.

Figures 2 - 5 show 300m and 600m buffers (suggested by RSPB in scoping response as potential range of distances birds can be displaced by roads) from the proposed new road alignment. Based on the data collected in 2011 and 2012, there is the potential for the new road to displace one pair of curlew within 300m and four pairs between 300m and 600m. This is not considered a significant impact on the population being less than 1% of the total estimated breeding population of the species in the SPA. Furthermore, in 2011, two pairs of curlew were recorded breeding within 100m of the existing road and using the roadside fence posts as perches and in 2012, five pairs were breeding within 100m of the existing road. This is associated with the current low traffic densities and absence of street lighting, which are not predicted to change (see Chapter 13 of Environmental Statement).

Based on the results in 2011 and 2012, there is the potential for the new road to displace one pair of golden plover between 300m and 600m. This is not considered a significant impact on the population being less than 1% of the total estimated breeding population of the species in the SPA. Furthermore, in 2012, two pairs were recorded breeding within 200m of the existing road.

A pair of merlin was recorded breeding to the east of the Site in 2012 but based on the current location would not be affected by the relocation of the road. However, the nest site in 2012 was close to the eastern Site boundary and so there would be the potential to disturb the species if the working of the quarry were to commence in proximity to an active nest site. If this were to be the case then this could have a significant adverse impact on the species. In reality this is unlikely to happen, there is considerable suitable habitat within the wider area and the heather management cycle for the grouse moor results in changes in the location of suitable habitat. In any one year merlin could nest in any of the suitable habitat areas and not necessarily within or adjacent to the Site.

None of the other three SPA species was recorded breeding within the Site.

Dust and Noise - The extraction limit of the quarry is never closer than 110m to the SPA boundary and this is alongside the area of the quarry already worked (Figure 5.8). Northwards the extraction limit is further away and generally beyond 150m. The new road lies between the extraction limit and the SPA boundary. Standard dust suppression measures coupled with the prevailing wind from the west/south west and the prevailing climate at the Site means that dust will not be a significant issue and certainly not impair the likelihood of the area being used by the species named for the SPA.

It may be expected that there may be short term temporary impacts from noise at the recommencement of quarrying operations and particularly when each phase next to the SPA commences and is near to the surface but quarrying will never be closer than 100m to the SPA and this will be limited in time and extent. Only Phases 3 and 5 are in proximity to the SPA, Phases 2 and 4 are more than 300m from the SPA boundary and there will be extended periods (5 years or so) when each of these two phases are worked when there is no quarrying within 300m of the SPA

boundary. Experience elsewhere in the locality at Pateley Bridge quarry shows also that birds quickly habituate to this and do not perceive noise as a threat or disturbance. At Pateley Bridge, peregrines nest within the quarry and lapwings and other species breed within 50m - 100m of the edge of the quarry, the lorry access road and Plant Site and it is the management of the land that has resulted in the largest change in numbers at the quarry with curlew increasing from 1 pair in 2003 to 4 pairs in 2009 through a relaxation in grazing (URS, 2010).

Loss of Adjacent Habitat - Working of the quarry will result in the temporary loss of nesting and foraging habitat suitable for the SPA species outside but adjacent to the SPA. This loss extends to around 16ha by the end of Phase 3 of quarrying at which time land starts to be progressively restored to moorland habitats but the largest area unavailable is during Phase 5 when 18ha is being quarried or used for silting. Thus at the worst approximately 50% of the land within the extraction area will be unavailable. For peregrine, and hen harrier this is not a significant loss given they have not been recorded breeding within the Site or the wider survey area and only peregrine was recorded flying/foraging over the wider survey area on a small number of occasions.

A pair of merlin was recorded in the managed heather moorland to the east of the Site in 2012. It is quite possible that this or another pair could breed within or around the Site in future years. However, given the size of the suitable habitat within the immediate wider area including within the SPA to the west, the loss of habitat to quarrying is assessed not to be significant for this species.

The use of the Site by dunlin and golden plover appears to be low from the results obtained in 2011 and 2012; for dunlin infrequent visits into or across the Site were recorded. In 2012, two pairs of golden plover were recorded breeding within the Site to the east of the road. Clearly, there are annual fluctuations in numbers and locations for nesting. The numbers recorded are low; one pair was recorded outside the Site to the West in the SPA and the loss of the habitat to quarrying is assessed not to be significant for either species.

Curlew did breed within the Site in 2011 and 2012. Three pairs were recorded in 2011 and four pairs in 2012. Based on these results, there will be a temporary loss of confirmed breeding habitat during the life of the quarry. These birds will be displaced temporarily but this equates to 0.1% of the population for which the SPA qualifies and the land is not within the SPA, although it is contiguous and it is assessed that this does not represent a significant impact on the SPA.

The area within the Site that appears to be used most by waders from the SPA and wider area is the worked parts of the quarry that has left a large lake, two smaller waterbodies, bare/sparsely vegetated ground and a shallow silt lagoon with wider bare silty margins. This appears to be because this habitat, albeit created through quarrying, is providing conditions not found in the immediate wider area.

In summary:

- The proposals could affect the features for which the SPA has been designated
- The probability of this for all but curlew is negligible and temporary.
- In the case of curlew the consequence of the effect would be temporary loss of habitat outside of the SPA used by four pairs of curlew for breeding in 2012
- The magnitude of this effect in terms of numbers affected is around 0.1% of the number of breeding pairs for which the SPA is designated and whilst not short-term the effect is reversible on restoration.

It is thus concluded that working of the site will not result in a “likely significant effect” and thus a full Appropriate Assessment is not required.

Whilst any impacts on the species for which the SPA qualifies are assessed to be below the threshold for a likely significant effect, measures will be incorporated into the working of the quarry to further reduce and mitigate any potential for impact. In the longer-term this will include restoration of the quarry to a more diverse habitat mosaic than is present currently.

TABLE 5: Summary Effects on SPA Qualifying Species

FEATURE	SPA QUALIFYING	PRESENCE ON SITE AND WIDER AREA	POTENTIAL IMPACT	“likely significant effect” on SPA
Peregrine falcon	15 pairs	Not breeding small part of commuting/foraging territory	Temporary very small reduction in foraging habitat	No
Hen Harrier	11 pairs	Not recorded	None currently	No
Merlin	136 pairs	One breeding pair and small part of commuting/foraging territory	Temporary very small reduction in foraging habitat	No
Golden Plover	1400 pairs	Two pairs breeding within Site in 2012	Potential temporary displacement of 2 breeding pairs through loss of habitat	No; impact on only 0.1% of breeding population of SPA
Curlew	3930 pairs	4 pairs inside Site; 6 pairs wider survey area	Potential temporary displacement of 9 breeding pairs through loss of habitat and new road	No; impact on only 0.2% of breeding population of SPA
Dunlin	330 pairs	None breeding inside Site; 1 pair wider survey area; limited use of silt lagoon	Temporary loss of small area of suitable habitat outside of the SPA	No

8.2.2 *West Nidderdale, Barden and Blubberhouses SSSI*

Direct Impacts

None of the SSSI lies within the Site boundary and so working of the quarry will not result in the loss of any of the SSSI land.

Indirect Impacts

Eight species (lapwing, redshank, teal, short-eared owl, snipe, whinchat, ring ouzel & common sandpiper) of bird noted on the SSSI schedule could be indirectly affected by re-alignment of the road, loss of habitat adjacent to the SSSI and noise from quarrying. Of the eight species noted only lapwing; four pairs were associated with the previously quarried areas, redshank; one pair associated with previously quarried areas and common sandpiper; one pair associated with the quarry were recorded breeding in the Site. The other species were recorded as single pairs breeding in the wider survey area including the land to the west in the SSSI or just foraging/passing over the same areas. As a whole, the wider survey area that includes the SSSI to the west of the Site was assessed to be of Local importance for these species and as an assemblage to be of District importance given the small area of the SSSI adjacent to the Site, which is less than 0.3% of the total SSSI area.

The re-alignment of the road based on a 300m zone of displacement would not result in significant disturbance of any of these species; based on the results from 2011 and 2012. This is also true for noise from quarrying which is never closer than 100m (save for a very small length where the Kex Gill road turns north) and generally between 150m - 200m from the SSSI boundary.

Based on the temporary loss of the heath within the Site but outside of the SSSI it is assessed that there will be a significant **Adverse** impact on these bird species at the Local level. This impact is only temporary and will occur sequentially over a number of years which, following the half way point of the life of the quarry, will be progressively restored so that following completion of quarrying, there is the potential for a local **Beneficial** effect as a result of the recreation of the heather moorland habitat and thus overall in the longer term a **Neutral** impact.

8.2.3 **Birds**

Red Kite

Red kites were not recorded breeding on the Site but were seen regularly flying over and foraging over the Site and wider survey area. Working of the quarry would lead to a temporary loss of a small area of foraging habitat for this species, which is on the increase and spreading wider since releases were made at Harewood House 10, or so years ago. The temporary loss of the foraging habitat is assessed not to be significant for the maintenance of this species in the wider area.

Little ringed Plover

In 2011, one pair of little ringed plovers was recorded breeding on the bare ground to the south of the large pool and in 2012, one pair again near the large pool and another pair on bare ground in the Plant Site. This habitat has been created by quarrying and as such is temporary and only present because of the cessation in working. Outside of the worked areas there is no particularly suitable habitat for this species and as such is of importance. Renewed working of the quarry will lead to creation of suitable areas for the species throughout the life of the quarry and as at other quarries, the silt lagoons provide ideal locations for the species, which does not appear to be disturbed by nearby activities. It is thus assessed that during the active life of the quarry there will be no significant impact on the potential for the species to nest and if there is an awareness of the presence of the species, measures can be instigated to avoid disturbance whilst it is nesting.

On restoration there is no provision currently for suitable habitat to be created and this could lead to loss of breeding of the species in the area which is assessed to be an **Adverse** impact of Local significance, however a commitment to a revised restoration plan will include habitat for this species to be incorporated into the design and thus lead to an overall **Neutral** impact.

Birds of Conservation Concern

A number of birds will be affected by loss of habitat during quarrying but in all cases save for red grouse, the numbers of breeding pairs affected are small (one or two pairs) and the impact will be progressive over a number of years and temporary. Most of the birds were associated with the quarried areas that are flooded currently and the presence of extensive silt lagoon areas with open water, large draw-down areas and sparsely vegetated slopes throughout the working of the quarry will provide alternative habitat for most if not all of these species. Experience at quarries elsewhere shows that these lagoons attract these species, which quickly adapt and habituate to the conditions. The scale of impact is assessed as a temporary significant **Adverse** impact at Local level, which will be offset quickly to become a **Neutral** impact with provision of the lagoons for the life of the quarry. The habitat used by these species has been created by quarrying and on restoration there is provision under the permitted plan to create an area of open water towards the north end of the Site. This will not provide the diversity of habitat required by a number of these species and so there is the

potential for an adverse impact on restoration. However, there is a commitment to produce a revised restoration scheme that will include creation of areas suitable for these species in the form of scrapes, shallow pools and areas of bare mineral substrate.

The birds nesting and foraging in the small plantations will be unaffected by the proposals and any revised restoration scheme will incorporate areas of tree and planting to compliment those existing along the Becks and above the Plant Site.

8.2.4 ***Bird Strike***

The Civil Aviation Authority highlighted in their response to the scoping request that the area falls within the statutory 13km birdstrike safeguarding zone of Leeds Bradford Airport and requested that any statutory obligations are met. This means that measures are required to be taken to minimise risk of birdstrike, principally from large gull colonies but also geese and large flocks of other waterfowl, through a combination of restoration design and a bird management plan. It appears however that the Site is further than 15km from the airport and thus outside the safeguarding zone but is considered below.

The restoration of the Site includes provision currently of an approximate 2ha lake without islands. The open water present currently amounts to around 2ha and this does not attract more than single figures breeding and wintering wildfowl and no seagulls. Thus, on restoration any significant increase in numbers would not be expected given the upland location of the Site and paucity of feeding grounds for large numbers of wildfowl and gulls.

The potential is thus during working of the site when there will be large areas of silt lagoons (up to 7ha of open water and shallows) albeit with little ground cover around the margins. Based on the above assumption that the upland location and paucity of feeding grounds is unlikely to attract large numbers of gulls it is not expected that the silt lagoons will be an issue. However, as a matter of best practice, on recommencement of working monthly monitoring of numbers of birds using the site will be undertaken and measures put in place should they reach trigger levels to be agreed with the CAA. This has been used successfully elsewhere such as at Newington quarry with respect to Robin Hood Airport.

9 **AVOIDANCE/REDUCTION/MITIGATION & COMPENSATION MEASURES**

A number of measures to further avoid/reduce/mitigate or compensate for any of the identified adverse impacts detailed above are proposed.

9.1 **Birds**

As a standard precaution wherever possible vegetation and soil will be removed between end August and beginning of March to avoid the breeding bird season. Where this is not possible, particularly as delays to stripping because of wet weather could occur, measures to deter nesting in areas to be stripped will be put into place. These were used successfully at Pateley Bridge quarry where very similar weather problems occurred.

9.2 **Management Plan and Committee**

It is expected that a draft structure of an initial Habitat Management Plan together with a commitment to provide subsequent plans on a regular basis will be prepared prior to determination of the planning application and will form part of a legal agreement required on grant of the planning permission.

The Plan will provide the basis for the management of the areas within the Site until they are lost to quarrying, the land within the Site boundary to remain undisturbed and outline for habitats to be restored following quarrying. The timescale for the development is such that the Management Plan will be a “live” document to be updated and amended accordingly as the Site progresses and is restored. The commitment is for the Plan to cover the life of the quarry and 20 years following final restoration. To this end there is a commitment to establish a Management Committee made up of representatives of the landowners, Hanson, Natural England, the County Council, District Council and interested groups such as Wharfedale Naturalists once quarrying recommences. One of the remits of this new group would be to oversee and steer the restoration of the Site throughout the life of the quarry and then at least until the end of the agreed aftercare period. This will ensure that opportunities for enhancing nature conservation beyond that provided in the Management Plan can be recognised and action taken. To ensure that the management and restoration achieves the objectives set, a scheme of monitoring to include birds and any other agreed groups will be instigated and reported on annually and could be undertaken by a local wildlife group.

10 ISSUES & BALANCES

Table 6 below provides a summary of the potential impacts on identified receptors except the Pennine Moors SPA, which is provided above in Table 5.

TABLE 6: Summary of Impacts, Measures to be taken and Residual Impacts

Receptor	Proposed Activity	Nature of Impact	Significance of Impact	Proposed Measures to Avoid/Reduce/Mitigate	Residual Impact
West Nidderdale, Barden and Blubberhouses SSSI	Quarrying of extension area	Loss of habitat within site resulting in displacement of birds	<p>Few pairs apart from red grouse nesting within Site in 2011 & 2012. Most significant area was the flooded quarry workings where the bare ground and water attracted lapwing, little ringed plover, oystercatcher and redshank. This has the potential for an Adverse Impact of Local significance but this is balanced against during the life of the quarry, there will be extensive silt lagoons that will provide similar habitat that exists currently and based on experience at other quarries are likely to be utilised by the same species. This will reduce the impact to Neutral.</p> <p>The loss of heathland habitat is assessed to be an Adverse impact significant at Local level given the low number of birds breeding and is offset through restoration of the habitat progressively through the life of the quarry to be an overall Neutral impact</p>	<p>Following completion of quarrying, there will be loss of the suitable habitat for lapwing etc. However the restoration is to be re-designed to incorporate habitat suitable for these species including bare ground and shallow open water with draw down areas.</p> <p>There is the opportunity to re-design the current restoration to provide more diverse range of habitats and this has the potential for a Beneficial impact significant at Local level</p>	<p>None</p> <p>Potential for an overall Beneficial impact of Local significance on restoration</p>
	Provision of new road	Noise and disturbance within 100m of new road displacing birds breeding within 100m of the new road	Few if any breeding pairs affected save for red grouse and birds were recorded nesting within 100m of the existing road in 2011 & 2012 and it is assessed there is no significant impact		
Red kite	Quarrying	Temporary loss of small part of foraging habitat	Not significant	None	None
	Restoration	Creation of suitable foraging habitat			
Little ringed plover	Quarrying	Loss of bare ground habitat to restoration of Phase but creation of new areas associated with silt lagoons	Overall not significant	None	None
	Restoration	Loss of bare ground habitat to restoration	Potential for an Adverse impact of Local significance	Provision of suitable habitat within revised restoration proposals	No overall impact

TABLE 6: Summary of Impacts, Measures to be taken and Residual Impacts

Receptor	Proposed Activity	Nature of Impact	Significance of Impact	Proposed Measures to Avoid/Reduce/Mitigate	Residual Impact
Breeding birds	Quarrying	Loss of habitat for a small number of breeding species	Potential for a significant Adverse impact of Local significance but most species associated with the pools and silt lagoon and the loss is balanced during the life of the quarry, because there will be extensive silt lagoons to provide similar habitat and based on experience at other quarries are likely to be utilised by the same species. This will reduce the impact to Neutral .	None	No overall significant impact
	Restoration to heath	Loss of bare ground and shallow water habitat	Potential for a significant Adverse impact of Local significance	The restoration is to be re-designed to incorporate habitat suitable for these species including bare ground and shallow open water with draw down areas.	No overall significant impact with potential for a Beneficial impact of Local significance in the long term
Birdstrike Safeguarding Zone	Creation of large silt lagoons	Attracts/provides suitable habitat for numbers of gulls and/or larger waterfowl	Assessed to be low risk given the upland nature of the Site and it being on the very edge of the 13km zone	Numbers to be monitored during working and measures put in place should they reach agreed trigger levels as have been used elsewhere such as at Newington quarry with respect to Robin Hood Airport	Little or no risk subject to agreed strategy with CAA
	Creation of 2ha lake on restoration	Attracts/provides suitable habitat for numbers of gulls and/or larger waterfowl	Based on the fact that there is currently around 2ha of open water and no gulls and few wildfowl are using the area, it is assessed that there is a low risk and the Site is on the very edge of the 13km zone	Revised restoration will investigate creation of a number of smaller waterbodies rather than one large lake	

No major significant adverse impacts on nature conservation have been identified and it is considered that the proposal for an extension of time to work the quarry does not conflict with any national or local policies and satisfies the obligations on NYCC to have due regard for the conservation of biodiversity under the NERC Act 2006 and guidance set out in the NPPF.

Impacts on the features for which the SPA has been designated have been considered and it is concluded that there will be no “likely significant effects” on any of these and that there is no requirement for a full Appropriate Assessment to be undertaken. Small scale identified impacts are limited to a small number of breeding curlew and this is considered to be acceptable given the small percentage of the qualifying pairs for the SPA potentially affected by the road relocation. Also, the small numbers outside of the SPA but which are breeding within the Site.

There is the potential for a number of short-term temporary impacts on a small number of bird species, particularly associated with the already worked areas which are providing habitat not found elsewhere in the locality. However, during working of the Site such habitat will always be present and be in place at a number of locations for extended periods and as such impact on the species will be low. The habitat is generally transient during the working of the quarry and is lost to the current permitted restoration. However, it is proposed to revise the restoration to bring more habitat diversity into the area and features that will be incorporated will include bare mineral areas and shallow water with draw down zones to provide for the long term for these species.

The habitats to be created on restoration replace the upland heath and blanket bog to be lost to working of the quarry over 20 years and these meet the criteria and aspirations of the UKBAP and LBAP. However to refine this a revised scheme is to be designed on receipt of planning that will incorporate other habitats into the scheme including wetland areas comprising shallow pools and scrapes and very wet peat areas for cotton grass and *Sphagnum* to colonise. These in turn will provide habitat for species such as dragonflies and birds at the moment associated with the quarried areas. Upland heath will still form the backbone of the restoration and will be managed accordingly to provide mixed age stands of heather that can be used for red grouse. It is considered that there is sufficient evidence of successful recreation of heathland elsewhere that the restoration is achievable here.

The requests of the CCA re birdstrike risk have as far as possible been met, particular given the Site is on the fringe of the 13km safeguarding zone of Leeds Bradford Airport. A monitoring scheme will be agreed to be undertaken during the working of the quarry and trigger levels set for numbers of waterfowl and gulls with agreed measures should the agreed trigger levels be exceeded. This has been successful at Newington quarry that lies closer to Robin Hood airport than does the Site here to Leeds Bradford.

There is a commitment to establish a Management Committee to oversee the management and restoration and involve local groups wherever possible to monitor species and habitats throughout the life of the Site to inform the management and restoration scheme and identify opportunities.

It is concluded that the working of the Site will not have a “likely significant impact” on the features of the SPA for which it is designated and that significant adverse impacts identified on the bird interests within and adjoining the Site have been avoided/reduced/mitigated to the point where there is an acceptable balance between the need for the mineral and nature conservation. This then accords with both National and Local Policies.

REFERENCES

Biodiversity Reporting & Information Group (2007).

Report on the Species and Habitat Review.

Eaton, M.A., Brown, A.F., Noble, D.G., Musgrove, A.J., Hearn, R., Aebischer, N.J., Gibbons, D.W., Evans, A. & Gregory, R.D. (2009)

Birds of Conservation Concern 3: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man. *British Birds* 102, pp296 - 341

Institute of Environmental Assessment (1995)

Guidelines for Baseline Ecological Assessment. E & FN Spon, London

Institute for Ecology & Environmental Management (2006)

Guidelines for Ecological Impact Assessment in the United Kingdom (ver. 7, July 2006)

North Yorkshire SINC Panel (2008)

Sites of Importance for Nature Conservation in North Yorkshire. Guidelines for Site Selection

Tharme, A.P., Green, R.E., Baines, D., Bainbridge, I.P. & O'Brian, M. (2001)

The effect of management for red grouse shooting on the population density of breeding birds on heather-dominated moorland. *Journal of Ecology* Vol. 38 Issue 2, pages 439 – 457

URS (2010)

Pateley Bridge Annual Report. Unpublished report by URS Corporation, Derby for Hanson Aggregates Wetherby

APPENDIX 1: SUMMARY OF RELEVANT LEGISLATION

The Wildlife and Countryside Act, 1981 (as amended)

The WCA 1981 is the major domestic legal instrument for wildlife protection in the UK, and is the primary means by which the following are implemented:

- The Convention on the Conservation of European Wildlife and Natural Habitats ('the Bern Convention'); and
- The Council Directive 79/409/EEC on the Conservation of Wild birds (the 'Bird Directive')

The main relevant provisions of the Act are: allowance for the protection of the most important habitats and species by designating SSSI's, a level of protection to all nesting wild birds and specific bird species under Schedule 1.

The Countryside and Rights of Way (CroW) Act, 2000

Part III of this Act deals specifically with wildlife protection and nature conservation in England and Wales. The CroW Act strengthened the safeguards afforded to SSSI's.

Habitats & Species Regulations, 2010 (as amended)

The original Regulations transposed the EU Directive on Natural Habitats, and Wild Fauna and Flora 9/43/EEC) into domestic legislation. Amendments in 2007 and 2009 addressed a number of gaps and inconsistencies in the original legislation and provided a greater legal certainty and clarity in a number of areas. In April 2010 the Regulations were brought up to date to consolidate changes made since 1994. The Regulations afford a high level of protection to a variety of species that are considered important at a European scale. The Regulations identify European Protected Species and various habitats of importance within the European Union, with important sites for these habitats/species or both being designated as special Areas of Conservation (SAC). Any proposed development that may have a significant effect on a SAC or Special Protection Area (SPA) should be assessed in relation to the site's 'conservation objectives', i.e. the reasons for which the site is designated.

The new Regulations simplified the species protection regime to better reflect the Habitats Directive, providing a clear legal basis for surveillance and monitoring of European Protected Species (EPS). The Regulations also amended the WCA, updating Schedules 5 and 8 to consider provisions made by the Habitat Regulations 1994 in relation to the protection of EPS. They also offered further clarification to Part 4 of Section 9 considering "reckless" offences on wild animals, which was previously amended by the CROW Act 2000.

In 2012, the Regulations were further amended to place new duties on public bodies to take measures to preserve, maintain and re-establish habitat for wild birds. They were also amended to ensure certain provision of the Habitats Directive and the Birds Directive were transposed clearly and Section 15 was amended to make clear that Local Nature Reserves can be designated for re-establishing bird habitat

Natural Environment and Rural Communities (NERC) Act, 2006

Section 41 of the NERC Act requires the listing of habitats and species that are considered to be of principle importance for the conservation of biodiversity in England, including habitats and species in England that have been identified as priorities within the UK Biodiversity Action Plan (UKBAP).

The NERC Act requires that the section 41 list be used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the NERC Act 2006 'to have regard' to the conservation of biodiversity in England, when carrying out their normal functions.

SUMMARY OF RELEVANT PLANNING

National Planning Policy Framework

There has been a recent change in National Planning Policy. Planning Policy Statement 9 (PPS9); Biodiversity and Geological Conservation was replaced in March 2012 by relevant sections within the National Planning Policy Framework (NPPF).

Section 11 of the NPPF relates specifically to "Conserving and Enhancing the Natural Environment".

Paragraph 109 states that "The planning system should contribute and enhance the natural and local environment by:

- Protecting and enhancing valued landscapes, geological conservation interests and soils;
- Recognising the wider benefits of ecosystem services;
- Minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- Preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability; and
- Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

Paragraph 113 states that "Local Planning Authorities should set criteria based policies against which proposals for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged. Distinctions should be made between the hierarchy of international, national and locally designated sites, so that protection is commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks". Referenced here is ODPM Circular 06/2005, which provides further guidance re the hierarchical approach and the Circular remains extant in its entirety within the NPPF.

Paragraph 118 states that "When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

- if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused
- proposed development on land within or outside a Site of Special Scientific Interest likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in

combination with other developments) should not normally be permitted. Where an adverse effect on the site's notified special interest is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of Sites of Special Scientific Interest;

- development proposals where the primary objective is to conserve or enhance biodiversity should be permitted;
- opportunities to incorporate biodiversity in and around developments should be encouraged;
- planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss; and
- the following wildlife sites should be given the same protection as European sites:
 - potential Special Protection Areas and possible Special Areas of Conservation;
 - listed or proposed Ramsar sites;²⁶ and
 - sites identified, or required, as compensatory measures for adverse effects on European sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

Paragraph 119 states "The presumption in favour of sustainable development (paragraph 14) does not apply where development requiring appropriate assessment under the Birds or Habitats Directive is being considered, planned or determined".

Local Planning Policy

North Yorkshire County Minerals Local Plan (adopted 1997)

This was due to expire in September 2007 and be replaced by the Minerals and Waste Development Framework but until such time that this is ratified, a number of the policies in the Minerals Local Plan are still extant and this includes a number of policies relevant to the proposed development. These are: -

4/6a Nature Conservation and Habitat Protection – Local

In making decisions on planning applications the Mineral Planning Authority will protect the nature conservation or geological interest of Local Nature Reserves and of other sites having a nature conservation interest or importance and will have regard to other wildlife habitats.

4/20 Aftercare

Planning permissions which are subject to conditions requiring restoration to agriculture, forestry or amenity (including nature conservation) will additionally be subject to an aftercare requirement seeking to bring the restored land up to an approved standard for the specified after-use. Normally this requirement will run for a period of five-years following restoration. Additionally, where forestry and amenity (including nature conservation) after-uses are proposed, the Mineral Planning Authority may seek to secure longer term management agreements.

Harrogate District Local Plan

This has a number of extant policies until such time as the Harrogate District Local Development Framework is approved. Two policies are relevant to nature conservation. These are:

Policy NC3 – Proposals for development likely to have an adverse effect on a local nature reserve or a site of importance for nature conservation will not be permitted. Protection of these sites will be afforded in accordance with their Districtwide importance.

Policy NC4 – Outside designated sites development will not be permitted which would result in the loss of or damage to semi-natural habitats which are important for nature conservation. Protection of these habitats will be afforded in accordance with their importance within the district.

The draft Harrogate District Local Development Framework Core Strategy (2009) includes a relevant policy: -

EQ1 Reducing risks to the environment:

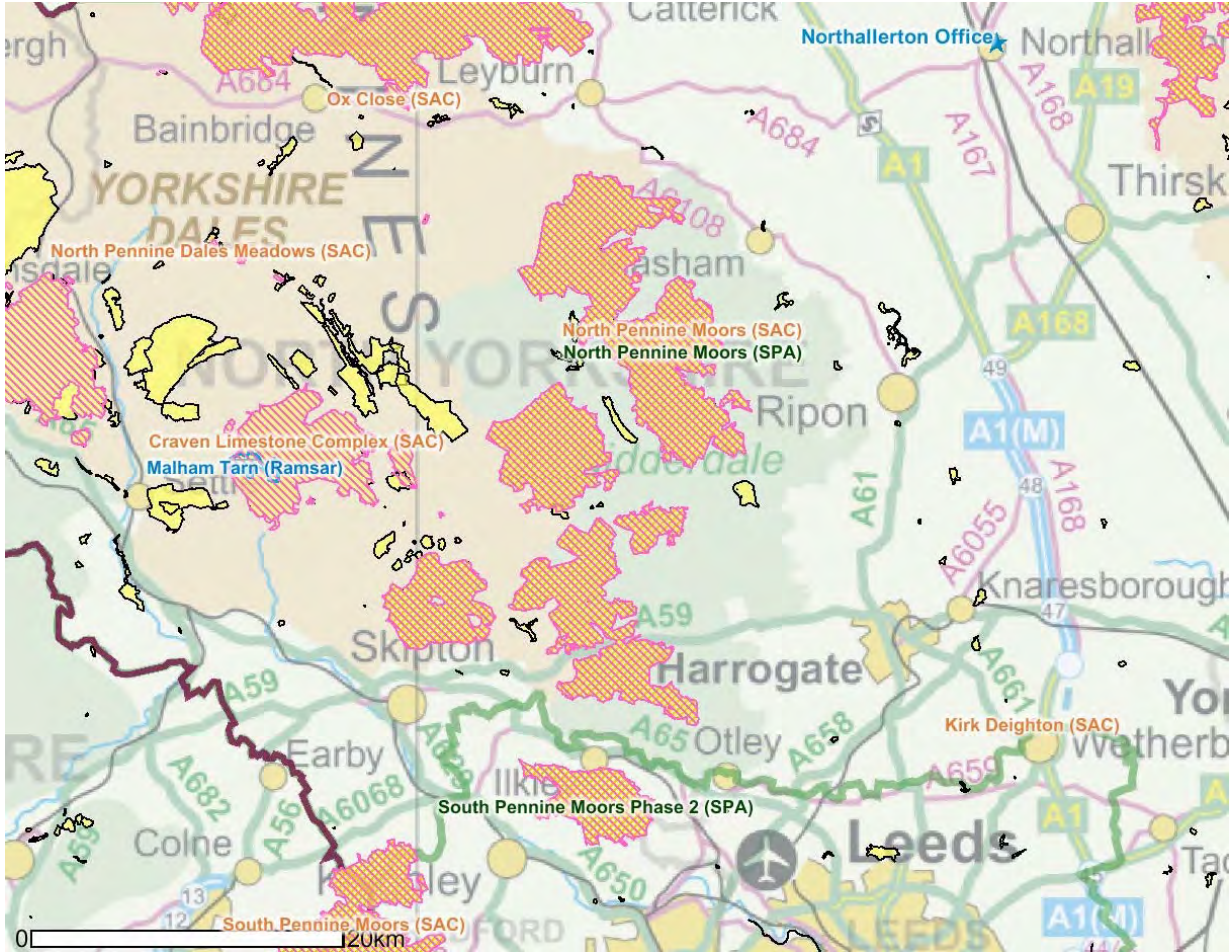
This core strategy is to be implemented by a number of specific policies, which have yet to be adopted and until such time the extant policies in the Local Plan are relevant for local matters with wildlife legislation and Government guidance re nature conservation relevant for compliance re-statutory sites and protected/notable species.

**APPENDIX 2: INFORMATION ON STATUTORY SITES AND RESULTS OF DESK
STUDY**



Nature on the Map

My Map



© Crown Copyright and database right 2011. Ordnance Survey Licence number 100022021. © Crown copyright. Licence number 100022432.
 © Natural England 2007. This page was produced from the Nature on the Map website at 14/11/2011 03:06:49

- * Natural England Offices
 - Special Areas of Conservation
 - Special Protection Areas
 - Ramsar Sites
 - Sites of Special Scientific Interest
 - Natural England Regions
 - Natural England Area Teams
 - Scotland, Wales and Ireland
 - Ordnance Survey background mapping
- England

JNCC is a statutory adviser to UK Government and devolved administrations



Home > Protected Sites > Special Areas of Conservation (SAC) > SAC selection

Special Areas of Conservation (SAC)

[UK SAC summary](#)

[UK SAC site list](#)

[England site list](#)

[Northern Ireland](#)

[Scotland](#)

[Wales](#)

[SAC selection](#)

[Summary](#)

[Background to site selection](#)

[Latest changes to the UK SAC list](#)

[Annex I Habitat accounts](#)

[Annex II Species accounts](#)

[Browse cSACs on a map](#)

[Notes on nomenclature](#)

[Search for a SAC](#)

[Other designations on UK SACs](#)

[cSACs in NI which adjoin cSACs in the RoI](#)

[Annex I habitats and Annex II species occurring in the UK](#)

[Abbreviations and acronyms](#)

[Acknowledgements](#)

[References](#)

[Download spatial and summary data](#)

[Download GIS data](#)

[Marine SACs](#)

North Pennine Moors

Site details

Country	England
Unitary Authority	Cumbria; Durham; Northumberland; North Yorkshire
Centroid*	SE137749
Latitude	54 10 10 N
Longitude	01 47 24 W
SAC EU code	UK0030033
Status	Designated Special Area of Conservation (SAC)
Area (ha)	103109.42

* This is the approximate central point of the SAC. In the case of large, linear or composite sites, this may not represent the location where a feature occurs within the SAC.

General site character

Bogs, Marshes, Water fringed vegetation, Fens (41%)
Heath, Scrub, Maquis and garrigue, Phygrana (32%)
Dry grassland, Steppes (26.5%)
Broad-leaved deciduous woodland (0.5%)

[Boundary map](#) and associated biodiversity information on the NBN Gateway.

[Natura 2000 data form](#) for this site as submitted to Europe (PDF format, size 30kb).

[Interactive map](#) from MAGIC (Multi-Agency Geographic Information for the Countryside).

Note:

When undertaking an appropriate assessment of impacts at a site, **all** features of European importance (both primary and non-primary) need to be considered.

Annex I habitats that are a primary reason for selection of this site

4030 [European dry heaths](#)

The North Pennine Moors (along with the North York Moors) hold much of the upland heathland of northern England. At higher altitudes and to the wetter west and north of the site complex, the heaths grade into extensive areas of **7130 blanket bogs**. The most abundant heath communities are H9 *Calluna vulgaris* – *Deschampsia flexuosa* heath and H12 *Calluna vulgaris* – *Vaccinium myrtillus* heath. There are also examples of H18 *Vaccinium myrtillus* – *Deschampsia flexuosa*, H10 *Calluna vulgaris* – *Erica cinerea* and H21 *Calluna vulgaris* – *Vaccinium myrtillus* – *Sphagnum capillifolium* heaths.

5130 [Juniperus communis formations on heaths or calcareous grasslands](#)

The North Pennine Moors includes one major stand of juniper scrub in Swaledale as well as a number of small and isolated localities. The Swaledale site grades into heathland and bracken *Pteridium aquilinum* but the core area of juniper is of W19 *Juniperus communis* – *Oxalis acetosella* woodland with scattered rowan *Sorbus aucuparia* and birch *Betula* sp.

7130 [Blanket bogs](#) * Priority feature

The North Pennine Moors hold the major area of **blanket bog** in England. A significant proportion remains active with accumulating peat, although these areas are often bounded by sizeable zones of currently non-active bog, albeit on deep peat. The main NVC type is M19 *Calluna vulgaris* – *Eriophorum vaginatum* blanket mire, but there is also representation of M18 *Erica tetralix* – *Sphagnum papillosum* blanket mire and some western localities support M17 *Scirpus cespitosus* – *Eriophorum vaginatum* blanket mire. Forms of M20 *Eriophorum vaginatum* blanket mire predominate on many areas of non-active bog.

7220 [Petrifying springs with tufa formation \(Cratoneurion\)](#) * Priority feature

The **petrifying springs** habitat is very localised in occurrence within the North Pennine Moors, but where it does occur it is species-rich with abundant bryophytes, sedges and herbs including bird's-eye primrose *Primula farinosa* and marsh valerian *Valeriana dioica*.

8220 [Siliceous rocky slopes with chasmophytic vegetation](#)

Acidic rock outcrops and screes are well-scattered across the North Pennine Moors and support vegetation typical of **Siliceous rocky slopes with chasmophytic vegetation** in England, including a range of lichens and bryophytes, such as *Racomitrium lanuginosum*, and species like stiff sedge *Carex bigelowii* and fir clubmoss *Huperzia selago*.

91A0 [Old sessile oak woods with Ilex and Blechnum in the British Isles](#)

Birk Gill Wood is an example of **old sessile oak woods** well to the east of the habitat's main distribution in the UK. However, this sheltered river valley shows the characteristic rich bryophyte and lichen communities of the type under a canopy of oak, birch *Betula* sp. and rowan *Sorbus aucuparia*. The slopes are boulder-strewn, with mixtures of heather *Calluna vulgaris*, bilberry *Vaccinium myrtillus* and moss carpets in the ground flora.

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site

4010 [Northern Atlantic wet heaths with Erica tetralix](#)

6130 [Calaminarian grasslands of the Violetalia calaminariae](#)



Location of North Pennine Moors SAC/SCI/cSAC

6150 [Siliceous alpine and boreal grasslands](#)

6210 [Semi-natural dry grasslands and scrubland facies: on calcareous substrates \(*Festuco-Brometalia*\)](#)

7230 [Alkaline fens](#)

8110 [Siliceous scree of the montane to snow levels \(*Androsacetalia alpinae* and *Galeopsietalia ladan*\)](#)

8210 [Calcareous rocky slopes with chasmophytic vegetation](#)

Annex II species that are a primary reason for selection of this site

Not applicable.

Annex II species present as a qualifying feature, but not a primary reason for site selection

1528 [Marsh saxifrage](#) *Saxifraga hirculus*

Many designated sites are on private land: the listing of a site in these pages does not imply any right of public access.

JNCC is a statutory adviser to UK Government and devolved administrations



[Home](#) > [UK](#) > [Protected Sites](#) > [Special Protection Areas](#) > [SPA Review](#) > SPA Review site accounts

SPA description

(information as published 2001)

North Pennine Moors

Country	England
Unitary Authority	Durham, North Yorkshire, Northumberland, Cumbria
SPA status	Classified 09/02/2001
Latitude	54 39 24 N
Longitude	02 14 49 W
SPA EU code	UK9006272
Area (ha)	147246.41
Component	Allendale Moors
SSSI/ASSIs	Appleby Fells Arkengarthdale, Gunnerside and Reeth Moors Bollilhope, Pikestone, Eggleston and Woodland Fells Bowes Moor Cotherstone Moor East Nidderdale Moors (Flamstone Pin - High Ruckles) Geltsdale and Glendue Fells Hexhamshire Moors Lovely Seat - Stainton Moor Lune Forest Mallerstang and Swaledale Head Moor House and Cross Fell Muggleswick, Stanhope and Edmundbyers Commons and Blanchland Moor Upper Teesdale West Nidderdale, Barden and Blubberhouses Moors Whitfield Moor, Plenmeller and Ashholme Commons



The North Pennine Moors SPA is situated in Cumbria, County Durham, Northumberland and North Yorkshire and includes parts of the moorland massif between the Tyne Gap (Hexham) and the Ribble-Aire corridor (Skipton). It encompasses extensive tracts of semi-natural moorland habitats. The site is of European importance for several upland breeding species, including birds of prey and waders. The southern end of the SPA is within 10 km of the South Pennine Moors SPA which supports a similar assemblage of upland breeding species. North Pennine Moors subsumes Moor House SPA, a site subject to separate classification.

For more information see [Phased, extended and subsumed SPAs](#)

Qualifying species

For individual species accounts visit the [Species Accounts section](#)

This site qualifies under **Article 4.1** of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive:

During the breeding season;

Golden Plover *Pluvialis apricaria*, 1,400 pairs representing at least 6.2% of the breeding population in Great Britain

Hen Harrier *Circus cyaneus*, 11 pairs representing at least 2.2% of the breeding population in Great Britain (Estimated population)

Merlin *Falco columbarius*, 136 pairs representing at least 10.5% of the breeding population in Great Britain

Peregrine *Falco peregrinus*, 15 pairs representing at least 1.3% of the breeding population in Great Britain

This site also qualifies under **Article 4.2** of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species:

During the breeding season;

Curlew *Numenius arquata*, 3,930 pairs representing at least 3.3% of the breeding Europe - breeding population (1992/3/4 survey)

Dunlin *Calidris alpina schinzii*, 330 pairs representing at least 3.0% of the breeding Baltic/UK/Ireland population (Estimate based on 92-94 counts)

Note:

Many designated sites are on private land: the listing of a site in these pages does not imply any right of public access.

NATURA 2000

STANDARD DATA FORM

FOR SPECIAL PROTECTION AREAS (SPA)
FOR SITES ELIGIBLE FOR IDENTIFICATION AS SITES OF COMMUNITY IMPORTANCE (SCI)
AND
FOR SPECIAL AREAS OF CONSERVATION (SAC)

1. Site identification:

1.1 Type 1.2 Site code

1.3 Compilation date 1.4 Update

1.5 Relationship with other Natura 2000 sites

U	K	0	0	1	4	7	7	4
U	K	0	0	3	0	0	3	3

1.6 Respondent(s)

1.7 Site name

1.8 Site indication and designation classification dates

date site proposed as eligible as SCI	
date confirmed as SCI	
date site classified as SPA	200102
date site designated as SAC	

2. Site location:

2.1 Site centre location

longitude	latitude
02 14 49 W	54 39 24 N

2.2 Site area (ha) 2.3 Site length (km)

2.5 Administrative region

NUTS code	Region name	% cover
UK12	Cumbria	19.18%
UK112	Durham	31.74%
UK22	North Yorkshire	32.16%
UK131	Northumberland	16.92%

2.6 Biogeographic region

Alpine

Atlantic

Boreal

Continental

Macaronesia

Mediterranean

3. Ecological information:

3.1 Annex I habitats

Habitat types present on the site and the site assessment for them:

Annex I habitat	% cover	Representativity	Relative surface	Conservation status	Global assessment

3.2 Annex I birds and regularly occurring migratory birds not listed on Annex I

Code	Species name	Population			Site assessment				
		Resident	Migratory		Population	Conservation	Isolation	Global	
			Breed	Winter					Stage
A082	<i>Circus cyaneus</i>		11 P			C		B	
A098	<i>Falco columbarius</i>		136 P			B		C	
A103	<i>Falco peregrinus</i>		15 P			C		C	
A140	<i>Pluvialis apricaria</i>		>140 0 P			B		C	

4. Site description:

4.1 General site character

Habitat classes	% cover
Marine areas. Sea inlets	
Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins)	
Salt marshes. Salt pastures. Salt steppes	
Coastal sand dunes. Sand beaches. Machair	
Shingle. Sea cliffs. Islets	
Inland water bodies (standing water, running water)	
Bogs. Marshes. Water fringed vegetation. Fens	51.0
Heath. Scrub. Maquis and garrigue. Phygrana	42.0
Dry grassland. Steppes	
Humid grassland. Mesophile grassland	6.5
Alpine and sub-alpine grassland	
Improved grassland	
Other arable land	
Broad-leaved deciduous woodland	0.5
Coniferous woodland	
Evergreen woodland	
Mixed woodland	
Non-forest areas cultivated with woody plants (including orchards, groves, vineyards, dehesas)	
Inland rocks. Screes. Sands. Permanent snow and ice	
Other land (including towns, villages, roads, waste places, mines, industrial sites)	
Total habitat cover	100%

4.1 Other site characteristics

Soil & geology:

Acidic, Nutrient-poor, Peat, Sandstone, Sedimentary

Geomorphology & landscape:

Montane, Upland

4.2 Quality and importance

ARTICLE 4.1 QUALIFICATION (79/409/EEC)

During the breeding season the area regularly supports:

<i>Circus cyaneus</i>	2.2% of the GB breeding population Count as at 1993 and 1994
<i>Falco columbarius</i>	10.5% of the GB breeding population Estimated population
<i>Falco peregrinus</i>	1.3% of the GB breeding population Count as at 1991
<i>Pluvialis apricaria</i> (North-western Europe - breeding)	at least 6.2% of the GB breeding population Estimated population

ARTICLE 4.2 QUALIFICATION (79/409/EEC)

4.3 Vulnerability

The North Pennine Moors covers nearly 150,000 hectares and is largely heather moorland, either as blanket bog or drier heathland, with smaller associated areas of wetland, grassland, bracken, scrub, woodland and cliff. The habitats and qualifying breeding bird populations are mostly dependant upon stock grazing and burning at sympathetic levels. The continuation of these practices relies on their profitability, including any subsidy or incentive payments. Over-grazing, over-burning and other forms of intensive agricultural or sporting management (e.g. drainage) may be damaging. These issues are being partly addressed through management agreements and related incentives. Further legislation relating to Common land and reform of the Common Agricultural Policy would achieve sustainable solutions.

Recreational activity may be problematic but is addressed through Site Management Statements and through continuing working with Local Authorities to manage access. There is evidence that acidic and nitrogen deposition are having damaging effects on the vegetation and hence on the bird populations. Such issues are being addressed through existing pollution control mechanisms. Within this large site there is scope to enhance many of the more natural habitats and species whilst maintaining the core SPA interests.

5. Site protection status and relation with CORINE biotopes:

5.1 Designation types at national and regional level

Code	% cover
UK01 (NNR)	5.0
UK04 (SSSI/ASSI)	100.0

Date of Notification: 25 March 1998

County: North Yorkshire **Site Name:** West Nidderdale, Barden and Blubberhouses Moors

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act, 1981, as amended.

Local Planning Authority: North Yorkshire County Council, Yorkshire Dales National Park Authority, Harrogate Borough Council, Craven District Council

National Grid Reference: SE 080705–SD 985580–SE 170510

Area: 13,418.94 (ha) 33,144.78 (ac)

Ordnance Survey Sheet 1:50,000: 98, 99, 103, 104 **1:10,000:** SD95NE, SE; SD96SE; SE05NW, NE, SW, SE; SE06SW, SE; SE14NE; SE15NW, NE, SW, SE' SE16SW, SE

First Notified: 25 March 1998

Description and Reasons for Notification:

Moorlands of the North Pennines are of international importance for their blanket bog and heather moorland vegetation communities and for their breeding bird populations, particularly merlin and golden plover. This site forms part of a series of moorland Sites of Special Scientific Interest in the North Pennines.

The upland watershed between Wharfedale and Nidderdale and the moorland plateau to the west of Wharfedale supports vegetation characteristic of the more natural moorlands of the North Pennines. These upland blocks include moorlands in western Nidderdale and from Barden Moor to Blubberhouses Moor. The site has a nationally important assemblage of moorland breeding birds including merlin, golden plover, snipe, curlew, redshank, teal and short-eared owl. The vegetation displays a transition between blanket bog and dry heathland and supports diverse and extensive upland plant communities. Dry heath dominates the low plateau and slopes, grading into wet heath, flushes and blanket bog on the deep peat overlying the higher summits. Acid grasslands occur around the edges of the site as a result of localised over-grazing, while several gills on the moorland edge support relict woodland.

Dry heath covers most of the site and this is dominated by heather *Calluna vulgaris* and wavy hair-grass *Deschampsia flexuosa*. On steeper slopes, particularly in gills, bilberry *Vaccinium myrtillus* becomes more dominant. Cowberry *Vaccinium vitis-idaea* is a frequent component of the dry heaths above 400 metres and on the slopes of stream gullies.

Areas of blanket mire occur on the higher moorland where deep peat has accumulated. In these areas, hare's-tail cotton-grass *Eriophorum vaginatum* is dominant, with cross-leaved heath *Erica tetralix*, crowberry *Empetrum nigrum*, common cotton-grass *E. angustifolium* and heather. Cloudberry *Rubus chamaemorus* is locally abundant on Henstone Band Side and Thorpe Fell. In locally wetter blanket mire or areas of wet heath or valley mire, the richest bog vegetation persists and supports cranberry *Vaccinium oxycoccos*, bog asphodel *Narthecium ossifragum*, cross-leaved heath *Erica tetralix*, bog mosses *Sphagnum* spp., round-leaved sundew *Drosera rotundifolia* and bog rosemary *Andromeda polifolia*.

Throughout the area species-poor flushes dominated by soft rush *Juncus effusus* and bog moss *Sphagnum recurvum* occur. Locally, species-rich flushes are found which contain scarcer species such as bog pimpernel *Anagallis tenella* and bog pondweed *Potamogeton polygonifolius*. The nationally scarce species, pale forget-me-not *Myosotis stolonifera*, occurs in several locations.

Other habitats of note on the site include those associated with past lead-mining activities. Although generally species-poor, the old spoil heaps support the nationally scarce, heavy metal tolerant spring sandwort *Minuartia verna*. A population of chickweed wintergreen *Trientalis europaea* occurs on Barden Moor.

Where grazing pressures have been severe, the vegetation is dominated by acid grassland, often in association with bracken *Pteridium aquilinum*. These grasslands consist mainly of mat grass *Nardus stricta* and heath bedstraw *Galium saxatile*, with patches of heath rush *Juncus squarrosus* and sheep's fescue *Festuca ovina*. Around the moorland edge and in some of the lower gills, grassland dominated by sheep's fescue, common bent *Agrostis capillaris* and heath bedstraw become abundant.

Woodland and scrub are very restricted habitats within the site. Guisecliff Wood is the largest area of woodland, dominated by silver birch *Betula pendula*, with occasional rowan *Sorbus aucuparia*, holly *Ilex aquilinum*, sessile oak *Quercus petraea* and pedunculate oak *Q. robur*. The ground layer is dominated by bracken, heather and bilberry with frequent bluebell *Hyacinthoides non-scripta* and wood sorrel *Oxalis acetosella*. Other small oak and birch woodlands remain in the lower reaches of Harden Gill and along Ashfold Side Beck. Upper Fell supports scattered trees or rowan, sessile oak, silver birch, bird cherry *Prunus padus* and hazel *Corylus avellana* over an understorey of bracken and bilberry.

Bird records and sample surveys indicate a nationally important breeding bird assemblage, including a nationally significant merlin population. Areas of tall heather are favoured by breeding merlin and short-eared owl, while the moorland burning regime provides the varied structure required by species like red grouse, golden plover and curlew. Snipe and redshank breed around the grassy and rushy edges of the moor, whinchat utilise the bracken and ring ouzels frequent gill sides and rocky outcrops. Peregrine, hen harrier and buzzard forage over the moorland. A variety of other breeding species are recorded including teal, wheatear, twite, common sandpiper and lapwing.

Other Information:

The site is located partly within the Yorkshire Dales National Park and partly within the Nidderdale Area of Outstanding Natural Beauty.

The international importance of the bird assemblage is supported by the presence of the following breeding species on Annex 1 of the EU Birds Directive: merlin, peregrine, golden plover and short-eared owl.

The site supports the following species which are listed as Red Data Birds in Britain, ED. L. A. Batten, 1990: teal, merlin, peregrine, red grouse, golden plover, curlew, redshank and twite. Short-eared owl, snipe, ring ouzel, whinchat, wheatear and lapwing are being considered as candidate Red Data Birds because their populations are declining or their status is uncertain.

The site overlaps part of the Stump Caves SSSI and is adjacent to part of the Cracoe Reef Knolls SSSI. These two geological sites are notified separately under the Wildlife and Countryside Act, 1981, as amended.



Our Ref: 11-281
Your Ref: 49343426

Site Data Search

Statutory Sites

The following data resources were searched:

Sites of Special Scientific Interest	Special Areas of Conservation
Special Protection Areas	Ramsar sites
National Parks	Areas of Outstanding Natural Beauty
National Nature Reserves	Local Nature Reserves

We do not hold full details of statutory sites therefore if you require further information you should contact Natural England. Their website is at:
naturalengland.org.uk/ourwork/conservation/designatedareas/default.aspx.

Statutory Sites

The following Statutory site was found within the search area, and is shown on the enclosed map.

<i>Designation</i>	<i>Name or location of site</i>	<i>Grid Reference</i>
Site of Special Scientific Interest	West Nidderdale, Barden & Blubberhouses Moors	SE131552
Special Area of Conservation	North Pennine Moors	SE131552
Special Protection Areas	North Pennine Moors	SE131552
Area of Outstanding Natural Beauty	Nidderdale	Whole of search area

Local Nature Reserves:

There were no Local Nature Reserves found within the search area.

Non-Statutory Sites

Local Wildlife Sites:

Local Wildlife Sites are known in North Yorkshire as SINCs (Sites of Importance for Nature Conservation). A leaflet explaining about SINCs is available from the NEYEDC web site: go to neyedc.org.uk/index.php - then go to Data services/Local Wildlife Sites data/ North Yorkshire SINC panel/Documents/ SINC leaflets.

The following sites were found to be within (or partly within) your search area and their locations are shown on the enclosed map:

<i>Site Code</i>	<i>Site Name</i>	<i>Grid Reference</i>	<i>SINC status</i>
SE15-01	West End Marsh	SE154555	SINC

Yorkshire Wildlife Trust Reserves

There were no Yorkshire Wildlife Trust reserves found within the search area.



Our Ref: 11-281
Your Ref: 49343426

Species data search

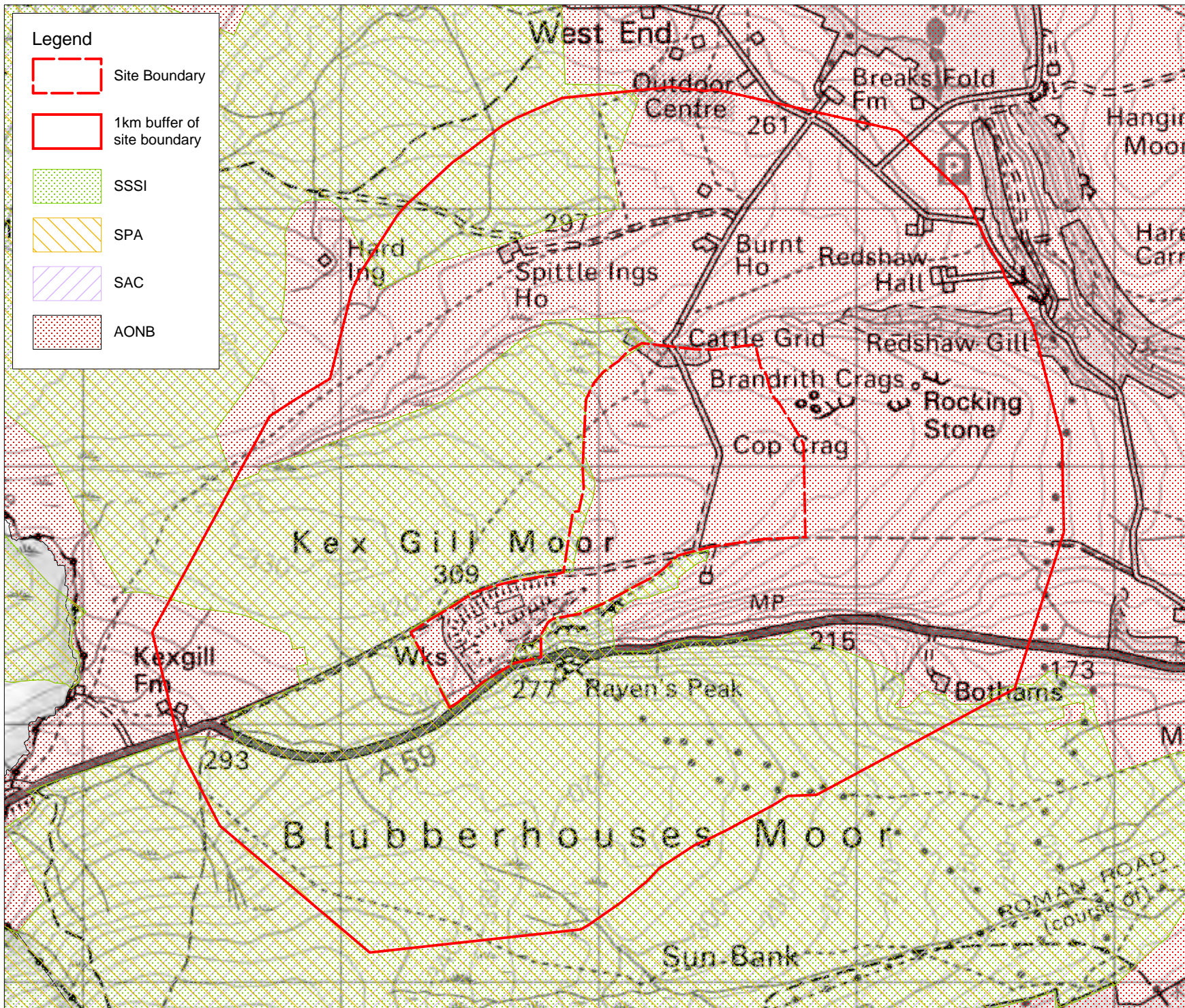
Enclosed is a list of notable and protected species found within the search area together with a spreadsheet listing the species records found, including several bird species, Slow-Worm and water vole. Please note that a lack of survey information for any particular area or taxonomic group does not necessarily mean that there is no nature conservation interest present and I would therefore recommend that a site survey is carried out in order to assess any ecological interest that might be present before proceeding with the development.

One particular point to bear in mind is that many bridges in North Yorkshire provide good opportunities for bats and support bat roosts. Please consult the North Yorkshire Bat Group regarding this aspect if the proposal is likely to require working close to or within the structure of any bridge. Bats are European Protected Species under the Conservation (Natural Habitats &c.) Regulations 1994. As you are probably aware, should a proposal be likely to affect or disturb bats and/or their roosts and therefore require derogation from the Regulations, a licence application to the Wildlife Licensing Unit, Natural England, is required in advance of the works commencing. The relevant contact is:

John Drewett, Chairman, North Yorkshire Bat Group, No Man's Common, Arrathorne, Bedale, DL8 1NA. Tel: 01677 451886.

www.nybats.org.uk

NB: The species search has been restricted to records from 1960. However, if older records are specifically required, these may be obtained at additional cost from NEYEDC upon request.



Client: URS

Client Ref: 49343426

Our Ref: 11-281

Description: Map showing Statutory Nature Conservation sites within the search area.

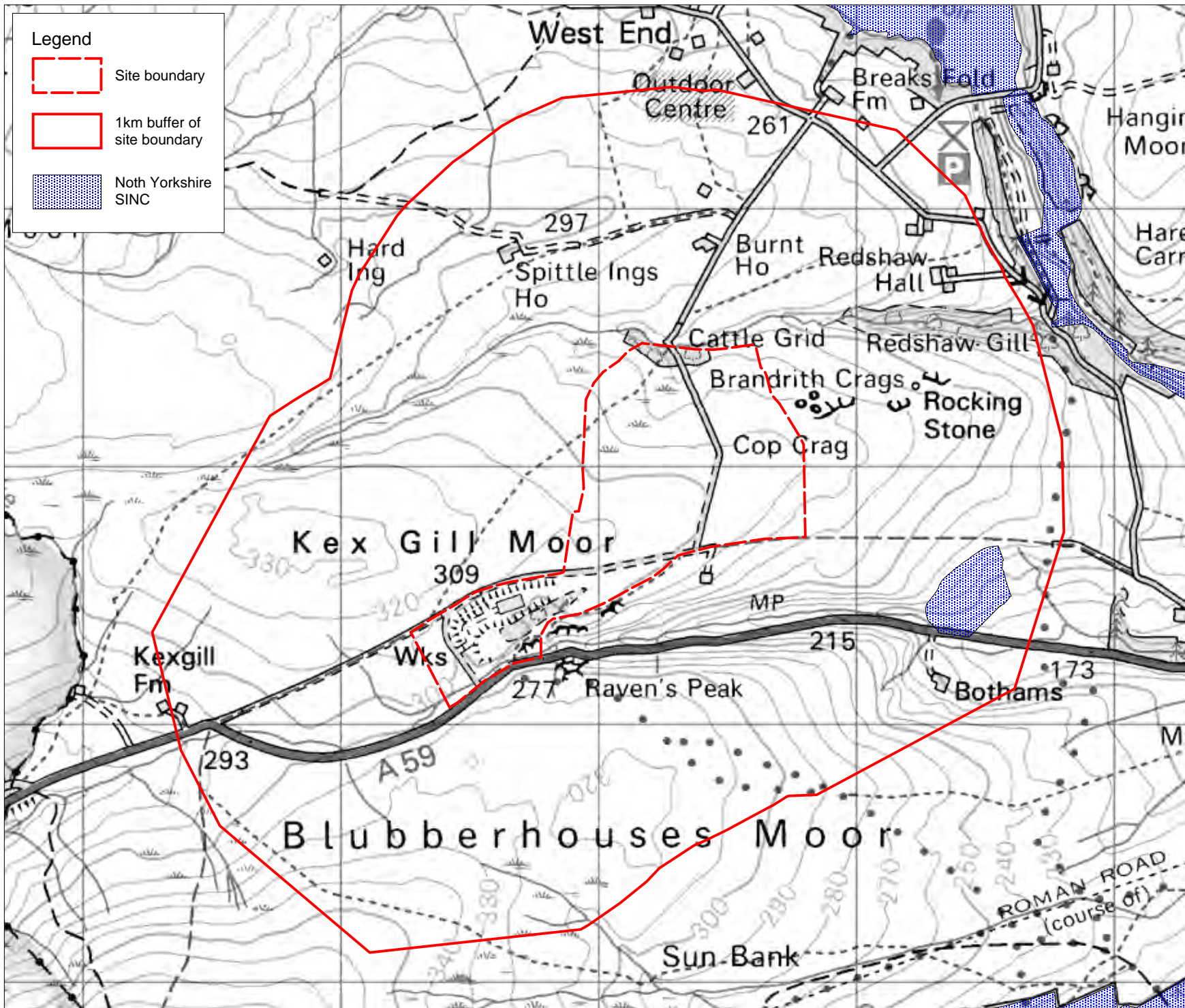
Scope of search: 1km from site boundary

Scale: 1: 20,000 when printed at A4

Date produced: 7/11/2011

This map is reproduced from Ordnance Survey material with the permission of Ordnance Survey on behalf of Her Majesty's stationary office.
© Crown Copyright 2011.

Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings.
License No: 100034590



Legend

- Site boundary
- 1km buffer of site boundary
- Noth Yorkshire SINC

Client: URS

Client Ref: 49343426

Our Ref: 11-281

Description: Map showing non-Statutory Nature Conservation sites within the search area.

Scope of search: 1km from site boundary

Scale: 1: 20,000 when printed at A4

Date produced: 7/11/2011

This map is reproduced from Ordnance Survey material with the permission of Ordnance Survey on behalf of Her Majesty's stationary office.
© Crown Copyright 2011.

Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings.
License No: 100034590

Scientific Name	Common Name	Taxonomic group	Location	Grid Reference	Custodian	Survey	Recorder	Dated	Measurement
Bufo bufo	Common Toad	amphibian	Blubberhouses	SE15	neyedc.org.uk	Herpetofauna records from The Naturalist	Richardson	01/01/1976 - 31/12/1976	
Rana temporaria	Common Frog	amphibian	North Yorkshire	SE15	neyedc.org.uk	Herpetofauna records from The Naturalist	Unknown	01/01/1970 - 31/12/1977	
Falco columbarius	Merlin	bird	Harrogate District	SE148543	neyedc.org.uk	Bird records from RSPB	Unknown	01/01/1984 - 31/12/1984	
Gallinago gallinago	Common Snipe	bird	No site name available	SE15I	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, 2005-2010		01/01/2005 - 31/12/2010	
Gallinago gallinago	Common Snipe	bird	No site name available	SE15H	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, 2005-2010		01/01/2005 - 31/12/2010	
Gallinago gallinago	Common Snipe	bird	No site name available	SE15N	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, 2005-2010		01/01/2005 - 31/12/2010	
Gallinago gallinago	Common Snipe	bird	No site name available	SE15I	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2004 - 31/12/2009	
Gallinago gallinago	Common Snipe	bird	No site name available	SE15H	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2004 - 31/12/2009	
Gallinago gallinago	Common Snipe	bird	No site name available	SE15N	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2004 - 31/12/2009	
Gallinago gallinago	Common Snipe	bird	No site name available	SE15H	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2003 - 31/12/2008	
Gallinago gallinago	Common Snipe	bird	No site name available	SE15N	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2003 - 31/12/2008	

Scientific Name	Common Name	Taxonomic group	Location	Grid Reference	Custodian	Survey	Recorder	Dated	Measurement
Gallinago gallinago	Common Snipe	bird	No site name available	SE15I	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2003 - 31/12/2008	
Gallinago gallinago	Common Snipe	bird	No site name available	SE15N	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2001 - 31/12/2006	
Gallinago gallinago	Common Snipe	bird	No site name available	SE15I	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2001 - 31/12/2006	
Haematopus ostralegus	Oystercatcher	bird	West End Marsh - 08/06/2000	SE154555	neyedc.org.uk	North Yorkshire SINC survey - 2004 and before	Abbott, Phyl	08/06/2000	
Muscicapa striata	Spotted Flycatcher	bird	No site name available	SE15H	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, 2005-2010		01/01/2004 - 31/12/2009	
Muscicapa striata	Spotted Flycatcher	bird	No site name available	SE15H	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2003 - 31/12/2008	
Muscicapa striata	Spotted Flycatcher	bird	No site name available	SE15H	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2001 - 31/12/2006	
Numenius arquata	Curlew	bird	West End Marsh - 08/06/2000	SE154555	neyedc.org.uk	North Yorkshire SINC survey - 2004 and before	Abbott, Phyl	08/06/2000	
Numenius arquata	Eurasian Curlew	bird	No site name available	SE15H	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, 2005-2010		01/01/2005 - 31/12/2010	
Numenius arquata	Eurasian Curlew	bird	No site name available	SE15I	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, 2005-2010		01/01/2005 - 31/12/2010	

Scientific Name	Common Name	Taxonomic group	Location	Grid Reference	Custodian	Survey	Recorder	Dated	Measurement
Numenius arquata	Eurasian Curlew	bird	No site name available	SE15M	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, 2005-2010		01/01/2005 - 31/12/2010	
Numenius arquata	Eurasian Curlew	bird	No site name available	SE15N	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, 2005-2010		01/01/2005 - 31/12/2010	
Numenius arquata	Eurasian Curlew	bird	No site name available	SE15I	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2004 - 31/12/2009	
Numenius arquata	Eurasian Curlew	bird	No site name available	SE15H	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2004 - 31/12/2009	
Numenius arquata	Eurasian Curlew	bird	No site name available	SE15M	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2004 - 31/12/2009	
Numenius arquata	Eurasian Curlew	bird	No site name available	SE15N	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2004 - 31/12/2009	
Numenius arquata	Eurasian Curlew	bird	No site name available	SE15N	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2003 - 31/12/2008	
Numenius arquata	Eurasian Curlew	bird	No site name available	SE15H	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2003 - 31/12/2008	
Numenius arquata	Eurasian Curlew	bird	No site name available	SE15M	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2003 - 31/12/2008	
Numenius arquata	Eurasian Curlew	bird	No site name available	SE15I	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2003 - 31/12/2008	

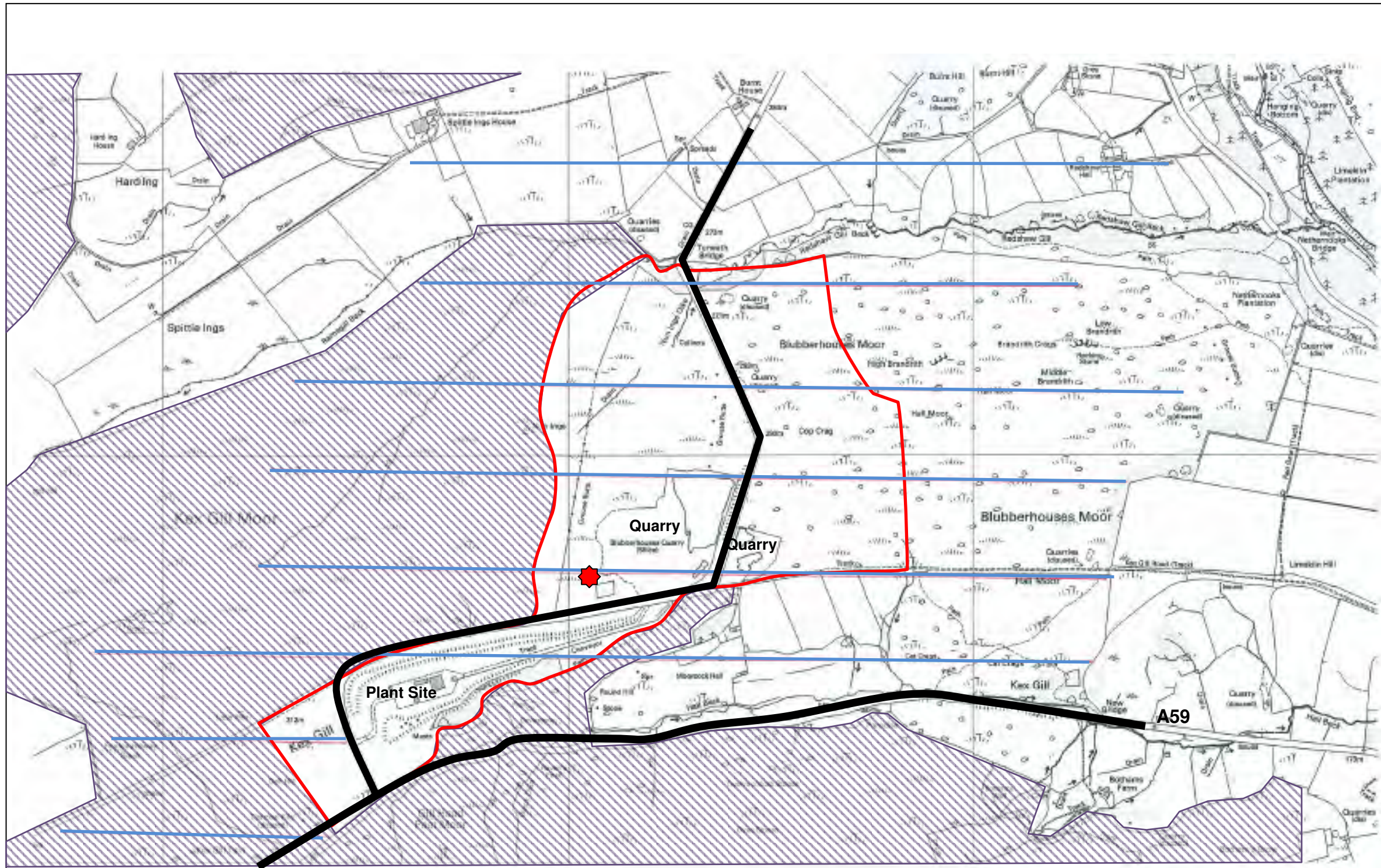
Scientific Name	Common Name	Taxonomic group	Location	Grid Reference	Custodian	Survey	Recorder	Dated	Measurement
Numenius arquata	Eurasian Curlew	bird	No site name available	SE15N	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2001 - 31/12/2006	
Numenius arquata	Eurasian Curlew	bird	No site name available	SE15I	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2001 - 31/12/2006	
Perdix perdix	Grey Partridge	bird	No site name available	SE15H	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, 2005-2010		01/01/2005 - 31/12/2010	
Perdix perdix	Grey Partridge	bird	No site name available	SE15I	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, 2005-2010		01/01/2005 - 31/12/2010	
Perdix perdix	Grey Partridge	bird	No site name available	SE15M	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, 2005-2010		01/01/2005 - 31/12/2010	
Perdix perdix	Grey Partridge	bird	No site name available	SE15M	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2004 - 31/12/2009	
Perdix perdix	Grey Partridge	bird	No site name available	SE15I	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2004 - 31/12/2009	
Perdix perdix	Grey Partridge	bird	No site name available	SE15I	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2003 - 31/12/2008	
Perdix perdix	Grey Partridge	bird	No site name available	SE15M	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2003 - 31/12/2008	
Phoenicurus phoenicurus	Redstart	bird	West End Marsh - 08/06/2000	SE154555	neyedc.org.uk	North Yorkshire SINC survey - 2004 and before	Abbott, Phyl	08/06/2000	

Scientific Name	Common Name	Taxonomic group	Location	Grid Reference	Custodian	Survey	Recorder	Dated	Measurement
Saxicola rubetra	Whinchat	bird	No site name available	SE15M	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, 2005-2010		01/01/2004 - 31/12/2009	
Tringa totanus	Common Redshank	bird	No site name available	SE15I	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, 2005-2010		01/01/2005 - 31/12/2010	
Tringa totanus	Common Redshank	bird	No site name available	SE15M	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, 2005-2010		01/01/2005 - 31/12/2010	
Tringa totanus	Common Redshank	bird	No site name available	SE15H	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, 2005-2010		01/01/2005 - 31/12/2010	
Tringa totanus	Common Redshank	bird	No site name available	SE15M	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2004 - 31/12/2009	
Tringa totanus	Common Redshank	bird	No site name available	SE15I	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2004 - 31/12/2009	
Tringa totanus	Common Redshank	bird	No site name available	SE15H	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2004 - 31/12/2009	
Tringa totanus	Common Redshank	bird	No site name available	SE15I	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2003 - 31/12/2008	
Tringa totanus	Common Redshank	bird	No site name available	SE15H	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2003 - 31/12/2008	
Tringa totanus	Common Redshank	bird	No site name available	SE15M	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2003 - 31/12/2008	





Scientific Name	Common Name	Taxonomic group	Location	Grid Reference	Custodian	Survey	Recorder	Dated	Measurement
Tringa totanus	Common Redshank	bird	No site name available	SE15I	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2001 - 31/12/2006	
Tringa totanus	Common Redshank	bird	No site name available	SE15N	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2001 - 31/12/2006	
Turdus merula	Common Blackbird	bird	Harrogate Yorkshire	SE152569	www.searchnbn.net	NBNGateway: RSPB Big Garden Birdwatch winter sightings in the UK in 2008		26/01/2008 - 27/01/2008	
Turdus torquatus	Ring Ouzel	bird	No site name available	SE15M	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, 2005-2010		01/01/2005 - 31/12/2010	
Turdus torquatus	Ring Ouzel	bird	No site name available	SE15M	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2004 - 31/12/2009	
Vanellus vanellus	Northern Lapwing	bird	No site name available	SE15H	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, 2005-2010		01/01/2005 - 31/12/2010	
Vanellus vanellus	Northern Lapwing	bird	No site name available	SE15N	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, 2005-2010		01/01/2005 - 31/12/2010	
Vanellus vanellus	Northern Lapwing	bird	No site name available	SE15I	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, 2005-2010		01/01/2005 - 31/12/2010	
Vanellus vanellus	Northern Lapwing	bird	No site name available	SE15M	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, 2005-2010		01/01/2005 - 31/12/2010	
Vanellus vanellus	Northern Lapwing	bird	No site name available	SE15N	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2004 - 31/12/2009	

Scientific Name	Common Name	Taxonomic group	Location	Grid Reference	Custodian	Survey	Recorder	Dated	Measurement
Vanellus vanellus	Northern Lapwing	bird	No site name available	SE15I	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2004 - 31/12/2009	
Vanellus vanellus	Northern Lapwing	bird	No site name available	SE15M	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2004 - 31/12/2009	
Vanellus vanellus	Northern Lapwing	bird	No site name available	SE15H	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2004 - 31/12/2009	
Vanellus vanellus	Northern Lapwing	bird	No site name available	SE15M	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2003 - 31/12/2008	
Vanellus vanellus	Northern Lapwing	bird	No site name available	SE15I	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2003 - 31/12/2008	
Vanellus vanellus	Northern Lapwing	bird	No site name available	SE15N	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2003 - 31/12/2008	
Vanellus vanellus	Northern Lapwing	bird	No site name available	SE15H	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2003 - 31/12/2008	
Vanellus vanellus	Northern Lapwing	bird	No site name available	SE15N	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2001 - 31/12/2006	
Vanellus vanellus	Northern Lapwing	bird	No site name available	SE15I	www.searchnbn.net	NBNGateway: Bird Conservation Targeting Project (BCTP) in the UK, archived data (2001-2009)		01/01/2001 - 31/12/2006	
Cerastium fontanum	Common Mouse-Ear	flowering plant	West End Marsh - 08/06/2000	SE154555	neyedc.org.uk	North Yorkshire SINC survey - 2004 and before	Abbott, Phyl	08/06/2000	○ Abundance Individuals (DAFOR)

Scientific Name	Common Name	Taxonomic group	Location	Grid Reference	Custodian	Survey	Recorder	Dated	Measurement
Hyacinthoides non-scripta	Bluebell	flowering plant	West End Marsh - 08/06/2000	SE154555	neyedc.org.uk	North Yorkshire SINC survey - 2004 and before	Abbott, Phyl	08/06/2000	O Abundance Individuals (DAFOR)
Pellia epiphylla	Overleaf Pellia	liverwort	Redshaw Gill	SE154565	www.searchnbn.net	NBNGateway: Bryophyte data for Great Britain from the British Bryological Society held by BRC	Haycock, G.	07/11/2007	
Sphagnum	Sphagnum	moss	West End Marsh - 14/07/2010	SE154555	neyedc.org.uk	North Yorkshire SINC survey - 2010	Hammond, Martin (Mr)	14/07/2010	LA Abundance 01 (DAFOR)
Anguis fragilis	Slow-worm	reptile	Blubberhouses	SE15	neyedc.org.uk	Herpetofauna records from The Naturalist	Richardson	01/01/1976 - 31/12/1976	
Arvicola terrestris	Water Vole	terrestrial mammal	River Washburn, Timble Ings, Otley	SE15	neyedc.org.uk	Water for Wildlife Project	Limb, Ken	19/08/2002	
Lepus europaeus	Brown Hare	terrestrial mammal	Kex Gill Moor	SE145565	neyedc.org.uk	Yorkshire Mammal Group records	Hopper	01/01/2004 - 31/12/2004	



Legend

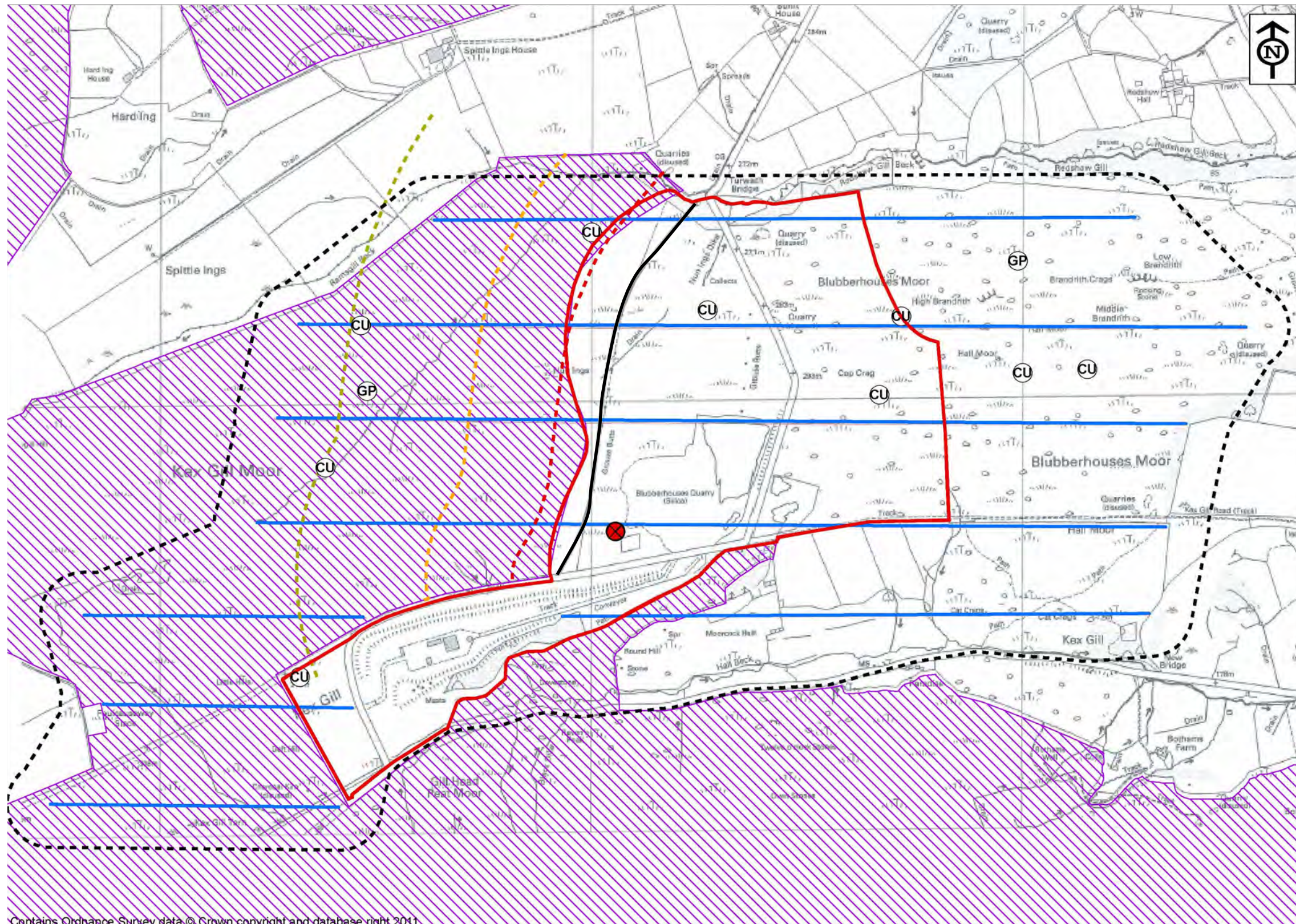
-  Site boundary
-  Vantage Point
-  SPA/SAC/SSSI
-  Transect Survey



URS Infrastructure & Environment UK
 12 Regan Way
 Chetwynd Business Park
 Chilwell
 Nottingham
 NG9 6RZ

BLUBBERHOUSES QUARRY

**Figure 1
 Location and Extent of
 Survey in 2012**



Contains Ordnance Survey data © Crown copyright and database right 2011.

Legend

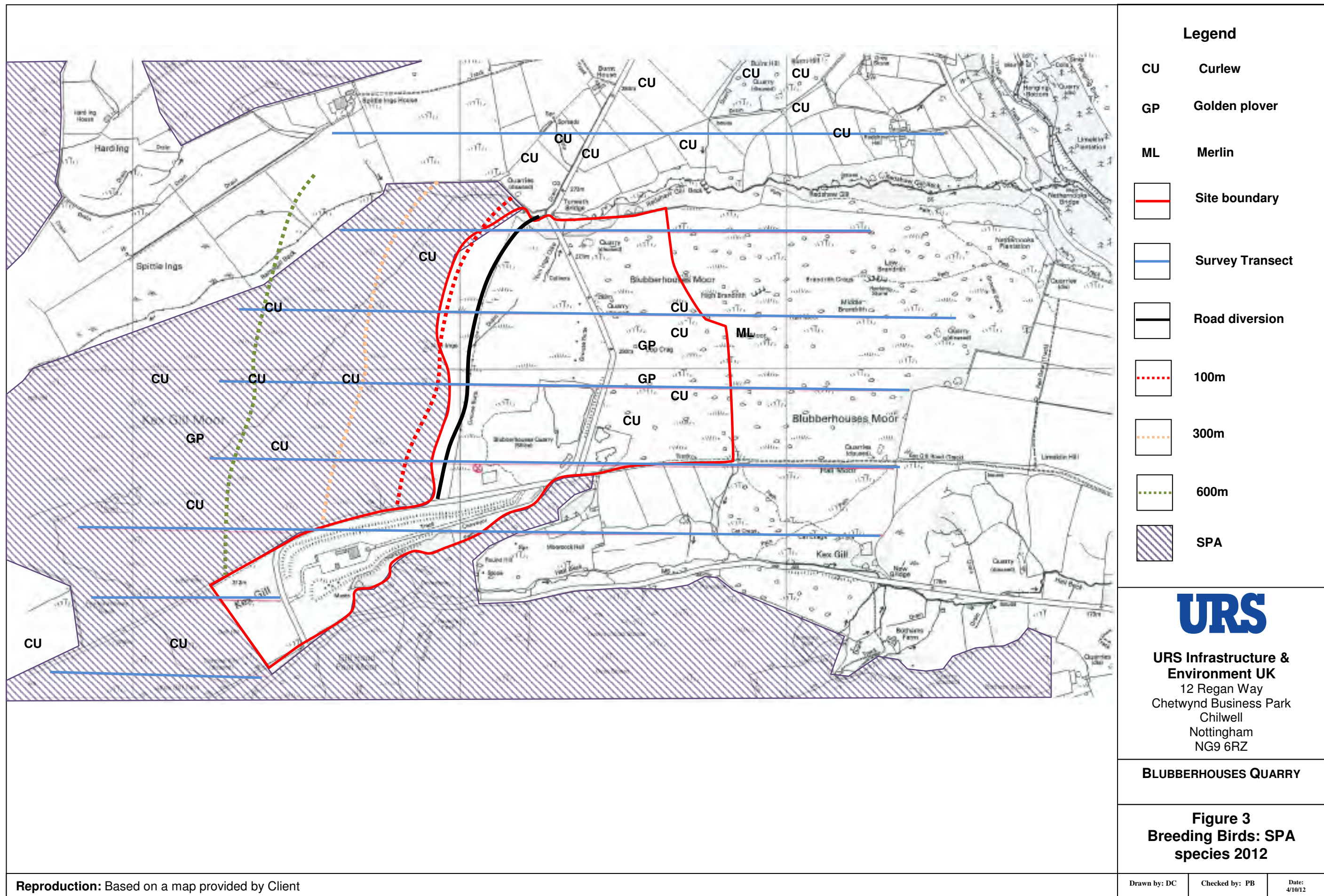
- CU Curlew
- GP Golden plover
- Site boundary
- Survey Transect
- Road diversion
- 100m
- 300m
- 600m
- SPA

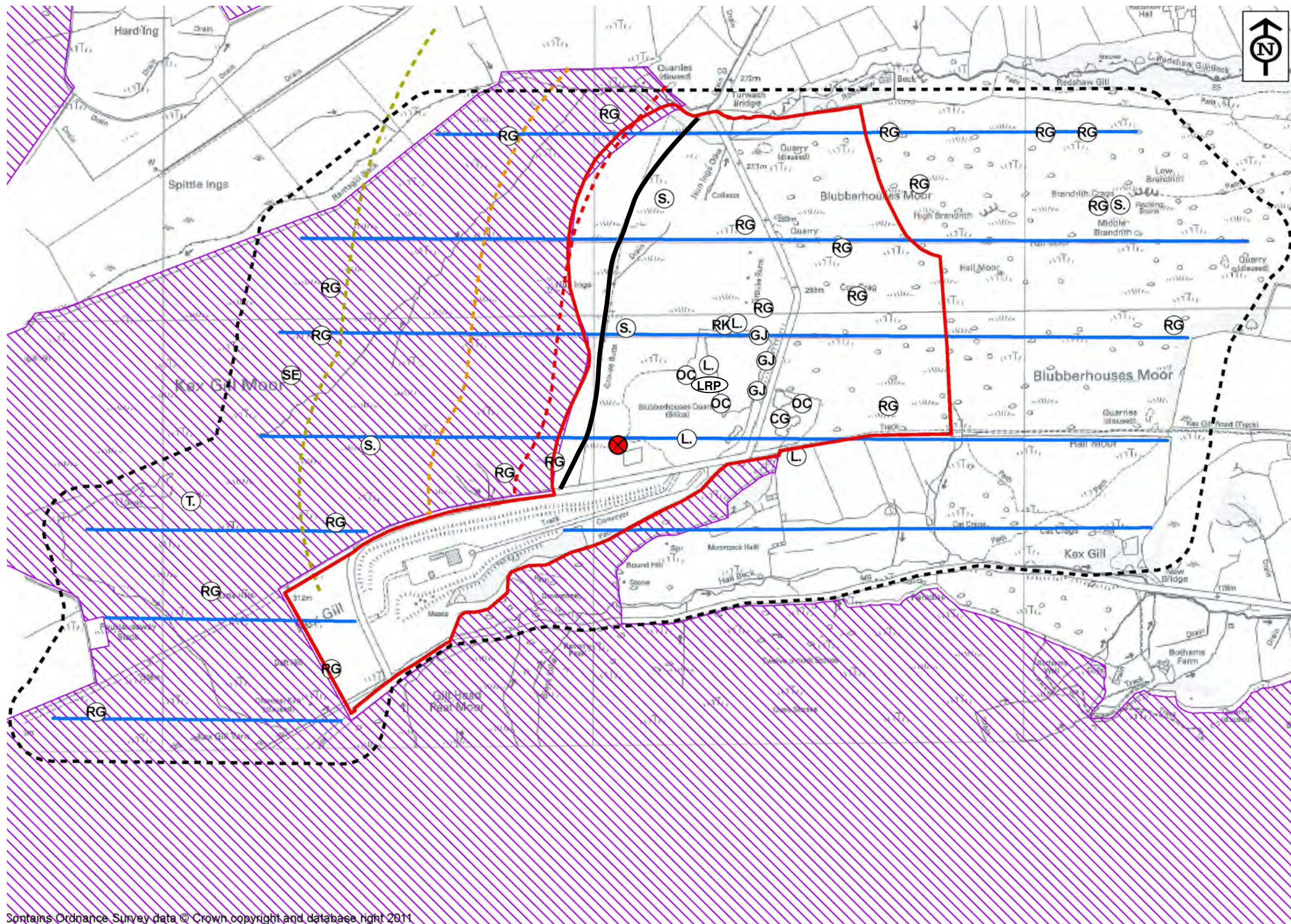


URS Infrastructure & Environment UK
 12 Regan Way
 Chetwynd Business Park
 Chilwell
 Nottingham
 NG9 6RZ

BLUBBERHOUSES QUARRY

**Figure 2
 Breeding Birds SPA
 Species 2011**












Sontains Ordnance Survey data © Crown copyright and database right 2011

Legend

- R Red grouse
- S Skylark
- L Lapwing
- RK Redshank
- O Oystercatcher
- T Teal
- G Greylag goose
- LRP Little ringed plover

-  Site boundary
-  Survey Transect
-  Road diversion
-  100m
-  300m
-  600m
-  SPA



URS Infrastructure & Environment UK
 12 Regan Way
 Chetwynd Business Park
 Chilwell
 Nottingham
 NG9 6RZ

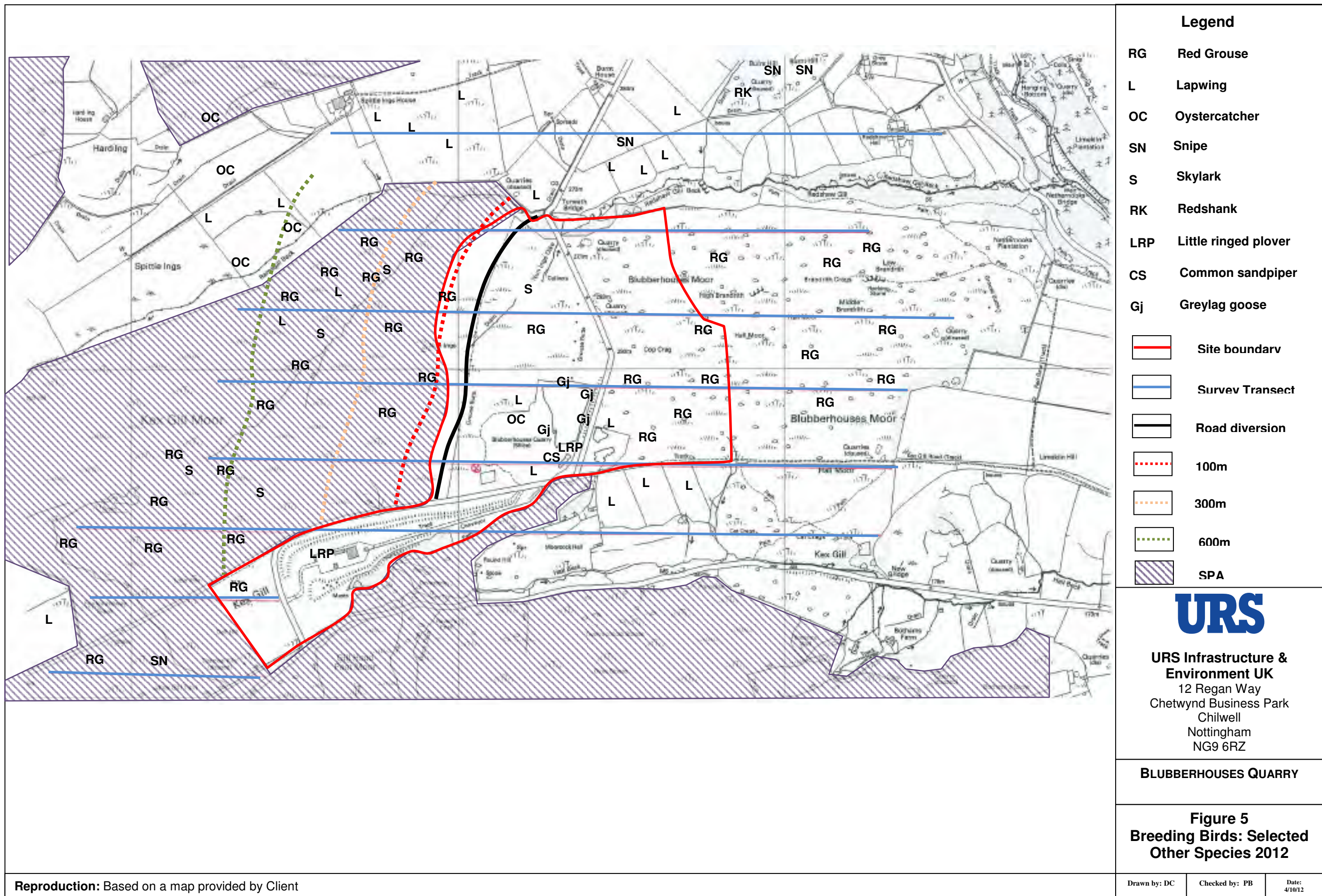
BLUBBERHOUSES QUARRY

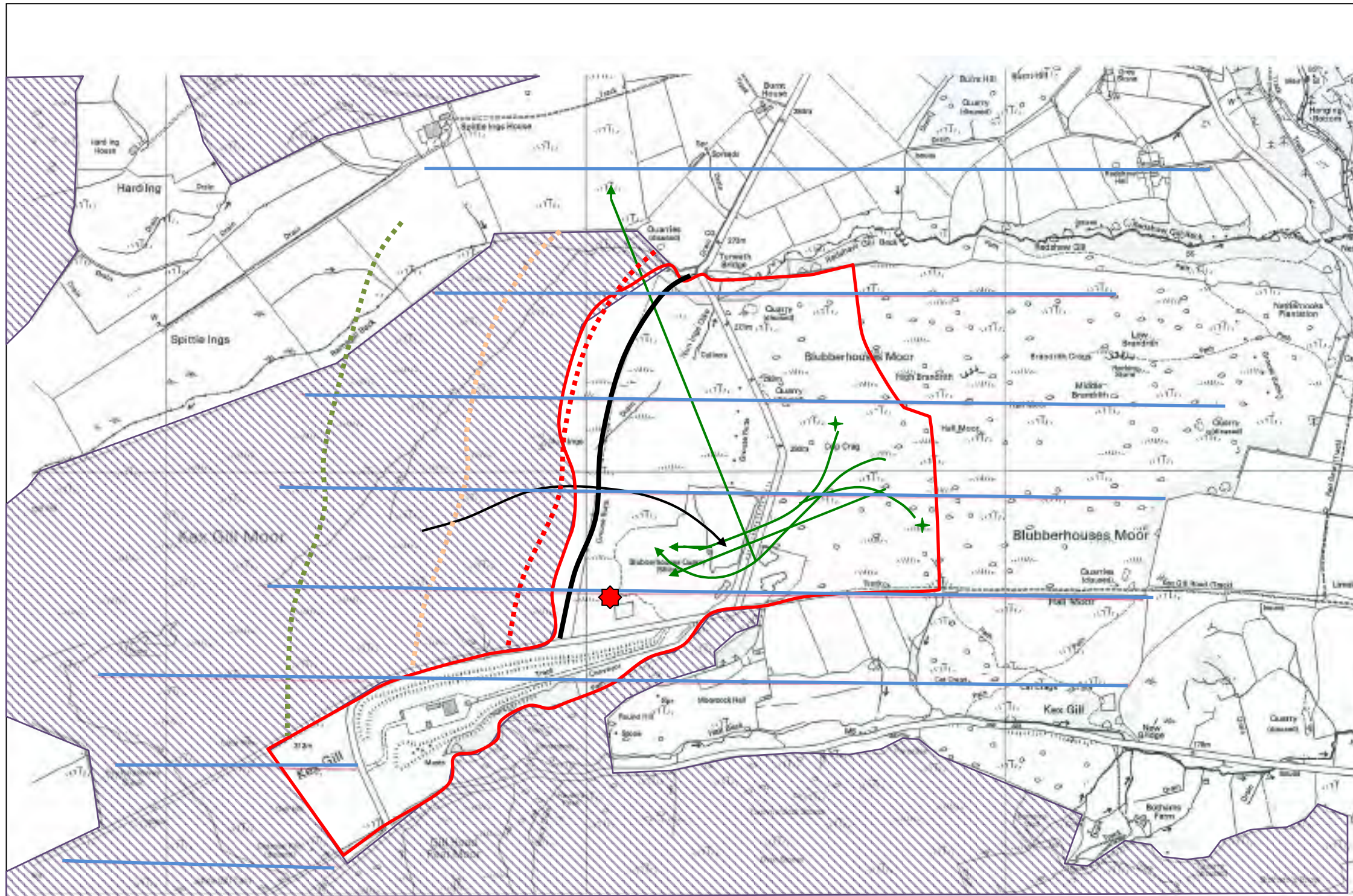
Figure 4
Breeding Birds: Selected
Other Species 2011

Drawn by: DC

Checked by: PB








Date:
4/10/12





Legend

22nd March 15:30 -18:30
 Wader flights
 Curlew flights:
 2+ Curlew flights:
 Oystercatcher flights:

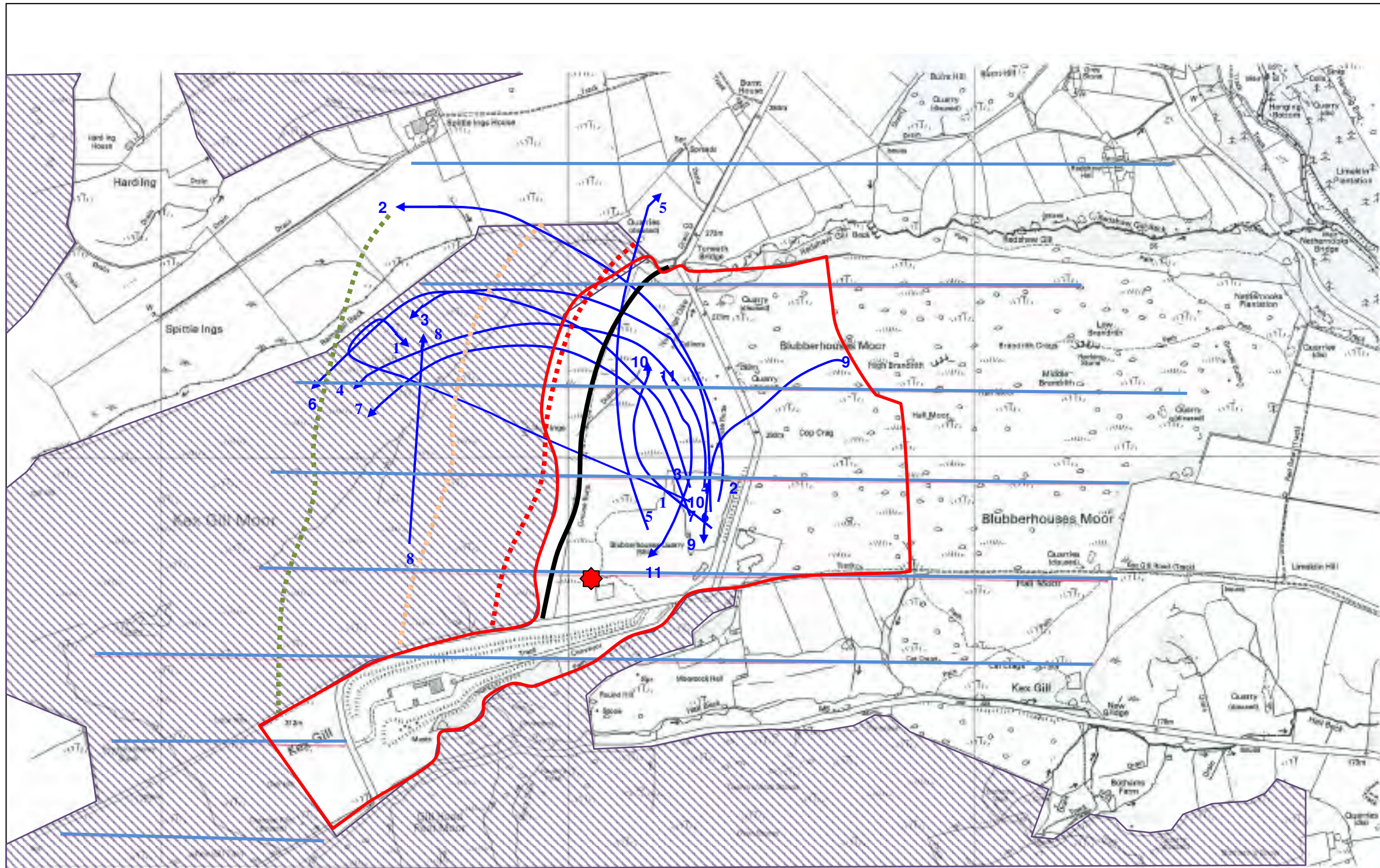
-  Site boundary
-  Vantage Point
-  Road diversion
-  100m
-  300m
-  600m
-  SPA



URS Infrastructure & Environment UK
 12 Regan Way
 Chetwynd Business Park
 Chilwell
 Nottingham
 NG9 6RZ

BLUBBERHOUSES QUARRY

Figure 6
VP 22nd March 2012:
Waders



Legend








22nd March 15:30 -18:30

Goose flights

Greylag pairs:
Flight nos: 1,2,5,9,10,11

Canada pairs
Flight nos: 3,4,6,7

Individual Canada
Flight nos: 8

-  Site boundary
-  Vantage Point
-  Road diversion
-  100m
-  300m
-  600m
-  SPA



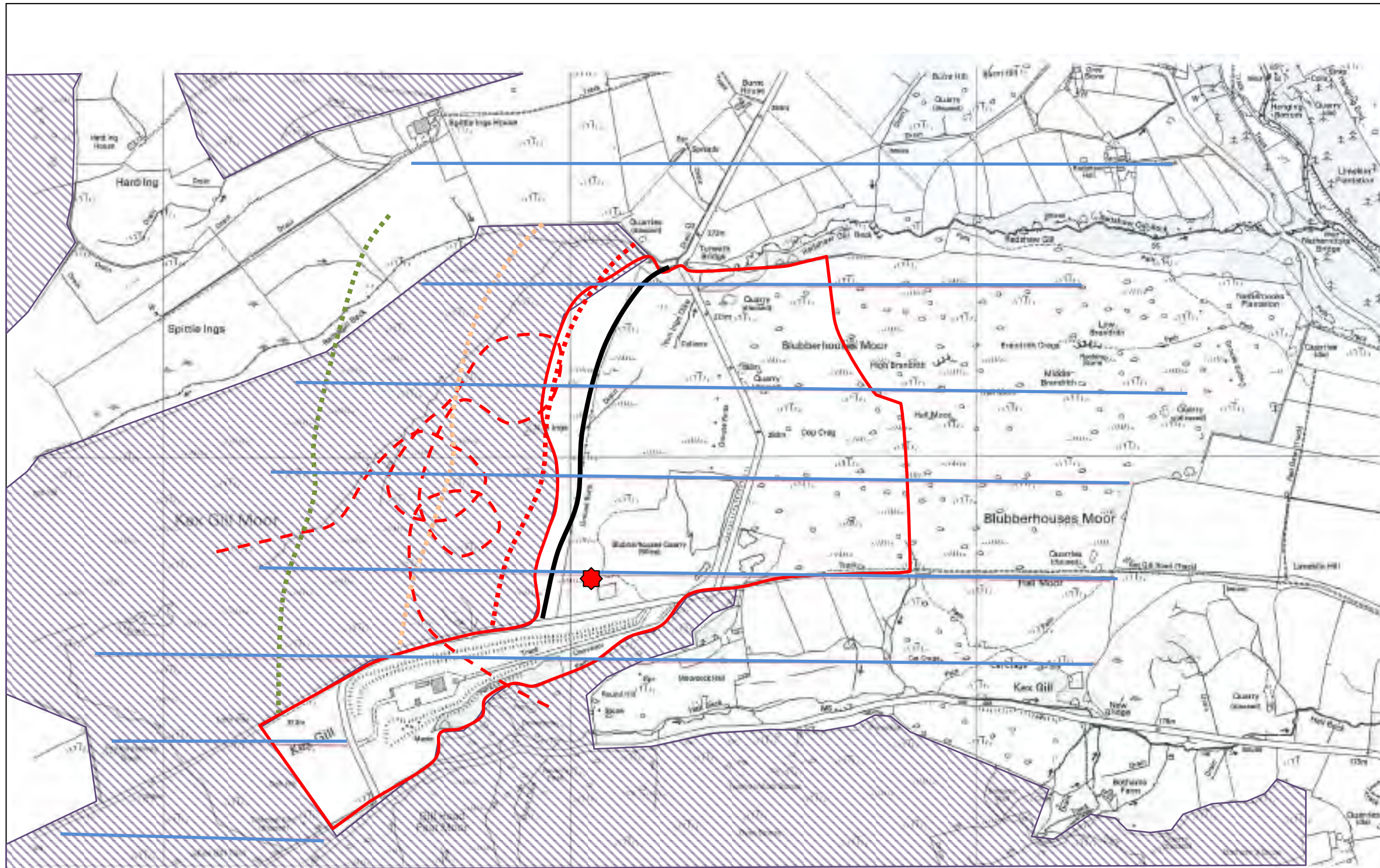
URS Infrastructure & Environment UK
 12 Regan Way
 Chetwynd Business Park
 Chilwell
 Nottingham
 NG9 6RZ

BLUBBERHOUSES QUARRY








Figure 7
VP 22nd March: Wildfowl

Reproduction: Based on a map provided by Client

Drawn by:	Checked by:	Date:
-----------	-------------	-------



Legend

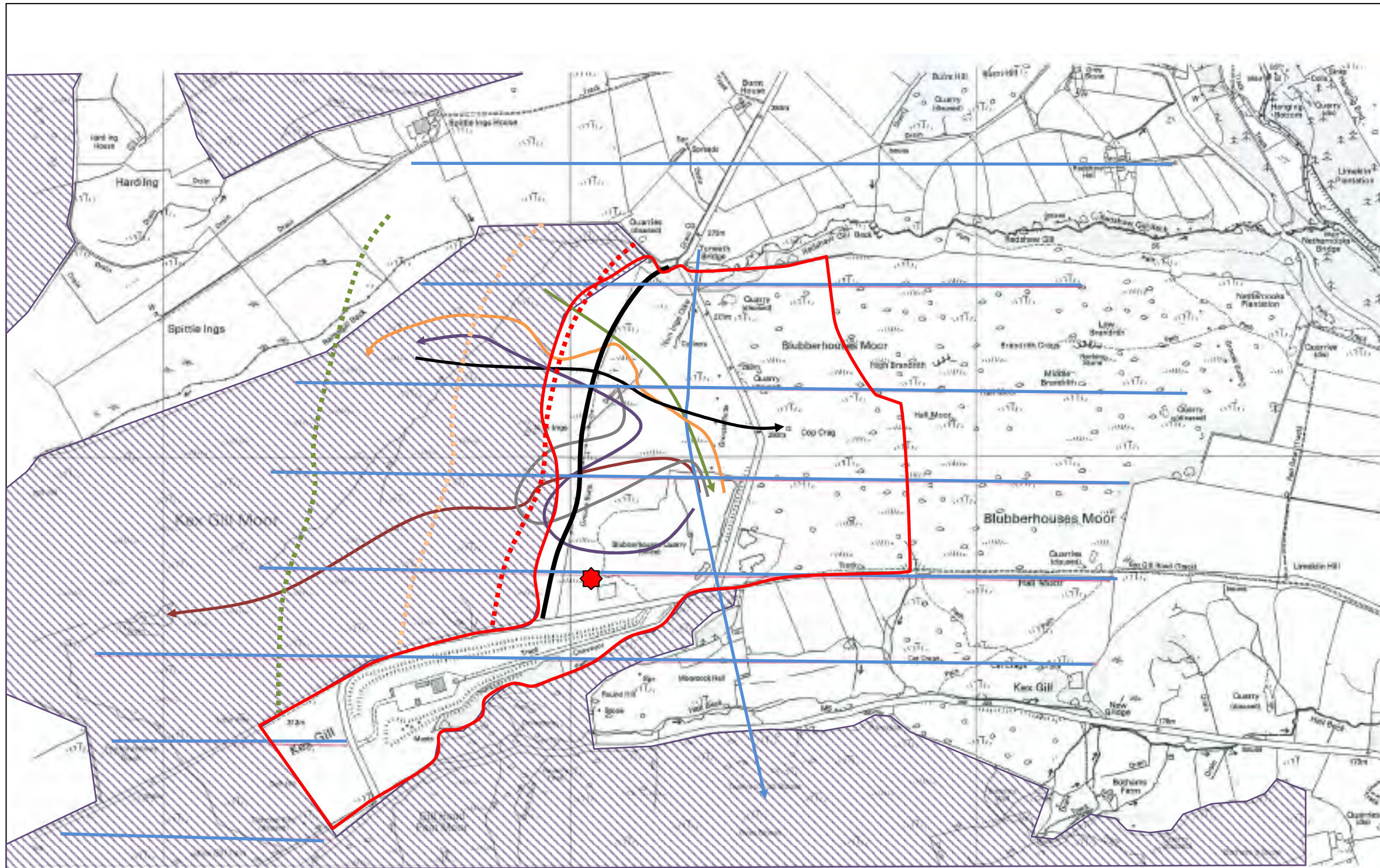
- 1 Red kite
-  Site boundary
-  Vantage Point
-  Road diversion
-  100m
-  300m
-  600m
-  SPA



URS Infrastructure & Environment UK
 12 Regan Way
 Chetwynd Business Park
 Chilwell
 Nottingham
 NG9 6RZ








BLUBBERHOUSES QUARRY

Figure 8
 VP 21st April 2012: Raptors



Legend

- 2 Greylag geese
- 3 Canada geese
- 1 Canada goose
- 3 Canada geese
- 2 Canada geese
- 2 Canada geese
- 4 Canada geese

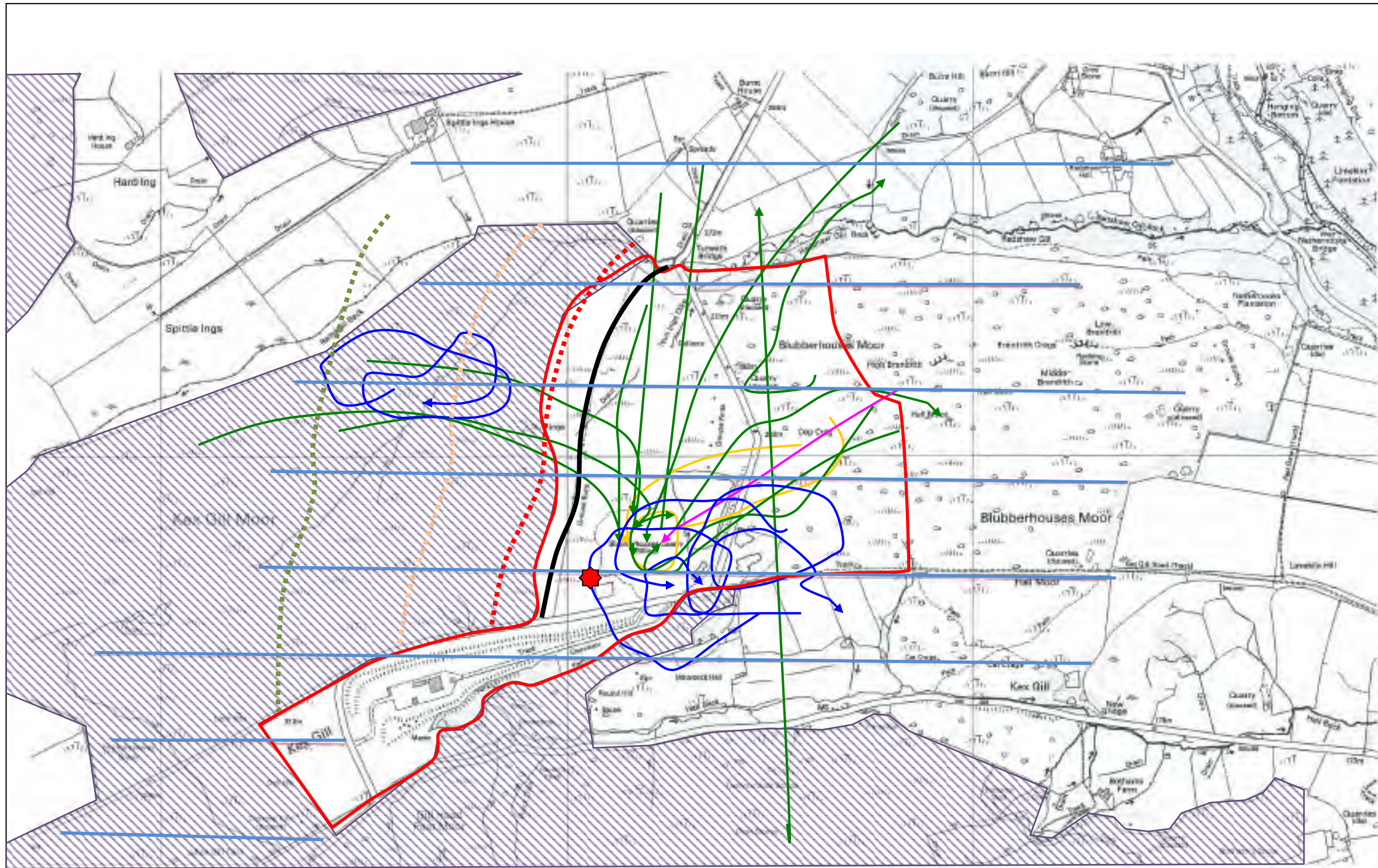
-  Site boundary
-  Vantage Point
-  Road diversion
-  100m
-  300m
-  600m
-  SPA







URS Infrastructure & Environment UK
 12 Regan Way
 Chetwynd Business Park
 Chilwell
 Nottingham
 NG9 6RZ








BLUBBERHOUSES QUARRY

Figure 9
 VP 21st April 2012: Wildfowl



Legend

- 26th May 18:30 – 21:30
- Wader flights
- Golden Plover flights: 
- Curlew Kite flights: 
- Lapwing flights: 
- Common Sandpiper flights: 

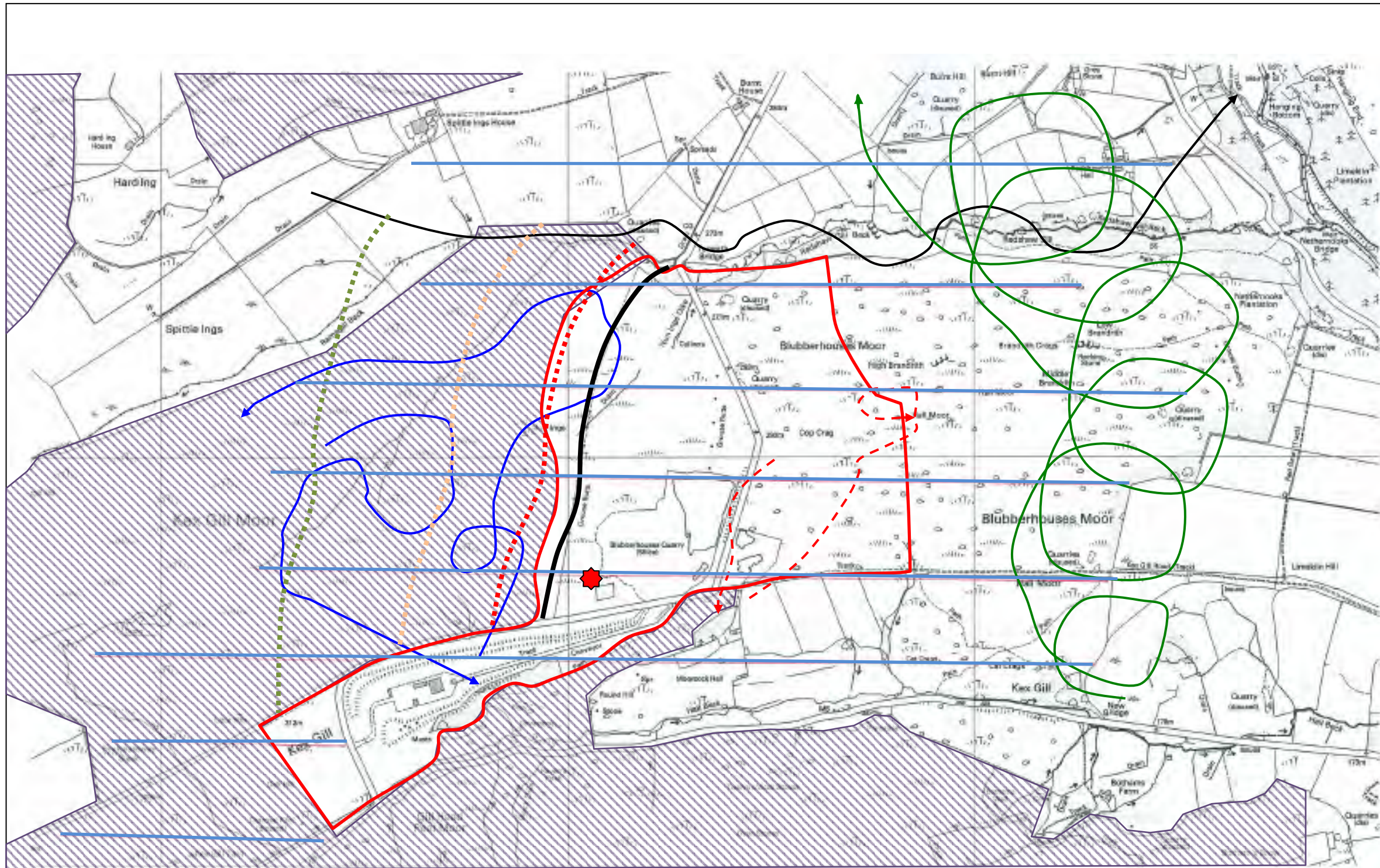
-  Site boundary
-  Vantage Point
-  Road diversion
-  100m
-  300m
-  600m
-  SPA



URS Infrastructure & Environment UK
 12 Regan Way
 Chetwynd Business Park
 Chilwell
 Nottingham
 NG9 6RZ

BLUBBERHOUSES QUARRY

Figure 10
VP 26th May: Waders



Legend

- 26th May 18:30 – 21:30
- Raptor flights
- Merlin flights:
- Red Kite flights:
- Kestrel flights:
- Buzzard flights:

- Site boundary
- Vantage Point
- Road diversion
- 100m
- 300m
- 600m
- SPA



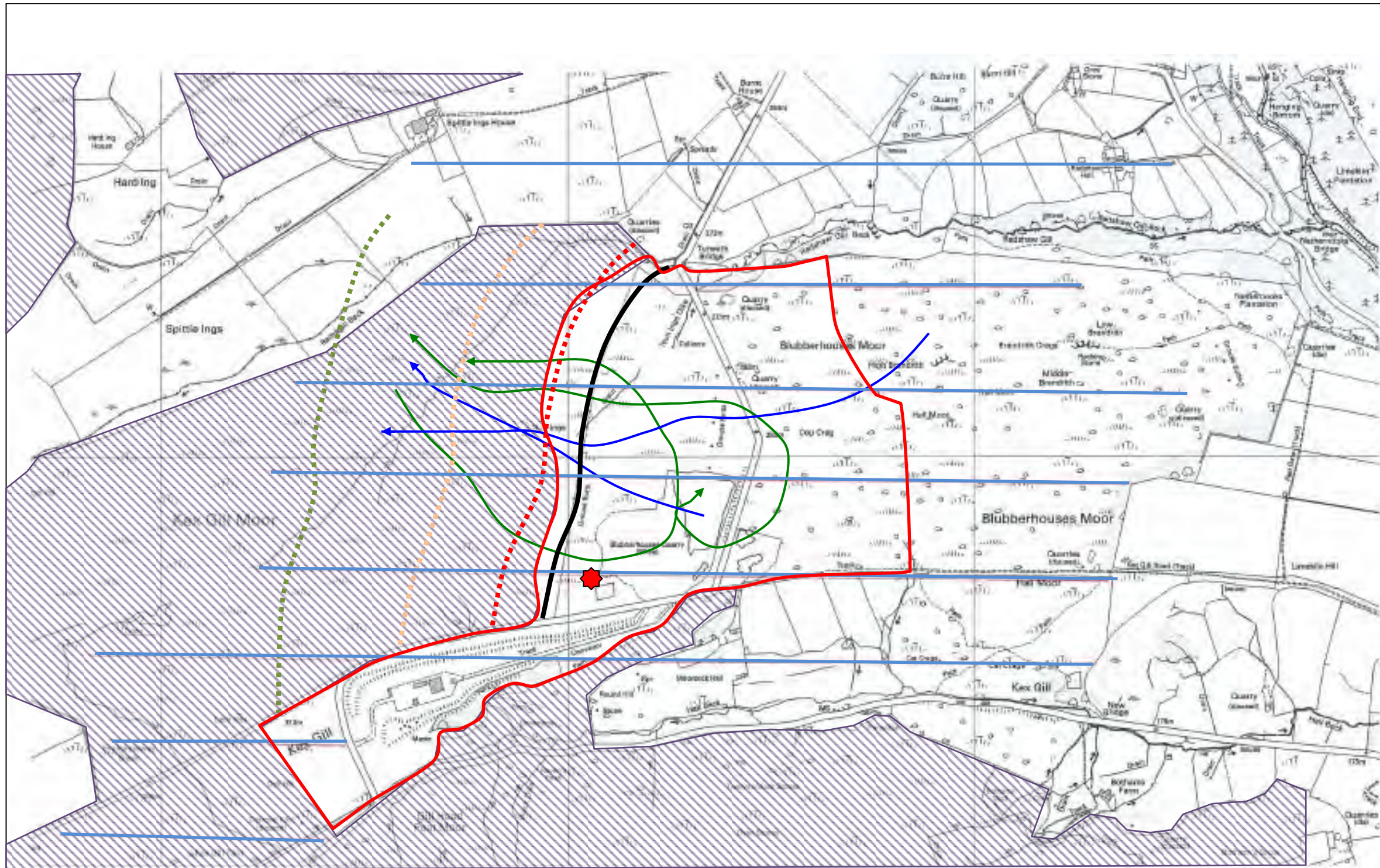
URS Infrastructure & Environment UK
 12 Regan Way
 Chetwynd Business Park
 Chilwell
 Nottingham
 NG9 6RZ

BLUBBERHOUSES QUARRY

Figure 11
VP 26th May: Raptors








Reproduction: Based on a map provided by Client

Drawn by: DC	Checked by:	Date: 4/10/12
--------------	-------------	---------------



Legend

26th May 18:30 – 21:30
 Geese flights
 Greylag flights: 
 Canada flights: 

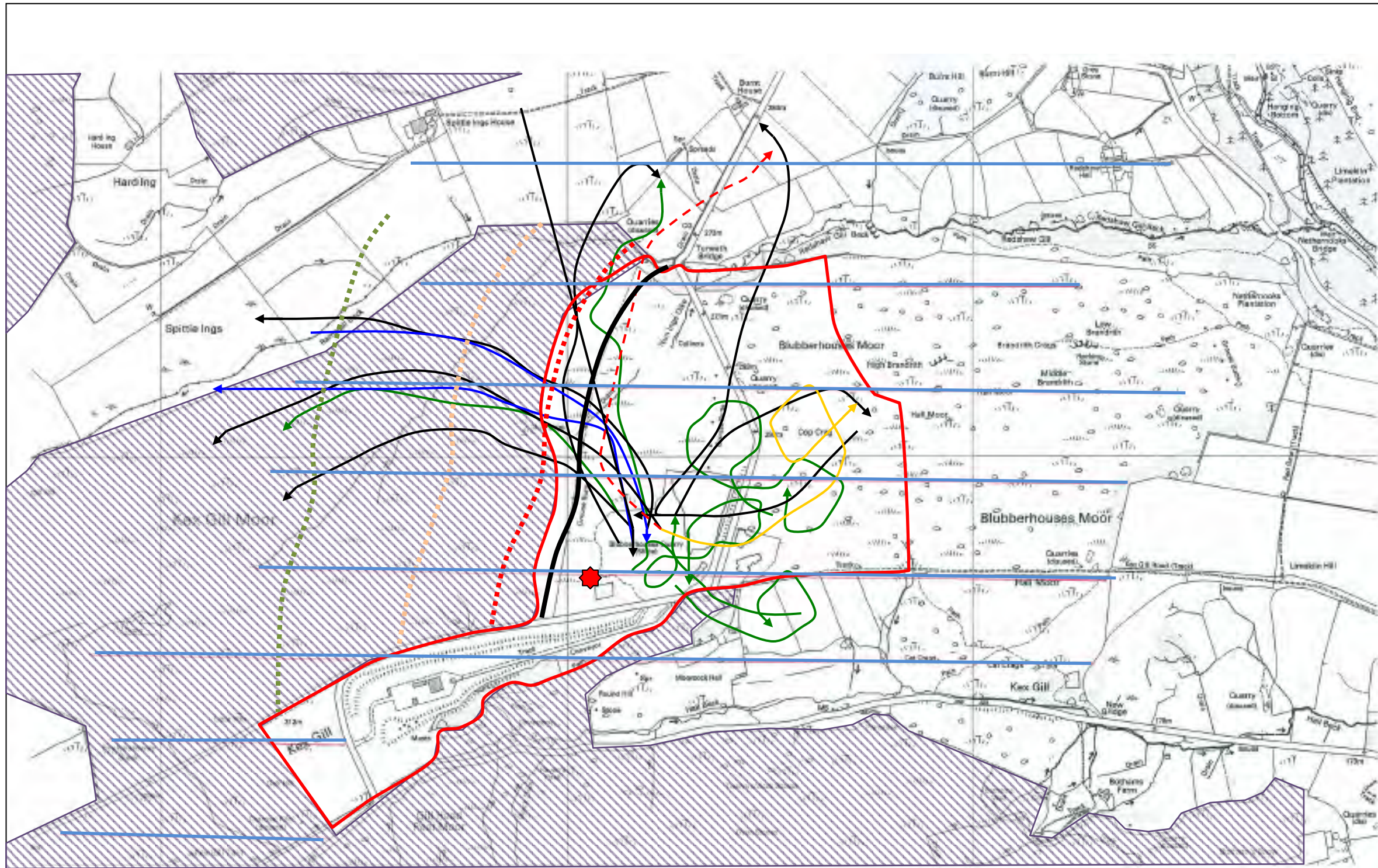
-  Site boundary
-  Vantage Point
-  Road diversion
-  100m
-  300m
-  600m
-  SPA



URS Infrastructure & Environment UK
 12 Regan Way
 Chetwynd Business Park
 Chilwell
 Nottingham
 NG9 6RZ

BLUBBERHOUSES QUARRY

Figure 12
VP 26th May: Wildfowl



Legend

- 17th June 5:15 – 8:15
- Wader flights
- Lapwing flights:
- Curlew flights:
- Oystercatcher flights:
- Redshank flights:
- Golden Plover flights:

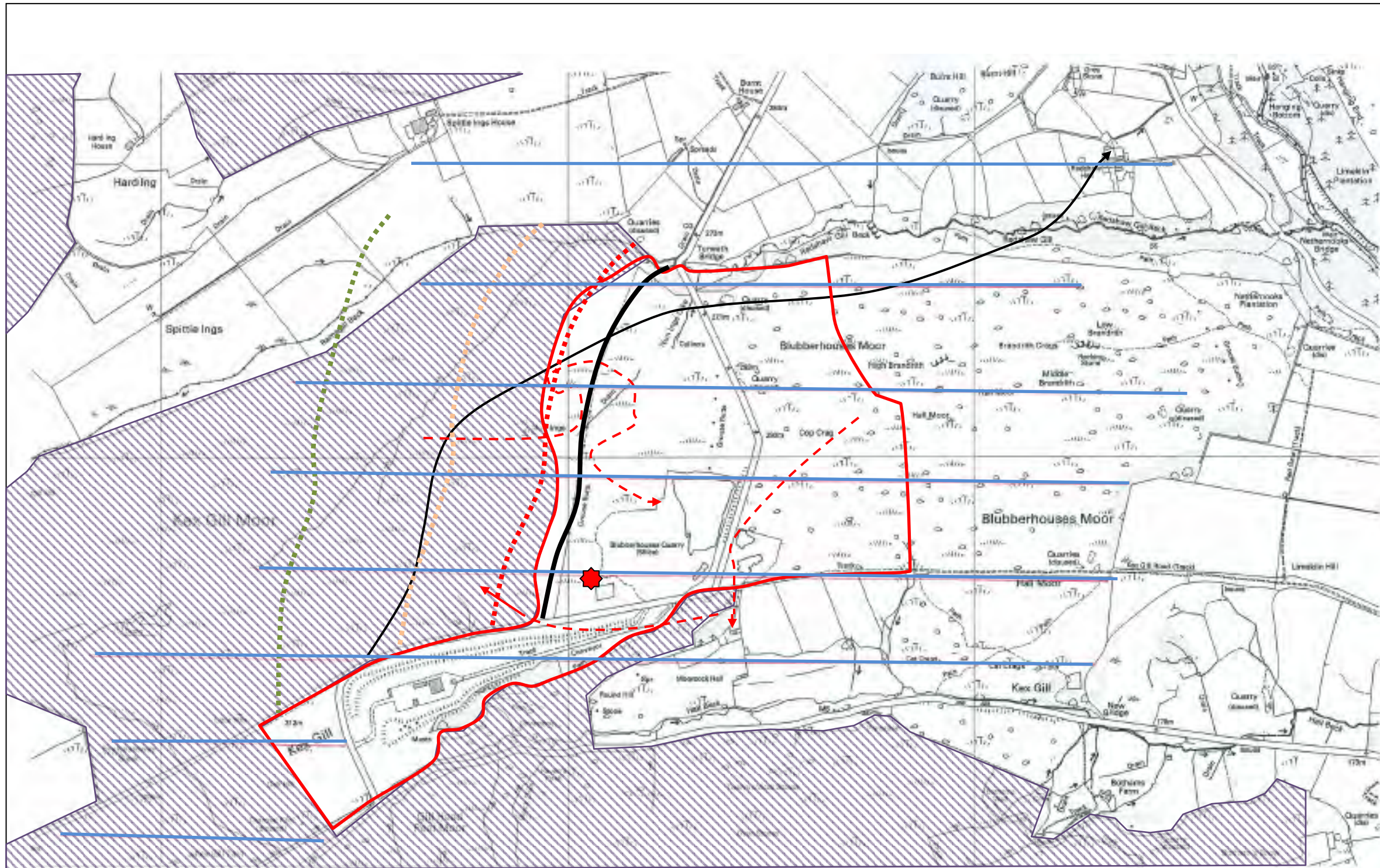
- Site boundary
- Vantage Point
- Road diversion
- 100m
- 300m
- 600m
- SPA





URS Infrastructure & Environment UK
 12 Regan Way
 Chetwynd Business Park
 Chilwell
 Nottingham
 NG9 6RZ








BLUBBERHOUSES QUARRY

Figure 13
VP 17th June: Waders



Legend

17th June 5:15 – 8:15
 Raptor flights
 Merlin flights: 
 Red Kite flights: 

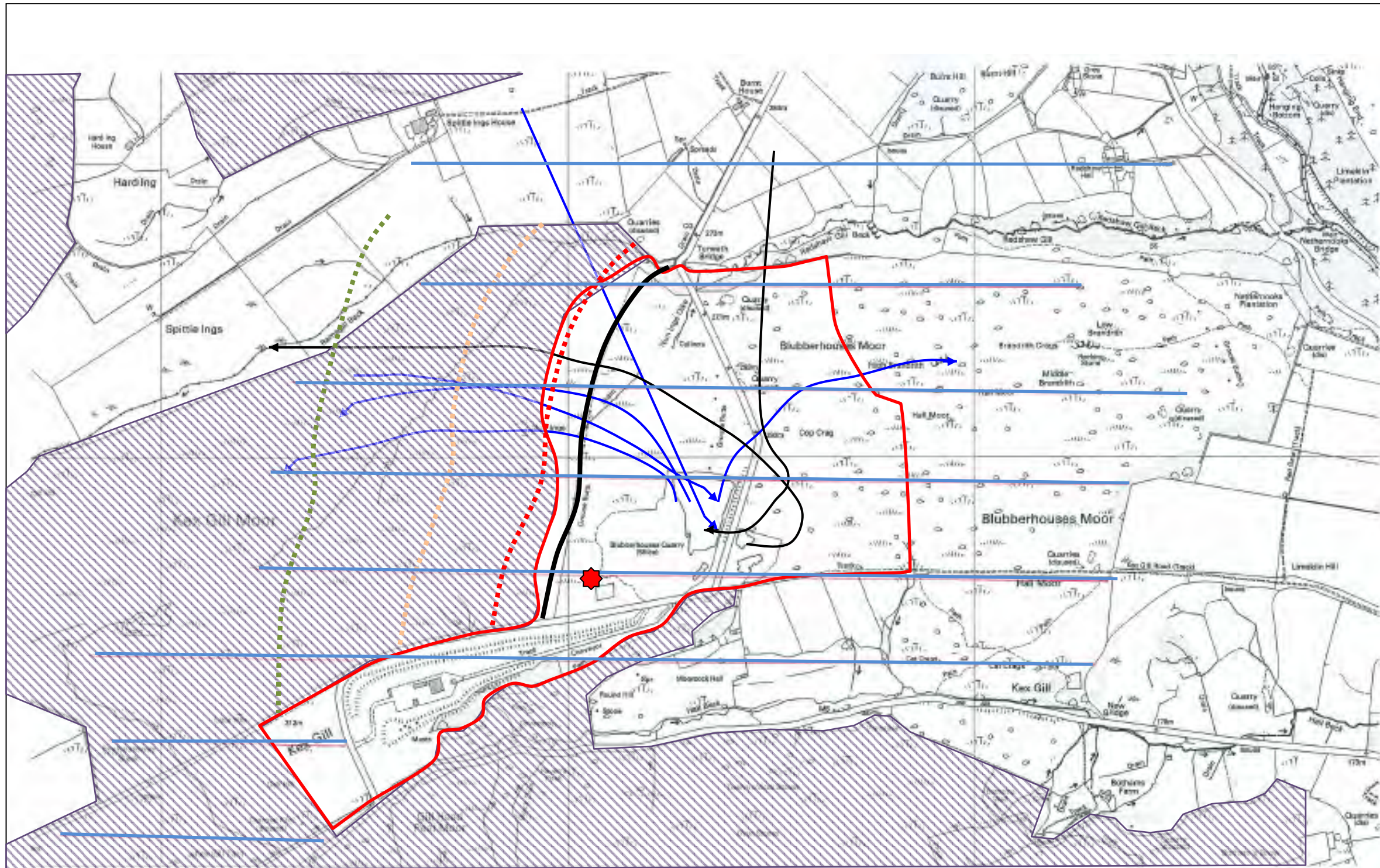
-  Site boundary
-  Vantage Point
-  Road diversion
-  100m
-  300m
-  600m
-  SPA



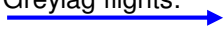
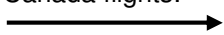
URS Infrastructure & Environment UK
 12 Regan Way
 Chetwynd Business Park
 Chilwell
 Nottingham
 NG9 6RZ








BLUBBERHOUSES QUARRY

Figure 14
VP 17th June: Raptors



Legend

17th June 5:15 – 8:15
 Geese flights
 Greylag flights: 
 Canada flights: 

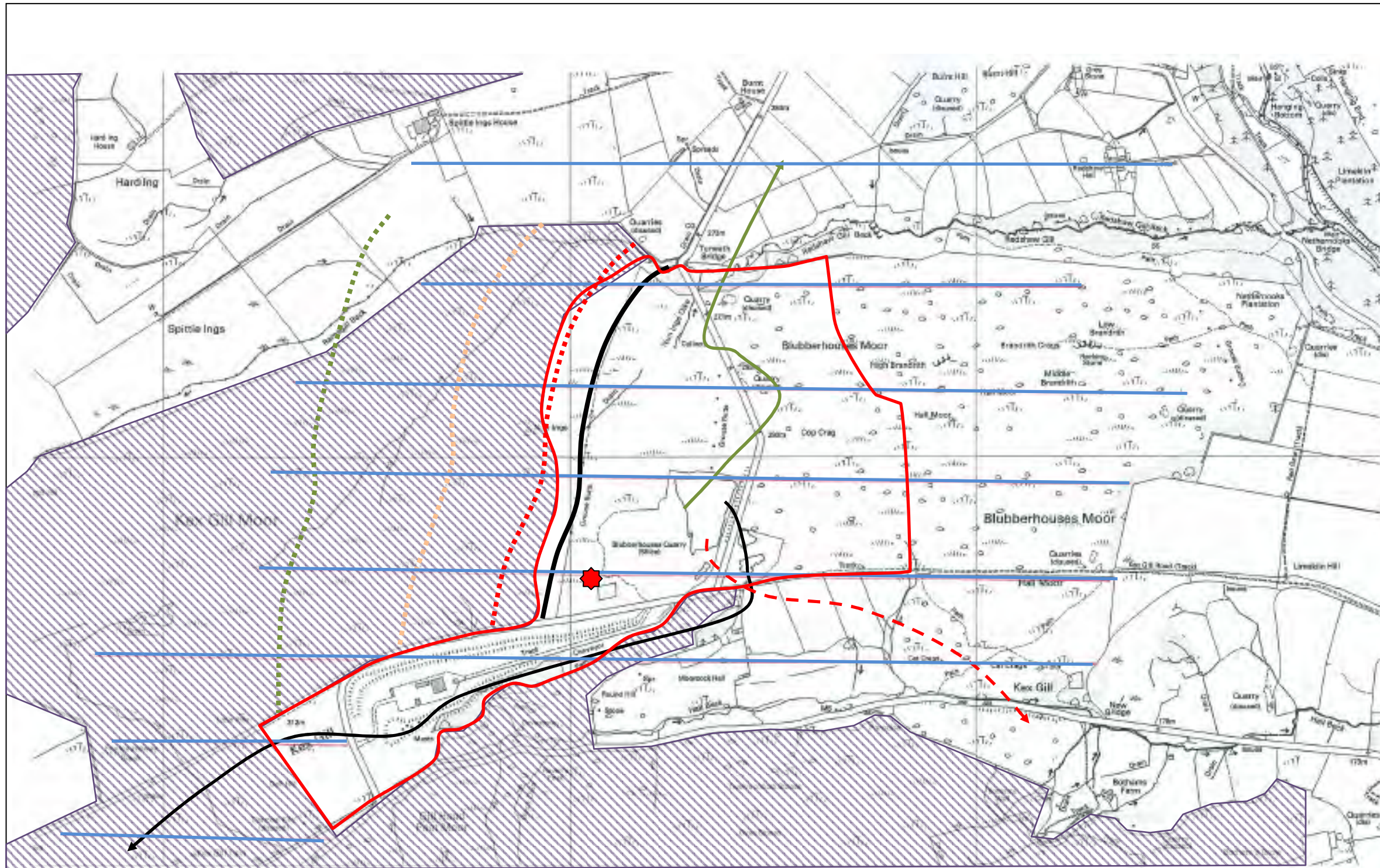
-  Site boundary
-  Vantage Point
-  Road diversion
-  100m
-  300m
-  600m
-  SPA



URS Infrastructure & Environment UK
 12 Regan Way
 Chetwynd Business Park
 Chilwell
 Nottingham
 NG9 6RZ

BLUBBERHOUSES QUARRY

Figure 15
VP 17th June: Wildfowl



Legend

- 2 Redshank
- 2 Oystercatcher
- 1 Oystercatcher
- Site boundary
- Vantage Point
- Road diversion
- 100m
- 300m
- 600m
- SPA

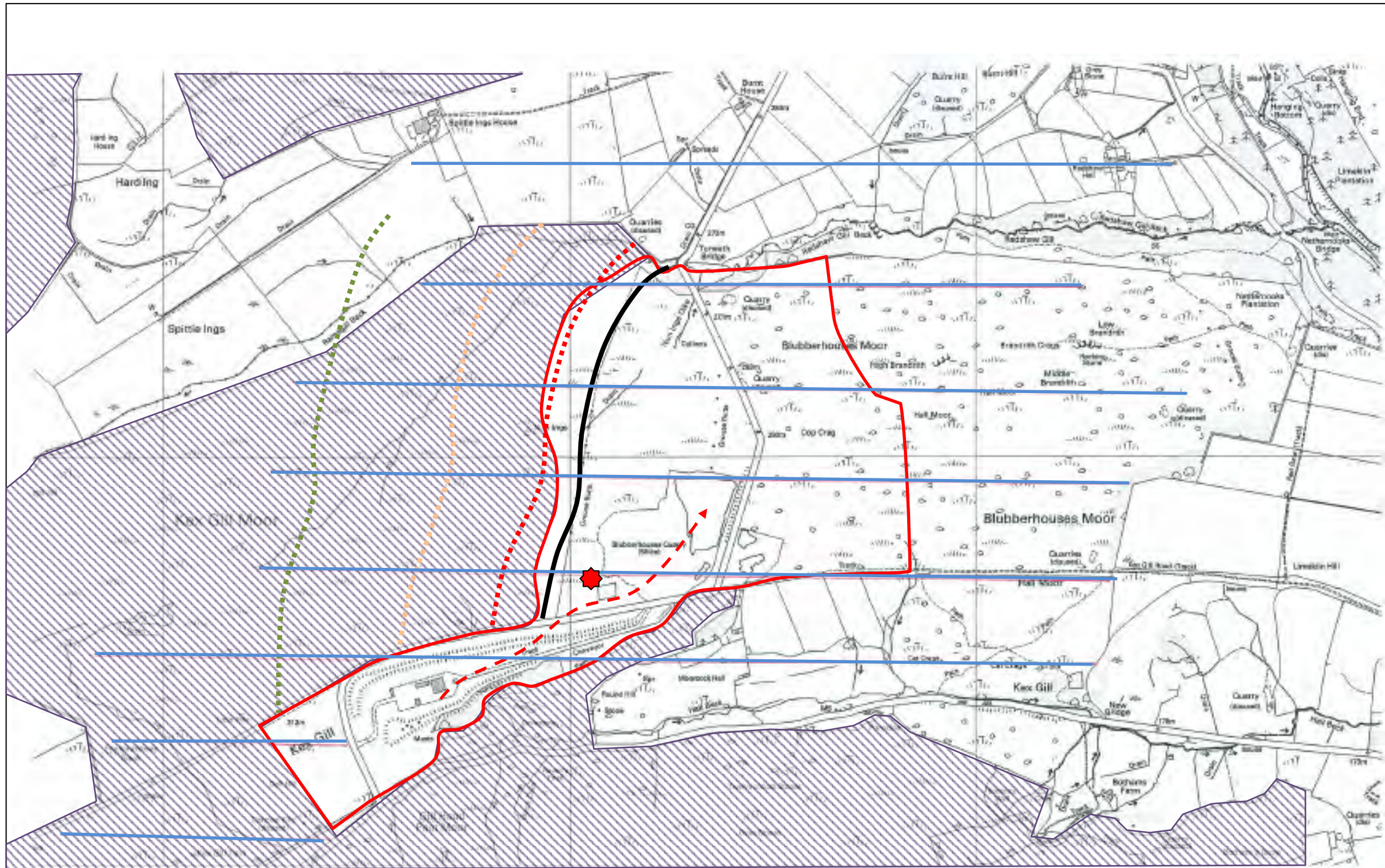
URS
URS Infrastructure & Environment UK
 12 Regan Way
 Chetwynd Business Park
 Chilwell
 Nottingham
 NG9 6RZ

BLUBBERHOUSES QUARRY

Figure 16
VP 26th July: Waders








Reproduction: Based on a map provided by Client

Drawn by: DC Checked by: PB Date: 4/10/12



Legend

1 Mallard

-  Site boundary
-  Vantage Point
-  Road diversion
-  100m
-  300m
-  600m
-  SPA



URS Infrastructure & Environment UK
 12 Regan Way
 Chetwynd Business Park
 Chilwell
 Nottingham
 NG9 6RZ

BLUBBERHOUSES QUARRY

Figure 17
VP 26th July : Wildfowl