

Bird Survey

Proposed Rabbit Ings Regeneration Scheme,
Near Royston, Barnsley

On behalf of the City of Wakefield Metropolitan
District Council and Yorkshire Forward

By WYG Environment



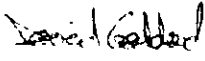
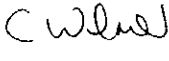
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RABBIT INGS REGENERATION SCHEME: BIRD SURVEY**1. INTRODUCTION****1.1 Background to Activity**

WYG Environment (WYGE) was commissioned by Carillion on behalf of City of Wakefield Metropolitan Borough Council (WMDC) and Yorkshire Forward (YF) to undertake ecological work as part of a regeneration scheme for the Rabbit Ings site ('the Site') that covers 65.9 hectares of land near the village of Royston, Barnsley. The Site includes land formerly used as a colliery spoil heap, former drift mine and disused sports pitches/recreation ground. The Rabbit Ings Regeneration Scheme ('the Scheme') will include the importation of soil making materials, regrading of steep slopes for Health and Safety reasons, and reclamation works to provide formal and informal recreation uses including sports pitches with two team changing facilities with ancillary site access, car parks and informal open areas with landscape and ecological enhancements.

Following a Phase 1 survey undertaken by Scott Wilson at the Site in 2007, a number of specific habitat and protected/notable species surveys were recommended to accurately predict potential ecological impacts as a result of the proposals. This report provides details of ecological work undertaken at Rabbit Ings in relation to breeding birds. The aims of this assessment were:

- To identify whether the site is used by breeding birds and determine the scale of impact as a result of the Regeneration Scheme proposals with respect to the *Wildlife and Countryside Act 1981* (as amended) and relevant planning and policy guidelines;
- To provide proposals for mitigation measures to offset any environmental impacts caused by the proposed work and to maintain the local breeding bird population; and
- To assist the client to operate within the law.

1.2 Site Location and General Description

The Site (centred around OS grid reference SE 381 118) is located to the north-east of the village of Royston, east of Lund Hill Lane (B6428), some 4.5km north-east of Barnsley, and covers approximately 65.9 hectares (ha). The site is within the administrative boundary of Barnsley Metropolitan Borough Council (BMBC). The majority of the site is owned by WMBC with the recreation ground owned by the Royston and Carlton Community Partnership (RCCP) and a relatively small parcel of land within the south part of the site under the ownership of BMBC.

The site effectively comprises three distinct areas, namely as follows:

- (i) the former Rabbit Ings spoil heap;
- (ii) the former Royston drift mine site located to the north-west of the spoil heap;
and
- (iii) the RCCP recreation ground located to the south-west of the spoil heap.

The Rabbit Ings spoil heap occupies the majority of the Site covering an area of approximately 50.9ha. Sandybridge Lane forms the eastern boundary of the spoil heap and Sandybridge Dyke is located to the south. A dismantled railway, part of Lund Hill Lane, along with the former Royston Drift Mine and some existing employment land is located to the west of the former spoil heap. Open agricultural fields and a former railway line forms the northern boundary of the spoil heap.

The spoil heap comprises a mound of colliery spoil rising approximately 35m to 40m above surrounding land. There are some areas of tree and shrub growth mainly on the southern slopes of the spoil heap, but other parts are sparsely vegetated. The spoil heap appears to be terraced on its northern flank, with steep embankments separating the terrace levels. Parts of the southern flank of the spoil heap are steep sided, leading to a much flatter area of land adjacent to Sandybridge Dyke that has more established areas of tree and shrub vegetation. The top of the spoil heap is generally flat with limited vegetation cover. There is evidence of surface erosion from uncontrolled surface water run-off on parts of the spoil heap. In addition, there is evidence of unauthorised use by motor bikes and 4x4 vehicles on the spoil heap and adjacent land within the Site.

A man-made pond is located in the north-east corner of the Site and a former lagoon is located in the south-west corner.

The former Royston Drift Mine site occupies an area of land approximately 6.5ha, located to the north-west of the spoil heap, east of Lund Hill Lane, and to the north of existing industrial land. It comprises a relatively flat area of land with an area of hardstanding along with the remains of former roadways and footings for former colliery buildings.

The RCCP derelict sports pitches/recreation ground is located adjacent to the south-west part of the spoil heap and covers an area of approximately 8.5ha. The sports pitches are in poor condition and are infrequently used; they have been 'ploughed' to prevent motorcycle and 4x4 access. The eastern boundary of this part of the Site is formed by a disused railway line adjacent to the spoil heap. The western boundary is formed by a public footpath, with Lund Hill Lane to the west, and the southern boundary by a hedgerow.

A public footpath runs generally along the northern site boundary, in part within the Site, providing a link between Lund Hill Lane in the west and Sandybridge Lane to the east. In addition, a public footpath runs from Lund Hill Lane in a south-east direction, to the north of the sports pitches/recreation ground, and leaves the southern boundary of the Site to connect with the wider rights of way network including the Trans Pennine Trail.

1.3 Surrounding Area

Land to the north and east of the Site includes open fields used for agriculture. The village of Shafton is located approximately 0.5km to the south-east of the spoil heap with intervening agricultural land. The Sandybridge Dyke is located along the southern boundary of the Site and the Trans Pennine Trail, with woodland areas and agricultural land to the south.

South-west of the spoil heap and outside the Site is a restored waste disposal tip (Cudworth Landfill Site) forming a prominent mound rising 10m above the surrounding land. West of the RCCP recreation ground is a railway line that runs north-south, passing over Lund Hill Lane, approximately 100m west of the site boundary. In addition, a former landfill site is located outside and to the north of the former drift mine part of the Site.

Between Lund Hill Lane and the former spoil heap is an area of land that is currently used for employment purposes, including a pallet yard and a number of other business activities.

The Monkton Coke and Chemical Works is located to the west of the Site and Lund Hill Lane. North of this coke works and to the west of Lund Hill Lane is a coal storage yard.

Royston Village is located to the south-west of the Site. Some residential properties and a nursery school on the east side of this village is located to the west of Lund Hill Lane approximately 100m distant from the south-west of the Site boundary. There are some residential properties along Lund Hill Lane approximately 250m north of the Site.

The Site is surrounded by arable land to the north, amenity fields and agricultural fields beyond to the south and is bordered by Lund Hill Lane and Sandybridge Lane to the west and east respectively.

1.4 **Proposed Work**

The Scheme provides for the regeneration of the Site and will primarily involve some importation of soil making materials, regrading and reclamation works to provide formal and informal recreation uses including sports pitches with two team changing facilities, ancillary site access, car parks, and informal open space areas with landscape and ecological enhancements. The Scheme will take 12-18 months to complete, subject to works being progressed within the appropriate soil handling season.

2. **DESK STUDY**

The local Biological Records Centre, West Yorkshire Ecology was consulted and this gave just one bird record of a barn owl (*Tyto alba*) roost (grid reference SE 373 131) recorded on the 11th August 2000. Barn owls are protected under Schedule 1 of the *Wildlife & Countryside Act 1981* (as amended). It is, therefore, a crime to:

- disturb any specially protected bird while it is building its nest;

- disturb any specially protected bird whilst it is near a nest containing eggs or young; or
- disturb the young of any of these birds before they are wholly independent.

3. **FIELD SURVEY METHODOLOGY**

The Site was visited on six occasions between April and early July 2008 to record evidence of breeding birds. The survey dates were 14th April, 6th May, 19th May, 9th June, 18th June and 1st July. On each occasion, the entire survey area was walked in the morning and birds were recorded in accordance with standard British Trust for Ornithology codes (Gilbert *et al.*, 2002) using a methodology based on the approach used in the *Common Bird Census* (Marchant, 1983).

4. **RESULTS**

4.1 **Breeding Birds**

The following table details the birds recorded during the surveys along with the breeding birds present on the Site and should be read in conjunction with Plans 1 to 6 showing detailed locations of breeding birds. The standard British Trust for Ornithology (BTO) codes for each species are given in brackets after the English name.

Table 1 Bird species recorded during the surveys.

English name (BTO Code)	Scientific name	Breeding Status on Site	Conservation
Barn Owl (BO)	<i>Tyto alba</i>	Has been recorded on site foraging and roosting but is not thought to be breeding.	Wildlife and Countryside Act 1981 Schedule 1 Local Biodiversity Action Plan Amber list - species of conservation concern Amber list - species of conservation concern UK
Blackbird (B)	<i>Turdus merula</i>	Recorded during the surveys and is highly likely to be breeding within the site.	
Blackcap (BC)	<i>Sylvia atricapilla</i>	Recorded within suitable breeding habitat and it is thought likely that it has breed.	
Black-headed Gull (BH)	<i>Chroicocephalus ridibundus</i>	Has been recorded flying over the site and around the aquatic habitats within the site.	Amber list - species of conservation concern UK
Blue Tit (BT)	<i>Cyanistes caeruleus</i>	Recorded within suitable breeding habitat with young birds being seen.	
Bullfinch (BF)	<i>Pyrrhula pyrrhula</i>	A difficult species to record due to its quite call and unobtrusive nature. It is however considered to be a breeding species.	Natural Environment Act 2006, section 41 Countryside and Wildlife Act 1968 UK Biodiversity Action Plan Red list - species of conservation concern
Canada Goose (CG)	<i>Branta canadensis</i>	Recorded visiting the sites aquatic habitats but has not been recorded as breeding.	
Carrion Crow (C)	<i>Corvus corone</i>	Present in some numbers throughout the site and is potentially breeding.	
Chaffinch (CH)	<i>Fringilla coelebs</i>	Present throughout the site is regarded as a breeding species within the dense scrub / woodlands within the site.	

English name (BTO Code)	Scientific name	Breeding Status on Site	Conservation
Chiffchaff (CC)	<i>Phylloscopus collybita</i>	Recorded within suitable breeding habitat and it is thought likely that it has breed.	
Collared Dove (CD)	<i>Streptopelia decaocto</i>	Has been recorded on site but is not thought to be breeding.	
Coot (CO)	<i>Fulica atra</i>	Has been recorded from the aquatic habitats and an adult was observed feeding young on 1 st July.	
Cuckoo (CK)	<i>Cuculus canorus</i>	Has been recorded on site during the majority of visits and has probably breed on site.	Natural Enviro 2006, section 1 Amber list - sp concern UK
Dunnock (D)	<i>Prunella modularis</i>	Recorded during three surveys and on the 1 st July was observed carrying food to a nest just off site.	Natural Enviro 2006, section 1 Amber list - sp concern UK
Feral Pigeon (FP)	<i>Columba livia</i>	Has been recorded flying over the site and are potentially nesting within buildings which are adjacent to the site.	
Goldcrest (GC)	<i>Regulus regulus</i>	Recorded within suitable breeding habitat and it is thought likely that it has breed.	Amber list - sp concern UK
Goldfinch (GO)	<i>Carduelis carduelis</i>	There are several records for this species from around the site and it is highly likely to be breeding.	
Grasshopper Warbler (GH)	<i>Locustella naevia</i>	Recorded singing on several occasions within suitable breeding habitat. The skulking nature of the species makes it difficult to record breeding activity. It is thought highly likely that it has breed.	Natural Enviro 2006, section 1 Red list - spec
Great Spotted Woodpecker (GS)	<i>Dendrocopos major</i>	Recorded on just one occasion 9 th June and could be breeding in the woodlands adjacent	

English name (BTO Code)	Scientific name	Breeding Status on Site	Conservation
Great Tit (GT)	<i>Parus major</i>	to the site which offer more suitable habitat for breeding. Recorded within suitable breeding habitat with young birds being seen.	
Green Woodpecker (G)	<i>Picus viridis</i>	Recorded on two occasions 14 th April and 9 th June and could be breeding in the woodlands adjacent to the site which offer more suitable habitat for breeding.	Amber list - sp conservation s Amber list - s concern UK
Greenfinch (GR)	<i>Carduelis chloris</i>	The only record relates to a bird in the south east corner and although in suitable habitat it is not thought to be a breeding species.	
Grey Heron (H)	<i>Ardea cinerea</i>	Recorded visiting the sites aquatic habitats and flying over but has not been recorded as a breeding species.	
Grey Partridge (P)	<i>Perdix perdix</i>	Has been recorded on site during the majority of visits and potentially may be breeding but no young have been recorded.	Natural Enviro 2006, section Countryside R UK Biodiversit Local Biodiver Red list - spec status in Europ Red list - spec
Herring Gull (HG)	<i>Larus argentatus</i>	Has been recorded flying over the site.	Natural Enviro 2006, section Amber list - sp concern UK
House Martin (HM)	<i>Delichon urbicum</i>	Recorded feeding over the site and collecting mud from around pond 1 for nest building.	Amber list - sp concern UK
Jay (J)	<i>Garrulus glandarius</i>	This species has been recorded twice towards the periphery of the site and is	

English name (BTO Code)	Scientific name	Breeding Status on Site	Conservation
		probably breeding in the woodland adjacent to the site.	
Kestrel (K)	<i>Falco tinnunculus</i>	Has been recorded flying over the site and uses the site as a foraging area.	Amber list - sp conservation s Amber list - sp concern UK
Lapwing (L)	<i>Vanellus vanellus</i>	A pair showed territorial behaviour above a field adjacent to the site and they have been recorded flying over the site.	Natural Enviro 2006, section Amber list - sp concern UK Local Biodiver: Barnsley
Lesser Black-backed Gull (LB)	<i>Larus fuscus</i>	Has been recorded flying over the site.	Amber list - sp concern UK
Lesser Redpoll (LR)	<i>Carduelis cabaret</i>	The one record is thought to relate to a bird retuning further north to breed.	Amber list - sp concern UK
Linnet (LI)	<i>Carduelis cannabina</i>	This species been recorded along the slopes of the southern boundary among the gorse (<i>Ulex europaeus</i>) and broom (<i>Cytisus scoparius</i>) which is the ideal breeding habitat. Adults have been observed carrying food obviously to feed young.	Natural Enviro 2006, section Countryside R UK Biodiversit Local Biodiver: Red list - spec
Little Grebe (LG)	<i>Tachybaptus ruficollis</i>	Has been consistently recorded from two ponds and an adult was observed feeding young on 1 st July.	
Little Owl (LO)	<i>Athene noctua</i>	Recorded by the presence of one pellet but no other evidence has been found.	
Long-tailed Tit (LT)	<i>Aegithalos caudatus</i>	Recorded within suitable breeding habitat and family groups have been seen (young being feed by adults).	

English name (BTO Code)	Scientific name	Breeding Status on Site	Conservation
Magpie (MG)	<i>Pica pica</i>	Recorded on most surveys but no breeding activity was noted. However breeding may well be taking place in the adjacent woodlands.	
Mallard (MA)	<i>Anas platyrhynchos</i>	Recorded visiting the sites aquatic habitats and potentially may be breeding in areas that are obscured from survey. Young were recorded on the 7 th July.	
Marsh Tit (MT)	<i>Poecile palustris</i>	Recorded calling and singing within suitable breeding habitat.	Natural Enviro 2006, section 1 Red list - spec
Meadow Pipit (MP)	<i>Anthus pratensis</i>	Has been recorded throughout the site in suitable habitat and it is highly likely to be breeding.	Amber list - sp concern UK
Mistle Thrush (M)	<i>Turdus viscivorus</i>	Recorded on several occasions and on the 9 th June fully fledged young were seen with the adult birds.	Amber list - sp concern UK
Moorhen (MH)	<i>Gallinula chloropus</i>	Has been recorded from the aquatic habitats and an adult was observed feeding young on 1 st July.	
Mute Swan (MS)	<i>Cygnus olor</i>	Recorded visiting the sites aquatic habitats and flying over but has not been recorded as a breeding species.	Amber list - sp concern UK
Pheasant (PH)	<i>Phasianus colchicus</i>	Has been recorded on site during most visits and potentially may be breeding.	
Pied Wagtail (PW)	<i>Motacilla alba</i>	Has been recorded on every survey date and adults have been recorded feeding young, though this does not prove that they have breed on site.	
Red-legged Partridge (RL)	<i>Alectoris rufa</i>	Has been recorded on site on one occasion	

English name (BTO Code)	Scientific name	Breeding Status on Site	Conservation
		and is not thought to be breeding.	
Redstart (RT)	<i>Phoenicurus phoenicurus</i>	A male was recorded on 1 st July and could relate to a failed breeder returning south.	Amber list - sp conservation s Amber list - s concern UK
Reed Bunting (RB)	<i>Emberiza schoeniclus</i>	This species has been recorded throughout the site in favourable habitats and is almost certainly a breeding species.	Natural Enviro 2006, section ' Countryside R UK Biodiversit Red list - spec
Reed Warbler (RW)	<i>Acrocephalus scirpaceus</i>	Recorded singing on several occasions within suitable breeding habitat. It is thought highly likely that it has breed.	
Robin (R)	<i>Erithacus rubecula</i>	Recorded during three surveys and is probably breeding within the site.	
Sedge Warbler (SW)	<i>Acrocephalus schoenobaenus</i>	Recorded singing on several occasions within suitable breeding habitat. It is thought highly likely that it has breed.	
Siskin (SK)	<i>Carduelis spinus</i>	The record of this species is thought to relate to birds retuning further north to breed.	
Skylark (S)	<i>Alauda arvensis</i>	Has been recorded throughout the site in suitable habitat and it is highly likely to be breeding.	Natural Enviro 2006, section ' Countryside R UK Biodiversit Local Biodiver: Barnsley Red list - spec status in Europ Red list - spec Natural Enviro
Song Thrush (ST)	<i>Turdus philomelos</i>	Recorded during the surveys and is highly	

English name (BTO Code)	Scientific name	Breeding Status on Site	Conservation
		likely to be breeding within the site.	2006, section 1 Countryside R UK Biodiversit Local Biodiver Red list - spec
Sparrowhawk (SH)	<i>Accipiter nisus</i>	Has been recorded flying over the site and potentially uses the site as a feeding area.	
Starling (SG)	<i>Sturnus vulgaris</i>	A few have been recorded on most survey dates with a peak count of 24 flying over the south west corner on the 1 st July. No proof of breeding has been recorded.	Natural Enviro 2006, section 1 Red list - spec
Stock Dove (SD)	<i>Columba oenas</i>	Has been recorded on site but is not thought to be breeding.	Amber list - sp concern UK
Swallow (SL)	<i>Hirundo rustica</i>	Recorded feeding over the site and collecting mud from around pond 1 for nest building.	Amber list - sp conservation s Amber list - s concern UK
Swift (SI)	<i>Apus apus</i>	Recorded feeding over the site.	
Tawny Owl (TO)	<i>Strix aluco</i>	Has been heard calling whilst bat surveys have been undertaken.	
Whitethroat (WH)	<i>Sylvia communis</i>	Recorded within suitable breeding habitat and it is thought likely that it has breed.	
Willow Tit (WT)	<i>Poecile montana</i>	Recorded calling and singing within suitable breeding habitat.	Natural Enviro 2006, section 1 Red list - spec
Willow Warbler (WW)	<i>Phylloscopus trochilus</i>	Recorded within suitable breeding habitat and it is thought likely that it has breed.	Amber list - sp concern UK
Woodpigeon (WP)	<i>Columba palumbus</i>	Has been recorded on site and is potentially breeding within the denser areas of the secondary woodland within the site.	

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English name (BTO Code)	Scientific name	Breeding Status on Site	Conservation
Wren (WR)	<i>Troglodytes troglodytes</i>	Has been recorded on every survey date and is highly likely to be breeding on site.	
Yellow Wagtail (YW)	<i>Motacilla flava</i>	A single bird was seen and it is thought to relate to a bird on passage.	Amber list - sp concern UK
Yellowhammer (Y)	<i>Emberiza citrinella</i>	This species has been recorded throughout the site and is almost certainly a breeding species.	Natural Enviro 2006, section 4 Red list - spec

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[A039273_Rabbit Ings_Bird Survey_01]

4.1.1 Schedule 1 Species

One legally protected bird species, the barn owl (*Tyto alba*) was recorded within the site boundaries; this species is listed on Schedule 1 of the *Wildlife and Countryside Act 1981* (as amended). The barn owl was first seen on the evening of the 13th March 2008 and then subsequently on 9th June 2008 when it was observed to leave its roost site beneath a bridge adjacent to the north-east boundary. The signs from the occupation of the roost site have been recorded throughout the survey period. It is thought that this represents a single bird that is not currently breeding. Whilst conducting other surveys on the Site, the bridge was checked for signs of breeding, including an increase in the number of owl pellets, feathers, staining from defecation and noise from the young (Hardey *et al.*, 2006), and none were found.

The barn owl has been recorded along the northern edge of the Site and has been recorded leaving the roost under the bridge at the north-eastern corner of the Site. It is considered most likely that this species is using the Site for hunting purposes and will thus be utilising the edge habitats between the secondary woodland / scrub areas and the grasslands as this is where small mammals are most likely to be found.

4.1.2 Red List Species

Twelve bird species listed on Section 41 of the *Natural Environment and Rural Communities Act 2006* and/or on the RSPB Red List of birds of high conservation concern were considered to be breeding on the Site. These species were the grey partridge, cuckoo, skylark, dunnock, song thrush, grasshopper warbler, willow tit, marsh tit, linnet, bullfinch, yellowhammer and reed bunting.

The locations of the RSPB red list and/or Natural Environment and Rural Communities (NERC) Act section 41 species are shown on Plans 1 to 6. These show that these species were primarily recorded around the periphery of the Site, where habitats were predominately secondary woodland, scrub and habitats surrounding the ponds.

There are two RSPB red list species which will be utilising the grassland areas throughout the Site; these are the grey partridge and skylark. An important area for these species is the secondary woodland and scrub along the southern boundary

as this is where several of the species listed above are breeding. Part of this area has been identified as requiring remediation works.

4.1.3 Amber List Species

Five species on the Royal Society for the Protection of Birds (RSPB) Amber List were recorded on the Site and were considered to be breeding on or very close to it. These were the green woodpecker, meadow pipit, mistle thrush, willow warbler and goldcrest. The remaining Amber List species were considered to relate to non-breeding birds that were using the Site for roosting, feeding or for gathering nesting material.

The locations of the RSPB Amber list and/or NERC Act Section 41 species are shown on Plans 1 to 6. These show that species have been primarily recorded around the periphery of the Site where habitats include secondary woodlands, scrub and the habitats surrounding the ponds. There are a further two RSPB Amber species which will be utilising the grassland areas throughout the Site; these are the meadow pipit and kestrel for breeding and hunting purposes.

Pond 1, located in the north-west corner of the site adjacent to the pallet yard has muddy edges which were used by the swallows and house martins as a place to collect mud to produce their nests with. Ponds are usually found within 300m of their nest site as any greater than this distance they run the risk of the mud drying out making it unusable. The birds are, therefore, considered likely to be currently nesting within the pallet yard / coking plant.

4.2 **Overwintering Birds**

The site has secondary woodland and scrub along many of its boundaries which provide both feeding opportunities and safe roosting sites. There are also woodlands adjacent to the site which will offer further opportunities. The areas within the site have some or all of the following food bearing trees and shrubs: hawthorn (*Crataegus monogyna*), alder (*Alnus* sp.), blackthorn (*Prunus spinosa*), silver birch (*Betula pendula*) and roses (*Rosa* sp.). They will provide a valuable source of food for birds over the winter period and thus the site is considered to be highly suitable to support overwintering bird populations. The grassland areas within the site will offer opportunities for birds such as owls for feeding. During the first breeding bird survey the following bird species were recorded; lesser redpoll and

siskin both of which could relate to overwintering birds. In personal communication with Mick Birkinshaw of Groundwork Dearne Valley there have been flocks of redwing (*Turdus iliacus*) and fieldfare (*Turdus pilaris*) recorded during the winter months.

5. IMPACTS & RECOMMENDATIONS

5.1 Breeding Birds

The works proposed for the south of the Rabbit Ings site, to include the re-profiling of steep slopes by cutting and filling, will in effect destroy the existing habitat. This area is used by a number of bird species, including some on the RSPB red and amber list, for breeding. The impact of the proposed work is, therefore, considered likely to be of a significant nature if no mitigation is undertaken. It is possible that species may find alternative breeding sites within the land surrounding Rabbit Ings.

The proposed avoidance and mitigation measures, designed to limit the impact of loss and disturbance of habitat used by breeding birds at the Site, include:

- The retention of existing habitats where appropriate including some along the southern tip slope;
- The retention of a 'wildlife refuge' in the south-eastern corner of the Site which will be subject to habitat enhancement including thinning of the tree canopy to allow an increase in the amount of gorse and broom within this area. Canopy thinning will be undertaken in January/February 2009 to avoid bird breeding season.
- A green corridor will be planted between the wildlife refuge and the footpath to limit disturbance which will also provide an additional nesting area.
- Any work throughout the Site to clear trees and scrub will be undertaken outside the bird breeding season i.e. work will be undertaken between October and February inclusive.
- Reed beds in the south-west corner of the Site will be extended as part of the flood compensation area and will encourage dunnoek, willow warbler and

reed bunting. Any disturbance to reed beds as part of the work will be undertaken outside bird breeding season.

- A ground level to ledge height of at least 3m will be retained under the bridge in the north-east corner of the Site to reduce the risk of human interference of the barn owl roost site. In addition, there will be no fill within 12m of the entrance to ensure a suitable flight line is maintained.
- Temporary fencing between Ponds 2a and 2b and the work area will be erected to reduce disturbance to the nesting little grebes during the proposed work. No other work to these ponds is proposed.
- As Pond 1 will be lost as a result of the proposed work (covered by a separate planning approval LPA reference number 2008/0244), a new pond will be created approximately 230m to the east. The pond will mimic the characteristics of the existing pond while incorporating enhancement options to ensure the continued use by nesting birds.

5.2 Over-wintering Birds

The most significant impact of the proposed work on over-wintering birds will be the loss of food bearing trees and shrubs and to a lesser extent roosting opportunities as a result of vegetation clearance. Some areas of suitable habitat will be retained within the work areas where appropriate with feeding and roosting habitat also being retained in undisturbed areas of the site (including the wildlife refuge) and within the surrounding area, and as habitat creation will be undertaken to enhance the area for over wintering birds once the Scheme is complete, the impact is considered to be of a temporary nature with beneficial effects in the long-term.

6. REFERENCES

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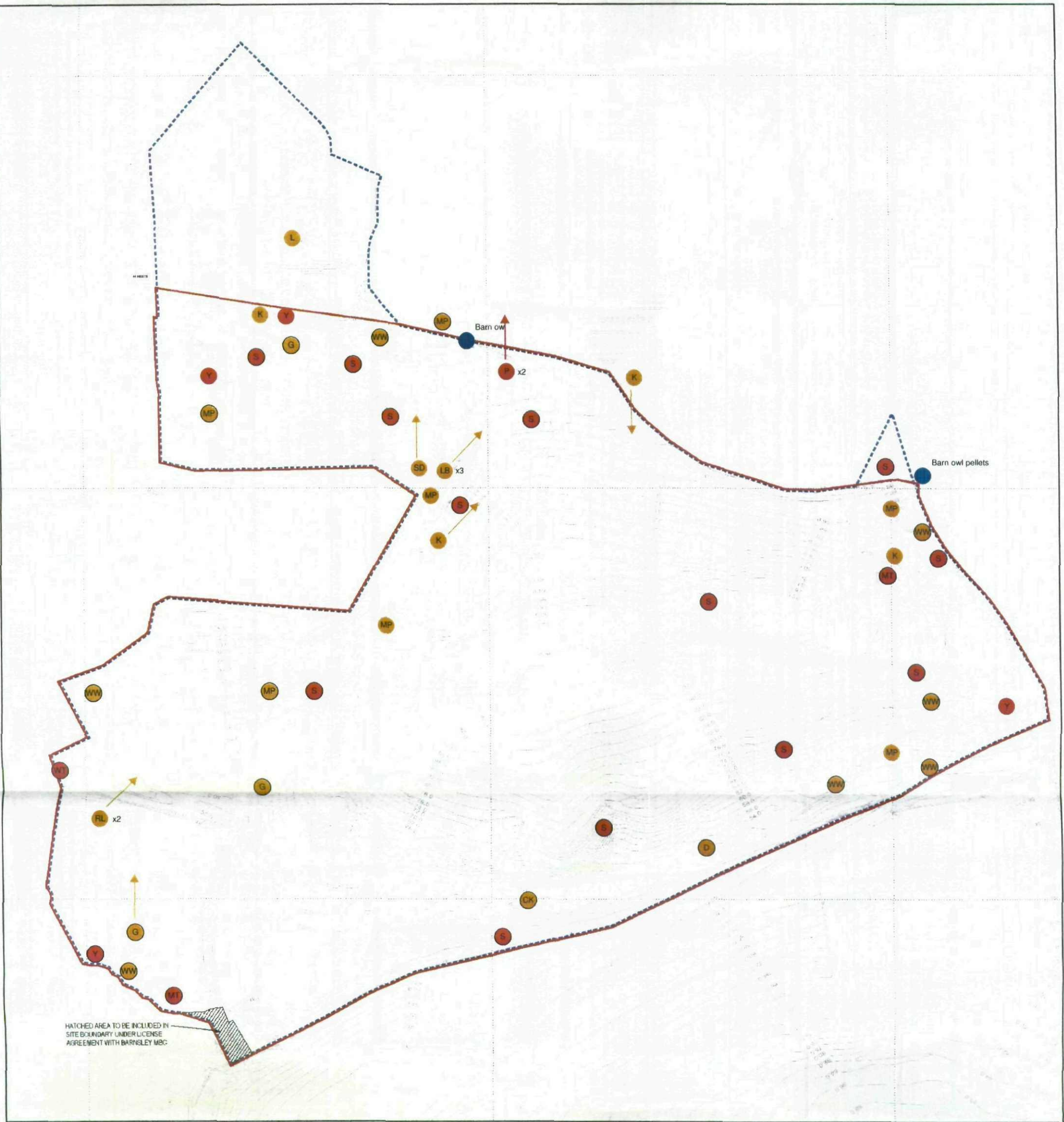
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Key to bird species

Schedule 1

Barn owl (BO)

RSPB Red List

Grey Partridge (P)
Skylark (S)
Song Thrush (ST)
Grasshopper Warbler (GH)
Willow Tit (WT)
Marsh Tit (MT)
Starling (SG)
Linnet (LI)
Bullfinch (BF)
Yellowhammer (Y)
Reed Bunting (RB)

RSPB Amber List

Mute Swan (MS)
Kestrel (K)
Lapwing (L)
Black-headed Gull (BH)
Lesser Black-backed Gull (LB)
Herring Gull (HG)
Stock Dove (SD)
Cuckoo (CK)
Barn Owl (BO)
Green Woodpecker (G)
Swallow (SL)
House Martin (HM)
Meadow Pipit (MP)
Yellow Wagtail (YW)
Dunnock (D)
Redstart (RT)
Mistle Thrush (M)
Willow Warbler (WW)
Goldcrest (GC)
Lesser Redpoll (LR)

Legend

- Schedule 1 Species
- RSPB Red List (Singing)
- RSPB Red List (Sighted)
- RSPB Amber List (Singing)
- RSPB Amber List (Sighted)
- Direction of flight

Executive Park
Avalon Way
Anstey
Leicester
LE7 7GR

Tel: 0116 2348100
Fax: 0116 2348002
email: midlands.ecology@wyg.com

White
Young
Green

Environmental

Project

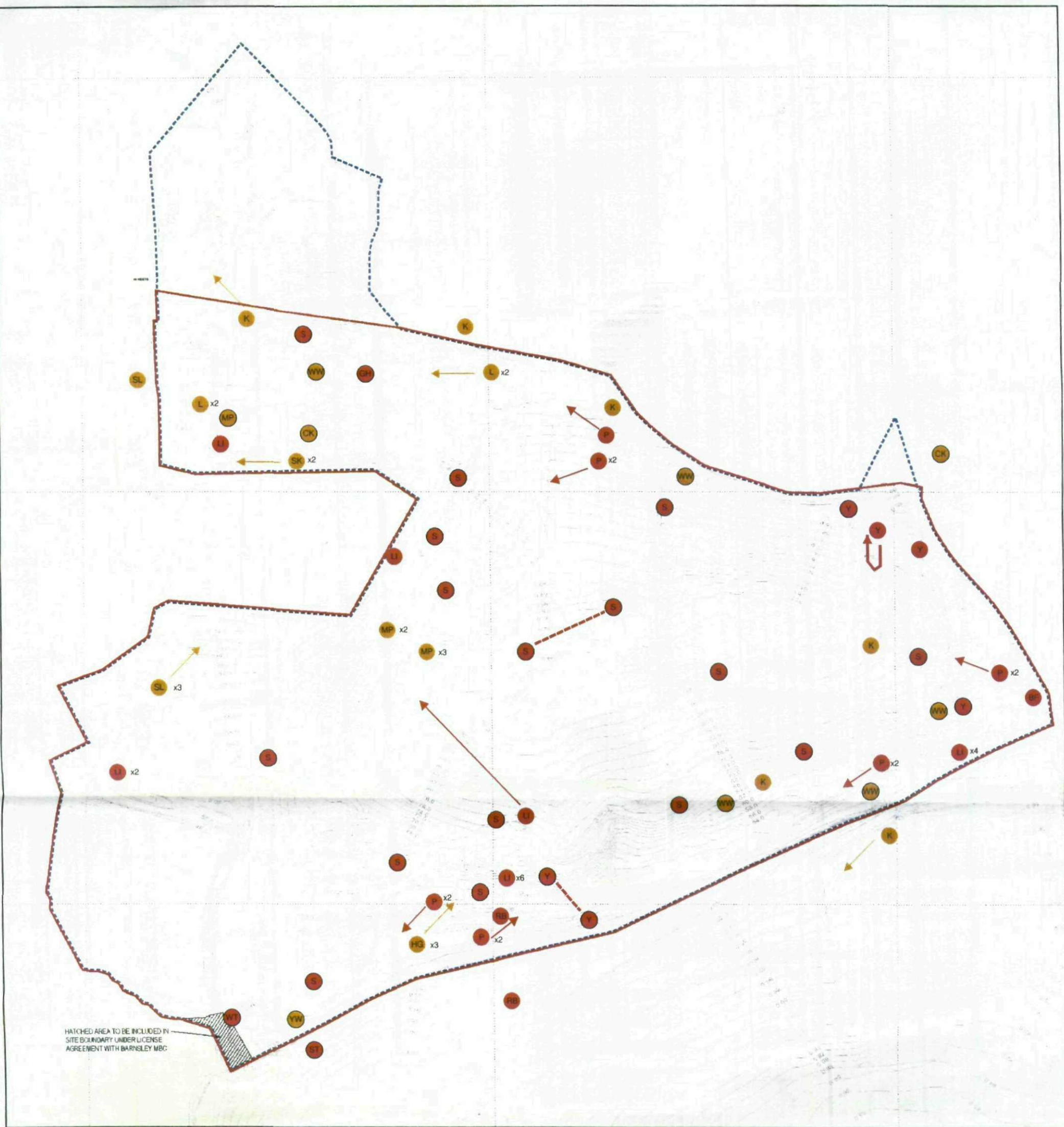
Rabbit Ings Colliery
Breeding Bird Survey

Drawing Title:

Survey 1 - 14th April 2008

Scale at A3:	Drawn by: TK	Date: 21/07/08	Checked By: DG	Date: 21/07/08	Approved By: RP	Date: 21/07/08
Project No: A039273	Office: 38	Type: 05	Drawing No.	Revision: 1		

Base map provided by



Key to bird species

Schedule 1

Barn owl (BO)

RSPB Red List

Grey Partridge (P)
 Skylark (S)
 Song Thrush (ST)
 Grasshopper Warbler (GH)
 Willow Tit (WT)
 Marsh Tit (MT)
 Starling (SG)
 Linnet (LI)
 Bullfinch (BF)
 Yellowhammer (Y)
 Reed Bunting (RB)

RSPB Amber List

Mute Swan (MS)
 Kestrel (K)
 Lapwing (L)
 Black-headed Gull (BH)
 Lesser Black-backed Gull (LB)
 Herring Gull (HG)
 Stock Dove (SD)
 Cuckoo (CK)
 Barn Owl (BO)
 Green Woodpecker (G)
 Swallow (SL)
 House Martin (HM)
 Meadow Pipit (MP)
 Yellow Wagtail (YW)
 Dunnock (D)
 Redstart (RT)
 Mistle Thrush (M)
 Willow Warbler (WW)
 Goldcrest (GC)
 Lesser Redpoll (LR)

Legend

- Schedule 1 Species
- RSPB Red List (Singing)
- RSPB Red List (Sighted)
- RSPB Amber List (Singing)
- RSPB Amber List (Sighted)
- Direction of flight
- Multiple sightings

125m

N

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White
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 Green

Environmental

Project

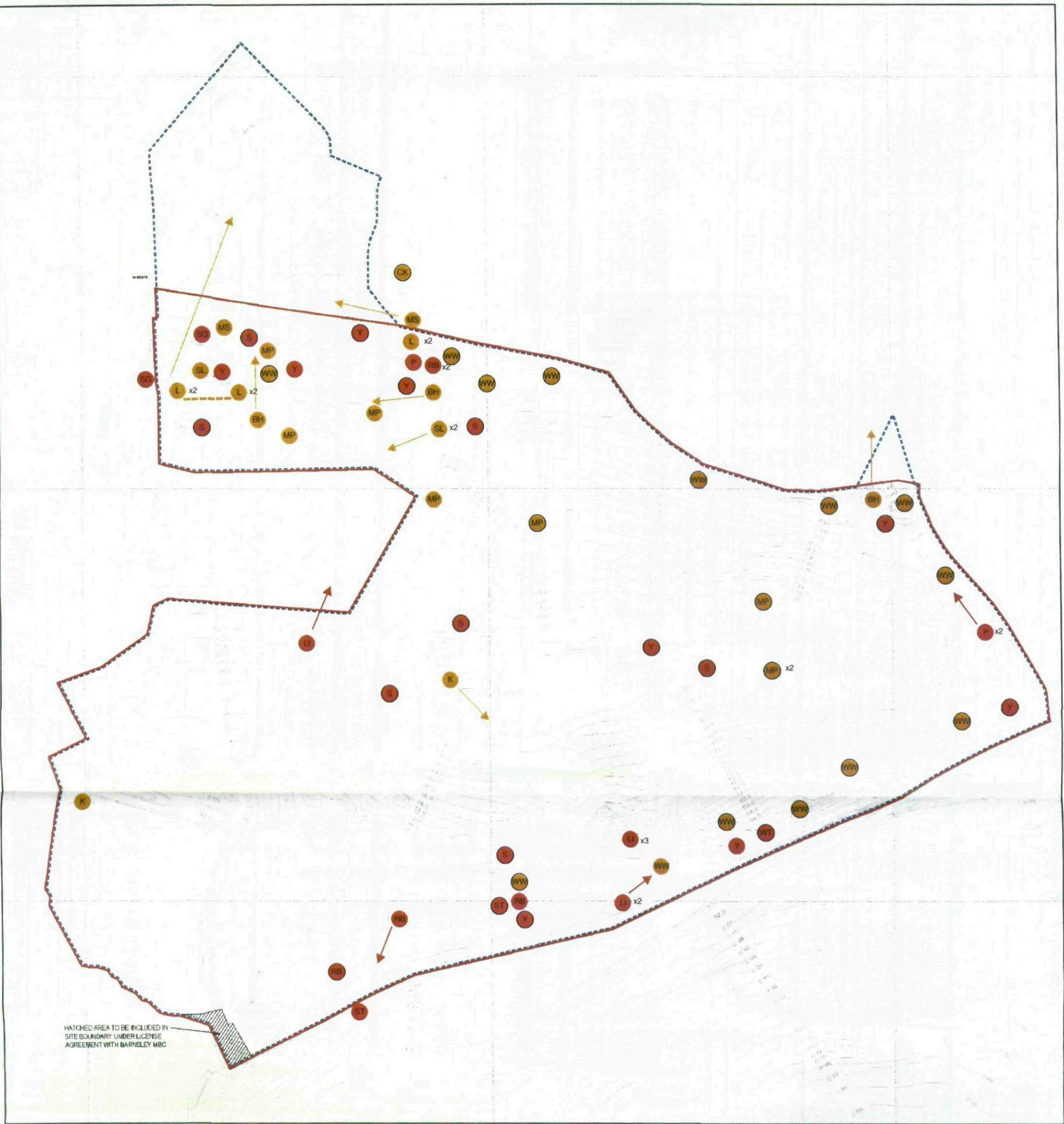
Rabbit Ings Colliery
 Breeding Bird Survey

Drawing Title:

Survey 2 - 6th May 2008

Scale at A3:	Drawn by: TK	Date: 21/07/08	Checked By: DG	Date: 21/07/08	Approved By: RP	Date: 21/07/08
Project No: A039273	Office: 38	Type: 05	Drawing No.	Revision: 1		

Base map provided by



Key to bird species

Schedule 1

Barn owl (BO)

RSPB Red List

Grey Partridge (P)
Skylark (S)
Song Thrush (ST)
Grasshopper Warbler (GH)
Willow Tit (WT)
Marsh Tit (MT)
Starling (SG)
Linnet (LI)
Bullfinch (BF)
Yellowhammer (Y)
Reed Bunting (RB)

RSPB Amber List

Mute Swan (MS)
Kestrel (K)
Lapwing (L)
Black-headed Gull (BH)
Lesser Black-backed Gull (LB)
Herring Gull (HG)
Stock Dove (SD)
Cuckoo (CK)
Barn Owl (BO)
Green Woodpecker (G)
Swallow (SL)
House Martin (HM)
Meadow Pipit (MP)
Yellow Wagtail (YW)
Dunnock (D)
Redstart (RT)
Mistle Thrush (M)
Willow Warbler (WW)
Goldcrest (GC)
Lesser Redpoll (LR)

Legend

- RSPB Red List (Singing)
- RSPB Red List (Sighted)
- RSPB Amber List (Singing)
- RSPB Amber List (Sighted)
- Direction of flight
- Multiple sightings

125m

N

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Anstey
Leicester
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White
Young
Green

Environmental

Project

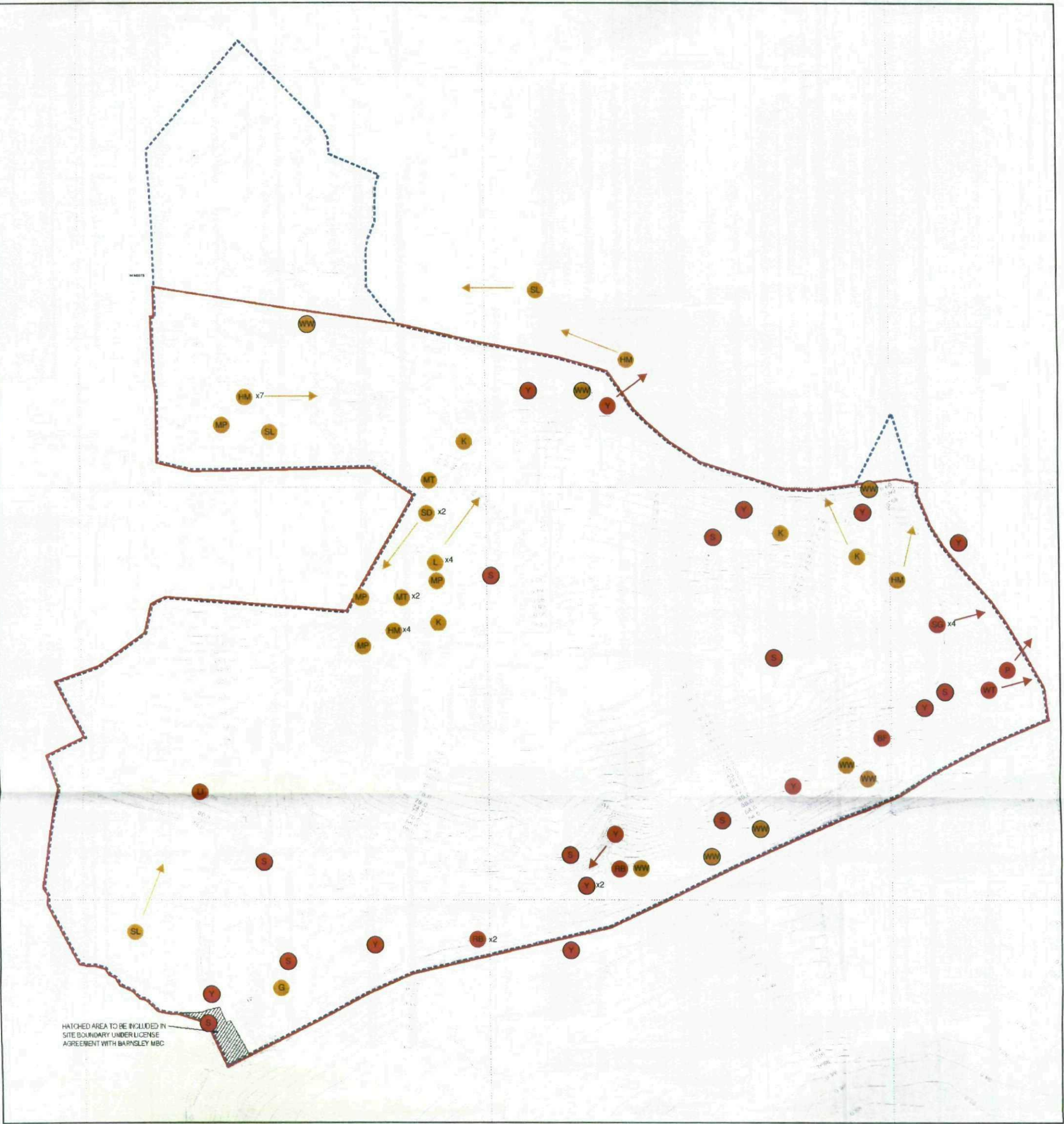
Rabbit Ings Colliery
Breeding Bird Survey

Drawing Title:

Survey 3 - 19th May 2008

Scale at A3:	Drawn by: TK	Date: 21/07/08	Checked By: DG	Date: 21/07/08	Approved By: RP	Date: 21/07/08
Project No: A039273	Office: 38	Type: 05	Drawing No.	Revision: 1		

Base map provided by



Key to bird species

Schedule 1

Barn owl (BO)

RSPB Red List

Grey Partridge (P)
Skylark (S)
Song Thrush (ST)
Grasshopper Warbler (GH)
Willow Tit (WT)
Marsh Tit (MT)
Starling (SG)
Linnet (LI)
Bullfinch (BF)
Yellowhammer (Y)
Reed Bunting (RB)

RSPB Amber List

Mute Swan (MS)
Kestrel (K)
Lapwing (L)
Black-headed Gull (BH)
Lesser Black-backed Gull (LB)
Herring Gull (HG)
Stock Dove (SD)
Cuckoo (CK)
Barn Owl (BO)
Green Woodpecker (G)
Swallow (SL)
House Martin (HM)
Meadow Pipit (MP)
Yellow Wagtail (YW)
Dunnock (D)
Redstart (RT)
Mistle Thrush (M)
Willow Warbler (WW)
Goldcrest (GC)
Lesser Redpoll (LR)

Legend

- RSPB Red List (Singing)
- RSPB Red List (Sighted)
- RSPB Amber List (Singing)
- RSPB Amber List (Sighted)
- Direction of flight
- Multiple sightings

125m

N

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White
Young
Green

Environmental

Project

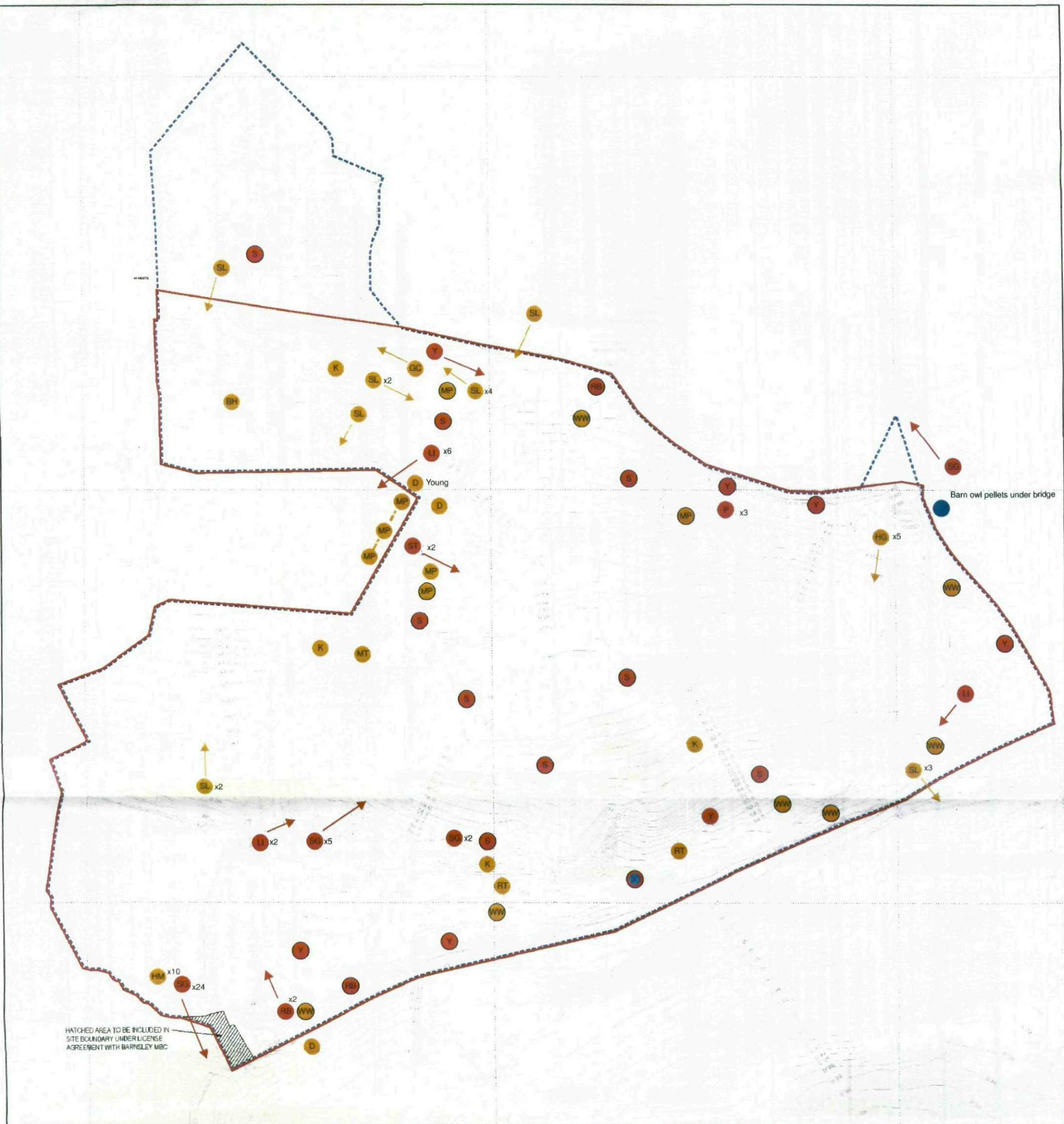
Rabbit Ings Colliery
Breeding Bird Survey

Drawing Title:

Survey 4 - 9th June 2008

Scale at A3:	Drawn by: TK	Date: 21/07/08	Checked By: DG	Date: 21/07/08	Approved By: RP	Date: 21/07/08
Project No: A039273	Office: 38	Type: 05	Drawing No.	Revision: 1		

Base map provided by



Key to bird species

Schedule 1

Barn owl (BO)

RSPB Red List

Grey Partridge (P)
Skylark (S)
Song Thrush (ST)
Grasshopper Warbler (GH)
Willow Tit (WT)
Marsh Tit (MT)
Starling (SG)
Linnet (LI)
Bullfinch (BF)
Yellowhammer (Y)
Reed Bunting (RB)

RSPB Amber List

Mute Swan (MS)
Kestrel (K)
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Black-headed Gull (BH)
Lesser Black-backed Gull (LB)
Herring Gull (HG)
Stock Dove (SD)
Cuckoo (CK)
Barn Owl (BO)
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Yellow Wagtail (YW)
Dunnock (D)
Redstart (RT)
Mistle Thrush (M)
Willow Warbler (WW)
Goldcrest (GC)
Lesser Redpoll (LR)

Legend

- Schedule 1 Species
- RSPB Red List (Singing)
- RSPB Red List (Sighted)
- RSPB Amber List (Singing)
- RSPB Amber List (Sighted)
- Direction of flight
- Multiple sightings

125m

N

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White
Young
Green

Environmental

Project

Rabbit Ings Colliery
Breeding Bird Survey

Drawing Title:

Survey 6 - 1st July 2008

Scale at A3:	Drawn by: TK	Date: 21/07/08	Checked By: DG	Date: 21/07/08	Approved By: RP	Date: 21/07/08
Project No: A039273	Office: 38	Type: 05	Drawing No.	Revision: 1		

Base map provided by