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## Oxfordshire Local Wildlife Site citation

### GAVRAY DRIVE MEADOWS

Site Code: 52W01

Grid Reference: SP595226

Area (ha): 15.6

Local Authority: Vale of the Whitehorse

Last Survey Date(s): 2002 (other surveys available from 2005)

Designation Date: 2002

#### Site Description

These meadows form a mosaic of small damp fields with ponds, divided by thick hedges with old trees. Most of the fields are probably former hay meadows over medieval ridge and furrow field patterns, and have a sward mostly dominated by tufted hair-grass with some meadow foxtail and meadow barley. However, fields 5 and 6 appear to be old pasture, with ragged robin, dropwort, devil's-bit scabious and common spotted orchid. Fields 7, 11 and 12 contain devil's-bit scabious and betony. Great burnet is frequent in fields 7 and 11, and scattered in fields 12, 14 and 16. Sneezewort and pepper saxifrage were only found in field 11. Common marsh bedstraw, bugle, greater bird's-foot trefoil, common knapweed and short-fruited willowherb are occasional throughout the fields. There is a very good range of rushes and sedges across the site, with nine species of sedge: glaucous, common, carnation, brown, hairy, false fox, spiked, slender tufted and oval. Grasses include yellow oat-grass, sweet vernal grass, tall fescue, meadow fescue and red fescue. In the drier areas, slightly acid conditions are indicated by frequent tormentil, lesser stitchwort and sweet vernal grass, especially in fields 5, 6, 14 and 15.

Most of the ponds in the western half of the site are shaded and/or only damp in summer. They have a species-poor vegetation of compact rush, plicate sweet-grass and tufted water-forget-me-not. CPM surveyed the ponds on the west side of the north-south road and reported great crested newt (a priority Biodiversity Action Plan species) in 3 ponds and a channel. Smooth newts were found in all ponds and the channel, and one palmate newt was recorded in field 9. The large water-filled pond in field 14 (on the eastern side of the road) contains greater reedmace, gypsywort, marsh foxtail, tufted water-forget-me-not, sharp-flowered rush and soft rush. The brook running along the western margin of the County Wildlife Site contains reed canary-grass, redshank, water chickweed and greater water plantain.

The hedges across the entire site are mostly tall and thick, and contain hawthorn with bramble, blackthorn and elder, as well as occasional crack willow, field maple, oak, ash, crab apple, English elm, dogwood, holly, wayfaring tree, guelder rose, buckthorn, hop and honeysuckle. They are probably post-medieval, as they dissect the ridge and furrow pattern that

runs through most of the fields. The hedge that separates fields 5 and 6 from fields 7 and 12 is a double hedge, with black bryony, mature oak, ash and crack willow, including one large collapsed crack willow pollard. The hedge that runs along the eastern edge of fields 11 and 12 is also double. These double hedge lines include Midland hawthorn, wood meadow-grass, great hairy brome and three-nerved sandwort; all four are ancient woodland indicator species (characteristic of woodlands more than 400 years old). The gappy hedge line between fields 11 and 12 contains five large mature oaks. The hedges around fields 8 and 9 contain abundant English elm suckers, as well as hawthorn and bramble. The bullace plum (*Prunus domestica* ssp. *insititia*), a rare and declining species in the county, is found in the hedge between fields 8 and 9.

Numerous birds are using the proposed County Wildlife Site, including reed bunting (which was seen flying across the road between fields 14 and 4), willow warbler, garden warbler, blackcap, whitethroat, lesser whitethroat, chiffchaff, bullfinch, linnet, song thrush, yellowhammer, sedge warbler, hobby and kestrel. Common pipistrelle, noctule, *Myotis* sp. and, possibly, serotine bats were recorded foraging over the site (CPM). Butterflies include large skipper, ringlet, common blue, small heath and marbled white. Twenty-six species of ground beetles were found in fields 5, 6, 11 and 12, including the nationally scarce *Bembidion gilvipes*.

UK PRIORITY BAP HABITATS: lowland meadows

UK PRIORITY BAP SPECIES: Reed bunting (3 or 4 singing males), song thrush (2 or 3 singing males), bullfinch, linnet; great crested newt.

RED DATA BOOK SPECIES:

NATIONALLY SCARCE SPECIES: *Bembidion gilvipes* a ground beetle

BIRDS OF CONSERVATION CONCERN:

Red list: Bullfinch, reed bunting, song thrush, yellowhammer, linnet.

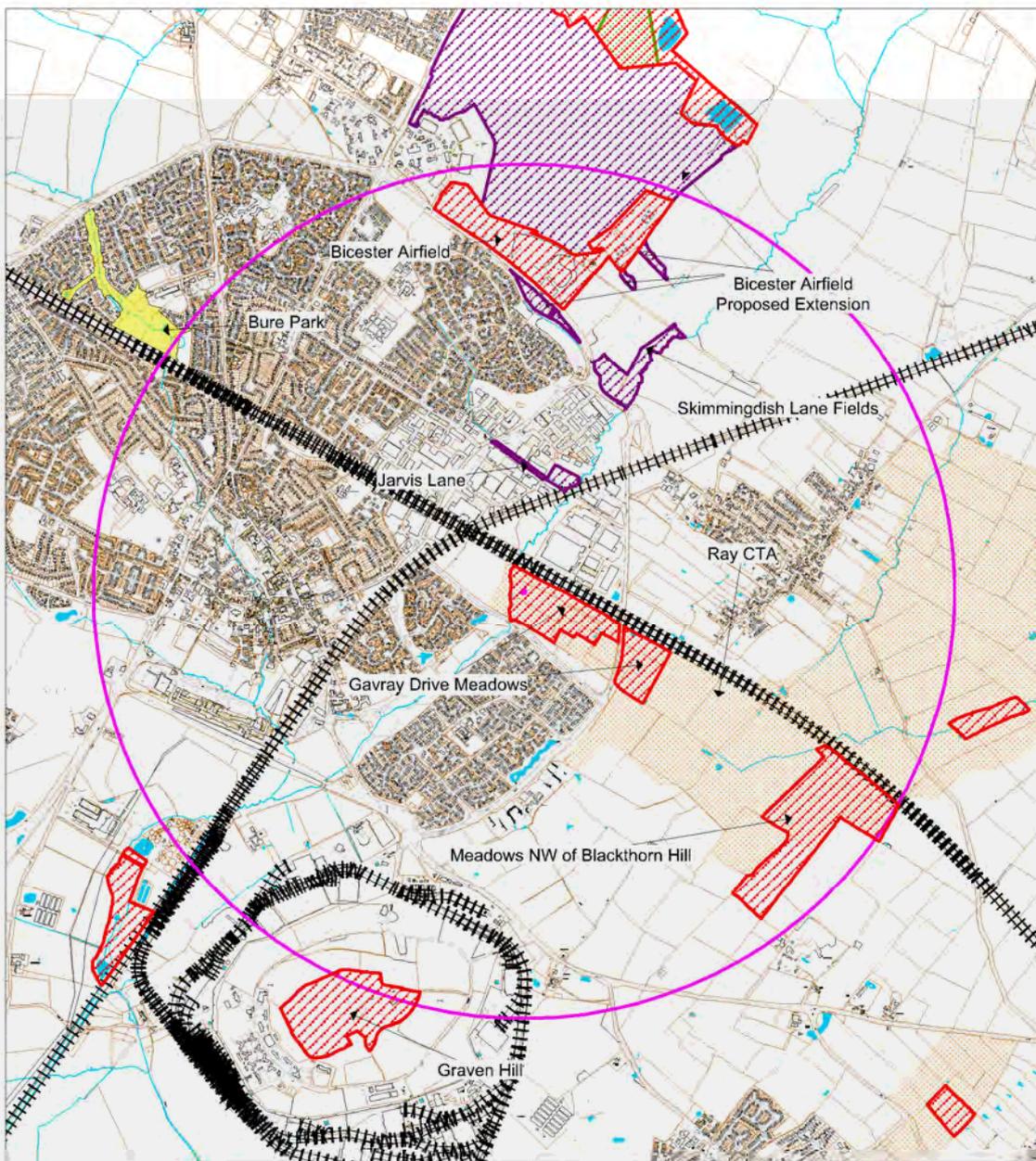
Amber list: Dunnock, willow warbler.

TYPICAL SPECIES of LOWLAND MEADOW: Great burnet, greater bird's-foot trefoil, betony, cuckooflower, devil's-bit scabious, sneezewort, pepper saxifrage, brown sedge, carnation sedge, common sedge and meadow barley.

## **Annex EDP 8 Gavray Drive Designated Sites Map**

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# Gavray Drive. Designated Sites



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Scale 1:25000

## **Annex EDP 9 Tree Bat Roosting Assessment 2013**

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## Gavray Drive, Bicester – Tree Bat Roosting Assessment 2013



Tree no.	Species (age class)	Feature(s) identified from initial inspection from the ground	Bat Roost Potential
T41	Oak (mature)	No features seen from ground, dense ivy covering along main trunk and in canopy	Low
T14	Oak (mature)	No features seen from ground	Low
T15	Oak (mature)	No features seen from ground	Low
T9	Oak (mature)	Woodpecker hole 5-6 cms diameter, north east side of tree, 6m above ground. No further features seen from ground	Medium
T10	Oak (mature)	No features seen from ground inspect with further aerial survey	Low
T43	Ash (mature)	In field corner with vertical split up trunk on east side and woodpecker hole. Split in trunk appears to lead to a cavity and woodpecker hole below. Rot hole on smaller branch to east, may be less risky to climb	High
T35	Crack willow (over mature)	In H6 with a cavity in trunk at approx. 1m high and other features may not be visible from ground	Low
T34	Oak (mature)	In H6 with possible hole in trunk on north side at approx. 6m but obscured by rose. Other features may not be visible. Probably not possible to climb without some clearance of rose first	Low
T33	Oak (mature)	In H6, foliage too dense to fully assess. Would be tricky to climb	Low
T32	Oak (mature)	In H6, dead branch stump in middle of tree at approx. 10m with possible gaps around base. Other features may be present and not visible from ground, climbable	Medium
T31	Oak (mature)	Just north of H6, leaning with dead wood in crown, possible cavity in trunk buttress	Low
T30	Oak (mature)	Just north of H6 with epicormic growth at base and on trunk. Several dead and snag ended branches with potential cavities. Knot hole on underside at south east limb at approx. 15m	Low
T29	Oak (mature)	Just north of H6. Small rot hole on north side at approx. 10m where a branch bends at almost at a right angle. Bird droppings visible. Other features may be present but not visible from the ground. Climbable	Low
G63.1	Willow (mature)	With lots of decay at base and several split and bent over branches. Several cavities and area of decay. Inspect with endoscope	Low
G63.2	Willow (mature)	With lots of decay at base and several crevices including an upward pointing hole into a thin branch	Medium
G63.3	Willow (mature)	With very fissured bark and crevices where trunk and branches have split. One branch which is almost horizontal to the ground at approx. 1m high has horizontal splits	Medium
T17	Ash (mature)	In broadleaved woodland strip with large woodpecker hole on west trunk at approx. 13m and possible hole above at approx. 16m. Other features may be present. Possible climbable	Medium
W58.4	Ash (mature)	Located along southern edge of wooded corridor, approx. 25m along mature oak tree 3m to the east. Feature: Woodpecker hole approx. 7m above ground on north west aspect of the tree, 7-8cms diameter	Medium
T19	Ash (mature)	Woodpecker hole, 8-9cms diameter, 9m above ground on west side. 2 <sup>nd</sup> woodpecker hole 5-6cms diameter, approx. 1m above on north and north east aspect 3 large woodpecker holes	High

		approx. 5, 7 and 10cms diameter respectively at approx. 10m above ground	
W58.3	Ash (semi-mature)	With hole vertically shaped hole where limb has been lost on southern aspect, 8m above ground	Medium – low
W58.2	Ash (semi-mature)	2 large woodpecker holes on east side 3m above ground, 7-8cms diameter	Medium
W58.1	Ash (semi-mature)	Woodpecker hole 6m above ground, north facing, 4-5cms diameter	Medium
T25	Oak (mature)	Visual inspection, significantly hindered by leaf cover. Snag end on east side where limb has been lost with large hole 10-11cms diameter just below snag end, facing east	Medium
T37	Ash (extra-mature)	No significant features seen from ground	Low
T80	Ash (semi-mature)	Hole where limb is lost, approx. 7cms diameter on north east aspect	Low
T7	Oak (mature)	Large woodpecker hole on south west side, 6m above ground, approx. 9cms diameter. Hole where limb lost on south side 4m high	High
T6	Oak (mature)	No features seen	Low
T8	Oak (mature)	No features seen	Low
T11	Oak (mature)	Long vertical crevice on south side ~6m above ground	High

## **Annex EDP 10 Breeding Bird Survey Results 2013**

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## Gavray Drive, Bicester - Breeding Bird Survey Results

Species	Protection/ UK Status*	Regional Status*	On-site Status	Population (determined for species of conservation concern)
Mallard ( <i>Anas platyrhynchos</i> )	Amber List	Very common resident	Possible breeder	Seen flying to the brook on Visit 1.
Red kite ( <i>Milvus milvus</i> )	Amber List Schedule 1	Now established resident- from reintroduction started in 1989	Non-breeder	Seen flying over the site just to the east of brook on Visit 2. Also observed over the site during other ecology surveys.
Barn owl ( <i>Tyto alba</i> )	Amber List Schedule 1	Uncommon breeding resident	Non-breeder	Single sighting of two individuals.
Sparrowhawk ( <i>Accipiter gentiles</i> )	–	Common resident	Possible breeder	Seen flying over the north east corner of the site with prey on Visit 2.
Stock dove ( <i>Columba oenas</i> )	Amber List	Numerous resident	Possible breeder	Recorded singing on Visit 1 along central hedgerow and foraging in the northern field.
Wood pigeon ( <i>Columba palumbus</i> )	–	Very numerous resident	Breeder	Widespread throughout the site.
Collard dove ( <i>Streptopelia decaocto</i> )	–	Very numerous resident	Breeder	Pair seen foraging in Field F13 and birds recorded singing along western boundary. Two to three pairs on site.
Cuckoo ( <i>Cuculus canorus</i> )	Red List UKBAP	Declining summer visitor	Possible-breeder	On Visit 3 a cuckoo seen in Field F8 and a bird heard singing just off site to the east.
Swift ( <i>Apus apus</i> )	Amber List	Common but declining summer visitor and passage migrant	Non-breeder	Recorded foraging within the site area but no suitable breeding sites.
Green woodpecker ( <i>Picus viridis</i> )	Amber List	Fairly common resident	Breeder	Heard on each survey visit, twice along the railway embankment along the northern boundary and a male bird seen along central hedgerow H6 on Visit 3.
Great-spotted woodpecker ( <i>Dendrocopos minor</i> )	–	Numerous resident	Breeder	Nest site identified in the north eastern section of the site, along southern boundary of Field F5.
Magpie ( <i>Pica pica</i> )	–	Common and still increasing	Breeder	Fledged chick seen in Field F3 and birds recorded across the site.

Species	Protection/ UK Status*	Regional Status*	On-site Status	Population
Jay ( <i>Garrulus glandarius</i> )	-	Common in woodlands and extending range	Possible breeder	Single birds seen in the eastern section of the site and in the large field close to the northern railway embankment and along the southern boundary.
Jackdaw ( <i>Corvu monedula</i> )	-	Numerous resident	Non-breeder	Small number of birds seen flying across the site and foraging in Field F13.
Carrion Crow ( <i>Corvus corone</i> )	-	Very numerous resident	Breeder	Nest identified in the trees along the brook. Birds observed across the site.
Gold Crest ( <i>Regulus regulus</i> )	-	Common resident	Possible Breeder	Singing along the southern boundary of the large field on Visit 1.
Blue tit ( <i>Parus caeruleus</i> )	-	Abundant throughout the county	Breeder	Widespread across the site with two nest sites identified; between five and seven pairs.
Great tit ( <i>Parus major</i> )	-	Abundant resident	Breeder	Two to eight pairs. Widespread across the site.
Coal tit ( <i>Periparus ater</i> )	-	Locally common resident	Possible breeder	Heard singing in the trees along the brook on Visit 1.
Swallow ( <i>Hirundo rustica</i> )	Amber List	Numerous summer resident	Non-breeder	Recorded foraging widely within the site area but no suitable breeding sites
Long-tailed tit ( <i>Aegithalos caedatus</i> )	-	Common resident	Breeder	Small group along the eastern side of the brook on Visits 1 with group of birds heard calling in same location on Visit 3. Birds also recorded in Field F1, Field F5. At least 3 pairs across the site.
Chiffchaff ( <i>Phylloscopus collybita</i> )	-	Common breeding species	Breeder	Six to thirteen pairs widespread in mature hedgerows and trees, largely to the east of the brook and along the boundary with the railway embankment.
Willow warbler ( <i>Phylloscopus trochilus</i> )	Amber List	Common summer visitor, recent evidence of decline	Breeder	Two to four pairs. Recorded in Fields F1, F2, F4, and F5.
Blackcap ( <i>Sylvia atricapilla</i> )	-	Commonest breeding <i>Sylvia</i> warbler	Breeder	Six to ten pairs across the site. Some concentration of pairs in more wooded areas; along the boundary with the railway, in the wooded strip to the south of Field F5 and along the strips of woodland along the southern boundary of the site.
Lesser Whitethroat ( <i>Sylvia curruca</i> )	-	Common summer visitor, showing some evidence of recent decline	Breeder	1 pair located in the central area of the site, along the north and eastern boundaries of Field F12.

Species	Protection/ UK Status	Regional Status*	On-site Status	Population
Common Whitethroat ( <i>Sylvia communis</i> )	Amber List	Common summer visitor	Breeder	Ten to eighteen pairs widespread in hedgerows and scrub across the site. One pair recorded along the western boundary of Field F14 but all other pairs located to the east of the brook.
Wren ( <i>Troglodytes troglodytes</i> )	–	Common resident	Breeder	Ten to sixteen pairs widespread across the site.
Starling ( <i>Sturnus vulgaris</i> )	Red List UKBAP	Very common resident	Breeder	Nest site identified in central section of the site in oak tree, part of hedgerow H6. Group of 10 birds seen aerial foraging over Field F13 on Visit 3.
Blackbird ( <i>Turdus merula</i> )	–	Abundant and ubiquitous resident	Breeder	Three to ten pairs widespread across the site.
Song thrush ( <i>Turdus philomelos</i> )	Red List UK BAP	Common resident, perhaps declining in suburban areas	Breeder	Five to eight pairs, located along the wooded strips and mature hedgerows to the east of the brook.
Robin ( <i>Erithacus rubecula</i> )	–	Very common resident	Breeder	Six to fourteen pairs widespread across the site.
Dunnock ( <i>Prunella modularis</i> )	Amber List UK BAP	Common and widespread resident	Breeder	Seven to fourteen pairs widespread across the hedgerow network and scrub on site, with all pairs except for one recorded to the east of the brook.
House sparrow ( <i>Passer domesticus</i> )	Red List UK BAP	Abundant resident, showing signs of recent decline	Possible breeder	Colony of approximately seven birds seen foraging amongst bramble scrub in one of the fields and three birds foraging in the south of the site on Visit 1. Several birds seen foraging in the large field on Visit 3.
Chaffinch ( <i>Fringilla coelebs</i> )	–	Abundant resident	Breeder	Two to three pairs
Greenfinch ( <i>Chloris chloris</i> )	–	Common resident	Breeder	One to six pairs, largely along the southern boundary and along the boundary with the railway embankment.
Goldfinch ( <i>Carduelis carduelis</i> )	–	Common resident	Possible breeder	Goldfinch singing along southern boundary by the brook and several birds observed flying across the site.
Bullfinch ( <i>Pyrrhula pyrrhula</i> )	Amber List UK BAP	Common resident	Breeder	Heard calling on Visits 2 and 3, along central Hedgerow H6, in the south east area of the site.

\* Regional status of species in 2008 as detailed in 'Birds of Oxfordshire 2008' Oxford Ornithological Society 2012

## **Annex EDP 11**

### **Wintering Bird Survey Results 2013**

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## Gavray Drive, Bicester - Wintering Bird Survey Results



Species	Protection/ UK Status*	Regional Status*	Population and Distribution
Pheasant ( <i>Phasianus colchicus</i> )	-	Common	Four birds recorded within F9 on the first visit and one in the same field on the fourth and sixth visits.
Moorhen ( <i>Gallinula chloropus</i> )	-	Widespread and common	Single bird recorded on the second and third visit within Field F13 adjacent to the stream and Pond P10.
Common buzzard ( <i>Buteo buteo</i> )	-	Fairly common	One or possibly two birds recorded hunting and perching along the sites northern boundary adjacent to the railway.
Red kite ( <i>Milvus milvus</i> )	Amber List Schedule 1	Now established resident- from reintroduction started in 1989	A single bird recorded foraging over the central section of the site and along the sites northern boundary on the third and sixth visit.
Sparrowhawk ( <i>Accipiter gentiles</i> )	-	Common resident	A single bird recorded hunting along the scrub habitat bounding the north of the site (Field F5) before flying north.
Woodcock ( <i>Scolopax rusticola</i> )	Amber List	Winter visitor	A single bird flushed from the same location at the eastern end of Fields F12 on visit 3, 4 and 5.
Snipe ( <i>Gallinago gallinago</i> )	Amber List	Common resident and winter visitor in suitable habitat	Two birds flushed from Field F3 on the fifth visit.
Black-headed Gull ( <i>Larus ridibundus</i> )	Amber List	Common visitor	A flock of up to 19 birds recorded around standing water within the arable field (Field F13) at the western end of the site.
Common Gull ( <i>Larus canus</i> )	Amber List	Frequent winter visitor	A single bird recorded within the arable field on the fourth visit.
Grey Heron ( <i>Ardea cinerea</i> )	-	Locally common resident	A single bird recorded flying south west over the arable field (Field F13) on the first visit.
Wood pigeon ( <i>Columba palumbus</i> )	-	Very numerous resident	Numerous flocks of up to 40 birds and individuals widely distributed throughout the site.
Collard dove ( <i>Streptopelia decaocto</i> )	-	Very numerous resident	Recorded on the first, fourth and fifth visit along the sites southern boundary.
Stock dove ( <i>Columba oenas</i> )	Amber List	Numerous resident	Two and four birds recorded on the second and third visit respectively.
Pied wagtail ( <i>Motacilla alba</i> )	-	Common breeding resident, with autumn influx of wintering birds	Eight birds recorded foraging around standing water within the arable field (Field F13) on the first visit, three recorded in the same location on the third visit and five on the fifth visit.

Species	Protection/ UK Status*	Regional Status*	Population and Distribution
Green woodpecker ( <i>Picus viridis</i> )	Amber List	Fairly common resident	A single bird recorded flying into Hedgerow H6 on the first visit and calling from the northern boundary scrub on the sixth visit.
Great-spotted woodpecker ( <i>Dendrocopos minor</i> )	–	Numerous resident	A single bird recorded on all but one visit within mature hedgerow habitat across the site.
Treecreeper ( <i>Certhia familiaris</i> )		Fairly common resident	A single bird was recorded in Hedgerow H10 within the eastern extent of the site on the second visit.
Magpie ( <i>Pica pica</i> )	–	Common and still increasing	Recorded widely throughout the site including a peak count of up to 23 birds on the first visit (some of these may have been repeat recordings).
Jay ( <i>Garrulus glandarius</i> )	-	Common in woodlands and extending range	Between 4 and 6 birds frequently recorded throughout the hedgerow scrub and trees habitat on site.
Jackdaw ( <i>Corvu monedula</i> )	–	Numerous resident	One bird and two birds recorded within trees along the northern site edge on the third, fourth and sixth visits respectively.
Carrion Crow ( <i>Corvus corone</i> )	–	Very numerous resident	Frequently recorded throughout the site boundary vegetation and foraging within the fields.
Gold Crest ( <i>Regulus regulus</i> )	–	Common resident	A single bird recorded in the north east corner on the fourth and sixth visit.
Blue tit ( <i>Parus caeruleus</i> )	–	Abundant throughout the county	Large numbers recorded throughout the boundary vegetation across the site with counts of 15- 25 birds per survey across the visits.
Great tit ( <i>Parus major</i> )	–	Abundant resident	Frequently recorded throughout the boundary vegetation across the site with counts of 7-12 birds per survey across the visits.
Coal tit ( <i>Periparusater</i> )	–	Locally common resident	A single bird recorded within mature trees lying between Fields F1 and F2 in the north eastern corner of the site.
Long-tailed tit ( <i>Aegithalos caudatus</i> )	–	Common resident	Two parties regularly recorded on site in association with the hedgerow and scrub habitat.
Wren ( <i>Troglodytes troglodytes</i> )	–	Common resident	Widely distributed throughout the site in association with the boundary vegetation with counts of 4-9 birds per survey across the visits.
Starling ( <i>Sturnus vulgaris</i> )	Red List UKBAP	Very common resident	9 birds recorded foraging within field F8 on the third visit, a flock of 20 recorded flying over Field F13 on the first visit and a single bird recorded flying south over the site on the fourth visit. Birds also recorded flying over site on the sixth visit.
Blackbird ( <i>Turdus merula</i> )	–	Abundant and ubiquitous resident	Widely distributed throughout the site with counts of 14-24 birds per survey across the visits.
Fieldfare ( <i>Turdus pilaris</i> )	Schedule 1 / Red List	Very common winter visitor and passage migrant	Recorded in low numbers on the first three visits in association with the hedgerows and scrub with a peak count of 7 birds.

Species	Protection/ UK Status*	Regional Status*	Population and Distribution
Song thrush ( <i>Turdus philomelos</i> )	Red List	Common resident, perhaps declining in suburban areas	Frequently recorded across the boundary vegetation on site with a peak count of 7 birds on any one survey.
Mistle thrush ( <i>Turdus viscivorus</i> )	Amber List	Common resident	A single bird recorded on the second, fourth and fifth visit within the mature vegetation bounding the stream corridor.
Redwing ( <i>Turdus iliacus</i> )	Schedule 1 / Red List	Common winter visitor and passage migrant	Small to large flocks frequently recorded throughout the site principally in association with the scrub/hedgerow habitat during the first two visits and the arable habitat on the third and fourth visit. Largest flock recorded approximately 50 birds within the arable field (field F13) on the fourth visit and total counts of 21-70 birds per survey across the first four visits.
Robin ( <i>Erithacus rubecula</i> )	–	Very common resident	Widely distributed throughout the boundary vegetation with counts of 8-17 birds per survey across the visits.
Dunnock ( <i>Prunella modularis</i> )	Amber List UK BAP	Common and widespread resident	Widely distributed throughout the boundary vegetation with counts of 5-15 birds per survey across the visits.
House sparrow ( <i>Passer domesticus</i> )	Red List UK BAP	Abundant resident, showing signs of recent decline	Up to four birds recorded on the third, fourth and sixth visit along the sites south eastern boundary.
Reed Bunting ( <i>Emberiza schoeniclus</i> )	Red List UK BAP	Common resident and passage migrant	Three birds (two female and one male) recorded within the scrub habitat adjacent to the stream on the third visit and a pair also recorded on the sixth visit.
Chaffinch ( <i>Fringilla coelebs</i> )	–	Abundant resident	Widely distributed in low numbers throughout the site in association with the mature tree vegetation. Counts per survey ranged from three to seven birds.
Greenfinch ( <i>Chloris chloris</i> )	–	Common resident	Two to three birds recorded on all but one visit within vegetation along the sites southern boundary.
Goldfinch ( <i>Carduelis carduelis</i> )	–	Common resident	Widely recorded in low numbers throughout the central and eastern extent of the site associated with the mature trees and hedgerows. Counts per survey ranged from 1-7 birds.
Bullfinch ( <i>Pyrrhula pyrrhula</i> )	Amber List UK BAP	Common resident	Frequently recorded in association with the scrub and hedgerow habitat within the central and western extents of the site with counts per survey ranging from three to thirteen birds.
Linnet ( <i>Carduelis cannabina</i> )	Red List UK BAP	Common resident, passage migrant and winter visitor	One bird recorded within Hedgerow H5 on the first visit and three birds recorded flying over field F9 on the fourth visit. Two birds recorded within the western boundary hedge of Field F3 on the sixth visit.

**\*Notes:**

*UK Protection*

Those species afforded additional protection under Schedule 1 of the Wildlife and Countryside Act 1981.

*UK Conservation Status and Criteria*

All data gained from: Eaton MA, Brown AF, Noble DG, Musgrove AJ, Hearn R, Aebischer NJ, Gibbons DW, Evans A and Gregory RD (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.

Red list criteria: Globally threatened; Historical population decline in UK during 1800–1995; Severe (at least 50%) decline in UK breeding population over last 25 years, or longer-term period; or Severe (at least 50%) contraction of UK breeding range over last 25 years, or the longer-term period.

Amber list criteria: Species with unfavourable conservation status in Europe (SPEC = Species of European Conservation Concern); Historical population decline during 1800–1995, but recovering; population size has more than doubled over last 25 years; Moderate (25-49%) decline in UK breeding population over last 25 years, or the longer-term period; Moderate (25-49%) contraction of UK breeding range over last 25 years, or the longer-term period; Moderate (25-49%) decline in UK non-breeding population over last 25 years, or the longer-term period; Rare breeder; 1–300 breeding pairs in UK; Rare non-breeders; less than 900 individuals; Localised; at least 50% of UK breeding or non-breeding population in 10 or fewer sites, but not applied to rare breeders or non-breeders; Internationally important; at least 20% of European breeding or non-breeding population in UK (NW European and East Atlantic Flyway populations used for non-breeding wildfowl and waders respectively).

*Regional Status*

All information gained from: Oxford Ornithological society (2012). *Birds of Oxfordshire 2008*.

## **Annex EDP 12**

### **Great Crested Newt Survey Results 2013**

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### Gavray Drive, Bicester – Great Crested Newt Survey Results

Date	Visit No.	Pond No.	No. Traps	Trap Results	Torch Results	Netting Results	Eggs Found?	Other Pertinent Info.
09/05/13	1	1	10	SN: 3 ♂ & 3 ♀ GCN: 1 ♀	SN: 3 ♂ & 1 ♀ 1 ♀ species unidentified	-	10+	-
		2	5	-	-	-	N	-
		4	4	SN: 1 ♂ & 1 ♀	SN: 1 ♀	-	N	-
		5	15	-	-	-	N	Great Diving Beetle, Leeches, Freshwater Shrimp
		6	6	SN: 3 ♂ & 3 ♀	1 Unidentified newt SN: 1 ♀	-	N	-
		7	19	GCN: 1 ♂ & 7 ♀	GCN: 11 ♂ & 17 ♀	-	50+	Great Diving Beetle
		8	5	-	-	-	N	-
		9	25	SN: 1 ♂ GCN: 1 ♂	SN: 1 ♀ GCN: 2 ♂	-	N	Great Diving Beetle, Mallards
		10	14	-	SN: 2 ♀	-	N	Mallards, Moorhen, Carp
		11	12	GCN: 1 ♂ & 1 ♀ SN: 1 ♂	GCN: 2 sex unidentified, 9 ♂ & 3 ♀ 1 unidentified female	-	3	-
		13/05/13	2	1	12	GCN: 2 ♂ & 2 ♀	-	-
2	7			-	-	-	1-10	-
4	4			SN: 3 ♀	-	-	N	Great Diving Beetle
5	11			-	-	-	N	-
6	3			GCN: 4 ♂ & 1 ♀ SN: 4 ♂	GCN: 2 ♂ & 1 ♀ SN: 3 sex unidentified	-	20+	-
7	18			GCN: 2 ♂ & 14 ♀	GCN: 6 ♂ & 11 ♀	-	N	-
8	9			-	-	-	N	-
9	14			GCN: 1 ♂	GCN: 1 ♂ & 1 ♀	-	N	Mallard
10	24			-	SN: 1 ♂ & 3 ♀	-	N	-
11	13			GCN: 2 Juv., 1 ♂ & 4 ♀ SN: 1 ♂	GCN: 3 Juv., 5 ♂ & 9 ♀ SN: 3 ♂	-	10-20	-

Date	Visit No.	Pond No.	No. Traps	Trap Results	Torch Results	Netting Results	Eggs Found?	Other Pertinent Info.
16/05/13	3	1	11	GCN: 1 ♂ & 2 ♀ SN: 1 ♀	GCN: 2 Juv.	-	Y	3 Great Diving Beetles
		2	7	-	-	-	N	-
		4	4	-	-	-	N	-
		5	13	-	-	-	N	-
		6	3	-	GCN: 3 ♀ SN: 2 ♀, 1 ♂	-	N	-
		7	19	GCN: 6 ♀	GCN: Juv. 1, 24 ♂ & 25 ♀	-	50+	Moorhen
		8	7	-	-	-	N	-
		9	26	SN: 1 ♀	GCN: 1 ♀	-	N	Mallards, Moorhen, Great Diving Beetle
		10	21	-	-	-	N	-
		11	13	GCN: Juv.1, 2 ♂ & 4 ♀	GCN:3 ♂ & 7 ♀ SN: 3 ♀, 1 ♂ 1 unidentified newt	-	30+	-
20/05/13	4	1	11	GCN:1 ♂ & 1 ♀	GCN: 1 ♂ & 1 ♀ SN: 1 ♀	-	Y	Mallard
		2	7	GCN: 1 ♀	-	-	N	
		4	4	-	SN: 1 ♀	-	N	Great Diving Beetle
		5	18	SN: 2 ♀, 2 ♂	-	-	N	
		6	3	-	-	-	N	
		7	20	GCN: 2 ♂ & 12 ♀	GCN: Juv.1, 34 ♂ & 30 ♀	-	50+	
		8	8	-	-	-	N	
		9	23	GCN:1 ♂ & 1 ♀	-	-	N	Mallard
		10	16	-	-	-	N	Mallards, Moorhen
		11	13	GCN: 2 ♂ & 3 ♀	GCN: Juv.12, 5 ♂ & 5 ♀ SN: 1 ♀	-	10+	Mallard, Mayfly

Date	Visit No.	Pond No.	No. Traps	Trap Results	Torch Results	Netting Results	Eggs Found?	Other Pertinent Info.
04/06/13	5	1	11	-	-	-	N	-
		2	9	GCN: Juv.1	-	-	N	-
		4	4	-	-	-	N	-
		5	16	SN: 1 ♂	-	-	N	-
		6	3	-	-	-	N	-
		7	18	GCN: 7 ♂ & 7 ♀ SN: 1 ♂	GCN: 4 ♂ & 18 ♀	-	Y	-
		8	8	-	-	-	N	-
		9	25	-	-	-	N	-
		10	10	-	-	-	N	-
		11	14	GCN: Juv.1 & 5 ♀	GCN: 1 ♀	-	Y	-
		06/06/13	6	1	11	SN: 2 ♀, 1 ♂, 1 eft GCN: 1 ♀	-	-
2	8			GCN: 2 ♀	-	-	Y	-
4	4			GCN: 1 ♂	-	-	N	-
5	14			GCN: 1 ♂	-	-	N	-
6	3			-	SN: 1 ♀ GCN: Juv.1 1 unidentified newt	-	N	-
7	18			GCN: 2 ♂ & 4 ♀	GCN: Juv.1, 15 ♂ & 12 ♀	-	Y	-
8	8			-	-	-	N	-
9	25			GCN: 1 ♀	GCN: 3 ♂ & 2 ♀	-	N	-
10	19			-	-	-	N	Signal Crayfish
11	14			GCN: Juv.1, 1 ♂ & 2 ♀ 1 unidentified newt	GCN: Juv.4, 4 ♂ & 6 ♀ SN: 1 ♀	-	Y	Dragonfly Nymphs

**N.B.** SN refers to smooth newt (*Lissotriton vulgaris*); GCN refers to great crested newt (*Triturus cristatus*). ♂ symbol used to denote male; ♀ symbol used to denote female.

## **Annex EDP 13 Reptile Survey Results 2013**

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# Gavray Drive, Bicester - Reptile Survey Results



## Common lizard *Zootoca vivipara*

Field	Visit No. & Survey Date 2013																				Peak Survey Count per Field	Relative Importance of Field
	1 05-Jun	2 07-Jun	3 20-Jun	4 27-Jun	5 02-Jul	6 12-Jul	7 19-Jul	8 24-Jul	9 02-Aug	10 08-Aug	11 19-Aug	12 22-Aug	13 29-Aug	14 05-Sep	15 10-Sep	16 16-Sep	17 20-Sep	18 25-Sep	19 27-Sep	20 01-Oct		
F1	9	15	7	0	7	1	0	0	4	5	11	8	5	0	7	3	7	22	5	8	22	High
F2	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	Low
F3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	6	0	1	0	0	6	Medium
F5	2	0	1	9	1	4	0	0	1	3	6	0	2	0	0	3	0	2	4	1	9	Medium
F6	1	4	3	13	1	0	0	1	0	3	10	4	2	1	2	3	3	1	2	5	13	Medium
F7	25	4	5	0	3	4	2	0	5	4	26	21	8	1	29	32	19	18	8	13	32	High
F8	0	0	0	0	1	1	0	0	0	0	1	0	0	2	1	8	3	7	6	3	8	Medium
F9	0	0	0	0	1	1	0	0	0	1	3	0	2	1	8	7	4	3	4	4	8	Medium
F10	1	1	1	1	3	1	0	0	2	0	4	1	3	0	6	3	2	2	1	2	6	Medium
F11	17	3	13	11	21	9	0	12	19	12	36	22	7	6	5	31	13	18	20	23	36	High
F12	1	1	13	12	12	13	3	3	8	11	32	29	10	3	13	29	25	17	28	44	44	High
F15	1	0	0	2	2	1	0	1	0	0	15	3	1	1	0	0	1	0	4	0	15	Medium
<b>Survey Count:</b>	48	28	43	48	53	35	5	17	39	39	146	88	40	15	75	125	77	91	82	103		

Not surveyed  
 Peak survey count (across site) 146  
 Peak survey count (across fields) 44

## Grass snake *Natrix natrix*

Field	Visit No. & Survey Date 2013																				Peak Survey Count per Field	Relative Importance of Field
	1 05-Jun	2 07-Jun	3 20-Jun	4 27-Jun	5 02-Jul	6 12-Jul	7 19-Jul	8 24-Jul	9 02-Aug	10 08-Aug	11 19-Aug	12 22-Aug	13 29-Aug	14 05-Sep	15 10-Sep	16 16-Sep	17 20-Sep	18 25-Sep	19 27-Sep	20 01-Oct		
F1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	Low
F2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Low
F3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Low
F5	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	Low
F6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Low
F7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Low
F8	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	Low
F9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Low
F10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Low
F11	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	Low
F12	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	Low
F15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Low
<b>Survey Count:</b>	1	0	2	3	1	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0		

Not surveyed  
 Peak survey count (across site) 3  
 Peak survey count (across fields) 2

**Annex EDP 14**  
**Brown and Black Hairstreak Records**  
**Received From Butterfly Conservation**

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# Gavray Drive, Bicester

## Brown and Black Hairstreak Records Received from Butterfly Conservation

### 1. Brown Hairstreak Records.

#### 1.1 Adult Brown Hairstreak sightings.

Date	Number of recorders	Purpose of visit	Brown Hairstreak seen	Number of other butterfly species recorded
26/08/05	6	Marsh Fritillary larval web	No	10
29/08/05	1	Marsh Fritillary larval web	No	4
01/09/06	4	Brown Hairstreak	No	6
04/09/06	1	Brown Hairstreak	No	1
06/09/07	1	Brown Hairstreak	Yes – 1 female	2
08/08/08	1	Brown Hairstreak	Yes – 1 male	8
18/09/09	1	Brown Hairstreak	No	2
02/08/10	1	Brown Hairstreak	Yes – 1 male	?

Details of 3 adult sightings.

06/09/07 – 1 female nectaring on brambles flowers growing in NW face of hedge EH (Field 12)

08/08/08 – 1 male flying in ash on north side of Field 7.

02/08/10 – 1 male nectaring on thistle in Field 13.

#### 1.2 Brown Hairstreak egg surveys.

Table 1.1 – Summary of surveys

Date	Eggs found	Search hours	Locations searched	Find Rate (eggs/hour)
Winter 2002/03	0	2	Various parts of SW facing hedges – exact locations not recorded.	0.0
Winter 2003/04	Not searched.			
Winter 2004/05	Not searched.			
Winter 2005/06	16	20	All SW & SE facing hedges east of the Langford Brook. All blackthorn west of the Langford Brook.	0.8
Winter 2006/07	74	17	SW face of hedges MN, NP & RS. NW face of hedges BE, EH & HN. Field 5 accessible hedgerows and scrub.	4.4
Winter 2007/08	33	7	SW face of hedges MN & NP	4.7
Winter 2008/09	No survey*.			
Winter 2009/10	No survey*.			
Winter 2010/11	478	40	All accessible hedges east of the Langford Brook. All blackthorn west of the Langford Brook.	12.0

\*During these winters rapid checks were carried out to confirm the continuing use of the site by the Brown Hairstreak for egg laying purposes. The searches were not done on a timed count basis and were terminated when a few eggs had been found.

Table 1.2 – Detailed egg counts by hedgerow (see annotated map for location of hedgerows and fields. Field numbers used are those designated when most of the site was designated as a County Wildlife site in 2002).

Table 1.2a – East of Langford Brook - Fields 1-7

Field	Boundary	Aspect	Eggs found				Estimated blackthorn
			2005/06	2006/07	2007/08	2010/11	
1	RS	SW	3	2	Not searched	16 <sup>s</sup>	80%
	SV	W	Inaccessible				?
	UV	NE	Inaccessible				?
	RU	SE	Not searched	Not searched	Not searched	6 <sup>ss</sup>	20%
	Scrub		Not searched	Not searched	Not searched	10 <sup>ss</sup>	

2	PQ	SW	Inaccessible				?
	QS	W	Inaccessible				?
	RS	NE	1	Not searched	Not searched	6 <sup>ss</sup>	20%
	PR	SE	Inaccessible				?
	Scrub		No scrub				
3	KL	SW	1			11 <sup>ss</sup>	20%
	LQ	W	No blackthorn				0%
	PQ	NE	Not searched	Not searched	Not searched	0 <sup>ss</sup>	20%
	KP	SE	0	Not searched	Not searched	5	20%
	Scrub		No scrub				
4		SW	Inaccessible				?
		W	No hedge				
		NE	Inaccessible				?
		SE	Inaccessible				?
	Scrub		0	Not searched	Not searched	0 <sup>ss</sup>	
5	BC	SW	No hedge				
	CF	NW	Inaccessible				?
	EF	NE	2	1	Not searched	2 <sup>ss</sup>	20%
	BE	SE	No blackthorn				0%
	Scrub		4	4	Not searched	24 <sup>ss</sup>	
6	AB	SW	0	Not searched	Not searched	2	10%
	BE	NW	Not searched	Not searched	Not searched	2	50%
	DE	NE	Not searched	Not searched	Not searched	7	30%
	AD	E	No hedge				
	Scrub		Not searched	Not searched	Not searched	14 <sup>s</sup>	
7	EF	SW	2	Not searched	Not searched	43 <sup>s</sup>	80%
	FK	NW	Inaccessible				?
	IJK	NE	Inaccessible				?
	EI	SE	0	Not searched	Not searched	0 <sup>s</sup>	20%
	Scrub		Not searched	Not searched	Not searched	1 <sup>ss</sup>	

Table 1.2b – East of Langford Brook - Fields 8-13

Field	Boundary	Aspect	Eggs found				Estimated blackthorn
			2005/06	2006/07	2007/08	2010/11	
8	JK	SW	0	Not searched	Not searched	9 <sup>s</sup>	30%
	KP	NW	Not searched	Not searched	Not searched	1 <sup>ss</sup>	30%
	PO	NE	Not searched	Not searched	Not searched	1 <sup>s</sup>	10%
	JO	SE	0	Not searched	Not searched	27 <sup>ss</sup>	30%
	Scrub		No scrub				
9	IJ	SW	0	Not searched	Not searched	6 <sup>s</sup>	30%
	JO	NW	Not searched	Not searched	Not searched	14 <sup>ss</sup>	30%
	NO	NE	Not searched	Not searched	Not searched	0 <sup>s</sup>	10%
	IN	SE	0	Not searched	Not searched	37 <sup>s</sup>	30%
	Scrub		No scrub				
10	NP	SW	0	3	5	91 <sup>s</sup>	90%
	PU	NW	Not searched	Not searched	Not searched	0 <sup>ss</sup>	20%
	TU	NE	No blackthorn				
		SE	No hedge				
	Scrub		No scrub				
11	GH	SW	3	Not searched	Not searched	37	30%
	HN	NW	Not searched	Not searched	Not searched	8	50%
	MN	NE	Not searched	Not searched	Not searched	9	50%
	GM	E	No hedge				
	Scrub		0	Not searched	Not searched	9	
12	DE	SW	4	Not searched	Not searched	29 <sup>s</sup>	40%
	EH	NW	Not searched	Not searched	Not searched	14 <sup>s</sup>	50%
	GH	NE	3	Not searched	Not searched	15	30%
	DG	E	0	Not searched	Not searched	1	10%

	Scrub		No scrub				
13	MN	SW	0	30	28	21	90%
		NW	No hedge				
	MT	NE	Inaccessible and probably no blackthorn				0%?
		E	No hedge				
	Scrub		No scrub				

Table 1.2c – West of Langford Brook

Field	Boundary	Aspect	Eggs found				Estimated blackthorn	
			2005/06	2006/07	2007/08	2010/11	2002/03	2010/11
Perimeter								
	WX	SW	0	Not searched		0 <sup>†</sup>	50%	No
	XA	SW	0	Not searched		0 <sup>†</sup>	10%	No
	ADGM	NW	No hedge					
	MY	NE	0	Not searched		0 <sup>†</sup>	50%	No
	YX	NE	0	Not searched		0 <sup>†</sup>	0%	0%
	WX	SE	0	Not searched		0 <sup>†</sup>	0%	0%
Cross hedge								
	XY	W	0	Not searched		0 <sup>†</sup>	10%	10%
	XY	E	0	Not searched		0 <sup>†</sup>	10%	10%

Note: \* = hedge cut down to ground during 2010 by Network Rail during fence construction.

## 2. Black Hairstreak Records.

Date	Number of recorders	Purpose of visit	Black Hairstreak seen	Number of other butterfly species recorded
18/06/05	1	Butterflies & day flying moths	No	4
08/06/06	1	Marsh Fritillary	No	7
10/06/06	1	Marsh Fritillary	No	3
20/06/06	3	White-letter Hairstreak	Yes - 2	8
25/06/06	1	Black Hairstreak	No	8
27/06/06	2	Black Hairstreak	Yes - 3	11
15/06/07	6	Black Hairstreak	Yes - 3	8
15/06/08	5	Black Hairstreak	Yes - 2	1
24/06/08	1	Black Hairstreak	No	6
18/06/09	1	Black Hairstreak	No	8
22/06/10	6	Black Hairstreak	Yes - 1	?
03/06/11	1	Black Hairstreak	No	2
10/06/11	1	Black Hairstreak	No	?

Details of Black Hairstreak sightings.

20/06/06 – Both seen nectaring on bramble flowers growing in NW face of hedge EH at east end of Field 12.

27/06/06 – Two seen nectaring on bramble flowers growing in NW face of hedge EH at east end of Field 12. Third flying over blackthorn scrub in Field 1.

15/06/07 – Two flying over blackthorn at very eastern end of hedge GH separating Fields 11 & 12. One nectaring on bramble flowers growing in hedge HN at east end of Field 12.

15/06/08 – One seen nectaring on bramble flowers growing in SW face of hedge EH. One flying in oak tree growing on north side of hedge NP – about third of the way along the hedge.

22/06/10 – One settled on blackthorn comprising SW face of hedge NP – just to west of oak tree where one of sightings made on 15/06/08 (see above).



Key

- Easement
- Land under control of the applicant

REVISION LIST

Revision	Date	By

Scale: 1:500

North Arrow

LAND NORTH OF GAWRAY DRIVE BICESTER

Application Site Plan

APP	NO	DATE	2004/01
-----	----	------	---------

**TRISTAR ENGINEERING**

10001 LINDSEY ROAD  
 BICESTER, HANTS RG22 7JH

01256 344444



## Plans

<b>Plan EDP 1</b>	Extended Phase 1 Survey (EDP124/56d 16 March 2015 JTF/JB)
<b>Plan EDP 2</b>	Bat Transect Routes 2013 (EDP124/78b 27 October 2014 DS/JB)
<b>Plan EDP 3</b>	Great Crested Newt Survey Area and Pond Locations (EDP124/88b 16 March 2015 JW/TW)
<b>Plan EDP 4</b>	Reptile Survey Area and Refugia Locations 2013 (EDP124/93b 16 March 2015 JTF/TW)
<b>Plan EDP 5</b>	Grassland NVC Communities (EDP124/94a 16 March 2014 TB/JB)
<b>Plan EDP 6</b>	Tree Bat Roosting Assessment 2013 (EDP124/89b 16 March 2015 JW/TW)
<b>Plan EDP 7</b>	Bat Transect Survey Results: June 2013 (EDP124/90b 16 March 2015 JW/TW)
<b>Plan EDP 8</b>	Bat Dusk/Dawn Transect Survey Results: July 2013 (EDP124/91b 16 March 2015 JW/TW)
<b>Plan EDP 9</b>	Bat Transect Survey Results: August 2013 (EDP124/92b 16 March 2015 JW/TW)
<b>Plan EDP 10</b>	Reptile Survey Results 2013 (EDP124/95b 16 March 2015 JTF/JB)
<b>Plan EDP 11</b>	Black Hairstreak, Brown Hairstreak and Small Heath Surveys 2011 & 2013 (EDP124/98b 16 March 2015 GC/TW)
<b>Plan EDP 12</b>	Butterfly Conservation Brown and Black Hairstreak Records (EDP124/59c 16 March 2015 JTF/TW)
<b>Plan EDP 13</b>	White-Letter Hairstreak Survey 2011 (EDP124/96a 16 March 2015 JTF/TW)

**Plan EDP 14**

White-Letter Hairstreak Survey 2013  
(EDP124/97a 16 March 2015 JTF/TW)



- Study Area
- Broadleaved Tree
- Broadleaved woodland
- Continuous scrub
- x Scattered scrub
- SI Semi-improved grassland
- SI Poor Semi-improved grassland
- Tall ruderal
- Marshy Grassland
- H8 Hedgerow ID
- F1 Field ID
- Species poor hedgerow
- x Species rich hedgerow with trees
- P1 Ponds
- Swamp
- Dry ditch
- Wet ditch
- Fence

**Note:**  
Habitat mapping should be treated as indicative only. For detailed mapping of grassland NVC communities refer to EDP 124/94a

**edp**

THE ENVIRONMENTAL DIMENSION PARTNERSHIP  
Tithe Barn, Barnsley Park Estate, Barnsley, Cirencester,  
Gloucestershire, GL7 5EG t 01285 740427 f 01285 740848  
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client  
**Gallagher Estates Ltd**

project title  
**Land North of Gavray Drive,  
Bicester, Oxfordshire**

drawing title  
**Plan EDP 1: Extended Phase 1 Survey**

date	16 MARCH 2015	drawn by	JTF
drawing number	edp124/56d	checked	JB
scale	Refer to Scale Bar		



- Study Area
- Transect Route 1 (2.07km)
- Transect Route 2 (1.98km)
- Transect Route 3 (1.99km)
- Transect Route 4 (1.92km)
- Listening Stop



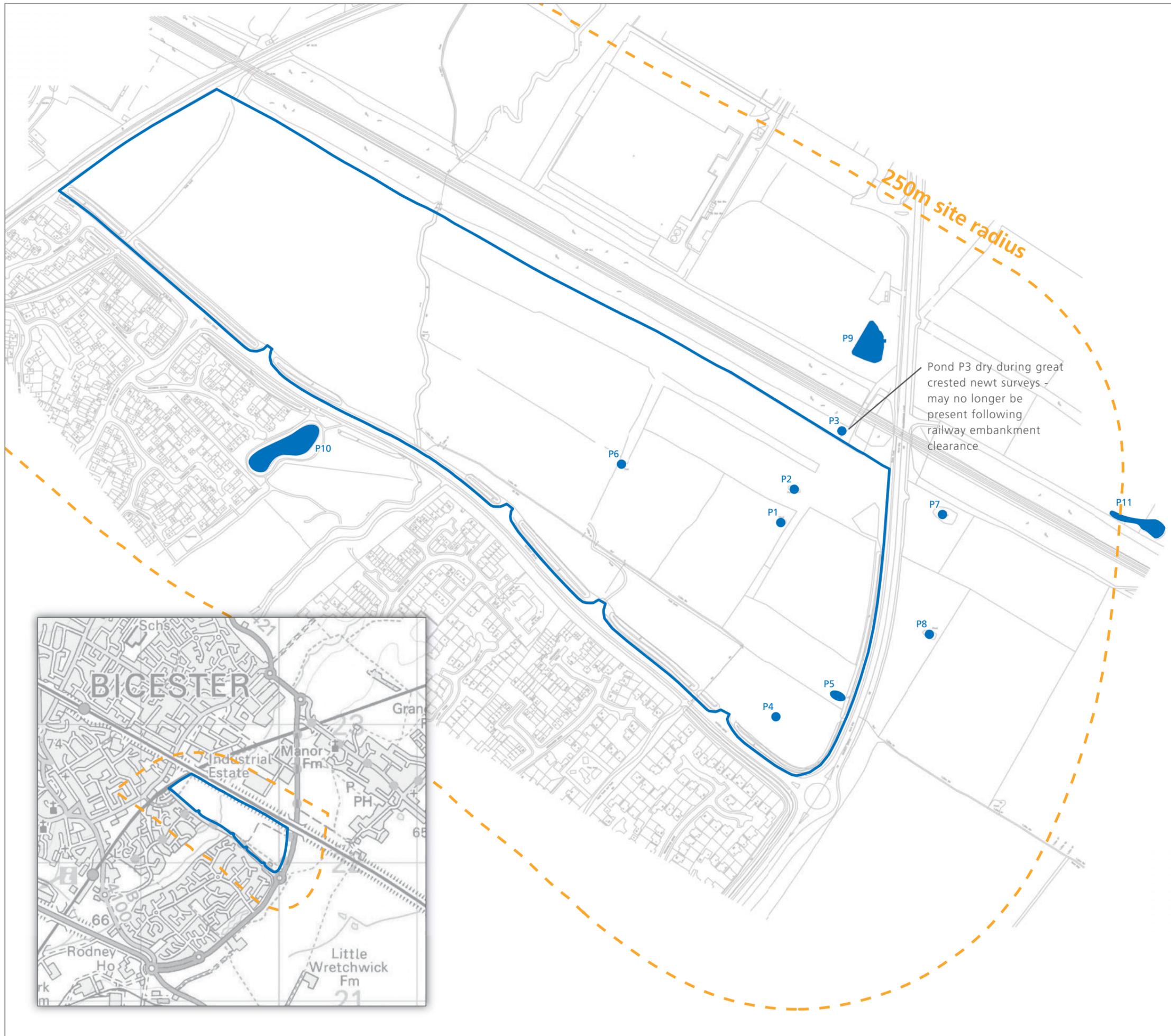
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**Gallagher Estates Ltd**

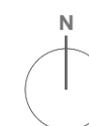
project title  
**Land North of Gavray Drive,  
 Bicester, Oxfordshire**

drawing title  
**Plan EDP 2: Bat Transect Routes 2013**

date	27 OCTOBER 2014	drawn by	DS
drawing number	EDP 124/78b	checked	JB
scale	NTS		



- Study Area
- 250m Site radius
- P1 ● Pond locations



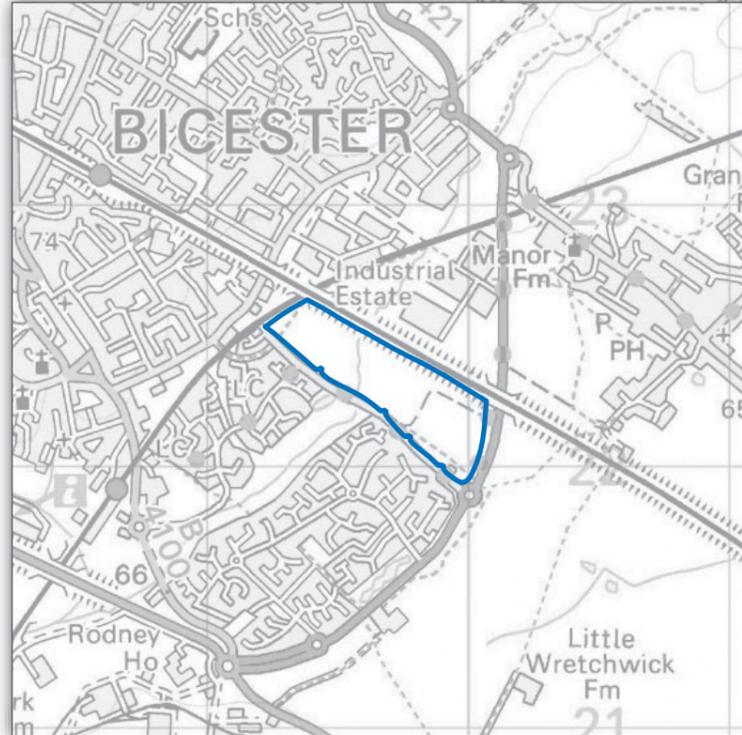
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project title  
**Land North of Gavray Drive,  
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drawing title  
**Plan EDP 3: Great Crested Newt  
 Survey Area and Pond Locations**

date	16 MARCH 2015	drawn by	JW
drawing number	EDP 124/88b	checked	TW
scale	NTS		



- Study Area
- ① Location and number of 500x500mm bitumen felt reptile refugia deployed 16th-17th May 2013
- ① Location and number of 500x500mm bitumen felt reptile refugia deployed 21st May 2013
- ① Location and number of 500x500mm bitumen felt reptile refugia deployed 21st June 2013
- X Location of corrugated galvanised steel reptile refugia deployed 4th-5th June 2013



**THE ENVIRONMENTAL DIMENSION PARTNERSHIP**  
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drawing title  
**Plan EDP 4: Reptile Survey Area  
 and Refugia Locations 2013**

date	16 MARCH 2015	drawn by	JTF
drawing number	EDP 124/93b	checked	TW
scale	Refer to Scale Bar		

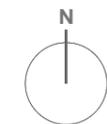


**NVC Grassland Communities**

- MG4 *Alopecurus pratensis*  
*Sanguisorba officinalis*  
grassland
- MG6 *Lolium perenne*  
*Cynosurus cristatus*  
grassland.
- MG9 *Holcus lanatus*  
*Deschampsia cespitosa*  
grassland
- MG10 *Holcus lanatus*  
*Juncus effusus*  
rush-pasture
- S28 *Phalaris arundinacea*  
tall herb fen
- U4 *Festuca ovina*  
*Agrostis capillaris*  
*Galium saxatile*  
grassland

**Note:**

Further details of NVC grassland communities provided in full in: "Broadview Ecological Consultants 'Analysis of grassland plant communities at Gavray Drive, Bicester. Report Ref R-13-003"



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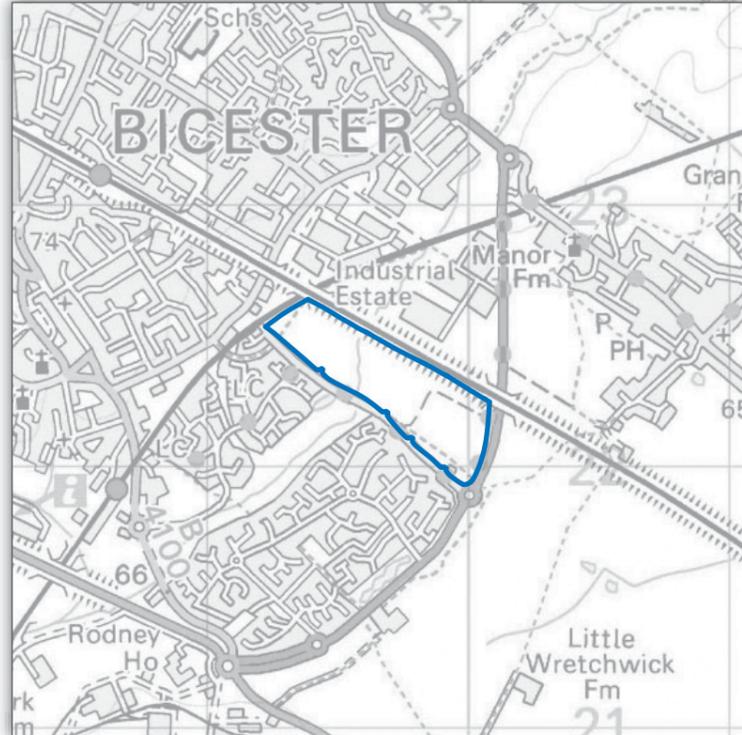
project title

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Bicester, Oxfordshire**

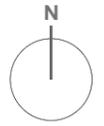
drawing title

**Plan EDP 5: Grassland NVC  
Communities**

date	16 MARCH 2014	drawn by	TB
drawing number	EDP 124/94a	checked	JB
scale	NTS		

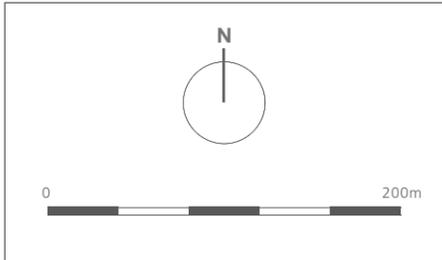


- Study Area
- Trees with Bat Roosting Potential**
- High
- Medium
- Low
- Broadleaved woodland
- H8 Hedgerow ID
- F1 Field ID
- Species poor hedgerow
- Species rich hedgerow with trees



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client	<b>Gallagher Estates Ltd</b>		
project title	<b>Land North of Gavray Drive, Bicester, Oxfordshire</b>		
drawing title	<b>Plan EDP 6: Tree Bat Roosting Assessment 2013</b>		
date	16 MARCH 2015	drawn by	JW
drawing number	EDP 124/89b	checked	TW
scale	NTS		



- Study Area
- Common pipistrelle
- Soprano pipistrelle
- Myotis Sp.
- Long-eared Sp.
- Pipistrelle Sp.
- ↔ Bat commuting  
(one chevron per bat)
- ⤿ Foraging Behaviour
- ↔ Foraging Behaviour
- Broadleaved woodland
- H8 Hedgerow ID
- F1 Field ID
- Species poor hedgerow
- Species rich hedgerow with trees

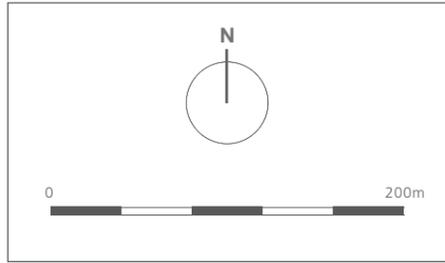
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drawing title  
**Plan EDP 7: Bat Transect Survey  
 Results: June 2013**

date	16 MARCH 2015	drawn by	JW
drawing number	EDP 124/90b	checked	TW
scale	NTS		



- Study Area
- Dusk  
Dawn
- ○ Common pipistrelle
- ○ Myotis Sp.
- ○ Noctule
- ○ Leisler's bat
- ○ Long-eared bat Sp.
- Bat commuting (one chevron per bat)
- ↻ Foraging Behaviour
- ↔ Foraging Behaviour
- Broadleaved woodland
- H8 Hedgerow ID
- F1 Field ID
- Species poor hedgerow
- Species rich hedgerow with trees



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**Plan EDP 8: Bat Dusk/Dawn Transect  
 Survey Results: July 2013**

date	16 MARCH 2015	drawn by	JW
drawing number	EDP 124/91b	checked	TW
scale	NTS		



- Study Area
- Common pipistrelle
- Soprano pip.
- Myotis Sp.
- Noctule
- Bat commuting (one chevron per bat)
- ↻ Foraging Behaviour
- ↔ Foraging Behaviour
- Broadleaved woodland
- H8 Hedgerow ID
- F1 Field ID
- Species poor hedgerow
- Species rich hedgerow with trees

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drawing title  
**Plan EDP 9: Bat Transect Survey  
Results: August 2013**

date	16 MARCH 2015	drawn by	JW
drawing number	EDP 124/92b	checked	TW
scale	NTS		



Study Area

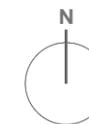
Field Number

Relative Importance of Fields for Widespread Reptiles as Determined by Peak Survey Counts of Common Lizards

High (> 20)

Medium (5 - 20)

Low (< 5)



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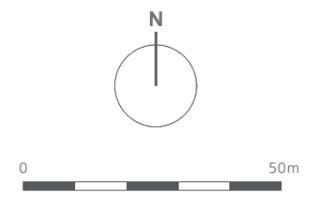
drawing title

**Plan EDP 10: Reptile Survey  
Results 2013**

date	16 MARCH 2015	drawn by	JTF
drawing number	EDP 124/95b	checked	JB
scale	Refer to Scale Bar		



- Study Area
- Blackthorn Patches Surveyed for Black Hairstreak Adults 2011 & 2013
- B Possible Black Hairstreak Sighting 05/07/08
- 2 Blackthorn Patches Surveyed for Brown Hairstreak Eggs 2013 (and no. of eggs found)
- Grassland Areas Surveyed for Small Heath 2011 & 2013
- H Small Heath Adults Recorded (date)



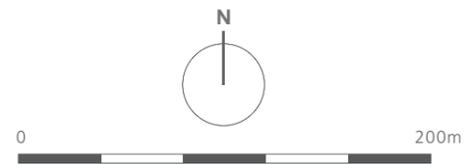
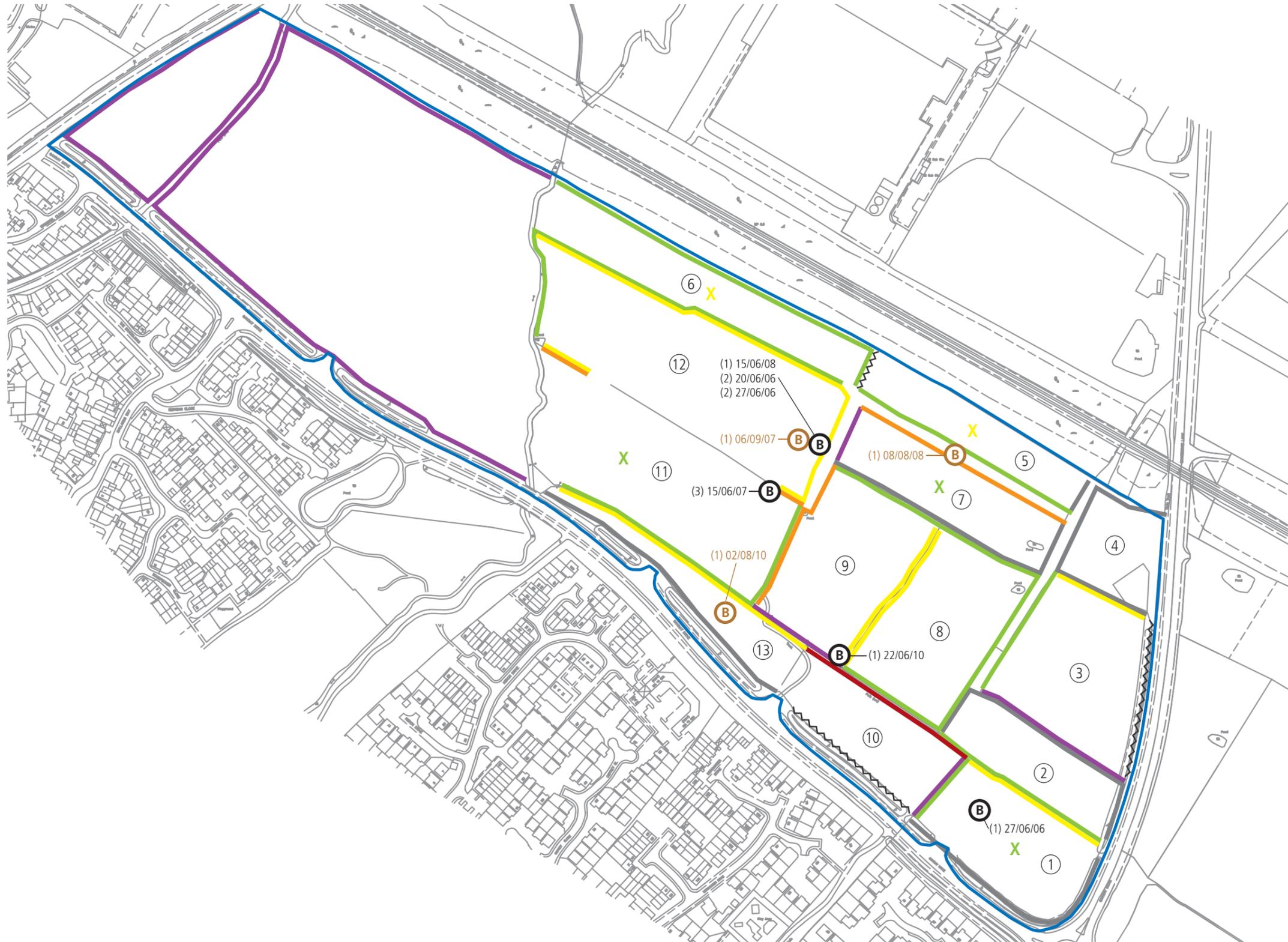
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drawing title  
**Plan EDP 11: Black Hairstreak, Brown  
 Hairstreak and Small Heath Surveys  
 2011 & 2013**

date	16 MARCH 2015	drawn by	JTF
drawing number	EDP 124/98b	checked	TW
scale	Refer to Scale Bar		



Study Area

**Brown Hairstreak egg search 2010/11**

Eggs found in hedgerow/scrub edge:

- Edge inaccessible
- 0 eggs found
- 1-10 eggs found
- 11-30 eggs found
- 31-50 eggs found
- 50+ eggs found
- Hedgerow without blackthorn

Eggs found in scrub within field:

- 1-10 eggs found
- 11-30 eggs found

**Brown and black hairstreak adult sightings (2005-10) - Locations approximate**

- Brown hairstreak
- Black hairstreak
- Field numbers



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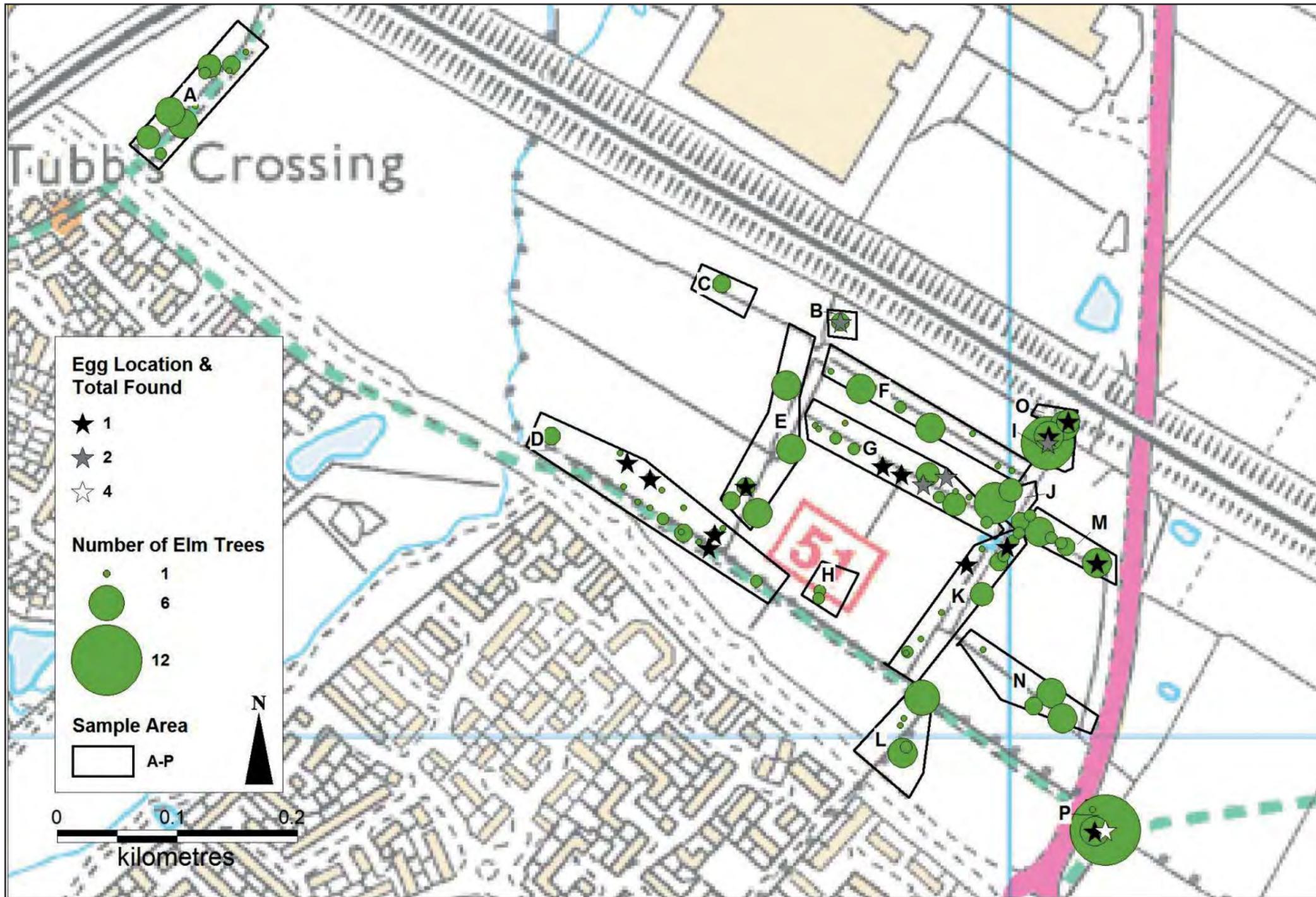
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**Plan EDP 12: Butterfly Conservation  
 Brown and Black Hairstreak Records**

date	16 MARCH 2015	drawn by	JTF
drawing number	EDP 124/59c	checked	TW
scale	NTS		



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**Plan EDP 13: White-Letter  
 Hairstreak Survey 2011**

date	16 MARCH 2015	drawn by	JTF
drawing number	EDP 124/96a	checked	TW
scale	NTS		