

West Blean and Thornden Woods

Breeding Birds Survey Summary Report

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Background

In March 2021, Applied Ecology Ltd (AEL) was appointed by Kent Wildlife Trust (KWT) to complete a breeding birds survey (BBS), including a lesser spotted woodpecker *Dendrocopos minor* (LSW) survey of an area of woodland at West Blean and Thornden Woods, Kent (“the Site”). The surveys were to act as ornithological baselines of the Site prior to the commencement of a rewilding project involving grazing of the woodland with various animals, including European bison *Bison bonasus*. Three grazing/browsing treatments areas have been identified, comprising one using European bison, one using other animals as a proxy for bison, and a control.

This report aims to provide a brief overview of the surveys, with details results provided separately in Excel documents.

Approach

Survey transects for both the BBS and LSW survey were provided by KWT, to sample a range of habitats in both rewilding treatments as well as the control area in the west of the Site. Each transect was divided into 200 m sections. The transect routes are shown in **Figure 1**.

Both surveys were planned and undertaken by Richard Dale MCIEEM – a senior ecologist and ornithologist.

Lesser spotted woodpecker survey

A repeat visit, transect-based survey combining aspects of the Breeding Birds Survey and LSW-specific survey methodologies¹ was completed during March–April 2021.

A total of three survey visits were made to the Site, on 8–9 March, 22–23 March and 1–2 April 2021, with each survey completed over two mornings.

Each transect was walked quietly at a slow pace, with the observer paying particular attention to bird movement in the tree canopy and checking any such movement with binoculars. Regular stops, at intervals of no more than 50 paces, were made in order to look for birds foraging on surrounding branches and foliage.

The numbers of LSW recorded on each 200 m transect section was recorded, with the sex and behaviour of the birds noted where observed.

¹ Gilbert, G., Gibbons, D.W. & Evans, J. (1998). *Bird Monitoring Methods: a manual of techniques for key UK species*. RSPB, Sandy, Bedfordshire.



Each visit began approximately 45 minutes after dawn ended before the late morning period when LSW activity typically declines.

The observer's position on each transect was tracked using GPS using the Avenza Maps app on a custom made GeoPDF and the precise location of LSW observations was recorded in the app. Subsequently, these observations were transferred to a Geographical Information System (ArcGIS).

The order that transects were walked was varied on each visit to possible bias from walking the same transects at the same time of day on each survey.

In addition to LSW observations, the observer recorded all other birds encountered on each transect – these data are provided in the Excel file but are not discussed further here.

Breeding Birds Survey

A repeat visit, transect-based survey following the methodology of the Breeding Birds Survey was completed during May–June 2021.

Two survey visits were made to the Site, on 6–7 May and 22–23 June 2021, with each survey completed over two mornings.

Each transect was walked quietly at a slow pace and all birds detected by sight or sound was recorded within the appropriate 200 m transect section on custom recording sheets using BTO two-letter species codes. Birds were recorded in one of the following distance bands, according to where they were when first noted:

- Within 25 m of either side of the transect line;
- Between 25–100 m either side of the transect line;
- More than 100 m either side of the transect line;
- Birds in flight only, at any distance.

Each visit began approximately 45 minutes after dawn ended before the late morning period when bird activity typically declines.

The observer's position on each transect was tracked using GPS using the Avenza Maps app on a custom made GeoPDF. And particularly notable observations – e.g., the locations of any LSW recorded, were recorded in the app.

The order that transects were walked was varied on each visit to possible bias from walking the same transects at the same time of day on each survey.

A small number of observations, or species recorded only in flight high above the Site and of no likely association with the habitats present were excluded from the data. These were predominantly of herring gull *Larus argentatus* but also included overflying cormorant *Phalacrocorax carbo* and black-headed gull *Chroicocephalus ridibundus*.



Findings

Lesser spotted woodpecker survey

A minimum of 13 individual LSW were recorded during the transect surveys, with a minimum of three further individuals found outside of timed transect sections (after survey completion or while the observer was walking between survey transects). The locations of all LSW recorded during the survey, including birds recorded outside of survey transects, are shown in **Figure 2**.

All areas of the Site produced records, with the exception of the north-eastern part of Thornden Wood (Bison transects 1–5). LSW were typically found in areas of mature forest, with large pedunculate oaks *Quercus robur*, although a cluster of records from the second survey visit, relating to at least three but potentially as many as five individuals, in the south of Thornden Wood (Proxy transect 1–2) included stands of coppice and semi-mature silver birch *Betula pendula*. As expected, no LSW were recorded from stands of conifers or young secondary growth.

The transect survey method is not particularly suitable for making accurate population estimates without a larger dataset including habitat information and detectability of target species. Detectability of LSW is highly dependent on the birds' behaviour, ranging from almost zero when quietly feeding, to relatively high when calling during territorial or courtship displays. One pair was located despite being approximately 100 m away from the transect route (Bison transect 10) when first detected. Individual birds were sometimes observed to range relatively widely, but some birds (notable pairs at Control transect 3 and Proxy transect 10) were found to be easily relocatable, in areas of woodland with old or recently excavated LSW nest holes, and showing frequent display and courtship behaviour indicative of a likely nearby nest site. A single LSW was also recorded on Proxy transect 10 during the breeding birds survey on 6 May 2021.

It is considered that the 16+ birds located during the survey likely relate to at least eight pairs, and that the total population of the Site is likely to be in the order of 10–16 pairs.

Table 1: LSW recorded on transects during survey.

Survey transect	Visit 1		Visit 2		Visit 3	
	7 March	8 March	21 March	23 March	1 April	2 April
Control 3	–	–	–	–	2	–
Bison 8	1	–	–	–	–	–
Bison 10	–	–	–	1	–	–
Bison 15	–	–	–	–	–	1
Proxy 1	–	–	3	–	–	–
Proxy 5	–	–	1	–	–	–
Proxy 6	–	–	–	–	2	–
Proxy 10	2	–	1	–	–	–



Breeding birds survey

A total of 34 species were recorded during the survey, representing a range of typical woodland species, including a number of red-listed woodland specialist species recorded in small numbers, such as lesser spotted woodpecker, nightingale *Luscinia megarhynchos*, lesser redpoll *Carduelis cabaret* and spotted flycatcher *Muscicapa striata*.

Nightingales, though likely under-represented by the survey as the majority of this species' activity occurs outside of the periods surveyed, were present in areas of dense undergrowth, typically thick secondary growth in areas of relatively recent coppice of clearfell. Spotted flycatcher was recorded rarely, but this is an unobtrusive species with a relatively low detectability (it also arrives late in the spring and would therefore have been missed by the first survey visit).

Species distribution was as expected, with, for example, goldcrest *Regulus regulus* and coal tit *Periparus ater* present on transect with conifer stands, willow warbler *Phylloscopus trochilus*, garden warbler *Sylvia borin* and nightingale *Luscinia megarhynchos* in areas of secondary growth, and nuthatch *Sitta europaea* and treecreeper *Certhia familiaris* in more mature woodland.

The most numerous species were the more generalist woodland species: blue tit *Cyanistes caeruleus*, robin *Erithacus rubecula*, woodpigeon *Columba palumbus*, wren *Troglodytes troglodytes* and chaffinch *Fringilla coelebs*. Note, however, that individual species have different detectability rates – for example, robin and blue tit were recorded in similar numbers, but robin is a highly vocal species and singing birds are easily detected at relatively large distances in woodland, while blue tits, at least when singing less frequently during the time young are in the nest, are less vocal and spend a high proportion of their time high in the canopy foraging and are more likely to be recorded by sight and at closer ranges. A given individual of the latter species is therefore likely to be less easy to detect overall and therefore in this instance probably present at a higher density than the former, despite the similar numbers recorded during the survey.

Table 2: Breeding birds survey summary results.

Species	Visit 1 6/7 May 2021	Visit 2 22/23 June 2021	Maximum count
Blackbird <i>Turdus merula</i>	26	20	26
Blackcap <i>Sylvia atricapilla</i>	22	13	22
Blue tit <i>Cyanistes caeruleus</i>	81	86	86
Bullfinch <i>Pyrrhula pyrrhula</i>	5	5	5
Buzzard <i>Buteo buteo</i>	–	5	5
Carrion crow <i>Corvus corone</i>	11	5	11
Chiffchaff <i>Phylloscopus collybita</i>	17	17	17
Chaffinch <i>Fringilla coelebs</i>	42	33	42
Coal tit <i>Periparus ater</i>	18	10	18
Garden warbler <i>Sylvia borin</i>	4	6	6
Goldcrest <i>Regulus regulus</i>	3	8	8
Goldfinch <i>Carduelis carduelis</i>	2	11	11



Species	Visit 1 6/7 May 2021	Visit 2 22/23 June 2021	Maximum count
Great spotted woodpecker <i>Dendrocopos major</i>	8	8	8
Great tit <i>Parus major</i>	22	24	24
Green woodpecker <i>Picus viridis</i>	2	5	5
Jackdaw <i>Corvus monedula</i>	6	4	6
Jay <i>Garrulus glandarius</i>	2	6	6
Lesser redpoll <i>Carduelis cabaret</i>	1	–	1
Lesser spotted woodpecker <i>Dendrocopos minor</i>	1	–	1
Long-tailed tit <i>Aegithalos caudatus</i>	10	20	20
Nightingale <i>Luscinia megarhynchos</i>	6	7	7
Nuthatch <i>Sitta europaea</i>	1	7	7
Robin <i>Erithacus rubecula</i>	85	70	85
Rook <i>Corvus frugilegus</i>	4	–	4
Song thrush <i>Turdus philomelos</i>	7	10	10
Sparrowhawk <i>Accipiter nisus</i>	–	1	1
Spotted flycatcher <i>Muscicapa striata</i>	–	2	2
Stock dove <i>Columba oenas</i>	4	3	4
Tawny owl <i>Strix aluco</i>	1	2	2
Treecreeper <i>Certhia familiaris</i>	3	7	7
Whitethroat <i>Sylvia communis</i>	2	2	2
Willow warbler <i>Phylloscopus trochilus</i>	7	8	8
Woodpigeon <i>Columba palumbus</i>	52	32	52
Wren <i>Troglodytes troglodytes</i>	34	45	45

Conclusions

The Site supports a wide range of woodland species, with an assemblage dominated by the more common generalist species which occupy most of the woodland types present. Lesser spotted woodpecker is a relatively common breeding species, found most reliably in areas of the most mature woodland.

A full analysis of the relationship between the birds recorded and the habitats present is outside the scope of this report, but areas of more mature woodland supported woodland specialists such as nuthatch, and lesser spotted woodpecker also seems more likely to be found in these areas. Anecdotally, noticeably different assemblages were present in areas of young coppice and secondary growth, as well as in areas dominated by conifers. More uniform areas of even-aged coppice seemed to support the fewest birds and were lacking in variety in the assemblage present.

By the nature of the survey methodology used, it is difficult to draw too many conclusions about overall population levels, particularly of the less frequently recorded species; the transect-based methodology provides a repeatable baseline measure of relative abundance against which future changes can be measured, rather than an absolute measure of breeding density.



West Blean and Thorden Woods

Bird survey transect routes

- Project area
- Treatment transect**
- Bison
- Proxy
- Control

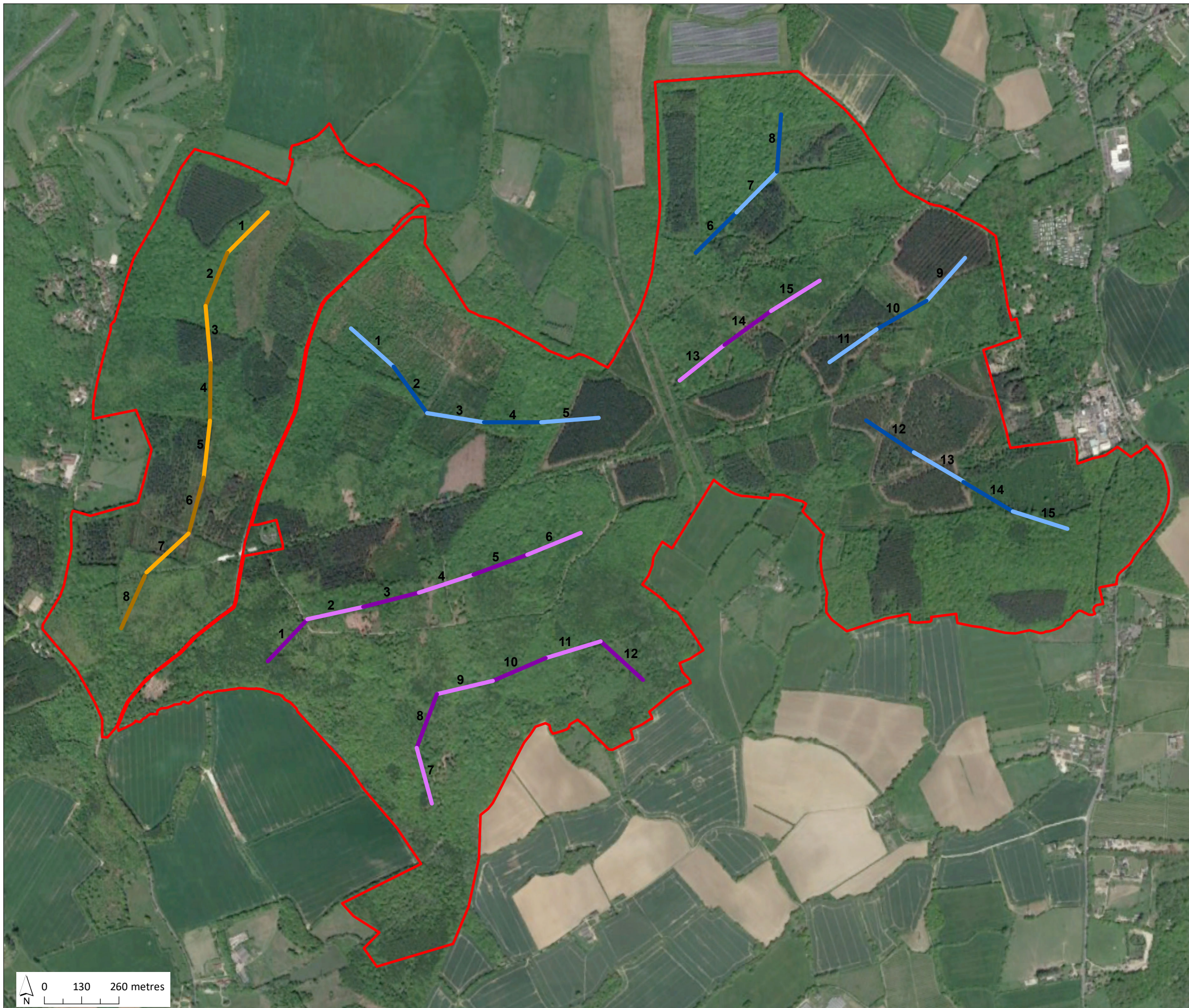


Figure 1

Map Scale @ A3: 1:13,000

Surveyed by: RD
Survey date: March–April 2021
Drawn by: RD
Checked by: DP
Status: Draft



West Blean and Thorden Woods

Lesser spotted woodpecker survey

- Project area
- Treatment transect**
- Bison
- Proxy
- Control
- LSW records - all**
- 1st visit - one bird
- 2nd visit - one bird
- 2nd visit - two birds
- 2nd visit - three birds
- 3rd visit - one bird
- 3rd visit - two birds

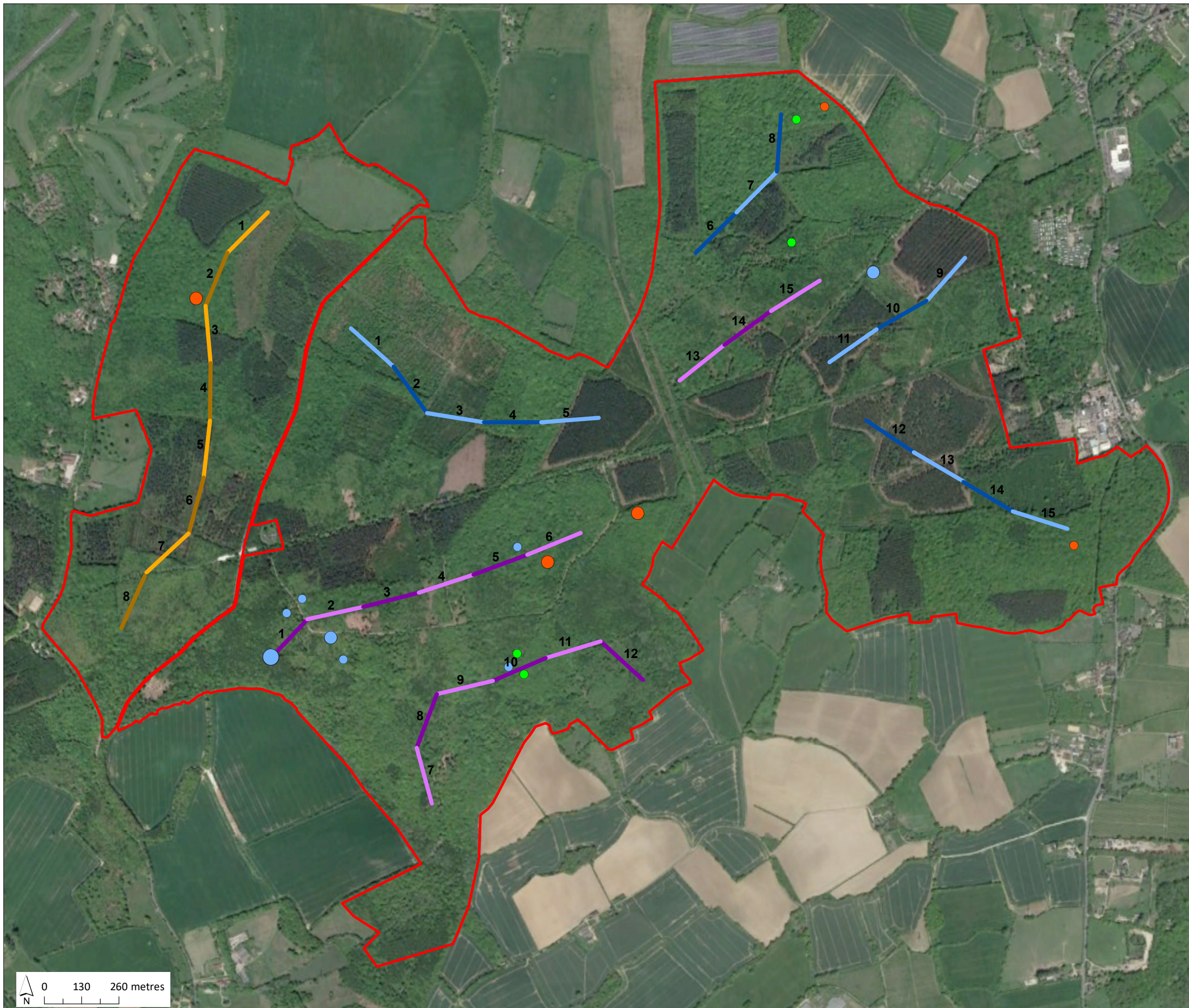


Figure 2

Map Scale @ A3: 1:13,000

Surveyed by: RD

Survey date: March–April 2021

Drawn by: RD

Checked by: DP

Status: Draft

