Overview Breeding Bird Survey for Wakelyns Organic Agroforestry

Produced by Suffolk Wildlife Trust for David Wolfe.

Surveyor Sam Hanks.

Contents

Outline of the survey, scope, limitations and discussion:

This survey was conducted in spring of 2020, (14.04.2020 and 04.05.2020) with the view of providing a baseline survey of the bird life at Wakelyns Organic Agroforestry, Metfield. The survey consists of two transect visits (see map) walking the farm early in the morning and mapping all birds seen and heard. Visit maps are then combined to produce a single map on which birds considered to have breeding territories are marked. This method is based on the breeding bird survey methods used by the BTO. There is a significant degree of interpretation in these results as a two-visit survey is not considered to be an exhaustive search, a 'full' survey would consist of four to six visits, however this should give a good baseline and a repeatable method for future surveys to compare to.

Some very common species are omitted and/or estimates of breeding not attempted, for example for wood pigeon no breeding estimate is made, and gull species and pheasants are ignored. There are also species that this survey will not have recorded (owls for example).

At Wakelyns, a count of 25 breeding species is excellent for a farm of this size. Most species encountered were scrub or woodland nesting specialists – with the busiest parts of the survey along the mature species rich hedgerows.

Organic management and agroforestry practices are clearly providing plentiful insect and seed food along with nesting habitat. Three species of note: turtle dove, bullfinch and willow warbler are benefiting uniquely from this set-up and efforts should be made to retain those habitat elements that these species are reliant on. Opportunities exist to improve things further for wildlife, notes are included at the end of the report with suggestions for these enhancements.

Several of the birds found in the survey are red or amber listed in the current BoCC publication, each of these is dealt with in the notes below.

Abbreviations used in this report:

BTO – British Trust for Ornithology

BBS – Breeding Bird Survey

BoCC – Birds of Conservation Concern (UK, version 4)

SWT – Suffolk Wildlife Trust

Results of the survey:

Table 1 below summarises the breeding and non-breeding records made on the two visits. Where breeding activity is confirmed an estimate of the number of territories is made. BoCC red and amber listed species are highlighted in their respective colours and a more detailed assessment of these species is given below.

Overview Bird Survey at Wakelyns Organic Agroforestry, Spring 2020			
Breeding records			
Abbreviation	Species	Territories	Notes
B	Blackbird	6	
BC	Blackcap	3	
BF	Bullfinch	1	In mature scrub around farmyard, a special bird to have.
BT	Blue Tit	3	Will benefit from the boxes
CC	Chiffchaff	5	
CH	Chaffinch	3	
D	Dunnock	2	Hard to survey for as a quiet bird
G	Greenfinch	1	
GT	Great Tit	2	Will benefit from the boxes
GW	Garden Warbler	1	Possibly more, further effort needed to confirm
LI	Linnet	2	In hedgerows, nice farmland bird
LT	Longtailed Tit	1	Somewhere along driveway
LW	Lesser Whitethroat	1	In driveway hedgerow
MH	Moorhen	1	In large pond by sprayer manufacturers yard
R	Robin	2	
RL	Red Legged Partridge	1	Pair seen
S	Skylark	4	In arable around Wakelyns - will be feeding with you
SD	Stock dove	2	Using Barn Owl box and farmyard
SL	Barn Swallow	1	Around farmyard - numbers uncertain
ST	Song Thrush	1	In nearby woodland
TD	Turtle Dove	1	In good scrub by meadow
WR	Wren	12	
WT	Whitethroat	7	
WW	Willow Warbler	3	Really nice to still have these!
YH	Yellowhammer	1	In old hedgerow to east
Records not confirmed as breeding			
Abbreviation	Species	Visit	Notes
BZ	Buzzard	B	Overhead
MG	Magpie	B	Very likely breeding - active and probably feeding young
WP	Woodpigeon	A + B	Ubiquitous
GO	Goldfinch	B	Only recorded on second visit - likely breeding
GR	Green Woodpecker	B	Flew away on second visit
J	Jay	A	Likely breeding in nearby woodland

In total 31 species were recorded at or around Wakelyns, breeding number estimates have been made for 25 of these. A survey of greater effort may return a higher species count and more accurate breeding numbers.

Notes on key breeding species:

This section deals with the key bird species that over-summer and nest at or close to the farm. The criteria used in assessments are intended to ensure that BoCC listings reflect each species' global and European status, as well as that within the UK and additionally measure the importance of the UK population in International terms.

Statements depicting the national trend are taken from the BTO Bird Facts Website: (http://www.bto.org/about-birds/birdtrends). The status for Suffolk has been derived from Piotrowski (2003) and subsequent Suffolk Bird Reports that are published annually. Links in the titles will direct you to further information from the BTO.

A further statement details observations and status at and around Wakelyns based on the survey work.

Bullfinch *Pyrrhula pyrrhula* (BoCC amber-listed species)

National Trend: The UK Bullfinch population entered a long period of decline in the mid-1970s, following a period of relative stability. The decline was initially very steep, and more so in farmland than in wooded habitats, but became shallower and eventually ended around 2000, since when there has been some increase. There are large annual fluctuations around the overall long-term trend. The BBS map of change in relative density between 1994-96 and 2007-09 indicates that major decreases in southern and western parts of the UK over that period contrasted with increases in northern England and eastern Scotland. There has been widespread moderate decline across Europe since 1980. The UK conservation listing was downgraded from red to amber in 2009 but the scale of decline still places the species near the borderline between these categories.

Causes of change: The reasons for the decline of Bullfinch are unclear, although a recent study suggests that changes in adult survival might be important. Agricultural intensification is suspected to have played a part in the decline, but other factors may also have contributed.

Suffolk Status: The Bullfinch is a common but declining resident and scarce passage migrant and is found widely throughout the county. It is a shy bird, which, despite its striking plumage, hides well in overgrown hedgerows and blackthorn thickets. It will also frequent old gardens and woodland edge and is most often noted in pairs or family groups. There has been a marked decrease in recent years. The species is an occasional visitor to migration watch-points and is subject to cold-weather movements.

Status/observations at or around Wakelyns:

Single male heard singing on both visits from dense scrub by farmhouse, utilising similar overgrown scrubby hedge habitat as turtle dove. Bullfinches breed in woods with shrubby undergrowth and in particular woodland pasture, woodland edge, scrub and occasionally tall, think hedgerows. The provision of scrub habitats at Wakelyns has clearly benefitted this species. Some extension of this habitat in field corners and along the woodland edge would help to secure its future.

What does this species need?

- Dense scrubby woodland edge, tall thick hedgerows.

- Plentiful seed sources
- Plentiful insect food available in breeding season

Dunnock *Prunella modularis* (BoCC amber-listed species)

National Trend: Dunnock abundance fell substantially between the mid-1970s and mid-1980s, after a period of population stability. Some recovery has occurred throughout the UK since the late 1990s, but the species is still amber listed. Clutch and brood sizes, and the number of fledglings per breeding attempt all increased as the population fell and have fallen again during the recent period of partial recovery. There has been widespread moderate decline across Europe since 1980.

Causes of change: The decline of the species between the mid-1970s and mid 1980s is likely to be due to several factors, but strong experimental evidence in farmland areas suggests that this may be linked to reduced winter food availability. This reflects similar results found for other species that suffer a 'hungry gap' in February and March

Suffolk Status: The Dunnock is an abundant resident and fairly common (mainly autumn) passage migrant. It is widely spread throughout the county, being a common feature of town and country gardens, parks, hedgerows, farmyards, woodlands, marshland and coastal scrub.

Status/observations at or around Wakelyns:

Two birds heard independently on surveys – very likely that you have multiple territories. A hard bird to survey as they can be quiet. Benefitting from the denser sections of hedgerow.

What does this species need?

- Dense scrub or woodland edge nesting habitat, bramble and thorny bushes.
- Plentiful insect food.

Linnet *Carduelis cannabina* (BoCC red-listed species)

National Trend: The Linnet is mostly a summer visitor with most of the UK population wintering in Iberia. However, small wintering flocks can be found on farms with a good food supply such as wild-bird seed mix plots. Linnet abundance fell rapidly in the UK in the late 1960s, and again between the mid-1970s and mid-1980s, but decrease has been followed by a long period of relative stability. Numbers have fallen further since the start of BBS in 1994. The BBS map of change in relative density between 1994-96 and 2007-09 indicates that, in both Britain and Northern Ireland, there was decrease over that period in eastern regions and increase in the west. There has been widespread moderate decline across Europe since 1980.

Causes of change: There is convincing evidence that nest failure rates rose during the principal period of population decline and this represents the most likely demographic mechanism driving the observed decreases in abundance. The most likely ecological driver of this pattern is habitat impoverishment due to agricultural intensification.

Suffolk Status: The Linnet breeds widely throughout the county, with the greatest densities around the River Blyth, around Stowmarket and in much of south Suffolk. Nesting takes place in small colonies on open farmland, young plantations, heathland and other scrub areas and, in recent years, suburban

gardens have been colonised. Large post-breeding gatherings are noted, mostly at coastal localities, and wintering flocks are not uncommon.

Status/observations at or around Wakelyns:

Utilising hedgerows (breeding) and a small flock noted on the first survey in fallow agroforestry strip. Linnets will often nest is loose association (semi-colonially), and often utilise areas of low scrub and scattered bushes. They also favour low hedges that are thick at the base, so a diversity of hedgerow heights on the farm would benefit Linnets as well as other hedge-nesting species.

What does this species need?

- Dense scrub patches for nesting (often nesting semi-colonially) and/or low thick hedges.
- Seed food available all year on fallow land, overwinter stubbles and weedy margins as well as rough grasslands.
- Wild bird cover plots can be useful for Linnet.

Skylark *Alauda arvensis* (BoCC red-listed species)

National trend: The Skylark declined rapidly from the mid 1970s until the mid 1980s, when the rate of decline slowed. BBS data show further decline, recently extending to Scotland. The BBS map of change in relative density between 1994-96 and 2007-09 indicates that decrease was severe in Northern Ireland and eastern England but that numbers rose in Scotland in that period, especially in the northwest. There has been widespread moderate decline across Europe since 1980.

Causes of change: There is good evidence to indicate that the most likely cause of declines in Skylark is agricultural intensification, specifically the change from spring to autumn sowing of cereals, which reduces the number of breeding attempts possible and may also reduce overwinter survival due to loss of winter stubbles

Suffolk Summering Status: Suffolk's open countryside has long been favoured by the Skylark and it occurs almost throughout the county. Skylarks breed amongst cereals and other arable crops with a clear preference for larger, more open, fields. Mixed farmland, with hedgerows and young plantations are also suitable, but established woodland is avoided.

Suffolk Wintering Status: In winter, single-figure groups are commonplace and winter flocks of 50-100 are not uncommon. The species is susceptible to the effects of harsh weather, when birds may become attracted to food-rich fields.

Status/observations at or around Wakelyns:

Only recorded from adjacent arable land, where there appears to be good numbers. Wakelyns itself is likely too enclosed for skylark to utilise readily and in 2020 the fallow had been cut multiple times in the spring which would have had a detrimental effect if they had been utilising it. Skylark will be utilising the organic areas with open aspects for feeding and will certainly benefit at the landscape scale from the organic production model used at Wakelyns as it will provide abundant insect food.

What does this species need?

- Spring cropping or unsown plots within shorter winter cereal crops for nesting
- Plentiful insect food in foraging areas
- In grassland, nest avoidance if silage making, or later hay making are best, avoid spring cutting.
- Overwintering stubble, or cover cropping to provide winter food resource.

Song Thrush *Turdus philomelos* (BoCC red-listed species)

National Trend: CBC/BBS showed a steep decline in Song Thrush abundance that began in the mid-1970s. Short-term increases beginning around 2012 mean that the long-term decline is now classed as moderate rather than steep, but the population remains substantially lower than in the late 1960s. BBS data from all UK countries show increase from 1994 to 2008, followed by a sharp downturn from 2008 to 2012 and the subsequent increase, but population levels remained relatively low throughout. The BBS map of change in relative density between 1994-96 and 2007-09 indicates that increase over that period was strongest in Wales and northern England, with little change in Northern Ireland and south-eastern England. The European trend is described as being a 'moderate increase', however the long-term % change is shown as +2%, with the trend graph suggesting that declines in the early 1980s have since been reversed.

Causes of change: Changes in survival in the first winter, and the post-fledging period, are sufficient to have caused the population decline. The environmental causes of this are unknown but are likely to include changes in farming practices, particularly land drainage and possibly increased pesticide usage.

Suffolk Status: Song Thrush is a common resident and passage migrant. It is a common feature of parks and gardens, but also inhabits heathland, woodland edges, farms and hedgerows. It has become scarce in recent years in line with the national trend

Status/observations at or around Wakelyns:

Bird heard from adjacent woodland where it is almost certainly nesting. Song thrush will benefit from uncut hedges and unmanaged grassy margins for food resource.

What does this species need?

- Healthy soil with plentiful earthworms and snails. Grazed pasture can be particularly good, as can wetlands and pond margins.
- Woodland with dense understorey or thick and tall hedgerows for nesting, early nesting species so no management after beginning of March.
- Hedgerow fruit for autumn food, hedges managed on rotation are best for this.
- Wild bird cover plots near woodland can be useful winter food sources.

Stock Dove *Columba oenas* (BoCC amber listed species)

National Trend: Following release from the lethal and sublethal effects of the organochlorine seed-dressings used in the 1950s and early 1960s, Stock Dove populations have increased very substantially. Numbers appeared to level off in the early 1980s, but the trend has been generally upward since the 1990s except for a sharp drop in numbers early in the current century. The BBS map of change in relative density between 1994-96 and 2007-09 indicates that increase has been strongest in western and eastern Britain, with decreases in midland regions. An apparent initial increase in nest failure rates

at the egg stage, now reversed, was not detectable in farmland habitats alone. Overall, nest failure rates have fallen substantially since the 1980s and there has been a major increase in the number of fledglings raised per breeding attempt. There has been widespread moderate increase across Europe since 1980

Causes of change: The increase since the mid-1960s may be due to two phases: an initial recovery from the high mortality caused by organochlorines, followed by increased breeding performance.

Suffolk Status: Stock Doves are sedentary but widespread in all seasons. Parkland, mixed areas of farmland and woodland edge are the favoured haunts of this species, although the dove is extremely adaptable and will at times exploit other habitats such as heathland.

Status/observations at or around Wakelyns:

Birds heard singing in farmyard and observed using barn owl box. Likely that this was two separate nests, suggesting suitable opportunities. Erecting further Barn Owl box would give both Owls (if present) and Stock Dove additional choices.

What does this species need?

- Hole nesting opportunities in mature trees, old buildings or larger bird boxes (e.g. barn owl boxes)
- Available seed food.

Turtle Dove *Streptopelia turtur* (BoCC red-listed species)

National Trend: The CBC/BBS trend shows severe declines in Turtle Dove abundance, beginning in the late 1970s and continuing steeply to the present. Atlas data show that more than half the 10-km squares occupied in 1968-72 had been lost by 2008-11, with the population withdrawing towards East Anglia and Kent. These trends, unless halted or reversed, would bring the species close to extinction in the UK within the next two decades. There has been widespread moderate decline across Europe since 1980 and the species is now classed by IUCN as globally threatened (Vulnerable).

Causes of change: There is good evidence to support the hypothesis that the primary demographic driver of Turtle Dove declines is a shortened breeding period, which has reduced the number of nesting attempts. This is thought to be driven by reduced food availability due to increased herbicide use, although analyses that test this directly are lacking. Note, however, that data do not permit analyses of variation in annual survival rates, but mortality both on the wintering grounds (due to habitat deterioration) and on migration (particularly through hunting) could be important.

Suffolk Status: The Turtle Dove is still locally distributed throughout the county, although it is declining fast. The higher densities occur on the coast and in the breck. Their breeding habitat of bushy hedgerows and mature scrub is in serious decline as farmland is continually being tidied and hedges over-managed.

Status/observations at or around Wakelyns:

Bird heard singing on first visit and reported to remain thereafter. Birds are thought to reduce singing when breeding so this should be a good sign. Turtle dove are a species requiring urgent conservation

action having been lost from much of the country. The dense overgrown scrub at Wakelyns will provide suitable nesting opportunities, safeguarding this by creating further suitable nesting areas would be good. The first year fallow agroforestry rows looked to be providing ideal feeding habitat for turtle dove, with bare ground and early seeding plant species, effort should be made to ensure there is an element of this feeding habitat available each spring – ideally established the preceding autumn. The RSPB can offer tailored advice for Turtle Dove. Opening ponds and ensuring they have shallow sloping access would also help.

What does this species need?

- Large dense overgrown hedgerows and scrub areas for safe nesting
- Sparse and open vegetation areas with early available seed food for returning birds in the spring.
- Access to water, used to create a 'milk' fed to chicks.
- Low levels of disturbance

Willow Warbler *Phylloscopus trochilus* (BoCC amber listed species)

National Trend: Willow Warbler abundance has shown regionally different trends within the UK. The overall CBC/BBS trend shows a rapid decline during the 1980s and early 1990s, after 20 years of relative stability, and, on the strength of a 31% decline on CBC plots between 1974 and 1999, the species was moved from the green to the amber list. This decline occurred mainly in southern Britain, however, accompanied by a fall in survival rates there, with Scottish populations remaining unaffected. The differing regional trends have been linked to differences in productivity. BBS figures since 1994 indicate a contrast between an upward trend in Scotland and in Northern Ireland, and continued severe decreases in England, with no overall trend in Wales. The BBS map of change in relative density between 1994-96 and 2007-09 indicates that strong decrease was widespread across England and Wales over that period, with little change across Northern Ireland, northern England and most of Scotland and increases in the far northwest. However, the most recent 5-year BBS trends suggest that declines may now be occurring throughout the UK.

***Causes of change*:** The causes of decline are uncertain. Decreased breeding success is likely to be an important driver of the decline in the south-east, and the differing trends across the UK suggest that climate change (or possibly habitat changes occurring over wide areas) could be a factor behind the changes. However, problems on migration or in winter have not been completely ruled out.

Status in Suffolk: Declining summer visitor and passage migrant. Almost lost from the east of the county with reducing numbers in the west.

Status/Observations at or around Wakelyns:

Three birds holding territories is a great result here, clearly the habitat is suitable and the birds were in each case utilising the agroforestry rows (two in Willow!) Suggest that a combination of good nesting opportunity along with plentiful food and potentially a cooler microclimate is working in the favour of Willow Warbler. Great stuff!

What does this species need?

- Scrub for nesting

- Insect food in summer, fruit and berries in autumn.

Yellowhammer *Emberiza citronella* (BoCC red-listed species)

National Trend: The Yellowhammer is a resident species and frequents farmland in all seasons. Yellowhammer abundance began to decline on farmland in the mid 1980s. The BBS map of change in relative density between 1994-96 and 2007-09 indicates that in Britain there was a sharp divide between decrease over that period in the east and south and limited increase in the northwest; the population in Northern Ireland has also declined. Atlas surveys in 2008-11 indicate that range loss in Northern Ireland and western Britain, first noted in 1988-91, has continued strongly (Balmer et al. 2013). Recent BBS data confirms that the earlier trends have continued, with a moderate decrease since 1994 recorded in England and a steep decrease in Wales, contrasting with shallow increase in Scotland. The species, listed as green in 1996, has been red listed since 2002. There has been widespread moderate decline across Europe since 1980.

Causes of change: Declines in annual survival have been proposed as the demographic mechanism for decline, due to winter resource limitation, although ring-recovery data are sparse and so most evidence for this is indirect. Reductions in winter seed food availability as a result of agricultural intensification (for example, the loss of winter stubbles and a reduction in weed densities) are widely believed to have contributed to the population decline.

Suffolk Status: The Yellowhammer is a typical bird of open farmland, but it is also common on gorse-clad heaths, commons and woodland edge. It gathers in large flocks during winter and is affected greatly during periods of harsh weather.

Status/observations at or around Wakelyns:

Single breeding bird in old hedgerow to the west of the farm, most likely the nest was on the outside of this hedgerow. Hedgerow is associated with a ditch which seems to benefit yellowhammer. They nest on the ground in long grasses, so maintaining generous uncut area adjacent to the hedgerows might encourage them 'in'. The further development of low scrub with scattered bushes would benefit this species.

What does this species need?

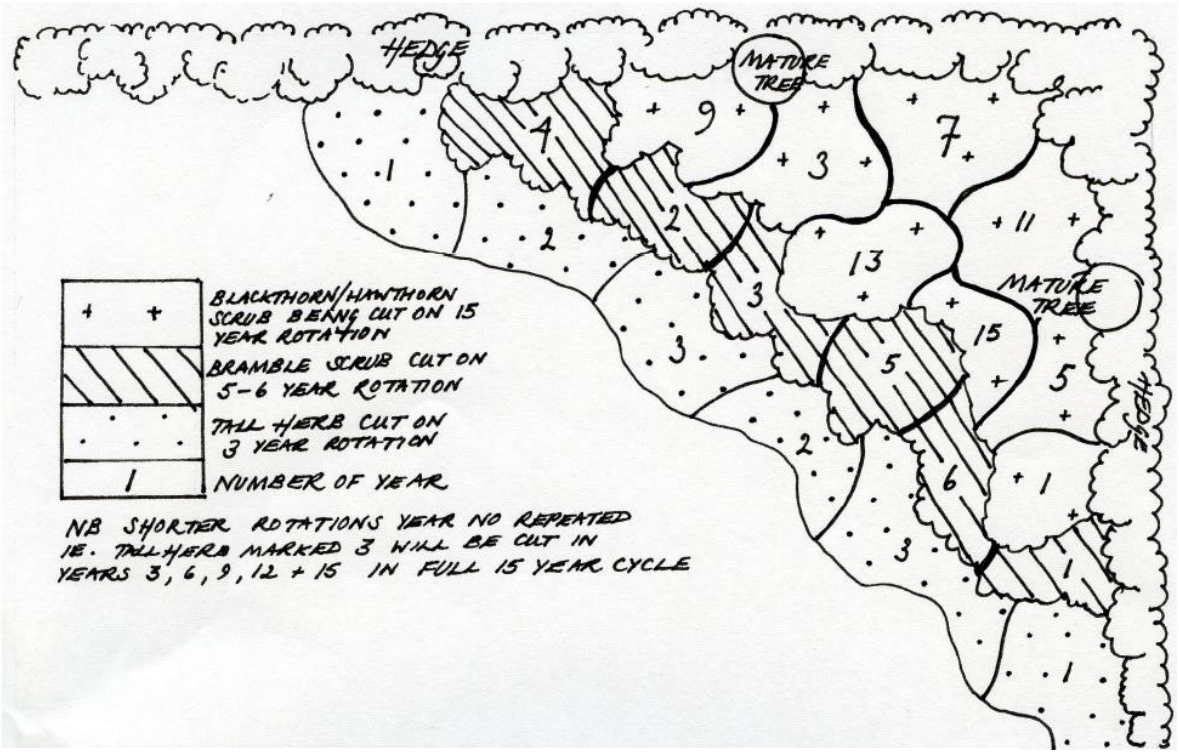
- Short dense thick hedgerows and scrub patches with tall grasses at base for nesting, often tracksides and ditch-sides are preferred.
- Plentiful seed resource throughout the winter, wild bird cover can be important for yellowhammer, as can supplementary feed in the 'hungry gap'.
- Insect food available in summer to feed young, tall grasses and mature hedgerows free of chemical spray.

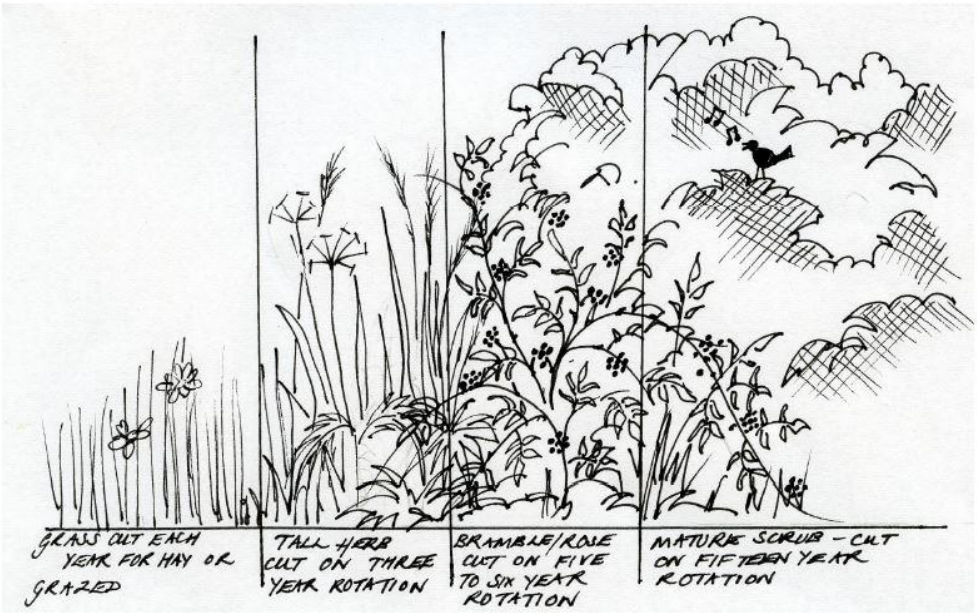
Notes on Management at Wakelyns:

Generally, Wakelyns is providing much better foraging and nesting resources than a conventional farming system, as evidenced by the species using the farm. Some of the existing planned improvements – introducing grazing for example – will add to these elements, but there is a risk of over-management and my impression of the agroforestry system is that it can be very neat, perhaps by necessity, which reduces its usefulness to wildlife. Opportunities to enhance the farm for the birds identified here will also have knock on benefits for invertebrates, mammals, amphibians, and bats.

- Development of new areas of scrub in less favourable field corners – separate from agroforestry production area which appears to be managed rather neatly. For the benefit of most of the priority species above. Idealised scrub management diagram is included below, note however that given the presence of turtle dove I would not recommend embarking on this type of management in your existing scrub areas until there was established alternative habitat available.
- Manage for open ground within fallow areas and encourage some agricultural 'weed' species which can be very good as early seed source. For the benefit of turtle dove and other seed eating species. Retaining generous fallow provision is desirable.
- Consider relaxing mowing regime, especially in spring, to protect possible skylark and provide abundant flowers as nectar and forage resource.
- Clear out old pond along PROW, for the benefit of many wildlife groups including birds. See separate pond report for specific recommendations.
- Leave generous tussocky grass margin adjacent to hedges to provide both foraging resource for insectivorous birds and nesting habitat for yellowhammer.
- Consider planting specific winter bird food crops in some agroforestry rows – this could double as a cover crop and would increase seed resources through the winter.
- Assess large hole nesting opportunities for stock dove and barn owl and consider provision of additional box.

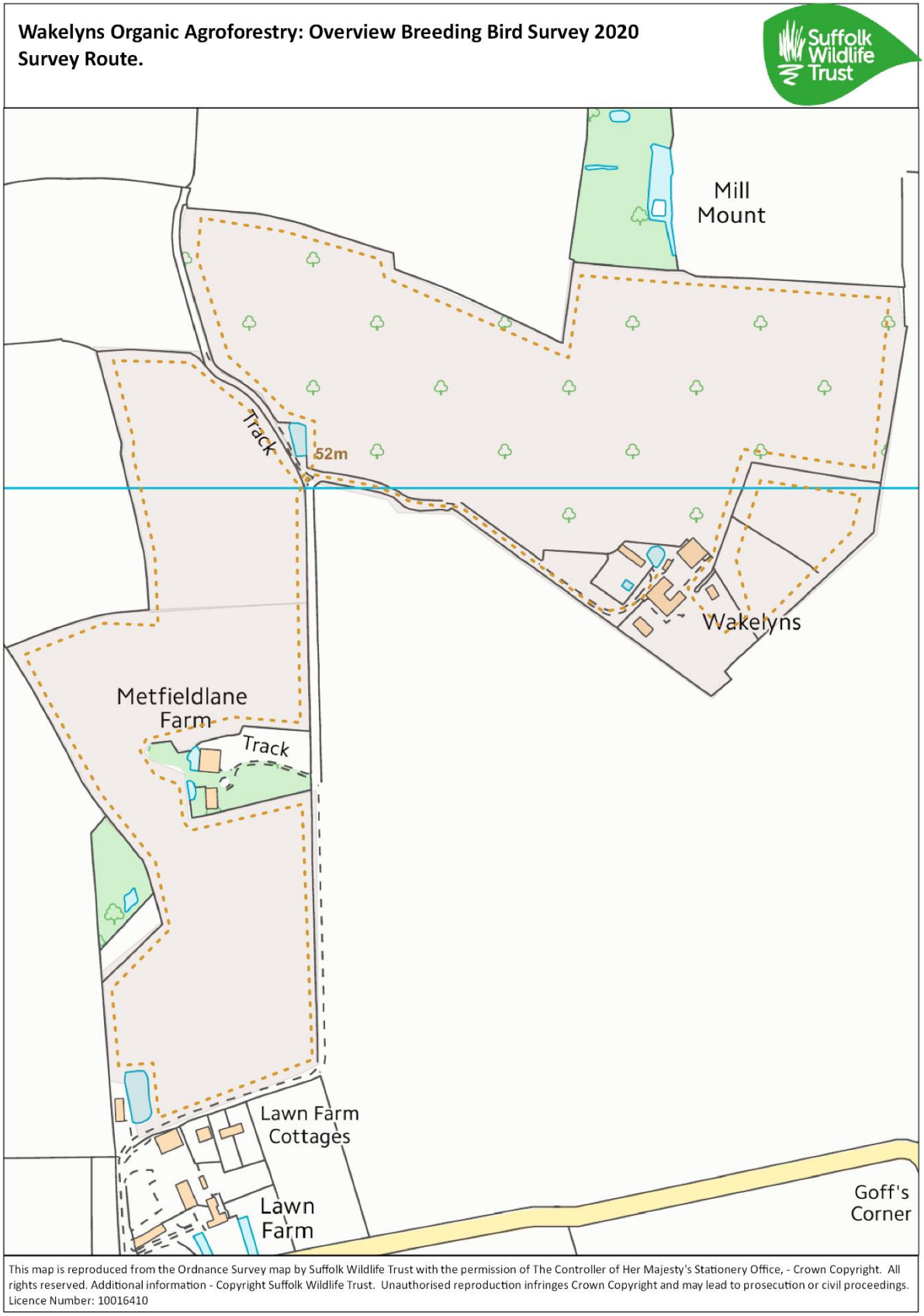
Example of rotational management





Maps:

Map 1 – survey transect route to inform repeat surveys.



Map 2 – locations of species included in the breeding territory estimate, abbreviations used as per results table (may differ from BTO standard).