

Response to Local Plan Policy S/CBC from John Meed

The first proposals for the *Greater Cambridge Local Plan* set out to ‘increase and improve our network of habitats for wildlife, and green spaces for people, ensuring that development leaves the natural environment better than it was before.’ It will aim to do this by requiring ‘development to achieve a minimum 20% biodiversity net gain’.

In doing this it seeks to go further than the Environment Bill which will ‘make it mandatory for housing and development to achieve at least a 10% net gain in value for biodiversity – a requirement that habitats for wildlife must be left in a measurably better state than before the development’.

The Environment Bill also requires ‘a new, historic, legally binding target to be set to halt the decline in species abundance by 2030’. And in 2019 the City Council declared ‘its recognition of the global biodiversity emergency and the local impact this could have on the communities and businesses we serve’.

Policy S/CBC: *Cambridge Biomedical Campus (including Addenbrooke’s Hospital)* in the local plan identifies an ‘area of major change’: S/CBC/E2 includes land adjacent to the Biomedical Campus that is already scheduled for development; in addition, S/CBC/A recommends development of the two fields between Babraham Road and Granham’s Road (pictured below in June). Such development would reduce the habitat available to farmland wildlife and in particular threatened farmland birds.

Will the developments in this area of major change, as proposed, achieve a minimum 20% biodiversity net gain, leave the natural environment better than it was before, and help halt the decline in species abundance?

For the last ten years I have been conducting ecological surveys of one square kilometre of green belt which includes the area of major change. The fields I study are bounded by the Biomedical Campus, the Nine Wells development, Babraham Road, Granham’s Road and the railway line. I attach a copy of my interim report for 2021.



The species most affected

At first sight the area I study may appear unlikely to support high levels of biodiversity. However, in practice it is home to remarkable populations of red-listed farmland bird species of high conservation concern (1), as well as the equally endangered water voles. There are also good numbers of brown hare and a range of other birds, mammals, arable plants, butterflies, dragonflies and other invertebrates.

Grey partridge

Grey partridge thrive across the square kilometre I study with a population of up to 18 spring pairs and 80–90 autumn birds, far more than is usually the case in Cambridgeshire where 0–5 pairs/km² in spring and 0–20 birds/km² in the autumn are typical. Grey partridge declined by 93% between 1970 and 2018, to just 37,000 pairs, and *Birds of Conservation Concern 5 (BoCC5)* classifies them as 'vulnerable to extinction' in the UK (1).



In the two fields between _____ and _____ covered by _____ five pairs bred this spring and at least four raised families – around 25 birds in four groups or 'coveys' used the fields this autumn.

Yellow wagtail

Yellow wagtails have declined by 68% since 1970, and there are now just 20,000 pairs in the UK; *BoCC5* classifies them as 'near threatened' meaning that they are considered likely to become at high risk of extinction in the UK in the near future. They are migratory birds that pass the winter in west Africa which means they face threats elsewhere in addition to the habitat loss and degradation they have suffered here.



Yellow wagtail nested close to the _____ the past, but have not done so since the Biomedical Campus development. The _____ are now the only place on the site regularly used by yellow wagtail with two-three pairs breeding there in recent years. It is probable that development of these fields as currently proposed would result in the loss of this species across the area I study.

Corn bunting

Corn buntings have declined by 89% since 1970 and their recent extinction in Ireland is being repeated across large parts of this country and *BoCC5* confirms we are at great risk of losing them here as well. There are now only 11,000 territories in the UK and the BTO's 2019 Breeding Birds Survey recorded corn buntings in just 148 of the 4,005 squares surveyed.

In recent years there have been ten or eleven territories across the square kilometre I study. Corn buntings are a species that like to nest in clusters, and there is one such cluster of four territories around the _____. Development of these fields as currently proposed would remove these nest sites.



Other red-listed species

Typically, around three pairs of both yellowhammer and of linnet and around eight pairs of skylark also breed ; in winter a flock of 50–80 linnet regularly roost . All are also red-listed as yellowhammer have declined by 60% and skylark and linnet by 56% since 1970 (see Appendix).

Policy S/CBC/A acknowledges that ‘release of the areas proposed would result in very high harm to the Green Belt’ and that ‘there are concerns regarding biodiversity’. In a feat of considerable verbal gymnastics, it then states that ‘the harm of release would be lower than other land in this area, although this is still acknowledged as a high level of harm’. I have not been able to trace definitions of ‘very high harm’, ‘lower harm’ and ‘high level of harm’, but losing ‘vulnerable’ and ‘near-threatened’ species must constitute ‘very high’ harm.

Are the ‘measures to enhance biodiversity’ realistic?

Policy S/CBC does propose ‘measures to enhance biodiversity and green infrastructure’ on the field sloping up to White Hill. In principle, this is a welcome initiative and there are certainly habitat improvements that could be made. However, there are several reasons why this does not go anywhere near far enough to counter the biodiversity loss.

Firstly, the field in question already supports good numbers of these farmland species. Although it is a larger field (around 40 hectares) it is in practice cropped in different sections, and habitat variety is also provided by a hedgerow, two grassy banks and an area planted with a winter bird seed mix. Typically, some in the field, along with several pairs of and an additional . Over the course of my study, between there each year, and in the winter of 2020-21 overwintered there; similar numbers are present this year as well. Up to .

Secondly, Policy S/CBC does not specify how the area would be managed to achieve a net gain in biodiversity. Even with enlightened habitat management, there would still be very difficult decisions to be taken both about which species would be favoured, and which not, and about which management measures to implement. Ironically, changes in land use and increased public access (the latter necessary to replace existing permissive footpaths that are used extensively) could increase pressure on populations of the species already there, making it quite possible that habitat mitigation here could increase species loss.

Thirdly, and fundamentally, the area is not large enough to offset biodiversity loss. At present, the arable land available to wildlife within the ‘area of major change’ adds up to around 70 hectares – if all the councils’ proposals were implemented we would be left with around 40 hectares. And we can add to this the other features – hedgerows, ditches, copses and grassy margins that would be lost or become inaccessible to farmland wildlife. The limits of the words ‘measures to enhance biodiversity and green infrastructure’ become immediately apparent. ‘Fitting a quart into a pint pot’ would be more accurate.

It is entirely unrealistic to expect Policy S/CBC, as it stands, to achieve the minimum required 20% biodiversity net gain of habitat. Even if offsite habitats were proposed that might benefit farmland birds elsewhere these would not justify losses of sedentary farmland bird species from their existing range.

Achieving biodiversity net gain

If Policy S/CBC is genuinely essential to the future of the City and South Cambridgeshire, and sufficiently exceptional to justify the release of green belt, a separate mitigation or compensation package would be required for the farmland birds in order to 'take account of particular species in a locality that give habitats their local distinctiveness' (2).

Such species mitigation would need to be carried out on immediately adjoining land to provide a refuge for the displaced wildlife as the species concerned are not readily mobile – it is common for grey partridge to spend their entire lives in or near a single field, while the corn bunting 'is so sedentary that individuals only 30km apart sing in a different dialect' (3).

This would mean improving the arable habitat across Granham's Road where currently there are just three fields, two hedges, one of which is in a poor state with large gaps, and far less margin habitat. The land does support but is less welcoming to the other red list species – in particular, the lack of hedgerows and margins means there is little scope for to breed and roost.

To give an idea of the habitat improvement needed, grey partridge have specific requirements: a safe place to nest and roost, a source of food for their chicks, and food supplies to get them through the winter (4); these would also benefit the other red-listed species. These could be provided as follows:

- Nesting and roosting places could be provided by restoring the existing hedgerows and margins, and by creating new hedgerows. These would also benefit yellowhammers and linnets, which nest, feed and sing in hedgerows; and corn buntings which also feed and sing there. Additional measures such as skylark plots would also benefit yellow wagtails and skylark.
- The chicks of grey partridge, yellow wagtails, corn buntings, skylark and yellowhammers need invertebrate food in the early weeks of their lives. This can be provided by improving and adding grassy margins, where invertebrate larvae will develop; and by reducing herbicide use in at least some parts of fields so that arable weeds can grow. A recent paper showed how 'even in an intensively grown cereal, arable weeds can play an important role in maintaining and restoring invertebrate populations', and that even 10% weed cover may be sufficient (5).
- Grassy margins also help provide winter food but this will be improved considerably if areas can be left as stubble for longer, or planted with a winter bird food mix.

Such a combination of restored and new hedgerows, grassy margins, changes to cropping and winter food would greatly help these species. These changes would create a mosaic of fields and other habitats, while retaining large enough fields for skylarks and yellow wagtails to nest safely among the crops, and to allow machinery ready access to maintain a commercially viable operation, as is currently the case for the fields at threat. Additional public access should also be built into the plans – indeed a genuine vision for the area would include a permissive path linking Nine Wells with Magog Down.

These changes would need to be built into the plan, via some form of agreement or covenant such as the conservation covenant suggested in the forthcoming Environment Bill. Such an agreement should also offer protection from future game bird releases.

The changes would need to be initiated well in advance of the loss of the existing fields to ensure suitable habitat is ready when needed. We would also need to carry out regular surveys to monitor population changes.

Conclusion

It should be clear from the evidence I have gathered over the last ten years that Policy S/CBC/A will have a negative impact on biodiversity, and that the mitigation measures proposed will be insufficient to prevent this, let alone achieve biodiversity net gain.

Habitat creation is always harder work than maintaining existing habitat. While my alternative proposals are based on the available research evidence, other local factors may help to account for the success of farmland birds in the area I study, and these may prove difficult to replicate in practice. Furthermore, measures like my alternative proposals should in any case form part of Strategic Green Infrastructure Initiative 3. Retaining the existing fields would be the less risky option.

Having said this, additional habitat improvement such as that I propose does offer a real improvement on the existing proposals, and a greater chance of achieving biodiversity net gain. It would also contribute more to Strategic Green Infrastructure Initiative 3. And while it would require genuine effort from the councils, and a good working relationship with the land owners and managers, Initiative 3 states that 'working with the farming community will be fundamental to effective delivery'.

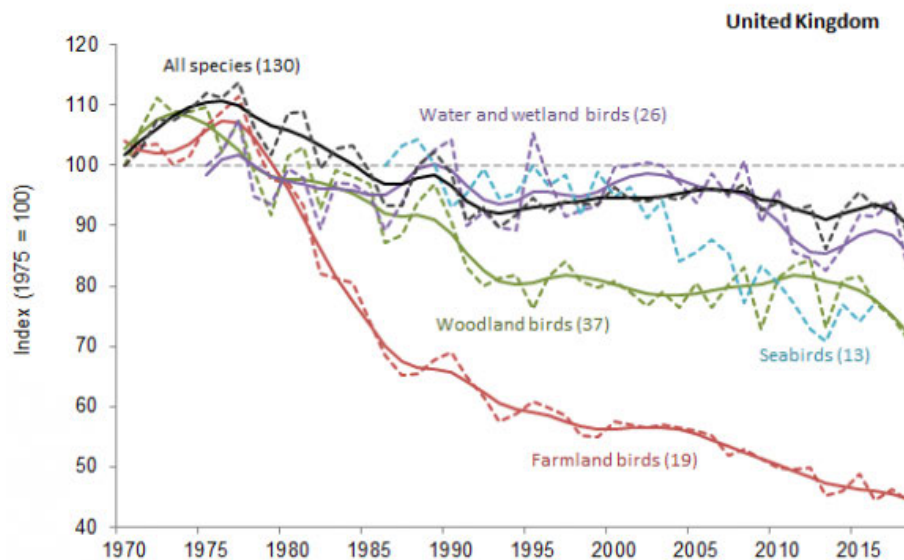
Furthermore, a project like this could be something for the councils to be proud of, as it may provide a template that other councils could adapt to help to save species that otherwise are at risk of extinction in the UK.

John Meed, December 2021

John Meed is a researcher and writer who lives in south Cambridge. He conducts regular surveys on behalf of the British Trust for Ornithology, the Royal Society for the Protection of Birds and the UK Butterfly Monitoring Scheme. He is currently completing a book about his ten-year study, provisionally entitled *A haven for farmland birds*. See <http://johnmeed.net/john-meed/nine-wells/>.

Appendix: The decline in farmland birds

This brief appendix outlines why safeguarding our farmland birds should be a high priority. The following graph, based on *Wild Bird Populations in the UK* (6), shows how, as the *State of Nature 2019* report puts it, 'bird species most closely associated with farmland have declined more severely than birds in any other habitat' since 1970 (7).



The national declines of the red-listed species most affected by S/CBC are as follows:

Grey partridge	-93%	Yellowhammer	-60%
Corn bunting	-89%	Skylark	-56%
Yellow wagtail	-68%	Linnet	-56%

Declines in bird populations indicate much deeper problems – the habitat and foods they depend on have also gone. The *State of the UK's Butterflies 2015* report (8) showed that we lost over half of our farmland butterflies between 1976 and 2014, and other farmland invertebrates have also been hit hard. Key factors are changes in farming practices including the loss of mixed farming, a move from spring to autumn sowing of arable crops, changes in grassland management, increased pesticide and fertiliser use, and the removal of hedgerows.

My interim report for 2021 (attached) shows how this year around

I study. Habitat variety (the combination of arable crops with hedgerows, ditches and grassy margins) and land management (field size, crop rotation, targeted pesticide use and winter cover crops) contribute to the richness of the area.

Data from the BTO (9) shows that grey partridge, corn bunting and yellow wagtail are increasingly restricted to eastern England. However, even here their distribution is patchy; in Cambridgeshire grey partridge are typically recorded in a fifth of the Breeding Bird Survey squares, and corn bunting and yellow wagtail in a quarter.

References:

- 1 Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. (2021). The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. *British Birds* 114: 723-747. See also Stanbury, A, Brown, A, Eaton, M, Aebischer, N, Gillings, S, Hearn, R, Noble, D, Stroud, D, Gregory, R and Powell, Dan (2017). The risk of extinction for birds in Great Britain. *British Birds*. 11,. 502-517.
- 2 Defra (2019) *Biodiversity net gain and local nature recovery strategy regulatory impact assessment* (pp 15-16) which also underlines that while 'the metric focuses on habitats' and 'is considered a suitable proxy for widespread species found in typical examples of different habitats', scarce species 'are likely to need separate consideration to the biodiversity metric' and that 'local and special characteristics need to be considered'.
- 3 Robinson, R.A. (2005) *BirdFacts: profiles of birds occurring in Britain & Ireland*. BTO, Thetford
- 4 Brewin, J, Buner, F and Ewald, J (2020). *Farming with nature – promoting biodiversity across Europe through partridge conservation*. The Game and Wildlife Conservation Trust
- 5 Smith, B M., Aebischer, N J., Ewald, J, Moreby, S, Potter, C, Holland, J M (2020). The Potential of Arable Weeds to Reverse Invertebrate Declines and Associated Ecosystem Services in Cereal Crops. *Frontiers in Sustainable Food Systems*, 3
- 6 Defra (2020). *Wild Bird Populations in the UK, 1970–2019*
- 7 Hayhow, D.B et al (2019). *The State of Nature 2019*. The State of Nature partnership.
- 8 Fox, R et al (2015). *The State of the UK's Butterflies (2015)*. Butterfly Conservation and the Centre for Ecology and Hydrology
- 9 National distributions of species are found in the BTO's Bird Atlas Mapstore (<https://app.bto.org/mapstore/>) while species data for Cambridgeshire is based on the BTO's Breeding Birds Survey (<https://www.bto.org/our-science/projects/bbs>) – in the ten years from 2010–2019 grey partridge were recorded in on average 19% of BBS squares, yellow wagtail in 28% and corn bunting 24%. Each species is recorded in even fewer of the Cambridgeshire records submitted to the BTO's Birdtrack, typically under 10% (<https://www.bto.org/our-science/projects/birdtrack>).