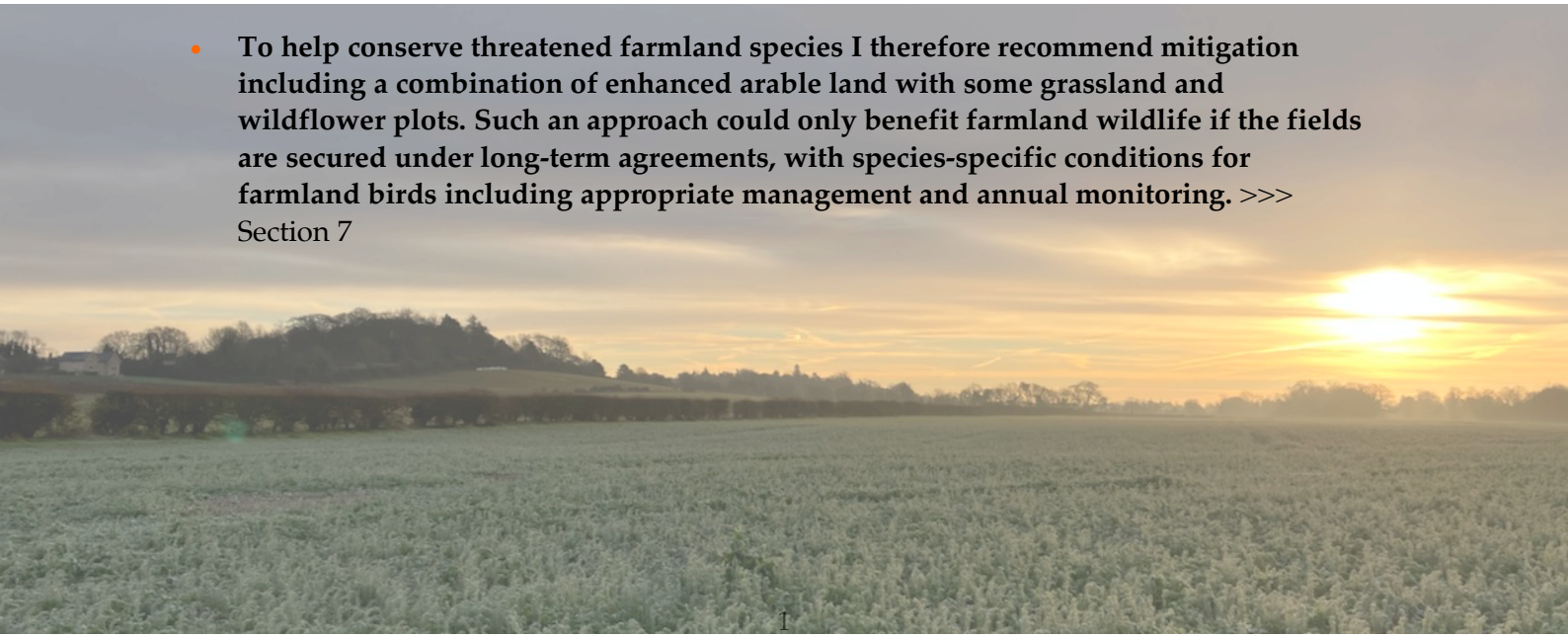
Response to Policy S/CBC from John Meed

Executive summary

- My 14-year study of the arable land adjoining the southern edge of the Cambridge Biomedical Campus shows that the area holds remarkable populations of threatened 'red list' farmland birds and other wildlife. >>> Section 1
- It is also clear from my evidence that the encroachment of CBC development into these arable fields has already had an impact on farmland birds, particularly the grey partridge, classified as 'vulnerable to extinction' in the UK. >>> Section 2
- The proposals in S/CBC to release two further fields from Green Belt will further increase the pressures on threatened farmland species as these fields are also well used by the red listed birds. >>> Section 3
- This version of S/CBC is a clear improvement over the first proposals in 2021 as it proposes mitigation by habitat improvements to one field in my study area (the 'SEA'), *and* to three further fields adjoining my study area (the 'Landscape Improvement Area') which are currently less suitable for most of the red list species. >>> Section 4
- Nonetheless there will be tensions in the way these four fields may be managed, in particular between habitats favoured for BNG such as woodland and grassland and the habitat needs of farmland species; and between amenity use and wildlife conservation. >>> Section 5
- The best mitigation for farmland wildlife would be arable enhanced, for example, by new wildflower or winter bird food plots, hedgerows and margins (which also offer good opportunities for BNG). Recent guidance suggests that farmland species will also use grassland managed for conservation provided that nest sites, chick food, and winter food/cover are also available. Fencing off conservation and grazing areas would allow amenity access and footpaths alongside safe spaces for wildlife. >>> Section 6
- **To help conserve threatened farmland species I therefore recommend mitigation including a combination of enhanced arable land with some grassland and wildflower plots. Such an approach could only benefit farmland wildlife if the fields are secured under long-term agreements, with species-specific conditions for farmland birds including appropriate management and annual monitoring.** >>> Section 7



1 Background – the fields around Nine Wells and White Hill

My 14-year ecological study of the farmland wildlife in eight fields around Nine Wells and White Hill, bounded by the Biomedical Campus, the Nine Wells development, Babraham Road, Granham's Road and the railway line draws on my experience as a surveyor for the British Trust for Ornithology (BTO), RSPB and the UK Butterfly Monitoring Scheme.[1]

The key focus of my study has been red list farmland birds[2] which form one of the UK Government's Biodiversity Indicators[3] because of their place as consumers in the ecosystem – declines in bird populations indicate wider problems. The State of Nature 2023 report[4] states that the 'bird species most closely associated with farmland have declined more severely than birds in any other habitat' since 1970'.

This table shows the six species that have been the focus of my study; the populations I have recorded over the last 14 years; and their decline and national importance:

Species	Populations	Decline since 1970; national importance[5]
Grey partridge	8–18 pairs	–93%; 'vulnerable' to extinction in the UK; red list
Corn bunting	8–11 territories	–87% – 'near threatened' with UK extinction; red list
Yellow wagtail	1–3 pairs	–74%; 'near threatened' with UK extinction; red list
Yellowhammer	10–15 pairs	–65%; red list
Linnet	8–20 pairs	–56%; red list
Skylark	50–60 pairs	–52%; red list

In addition, across my study area I have recorded:

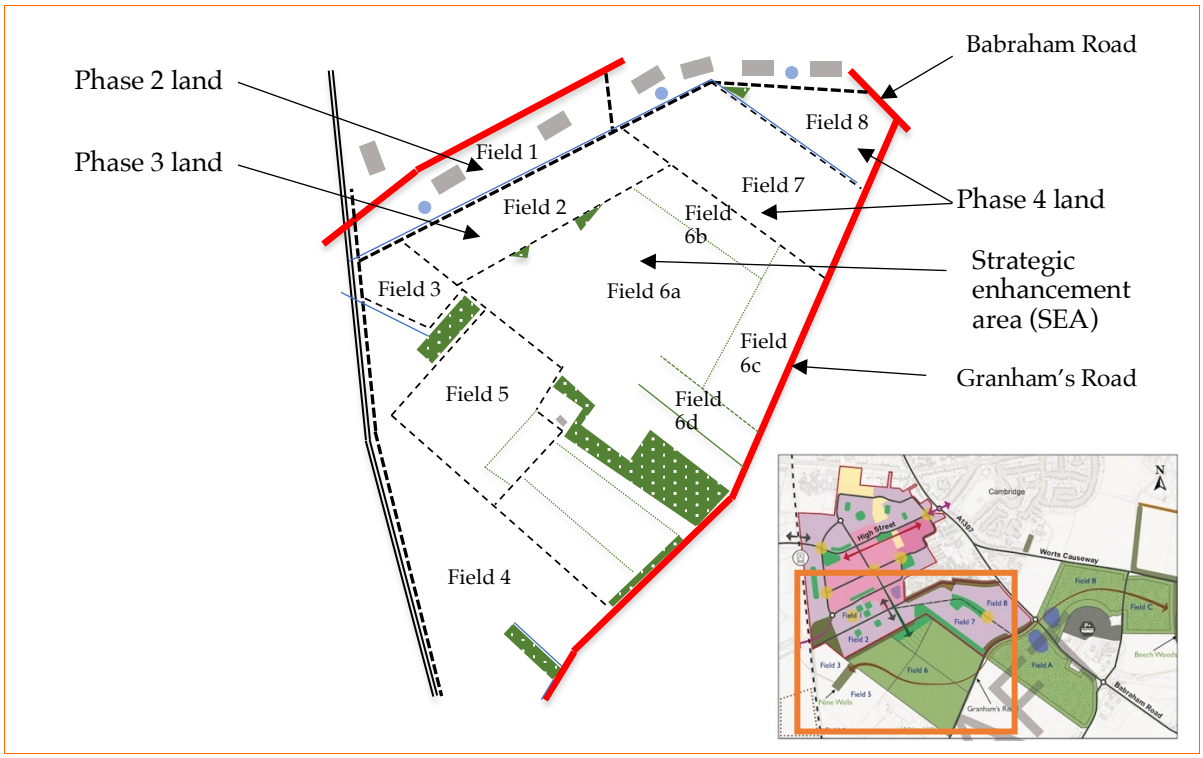
- 108 bird species, including 18 of the 19 farmland bird indicator species, 25 red list species and 34 amber list species; in total 53 species have bred
- 20 mammal species including brown hare, water vole and badger
- 24 butterflies including small colonies of brown argus and small coppers
- 17 dragonflies and damselflies and a range of bees, wasps, moths, grasshoppers, crickets, beetles, flies and ants
- over 40 trees and shrubs including the rare black poplar and over 120 species of flowering plants.

My study and book have been described as 'a model of local natural history writing', 'a passionate study', 'a rallying cry to promote and adopt the nature friendly farming approach', 'meticulous recording of farmland birds' and 'years of careful observation'.[6]

My study is regularly quoted in planning documents including the *Cambridge Biomedical Campus Preliminary Ecological Appraisal* which recommends that 'breeding and wintering bird surveys [should be] kept up to date'.

2 The impact of Phase 2 CBC expansion

This map shows my study area (and below right the S/CBC proposals, page 219). Phase 2 of the Biomedical Campus Phase 2 began on my Field 1 in 2017 with the construction of ABCAM Building; that of 1000 Discovery Drive began in 2022 and now all the rest of Field 1 is under development.



This has already had a significant impact on farmland birds – this table shows the numbers of pairs of the six red-listed species recorded in Fields 1 and 2 from 2016–2025:

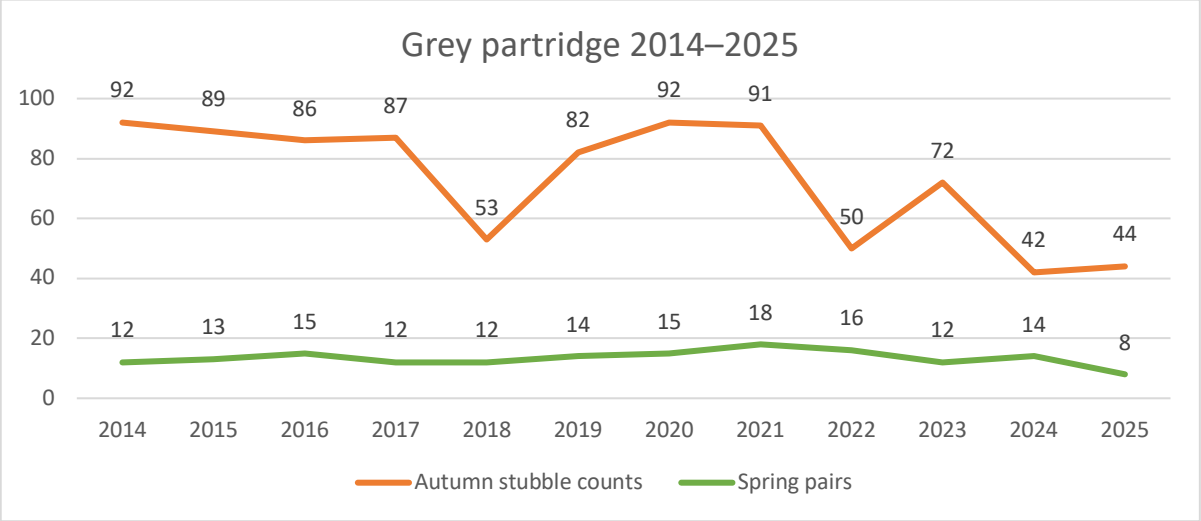
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Grey partridge	6*	1	6	3	–	4	1	–	–	–
Corn bunting	2	1	4	1	1	2	1	–	–	–
Yellowhammer	6	3	3	2	3	2	4	3	2	3
Skylark	8	9	8	7	18	18	10	6	7	3
Linnet	5	4	2	3	2	1	3	–	–	–
Yellow wagtail	1	–	–	–	–	–	–	–	–	–

*In 2016 Field 1 was a centre for grey partridge pairing, and on 11/2/2016 I recorded 9 pairs there, and 2 more very close by; pairs spread out further across the site later in the spring.

Construction of the ABCAM Building appears to have had limited impact. However, since work on 1000 Discovery Drive began in July 2022 no grey partridge, corn bunting or linnet have nested in either field, and far fewer skylark. Loss of habitat explains the declines in Field 1, while disturbance and noise levels may have made Field 2 less attractive. Hedge-nesting yellowhammer were less affected.

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 it is now a 'scarce' breeder[7] and 0–5 pairs/km² in spring and 0–20 birds/km² in the autumn are typical. However numbers, especially in autumn, have been lower since 2022.



This table compares numbers of grey partridge pairs in Fields 1–2 with those in Fields 4–6, the three largest fields:

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Fields 1–2	6	1	6	3	–	4	1	–	–	
Fields 4–6	7	9	6	9	13	9	12	11	12	8

Bird populations fluctuate in response to factors such as weather, cropping, availability of food and changes in predators. The cool, wet breeding season of 2024 reduced invertebrates that chicks need and contributed to fewer pairs in 2025 (at the RSPB's Home Farm on the other side of Cambridge grey partridge pairs decreased from 6 in 2024 to 2 in 2025[8]).

Nonetheless, while there were no grey partridge pairs in Fields 1–2 after 2022, pairs in Fields 4–6 remained fairly consistent. This suggests that the Field 1 development has not only reduced numbers nearby, but may well have contributed to an overall decline.

Phase 3

In the last local plan my Field 2 was also released from Green Belt as Phase 3 of CBC. Future development of this land can only add to the pressures on threatened species, and to date there has been no meaningful mitigation of these pressures.

3 The likely impact of losing Fields 7 and 8 (Phase 4)

So what is the likely impact of losing Fields 7 and 8 as proposed in S/CBC? The following table shows the number of red list pairs in these two fields between 2016 and 2025:

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Grey partridge	–	1	3	2	1	5	3	1	1	–
Corn bunting	2	2	3	4	3	4	4	2	2	2
Yellowhammer	3	2	2	5	3	1	1	2	–	3
Skylark	5	8	7	6	4	7	10	10	9	10
Linnet	3	4	5	7	5	3	3	3	2	4
Yellow wagtail	–	–	–	1	2	3	2	1	–	–

Although there are again fluctuations from year to year, it's clear that both fields make an important contribution to the overall populations in the area. If this habitat is lost there is likely to be an overall decline in populations without suitable mitigation.

The first proposals for the local plan in 2021 suggested that habitat improvements to one field within my study area would be sufficient. I commented in my response that '*It is entirely unrealistic to expect Policy S/CBC, as it stands, to achieve the minimum required 20% biodiversity net gain of habitat… species mitigation would need to be carried out on immediately adjoining land to provide a refuge for the displaced wildlife.*'

It is therefore important that the 2025 proposals include habitat improvement not only to the original field (the 'Strategic Enhancement Area') but also to three further fields adjoining my study area (the 'Landscape Improvement Area'). The revised S/CBC is generally very light on detail about possible mitigation in these fields, but there are some positive signs. The following paragraphs in S/CBC highlight the importance of safeguarding farmland wildlife:

- Page 215, Paragraph 17c: '*existing agricultural*, grassland and woodland *habitats are enhanced*, improving ecological links between Nine Wells LNR and Gog Magog Hills'.

- Page 221, Paragraph 3.2.27 finishes: 'The enhancement of *agricultural*, grassland and woodland habitats, the creation of ecological corridors, *and the restoration of farmland species* are essential components of this strategy' (my italics).

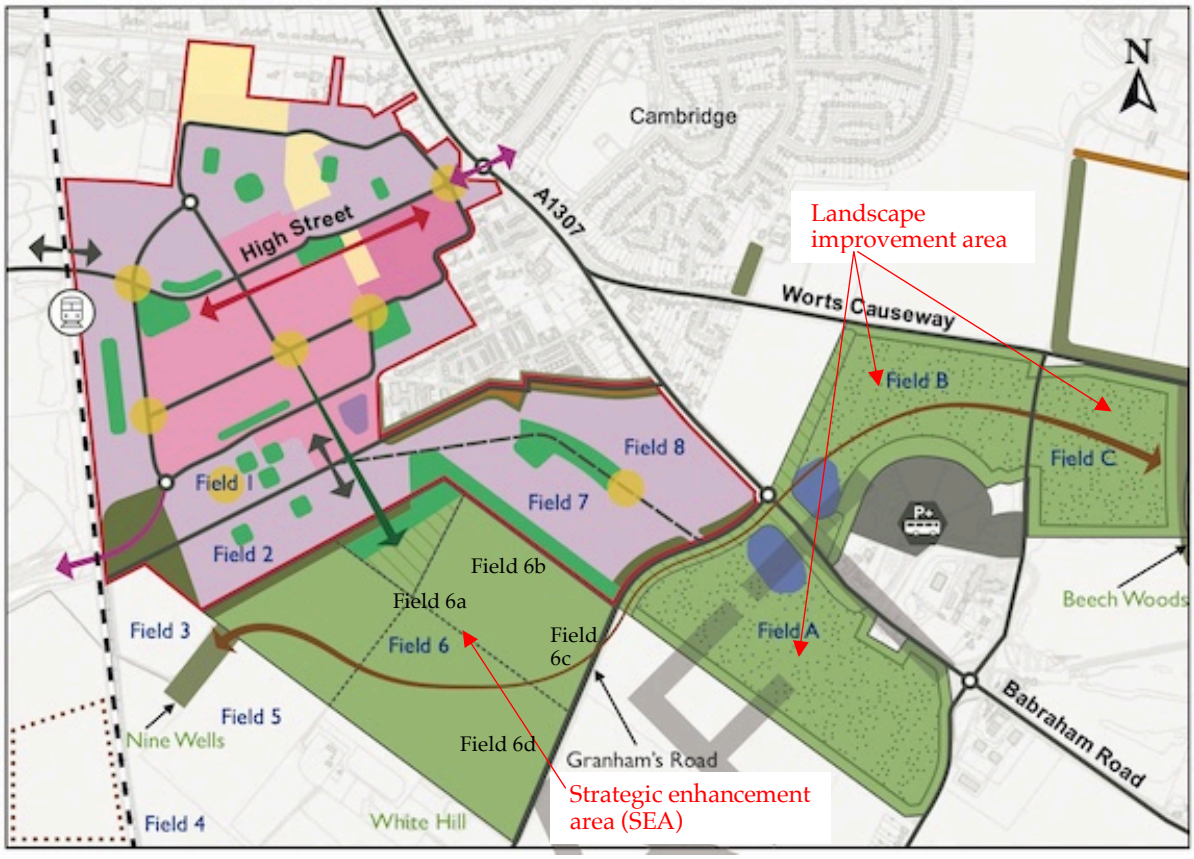
In addition, the *Cambridge Biomedical Campus Preliminary Ecological Appraisal* stresses (Page 23 Para 4.5.24) that '*Farmland birds have declined greatly in the UK and many are species of principal importance*' and the Conclusion Paragraph 5.4.3 states:

> '*A future biodiversity strategy will need to balance the requirements for quantitative biodiversity net gain against the needs of the current assemblage of species present, in particular species which require large areas of cropland and/or grassland such as ground nesting farmland birds.*'

The *Biodiversity and Green Spaces Topic Paper* (Page 18 Paragraph 3.46) states that 'consideration is given to both habitat *and species* constraints and opportunities'.

4 Existing farmland wildlife in the four mitigation fields

This map, adapted from S/CBC, shows the Strategic Enhancement Area (SEA – my Field 6) and the three fields identified for the Landscape Improvement Area (marked as Fields A–C):



The Strategic Enhancement Area (SEA)

The SEA is already home to good numbers of red list species – this table shows the estimated number of pairs over the last 10 years:

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Grey partridge	4	6	4	4	8	4	5	4	6	3
Corn bunting	3	2	1	1	2	1	2	3	5	3
Yellowhammer	3	5	2	3	4	4	2	3	5	3
Skylark	12	16	19	23	20	16	21	15	26	25
Linnet	4	7	4	3	2	3	4	2	3	5
Yellow wagtail	–	1	1	–	–	–	–	–	–	–

Although this is by some way the largest field in my study area, there are in practice four owners: the Trumpington Estate owns and farms most of the land (Field 6a); the County Council owns a strip of land along the hedge on the north east side (Field 6b); a strip of land beside Granham's Road is owned by Keith Naylor (Field 6c); and a 4 hectare area near the top of White Hill is owned by the Sills family (Field 6d).

This patchwork means that different parts of the field may be cropped differently and that two grassy banks and an in-field hedge provide extra nesting habitat. The Sills Field (6d) was until last year planted with *AB9 Winter bird food*, with considerable benefits for farmland species; in early 2021 some 40 grey partridge formed a lek in the field during pairing, an even that only occurs in the few areas where such numbers live – 4 pairs remained there to breed while others spread out further.

It is now planted with *AB8/CIPM2 Flower rich margins and plots*; this is settling in so it is too early to assess the impact of the change but it should offer 'shelter and invertebrate food for farmland birds and their chicks' and 'seed food for farmland birds in autumn and winter'[9]. I had also recorded a smaller-scale lek in Field 6c in early 2020.

Finch flocks are regular across the whole field in winter and in 2025 a tree at the top of Field 6c hosted up to 80 linnets. Up to 5 corn buntings sing along Granham's Road and from the bank along Field 6d. Yellow wagtail breeding in F7 also forage in the field. Up to 20 brown hare use the field in the early spring.

There is some lack of clarity in S/CBC about the SEA. The map on Page 219 appears to identify a '*public amenity area*' next to the Campus separated from the rest of the field by '*landscaped bunds*'. Page 214, Paragraph 13 states that '*other associated uses and mitigation may be provided in the Strategic Enhancement Area, including drainage, habitat compensation and, in appropriate locations, open space*' while Page 215, Paragraph 17d requires *'a well vegetated landscape buffer… including planting of native species, wetlands, woodland and hedgerows'*.

Landscape Improvement Area (LIA)

Three arable fields are included in the Landscape Improvement Area:

- Field A is a long field with hedgerows along the roads but little other margin habitat. It holds skylark – in spring 2025 I recorded 19 singing males plus 2 corn buntings and 2 whitethroats. Although partridge and other species sometimes forage in the field, it is unlikely that they breed because of the limited margin areas. Importantly, a small field at the Hinton Way end of the field, also owned by the Sills family, is planted with *AB9/CAHL2 Winter bird food* and attracts yellowhammer, linnet and corn bunting – I have also seen individual grey partridge there.

- Field B was in the past home to several of the red listed farmland birds including grey partridge. However, the combination of house building in the western part, and the increasing height of the woodland around the Park and Ride has had an impact. On a visit in Spring 2025 I recorded 2 skylarks, 1 linnet and 1 whitethroat.

- Field C neighbours the Beechwoods LNR. On a visit in Spring 2025 I recorded 2 skylarks, 1 whitethroat and 1 lesser whitethroat. In addition, a corn bunting was singing from just across Wort's Causeway.

Page 215, Paragraph 18 of S/CBC sets out *'Proposals in the Landscape Improvement Area'* but this makes no concrete recommendations for mitigating the impact on farmland wildlife.

In addition, the **realignment of Granham's Road** will remove hedgerows which provide cover and nest sites and overhead wires used extensively by corn buntings as song posts.

5 Mitigation tensions

There are potential tensions for managing the mitigation fields (the SEA and LIA), notably between existing arable land and grassland/woodland, and between amenity and conservation.

Arable land use vs grassland/woodland

There are several reasons why there may be pressures to convert arable land into grassland or woodland. Firstly, BNG units for grassland and woodland are much higher than those for arable. Secondly, specific habitats such as calcareous grassland are priorities in the area south of Cambridge. And thirdly, while it is often true that intensively farmed arable land may support limited biodiversity, there is too often insufficient recognition of the value of enhancing arable land through margins, hedgerows, beetle banks and wildflower plots.

We have already seen how Paragraph 17c and Paragraph 3.2.27 highlight 'agricultural, *grassland and woodland* habitats'. The *Cambridge Biomedical Campus Preliminary Ecological Appraisal* also stresses the need to 'plant new areas of species-rich native deciduous woodland' and 'consider the creation of species-rich chalk grassland', while also recognising the need to 'retain and enhance existing hedgerows and arable field margins' (Page 33, Paragraph 5.3.1).

Amenity vs conservation

There will be entirely understandable pressure for amenity space, both for staff and patients of the campus, and from local residents; and the loss of Fields 7 and 8 also means the loss of footpaths in open countryside. In the S/CBC document:

- Page 215, Paragraph 17 talks of establishing 'a strong, varied and well-connected framework of *accessible green infrastructure* optimising biodiversity value and integrating nature-rich open spaces and ecological corridors throughout the site' and 'delivery of biodiversity enhancements, while accommodating *appropriate amenity, recreation, and wellbeing functions*'.

While such amenity should where possible be 'embedded within development parcels' there is clearly an expectation that some of Fields 6, A, B and C should also support this function:

- For example, Paragraph 17 talks of establishing 'high quality active travel routes from Limekiln Road into the southern end of the Campus' and 'providing multifunctional landscapes that balance ecological protection with informal play, sport, and relaxation'.

- Page 214, Paragraph 13 states that 'other associated uses and mitigation may be provided in the Strategic Enhancement Area, including drainage, habitat compensation and, in appropriate locations, open space'.

- Page 221, Paragraph 3.2.27 finishes: 'The enhancement of *agricultural*, grassland and woodland habitats, the creation of ecological corridors, *and the restoration of farmland species* are essential components of this strategy' (my italics).

The *Biodiversity and Green Spaces Topic Paper* (Page 18 Paragraph 3.46) recognises the 'Recreational impacts on designated biodiversity and geodiversity sites'.

6 Can these tensions be resolved?

Most farmland birds (and other wildlife such as brown hare) prefer an open habitat. In addition, it is widely agreed that farmland birds have three key requirements:

- A safe place to nest, often on the ground, in wildflower plots, hedgerows, grass margins and beetle banks, but sometimes out in the fields (especially skylark)
- Food in spring and summer for their growing chicks – invertebrates (except for linnets) found in wildflower plots, conservation headlands, grassy margins, etc.
- Food and shelter over the winter in wildflower plots, winter bird food mixes, winter stubbles and similar seed-rich areas[10].

See **Appendix 1** for more detail and individual species requirements.

Woodland

Woodland can offer important habitat to the species that use it. However, because most farmland species prefer open habitat, they generally avoid areas of woodland.

> *Inappropriate planting in open landscapes robs the habitat much of our most threatened wildlife. Species like skylark, corn bunting, grey partridge, lapwing and curlew all depend on open treeless landscapes for their survival, so we should be very cautious about the proposed biodiversity benefits of woodland planting.*[11]

Therefore, in order to conserve the existing farmland wildlife any new woodland would best be restricted to land adjoining existing woodland in Nine Wells and the Beech Woods.

Grassland

Evidence from the early days of agri-environment schemes suggested that converting arable land to grassland may have reduced numbers of some farmland species. One study found that 'grey partridge numbers declined rapidly on arable fields' following their reversion to grassland while another found that skylark, corn bunting and meadow pipit 'were not consistently more abundant on arable land reverted to grassland'.[12]

However, the guidance has evolved over more recent times. Francis Buner, one of Europe's leading experts on grey partridge, comments that if a field is converted to grassland:

> *This should be planted with species-rich flower meadow mix that must not be mown during the breeding season between 1 May and 31st of July. From 1st of August a hay cut should be taken. Such meadows, especially if they are also grazed in winter, can be very suitable for grey partridges year-round, including nesting and foraging during the breeding season.*[13]

At nearby Magog Down it seems likely that 'skylarks prosper better in grassland than in cereal cropping' where breeding may be curtailed by harvest[14]. Grassland can be made more attractive for ground-nesting birds by planting adjacent wildflower plots which provide ideal nesting sites because of their open structure at ground level, combined with vegetation that provides suitable cover and camouflage, as well as winter food and cover.[15]

Amenity

Public access can negatively affect wildlife: 'soils and vegetation can be directly and indirectly affected by trampling, with further impacts on the invertebrates and small mammals'; while disturbance can lead to 'possible changes in behaviour' and birds 'may not settle to breed, may vacate a site, or breed in reduced numbers due to recreational disturbance'[16].

We are fortunate to be able to draw on the experience of a number of local sites:

- My own study area is well used by walkers, cyclists and families for amenity but my study suggests that farmland birds have so far been able to live alongside this – indeed it is possible that human presence may deter predators.[17]

- Locally, Magog Down has good numbers of skylark and some other farmland species despite high amenity use – the combination of a fenced-off dog run, securely-fenced grassland, and signage and clear footpaths across open downland, has helped.[18]

- Trumpington Meadows has also had to manage amenity pressures on nesting skylark; The senior ranger comments that 'We started off with just signs in place but after watching numerous people and dogs wading through the middle of the meadows, flushing skylarks as they went, we decided to take further precautions. We use electric fencing posts connected with one line of old orange baler twine – cheap, easy to install, not intrusive to the birds.'[19]

- By contrast, in Hobson's Park Country Park (just across the railway line), where arable land was also converted to grassland, in the early days grey partridge, corn buntings and other species continued to use the land. However, there was a sharp decline as amenity pressure, especially from dogs, increased.[20]

So, managing access will be crucial if farmland birds are to survive in the aftermath of further CBC expansion. Land intended for farming and conservation should be clearly separated from amenity areas and footpaths, where necessary with fencing, and with suitable signs and interpretation.

In addition, the map on Page 219 contains other elements that could help manage access and improve biodiversity. For example, the 'bunds' could provide habitat for butterflies and other pollinators, while the drainage ponds could provide habitat for dragonflies, amphibians and reptiles.



2m high hedgerows with grassy margins provide nest sites, chick food and winter food and cover

7 Recommendations for S/CBC

In 2019 the City Council declared 'its recognition of the global biodiversity emergency'. The *Environment Act 2021* set a legally binding target to 'halt the decline in species abundance by 2030'. The following recommendations would contribute to halting the declines of threatened farmland species. See **Appendix 2** for more detailed suggestions.

The Strategic Enhancement Area (SEA)

The SEA close to the Campus (my Field 6) already provides habitat for farmland birds.

- The main area of this field should remain as arable enhanced by at least one more 2m-high hedge and margin habitats to provide additional nest sites, food and cover for farmland birds. The existing area planted with a bird food mix should be retained.

- It will make sense to use an area closest to the Campus for amenity, with clear signage to conserve wildlife using the arable land. There could also be value in extending woodland close to Nine Wells LNR (see **Appendix 2**).

The Landscape Improvement Area

- Of the three fields in the LIA, Field A (immediately across Granham's Road) is a priority for protection of farmland species as it is closest to the area where these already live. It should remain arable but enhanced with wider field-edge margins, an in-field beetle bank and an area planted with a wildflower mix or winter bird food. New hedges must be planted along the realigned Granham's Road and hedges maintained at 2m high.

- While Field B (across Babraham Road) could also be similarly managed as enhanced arable, it could also be considered for grassland conversion as long as the grass is grazed or mown after the breeding season and that safe nesting areas, chick food and winter food and shelter are also available eg in a wildflower plot.

- As Field C adjoins the Beech Woods LNR there would be a strong case for natural regeneration of scrub and woodland to extend the LNR and grassland conversion, again with safe nesting areas, chick food and winter food and shelter (see **Appendix 2**).

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.

- These changes would need to be secured legally, via some form of agreement or covenant such as the conservation covenant suggested in the *Environment Act 2021* that would 'take account of particular species in a locality that give habitats their local distinctiveness'[21]. Regular monitoring of populations should continue.

- In addition, a footpath linking Nine Wells and the Campus with the Beech Woods should pass around Fields A, B and C with clear signage and if necessary fencing.

- A true vision would extend the existing footpath from Nine Wells to Granham's Road and Hinton Way up to Magog Down, with accompanying habitat enhancements to the large field stretching up the hill from Hinton Way to Magog Down to create a wildlife corridor and improve ecological links. Such enhancements could yield BNG units.

Recommended changes to wording of S/CBC

The importance of safeguarding farmland species is highlighted in the S/CBC document which calls for 'the enhancement of *agricultural*, grassland and woodland habitats' (Page 221, Paragraph 3.2.27) and stresses that '*the restoration of farmland species'* is an essential component of this strategy (also Paragraph 3.2.27 – my italics). These priorities should be reinforced elsewhere as follows:

- Page 212, Point 7: Add 'including habitat improvements that will protect existing farmland wildlife' to read:

> 7. Areas to the south of the Campus in the Cambridge Green Belt will be enhanced to provide additional green space, landscaping and biodiversity improvements, *including habitat improvements that will protect existing farmland wildlife*, to mitigate the impact of development and enhance its wider setting

- Page 214, Paragraph 13: add 'to conserve threatened farmland species' as follows:

> 'Ensure the built area of the Campus is contained within the Site Allocation boundary identified on the Policies Map. Beyond this, other associated uses and mitigation may be provided in the Strategic Enhancement Area, including drainage, habitat compensation *to conserve threatened farmland species* and, in appropriate locations, open space.'

- Page 215, Paragraph 17c: change 'agricultural' to 'arable' for clarity and add 'and conserving existing threatened farmland species' as follows:

> *'17c* existing *arable*, grassland and woodland habitats are enhanced, improving ecological links between Nine Wells LNR and Gog Magog Hills *and conserving existing threatened farmland species*.'

- Page 215, Paragraph 17d I propose the following revised wording for clarity and to reinforce the importance of the SEA for wildlife:

> *'17d* provision of a well vegetated landscape buffer within the Strategic Enhancement Area (S/SEA/CBC) to the south of the campus that responds positively and sensitively to the existing topography and habitats, including planting of native species, *wildlife-friendly drainage ponds*, *enhanced arable habitats including* hedgerows and *limited extension of existing* woodland.

- Page 215, Paragraph 18 beginning 'Proposals in the Landscape Improvement Area must: Add new point d as follows:

> *'d Provide enhanced arable habitat for threatened farmland species':*

- Page 221, Paragraph 3.2.27 (near the end): change 'agricultural' to 'arable' to read: 'the enhancement of *arable*, grassland and woodland habitats'.

Conclusion

It should be clear from the evidence I have gathered over the last 14 years that Policy S/CBC will place even more pressure on threatened farmland species, and that significant mitigation on adjoining land will be essential to counter this, let alone achieve biodiversity net gain. Without such mitigation, there will be an unforgiveable further loss of species that are already vulnerable to, or near threatened with, extinction in the UK.

However, appropriate mitigation can help to reduce the impact as long as it is well planned and that habitat improvement begins early enough to allow space for wildlife displaced by development. And it could also be something for the councils to be proud of, as it may provide a template that other councils could adapt to help to protect species under threat from climate change and human activity.

John Meed, January 2026

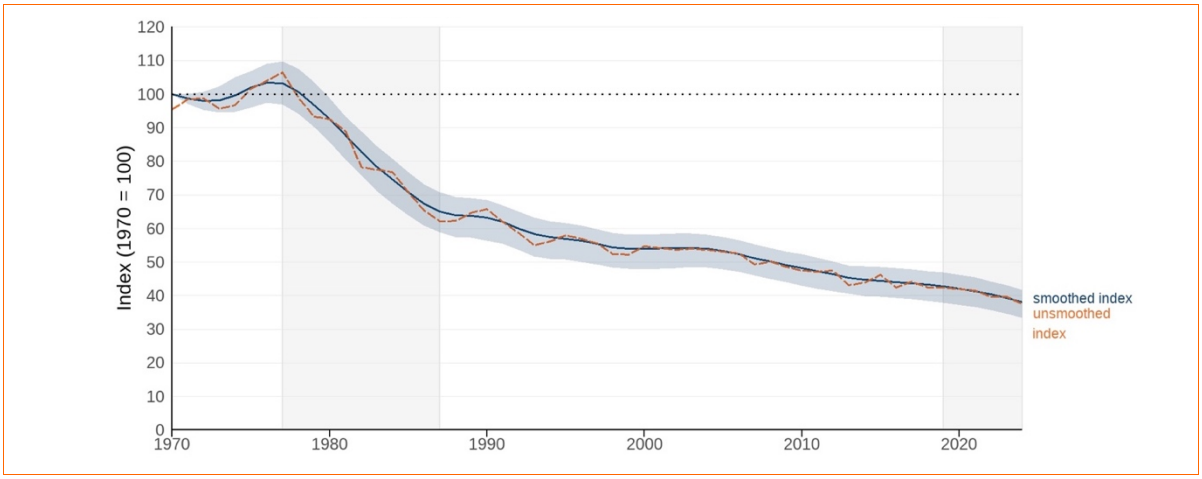
John Meed is a naturalist, researcher and writer who lives in south Cambridge. He conducts regular surveys on behalf of the British Trust for Ornithology, the Royal Society for the Protection of Birds and the UK Butterfly Monitoring Scheme. More details of his study are contained in his book *A haven for farmland birds*. See johnmeed.net/ecology.

In preparing this submission I have consulted with a range of people and organisations to help ensure that my suggestions are as up-to-date, evidence-based and constructive as possible. These include:

- Cambridge Biomedical Campus Ltd; Cambridgeshire County Council and the Trumpington Estate (landowners); and city councillors.
- People working in the conservation field including Francis Buner from the Interreg North Sea PARTRIDGE project; Martin Baker and Rebecca Green from the Wildlife Trust for Bedfordshire, Cambridgeshire and Northamptonshire; Duerden Cormack from the RSPB Hope Farm; Sarah Nicholas, Principal Planning Officer, Cambridge Past, Present and Future; Bryan Davies and John O'Boyle, trustees of the Magog Trust; Guy Belcher, Biodiversity Officer for Cambridge City Council; and Howard Slatter who has recorded bird populations on the land that is now Hobson's Park since 1987.

Appendix 1: Conserving farmland birds

This appendix outlines priorities for conserving farmland birds. The following graph, based on *Wild Bird Populations in the UK 1970–2014*[22], shows how, as the *State of Nature 2023* report puts it, 'bird species most closely associated with farmland have declined more severely than birds in any other habitat' since 1970[23]. While all birds declined by 18%, farmland birds declined by 62% and farmland specialists by 75%.



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

Grey partridge	-93% (37,000 pairs)	Yellowhammer	-65%
Corn bunting	-87% (11,000 pairs)	Linnet	-56%
Yellow wagtail	-74% (20,000 pairs)	Skylark	-52%

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[24] showed that we lost over half of our farmland butterflies between 1976 and 2014, and other invertebrates including bees have 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 removal of hedgerows.

Data from the BTO[25] shows that grey partridge (below left), corn bunting (centre) and yellow wagtail (right) 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.

Habitat requirements of the six red-listed species

Farmland birds have three key requirements:

- A safe place to nest
- Food in spring and summer for their growing chicks
- Food and shelter over the winter.

The following detailed requirements for the six species are adapted from the latest research[26].

Grey partridge need:

- *Safe nest sites*: Partridges nest on the ground between the 1st of May and early August in permanent and semi-permanent vegetation such as wildflower plots, hedge bottoms, grass margins and beetle banks. Wildflower plots can provide ideal nesting sites because of their open structure at ground level, combined with vegetation that provides suitable cover and camouflage. Hedgerows, grass margins and ditches in the spring should retain enough dead grass or similar vegetation from the previous year to provide cover for a female grey partridge sitting on a nest.
- *Chick food*: chicks feed on insects, especially caterpillars, beetles, bugs, sawfly larvae, ants and aphids, which they find mainly in crop margins, wildflower plots, conservation headlands and unsprayed crops (or unimproved grasslands).
- *Winter food and cover*: adult partridges eat seeds and shoots such as winter stubbles, harvested root crops, newly-sown crops and weeds in the crop margins. Hedges, grassy and flower-rich margins, beetle banks etc can all also provide cover from predators.

Corn buntings, whose recent extinction in Ireland is being repeated across large parts of this country (the BTO's 2019 Breeding Birds Survey recorded corn buntings in just 148 of the 4,005 squares surveyed) also nest on the ground in crops or grassy margins. They start nesting later – from late May or June – and can have flightless youngsters well into August. Chicks also need insect food, while adults principally eat cereal grains from winter stubbles or cereal-rich wild bird mixes. Corn buntings also use overhead wires and hedgerow bushes as song posts.

Yellow wagtails are summer visitors – they pass the winter in west Africa which means they face threats elsewhere in addition to the habitat loss and degradation they have suffered here. They breed on the ground in arable crops or fringes of grassland. Adults and chicks eat insects and spiders in crops, grazed pasture and near ponds. Measures such as skylark plots would also benefit yellow wagtails.

Skylarks also nest on the ground in larger open arable fields (preferably spring-sown cereals or skylark plots) or unimproved, extensively grazed grassland. Chicks (and adults in summer) eat insects such as sawfly larvae, beetles, ants, spiders and grasshoppers. In autumn and winter adults feed on seeds and shoots such as knotgrass and groundsel, notably in weedy stubbles.

Yellowhammers nest on or close to the ground in short (less than two metres), dense hedgerows, field margins with long grass, scrub and woodland edges. Adults feed in field margins, winter stubbles and wild bird plots on seeds from dead nettles, groundsel, sorrel, cereal grains, millet and annual plant weeds, etc; chicks depend on insects from field margins, fallow land and unimproved grasslands. They sing from hedgerows.

Linnets sing from and nest in thorn hedges and gorse from up to 2 metres. Both adults and chicks rely almost entirely on seeds throughout the year. Chicks feed on weed seeds and unripe oilseed rape grains. During the winter, adults will favour stubbles and field margins or seeds such as dandelion in pasture.

Although there are many aspects of habitat that can benefit all six species such as grassy margins, beetle banks, conservation headlands, wildflower plots, reduced pesticide use, crop variety and unimproved grassland, there are also differences. In particular, while skylark prefer larger, open fields, linnet and yellowhammer need hedgerows to breed; and while grey partridges and corn buntings will use unimproved grassland that meet their requirements, both are principally found in arable land.

Possible management approaches

The variety or mosaic of habitats around Nine Wells and White Hill helps to meet these requirements. There are arable fields of different sizes including a 4ha area planted with a bird food mix, hedgerows, grassy margins, in-field banks, pasture, water sources, woodland, copses and some unkempt corners. Across the site arable weeds help to 'play an important role in maintaining and restoring invertebrate populations'[27].

The fields across Granham's Road and Babraham Road identified in S/CBC for mitigation could be enhanced to meet more of these requirements:

- Existing arable land can be enhanced by reducing pesticide use, improving or creating hedges, and creating wide margins or wildflower plots. Beetle banks across fields can increase cover, food and nest sites without discouraging skylark. Plots or strips of winter bird food mix would provide winter food and cover.

- New areas of meadow grassland could be made more attractive to farmland birds by fencing off uncut/ungrazed margins around grass fields which would be cut in rotation. Planting wildflower plots would provide additional nest sites, food and cover.

- Hedges should be cut in rotation and kept at 2m in height. See **Appendix 2** for more detailed suggestions.

An appropriate blend of these approaches would help to mitigate habitat loss and enhance the suitability of adjoining land. The SEA and the field immediately across Granham's Road might best be treated as enhanced arable with rather more grassy and flower-rich areas while an area closer to the Beech Woods might be converted to grassland, but with small plots of wild bird cover. And ponds would provide a water supply and encourage invertebrates, while bunds could increase habitat for butterflies and other invertebrates.

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.

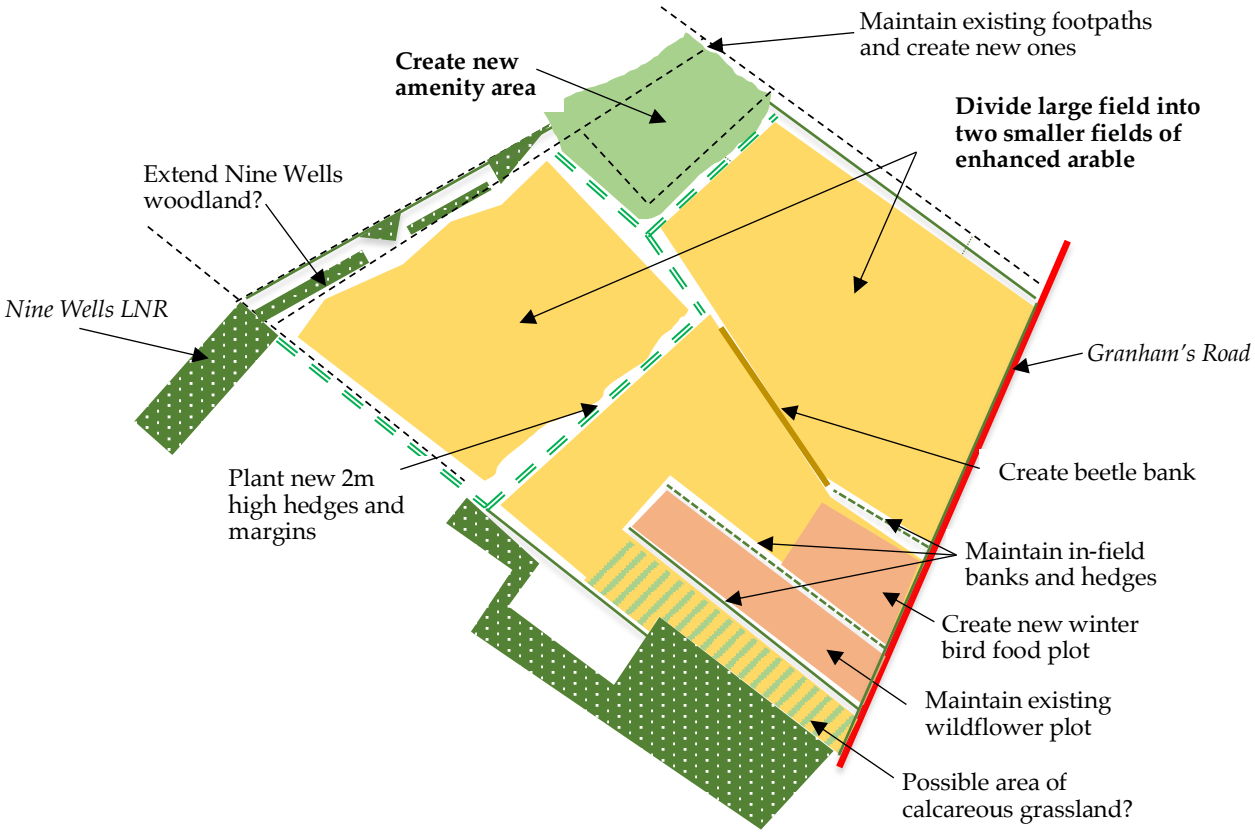
Appendix 2: Possible use of mitigation fields

These are some initial, outline ideas of how the mitigation fields might be managed to improve and create habitat for farmland birds while also meeting needs for other wildlife and amenity. I am keen to discuss these at all stages.

1 The Strategic Enhancement Area

The map below (based on that on page 219 of S/CBC) suggests one way in which the SEA might be managed.

- The area closest to the Campus would be used for amenity, with footpaths eventually linking Nine Wells and the campus to the Beech Woods and Magog Down. Bunds, hedges and signage can separate amenity from conservation land.
- The main area of this field would remain as arable but divided into 2-3 smaller fields separated by 2m-high hedges and margins and/or a beetle bank, and further enhanced by maintaining and creating wildflower or winter bird food plots to provide additional nest sites, food and cover for farmland birds.
- There could also be value in extending woodland close to Nine Wells LNR to increase the barrier between the campus and the fields; and possibly an area of calcareous grassland near the top of White Hill.



2 The Landscape Improvement Area

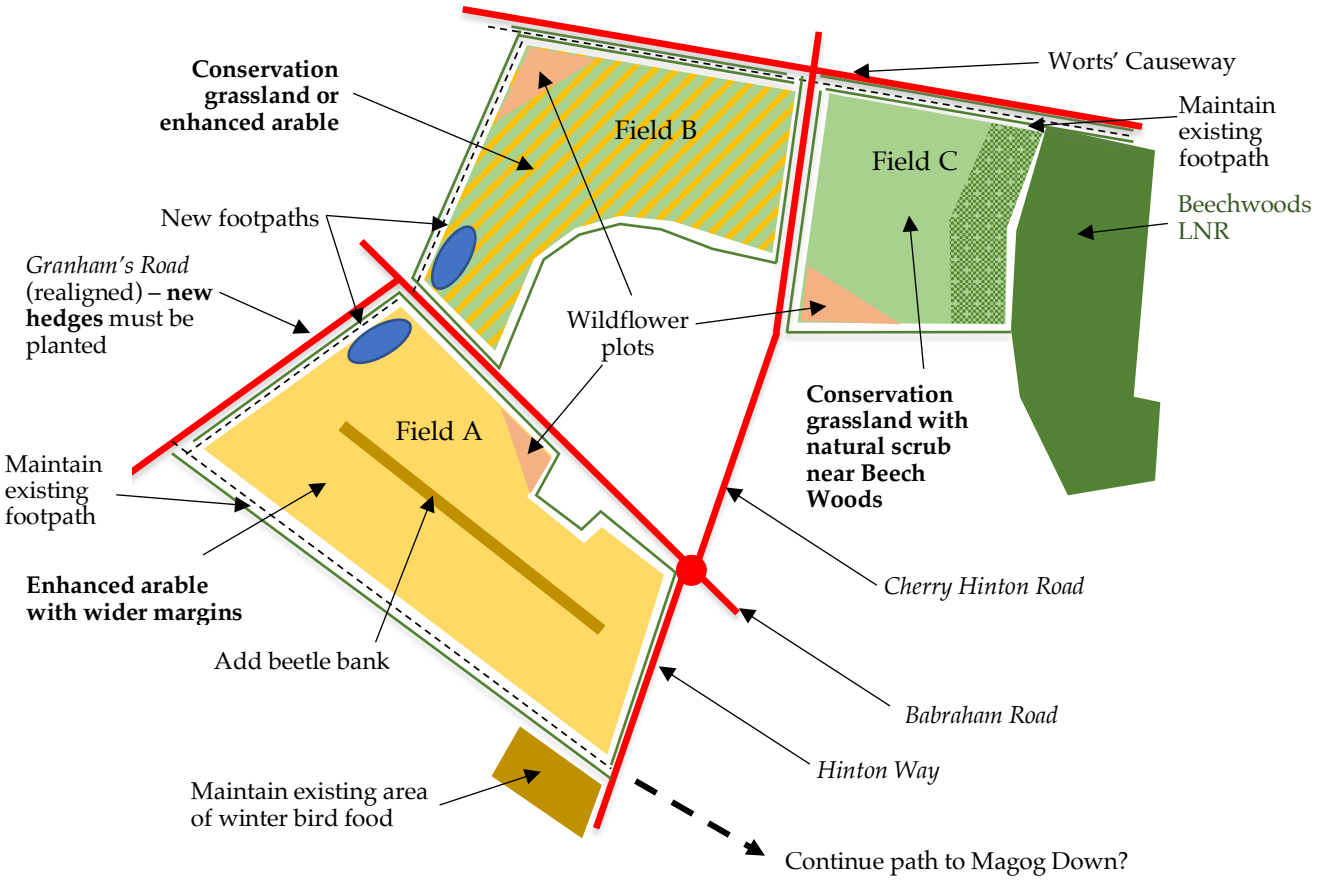
This map (based on that on page 219 of S/CBC) suggests options for managing the LIA.

- Of the three fields in the Landscape Improvement Area, **Field A** (between Granham's Road and Hinton Way) is the most likely to offer scope for arable habitats for farmland species. The field can be easily enhanced by hedgerows, wider margins, an in-field beetle bank and wildflower plots to provide additional nest sites, food and cover. A drainage pond and bunds close to Granham's Road would provide additional habitat. *The hedges lost to Granham's Road realignment must be replaced.*

- While **Field B** (across Babraham Road) could also be similarly managed as enhanced arable, it could also be considered for grassland conversion as long as the grass is grazed or mown after the breeding season and that safe nesting areas, chick food and winter food and shelter are also available in a wildflower plot.

- **Field C** adjoins the Beech Woods LNR so there is a strong case for natural regeneration of scrub to extend the LNR (which might suit linnet and yellowhammer) and grassland conversion, again with safe nesting areas, chick food and winter food and shelter.

A combination of existing and new footpaths around the fields would link the campus with the Beech Woods and, with landowner agreement, the existing path from Granham's Road to Hinton Way could be extended to Magog Down.



References

[1] For details of my study see Meed, J (2022) *A haven for farmland birds*. Independent Publishing Network and my annual reports available from johnmeed.net/ecology

[2] 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.

[3] Defra, (2025) *Wild bird populations in the UK and England, 1970 to 2024*. See https://www.gov.uk/government/statistics/wild-bird-populations-in-the-uk/wild-bird-populations-in-the-uk-and-england-1970-to-2024

[4] Burns, F, Mordue, S, al Fulaij, N, Boersch-Supan, PH, Boswell, J, Boyd, RJ, Bradfer-Lawrence, T, de Ornellas, P, de Palma, A, de Zylva, P, Dennis, EB, Foster, S, Gilbert, G, Halliwell, L, Hawkins, K, Haysom, KA, Holland, MM, Hughes, J, Jackson, AC, Mancini, F, Mathews, F, McQuatters-Gollop, A, Noble, DG, O'Brien, D, Pescott, OL, Purvis, A, Simkin, J, Smith, A, Stanbury, AJ, Villemot, J, Walker, KJ, Walton, P, Webb, TJ, Williams, J, Wilson, R, Gregory, RD, 2023. *State of Nature 2023*, the State of Nature partnership, Available at: www.stateofnature.org.uk

[5] 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

[6] Comments from Stephen Tomkins (Former Chair of Cam Valley Forum), Cam Valley Forum review, Martin Baker (Wildlife Trust), Cambridge Independent 26/11/24, Nature in Cambridgeshire review 65/2023

[7] Source: BTO Birdfacts at https://data.bto.org/birdfacts-places/?search=cambridgeshire-bcra

[8] Email dated 2/12/2025 from Duerden Cormack, Monitoring Assistant at RSPB Hope Farm

[9] https://defrafarming.blog.gov.uk/create-and-maintain-flower-rich-margins-and-plots/

[10] See for example https://www.rspb.org.uk/helping-nature/what-we-do/influence-government-and-business/farming/hope-farm/the-big-three. More details from Brewin, J, Buner, F and Ewald, J (2020). *Farming with nature – promoting biodiversity across Europe through partridge conservation*. The Game and Wildlife Conservation Trust. See also Feber, R.E. & Macdonald, D.W. (2017). Birds. In: *Wildlife & Farming: Conservation on Lowland Farms*. Pp. 143-150. Wildlife Conservation Research Unit, University of Oxford

[11] Letter from Mike Swan, Head of Education, The Game and Wildlife Conservation Trust, to *The Independent* 19/8/2019

[12] Aebischer N.J. & Potts G.R. (1998) Spatial changes in grey partridge (Perdix perdix) distribution in relation to 25 years of changing agriculture in Sussex, U.K. *Gibier Faune Sauvage, Game Wildlife*, 15, 293-308; and Wakeham-Dawson A. & Aebischer N.J. (1998) Factors determining winter densities of birds on environmentally sensitive area arable reversion grassland in southern England, with special reference to skylarks (Alauda arvensis). *Agriculture, Ecosystems & Environment*, 70, 189-201. A summary of such research was published in Ewald J.A., Aebischer N.J., Richardson S.M., Grice P.V. & Cooke A.I. (2010) The effect of agri-environment schemes on grey partridges at the farm level in England. *Agriculture, Ecosystems & Environment*, 138, 55-63.

[13] Email dated 4/11/2025 from Francis Buner, Head of the Interreg North Sea PARTRIDGE project

[14] Notes from meeting on 18/12/2025 with Bryan Davies and John O'Boyle, trustees of the Magog Trust

[15] Brewin, J, Buner, F and Ewald, J (2020). *Farming with nature – promoting biodiversity across Europe through partridge conservation*. The Game and Wildlife Conservation Trust

[16] Natural England (2009). *Scientific research into the effects of access on nature conservation*. Natural England Commissioned Report NECR012

[17] Meed, J (2022) *A haven for farmland birds* pp 68–71

[18] Notes from meeting on 18/12/2025 with Bryan Davies and John O'Boyle, trustees of the Magog Trust

[19] Email dated 17/12/25 from Rebecca Green, Senior Ranger (Trumpington Meadows), The Wildlife Trust for Bedfordshire, Cambridgeshire & Northamptonshire

[20] Notes from meeting on 3/12/2025 with Howard Slatter who has recorded bird populations on the land that is now Hobson's Park since 1987

[21] 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'.

[22] Defra (2025). *Wild Bird Populations in the UK, 1970–2024.* See https://www.gov.uk/government/statistics/wild-bird-populations-in-the-uk/wild-bird-populations-in-the-uk-and-england-1970-to-2024

[23] Burns, F, Mordue, S, al Fulaij, N, Boersch-Supan, PH, Boswell, J, Boyd, RJ, Bradfer-Lawrence, T, de Ornellas, P, de Palma, A, de Zylva, P, Dennis, EB, Foster, S, Gilbert, G, Halliwell, L, Hawkins, K, Haysom, KA, Holland, MM, Hughes, J, Jackson, AC, Mancini, F, Mathews, F, McQuatters-Gollop, A, Noble, DG, O'Brien, D, Pescott, OL, Purvis, A, Simkin, J, Smith, A, Stanbury, AJ, Villemot, J, Walker, KJ, Walton, P, Webb, TJ, Williams, J, Wilson, R, Gregory, RD, 2023. State of Nature 2023, the State of Nature partnership, Available at: www.stateofnature.org.uk

[24] Fox, R et al (2015). *The State of the UK's Butterflies (2015)*. Butterfly Conservation and the Centre for Ecology and Hydrology

[25] Robinson, R.A. (2005) *BirdFacts: profiles of birds occurring in Britain & Ireland*. BTO, Thetford

[26] Partridge project *Farming with nature: Promoting biodiversity across Europe through partridge conservation*, RSPB *Land management advice*, GWCT *Species information sheets,* and Kent Wildlife Trust *Managing field margins for wildlife*

[27] 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**