

Wildlife and development guidance note: **Cirl Bunting**



Male cirl bunting
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Female cirl bunting
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Who is this document for?

This guidance note is intended to help anyone (e.g. developers, agents, consultants, Local Planning Authorities) considering built developments that may affect cirl buntings in Devon. Map 1 shows where cirl buntings are found in Devon at the time of publication (this map will be updated annually). From this you can see whether a proposed development falls within the known range and is likely to affect cirl buntings. An up-to-date map can be found at: <http://bit.ly/2wFg97f>.

This document has been produced by Devon County Council, Teignbridge District Council, Torbay Council and the RSPB. Discussions are ongoing with neighbouring authorities to seek broader adoption. It is a live document and will be updated as issues are raised and resolved. For the latest version and to provide feedback visit – <http://bit.ly/2wFg97f>.

Contents

Section	Title	Page
I	Background	3
II	Why are cirl buntings important in the planning context?	4
III	Cirl bunting positive planning process	7
	Step 1 Determine whether a proposal affects cirl buntings	7
	Step 2 Apply the mitigation hierarchy	8
	Step 3 Contribute to strategic provision	10
	Step 4 Ensure effective delivery	10
	Design and management plans	10
	Mechanisms	11
	Delivery provider	12
	Step 5 Establish ongoing monitoring and reporting	12
	Step 6 Enforce against non-compliance	12
IV	References	13
Appendix 1	Cirl bunting habitats	14
Appendix 2	Survey methodology to establish cirl bunting presence on a site	17
Appendix 3	BTO behaviour codes	23
Appendix 4	Example survey interpretation map	24
Appendix 5	Cirl bunting compensation cost calculations	25
Appendix 6	Cirl bunting habitat requirement justification	28
Appendix 7	Biodiversity unit gain from financial contribution	32
Map 1	Devon's cirl bunting breeding range.	35
Map 2	Target areas for strategic cirl bunting nature reserves	36

I Background

Cirl buntings are an attractive and iconic Devon species. Once widespread across southern England, changes in farming practice resulted, by the late 1980s, in almost the entire UK population being restricted to South Devon. Dedicated conservation effort since then has halted and reversed their catastrophic decline. However, cirl buntings remain rare (1,079 pairs recorded in last systematic national survey in 2016) and very restricted in range, with most of the population in South Devon, confined to suitable farmland between Exeter and Plymouth.

In 2016, the national cirl bunting population falls within:

Devon County Council	88%
Of which:	
South Hams District Council	54%
Teignbridge District Council	33%
*East Devon District Council	1%
*Exeter City Council	wintering only
Torbay Council	7%
Cornwall County Council	5

*support a small % of the population, but represent important outposts for extending the range of the species.

Map 1 (page 36) shows the currently known cirl bunting range. The red areas are 250m radius areas around records of breeding cirl buntings. They represent the land on which each pair will hold its territory. The amber areas are 2km radius around breeding territories and represent the areas where cirl buntings are likely to be wintering and where unknown territories are most likely to be located and new territories most likely to be established.

Ecological Needs

Cirl buntings are characteristic of Devon's low intensity mixed farmland. They are birds of farmland and need a mixed farmland landscape to flourish. Changes to farming practices and the resultant loss of nesting sites and sources of both winter and summer food is the major cause of the cirl bunting's dramatic decline. See Appendix 1 for details of cirl bunting habitats. In brief, they need:

1. Nesting sites: traditionally managed hedgerows and scrub.
2. Breeding: tussocky pasture on which to forage for invertebrates to feed young. As a highly sedentary species, breeding cirl buntings usually forage within 250m of their nests when feeding young, with the majority of territories having arable and rough grassland habitats within 250m of the nest (Stephens *et al*, 2002).
3. Winter: A source of small seeds over the winter, ideally arable weeds within an over-winter stubble following harvest of a low input spring barley crop. They generally travel no further than 2km from their breeding areas in winter (Evans, 1996). It is therefore vital that summer and winter habitats are available within close proximity to each other.

Loss of one habitat type may undermine the suitability of a landscape to support them. For example, the integrity of a breeding site for cirl buntings will be jeopardised if hedges are retained but grassland lost and vice versa. In addition winter foraging habitat is essential to attract and sustain breeding pairs due to their highly sedentary nature.

Wider Benefits

Preserving a network of suitable habitats isn't just good for cirl buntings. It also preserves the characteristic Devon landscape and benefits a number of other priority species and habitats such as bats, dormouse, wildflowers, arable plants and hedgerows.

For further details of the conservation action taken for cirl buntings see:

<http://www.rspb.org.uk/ourwork/projects/details/222509-the-cirl-bunting-project>

II Why are cirle buntings important in the planning context?

Whilst changes in farming have caused the cirle bunting's decline, their limited range and distribution around coastal settlements that have strong development pressure mean that cumulatively, growth of those settlements risk a population-scale impact on the species, and a major threat to its continued recovery.

The cirle bunting is a UK priority species of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. These species were identified as requiring action under the UK Biodiversity Action Plan and remain conservation priorities under the UK Post-2010 Biodiversity Framework. The S41 list is used to guide decision-makers, including local authorities, in implementing their duty under Section 40 of the NERC Act 2006, to have regard to the conservation of biodiversity in England when carrying out their normal functions.

The National Planning Policy Framework¹ sets out the Government's planning policies for England and how these are expected to be applied. It includes:

- Minimising impacts on biodiversity and providing net gains where possible (paragraph 109)
- Planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure (paragraph 114)
- Promoting the protection and recovery of priority species populations and the preservation, restoration and re-creation of ecological networks and priority habitats (paragraph 117); and

In particular, it is worth emphasising the Government's policy towards conserving and enhancing biodiversity by adherence to the mitigation hierarchy. This approach is set out in the first bullet point in paragraph 118 of the NPPF; it states:

If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused.

This statement makes clear that the preferred approach is always to avoid impacts wherever possible, and to then mitigate as the next best choice. However, there will be circumstances where compensation is the only alternative, other than for the LPA to refuse planning permission. There may be situations where the number/density of cirle buntings is such that planning authorities should refuse planning permission. Where this isn't the case, unavoidable loss of Cirle Bunting habitat will require adequate provision of new habitat to offset the loss incurred on the proposed development land. This document provides clear guidance on how the need for such compensation can be assessed and delivered.

Planning law² also requires planning applications to be determined in accordance with up-to-date Development Plan policies, including those that seek to preserve biodiversity (such as S.41 species). These relevant policies are available on respective Local Planning Authority websites. This document amplifies and clarifies the requirements of those policies in respect of the cirle bunting. It is not a supplementary planning document but is seeking approval at Planning

1. <https://www.gov.uk/government/publications/national-planning-policy-framework--2>

2. Section 38(6) of the Planning and Compulsory Purchase Act 2004 and section 70(2) of the Town and Country Planning Act 1990

Committee of the following Councils and is a material consideration in determining planning applications:

- Devon County Council;
- Teignbridge District Council;
- Torbay Council
- Discussions are ongoing with neighbouring Councils to seek broader adoption of this guidance.

Cirl buntings along with all wild birds are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended) from being killed, injured or captured, and their nests and eggs protected from being damaged, destroyed or taken. Cirl buntings are also listed under Schedule 1 of the Act which makes it an offence to intentionally or recklessly disturb birds at, on, or near an 'active' nest. Disturbance could be caused by human activity or machinery working near the nest and is to be avoided during the breeding season – any clearance of scrub/hedges if undertaken shall be done outside the breeding season.

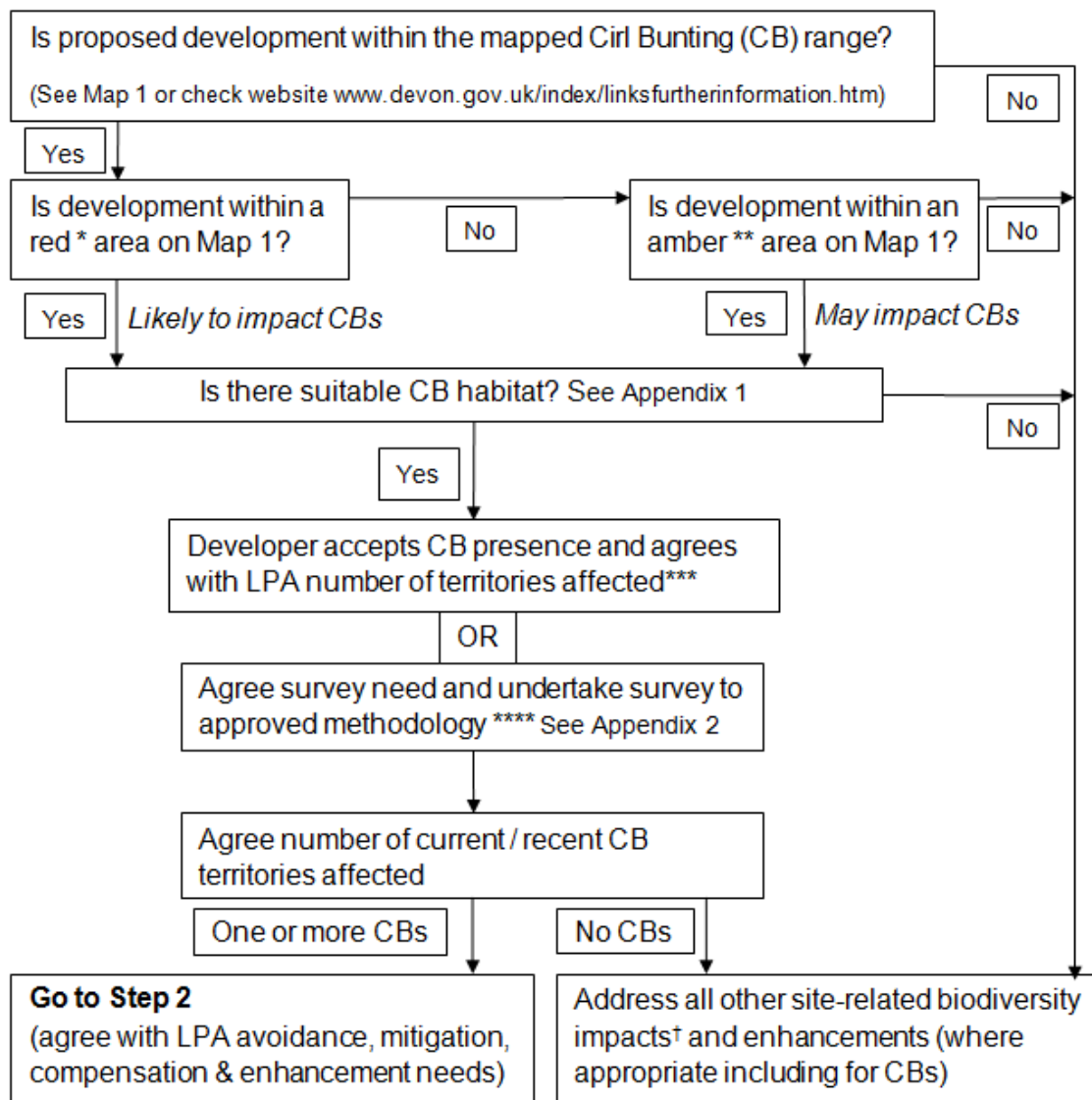
Cirl buntings have a particularly long breeding season and can be actively nesting from mid-April into mid-September. It is the responsibility of any developer to ensure that no breeding cirl buntings are disturbed as part of any built development.

III Cirl bunting positive planning process

The following six sequential steps shall be followed in order to determine whether a proposal is likely to harm a cirl bunting territory, appropriate avoidance, mitigation, compensation and enhancement measures and, if compensation is needed, its form, scale and delivery.

Step 1: Determine whether a proposal affects cirl buntings

The flow chart below shows how cirl bunting impacts must be assessed and addressed before a planning application is made and how.



* Red areas are where CB breeding has been recorded. If development takes place in this area it is very likely to impact on a breeding territory/territories and/or wintering habitat.

** Amber areas are where CBs may be feeding in winter and could also be breeding. If a development takes place in this area it may impact on breeding territory/territories and/or wintering habitat.

*** Including by commissioning data search (from RSPB) to identify known CB breeding territories

**** If the approved cirl bunting survey methodology is not followed, the Local Planning Authority may ask for the survey to be repeated.

† For Devon County Council guidance on wildlife in the planning system, see www.devon.gov.uk/wildlife

Step 2: Apply the mitigation hierarchy

Where ciril buntings are relevant to a proposed development, the mitigation hierarchy must be deployed to minimise impacts and achieve net enhancement for the species as set out below. The mitigation hierarchy shall be supported by appropriate plans and strategies as per Step 4.

- i. **Avoid:** Priority shall be given to avoiding loss of or harm to ciril bunting habitat (as detailed in Appendix 1). Retain habitats such as hedges, scrub and grassland and ensure appropriate management. In some cases, the population of ciril buntings present may override the need for the development, and the site left undeveloped in order to conserve the population *in situ* (e.g. where it affects a nationally important population, i.e. 1% or more of the national population; currently 20 or more individuals).
- ii. **Mitigate:** Ensure no nesting habitat (hedges and scrub) is removed during the nesting season. Ciril buntings have an extended breeding season ranging from mid-April to mid-September, though some variation may occur depending on weather conditions.
- iii. **Compensate:** Where there is a residual impact on ciril buntings after applying avoidance and mitigation measures, compensation will be required in accordance with Table 1 (page 10). Onsite habitat creation will only contribute towards compensating for a breeding territory in the rare instance where it is in a suitable location and of a sufficient scale and mix on its own or in combination with adjacent offsite measures to meet the requirements set out in this document. Compensation will be demonstrably additional and further:
 - a) Compensation shall be in a suitable location. Ideally this would be within 250m of the damage to ensure territories affected can move to the compensation habitat. Where this is not possible it should be within the determining planning authority boundary and at a strategic scale as per b) below. All compensation must be within 2km of an existing breeding territory and include spring barley stubbles alongside breeding habitat to ensure a good chance of attracting new breeding pairs (outside of the breeding season, ciril buntings forage within 2km of their breeding territories).
 - b) Compensation shall be at a suitable scale. Managing for one isolated pair is less likely to be successful than managing a larger area for several pairs of ciril buntings. In addition, creating and managing suitable agricultural habitat, particularly arable, within a development is likely to be difficult. On larger sites, e.g. quarries, or where only linear features, such as hedges, are lost it may be possible to achieve a suitable scale of compensation on-site. On most sites, compensatory provision will normally need to be off-site. Wherever possible these should be combined with other compensation areas to achieve larger, joined up and strategic sites such as through the strategic approach set out in Step 3.
 - c) Compensation shall be to an appropriate timescale. Compensation should be provided for the duration of the impact (i.e. in most cases in-perpetuity) and secured prior to commencement. Compensation should also be established several years in advance of the damage to ensure the habitat is suitable.
 - d) Compensation shall follow Steps three to six (pages 10-13).
- iv. **Enhance:** Development proposals should deliver a net gain for wildlife. Where compatible, the habitat creation or restoration required for ciril buntings shall also be designed to meet the requirements of other species and habitats impacted by the development.

Enhancements could also include additional areas of suitable habitat to benefit ciril buntings and other wildlife of conservation concern. Appendix 1 describes suitable ciril bunting habitats.

Table 1 – Ciril bunting compensation requirements

Loss	Compensation need
Loss of more than 0.7ha ³ of suitable habitat within a breeding territory or Loss of less than 0.7ha of suitable habitat within a breeding territory, where there is a high risk of compromising its viability ⁴	Ordinarily at least 2.5ha ⁵ suitable habitat per breeding territory lost/ compromised, made up of at least: - 1.13ha of rough grassland - 0.2ha of hedge/scrub and - 1ha ⁶ of spring barley ⁷
Loss of less than 0.7ha of suitable habitat within a breeding territory, where there is a low risk of compromising its viability.	Suitable habitat at least equal in area and quality to the amount of habitat lost per Breeding Territory compromised.
Hedgerow loss only	At least a like-for-like replacement by length of species-rich hedgerow, under sympathetic management and ensure optimal management of remaining hedges.
Loss of 1ha or more of suitable habitat supporting a nationally important ⁸ Wintering Population but no Breeding Territories	At least 2ha ⁹ of suitable habitat per affected site.

3. 0.7ha of suitable habitat is judged (based on RSPB research – see references in Section 6) an appropriate threshold to assume on average the loss of which would compromise the viability of the breeding territory. This is over half the area of rough grassland that evidence suggests a breeding pair needs to be successful. Breeding ciril buntings forage up to 250m from their nest. Whilst a circle with a radius of 250m has an area of >19ha, in reality ciril buntings are likely to depend on a relatively small area of habitat within the total theoretical area.

4. The LPA will decide, in light of ecological advice, whether a smaller area of habitat loss has a high risk of compromising a territory's viability. This will be informed by the habitat type, scale and location of the proposed loss in relation to the nest and the remaining availability of suitable habitat. RSPB can advise in cases where there is doubt.

5. Research suggests that it is only possible to have confidence that ciril buntings will use compensatory habitat if the full 2.5ha of suitable habitats is created and appropriately managed. Because of the species' secretive nature it is extremely difficult to identify the centre of a territory (the nest site), and therefore to know that the compensatory habitat, even if within 250m of a breeding record, is being provided within an existing territory. In exceptional circumstances where it is possible to have a high level of confidence (as decided by the LPA) that a territory will remain viable, it may be possible to provide less than this. See Appendix 6 for details

6. At least 1ha of wintering habitat is needed to ensure a supply of seeds throughout the winter.

7. Compensatory breeding sites will need to include all aspects of ciril buntings' habitat requirements i.e. tussocky pasture, scrub/hedges and spring barley/winter stubble. RSPB research shows that ciril buntings need a minimum of 1.13ha of rough grassland and at least 0.2ha of hedge or scrub for a successful breeding territory within 250m of arable habitat. Cereals are used for summer foraging but also as winter habitat when left as stubble. It is essential that winter forage (weedy spring barley stubble) is included in the compensation package since this is the land use that will attract ciril buntings in and encourage them to use a site.

8. 1% or more of the national population of ciril buntings (20 or more individuals in 2016).

9. Good spring barley arable habitats take time to establish. It is the associated layer of ground-level weeds that provide the seeds ciril buntings feed on in winter. Where 1ha or more of a nationally important winter ciril bunting site is lost, 2ha of ongoing compensatory spring barley should be provided to help offset the temporal and other risk factors associated with establishing a new high quality spring barley arable habitat. See habitat examples in Appendix 1.

Step 3 Contribute to strategic provision

A developer needing to deliver compensation shall ordinarily make a financial contribution to the relevant LPA, to pool with other such contributions and deliver strategic off-site Cirl Bunting nature reserves (in accordance with this document). This aggregates habitat creation requirements at a small number of key locations (see Map 2) within the species' range, to achieve population-scale benefits.

Teignbridge District Council has successfully operated such an approach on a number of applications. The contributions required per Breeding Territory compromised is set out in Appendix 5 and may vary across LPA depending on local land values, delivery partners, schemes and detailed specifications. Contributions per Breeding Territory lost or compromised for the following LPAs are:

- Teignbridge - £74,193 (based on 2014 prices and subject to inflation); and
- Torbay - £87,313 (based on 2015 prices and subject to inflation).

Step 4 Ensure effective delivery

Delivering the mitigation hierarchy must be supported by suitable plans / strategies, securing mechanisms and delivery bodies to give confidence in the successful delivery of all necessary measures.

Design and management plans

Relevant plans and strategies should be produced and implemented in accordance with BS 42020:2013 (Biodiversity – Code of Practice for Planning and Development). In particular:

- Ecological Design Strategies (EDS) as per Clause D.4.3, required to inform the design and implementation of capital works; and
- Landscape and Ecological Management Plans (LEMP) as per Clause 11.1 and D.4.5, required to secure a commitment to on-going long-term management of the habitats provided through the initial capital works.

The detail required will reflect the size and complexity of the proposed measures, but the plans/strategies shall include (adapted from BS42020:2013):

- a) Ecological trends and constraints on site that could influence design and management.
- b) Aims and conservation objectives for the proposed works.
- c) Review of site potential and constraints.
- d) Detailed designs and appropriate management activities for achieving aims and objectives.
- e) Description and evaluation of features to be managed to achieve aims and objectives.
- f) Detailed assessment of biodiversity impacts and how measures will contribute to achieving the policy commitment of net gain for biodiversity. Assessments should use the Defra Biodiversity Offsetting Metric in line with the latest local guidance (see <http://www.naturaldevon.org.uk/biodiversity-offsetting-pilot/>). The RSPB and TCCT financial compensation mechanisms (Appendix 5) will be considered to contribute an uplift in biodiversity units as set out in Appendix 7:
- g) Extent and location/area of proposed works on appropriate scale maps and plans.
- h) Prescriptions for establishment, initial aftercare and long-term maintenance.
- i) Type and source of materials to be used where appropriate, e.g. native species of local provenance.
- j) Details for disposal of any wastes arising from works.

- k) Preparation of a work schedule that includes demonstration of how it is aligned with the proposed phasing of development and an annual maintenance work plan capable of being rolled forward over five year periods.
- l) Body or organisation and personnel responsible for implementing the plan/strategy.
- m) Monitoring and remedial measures (see Step 5 below).
- n) Details of the legal and funding mechanism(s) by which the long-term implementation of the plan/strategy will be secured by the developer with their relevant delivery partners.

The plans/strategies must be submitted for approval to the relevant LPA who will assess its viability and fitness-for-purpose.

Mechanisms

Circl bunting compensation and enhancement measures must be secured prior to commencement of development by a suitable mechanism, such as those recommended below. Further mechanisms may be required to secure long-term funding and land security, for example covenants or land charges.

i. S106 agreement:

Planning obligations under Section 106 of the Town and Country Planning Act 1990 (as amended), commonly known as S106 Agreements, can be used to secure compensation and enhancement measures, where they meet the legal tests set out in Regulations 122 and 123 of the Community Infrastructure Levy Regulations 2010 as amended. As only five S106 Agreements can be pooled to deliver one item of infrastructure, local planning authorities must be careful in their use of this mechanism. (See <http://www.legislation.gov.uk/ukxi/2010/948/part/11/made>). However it is considered that land provided purely to protect and enhance nature conservation value is not “infrastructure” in the context of s.216(2) PA 2008 and therefore not subject to these pooling restrictions.

ii. Grampian condition:

A planning condition attached to a decision notice that prevents the start of a development until off-site works have been completed on land not controlled by the applicant (Grampian Regional Council v City of Aberdeen District Council (1984) 47 P&CR 633)). These require a scheme providing for the compensation and enhancement to be submitted and approved by the LPA, prior to commencement. Example condition wording is provided below. The cost calculations of Appendix 5 provide indicative costs of scheme delivery.

The following example condition wording is taken from the Secretary of State’s final decision on 3 September 2013 in respect of an appeal by Bellway Homes (North East) Ltd, Land at Whitehouse Farm, West Moor, Newcastle-upon-Tyne (in North Tyneside). Application ref: 11/02337/FUL. Further standard or model conditions are provided in BS 42020:2013 (Biodiversity – Code of Practice for Planning and Development).

88. No development shall commence unless and until a scheme ("the offsetting scheme") for the offsetting of biodiversity impacts at the site has been submitted to and agreed in writing by the Local Planning Authority. The offsetting scheme shall include:

1. A methodology for the identification of receptor site(s);
2. The identification of receptor site (s);
3. Details of the offset requirements of the development (in accordance with the recognised offsetting metrics standard outlined in the Defra Metrics Guidance dated March 2012);
4. The provision of arrangements to secure the delivery of the offsetting measures (including a timetable for their delivery); and
5. A management and monitoring plan (to include for the provision and maintenance of the offsetting measures in perpetuity).

The written approval of the LPA shall not be issued before the arrangements necessary to secure the delivery of the off-setting measures have been executed. The offsetting scheme shall be implemented in full accordance with the requirements of the approved scheme.

Delivery provider

The agreed compensation and enhancement measures must be delivered by a capable and competent individual or organisation – the delivery provider. Developers, conservation bodies and landowners wishing to be delivery providers will need to demonstrate to the Local Planning Authority how they will deliver and maintain the compensation and enhancement measures, including having the expertise, appropriate finance and long term control of the land. Measures should be designed to compensate for damage to biodiversity for at least the lifetime of the development that is causing the damage, e.g. for residential development this should be in perpetuity given the establishment of the permanent principle of residential use.

Step 5 Establish ongoing monitoring and reporting

Independent monitoring will be a requirement of any compensation, mitigation or enhancement measures delivered via the planning process. Independent monitoring shall be factored into and funded through developer contributions and undertaken to:

- a) Ensure compliance with relevant planning conditions/obligations;
- b) Establish the success and effectiveness of measures undertaken to avoid, mitigate or compensate for impacts and/or to achieve biodiversity enhancements; and
- c) Identify, agree with the decision-maker and implement contingencies and/or remedial actions where monitoring shows proposed measures to be ineffective or not reaching their stated aims and objectives.

Monitoring proposals shall be in accordance with Clause 11.2 of BS42020:2013 and detailed within the approved Management Plan (as above). The independent organisation carrying out the monitoring and feedback advice must be agreed with the Local Planning Authority.

Step 6 Enforce against non-compliance

Where monitoring identifies non-compliance with planning conditions, obligations or licensing requirements, enforcement powers are available and will be used where appropriate by the relevant decision-maker (e.g. local planning authority).

IV References

Evans, A.D. 1996. The importance of mixed farming for seed-eating birds in the UK. In Pain, D.J. & Pienkowski, M.W. (eds) *Farming and Birds in Europe. The Common Agricultural Policy and Its Implications for Bird Conservation*: 331-357. Academic Press, London.

Stephens D.K., Donald P.F., Evans A.D., Buckingham D.L. & Evans J. 2002. Territory distribution and foraging patterns of ciril buntings (*Embiriza cirilus*) breeding in the UK. *Biological Conservation* **107**, 307-313.

Appendix 1 – Cirl bunting habitats

References:

- Advisory sheet: [Land management for cirl bunting](#)
- Advice for farmers: <http://www.rspb.org.uk/ourwork/farming/advice>

Cirl buntings favour an extensively managed mosaic of mixed farmland, with fields typically of 2ha and smaller, though this is not always the case as they will use suitable habitat in large fields. They nest in dense cover provided by particularly thick hedgerows or scrub, typically foraging within 250m of the nest. In the summer months they rely on extensively managed grassland (often cattle grazed) and field margins/corners for invertebrates, particularly grasshoppers and crickets. In the winter they forage in cereal stubbles, particularly those from spring-sown barley. Other winter habitats include wild bird seed crops, stubble turnips, fallows, field margins and game cover that have an open structure that allows the birds to access the seeds. They feed on seeds from broad-leaved weeds such as fat hen, chickweed and annual meadow grass. They winter usually within 2km of breeding habitat and cirl buntings can use a number of sites during the winter. As well as arable habitats, they may also use rough grassland, pasture fields where stock is over-wintered and fed with grain or hay or gardens.

Table 2: Summary of the habitats and management required by cirl buntings

Habitat type	Function	Ideal Outline Management
Rough, tussocky semi-improved grassland supporting invertebrates	Summer foraging	Cattle or mixed grazing. Management regime necessary to maintain access to the ground for foraging birds and a sward suitable for grasshoppers. Must have good surrounding hedges or dense areas of scrub e.g. gorse or bramble.
Species rich UK BAP priority grassland habitats (including coastal grasslands).		
Arable field margins/field corners	Summer foraging	Rough grassland, cut on rotation. Some areas retained uncut each year. Other areas are cut during the growing season to allow bird's access to the ground to forage.
Low-input spring cereals and winter stubbles, usually barley	Summer and winter foraging	Birds will forage for insects during summer, often take fledged young into crops. Retained as overwintered stubble through until April. See agri-environment description for further information. Must have good cover, hedges/scrub around field. Most likely to be within 2km of an existing breeding territory to be used in winter.
Wild Bird Cover crop	Winter foraging	Crop grown specifically for a winter food source for cirl buntings. Example mix: Spring barley (80%), millet and quinoa (20%). Dense growing crops such as kale are not suitable. Established annually after mid-April. Must have good hedges/scrub around field. Most likely to be within 2km of an existing breeding territory.
Scrub	Nesting	Gorse, bramble, blackthorn – managed on rotation to maintain suitable nesting habitat and to create open areas within the scrub good for foraging. Needs to be within an area of summer foraging habitat.
Hedgerows	Nesting	Traditional hedge, thick with dense vegetation such as blackthorn, hawthorn, bramble. Must have a sympathetic

		cutting regime, i.e. not regularly flailed or cut every year and only cut in winter as they can nest into September.
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Examples of cirl bunting breeding and summer foraging habitat



Examples of cirl bunting winter foraging habitat



Photos: RSPB

Appendix 2 – Survey methodology to establish cirl bunting presence on a site

1. Introduction

The following survey methodology has been designed to give an indication of number of cirl bunting territories on site but many factors such as observer experience, weather conditions and territorial behaviour or lack of it can influence how successful this will be. Cirl buntings when breeding can be very quiet and elusive, particularly isolated pairs where singing can be infrequent. A data search (contact RSPB direct) before surveying the site should be undertaken to give an indication of the historic use of the site. Cirl buntings are very site faithful. However, the national surveys are undertaken from public rights of way so inaccessible sites are less likely to have any data available. So a lack of data does not mean cirl buntings are not present if the habitat is suitable, especially if the site is within 2km of known breeding pairs.

Cirl bunting surveys should be undertaken on sites with suitable habitat within 2km of the known breeding range of cirl buntings. Map 1 shows where cirl bunting territories have been recorded (red area) and where they may occur (orange area) as it is within 2km of breeding territories. Note that our most comprehensive data on cirl buntings is based on the most recent national survey in 2016 and any additional reliable sightings since. It is possible that cirl buntings may be present in other areas.

All surveys, the interpretation of data and subsequent ecological reports should be undertaken and prepared in accordance with Clause 6 of BS42020:2013.

2. Note to ecological consultants/developers/local authorities

The RSPB expects cirl bunting surveys over an entire breeding or wintering season (or both, as appropriate to the habitat of the site) to follow the most recent edition of this methodology. This means that all visits for a breeding survey need to be in the same year, and that all visits for a wintering survey need to be in the appropriate months of one single winter season i.e., in the end months of one year and in the early months of the following year.

Failure to carry out cirl bunting surveys where recommended, or surveys that do not follow this methodology may result in an RSPB objection to the related planning application.

The RSPB will review this guidance annually and circulate any revisions prior to the onset of a breeding season (and will confirm the date of the most recent edition on request).

3. Habitat Survey

Before any species surveys are undertaken, habitats on site should be assessed and mapped to identify areas potentially suitable for cirl bunting. For details of important habitats and how to identify them, please see Appendix 1.

4. Breeding Survey

To establish how many cirl buntings are utilising a site, detailed observations over a single breeding season (i.e., visits in the recommended months made in the same year) will be required. However, it is not necessary to locate or examine nests; this is both highly disturbing to cirl buntings and not needed to assess importance of a site for cirl buntings and also illegal without a specific disturbance licence from Natural England (NE). Whilst every effort should be

made to avoid disturbance, it is recommended that surveyors obtain a Natural England licence for this Schedule 1 species.

Cirl buntings can be difficult to survey, particularly at low breeding densities, so it is important that the work is carried out by a competent ornithologist, preferably with previous experience of cirl buntings. If the surveyor has no or little experience with cirl buntings a prior visit to a site with high densities, such as Labrador Bay - <http://www.rspb.org.uk/reserves/guide/l/labradorbay/about.aspx> - should be undertaken to gain experience of the species, particularly its calls which are invaluable in locating them.

Any additional surveys (habitats/species including other bird surveys) should be done separate to the cirl bunting survey.

Information required:

- Presence of cirl bunting
- Number and approximate location of breeding territories
- Habitat location and use
- Any constraints to survey (e.g. access limitations to areas of apparently suitable habitat, survey effort not according with RSPB recommendations).

4.1. Survey method

A minimum of five survey visits between mid-April and the end of August are required and all these visits need to be in the same year. At least two should be in mid-April-May and two in June-August. At least one visit must be after mid-August as this is a good time to detect family parties. Ideally there should be a sufficient gap between each visit, e.g. c2 weeks. More visits would help to build a complete picture of bird use on the site, or if there is a high concentration of pairs. Territories can overlap and singing males are known to use the same singing posts as their neighbours. It is vital to ensure that simultaneous registrations are recorded. Nests can be within 100m of each other which makes assessing number of pairs difficult. In cold springs breeding activity may be delayed and birds can still be in loose flocks in April and early May. However, this will still give an indication of where birds may subsequently go on to nest.

The duration of each visit (which should be recorded) will depend on the size and features present at each individual site. It is recommended that at least 5 minutes is needed per hectare surveyed plus 45 minutes per site.

For example

1 ha site = 45 minutes + 5 minutes = total time on site 50 minutes.

20 ha site = 45 minutes + (20x5 minutes = 100 minutes) = total time on site 145 minutes.

A site of up to 50ha of suitable habitat would require almost 5 hours.

Avoid poor weather conditions, specifically heavy rain, poor visibility and strong winds (greater than Force 4), as bird activity and detectability will be much reduced. Complete a single visit in a single morning.

The site should be mapped and a route taken that approaches to within 10m of every hedge or suitable area of scrub on the survey area. This route should also be mapped and should be walked slowly to aid detection. Vary the direction of the route walked between visits. All hedgerows and areas of scrub will need to be walked on each visit. The survey should preferably be carried out in the morning after sunrise and before 1100hrs. However, cirl

buntings can be active at all times of day so timing could vary between visits as long as the majority of visits are undertaken in the morning. Avoid between 1100 and 1500hrs.

The song of the male may be audible from up to 500m on a calm day. It is best described as a slightly accelerating, rattled trill lacking rhythm. It can resemble that of greenfinch, wren, yellowhammer and lesser whitethroat with individual males varying the quality and tone of the song though not the general structure during a bout of song. Their other calls, heard only at close range, are more difficult to pick up without previous knowledge and experience, but these are often the best way of detecting birds so it is vital surveyors know these calls. The commonest call is a sharp, thin, quiet 'tsip' very like that of a young robin: this call is often given in flight. Other calls, including alarm and contact calls, are similar and inconspicuous. The calls of chicks and recently-fledged young are distinctive and can be useful in identifying breeding sites. The calls are similar to those of adults, though are more frenetic and typically comprise two or more staccato notes given in quick succession, rather than just the single note given by the adult.

For records of ciril bunting song and calls, follow these links:

<http://www.xeno-canto.org/species/Emberiza-cirlus>

<http://sounds.bl.uk/Environment/British-wildlife-recordings/022M-W1CDR0001391-1700V0>

<http://www.rspb.org.uk/discoverandenjoynature/discoverandlearn/birdguide/name/c/cirilbunting/index.aspx>

<http://www.british-birdsongs.uk/ciril-bunting>

Territories can overlap or be very close. For example, nests can be within 100m of each other. In addition, where they are at a low density they may sing intermittently and could easily be missed. Singing males are known to use the same singing posts as their neighbours, or do not necessarily sing at each other, making assessing number of territories difficult. Singing birds will often stop singing when approached. If birds are heard singing from different locations but not all at the same time do not assume this is the same bird moving around. They will often sing at different times to each other. If you have not seen birds flying between song posts, sit and wait for singing to resume and see if it can be determined if these are different birds. Ensure that you record simultaneous singing or calls on the map, as well as movements of individual birds.

If birds have not been picked up on early visits, spend 45-60 minutes in suitable breeding habitat to pick up birds that may be being inactive and quiet. This can happen when there is a very low density of birds. Ciril buntings can be extremely unobtrusive and can spend time just sitting quietly in hedges so it is important to spend time in suitable areas and not just walk through. Change the location of where time is spent on different visits.

If birds are suspected of nesting off the site but foraging within the site boundaries, this information is equally important. For this reason it would be useful to survey within 250m of the site boundary (this can be done by scanning from the survey site boundaries but ideally by walking suitable habitat in this 'buffer' zone if access is possible) and record any birds seen just off site.

Use separate maps at an appropriate scale (e.g. 1:2500) for each visit, or use a different colour to indicate different visit dates. On each map note the visit number, date, times, observer and

weather (e.g. Visit 1, 21/04/14, 0730-1100 BST, observer: JW, weather: cool, bright and wind speed force 2).

On each visit, map the location of every cirl bunting, indicating its behaviour with the appropriate BTO behaviour code (see Appendix 3). Use separate maps for each visit or use a different colour to indicate different visit dates. The most important point to concentrate on is the location of individuals which are recorded at the same time. For example, three males singing simultaneously indicates three separate territories.

4.2. Interpretation of data

After the final visit, put all the sightings on a separate 'summary' map and circle the cluster of sightings considered to be from each territory on the site. From this the minimum number of territories using the site can be assessed. Retain field maps as well as final season maps to submit to the local planning authority with the application. Record as much detail as possible, such as the age and sex of each bird.

A cluster is, in general, a spatially distinct group of registrations, in which not more than one male and female are represented. However, as already said, cirl buntings are not always easy to pick up. For example, if a singing male has been recorded on more than one visit an assumption that he is part of a breeding pair should be made. Normally there should be at least two registrations per cluster for the series of visits, unless conditions on other visits were not ideal. However, as cirl buntings are so elusive and may move between nesting attempts (i.e. to just off site), if birds are seen in appropriate nesting habitat on just one occasion then record as possible breeding.

A single record of a nest containing eggs or young (but note that nest finding is not required as part of this survey and illegal without the relevant licence), an adult carrying nesting material or food, or recently fledged young can be counted as a territory with confirmed breeding. As cirl buntings can nest within 100m of each other, territories can be close together and in fact overlapping. This is something that needs to be considered when interpreting data. They typically forage within 250m of the nest, but this can occasionally be further. Using this as a basis, a pair of cirl buntings may range over 19ha during the breeding season.

Records of more than two birds together, other than pairs or juveniles, should be treated as belonging to more than one cluster. If a group of birds show any sign of aggression, then it would be reasonable to put them on the boundary between clusters. If during field-work two records fall very close together on a single visit, it is worth another few minutes of waiting to see if they are from two different birds.

Ideal clusters show both a series of registrations of territorial behaviour spanning most of the visits and dotted lines (indicating birds recorded simultaneously and therefore indicative of separate territories) radiating out to neighbouring clusters (see Appendix 4). However, in reality, map analysis can involve a certain amount of subjectivity in interpretation. It is therefore important to retain field maps as well as final season maps as these may be required to explain interpretation of data and to justify the number of territories considered to be using the site.

It is important to remember that the boundaries drawn around clusters, although useful in understanding the number of territories on the site, do not represent the limit of where the birds range and should therefore not be used for this. To understand how the birds use the site through the season would require far more detailed and more frequent observations.

The interpretation of behaviour to assess breeding¹⁰ is as follows:

Possible breeding	Probable breeding	Confirmed breeding
<ul style="list-style-type: none">• Bird recorded in suitable breeding habitat• Singing male	<ul style="list-style-type: none">• Pair in suitable nesting habitat• Territorial behaviour• Display• Visiting probable nest site• Agitated behaviour• Carrying nesting material	<ul style="list-style-type: none">• Adult carrying faecal sac or food for young• Recently fledged young• Chicks heard

It is not necessary to have evidence of confirmed breeding to know that a site is important for the species. Records of birds exhibiting behaviours for possible and probable breeding in suitable habitat in the breeding season indicate that a site has importance for ciril buntings.

4.3. Breeding Survey Summary

- Map habitats on site (see Appendix 1).
- Undertake 5 survey visits: at least two in mid-April-May, at least two in June-August (including one visit after mid-August), with all visits made in the same year.
- Map route taken, weather and time spent on site for each visit.
- Map all sightings and behaviour – retain field maps as well as final territory map.
- Interpret sightings on a final territory map – assess minimum number of territories on site.

5. Winter Survey

Ciril buntings will move up to 2km to find favourable foraging habitats, mainly winter stubble. They can use several different sites throughout the winter. To identify if a site is used by ciril buntings, regular systematic searches are required. All visits should be made in the same winter season, i.e., in the recommended months at the end of one year and the beginning of the following year.

Information required:

- Presence of ciril bunting
- Maximum numbers using site
- Habitat locations
- Foraging areas
- Any constraints to survey (e.g. access limitations to areas of apparently suitable habitat, survey effort not according with RSPB recommendations).

5.1. Survey method

Map suitable habitats on the site (for details of what habitats ciril bunting use in winter see Appendix 1).

10. Balmer, D.E., Gillings, S., Caffrey, B.J., Swann, R.L., Downie, I.S. & Fuller, R.J. 2013. *Bird Atlas 2007-11: the breeding and wintering birds of Britain and Ireland*. BTO Books, Thetford.

The site should be checked at least 4 times over a single winter period (October-March), i.e. visits should be in the recommended latter months of one year and the early months of the following year. Two visits should be before Christmas and two after. Visits should be spread over the winter period, with each visit in a different month. Surveys should be undertaken in the morning one hour after sunrise as this is when the birds are most actively foraging. Leave at least 10 days between each visit. The duration of each visit will depend on the size and features present at each individual site, but as a guide 10ha should take 1 hour. Avoid poor weather conditions, specifically heavy rain, poor visibility and strong winds as bird activity and detectability will be much reduced.

Ensure survey route takes you with 10m of each field boundary. Cirl buntings are unlikely to feed in the middle of large fields but may do if there are patches of scrub/cover. Surveyors should be familiar with calls made by cirl buntings as this is often the way they are picked up. If birds are flushed, take note of where they fly to and record on field maps to help avoid double counting.

Though there can be several species feeding in the same fields, cirl buntings often stick together rather than join mixed flocks, though this is sometimes the case.

The maximum number of birds seen on the site on any one visit should be reported along with where they were feeding.

6. Disturbance

Cirl buntings are protected under Schedule 1 of the Wildlife and Countryside Act (1981). Breeding birds and their nest sites should NOT be disturbed unless an appropriate licence is held. For details on appropriate bird licenses visit - <https://www.gov.uk/government/collections/bird-licences>. Please note that searching for nests is NOT part of this survey.

7. References

Balmer, D.E., Gillings, S., Caffrey, B.J., Swann, R.L., Downie, I.S. & Fuller, R.J. 2013. *Bird Atlas 2007-11: the breeding and wintering birds of Britain and Ireland*. BTO Books, Thetford. ISBN 978-1-908581-28-0.

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Gilbert G, Gibbons D W and Evans J (1998) *Bird Monitoring Methods: a manual of techniques for key UK species*. RSPB, Sandy. ISBN 1-901930-03-3.

Mackenzie, D.I., Nichols, J.D., Lachman, G.B., Droege, S., Royle, A. and Langtimm, C.A. (2002). Estimating site occupancy rates when detection probabilities are less than one. *Ecology*, 83:8. pp. 2248–2255.

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14 June 2017

To be reviewed annually. Contact RSPB for up to date version.

Appendix 3 – BTO behaviour codes

Standard symbols for bird activities.

The standard BTO list of conventions is shown. These are designed for clear and unambiguous recording. Symbols can be combined where necessary. Additional activities of territorial significance, such as displaying or mating, should be noted using an appropriate clear abbreviation.

CH, CH♂, CH♀ 3 CH juvs, CH♂1♀	Chaffinch sight records, with age, sex or number of birds if appropriate. CH♂ indicates one pair; 2CH♂ means two pairs together.
R fam	Juvenile Robins with parents(s) in attendance.
<u>R</u>	A calling Robin
<u>R</u>	A Robin repeatedly giving alarm calls or other vocalisations (not song) thought to have strong territorial significance.
(R)	A Robin in song
RR	An aggressive encounter between two Robins.
* R	An occupied nest of Robins; do not mark unoccupied nests, which are of no territorial significance by themselves.
* BT	Blue Tits nesting in a specially provided site (e.g. nest-box)
* PW on	Pied Wagtail nest with an adult sitting.
PW mat	Pied Wagtail carrying nest material
PW food	Pied Wagtail carrying food.

Movements of birds can be indicated using the following conventions:

- GR →	A calling Greenfinch flying over (seen only in flight)
(D) →	A singing Dunnock perched then flying away (not seen to land)
→ B♂	A male Blackbird flying in and landing (first seen in flight)

The following conventions indicate when registrations relate to different birds, and when to the same bird. Their proper use is essential for the accurate assessment of clusters.

WR → WR

A Wren moving between two perches. The solid line indicates it was definitely the same bird.

(WR) --- (WR)

Two Wrens in song at the same time, i.e. definitely different birds. The dotted line indicates a simultaneous registration and is of very great value in separating territories.

* Li --- * Li

Two Linnet nests occupied simultaneously and thus belonging to different pairs. This is another example of the value of dotted lines. Only adjacent nests need be marked in this way.

(CK) — (CK)

The solid line indicates that the registrations definitely refer to the same bird.

(SD) — ? — (SD)

A question-marked solid line indicates that the registrations probably relate to the same bird. This convention is of particular use when the census route returns to an area already covered—it is possible to mark new positions of (probably the same) birds recorded before, without the risk of double recording. If birds are recorded without using the question-marked solid line, overestimation of territories will result.

(WR) WR mat

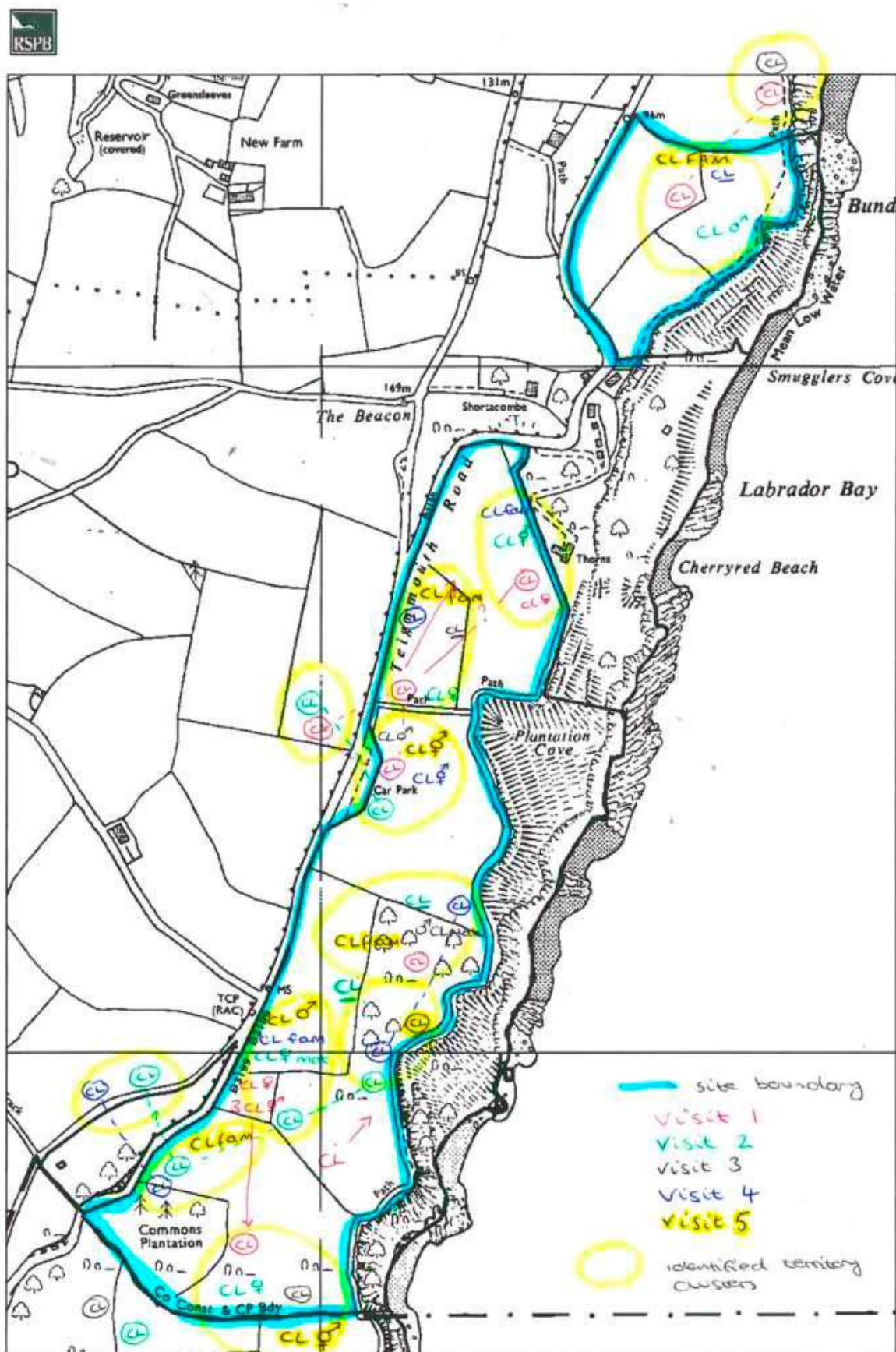
No line joining the registrations indicates that the birds are probably different, but depending on the pattern of other registrations they may be treated as if only one bird was involved. (It is possible to use a question-marked dotted line, indicating that the registrations were almost certainly of different birds.)

C* C*

Where adjacent nests are marked without a line, it will often be assumed that they were first and second broods, or a replacement nest following an earlier failure.

In all cases the standard BTO codes for British birds should be used.

Appendix 4 – Example survey interpretation map



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Appendix 5 – Cirl bunting compensation cost calculations

The cost of delivering compensation measures may vary across Local Planning Authorities depending on local land values, partners, schemes and specifications. The following sets out agreed financial contributions that are in place for Teignbridge (Section 1), at 2014 prices and Torbay (Section 2), at 2015 prices. Section 3 shows estimated costings for a landowner/developer providing the mitigation for a breeding territory themselves, at 2014 prices. All figures shall be updated for inflation.

When calculating contributions for impacts on a nationally important Wintering Population but no breeding territories, apply an area-based proportion to the breeding territory rates set out below. For example, if 1ha of suitable habitat is lost then, according to Table 1, at least 2ha of compensation is needed which in Teignbridge equates to £59,354 where a contribution of £74,193 provides for 2.5ha of breeding territory compensation.

1. Teignbridge District Council - financial contribution to compensate for one cirl bunting breeding territory

Contribution covers land purchase for nature reserve and RSPB management and monitoring costs for first 5 years with subsequent costs being met by RSPB reserve management budget.

Land purchase costs

Land price	@£23,000/ha (arable) x 2.5	£57,500
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Site setup costs

Incl. grassland creation, arable creation, fencing, gates, hedge planting etc.	£2,500
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TOTAL Capital costs	<u>£60,000</u>
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Annual Management costs (using figures for payments available under Higher Level Stewardship)

<http://publications.naturalengland.org.uk/publication/2827091>

Hedge maintenance	£ 540.00
Hedge laying/planting = 100m a year	£ 700.00
Grassland management	£ 146.90
Combination of low input spring cereal and over-wintered stubbles	£ 370.00
6m grass buffer strip around arable	£ 81.60
Total	£1,838.50/year

Annual Staff Costs

Monitoring by RSPB staff during site management visits (5 site visits during summer at 60mins each and 4 visits during winter at 20mins each) = 1 day

Admin for site, arranging work/contractors/dealing with tenants etc. = 3 days

Total of 4 RSPB staff days per year @ £250/day	£1,000/year
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TOTAL Revenue Costs per Year	<u>£2,838.50/year</u>
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Summary costs

Purchase/habitat creation costs	£60,000
Annual costs (annually for 5 years*)	£14,193

Total cost	<u>£74,193</u>
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*Under this scenario, following the first 5 years, the RSPB funds ongoing management.

2. Torbay Council - financial contribution to compensate for one cirl bunting breeding territory

Contribution covers Torbay Coast and Countryside Trust (TCCT) management and monitoring costs for 25 years. TCCT has every intention to continue to manage the land in accordance with an agreed Scheme of Management until the expiry of its current lease in 2060. This calculation includes a 2% capitalisation cost (inflation and loss of interest payments).

Table 3: Scheme costs based on habitat provision for an additional six pairs of cirl buntings at Cockington by TCCT

Works Category	Costs	
Setup Costs		
Fences, Gates and Water Supply	£50,206	
Stock Purchase	£3,960	
Total Setup Costs	£54,166	
Infrastructure Replacement Costs		
Fences, Gates and Water Supply	£144,379	
		Capitalised @ 2%
Total Infrastructure Replacement Costs	£144,379	£113,783
25 yr. Running Costs		
Grassland Management	£151,346	
Hedgerow Management	£166,526	
Arable Management	£123,770	
Management of Grass Margins	£2,513	
Winter feeding	£7,613	
Monitoring of cirl bunting numbers	£4,004	
		Capitalised @ 2%
25 yr. Running Costs	£455,771	£355,929
Average Annual Running Costs	£18,231	£14,237
TOTAL for 6 pairs (Setup, Infrastructure Replacement & Running Costs)	£654,316	£523,878
Scheme cost per pair of cirl buntings		£87,313

Note that this cost is based on an agreed Scheme of Management for habitat provision for an additional six pairs of cirl buntings at Cockington for at least 25 years. One contribution is already secured through a s106 agreement leaving compensation for five pairs currently available.

A similar Scheme of Management is being developed for TCCT managed land at Maidencombe.

3. Cost of developer/landowner delivery of compensation for one ciril bunting pair

Contribution covers ongoing management and monitoring of land only.

Site setup costs

For example grassland creation, arable creation, fencing, gates, hedge planting etc.

TOTAL Capital Costs £2,500

Annual Management costs using figures for payments available under Higher Level Stewardship)

<http://publications.naturalengland.org.uk/publication/2827091> Hedge maintenance

£ 540.00

Hedge laying/planting = 100m a year	£ 700.00
Grassland management	£ 146.90
Combination of low input spring cereal and over-wintered stubbles	£ 370.00
6m grass buffer strip around arable	£ 81.60
Total	£1,838.50/year

Annual Monitoring Costs

Monitoring by ecologist (5 site visits during summer at 60mins each and 4 visits during winter at 20mins each plus travel time) = 4.5 days Site visits to check habitats 2 days

Total of 3 consultant days per year @ £350/day £2,275/year

TOTAL Revenue Costs per Year £4,113.50/year

Summary costs

Habitat creation costs	£ 2,500
Revenue costs for 80* years	£329,080

Total cost £331,580**

* 80 years represents an approximation of in perpetuity.

** At 2014's prices – no allowance has been made for inflation over this period.

Appendix 6 – Cirl bunting habitat requirement justification

1. Introduction

The recommendations expressed in this document are based on the most current scientific evidence and the experience from 25 years of habitat delivery through the RSPB/Natural England Cirl Bunting Recovery Project.

The ecology and habitat requirements of cirl buntings are well known (Evans, 1997). They nest in thick hedges or scrub such as bramble or gorse. In summer, they mainly forage for invertebrates in semi-improved/rough grassland and, in winter, they forage for seeds mainly in stubble fields. They are also known to forage in cereal fields during summer, both to collect invertebrates (especially from spring-sown crops) and to collect grain of the crop when wet or cool weather makes it difficult to find invertebrates. Cirl buntings are a resident and relatively sedentary species, typically moving no more than 2km between breeding and wintering areas. Conservation action has mainly involved the delivery of key habitats through agri-environment schemes which has led to a significant increase in the cirl bunting population (Peach et al 2001). Despite this increase the UK cirl bunting population continues to be restricted mainly to south Devon and is therefore vulnerable.

It is important that compensation habitat, if it is to be successful, can support the critical year-round needs of the required number of pairs of cirl buntings: hedges/scrub, appropriate grassland and spring barley left as stubble.

2. Compensation Requirements

Based on years of quantitative research in South Devon, the authors conclude that, to adequately compensate for the loss of habitat associated with one pair of cirl buntings, it is necessary to provide at least 2.5ha of appropriately managed habitat.

The 2.5ha for a single cirl bunting pair should comprise as follows:

2.1. Semi-Improved / Rough Grassland (summer feeding habitat) – minimum 1.13 ha

The amount of rough grassland recommended is derived from average habitat parameters measured in the study reported in Stevens et al (2002). This found that cirl bunting territories contained an average of 1.13 ha of rough grassland. It should be noted that study sites are likely to have been high functioning sites with good concentrations of breeding cirl buntings and therefore high quality grassland habitats (i.e. having a history of low fertilizer inputs, low grazing/mowing intensity and consequently high invertebrate abundance). In most cases, grassland compensation sites are unlikely to be of such high quality and will need time to develop and there could be a case for increasing the area of grassland habitat provided. However, for now it is assumed that some summer foraging habitat will be provided by arable and the margins of hedge/scrub habitats. It is recommended that grass margins are provided around the arable component of the compensation habitat and these can count towards grassland provision.

2.2. Hedge / Scrub (nesting habitat) – minimum 0.2 ha

Mature and properly managed hedges should provide suitable nesting habitat. Our recommendation is for a minimum of 0.2 ha of hedge/scrub habitat (which could equate to c1000 metres of hedge that is approximately 2 metres wide, or 0.1ha of scrub and 500m of 2m wide hedge) as adequate to provide nesting habitat for one cirl bunting pair. Hedgerows must

be appropriately managed to provide the thick bushy conditions that nesting ciril buntings favour: this carries an expectation that ongoing rotational hedge management will render some of the available hedgerow unsuitable for nesting in some years. Hedges are important for cover throughout the year and it is also essential that winter cereal stubbles have suitable surrounding hedges, as ciril buntings rarely forage further than 30m from cover (Evans 1997). A large proportion of nests are known to have both rough grassland and arable habitats within 250m (Stevens et al 2002), showing the importance of a mixed farmland landscape for this species. Stevens et al (2002) found a strong positive influence of non-linear scrub (young gorse and bramble within grassland) on ciril bunting territory distribution. If scrub is present or can be encouraged within the grassland, it will be very beneficial.

2.3. Weedy Overwinter Stubble (winter feeding habitat) – minimum 1 ha

This 1ha minimum is based on research reported in Peach & Wotton (2010). This indicates that 1 ha of Environmental Stewardship's special barley option (spring sown barley harvested in autumn and left as a weedy winter stubble until end of March) per 1km square supports on average 1.7 pairs of ciril buntings. It is important that this winter habitat provides a seed source that will last throughout a winter. If spring barley is not appropriate then a barley-based unharvested crop may be considered, but this will still need to be at least 1 ha in area.

When chick rearing, ciril buntings will forage for ripening grain (and for some invertebrates) in cereal crops and a high proportion of nests are within 250m of arable land. In addition, the winter stubble is important to attract ciril buntings to a new site and is therefore a critical component of any compensation scheme. Providing less than 1ha of arable can be problematic from a management point of view, as it provides little resilience against management error or crop failure.

2.4. Total Area of Compensation Habitat – minimum 2.5ha

The individual habitat areas in 1) to 3) above total a minimum provision of 2.33 ha. However, the individual area totals are the minimum areas required and assume high quality habitats are provided. While ciril buntings can occur at a density of 2.5 pairs or more per ha, those situations are the exception, not the norm. They are usually associated with the highest quality habitats and most suitable landscapes.

When new habitat must be created for ciril buntings – as is the case with provision of compensation for developments – average habitat quality is likely to be lower. A larger amount of land is therefore needed to provide an amount of habitat that has a high chance of supporting a viable local ciril bunting population.

Hence at least 2.5ha of compensatory habitat should be provided for each compensated pair of ciril buntings. Particularly, it is recommended that more grassland than the minimum of 1.13ha is established where possible. It will take time for some habitats to establish and become functional.

2.5. Location

The location of compensation habitat needs to be carefully considered. For compensation to be successful there has to be a high probability of ciril buntings finding the site. Ideally compensation sites should be within 1km of a healthy ciril bunting population, as Peach et al

(2001) showed that new agri-environment agreements more than 1km from an existing territory were less likely to be colonised. Two kilometres is the maximum distance the species will typically travel, so compensation must be delivered at least this close to established breeding pairs. The overall scale of compensatory habitat provision is also likely to be important and we therefore advocate locating compensation sites next to one another; managing for one isolated pair is less likely to be successful than managing a larger area for several pairs of ciril buntings. On a practical basis (based on our experience of the Ciril Bunting Recovery Project) larger blocks of land, in particular arable, are often easier to manage than smaller blocks.

3. Summary

We are confident that providing the habitat areas recommended in this document, coupled with appropriate ongoing management, provides a strong basis for compensating for ciril buntings lost through development. Providing smaller habitat areas would seriously reduce the likelihood of long-term occupancy by ciril buntings. Pooling compensation and providing larger areas of adjoining habitat is strongly recommended because larger sites:

- can accommodate more sustainable populations
- Are more resilient to management practices and unforeseen problems that might render some habitats unsuitable in some years (e.g. permits arable rotations or hedge restoration)
- Are usually cheaper to manage per ciril bunting pair. Are more likely to attract newly-colonising ciril buntings

This approach also fits with the principles of “*more, bigger, better and joined*” set out in the Lawson report.

The success of compensation for ciril buntings delivered through the planning process needs to be monitored. This can add to our understanding of delivering ciril bunting habitat and be used to review the proposals set out in this document. It is recommended that this review happens by 2025.

January 2016

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Cath Jeffs (Ciril Bunting Project Manager, RSPB)
Phil Grice (Senior Specialist - Ornithology, Natural England)

4. References

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Stevens, Donald, Evans, Buckingham and Evans (2002) *Territory distribution and foraging patterns of ciril buntings breeding in the UK* in *Biological Conservation* 107: 307-313.

Making Space for Nature: A review of England's Wildlife Sites and Ecological Network
Chaired by Professor Sir John Lawton CBE FRS. Submitted to the Secretary of State, the
Department for Environment, Food and Rural Affairs on 16 September 2010

Appendix 7 – Biodiversity unit gain from financial contribution

National and local planning policy seek net gain for biodiversity from development. Policy compliance can be demonstrated, in part, by the use of the Defra Metric (<http://bit.ly/1We3PAQ>) to quantify the net impact of development. Calculations assess the impacts in terms of biodiversity units and a net gain is considered to be a positive net impact of greater than zero.

This document provides guidance on how the curlew bunting shall be considered through planning. Offsite habitat enhancements to compensate for impacts on curlew bunting (including through the payment of a financial contribution) may also achieve an uplift in biodiversity. This can again be quantified using the Defra Metric. This uplift can be considered against any net impacts of onsite biodiversity measures to demonstrate net gain.

For example, a development proposal includes onsite measures resulting in a net loss of biodiversity. The proposal also results in the loss of one curlew bunting breeding territory and agrees a suitable compensation payment for offsite habitat enhancements. If the offsite enhancements result in both the necessary curlew bunting gain and an uplift in biodiversity units, then the proposal can be considered to have achieved net gain if the onsite loss is less than the offsite gain in biodiversity units.

This assumes no other wildlife impacts and does not take account of impacts on protected or (other) priority species and protected sites.

This appendix sets out how much biodiversity unit gain is expected to be achieved from strategic provision (Step 3) by RSPB and TCCT, funded through financial contributions (Appendix 5). Should the developer choose to deliver the compensation through another approved delivery provider then a bespoke assessment may be required.

Useful sources of information:

The calculations made in this Appendix are based on the Defra metric and use the Warwickshire excel spreadsheet-based calculator. The calculator and guidance on its use is available from <http://www.warwickshire.gov.uk/biodiversityoffsetting>. Other calculators are available.

Guidance on offsetting was produced for South Devon in 2014 as part of Defra's pilot. This is due to be updated and a single recommended calculator provided for the entire county. In the meantime the South Devon guidance is available from <http://www.naturaldevon.org.uk/biodiversity-offsetting-pilot/>.

Assumptions:

The calculations are based on hypothetical scenarios taking details set out in this document into account. The following specific assumptions have been made:

- Habitat areas are measured up to the centre point of the field boundary
- Baseline habitats are all in poor condition:
 - o 1.1ha intensively managed arable
 - o 1.4ha Improved or Poor Semi-Improved grassland
 - o 0.8km intact species poor or rich hedge without trees
- Proposed habitats are expected to reach moderate condition within timescales specified.
 - o 1.1ha low input spring barley; immediate
 - o 1.3ha tussocky, insect-rich but still improved or Poor Semi-Improved grassland; within 5yrs

- 0.8km intact species poor or rich hedge without trees but allowed to grow bushy and tall with rotational management; within 5yrs
- 0.1ha scattered scrub
- The calculation assumes that management changes have resulted in enhanced condition for the habitats but that they remain the same as the baseline with the exception of some additional scattered scrub on the grassland. The scrub is assumed to be planted into the grassland with a gradual transition to its target habitat and therefore considered to be enhancement of the grassland rather than loss and then creation.
- Defra guidance on the use of the metric would not normally support the use of low Distinctiveness habitats on offset sites. However the South Devon Biodiversity Offsetting Guidance recognises the ciril bunting as a strategic priority for targeting offsets and the wider wildlife benefits of two particular habitats - low input spring sown arable and tussocky insect rich grassland. The guidance therefore assigns a condition enhancement for these habitats over the baseline low distinctiveness habitats of intensive arable and improved grassland. These measures are therefore assumed not to be considered as trading down.
- Habitats of higher biodiversity unit value could also be enhanced or created to benefit ciril bunting e.g. species-rich grassland. However this is likely to take longer and cost more to achieve. Development sites that still have residual net impacts on non-statutory biodiversity when factoring the below values in should discuss with their offset provider as to the feasibility and cost of delivering greater unit value from their ciril bunting compensation scheme.
- A screen shot of the area and linear-based calculations is provided below.

Results:

The above assumptions provide for different scenarios. Calculations have been made for each of these and then averages taken to provide the final anticipated biodiversity value achieved through the financial contributions. The level of gain is therefore:

- Average habitat gain: 5 units; to avoid trading down this should only be used to compensate for low value habitat loss elsewhere.
- Average linear habitat gain: 3.3 units; to avoid trading down this should only be used to compensate for medium or low value linear habitat loss elsewhere.

Area-based calculations:

Existing habitats on site Please enter <u>all</u> habitats within the site boundary							Habitat Biodiversity Value						Comments
			Habitat distinctiveness		Habitat condition		Habitats to be retained with no change within development		Habitats to be retained and enhanced within development		Habitats to be lost within development		
code	Phase 1 habitat description	Habitat area (ha)	Distinctiveness	Score	Condition	Score	Area (ha)	Existing value	Area (ha)	Existing value	Area (ha)	Existing value	
Direct Impacts and retained habitats				A		B	C	A × B × C = D	E	A × B × E = F	G	A × B × G = H	
J11	Other: Arable	1.10	Low	2	Poor	1			1.10	2.20			
B4	Grassland: Improved grassland	1.30	Low	2	Poor	1			1.30	2.60			
B4	Grassland: Improved grassland	0.10	Low	2	Poor	1			0.10	0.20			
J11	Other: Arable	1.10	Low	2	Poor	1			1.10	2.20			
B6	Grassland: Poor semi-improved grassland	1.30	Medium-Low	3	Poor	1			1.30	3.90			
B6	Grassland: Poor semi-improved grassland	0.10	Medium-Low	3	Poor	1			0.10	0.30			
Total		5.00				Total	0.00	0.00	5.00	11.40	0.00	0.00	
											ΣD + ΣF + ΣH		
											Site habitat biodiversity value		11.40

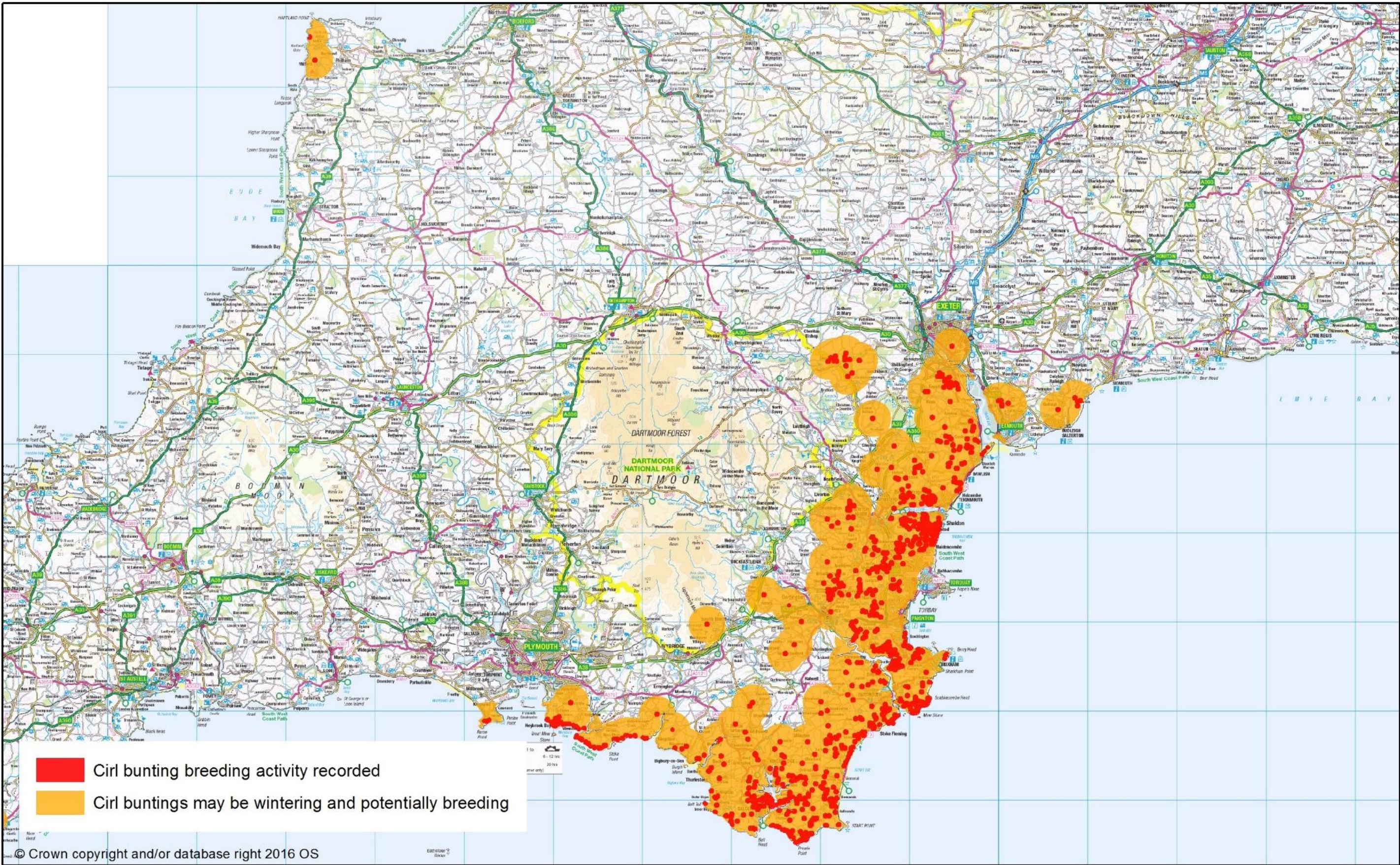
Proposed habitats on site (Onsite mitigation)			Target habitat distinctiveness		Target habitat condition		Time till target condition		Difficulty of creation / restoration		Habitat biodiversity value		Comment
code	Phase 1 habitat description	Area (ha)	Distinctiveness	Score	Condition	Score	Time (years)	Score	Difficulty	Score	(N × O × P) / Q / R		
Habitat Creation			O		P		Q		R		(N × O × P) / Q / R		
		N											
Total		0.00											
Habitat Enhancement							Existing value S (= F)				((N × O × P) - S) / Q / R		
J11	Other: Arable	1.10	Low	2	Moderate	2	2.20	5 years	1.2	Low	1	1.83	low input spring barley
B4	Grassland: Improved grassland	1.30	Low	2	Moderate	2	2.60	5 years	1.2	Low	1	2.17	tussocky insect-rich grassland
A22	Woodland: Scattered scrub	0.10	Medium	4	Moderate	2	0.20	5 years	1.2	Low	1	0.50	
J11	Other: Arable	1.10	Low	2	Moderate	2	2.20	5 years	1.2	Low	1	1.83	low input spring barley
B6	Grassland: Poor semi-improved grassland	1.30	Medium-Low	3	Moderate	2	3.90	5 years	1.2	Low	1	3.25	tussocky insect-rich grassland
A22	Woodland: Scattered scrub	0.10	Medium	4	Moderate	2	0.30	5 years	1.2	Low	1	0.42	

Linear-based calculations:

							Linear Biodiversity Value						
Existing linear features on site			Linear distinctiveness		Linear condition		Linear features to be retained with no change within development		Linear features to be retained and enhanced within development		Linear features to be lost within development		
code	Phase 1 habitat description	Feature length (km)	Distinctiveness	Score	Condition	Score	Length (km)	Existing value	Length (km)	Existing value	Length (km)	Existing value	
Direct Impacts and retained features				A		B	C	A x B x C = D	E	A x B x E = F	G	A x B x G = H	
J21	Hedges: Intact hedge	0.80	Medium	4	Poor	1			0.80	3.20			
J211	Hedges: Native species rich intact hedge	0.80	High	6	Poor	1			0.80	4.80			
Total		1.60				Total	0.00	0.00	1.60	8.00	0.00	0.00	
											ΣD + ΣF + ΣH		
											Site Linear Biodiversity Value		8.00

Proposed linear features on site (Onsite mitigation)			Target linear distinctiveness		Target linear condition		Time till target condition		Difficulty of creation / restoration		Linear biodiversity value		
code	Phase 1 habitat description	(km)	Distinctiveness	Score	Condition	Score	Time (years)	Score	Difficulty	Score	(N × O × P) / Q / R		
Linear Creation			O		P		Q		R		(N × O × P) / Q / R		
		N											
Total		0.00											
Linear Enhancement							Existing value S (= F)				((N × O × P) - S) / Q / R		
J21	Hedges: Intact hedge	0.80	Medium	4	Moderate	2	3.20	5 years	1.2	Low	1	2.67	
J211	Hedges: Native species rich intact hedge	0.80	High	6	Moderate	2	4.80	5 years	1.2	Low	1	4.00	

Map 1 – Devon’s cirl bunting breeding range. Known breeding territories (red) and potential breeding / wintering areas (amber). (Primary source: 2016 national survey)



Map 2 – Target areas for strategic cirl bunting nature reserves

