Gravity

Smart Campus

Gravity LDO Environmental Statement

Volume 2 – Appendices

Appendix 12.5

Bird Survey Report

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PLANS

PLAN ECO1 Breeding Bird Survey

1. INTRODUCTION

1.1. Background

1.1.1. Ecology Solutions Ltd was commissioned on behalf of This Is Gravity in March 2020 to undertake a comprehensive programme of ecology survey work for This is Gravity Ltd (TIGL), at the site known as Gravity, at Puriton, near Bridgwater, Somerset; hereafter referred to as the 'Site'.

1.1.2. Survey work undertaken at the Site includes a range of habitat and species-specific surveys covering the 2020 survey period. This report has been produced in order to detail the methodologies and findings of the habitat survey work undertaken.

1.1.3. It should also be recognised that the Site has already been subject to previous extensive ecological survey and assessment work as part of the decommissioning and remediation works which have planning consent, as well as to inform the extant hybrid planning permission for the Site redevelopment and Natural England licence applications.

1.1.4. The majority of the Site has been the subject of numerous ecological surveys since 2008. EnvironPlus International Limited (EPI) undertook an initial suite of surveys in 2008, with Ecology Solutions having undertaken regular update work since 2011. The results of the survey works are detailed in the Environmental Statement (2013) and ES Addendum (2017) produced by Ecology Solutions in support of the extant planning permission.

1.1.5. The majority of the site and the previous surveys on it, did not include the 'full' Site, therefore as well as updating previous surveys, surveys of the additional land to be contained in the LDO were included.

1.1.6. The extensive historic survey information available has been used to inform the update survey work and is referenced, where necessary, within this report.

1.2. Site Characteristics

1.2.1. The main component of the Site is located to the north east of Puriton. In addition, the Site includes a railway spur to the north west, a road connection from Junction 23 of the M5 motorway to the south west of the Site and a reedbed system that connects the Site to the River Huntspill to the north. The Site is within an agricultural setting, and is located between the villages of Puriton (to the west) and Woolavington (to the east).

1.2.2. Broadly, the Site comprises grasslands, woodland, scrub, hedgerows, tall ruderal and ephemeral vegetation along with standing water, reed bed, wet and dry ditches as well as buildings and hardstanding. There are also areas of disturbed / bare ground.

1.1. Bird Survey Report

1.1.1. This document describes the results of the reptile survey work undertaken and provides a broad assessment of the current ecological interest of the Site as a whole for this species group, based upon field and desk-based

studies. The importance of the Site for birds within the Site is evaluated with due consideration given to the guidance published by the Chartered Institute of Ecology and Environmental Management (CIEEM) [1.]

[1]CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester

2. SURVEY METHODOLOGY

2.1 The methodology utilised for the breeding bird survey work can be split into two areas, a desk study and specific faunal survey work. These are discussed in more detail below.

2.2 Desk Study

2.2.1 In order to compile background information on the use of the application site and its immediate surroundings by reptiles, Ecology Solutions contacted Somerset Ecological Records Centre (SERC). The records received are collated data from a number of sources and provide information on an array of bird species (covering a 3km search radius from the Site).

2.2.2 Information provided by SERC is referred to where relevant.

2.3 Breeding Bird Survey

2.3.1 The survey methodology utilised across the Site comprises of walked transects. Transect surveys are focussed on general breeding bird interest associated within the Site. The transects were planned to incorporate all habitat types (e.g. woodland, wetland and farmland) present within or adjacent to the Site.

2.3.2 Survey visits were carried out at suitable times (i.e. early mornings) in April 2020 and early June 2020. In general surveys were undertaken over a three to four hour period, with continual observations being taken for the duration of the survey.

2.3.3 Transects were walked by experienced ornithologists covering the Site. The activity of all bird species present within Site during the survey period were recorded.

2.3.4 To ascertain the breeding status of birds using the Site, the following criteria were applied following the methodology used in the 'Atlas' surveys of 1988-1991 (Gibbons et al, 1993). This accepts the following activities as denoting breeding (including those probably breeding although definite proof was lacking):

- Bird apparently holding territory;
- Courtship and display;
- Nest-building (including excavating nest-hole);
- Distraction display or feigning injury;
- Adult carrying faecal sac or food;
- Adult entering or leaving apparently occupied nest site;
- Nest with eggs or eggshells found, or bird sitting but not disturbed;
- Nest with young; or downy young of ducks, game-birds, waders and other nidifugous species; and

- Recently fledged young.

2.3.5 Observations were recorded within Site itself as well as adjacent suitable habitats, where present.

3. SURVEY RESULTS

3.1 Given the habitats present it is considered that the Site has potential to support a range of bird species.

3.2 **Previous surveys**. Breeding bird surveys were undertaken by EPI in April and May 2009. Dawn surveys were conducted to recorded general breeding behaviours as well as evening visits to look for evidence of Barn Owls *Tyto alba*.

3.3 The areas with most breeding activity within the Site were recorded to be the trees and scrub towards the periphery. In addition, high levels of breeding activity were recorded in the reed bed to the north, the disused railway to the north-west, the Borrow Pit to the east and the orchard to the south-east of the Site. Low levels of breeding activity were recorded throughout much of the central part of the Site.

3.4 In total of 67 species were recorded during the breeding bird survey. The survey identified a number of species listed on Schedule 1 of the Wildlife and Countryside Act, the UK and Somerset Biodiversity Action Plans (BAPs) and/or on the Red and Amber Lists of Species of High Conservation Concern. These species are listed in Table 1 below.

Species	Schedule 1	BAP Status	BoCC Status
Barn Owl	Yes	Somerset	Amber
Bullfinch		UK and Somerset	Amber
Cetti's Warbler	Yes		
Cuckoo		Somerset	Red
Dunnock			Amber
Herring Gull		Somerset	Red
Hobby	Yes	Somerset	
House Sparrow		Somerset	Red
Kingfisher	Yes	Somerset	Amber
Linnet		UK and Somerset	Red
Little Owl		Somerset	
Merlin	Yes	Somerset	Amber
Mistle Thrush		Somerset	Red
Reed Bunting		UK	Amber
Skylark		UK and Somerset	Red
Song Thrush		UK and Somerset	Red
Snipe		Somerset	Amber
Starling		Somerset	Red
Wood Warbler			Red

Table 1: Protected and notable bird species recorded in breeding bird survey 2009 by EPI

3.5 All of the buildings with opportunities for breeding Barn Owls on the Site have since been removed as part of the remediation process. Barn owl nesting opportunities have been provided at the Site in the form of an enclosed box within one of the Bat roost buildings and in two nesting boxes located close to suitable retained foraging habitat within the Site.

3.6 Sixteen Cetti's Warbler territories were recorded within the Site, associated with the scrub and reeds along ditches, particularly in the western and north-eastern parts of the site including the Fishing Lake.

3.7 **Update surveys.** Breeding bird surveys were undertaken by Ecology Solutions in April 2020 and May 2020. The full list of species recorded during the update survey is shown below in Table 2.

Bird Species		Signs of Breeding Behaviour Observed
Common Name	**Scientific Name**	
Blackbird	*Turdus merula*	✓
Blackcap	*Sylvia atricapilla*	✓
Bluetit	*Cyanistes caeruleus*	✓
Bullfinch	*Pyrrhula pyrrhula*	
Buzzard	*Buteo buteo*	
Carrion Crow	*Corvus corone*	✓
Cetti's Warbler	*Cettia cetti*	✓
Chaffinch	*Fringilla coelebs*	✓
Chiffchaff	*Phylloscopus collybita*	✓
Collared Dove	*Streptopelia decaoto*	
Cuckoo	*Cuculus canorus*	✓
Dunnock	*Prunella modularis*	✓
Goldcrest	*Regulus regulus*	✓
Goldfinch	*Carduelis carduelis*	✓
Great Spotted Woodpecker	*Dendrocopos major*	
Great Tit	*Parus major*	✓
Green Woodpecker	*Picus viridis*	
Greenfinch	*Carduelis chloris*	
Grey Partridge	*Perdix perdix*	
Herring Gull	*Larus argentatus*	
House Martin	*Delichon urbicum*	✓
House Sparrow	*Passer domesticus*	✓
Jackdaw	*Corvua monedula*	
Lesser Black Backed Gull	*Larus fuscus*	
Lesser Whitethroat	*Sylvia curruca*	✓
Linnet	*Carduelis cannabina*	✓
Longtailed Tit	*Aegithalos caudatus*	✓

Magpie	*Pica pica*	✓
Mallard	*Anas platyrhynchos*	
Marsh Harrier	*Circus aeruginosus*	
Mistle Thrush	*Turdus viscivorus*	✓
Pheasant	*Phasianus colchicus*	
Pied Wagtail	*Motacilla alba*	✓
Red Kite	*Milvus milvus*	
Reed Warbler	*Acrocephalus scirpaceus*	✓
Robin	*Erithacus rubecula*	✓
Rook	*Corvus frugilegus*	
Sedge Warbler	*Acrocephalus schoenobaenus*	✓
Shell Duck	*Tadorna tadorna*	
Song Thrush	*Turdus philomelos*	✓
Starling	*Sturnus vulgaris*	
Stock Dove	*Columba oenas*	
Swallow	*Hirundo rustica*	
Whitethroat	*Sylvia communis*	✓
Wood Pigeon	*Columba palumbus*	✓
Wren	*Troglodytes troglodytes*	✓
Kingfisher	*Alcedo atthis*	✓

Table 2: Bird species recorded in breeding bird survey 2020 by Ecology Solutions

3.8 Much like the previous surveys undertaken for breeding birds, the areas with most breeding activity within the Site related to trees, ditches and scrub towards the periphery and high levels of breeding activity were recorded in the reed bed to the north. Low levels of activity were recorded throughout much of the central part of the Site.

3.9 In total 47 species were recorded during these surveys with 28 of these species showing signs of breeding including singing, nest construction and territory displays. A further three species were recorded that were likely to be breeding however no confirmative evidence (e.g. nest sites) of this were recorded during the surveys (Kingfisher, Marsh Harrier and Barn Owl). The results of the survey work undertaken are shown graphically on Plan ECO1.

3.10 The survey identified a number of species listed on Schedule 1 of the Wildlife and Countryside Act, the UK and Somerset BAPs and/or on the Red and Amber Lists of Species of High Conservation Concern. These species are listed in Table 3 below.

Species	Schedule 1	BAP Status	BoCC Status
Bullfinch		UK and Somerset	Amber
Cetti's Warbler	Yes		
Cuckoo		Somerset	Red
Dunnock			Amber
Herring Gull		Somerset	Red
House Sparrow		Somerset	Red
Linnet		UK and Somerset	Red
Little Owl		Somerset	
Mistle Thrush		Somerset	Red
Reed Bunting		UK	Amber
Song Thrush		UK and Somerset	Red
Starling		Somerset	Red

Table 3: Protected and notable bird species recorded in breeding bird survey 2020 by Ecology Solutions

3.11 Cetti's Warbler territories were recorded within the Site, again associated with the scrub and reeds along ditches, particularly in the northern reed bed and north-eastern parts of the site including the Fishing Lake.

3.12 Kingfisher were recorded in the northeast of the Site, along rhynes during the surveys although no specific nesting sites was recorded. Similarly, Marsh Harrier were recorded flying over the reed bed with nesting behaviours recorded, although no nest site was confirmed. Evidence of Barn Owl using the Site was recorded and nest boxes for this species are present onsite, although no evidence of nesting has been confirmed.

3.13 Overall, given the extensive areas of land disturbance that has taken place as part of the clearance and remediation of the Site, the extent of suitable habitat for breeding birds has reduced. This is however, generally limited to the central areas of the Site that were of less value to bird species prior to clearance compared to the wetland and woodland features at the Site periphery. Other habitats in the wider areas such as improved grassland fields were of little interest to birds, although the boundary hedgerow and treelines do offer sheltering and breeding habitat for a range of common bird species.

3.14 The Site is not considered to be of any significant interest to wetland or farmland birds as evidenced through the lack of records of such species during surveys undertaken.

3.15 **Background records.** The desk study undertaken with SERC returned several records of protected or notable bird species from within the Site. These included Grey heron *Ardea cinerea*, Chiffchaff *Phylloscopus collybita*, Pintail *Anas acuta*, Cetti's Warbler *Cettia cetti*, Shoveler *Anas clypeata*, Goldeneye *Bucephala clangula*, Red-breasted Merganser *Mergus serrator*, Red-necked Grebe *Podiceps grisegena*, Pochard *Aythya farina*, Gadwall *Anas strepera*, Bittern *Botaurus stellaris*, Teal *Anas crecca*, Great Crested Grebe *Podiceps cristatus*, Gadwall *Anas strepera*.

4. SUMMARY

4.1 Ecology Solutions Ltd was commissioned on behalf of This Is Gravity in April 2020 to undertake a suite of ecology survey work at the site known as the Gravity Smart Campus, Puriton, Somerset.

4.2 The results of the survey work undertaken are present within this report and it is considered that an extensive ecological baseline for breeding bird species has been established that can fully inform any future assessment / evaluation of the Site in ecological terms.

4.3 The survey work has informed the LDO process and the related Environmental assessment process.