Kelland Homes

Clonburris Strategic Development Zone

Breeding Birds Survey Report

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RSK GENERAL NOTES

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Date:	07/07/2022		07/09/2022

EXECUTIVE SUMMARY

- Blackstaff Ecology Ltd. was previously commissioned to conduct an Ecological Impact Assessment (EcIA) for a section of the Clonburris Strategic Development Zone (SDZ), a site of ca. 280ha located in west Dublin. The Site of approximately 6.3 ha is located at Irish Grid ref O 06442 32486, on lands within the townland of Cappagh, Dublin 22. The proposed development is located west of the Ninth Lock Road, south of the Dublin-Cork railway line, north of Cappaghmore housing estate and Whitton Avenue, and east of an existing carpark / park & ride facility at the Clondalkin Fonthill train station and the R113 (Fonthill Road).
- As stated within the EcIA recommendations, due to the presence on site of habitats suitable to birds, further surveys were recommended, including Breeding Bird Surveys (BBS). These surveys, in the form of walked transects, were conducted by Blackstaff Ecology during spring and summer of 2022. The findings are presented in this report.
- A total of 29 bird species were identified on site during the surveys, which were carried out during three separate visits. Some of the species identified on site are listed as species of medium conservation concern (amber list) within the BoCCI (Birds of Conservation Concern in Ireland) list 2020-2026. These are: barn swallow, starling, lesser black-backed gull, and herring gull.
- Compensatory and mitigating measures are suggested to help minimise the potential impact of the development works on the local bird population.

CONTENTS

1.0 INTRODUCTION

1.1 Purpose of this report

1.1.1 Blackstaff Ecology Ltd was commissioned by RSK to conduct breeding bird surveys within a section of the Clonburris Strategic Development Zone, a site proposed for housing development located in west Dublin, as recommended within an earlier EcIA carried out in April 2021. The area to be surveyed measures approximately 7.2ha and contains a variety of habitats deemed favorable to breeding passerine birds and other bird groups alike. These are: hedgerows, lines of trees, scattered trees, scrub, unmanaged grassland/dry meadow, ephemeral vegetation, derelict buildings, and drainage ditches.

1.1.2 As the proposed development will disrupt some of the habitats present on site, Breeding Bird Surveys (BBS) were undertaken in order to assess the bird population assemblage on site, which includes resident and summer visiting species, their distribution and abundance, which species are actually utilising those habitats as breeding ground, their activity/behaviour, and which species will likely be negatively affected.

1.1.3 The survey results, which are included within this report, will help in delineate appropriate mitigating and/or compensatory measures to be adopted during and after the construction phases.

1.2 Landscape context

1.2.1 The site is located at the eastern end of the SDZ between the R113 to the west and the Ninth Lock Road to the east, in proximity to Clondalkin Fonthill train station (access to site grid ref.: 53.331770, -6.3999288). A railway is adjacent to the north site boundary, while a residential estate is present to the south.

1.2.2 The Fossitt habitats on site, identified during the EcIA surveys, consist of hedgerows (WL1), dry meadow and grassy verges (GS2), stone walls (BL1), recolonising bare ground (ED3), earth bank (BL2), spoil and bare ground (ED2), recently felled woodland (WS5) and drainage ditches (FW4).

1.2.3 Several lengths of hedgerow had been already cleared at the time of the habitat surveys, and other parts of hedgerow had been severely cut back. An area of woodland had been cleared around an old building ruin, and areas of scrub had been removed. The removal/reduction of those habitats was confirmed during the BBS surveys. Removal of vegetation was done with granted permission and south works (SDZ20A/0021) and completed prior to nesting season of March 2022.

1.2.4 There are no designated sites including or in close proximity to the development site, however, as established in the EcIA report, a zone of influence extending ca. 24km from the site boundary includes various sites of international importance for nature conservation, *e.g.* Special Areas of Conservation (SAC) and Special

Protected Areas (SPA). These are: Dublin Bay North SAC, Dublin Bay South SAC, South Dublin Bay and River Tolka Estuary SPA, Howth Head SAC and SPA, and Dalkey Island SPA.

1.2.5 No impacts on the avian interest features of these designated sites are envisaged.

1.2.6 A site proposed as a National Heritage Area (pNHA), the Grand Canal, can be found in close proximity to the site, at ca. 100m south to the closest point. The River Liffey, which is part of the Royal Canal pNHA, is located at more than 3km to the north. **Figure 1 in Appendix A** shows the site location in relation to the local landascape and the wider area. Site synopsis citations on the Grand Canal and Royal Canal pNHAs can be found in **Appendix C.**

1.3 Development proposals

1.3.1 Clondalkin and Fonthill train station at Irish Grid ref O 06442 32486. Kelland Homes Ltd seeks permission for development on a site area of 6.3Ha, on lands within the townland of Cappagh, Dublin 22. The proposed development is located west of the Ninth Lock Road, south of the Dublin-Cork railway line, north of Cappaghmore housing estate and Whitton Avenue, and east of an existing carpark / park & ride facility at the Clondalkin Fonthill train station and the R113 (Fonthill Road). The proposed development is located within the Clonburris Strategic Development Zone (SDZ), within part of the development areas of Clonburris Urban Centre (i.e. CUC-S4) and Clonburris South East (i.e. CSE-S1 & CSE-S2), as identified in the Clonburris SDZ Planning Scheme 2019.

1.3.2 The proposed development consists of the construction of 283 no. dwellings, crèche and 3 no. retail / commercial unit, comprised of:

- 112 no. 2, 3 & 4 bed, 2 storey semi-detached and terraced houses;
- 110 no. 2 & 3 bed duplex units accommodated in 10 no. 3 storey buildings;
- 61 no. 1 & 2 bedroom apartments in 2 no. 4 & 6 storey buildings;
- 1 storey creche (c.599m²);
- 2 no. retail /commercial unit (c.152m²).
- 1 no. retail /commercial unit (c. 325m²)

1.4 Statement of authority

1.4.1 Field surveys were conducted by Dr Erfan Fadaei BSc PhD, and Dr Marco Ilardi MSc PhD. This report was prepared by Marco, reviewed by Mark Lang CEcol MCIEEM, and approved by the project manager Cormac Loughran MSc CEnv MCIEEM.

1.4.2 Erfan has a BSc (Hons) in Zoology from the University of Manchester and a PhD in deer ecology and management from Queen's University Belfast. Erfan has several years' experience conducting a range of faunal surveys and habitat

surveys, and has carried out numerous Breeding Bird and Bat Activity surveys. He is a qualifying member of CIEEM.

1.4.3 Marco was awarded a MSc in Natural Sciences (Summa Cum Laude) from the University of Palermo (Italy) and a PhD in Soil Ecology from Queen's University Belfast. He has conducted academic research on the ecology of various taxa, including reptiles, birds and soil microfauna. He has been involved in conservation projects and volunteering for a number of years with LIPU (Italian League for the Protection of Birds), RSPB, BTO and Conservation Volunteers NI. Since 2019 he has been working as an ecologist for different consultancy firms, conducting preliminary ecological appraisals (PEA), bat roost potential assessments (BRP), and bat activity surveys, including report writing, eventually joining Blackstaff Ecology in May 2022. To date Marco has completed 14 PEAs, 6 BRPs, 8 Bat Activity survey reports, and 2 HRAs (Habitat Regulation Assessments), plus numerous Breeding Bird and Vantage Point surveys.

1.4.4 Mark Lang, the technical and quality approver, is an Associate director with RSK, an experienced ornithologist with over 30 years' experience, a Chartered Ecologist (CEcol), and full member of CIEEM.

2.0 METHODS

2.1 Survey

2.1.1 A total of three Breeding Bird Surveys (BBS) were undertaken in the period May-June 2022. All surveys were conducted during the morning hours:

1st BBS – 13/05/2022, from 8:30 to 10:00 (conducted by Dr Erfan Fadaei).

2nd BBS – 11/06/2022, from 5:30 to 6:55 (conducted by Dr Marco Ilardi).

3rd BBS – 07/07/2022, from 7:45 to 9:15 (conducted by Dr Marco Ilardi).

2.1.2 The site was covered with a slow paced transect. The direction of the transect was randomly decided and adapted to the site features encountered during the survey. The length of the walked distance ranged from 1.3 to 1.4km. Maps of the walked transects can be found in **Appendix A (Figures 2, 3 and 4)**.

2.1.3 During the transects every bird species, and the number of individuals for each species, identified either visually or by their songs/calls was recorded on a map of the site, with estimated distance from the transect line. Observed behaviors and/or flight directions were also noted down when relevant.

2.1.4 Care was taken to ensure even survey effort between survey visits, and that the same survey area/s were surveyed during each transect, so as not to introduce observer effort bias into the survey results. However, eventual constraints had to be taken into account in deciding transect routes and timing.

2.2 Constraints and limitations

2.2.1 Some constraints were encountered during the surveys' planning. As Breeding Bird surveys need to be conducted in favorable conditions, the weather in particular was the main factor in deciding dates and time for the surveys.

2.2.2 The three surveys could not be conducted by the same surveyor due to unforeseen unavailability. Although care was taken to maintain consistency between surveys, the results might contain some observer effort bias due to slight changes in the transect route and observer's own approach in conducting the survey.

2.2.3 Some areas within the site presented limited access due to thick vegetation and uneven ground. The transects had to be adapted accordingly.

3.0 RESULTS

3.1 Field survey details

3.1.1 Table 1 summarises the dates, times, and weather conditions experienced during each of the 3 field surveys.

Table 1. Field survey parameters

Date	Start time	Finish time	Distance walked (km)	Visibility	Temperature (°C)	Wind strength/direction	Rain	Cloud cover (%)
13.05.22	08:30	10:00	1.4	1000m+	13-14	4/W-SW	NIL	50
11.06.22	05:30	06:55	1.3	1000m+	13	2/W	NIL	0-70
07.07.22	07:45	09:15	1.3	1000m+	14-16	3-4/W	NIL	70-100

3.2 Breeding Bird Surveys results

3.2.1 The following tables list the birds identified during the transect for each survey, considered separately. Species are listed in order of identification, from the first to the last species identified along the transect. Each species might present multiple identification events. The actual or estimated distance from the transect line is reported as 25 (0-25m), 100 (25-100m) or 100+ (>100m).

3.2.2 For each identification event, habitat used/occupied, behavior, flight direction and song/call are also listed within the tables if relevant for that particular species.

3.2.3 The maps in Appendix A also show the presumed or exact locations (where birds were identified visually) of the identified species. **A species code table can be found in Appendix B**.

Table 1. First BBS transect (13/05/2022)

ID Event	Species	Heard/Seen (H/S)	Distance	Song/Call	Habitat	Behaviour	Flight
1	Wren	H	25	song	hedgerow		
2	Song thrush	H	25	song	trees		
3	Dunnock	H	25	song	trees		
4	Wren	H	25	song	hedgerow		
5	Chaffinch	H	25	song	trees		
6	Wren	H	100	song			
7	Great tit	S	25			flying over (pair)	
8	Robin	H	25	song	trees		
9	Wren	H	25	song	trees		
10	(Nest)				tree	possibly unoccupied	
11	Wren	H	25	song	bushes		
12	Jackdaw	S	25		derelict building	nesting (pair)	
13	Blue tit	H	25	call	trees		

"	Bullfinch	S	25		tree	perching
14	Woodpigeon	H	100	song	trees	
15	Blue tit	H/S	25	call	tree	pair
16	Woodpigeon	H	25	song	trees	
17	Bullfinch	S	25		hedgerow	perching (pair)
"	Song thrush	H	25	song	trees	
"	Wren	H	25	song	hedgerow	
18	Robin	H	100	song		
"	Wren	H	100	song		
19	Sparrowhawk	S	100		trees	hunting
20	Blue tit	S	100		tree	perching
21	Magpie	H/S	25	call	trees	pair
22	Dunnock	H	25	song	hedgerow	
23	Swallow	H/S	100	call	grassland	foraging (pair)
24	Blackbird	S	25/100		hedgerows, trees, grassland	many throughout site

Table 2. Second BBS transect (11/06/2022)

ID Event	Species	Heard/Seen (H/S)	Distance	Song/Call	Habitat	Behaviour	Flight
1	Bullfinch	S	25		fence	perching	
2	Wren	H	25	song	bushes		
3	Magpie	S	100		scrub/ephemeral	foraging (small group)	
4	Lesser black-backed gull	S	100+			flying high in circles over site	
"	Jackdaw	S/H	100+		call	flying across	
5	Blackcap	H	100	song	trees		
"	Song thrush	H	100	song	trees		
"	Blackbird	H	100	song	trees		
"	Hooded crow	S	100		trees	perching (pair)	
6	Woodpigeon	S	25		scrub/ephemeral	foraging (pair)	
7	Goldfinch	H/S	25	call		flying over	
8	Buzzard	S	100		trees	flying off	
9	Rook	S	100+			flying across site	W-E
10	Dunnock	H	25	song	trees		
11	Starling	S	100			flying over (pair)	
"	Wren	H	100	song	hedgerow		
12	Whitethroat	S	25		scrub	foraging	
13	Wren	H	100	song	hedgerow		
14	Herring gull	S	100			flying low above railway	
15	Pheasant	H	100+	call	grassland		
16	Wren	H	25	song	hedgerow		
17	Wren	H	100	song	hedgerow		

18	Woodpigeon	H	100	call	trees		
19	Blue tit	S/H	25	call	trees	foraging	
20	Magpie	H	100	call	trees		
"	Wren	H	100	song	trees		
21	Blackbird	H	25	call	hedgerow		
22	Wren	H	25	song	trees		
23	Chiffchaff	H	25	song	trees		
"	Whitethroat	H	25	song	trees		
24	Goldfinch	S/H	25	song	tree	perching	
"	Blue tit	S	25		tree	foraging	
25	Robin	H	25	call	trees		
26	Coal tit	S/H	25	call	trees	foraging (small group)	
"	Long-tailed tit	S/H	25	call	trees	foraging (small group)	
"	Rook	S	25			flying over (pair)	S-N
27	Hooded crow	S	25			flying over (carrying food)	
28	Chaffinch	H	25	song	trees		
"	Chiffchaff	H	25	song	trees		
29	Dunnock	S	25		bushes	perching	
"	Blackbird	S	25		bushes	perching	
30	Wren	H	100	song	trees		
"	Goldfinch	H	100	song	trees		
31	Great tit	H	100	song	trees		
32	Great tit	S	25		trees	family group (adults feeding young)	
33	Swallow	S	25		grassland	foraging	
34	Magpie	H	100	call			
35	Robin	H	100	song	trees/derelict building		
36	Blackcap	H	100	song	trees/derelict building		
37	Blackbird	H	25	call	bushes		

Table 3. Third BBS transect (07/07/2022)

ID Event	Species	Heard/Seen (H/S)	Distance	Song/Call	Habitat	Behaviour	Flight
1	Wren	H	100	song	hedgerow		
2	Woodpigeon	S	25			flying over	
"	Song thrush	S	25			perching on cables overhead	
3	Woodpigeon	H	25	song	trees		
4	Blackbird	H	25	call	scrub		
5	Woodpigeon	S	100		scrub/ephemeral	foraging	
6	Buzzard	H/S	100	call		flying above tree canopy	S-N

7	Blue tit	H	25	call	trees		
"	Goldfinch	H	25	song	trees		
8	Chaffinch	H	100	song	trees		
9	Robin	H	100	song	trees		
10	Robin	H	25	call	trees		
11	Chiffchaff	H	100	song	trees		
12	Wren	H	25	song	hedgerow		
13	Gull	S	100+			flying high	SW-NE
14	Blue tit	H	25	call	hedgerow		
15	Blackbird	S	25		hedgerow	flying into vegetation	
16	Lesser black-backed gull	S	100+			flying high	W-E
17	Wren	S	25		hedgerow	foraging	
18	Robin	S/H	25	call	hedgerow	alarmed	
19	Reed bunting	S	25		grassland/hedge	foraging/perching (female)	
"	Goldfinch	S/H	25	call	hedgerow	gathering (big group)	
20	Wren	H	25	song	hedgerow		
21	Swallow	S	100+			foraging	
"	Magpie	S	100+			flying above tree canopy	S-N
22	Wren	H	100	song	trees		
23	Magpie	H/S	25	call		flying over	W-E
24	Swallow	S	25			foraging (big group)	
25	Woodpigeon	H/S	25	song	trees		
26	Herring gull	S	100			flying high	E-W
27	Swallow	S	25		grassland	foraging	
28	Blackcap	S	25		bush	perching	
29	Lesser black-backed gull	S	100			flying high in circles	
30	Magpie	S	100		trees	flying among trees	
31	Blackcap	H	100	song	trees		
32	Wren	H	100	song	trees		
33	Blue tit	H	25	call	trees		
34	Swallow	H/S	25	song	grassland	foraging	
35	Magpie	H	100	call	trees	gathering (possible family)	
36	Chaffinch	H	100	song	bushes		
37	Goldfinch	H	100	call		flying over	
38	Rook	H	100+	call			
39	Wren	H	100	song	hedgerow		
40	Dunnock	S	25		scrub	foraging on ground	
"	Blackbird	S	25		scrub	foraging on ground	

41	Mistle thrush	S	100	cables overhead	perching

3.2.4 The following table lists the birds identified during the survey transects according to their abundance (likely numbers/territories), with combined results of the three visits.

Table 4. Estimated breeding bird population

Species	Numbers	Comments
Wren	12-13 territories	singing birds in suitable habitat; breeding
Robin	6 territories	singing birds in suitable habitat; breeding
Blue tit	5 territories	birds seen/heard in suitable habitat; breeding
Blackbird	4-5 territories	birds seen/heard in suitable habitat; breeding
Magpie	4-5 territories	birds seen/heard in suitable habitat; breeding (young heard calling)
Woodpigeon	4 territories	birds seen/heard in suitable habitat; breeding
Goldfinch	4 territories	birds seen/heard in suitable habitat; gathering observed; breeding
Dunnock	3-4 territories	singing birds in suitable habitat; breeding
Chaffinch	3-4 territories	singing birds in suitable habitat; breeding
Song thrush	3 territories	singing birds in suitable habitat; breeding
Chiffchaff	3 territories	singing birds in suitable habitat; breeding
Blackcap	3 territories	singing birds in suitable habitat; breeding
Great tit	2 territories	birds seen/heard in suitable habitat; breeding (observed fledglings being fed by adults/parents)
Jackdaw	1 territory	birds seen in suitable habitat; nesting inside chimney of derelict building; breeding
Whitethroat	1 territory	singing bird in suitable habitat; likely breeding
Pheasant	1 territory	bird heard in suitable habitat; likely breeding
Bullfinch	1 likely territory	birds seen/heard in suitable habitat; possibly breeding
Long-tailed tit	1 likely territory	birds seen/heard in suitable habitat; possibly breeding
Reed bunting	1 likely territory	female seen in suitable habitat; possibly breeding
Coal tit	1 likely territory	birds seen/heard in suitable habitat; possibly breeding
Hooded crow	1 likely territory	pair seen in suitable habitat; carrying food; possibly breeding
Sparrowhawk	1 likely territory	bird seen in suitable habitat; hunting; possibly breeding
Buzzard	1 likely territory	bird seen in suitable habitat; possibly breeding
Mistle thrush	1 likely territory	bird seen in suitable habitat
Rook		suitable foraging habitat; pair observed commuting; unlikely breeding
Starling*		suitable habitat; pair observed commuting
Swallow*		suitable foraging habitat
Lesser black-backed* gull		birds seen commuting and patrolling over site
Herring gull*		birds seen commuting and foraging in nearby areas

(*) BoCCI Amber List

4.0 EVALUATION/RECOMMENDATIONS

4.1 Breeding Bird Community

4.1.1 A total of 14 bird species were recorded during the 1st Breeding Bird survey; 26 species were recorded during the 2nd Breeding Bird survey; and 19 species were recorded during the 3rd survey. The total number of species recorded for the site overall is 29.

4.1.2 The passerine dominated bird community on site is typical of the range of habitats present on site, also considering the vicinity to residential areas and the disturbance caused by the adjacent railway. The most recorded species were: wren (*Troglodytes troglodytes*), woodpigeon (*Columba palumbus*), magpie (*Pica pica*), blackbird (*Turdus merula*), blue tit (*Cyanistes caeruleus*), robin (*Erithacus rubecula*), barn swallow (*Hirundo rustica*), goldfinch (*Carduelis carduelis*), dunnock (*Prunella modularis*), song thrush (*Turdus philomelos*), chaffinch (*Fringilla coelebs*), and blackcap (*Sylvia atricapilla*). Worthy of note is the record of a female reed bunting (*Emberiza schoeniclus*), seen foraging on tall grasses during the third visit. The presence of this species in close vicinity to more urbanized areas could indicate a low level of disturbance within the site itself.

4.1.3 Based on the number of recorded individuals, their behaviour and habitat occupied, it is highly probable that the following **14** species are regularly breeding on site: wren, robin, blue tit, blackbird, magpie, woodpigeon, goldfinch, dunnock, chaffinch, song thrush, blackcap, chiffchaff (*Phylloscopus collybita*), great tit (*Parus major*), and jackdaw (*Coloeus monedula*). Active breeding behaviour was observed for a family of great tits, with parents feeding fledged youngsters on trees within a hedgerow, and a pair of jackdaws nesting inside the chimney of the derelict building on site. Other passerine species, which appear to be less abundant as they were recorded less frequently during the surveys, might also be breeding on site as suggested by the presence of suitable habitat and/or by the observed behaviour: whitethroat (*Curruca communis*), bullfinch (*Pyrrhula pyrrhula*), long-tailed tit (*Aegithalos caudatus*), coal tit (*Periparus ater*), hooded crow (*Corvus cornix*) and reed bunting. Barn swallows however, as they usually travel long distance during their foraging activity, might not be breeding on site or adjacent areas even though they were frequently recorded.

4.1.4 The habitats on site seem to also support species higher up the food chain, like buzzard (*Buteo buteo*) and sparrowhawk (*Accipiter nisus*), which might also be breeding on site.

4.1.5 Some of the species identified on site are listed as species of medium conservation concern (amber list) within the BoCCI (Birds of Conservation Concern in Ireland) list 2020-2026. These are: barn swallow, starling (*Sturnus vulgaris*), lesser black-backed gull (*Larus fuscus*), and herring gull (*Larus argentatus*).

4.2 Mitigation measures

4.2.1 The following measures are suggested to help mitigate for the loss of habitat that the development proposals will entail.

4.2.2 It is expected, as a consequence of the development works, that the habitat loss on site will be substantial. This may in turn cause fragmentation and isolation of habitats, and disturbance to species. Where possible, to minimize the impact of the proposed development on the local bird populations, hedgerows and tree lines present on site should be maintained, enhanced and protected. Selected areas within the communal amenity green spaces could be reserved and re-seeded with wildflowers, and managed by an annual late summer hay cut with the arising removed in order to attract higher numbers and increase the biodiversity of insects and other invertebrates, which would function as a foraging resource for breeding birds. In addition, the installation of a variety of bird boxes/artificial nests on trees and newly built structures, should minimise the negative impacts and maintain the local diversity of birds. In particular, species-specific artificial nests should be installed to attract summer visitor species faithful to nesting sites (swift, barn swallow, house martin), which are finding increasingly difficult, if not impossible, to come back to the same site each breeding season since their nests are often destroyed or removed during the winter months.

4.2.3 The removal of hedgerows, felling of trees, and demolition of the building ruins on site should be undertaken outside of the bird breeding season (March to August inclusive). If any vegetation removal works are required to commence during the bird breeding season, then a further inspection by a suitably qualified ecologist, in and within at least 5 m of the area to be impacted, is required immediately prior to commencement of the work. This is to ensure that no active nests and nest sites are illegally destroyed. If active nests are identified, then an appropriate standoff distance (10-20m) will be maintained, and vegetation removal will have to cease until young birds have successfully fledged.

4.2.4 To protect habitats suitable for breeding birds present within areas adjacent to the development site or within the wider landscape, standard pollution prevention control measures to maintain water and air quality should be outlined in a Construction Environmental Management Plan (CEMP).

5.0 CONCLUSIONS

The development site contains habitats which are used by a range of common bird species, and potentially by species included in the BoCCI Amber List, both for breeding and foraging activity. All such habitats, which include grasslands/meadows, hedgerows, line of trees, ditches and building ruins will be directly affected, either substantially reduced or completely removed, as a consequence of the proposed development, with significant negative impact on the local populations of breeding birds. Therefore, the mitigation measures proposed within this report should be observed and included as an integral part of the development plans. Every effort should be made to implement the suggested mitigations and enhancements, not only to protect the existing species breeding on site, but also to attract other species and so increase the local biodiversity.

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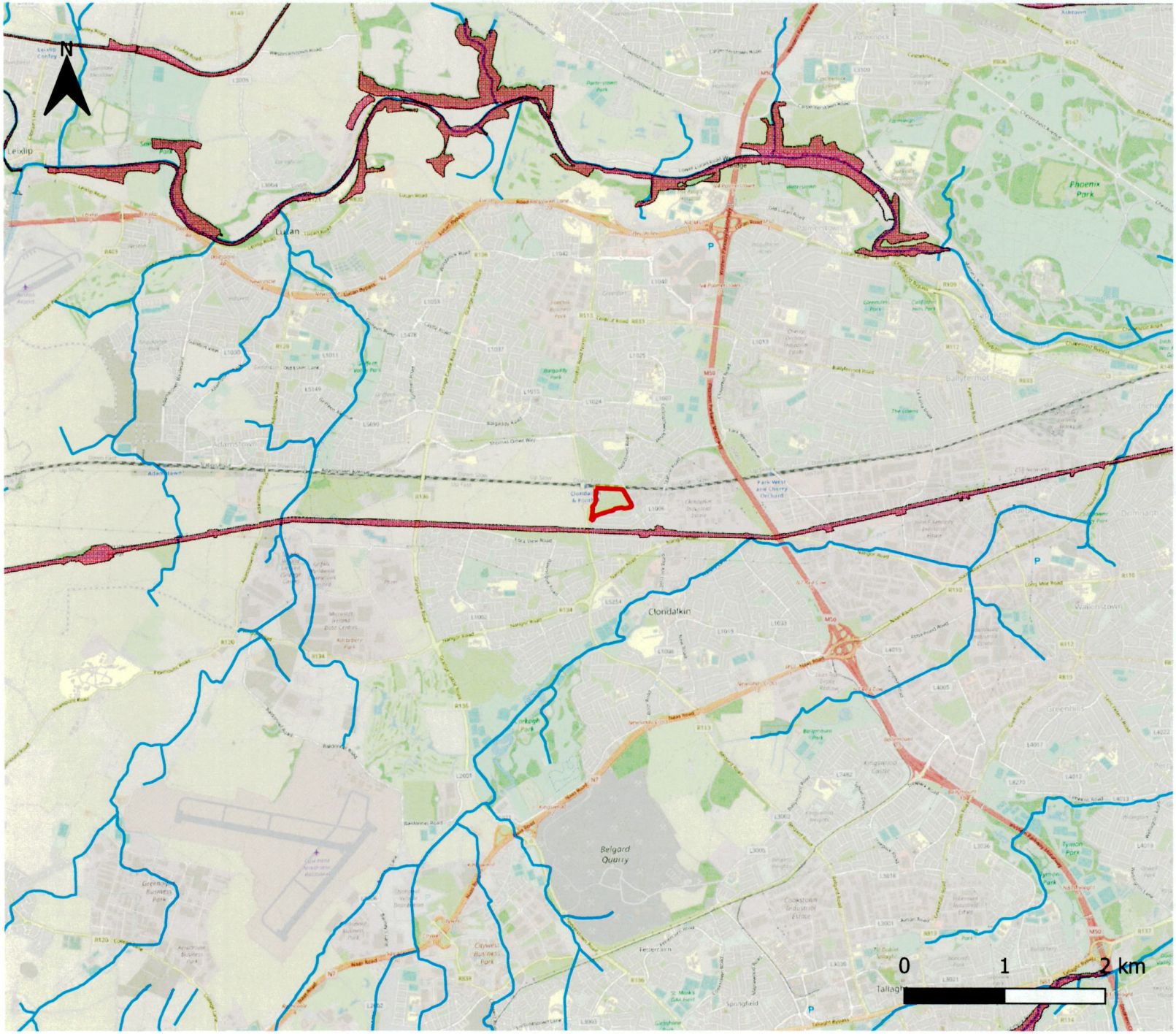
APPENDIX A – FIGURES

[↘]



Co. Dublin

Clonburris Strategic Development Zone

Key

Site boundary

pNHAs

Rivers

Figure 1 - Site location in relation to local pNHAs

SCALE 1:50000

Breeding Bird Survey

Author: Dr Marco Ilardi (Blackstaff Ecology)

RSK

Co. Dublin

Clonburris Strategic Development Zone

Key

- Site boundary
- 50m buffer
- BBS transect
- ID events (with species codes)

Figure 2 - First BBS transect (13/05/2022)

SCALE 1:2500

Breeding Bird Survey

Authors: Dr Marco Ilardi & Dr Erfan Fadaei (Blackstaff Ecology)

RSK

Co. Dublin

Clonburris Strategic Development Zone

Key

- Site boundary
- 50m buffer
- BBS transect
- ID events (with species codes)

Figure 3 - Second BBS transect (11/06/2022)

SCALE 1:2500

Breeding Bird Survey

Author: Dr Marco Ilardi
(Blackstaff Ecology)

RSK

Co. Dublin

Clonburris Strategic Development Zone

Key

- Site boundary
- 50m buffer
- BBS transect
- ID events (with species codes)

Figure 4 - Third BBS transect (07/07/2022)

SCALE 1:2500

Breeding Bird Survey

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