An Bord Pleanála Oral Hearing

Irish Water

**Greater Dublin Drainage** 

**Response to Inspector's Questions** 

Biodiversity (Marine & Terrestrial Ornithology) – Simon Zisman

# **Biodiversity (Marine & Terrestrial Ornithology)**

## Bird Survey Raw Data – Terrestrial

The following Appendices provide the raw terrestrial bird data collected for the Greater Dublin Drainage Project. The data should be considered in conjunction with EIAR Chapter 11, which provides supplementary information on survey method and other background information.

A key to help interpret the data is also provided, extracted from Bibby et al<sup>1</sup>. (2000) (see Appendix 1).

The terrestrial bird data were collected between January 2015 and November 2017, and comprise:

- Winter surveys (for late winter 2014/15, early winter 2015/2016, late winter 2016/2017 and early winter 2017/2018); and
- Summer surveys (for 2015 and 2017).

The data is provided in the following format:

- Appendix 1 Key from Bibby et al (2000);
- Appendix 2 Winter 2015 (January and February);
- Appendix 3 Winter 2015 (November);
- Appendix 4 Winter 2017 (March);
- Appendix 5 Winter 2017 (November);
- Appendix 6 Summer 2015 (April and June); and
- Appendix 7 Summer 2017 (May and June).

<sup>&</sup>lt;sup>1</sup> Bibby, C., N. Burgess, D. Hill, and S. Mustoe (2000) Bird Census Techniques. Academic Press. Elsevier. ISBN: 9780120958313

# APPENDIX 1 KEY FROM BIBBY ET AL (2000)

The information below is taken from Bibby et al. (2000). It gives the standard notation for activity codes for birds and it provides the standard two-letter codes that are for recording birds and their behaviour.

# **BTO SPECIES CODES**

AC	Arctic Skua	GA	Godwol	LE	Long-eared Owl	MZ	Sand Martin
AE	Arctic Tern	GX	Gonnel	σ	Long-korled Til	\$\$	Sandering
AV .	Avacet	GW	Gorden Worbler	MG	Magple	ΤE	Sandwich Tern
BO	Born Owl	ĠY	Garganey	MA	Wallard	γı	Saw's Warble
BY	Bornocle Goose	GĆ	Goldenest	MN	Manalarin Duck	SQ	Scarlet Rosefinch
B,A	Bortailed Godwit	EA	Golden Eagle	MAX .	Monx Shearwater	SP	Seaup
BR	Bearded Te	QL I	Golden Orinke	AAR	Marsh Harrier	CY	Scottish Crossbill
BS	Berwick's Swan	ĢF	Golden Pheasant	MT	Marsh Tit	SW	Sedge Worbler
B4	Biltern	Ģ₽	Golden Plover	MW	Morsh Worbler	NS	Serin
B≪	Block Groupe	GN	Goldeneye	MP	Mepdow Pipit	5A	Shog
TY	Block Guillemot	ĠO -	Goldinch	MU	Mediterranean Gul	SU	Shelduck
BX	Block Redstort	GD	Goosander	ML	Merlin	SX	Shorelarti
Bj	Block Tern	GI	Gashawk	M.	Mistle Thrush	SE	Short-eared Owl
В.	Blockbird	GH	Grosshopper Worbler	MO	Monlogy's Hower	ŝŶ	Shoveler
			Great Black-bodied Gull	MH	Moorhen	SK	Siskin
₿⊂	Blockcop	GB					
βH	Block-headed Gull	GG	Great Crested Grebe	MS	Mule Swon	S.	Skylaik
BN	Block-necked Grebe	ND	Gragt Northern Diver	N.	Nightingola	SZ.	Skovanian Grabe
BW	Block-toiled Godwil	NX	Great Skua	NU	Nighljor	5N	Snipe
BV	Black-throared Diver	GS	Great Spotted Woodpecker	NH	Nuihaich	548	Snow Bunting
BT	Blues Tit	GT	Great Tri	OP	Osprey	5T	Song Thrush
BU	Bluethroot	GE	Green Sondpiper	OC	Oyslercalcher	SH	Sparrowhawk
BL	Brombling	Ġ.	Green Woodpecker	PX	Peofowl/Pagcock	AK	Sporred Cricke
8G	Brent Goose	GR	Greenfinch	PE	Peregrine	SF	Spotled Flycolchee
BF	Bullfinch	GK	Greenshonk	РН	Pheasoni	DR	Spotted Redshank
BZ	Buzzard	H.	Gray Heron	PF	Pied Hycoscher	SG	Storling
čG	Conada Gaose	P	Gray Partridge	PW	Pied Wogtail	\$D	Stock Dove
CP	Copercollie	GV	Grey Ployer	PG	Pink-footed Goose	SC	Stonechot
č.	Carrion Crow	GL	Grey Wagrail	PT	Pintgil	IN	Stone-curlew
CW.	Calli's Worbler	GJ	Greylog Goose	PO	Pachard	TM	Storm Peirel
	Chaffinch	GU	Guillemot	PM		51	Swollow
ĆH					Ploimigon		
ĊĊ	Chiffchoff	FW	Guinealowl (Helmeted)	PU	Puffin	SI	Swift
ĊF	Chough	HF	Hawlinch	PS	Purple Sondpiper	ю	Towny Cwl
CL		HH	Hen Hamier	Q.	Quoil	Г	Teal
CT	Ççal Til	HG	Herring Gull	RN	Raven	ΤK	Terrminck's Stint
CD	Collared Dove	HY	Неффу	RA.	Razarbill	ΤP	Tree Pipit
GM	Common Gull	ΗZ	Honey Buzzard	RG	Red Grouse	TS	Tree Sporrow
CS	Common Sondpiper	HC	Heoded Crow	KT	Rød Kite	TC .	Treccroepor
CX –	Common Score:	HP	Ноорое	ED	Red-booked Shrike	τu	Tofted Duck
CN	Common Tern	HM	House Marlin	B/M	Red-breasted Merganser	Π	Tomstone
co	Coat	HS	House Sparrow	RGI	<b>Red-crested Pochard</b>	π	Tortle Dove
ĊA	Cormorant	JD	Jackdaw	EV	Red-fooled Falcon	TW	Twile
CB	Corn Bunting	J.	Jay	RL	Realfegged Partridge	WA.	Water Roll
ÇĘ	Compraise	К.	Kestro	NK	Red-necked Photorope	W.	Wheateor
çî	Crested Til	KF	Kingfisher	LR	Redpoll (Lesser)	WM.	Whimbrel
ČR	Crossbill (Common)	KI	Kittiwake	RK	Redshank	WC	Whinchat
CK	Cuckoo	KIN	Knol	RT	Redstort	WG	White-fronted Goose
čΰ	Curlew	LM	Lady Amherst's Pheosant	RH	Regularizated Driver	WH	Whitethraat
0W	Darifard Warble	LA	Lapland Bunning	RE	Redwing	W5	Whooper Swon
DI				RB	Read Bunting	WN	Wigeon
DO	Dipper	L.	Lapwing Leach's Petrel	RW	Read Worbler	WT	Willow Tri
	Datteral	TL					
DN	Dunlin	LB	Lesser Block-bocked Gull	RZ	Ring Ouzel	WW	Willow Warbler
D.	Dunneck	LS	Lesser Spotted Woodpecker	₽P	Ringed Plover	OD	Wood Sandpiper
₿G	Egyption Goose	ιw.	Losser Whitothroat	ŔI	Ring-necked Parakee	wo	Wood Workler
E.	Eider	u	Linnet	R.	Rabin	WK	Wardcock
FP	Feral Pigeon	εī	Little Egret	DV	Rack Dave (not feral)	WL	Woodlark
Ζl	Feral/hybrid goose	ιG	Little Grebe	RC	Rock Pipit	WP	Woodpigeon
ZF	Feral/hybrid mallard type	10	Little Gull	RQ	Rook	WR	Wren
۴F	Fieldfore	LO	Little Ovel	R5	Roseole Tern	WY.	Wryneck
FC	Fifecres	UP .	Little Renged Plover	RY	Ruday Duck	YW	Yellow Wagtail
۴	Fulinar	AF	Lille Tern	RU	Roff	Y.	Yellowhammer

If you are not submitting your data electronically using BBS-Online, please return your Field Recording Sheets to your Regional Organiser with your other BBS forms. If you would like to submit your results on BBS-Online, please inform your RO, then visit www.bto.org/bbs.

	Bild Gerbus Techniq
	AWen moving between two parotes. The solid line

indicates it was definitely the series birth.

Two Warms in songed the same time, i.e. definitely different texts. The dotted line indicates a simultaneous registration and is of very great value in separating territories.

End Gereius Techniques

Two Litinet nests occupied simultaneously and thus belonging to different pairs. This is another exemple of the value of stated lines. Only adjacent nexts need the marked in this year.

The existing indicates that the registrations definitely rater to the store bird.

A question-marked solid line indicates that the registrations probably relate to the serve skill. This convention is of particular use when the census route retains to an area already covered - it is possible to mark new prections of (probably the same) birds recorded before. without the esk of double recording. If birds are recorded without using the question-marked solid line. supracting the notion of territorios will misuit.

When there is no line joining the registrations, this indicates that the birds are probably different, drispossible to use a custation marked dotted line, indisating that the registrations were almost suitainly of different birds.)

Where adjacent nests are marked without a line, it will often be assumed that they stere list and second broads, or a replacement next to owing an earlier talura.

The above conventions indicate when registrations relate to different birds. and when to the same bird. Their proper use is essential for the accusate passagement of clusters.

le all record the standard BTO code: for Entre houtd be used.

Some territories will overlap the plot boundary and overal ways of dealing with these are considered below. Normally it is necessary to map records outside the plot. In the field, this may be accomplished by recording eventhing detected from the boundary without walking outside the plot. The field maps therefore need to extend by about 100 m in all directions to include these observations.

### Territory Mapping Nethods

### 4. Habitat recording

To interpret the reasons behind the distribution of birds on a plot, it may be necessary to describe its separation in some you (Chapter 11). Since the hird data are mapped, it is ideal also to map the vegetation to analyse habitat utilization by hirds. If the plots are each relatively uniform and there are reveral of them that differ from one another, it might be sufficient. to describe or measure the vegetation without mapping it.

### Variations of the method

Up until now, we have concentrated on the BTO's Common Bird Census, where it is important that the method does not vary. For other nurvers it, may be useful to vary the method in the following ware

### 1. Restricting the list of spacies covered

The GBC and bird community studies include all species, as at least as many as san possibly be recorded. If the purpose of the study is more restricted, the first variation is to map fewer species. This helps to concentractime and effort in the required direction. The purpose of making tenvisits is to gather enough data to register territories of species differing in their breeding and singing assions. If only one species is being studied, five visits at the most appropriate season and time of day would suffice.

Recognising the boundaries between territories of hirds of the tame species is the single most important aim of territory mapping. In a study aimed at a particular species, more effort can be put into finding neighbearssinging at each other or fighting. The species map could be updated after each field with. In this way, it would be obvious if there were any areas where it was going to be difficult to resulve the number and pattern of clusters. Latra field effort could be made in these places on subsequent. winters.

### 2. Eliciting responses

The observer can increase the chance of finding birds and obtaining simultaneous registrations by using a tape to play snatches of song of the target species and recording may responses. If a upp is played in places that may be tentiony boundaries, it might help to see whether or not there is a response from both birds. Owners of isologed territories offensing less than where the treighnours are close. A tape recorder could increase the chance of getting sufficient resourch for a cluster. Many migrants only sing early in the brocking sensor, but a tape recorder can git a response while birdenro pesting and have largely stopped singing. Thought should be given, however, to the risk of disturbance caused by this method.

For some elusive blick, dogs can be used to increase the chance of obtaining registrations. Dogs are regularly used in counting gamehinds and for Fit ding nexts of ducies or success. It goes sightent asying that a mitable and well trained dog and handler are needed if this method is to do more good for the centrals than harm to the birds.

#### 40

49

Figure 3.3

(continues)

an Figu

Stan

code

map

birds

re 3.2	80	Stock Dev
	CS.	Great Spo
Cart	g .	Grybrit.
s tor	TP	Tree Pipit
ping	VIB	When
5	A.	Piobie
2	N	Nghtings
	30	Stonechus
	8	Backord
	ST	Song Thru
	SW	Sector We
	HA	Feed Wa
	LW	Looser W

LT.

80	Stock Drug
CS.	Great Spotled Weadpecker
g .	Grylant
TP	Tree Pipit
NR	Wien
R.	Plobin
N	Nghtingale
30	Stonechat
8	Backbell
SE	Song Thrush
SW	Seciga Warbler
HH	Feed Wattier
LW.	Loosee Whitethroat
WH	Whitethroat
GW	Garden Warbler
BC .	Bischcap
OW	Wood Warthler
CC	Childhalf
GC.	Goldcrest
PPE -	Pied Flycatcher

Long-tailed Till

Elic) Census Techniques

### Tenitory Mapping Methods

MT.	Narsh Tit
WT:	Willow Tit
CT	Coel Tit
57	Dive TR
GT	Great Tri
NH	Nuthetch
TC	Treecreeper
MG	Magpie
FD.	Finds
C	Carrier Crow
EN.	Ravan
50	Elaring
CH.	Chaifinch
CR	Greenlinch
00	Coldinch
L	Linnet
1.71	Fiectool
BF	Bu#linch
¥.	Yellow teatmen
EB.	Field Burting
CB	Core Burting

A selection of standard species codes developed by the British Trust for Omithology for British passening species commonly recorded on Common Bird Census plots. The full list (British Birds 1954) can be used for any kind of bird recording in all hapitals and conditions throughout the Western Palaeartic.

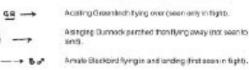
### 3. Bird recording

The identity and activity of all birds are mapped with small and tidy striling. in pencil or ball-point yea. If the map gets wet, some inks run; ball-points do not work on a wet map but pendis still do. It is beloful to use a standard list of rodes for hird species. Codes for some British birds are shown in Fig. 3.3. Activities are also given standard codes (Fig. 3.3). Care should be taken to moved as much detail as possible such as the sex and age of the bird. It is often critical in analysis to know shether a multiple observation was a pasty of juveniles. Were two different hirds nearby a) the male and female of a gair, or b) of the same sex and thus presumably near a territory boundary?

The most useful point to concentrate on is the location of individuals of the sume species that can be seen or heard simultaneously. A key feature of analysis is the assumption that territory boundaries fall between such records. For uniformly distributed species, it is difficult to analyse the results without reference to simultaneous registrations. It may not be clear if a singing hird is different from one seen earlier, a short distance away. Such ambiguous registrations must be joined by a line with a question mark to indicate that the observer is not sure whether thes are the same hird or not. They are quite likely to be the same bled. If they really are different, the channess are that both will appear simultaneously on a different visit.

Figure 3.3	CH. CHA, CH &	Chatterine sight resonance, with ago, sox or number of birds it appropriate. CH indicates one pair; 2CH means two
Standard	3 CH Juns, CH of 19	pairs together
symbols for bird	R. fore	Juvenile Robino witi pasenta(a) in attendance.
activities	8	Acolling Robin.
	ř.	A Robin repeatedly giving aliam calls or other vocatisa- lions incl song) thought to have strong territorial agrificance.
	ß	A Robin in song.
		An aggreeative encounter botween two Robins.
	**	An occupied neet of Rebins, do not mark snowaupied neets, which are of no tenitorial significance by them selvers.
	38 BT	If up Tits reasing in a specially provided site (e.g. nestbox)
	w PW on	Red Wagbelmeet with an adult sitting.
	Pwimak	Red Wagtel canying next material.
	Pw/ find	Pied Wagtelfeanying food.

Movements of birds can be incluated using the following conventions:



(continued)

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

# **APPENDIX 2**

# WINTER 2015 (JANUARY AND FEBRUARY)

The data from the January and February 2015 winter walkover surveys were collected as species counts and are enclosed as an Excel spreadsheet that give the numbers recorded along various sections of the Proposed Project.

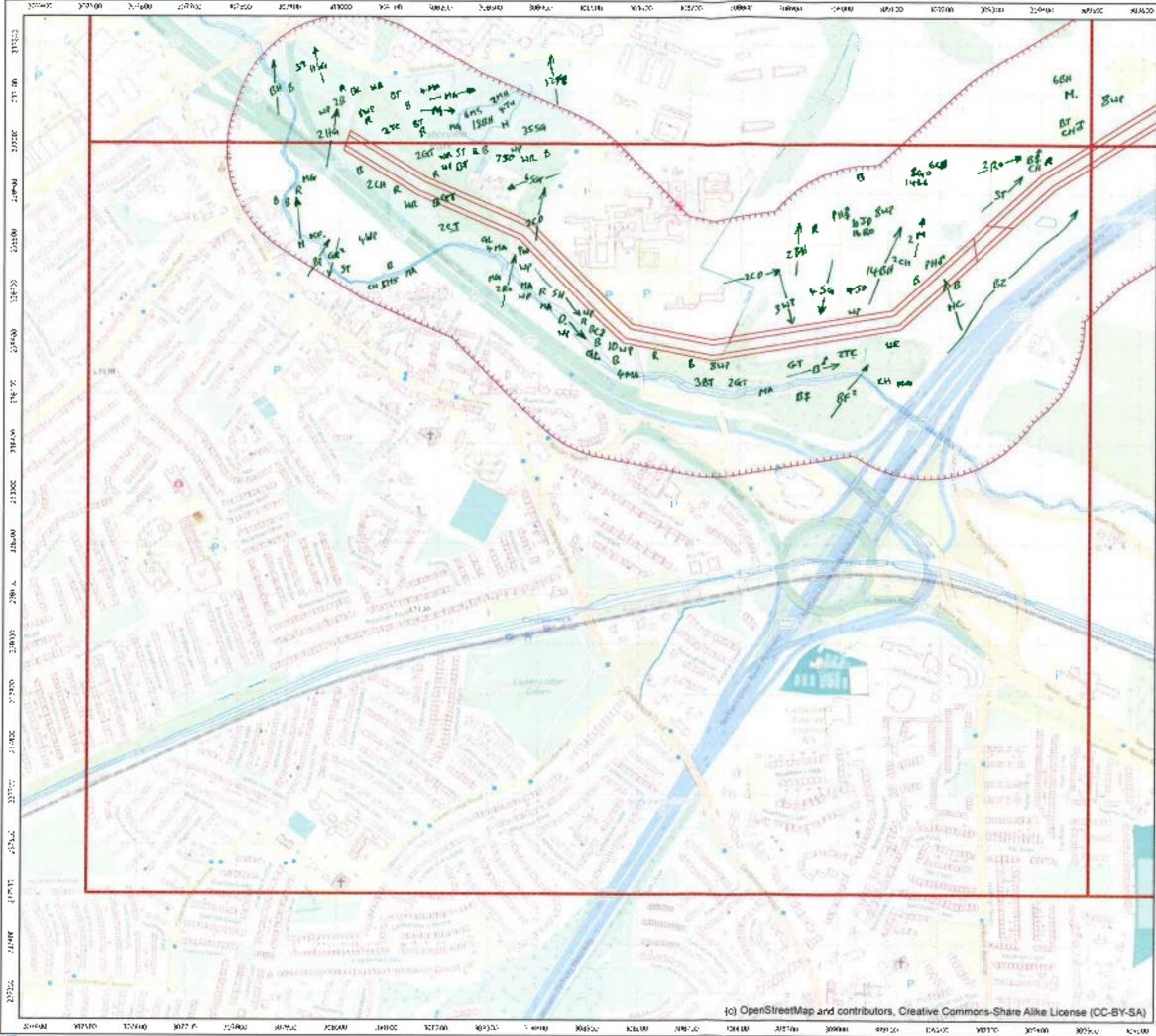
		BIRD	S US	SING	SITE																																						
SURVEY SECTION	DATE	В.	BF	BH	BT	BZ	CD	CH	CM	СТ	D.	DI	ET	FF	GC	GL	GO	GP	GT	GR	H	HC	HG	HS	JD	K.	L.	LI	LT	Μ.	MA	MG	MP	MS	PH	PW	R.	RB	RE	RO	RP	S.	SD
The Grange - N3/M50 JCT	04/02/15	14		28	35			10	1	5		1			2	1	19		13			5	2		5	1			4	1	8	9		9			21						
N3/M50 JCT - Cappagh Rd	04/02/15	10			9	2				2	8						5		6			4		4	3	1			5	6		16	9				16	1	10	1			
Cappagh Rd - M2	04/02/15	35	3		13	1		1		1	4	3		57	1		2	34	7		1	6		2	4		33	4		1		9	1			1	20	3	63	22	2		4
M2 - R108	03/02/15	63	7		23	3		12		5	12		1	12	1	1	6		2	2		7		2	4			65	7	2		22	13				11	17	55			164	
R108 - M1	03/02/15	16	3		13	3		3		7	6						4	10	5	1		13		2	2							4	34			1	24			23		2	
M1 - WWTW	30/01/15	18		7	3			1								2	6		5			1	2	4	2			50	3			4	240		2	11	7	2					
WWTW	30/01/15	10	2	22	2	3		4	32		1								1			7	40		14							14	15				4	6				1	
WWTW - R107	30/01/15	21	2		12	1	2	6		1	2			10			4		3	1		2		6	8					6		9	45				16	3	32			20	
R107 - Railway	30/01/15	28				1		4		2	3						72		6			7	2		7				2	3		11				1	10		11			27	
Railway - R106	30/01/15	6									2			2			1																2				3		8			4	

							BIR	DS II	N FLI	GHT	r on	LY																																							
SG	SH	SN	ST	TS	WP	WR	Y.	Β.	.   B	F E	BH	BT	ΒZ	CH	СМ	СТ	D.	FF	GC	GO	GP	GT	GR	Н	HC	HG	HS	JD	L.	LI	LT	M.	MG	i   MP	MS	PW	/ R.	RB	RE	RN	RO	S	SG	SH	SI	1   ST	T   1	TS	WP	WR	Υ.
2			5		22	4									2					3						1		2					3																6		
12		1	12		26	14							7												2	1		10					4		4						12								2		
141			6		63	5	9							2							3				1								1								20		10	1	2				2		
14	1		11		44	25																		1	5				10			5	10								20								4		
1					42	11					2				2					4					3	4		7					1	1							9	3							6		
	1		2		13	7	4				3				4					1					1	1		3													25								8		
10				3	111	7	5						1	1											1									10						1	31	11							70		
80		3	5		14	3					3			1						1					1	1		6					4								1		31						3		
16	1		5		40	6	1						2							2						2		11				4	5	10							2		1						32		
					10	3		1					1		14											14							4								2	20							2		

# APPENDIX 3 WINTER 2015 (NOVEMBER)

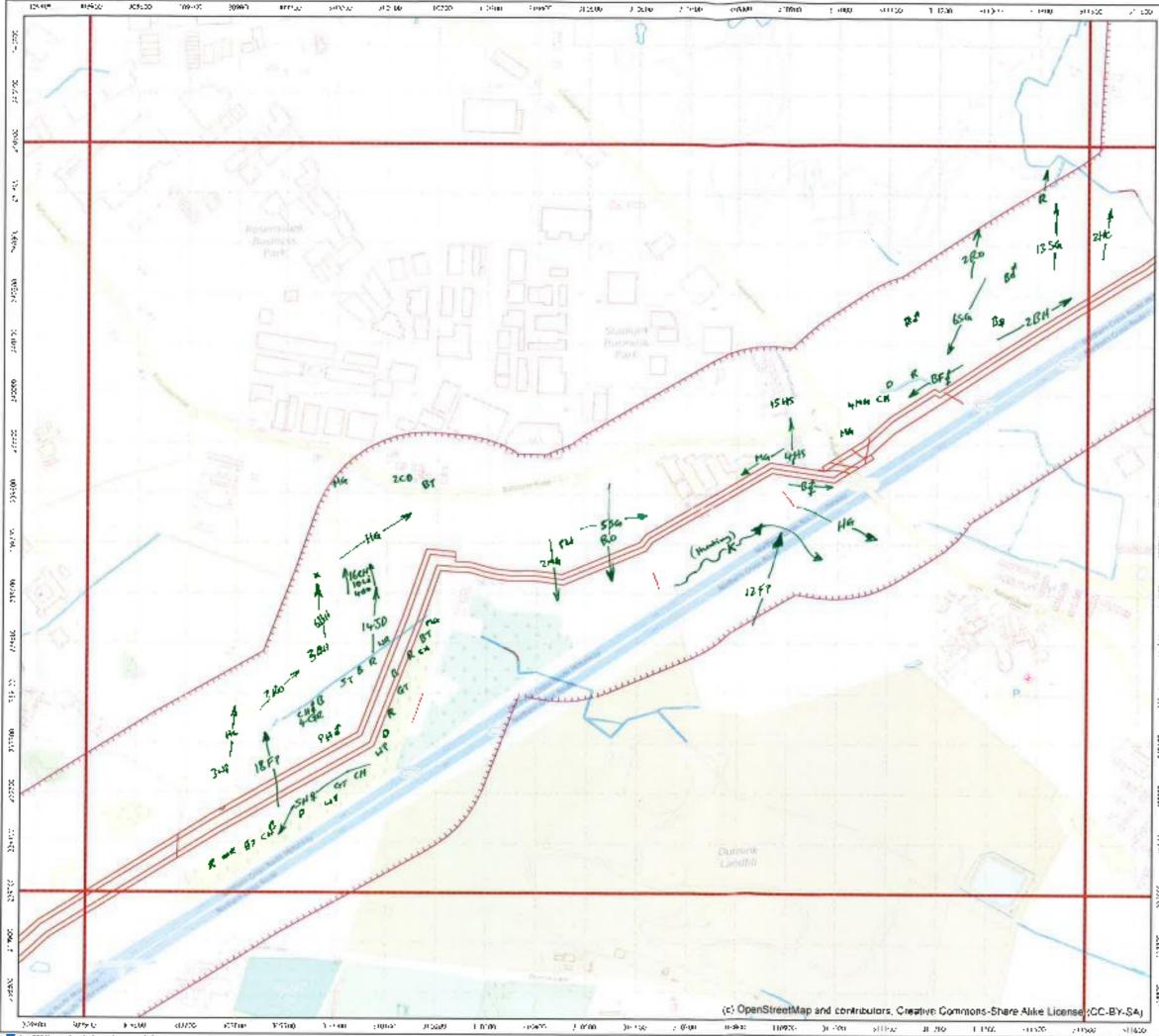
The data from the November 2015 winter walkover surveys were mapped, and are enclosed below (along with the associated survey recording sheets).

	-	Cher She	3	Wind Speed	peed		Direction	RainSnow	M	Claud Cover	Cloud Height	Visibility
RPS		weance January	ē		Beaulor	n Moh					Househ of should	
Sile	ى	600		Calm Light air			z¥	None Drizzle/Mist		h eightra e.g. 3:6	above average shove average hoinhi ol	Poor (<1km) D Moderare (1-3km) 1
Date	91	SI 02/11/91	n	Light breeze Gentis breeze	D	4-7 8-12	ш үл Ш	Light showers Heavy showers	wars 2 Dwars 3		viewshed	Good (+ 3km) 2
Survey	3	ULLER LOO	0.	Mod. breaze Fresh broeze		13-18	ы Va	Heavy rain Lying Snow	3	Frost	<150m 0 150-500m -	
Observer	Ż	N. Veel		Strong breeze	JTBB28 6	25.31	MM	S Runfa				
Start Time	$\vdash$	08:30		Fresh gale		9446		On sile		Ground 1	_	Please be as accurate as possible, with weather details, entering only one figure
Finish Time	-	15:30		Whole gale							_	nor a range. e.g. WS - 5, not 5-5. Use notes for extra into.
Sheet 1/	&[ ]\$	] Maps attached	ched	Hurricane		73+					E.g. WS · 5, gusting 6 (in notes).	ng 6 (m noles).
Weather	Wind	Wind directing	Rain	Cloud	Cloud	Visibility	Frast	Snow	Notes/e.g.	Notes(e.g. temperature)	rrej	
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Hr 29:56	m	3	0	6/8	14	5	ł	l	2.2			
Hr 314:30	e	35	0	8/8	2	2	1	l	202			
Hr 4 16:30	~	S	4	5/2	_	2	l		م م			
Hr 5 1213	~	s S		218	_	_		1	900			
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Hr 714:30	÷	SU	2	818	-	第1	ļ	1	28			
Hr 8												
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For office use only. NB- Initial <u>AND</u> date <u>ALL</u> boxes.	e only. NB- ate <u>ALL</u>	Logged		Databa	Database Entered		Database Validated	/alidated	GISI	GIS Entered	GIS Validated	lidated



	RPS Winter Welkerer
	Surveyor: N. Veale
	Date: 16 11 7016
	Start time 8:30 End time: 15:30
	Please altach weather sheet Notes:
	6 77-8-19 <sup>7</sup> 10 1911 12 13
	14 (155 18 177 18 (c) OpenStretulMap and
	Contributors, Creative Commons-Share Alike
	Legend
	B65/VV/VO survey boundary (250 m buffer, supplied 20140420, blus 250 m buffer of protruding access track
101	supplied 201509-7)
	Greater Dublin Drainage
	Greater Dublin Drainage Breeding/winter bird survey
	Breeding/winter bird survey

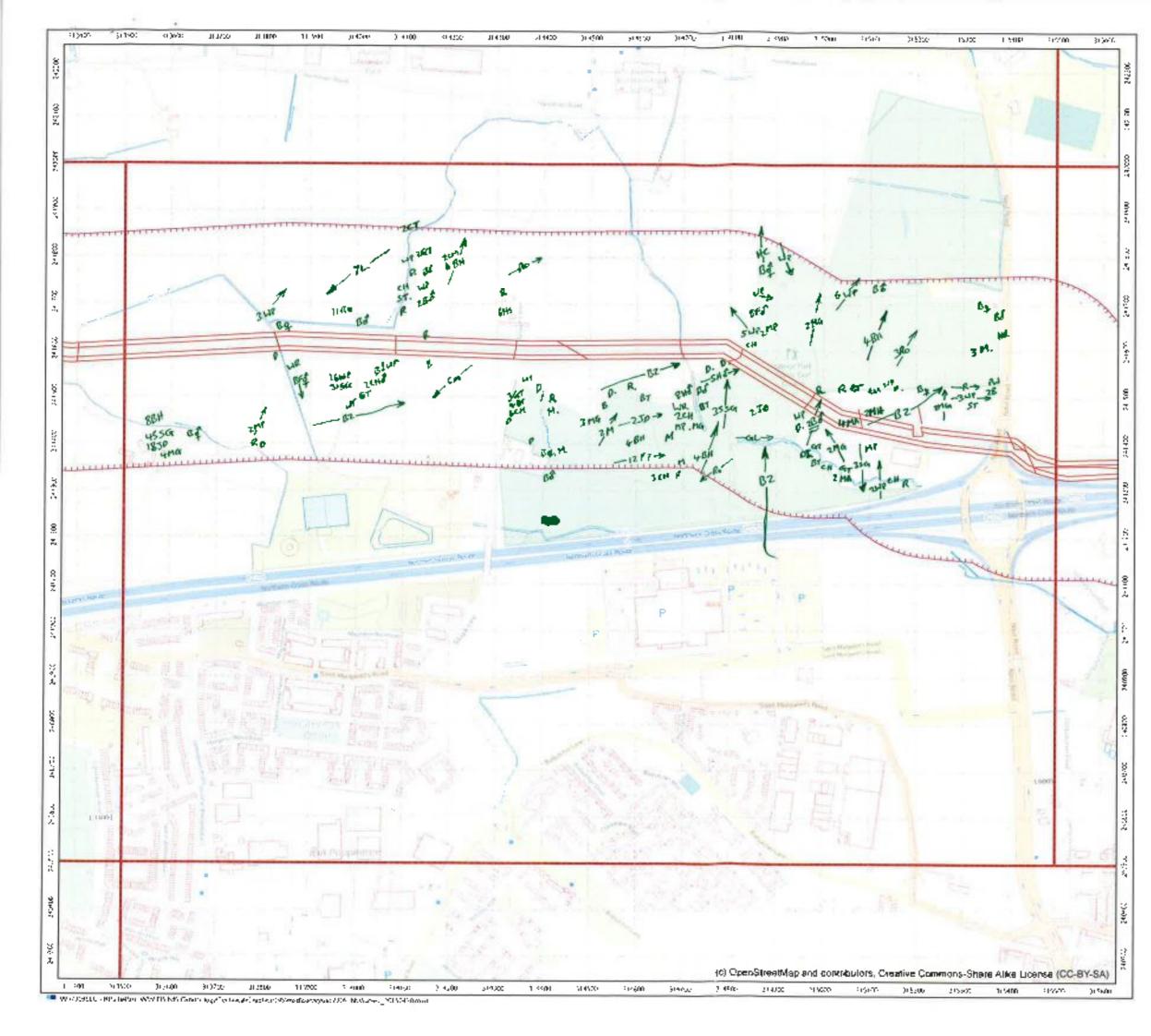
	No.	Westher Sheet		Wind Speed	Speed		Direction	Rain/Snow		Cloud	Cloud Height	Visibility
(LL)			Ē		Beeutort	nt Moh						
Site	5	00		Calm E			Z	Nane Deteologiation	0.	in eghtrs 3.2	Height of cloud above average	Poor (stkm) 0 Moderate (1760) 1
Date	2 (	E		Light breaze		4	<u>ا</u> س	Light showers		i B	height of viewshert	Good (>3km) 2
		19		Gentle breeze Mod. breeze	au	8-12 13-18	ងីស	Heavy shokers Heavy rain	615 10 4		<150m 0	
Survey	Ż	1	o,	Fresh breeze	_	18-24	SW	Lying Snow		Frost	Ë	
Observer	Z	Nui Ve	lecle	Strong breeze	breeze 6	25-31	N N				>500m 2	
Start Time	T	09:45		Fresh gale		9948E	MM	Nono On site	0 F	Ground 1	Please be as accu	Please be as accurate as possible, with
Finish Time		14:05		Strong gale Whole gale		47-54		High ground		All clay 2	weather detats, entering only on not a range, e.g. WS - 5, not 5-5.	weather detats, entering only one legure. not a range, e.g. WS - 5, not 5-5.
Sheet 1/	1_	] Maps attached	ched	Storm Hurricane	= ₽ ₽						Use notes for extra mito. E.g. WS - 5, gusting 6 (in notes).	a anto. g 6 (in notes).
Weather	-	Wind	Rain	Cloud	Cloud	Visibility	Frost	Snow N	oles(e.g.	Notes(e.g. lemperature)	(a)	
	speed	direction		COVER	height							
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Hr 2 4:45	2	×	ų	8/8	2	2	1		S°C			
Hra (o.e)	r	SE	4	8/8	2	۲	1	-	200			
Hr 4(1:45	3	SE	2	8/8	_	-	1		2.0			
Hr 512'45	4	5	4	8/8		2		1	300			
Hr 613:45	4	λ	2	8/8	1	2	1	5	willen	Stopped	at 14:0	5、144、レーシ
Hr 7[4/kS	6-8	SU	Sup	Sudvian	Stappe	ped	-	0		See L	med s from	55
Hr 8									~			
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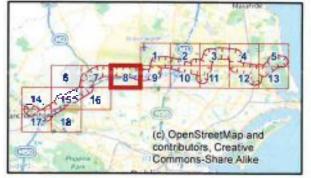
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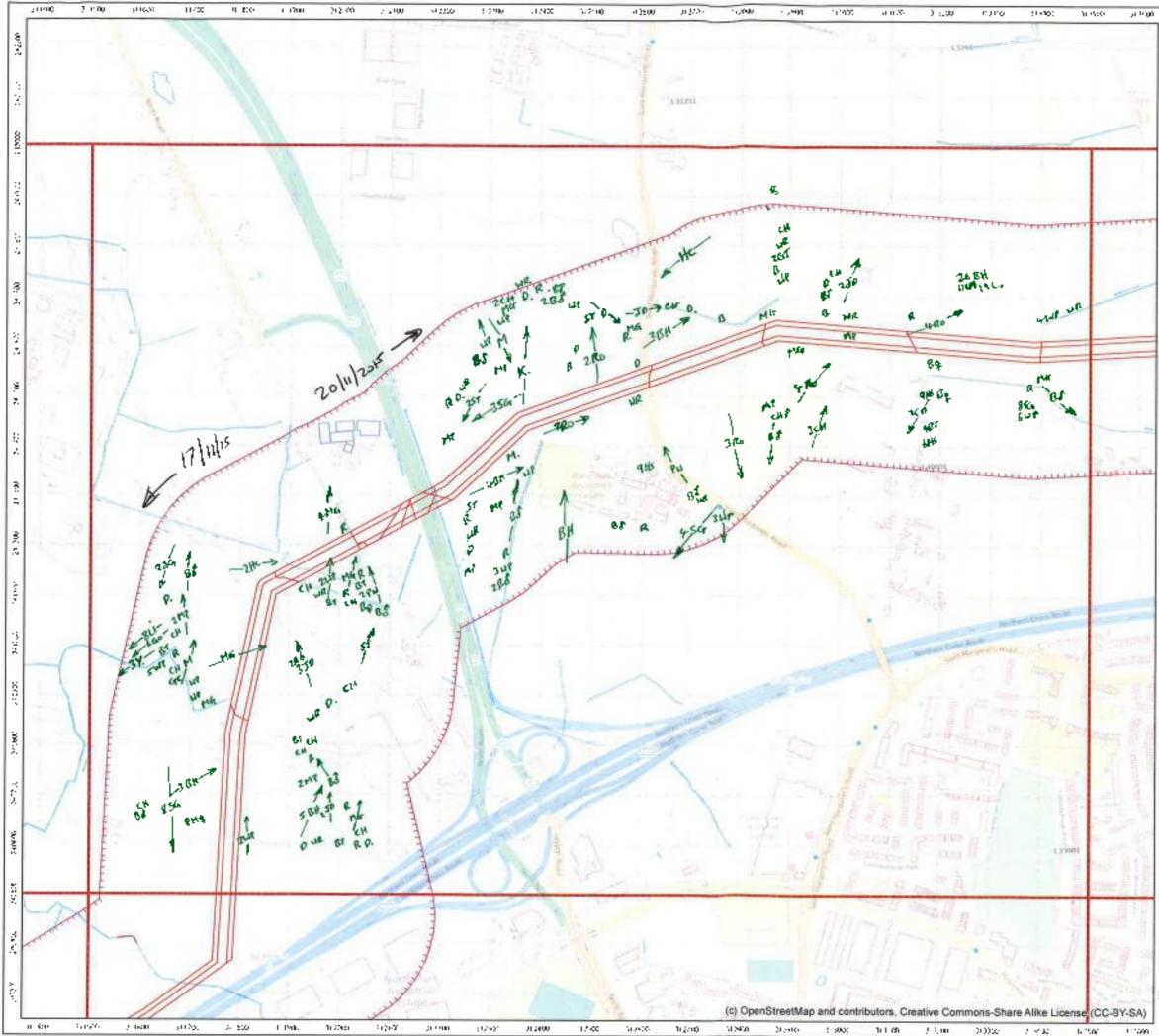
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Greater Dublin Drainage

Breeding/winter bird survey

Page 8 of 18

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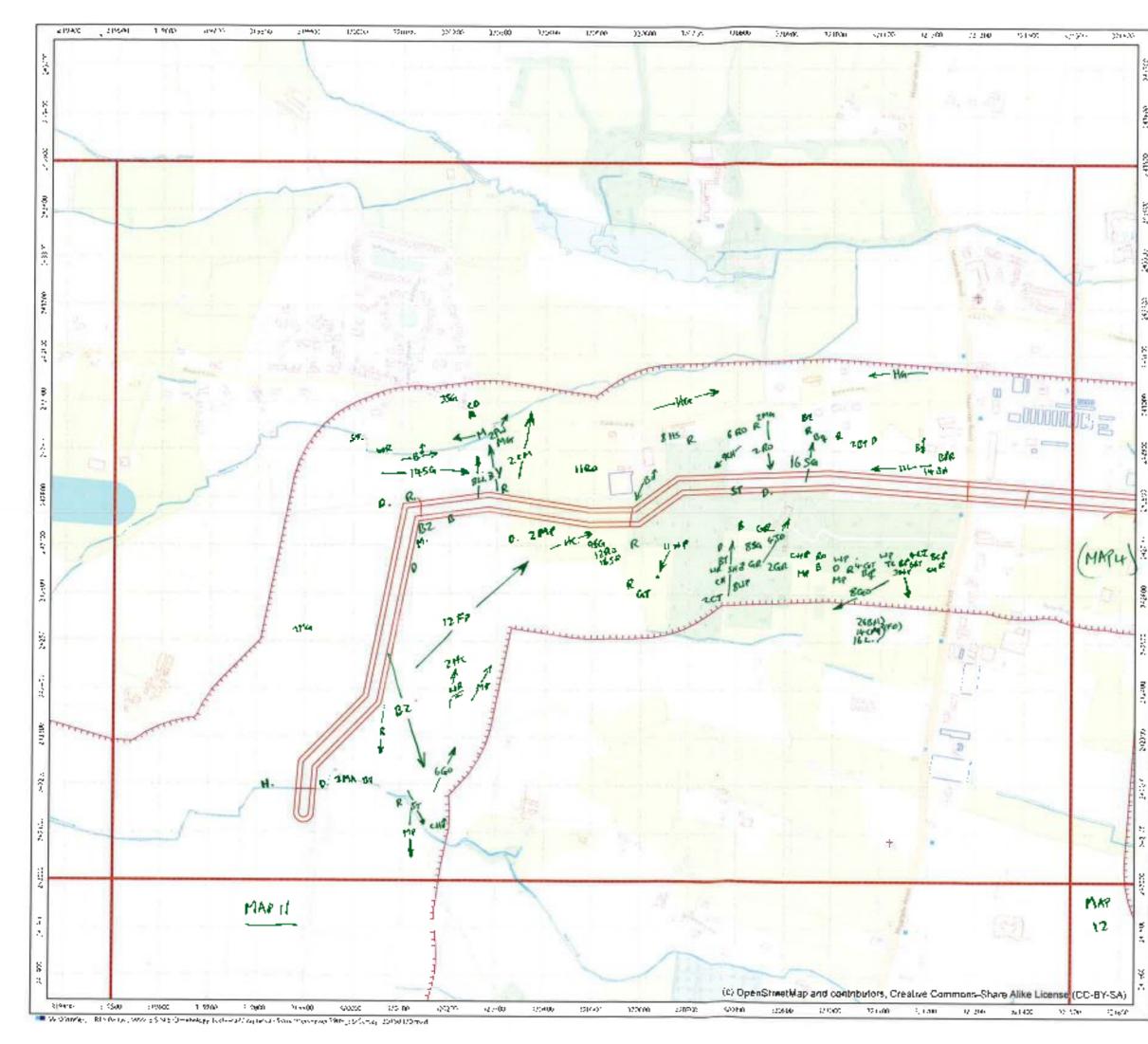
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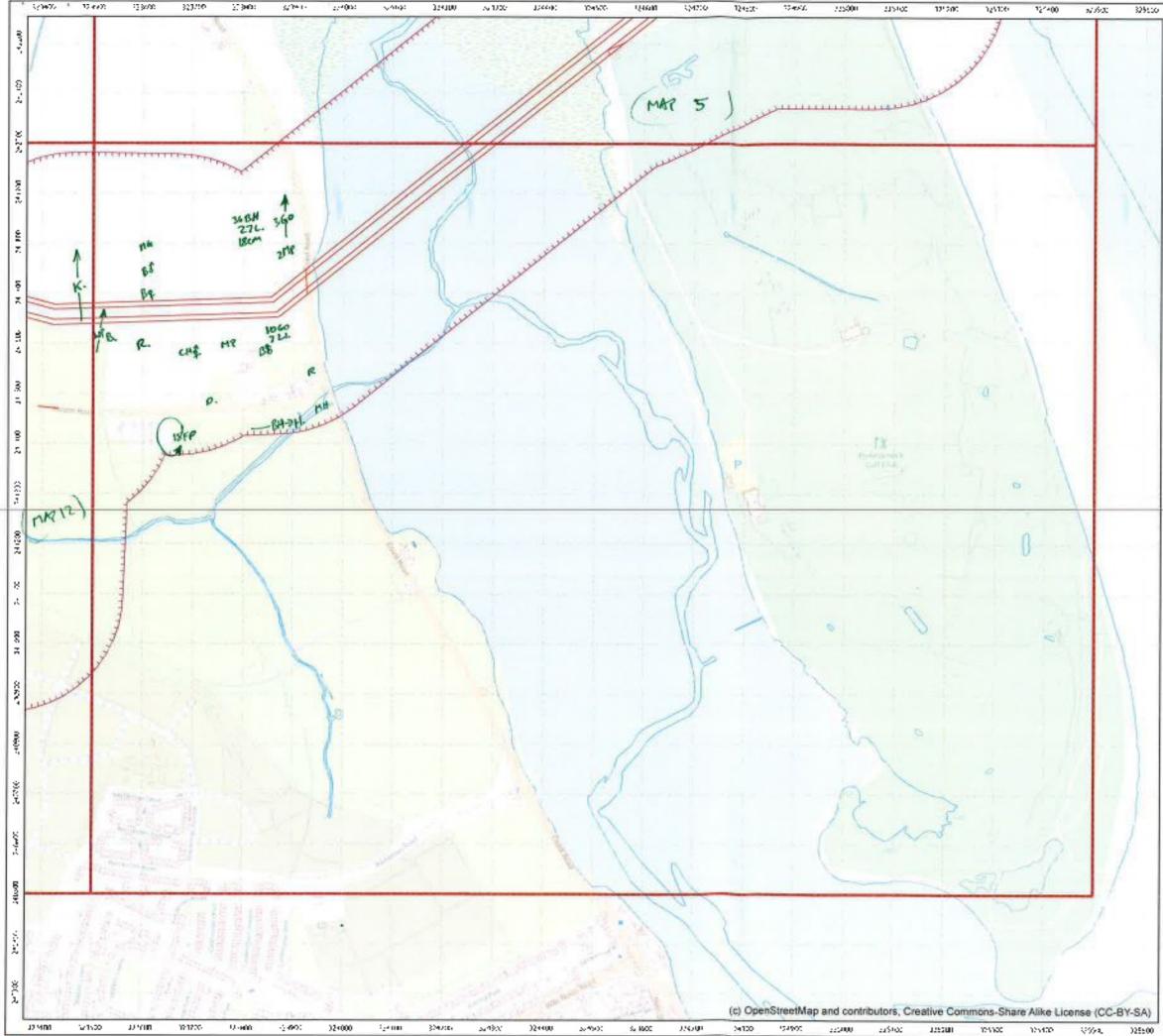


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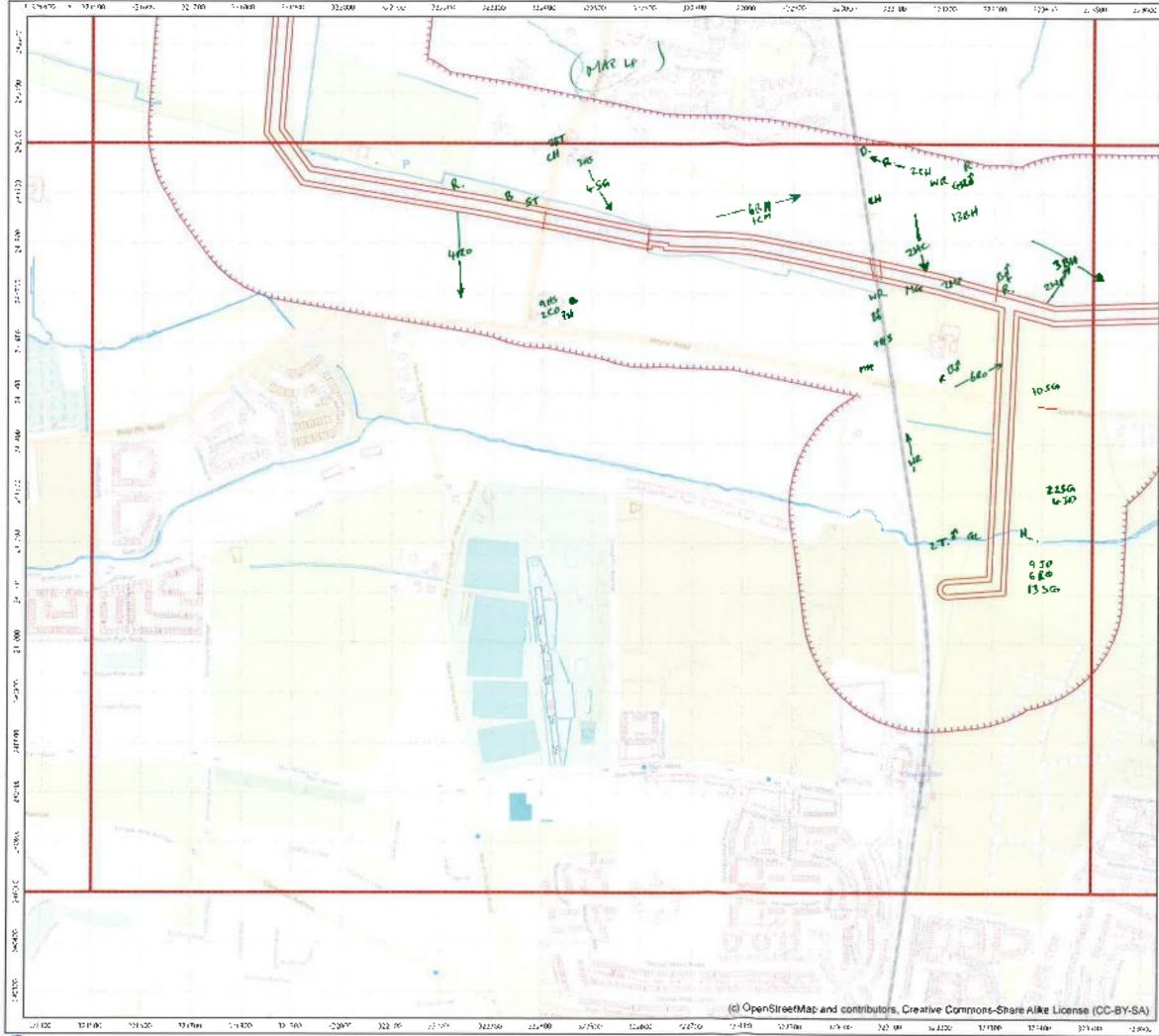
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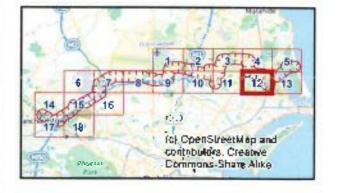
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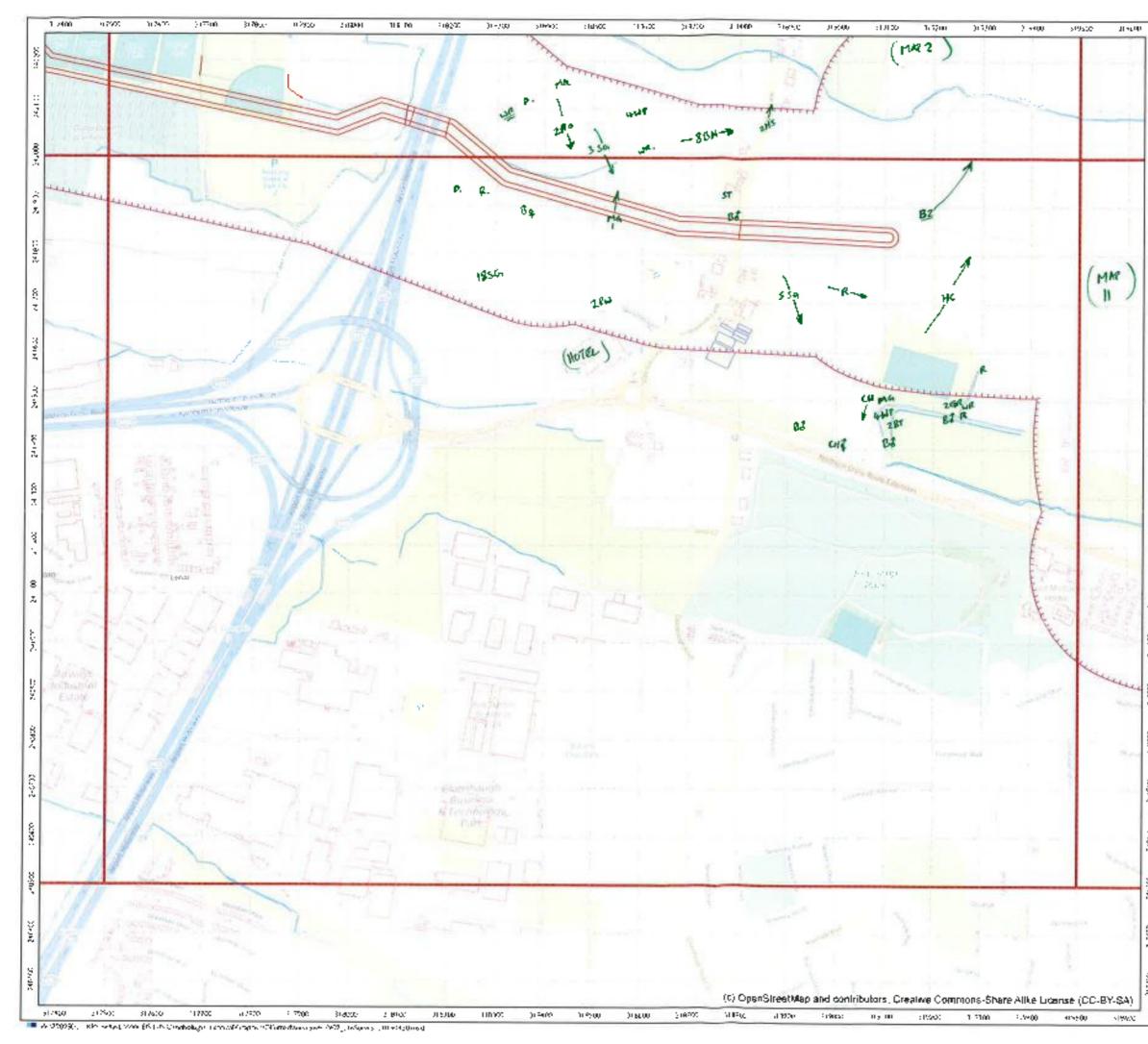
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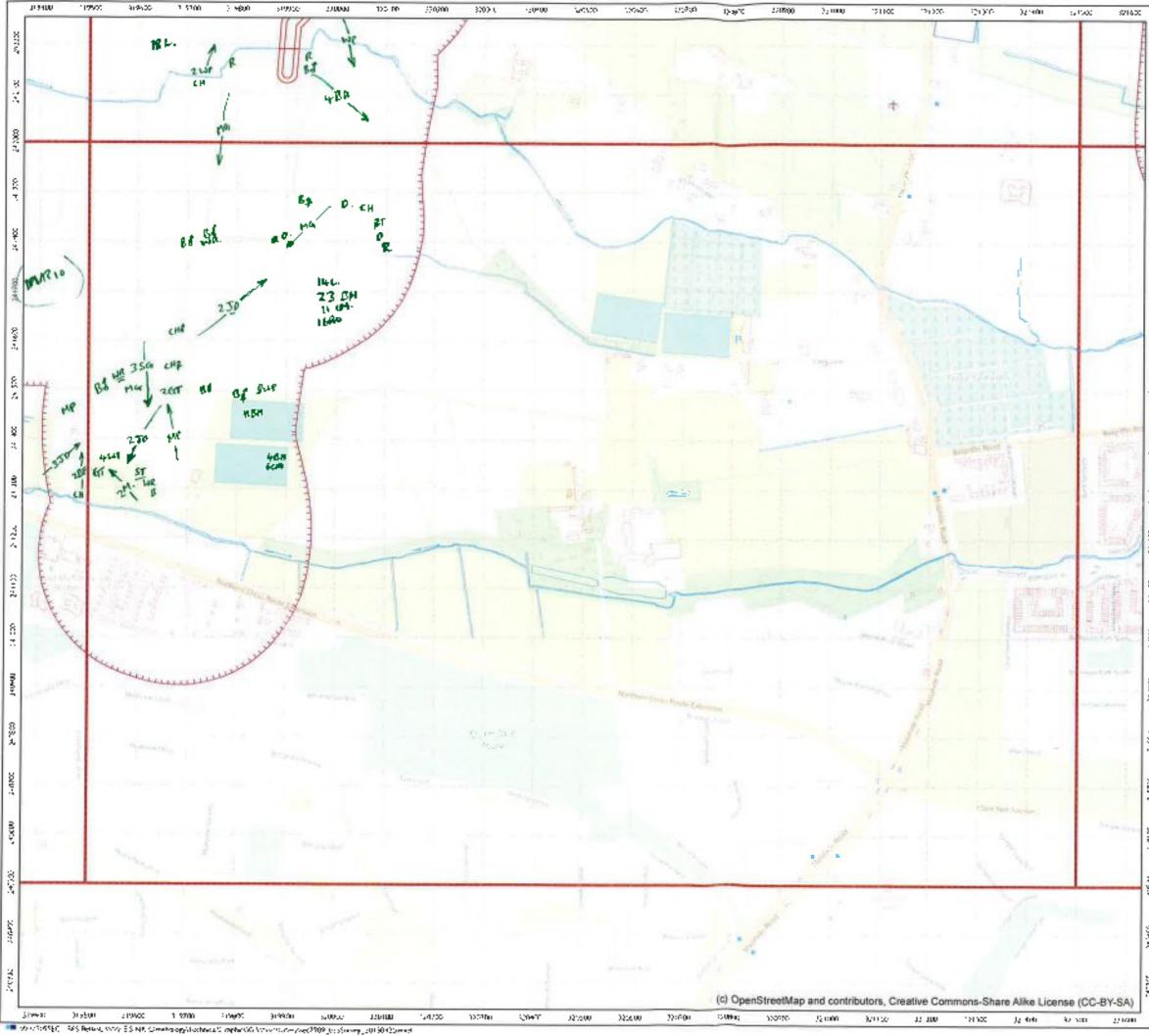
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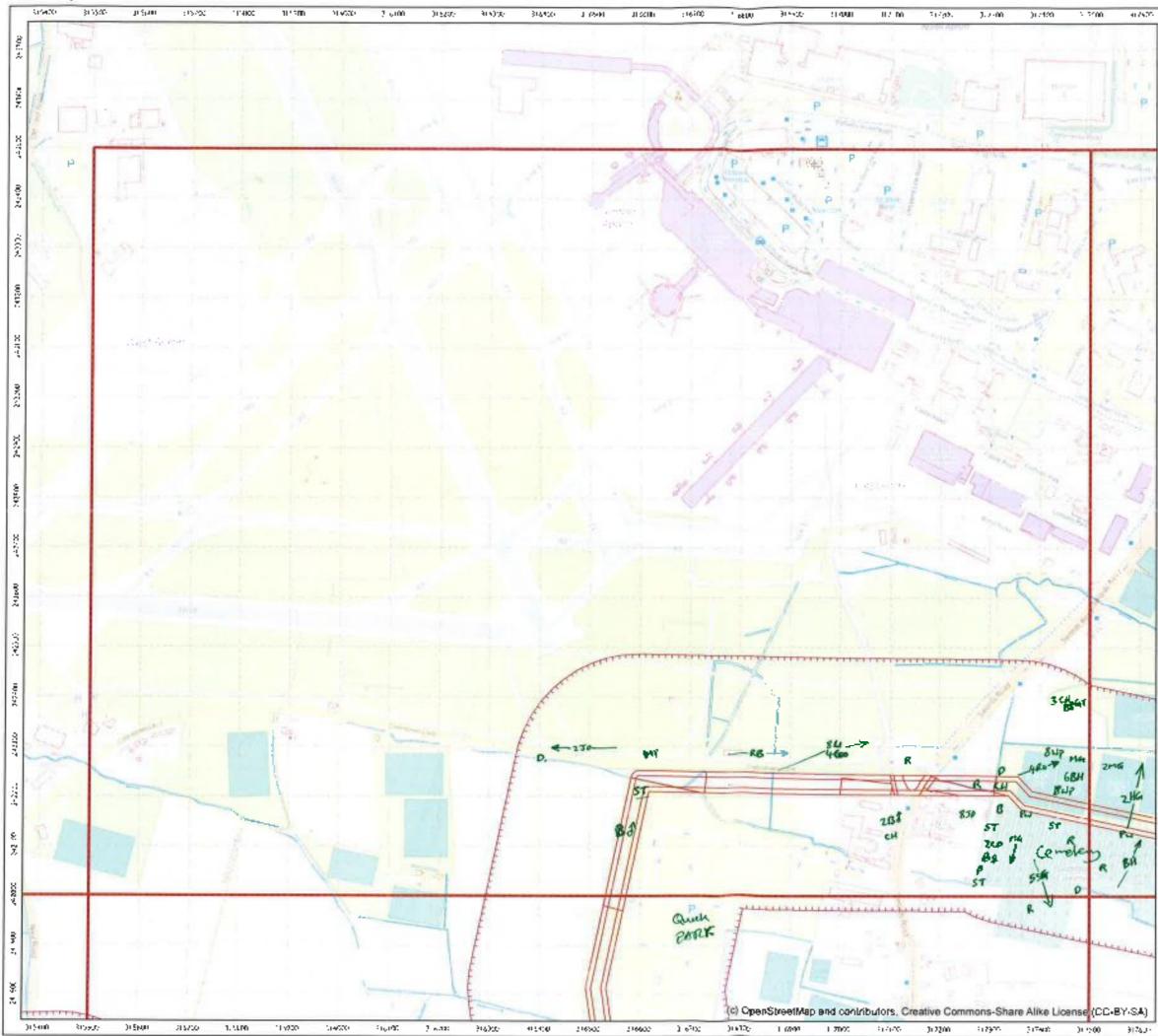
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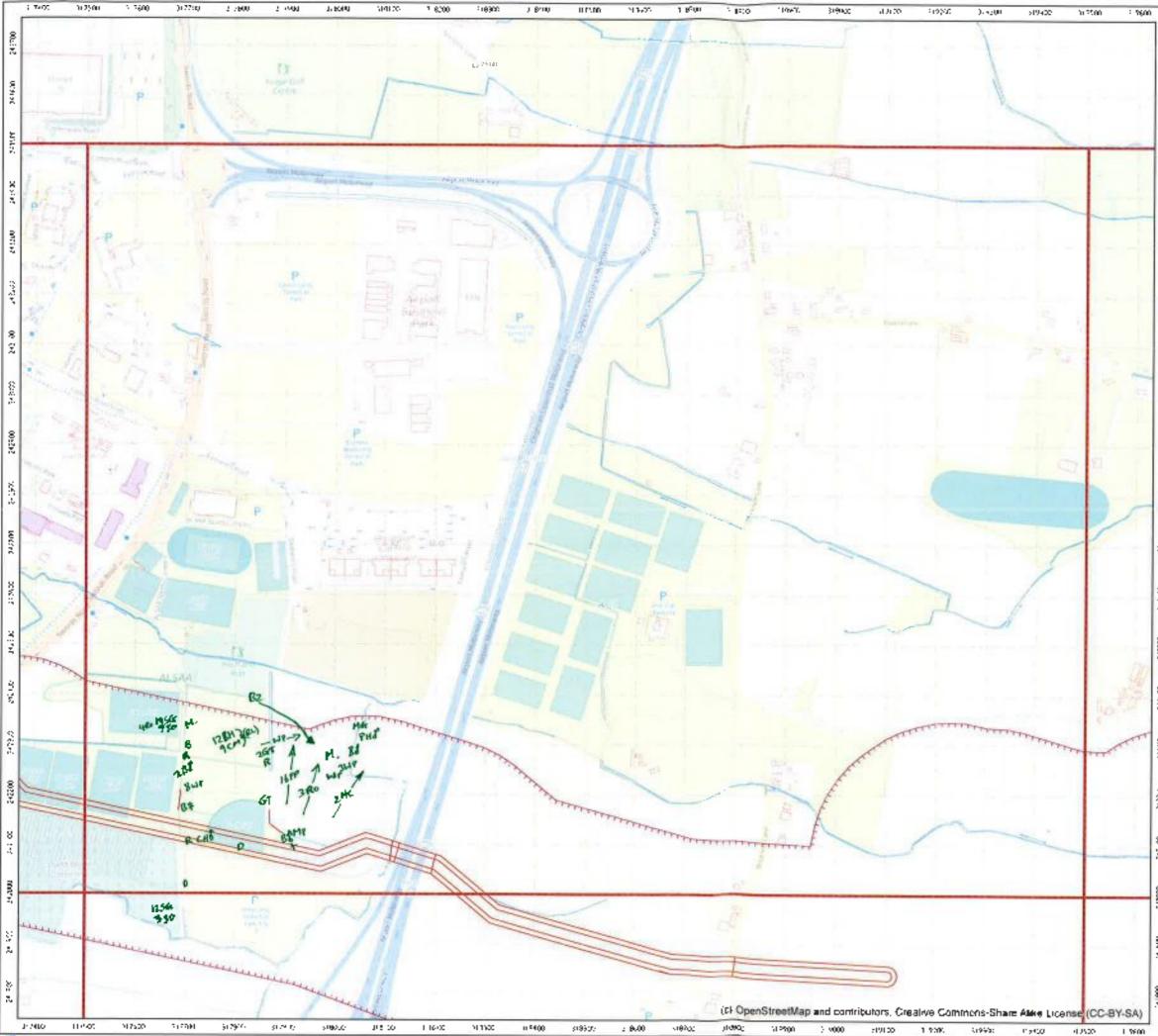


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# **APPENDIX 4**

# WINTER 2017 (MARCH)

The data from the March 2017 winter walkover surveys were mapped, and are enclosed below (along with the associated survey recording sheets).

RPS	W	eather Sh	seet	Wind	Speed Beav	kont Mich	Direction	Rain/S	inow	C	buol		Cloud Height	Visibility	-
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Finish Tid		100		Whole Storm	gaka 10 11							Lipp notes for exir	a into.
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Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes(e.g	. tempera	aure	9)	
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Hr 212 <sup>1</sup> 15	3	ENE	0	10	\$P +	2					_		
Hr 3 <i>1345</i>	3	E	0	- 0	tt.	2			10%				
Hr 4 Mis	3	e	1	7/8	A	1							
Hr 56015	3	NE	Ø	718		2	-		10 ° C				
Hr6#'rs	3	E	0	7/8	ы	2							
Hr 71715	3	E	0	018	4	2		-	11°C		_		
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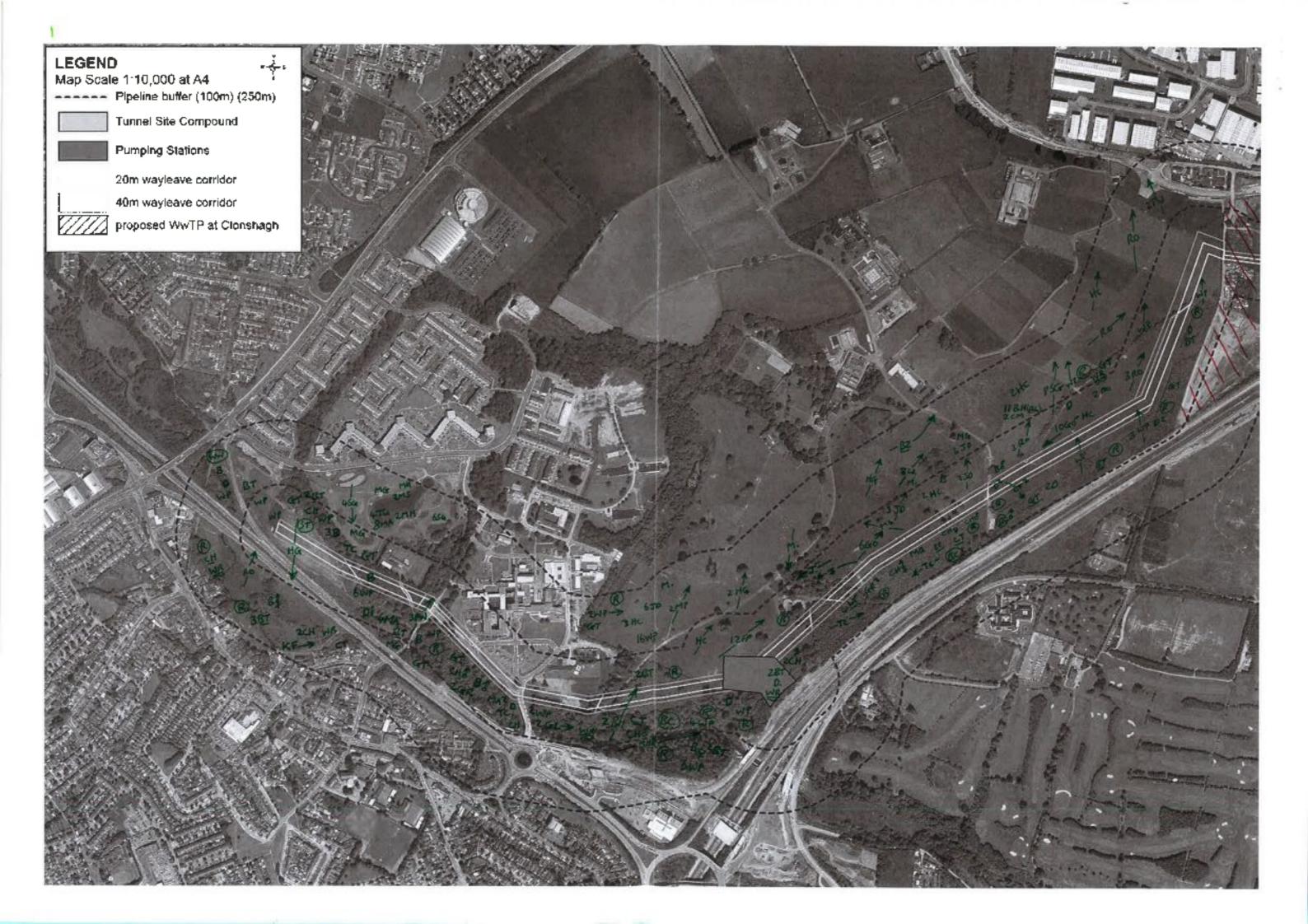
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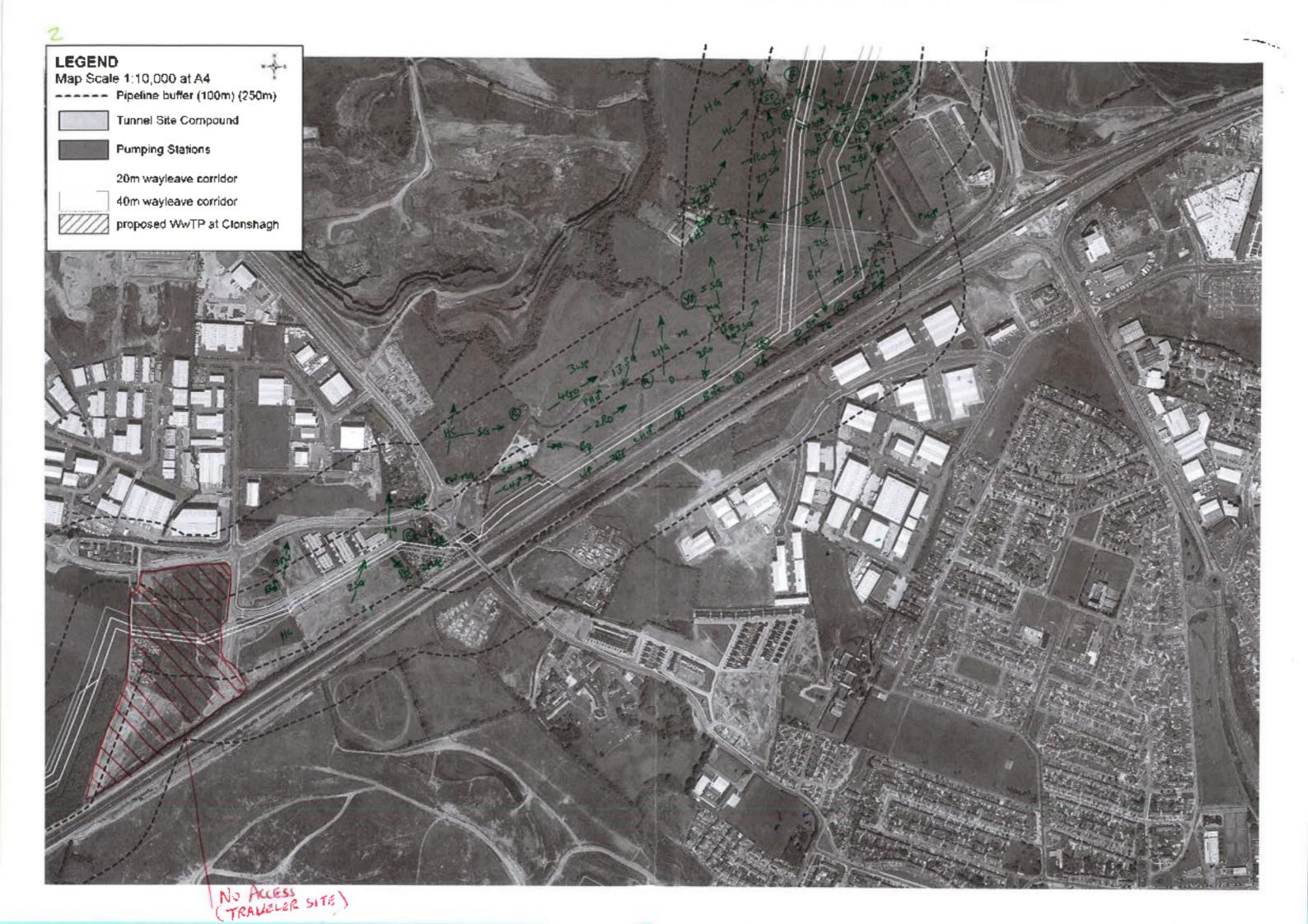
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Hr 5 (à. 22	3	NE	3	P	2	1	0	0	400			
Hr 6 <del>(f.Z</del> a	3	NE	2		2		0	-	S°C S°C			
Hr 7(1:20	4	NE	2	- 10	2	-		0	590			
Hr 8(3:22	4	NE	3	41	2	1	0	0	Sac	_		
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RPS Weather Sh Site GOD		eet	Wind	ion Moh	Direction Rain/S		now	Cloud Cover In eighths e.g. 3/8	Cloud Heighi Visibility Height of cloud above everage Neight of Moderate (1-3km) 1	Visibility		
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Date	2	21/03/2017			Light breeze 2 4-7 Genile breeze 3 8-12			Light showers 2 Hoavy showers 3 Heavy rain 4 Lying Snow			height of viewshed Good (>3km) ( <150m 0 150-500m 1 >500m 2	
Survey	Nin Vede			Mod. breeze 4 13-18 Frosh breeze 5 19-24 Strong breeze 5 25-31			-16 S -24 SW -31 W					
Observer												
Start Tim	e C	07:50			jale 8		89-46	None 0 On site 1		None D Ground 1	Please be as accurate as possible, with	
Finish Time 14:30			Strong gale 9 47-54 Whole gale 10 55-53				High ground 2		All day 2	not a range, e.g. WS - 5, not 5-6.		
Sheet 1/	&[]	Maps atta	sched	Storm Hurrica	1				9		Use notes for ear E.g. WS - 5, grate	a Into.
Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes(e.g.	lemperatu		
Hr 1 67 Sc	3	L	0	648	2	1	I	1	-12			
Hr 20854	4	LJ .	2	718	2	1	1	4	- )°C	SNOW SHOWERS		
Hr 309:30	4	L.	0	7/8	2	1	0	0	0"4			
Hr 4 (0.150	4	L)	$\mathcal{O}$	6/8	2	2	0	0	2 20			
Hr 5 II: 50	44	W	2	7/8	2	1	0	0	2.0	(SLee	+)	
Hr 6 17\\$	3	512	0	5/8	2	2	Ð	0				
Hr 7 13:50	3	دىك	0	5/8	2	2	0	0	4°C			
Hr 8 Field Notes:	3	ى ب	0	5/8	2	2						
Maps att												,
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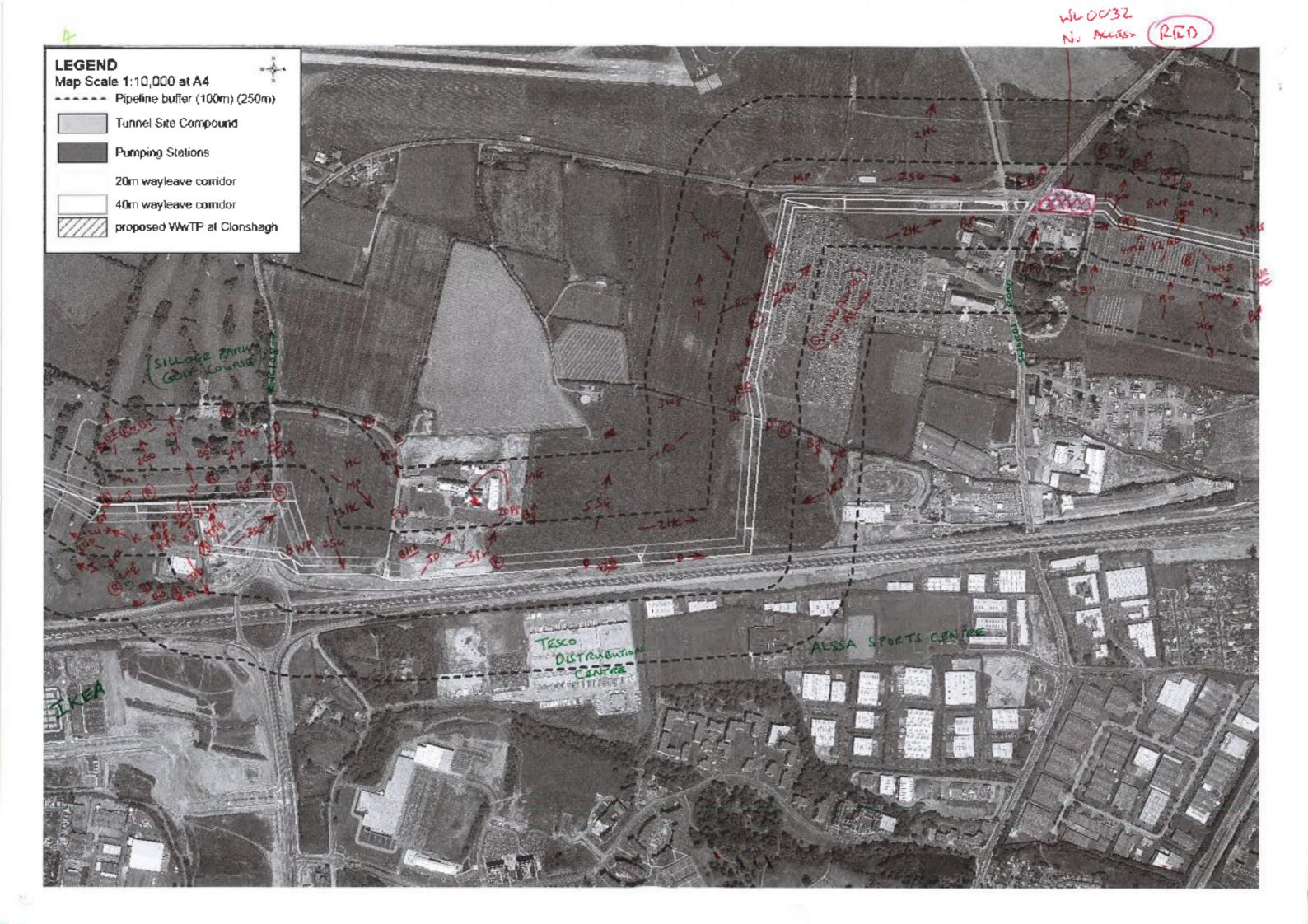
RPS	V	eather Sh	ree	Wind	Speed Begu	kon: Moh	Direction	Rain/S	now	Cloud Gover	Cloud Height	Visibility
Site	0	500		Calm Light a	0		N NE	None	0	In eignths	Height of cloud above average	Poor (-c1km) D
Date		03/2017	7	Lightb	reeze 2	4-7	E	Drizzle/ Light sh	KOWYEITE 2	0.9.38	height of viewshad	Modelate (1-3km) 1 Good (>3km) 2
Survey			1.0	Mod, b	19929 4	13-18	S€ S	Heavy a	showers 3 ain 4		<150m 0	
Observer	N	, Veile			breeze 6		SW W	Lying	Snow	Frost	150-500m 1 >500m 2	
Start Tim	ec	7.30		Mod. g Fresh (			NW	None On site	0	None 0 Ground a		rate as possible, with
Finish Tir	ne /	5.30		Strong Whole	pale 9	47-54		High gro		All day 2	weather details, er not a range, e.g. V	ntering only one liture.
Sheet 1/		Maps atta	ched	Storm	Č 1	1 64-72					Use notes for extra E.g. WS - S, gustin	a info.
Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes(e.g	l temperatu		-y o (in noise).
Hr 17:30	4	W	0	7/8	2	2		-	700			
Hr 2 8: 50	4	ŵ	0	8/8	2	2		-				
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Hr 4 10 3 v	4	L L	0	818	2	2						
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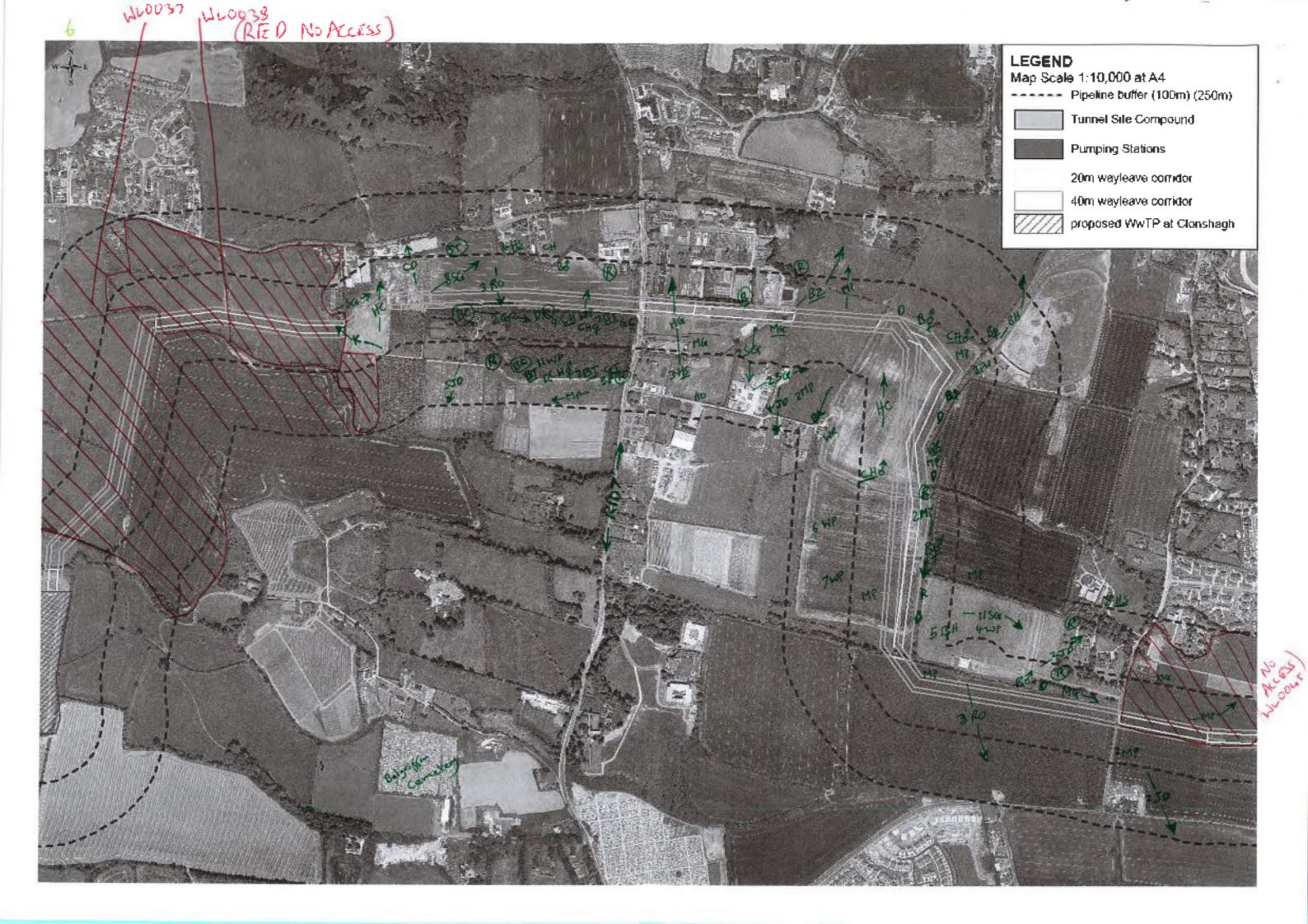




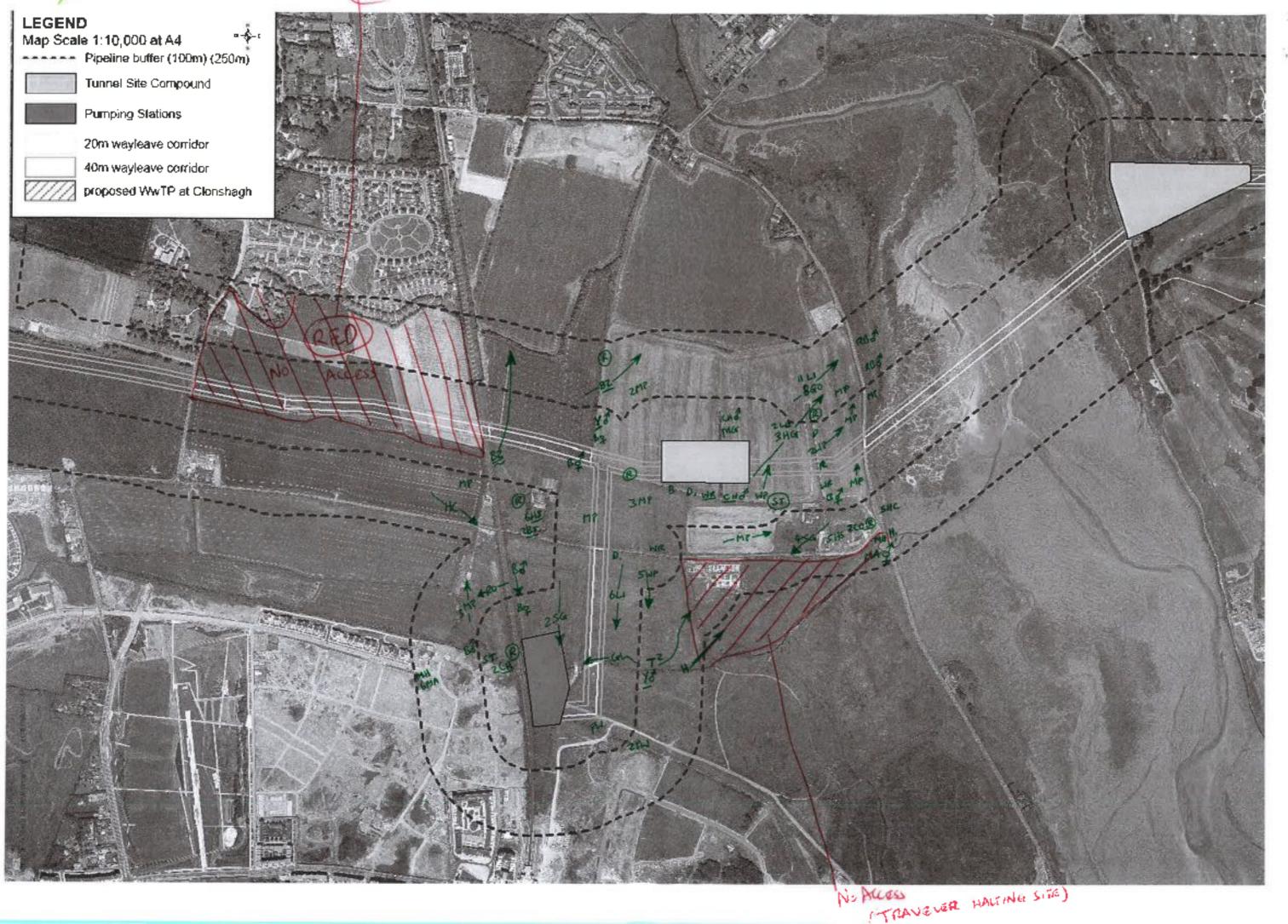














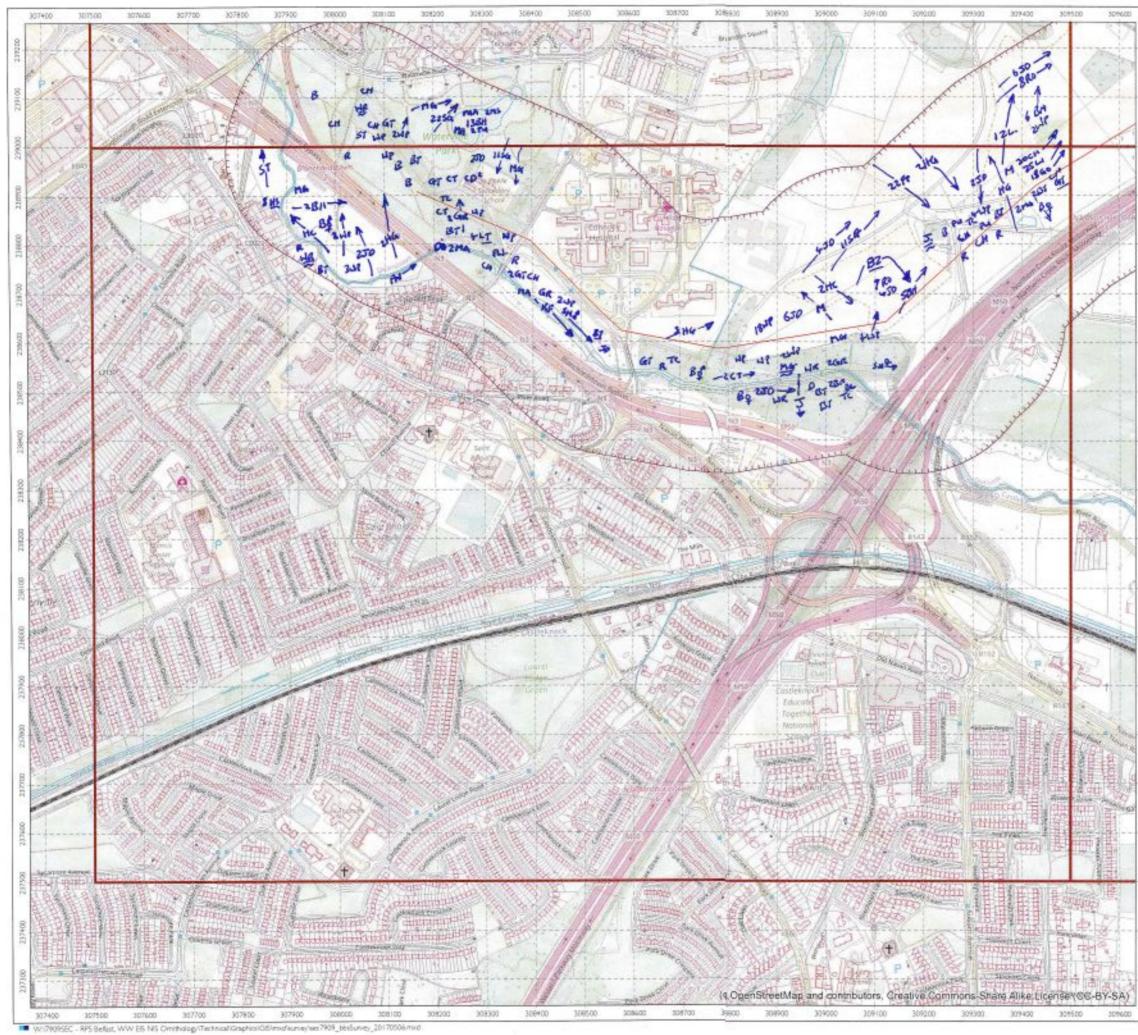
## GDD Oral Hearing Response to Inspector's Questions

## APPENDIX 5 WIN1

WINTER 2017 (NOVEMBER)

The data from the November 2017 winter walkover surveys were mapped, and are enclosed below (along with the associated survey recording sheets).

RPS Site Date Survey Observer	6	eather Shi DD 111 17 110 Newb	et	Wind S Calm Light ai Light br Gentle Mod. br Fresh b Strong	Beauk 0 r 1 eeze 2 breeze 3 reeze 4 ireeze 5	ort Mph >1 1-3 4-7 8-12 13-18 19-24 25-31	Direction N NE E SE S SW W	Rain/Sr None Drizzle/M Light sho Heavy si Heavy ra Lying S	0 Aist 1 owers 2 howers 3 ain 4	Cloud Cover In eighths e.g. 3/8 Frost	Cloud Height Height of cloud above average height of viewshed <150m 0 150-500m 1 >500m 2	Visibility Poor (<1km) 0 Moderate (1-3km) 1 Good (>3km) 2
Start Time Finish Tin Sheet 1/	e O ne la	8:.\0 5:20 Maps atta	ched	Mod. gr Fresh g Strong Whole Storm Hurrica	ale 7 jale 8 gale 9 gale 10 1	32-38 39-46 47-54 0 55-63 1 64-72	NW	None On site High gro	0 1 und 2	None 0 Ground 1 All day 2	Please be as acc	a info.
Weather	Wind	Wind direction	Rain	Cloud	Cloud height	Visibility	Frost	Snow	Notes(e.g	i. temperatu	ire)	
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Hr 3	3	SU	0	618	2	2	0	-	1			
Hr 4	3	Sw	0	618	2	2	0	/	4°C			
Hr 5	4	Sw	2	6/8	1	2	0	-				
Hr 6	4	SU	2	518	2	2	0	-				
Hr 7	3	SW	2	618	1	2	0	-				
Hr 8	4	SW	0	5/8	2	2	0	/	9°C		1997 - San Colombia (1997 - 1997)	
Field Notes Maps at												
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surveyor: N	ich Ved	e	
Date: 08	ich Vede (11) 2017		
Start time:	End t		



Legend

BBS/WWO survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)

- Pipe route (supplied 20170405)

Greater Dublin Drainage

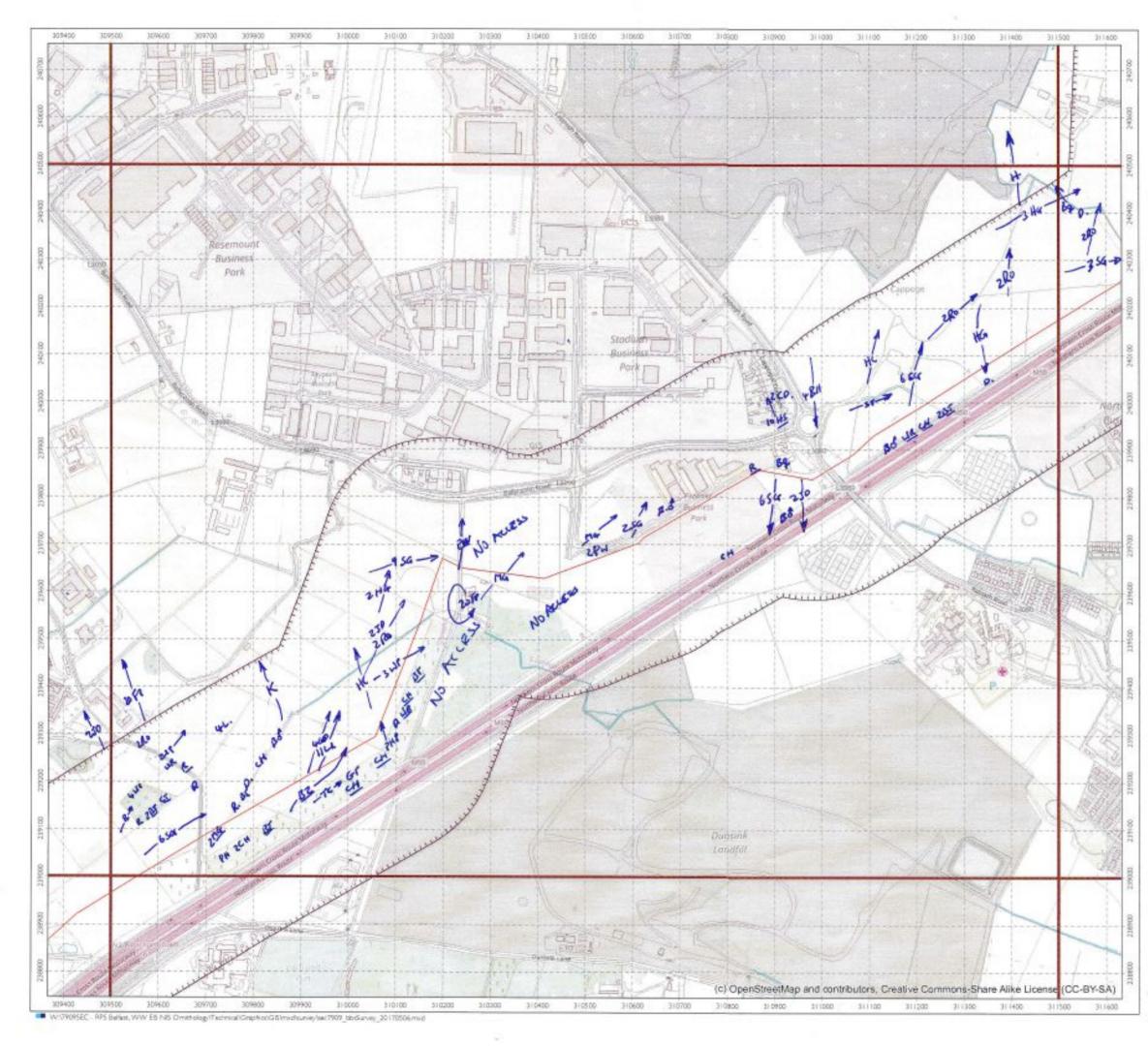
Breeding/winter bird survey

Page 17 of 18

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Surveyor: N.ch	
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Start time:	End time:
*Please attach wea Notes:	ther sheet
-103	Macanica M
A	
6 7	Baser Hill
19 A	1 2 3 4 5

BB5/WWO survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)

- Pipe route (supplied 20170405)

Greater Dublin Drainage

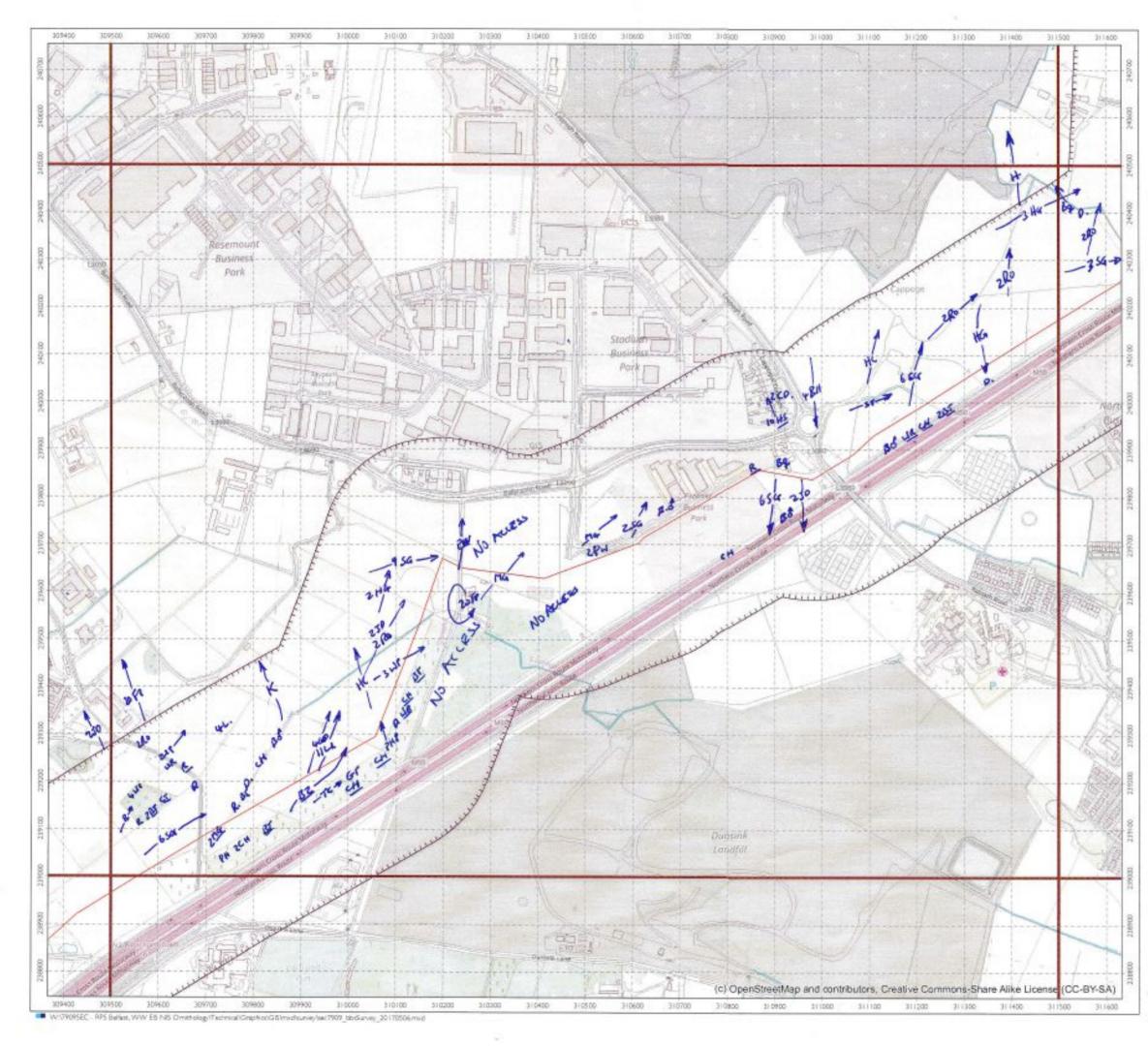
Breeding/winter bird survey

Page 15 of 18

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RPS	w	eather She	eet	Wind 9	Speed Beaut	ort Mph	Direction	Rain/S	now	Cloud Cover	Cloud Height Height of cloud	Visibility
Site Date	Date 9 11/17			Calm         0         >1           Light air         1         1-3           Light breeze         2         4-7           Gentle breeze         3         8-12           Mod. breeze         4         13-18			N None NE Drizzle/M E Light shot SE Heavy sh S Heavy rai		owers 2 howers 3	In eighths e.g. 3/8	above average height of viewshed	Poor (<1km) 0 Moderate (1-3km) 1 Good (>3km) 2
Survey		A CONTRACTOR OF THE OWNER		Fresh b	preeze 5	19-24	SW	Lying		Frost	<150m 0 150-500m 1	
Observer	N	in Veal	e	Strong Mod. ga		25-31 32-38	W NW	None 0		None 0	>500m 2	
Concession of the local data and		8:30	Fresh gale 8 39-46 Strong gale 9 47-54				On site 1 High ground 2		Ground 1 All day 2	Please be as accurate as possible, with weather details, entering only one figure		
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Sheet 1/	&[]	Maps atta	ched	Storm Hurrica	ne 1:	No. 1977. A 67 1					E.g. WS - 5, gusti	
Weather	Wind speed	Wind direction	Rain	Cloud	Cloud height	Visibility	Frost	Snow	Notes(e.g	. temperatu	ire)	
Hr 1	5	NU	1	8/8	1	2	-	_	82			
Hr 2	4	W	1	818	1	2	-	_				
Hr 3	4	W	0	6/8	1	2	-	_				
Hr 4	4	NU	0	6/8	2	2	-		11°C			
Hr 5	4	NW	0	6/8	2	2		_				
Hr 6	4	NW	0	SIS	2	Z		-				
Hr 7	5	W	0	3/8	2	2	-	_	11°C			
Hr 8	5	W	0	3/8	2	2		_				
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6 7	Baser Hill
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BB5/WWO survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)

- Pipe route (supplied 20170405)

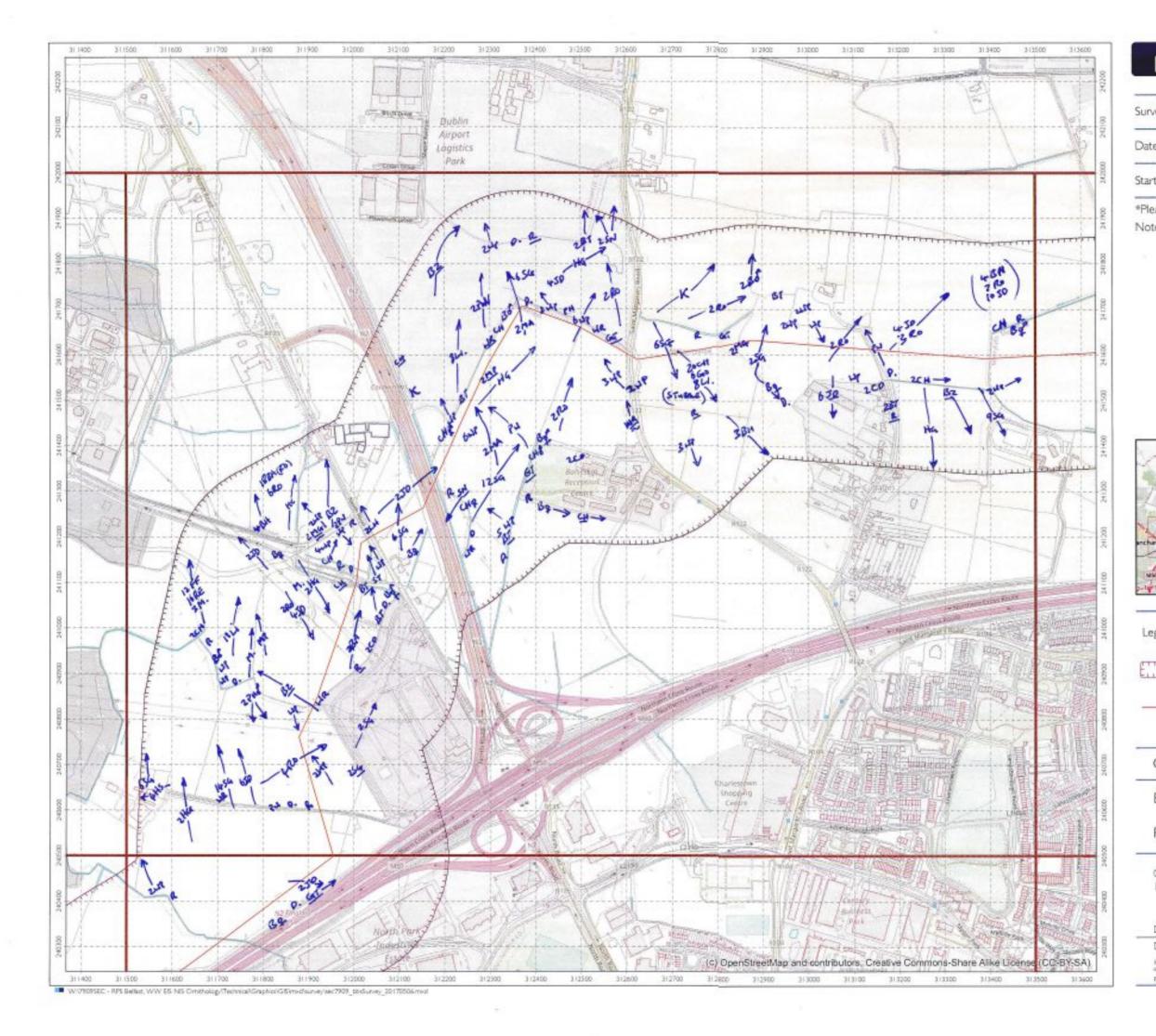
Greater Dublin Drainage

Breeding/winter bird survey

Page 15 of 18

Insh National Grid, EPSG 29902 * OpenStreet/Vac contributors, Reproduced from the Ordnance Survey Of Ireland by							
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Page 7 of 18	
Page 7 of 18	200 m

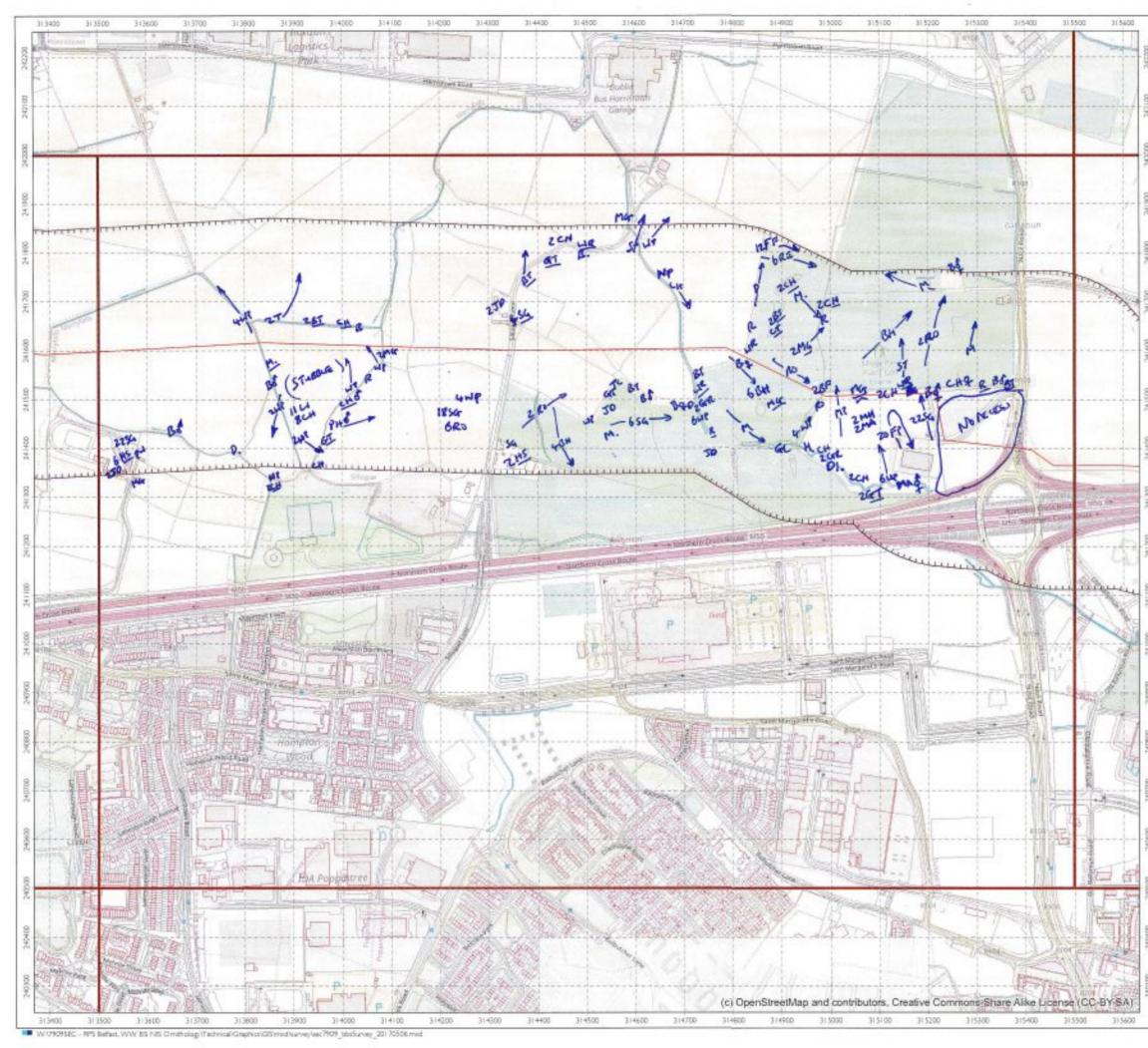
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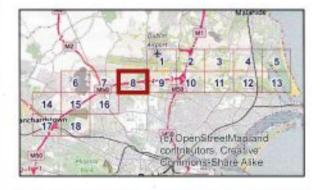
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Approved DRAFT



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Legend

BBS/WWO survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)

Pipe route (supplied 20170405)

Greater Dublin Drainage

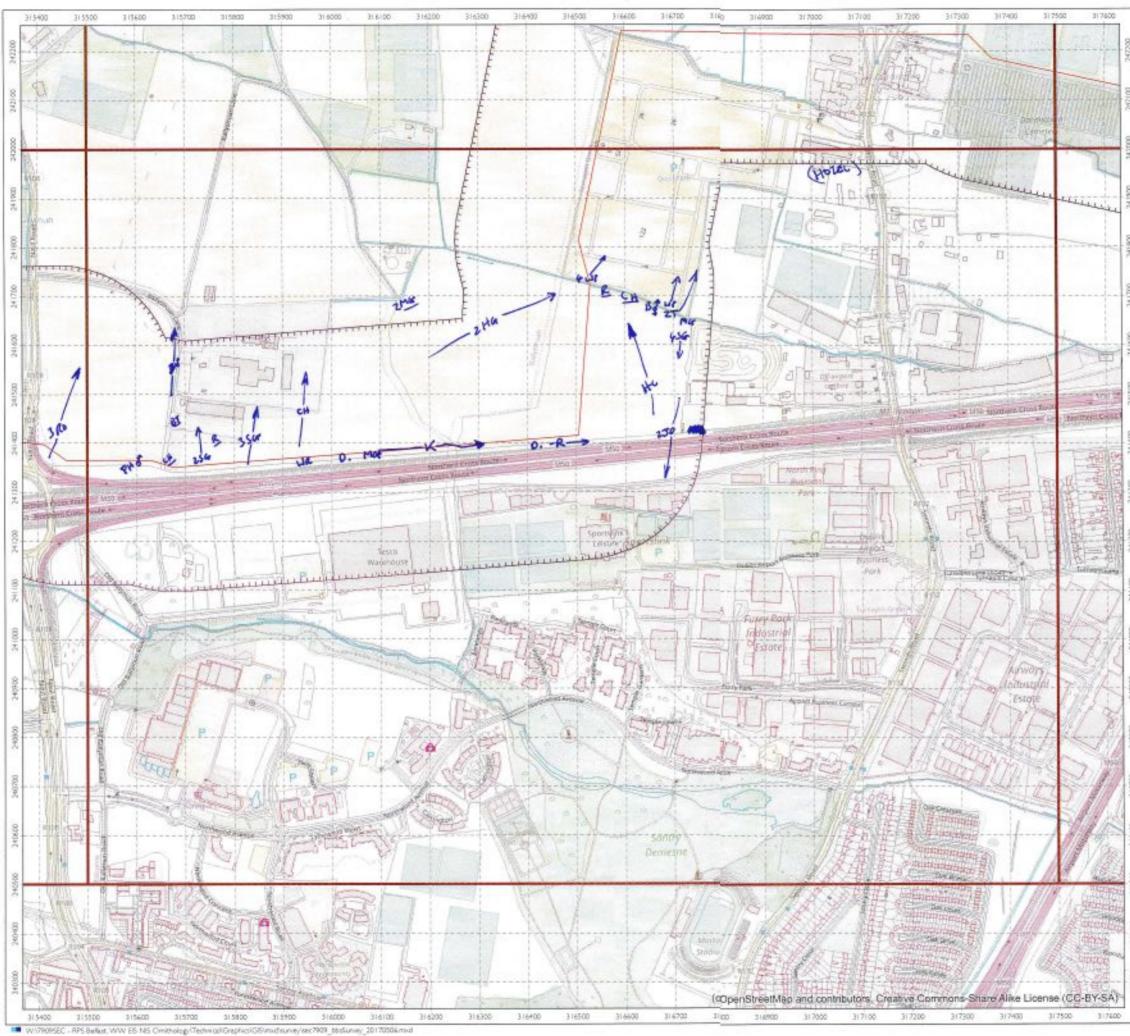
Breeding/winter bird survey

Page 8 of 18

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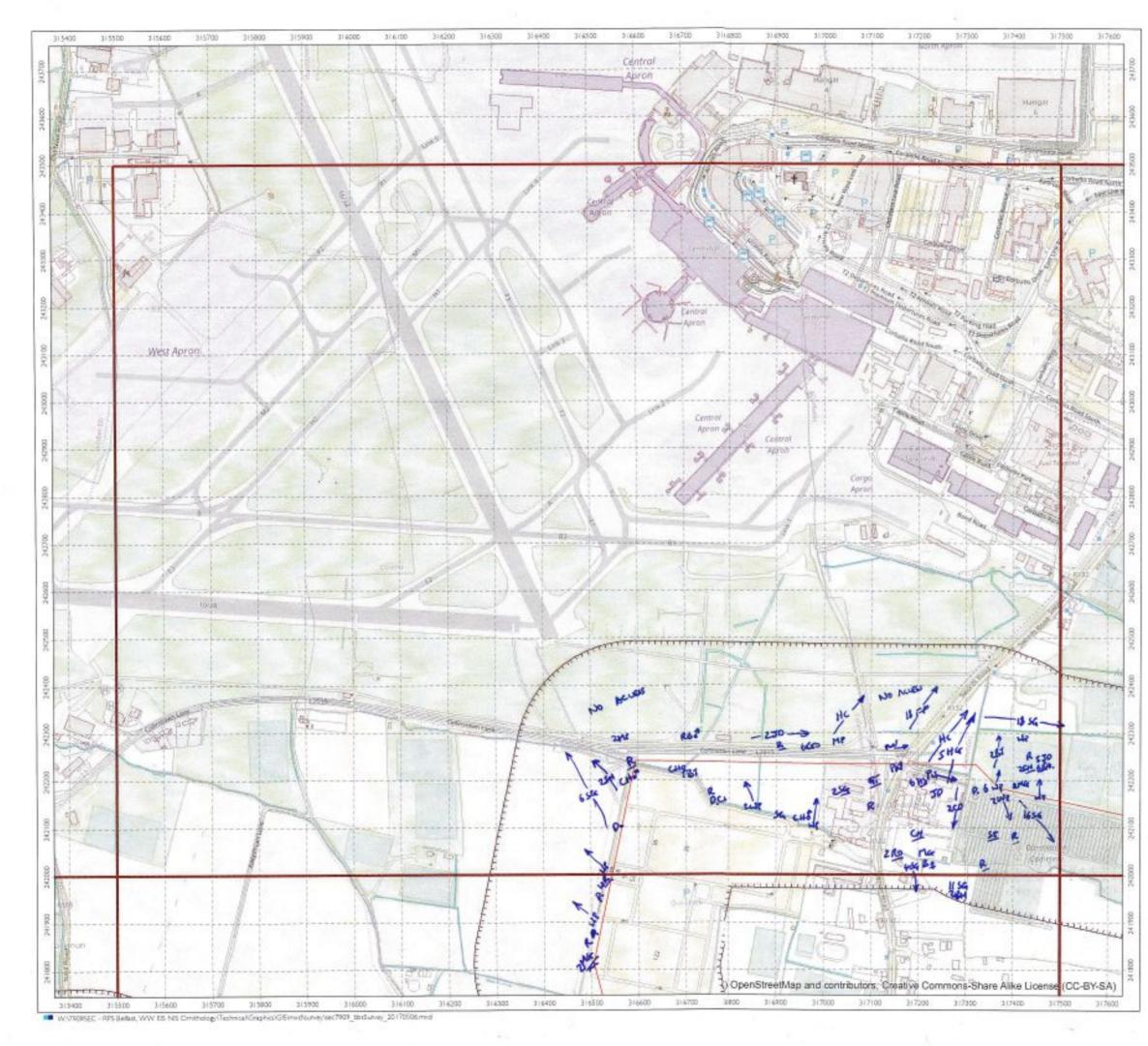
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Start Time		N. Vecce 08:40		Mod. ga	ale 7	32-38	NW	None 0 Opisite 1			>500m 2		
Finish Tin				Strong gale 9 47-5		47-54	4 Hig		On site 1 High ground 2		Please be as accurate as possible, with weather details, entering only one figure, not a range, e.g. WS - 5, not 5-6. Use notes for extra info. E.g. WS - 5, gusting 6 [in notes].		
Sheet 1/ & [		1.240		Storm									
Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	2 73+ Visibility	Frost	Snow	Notes(e.g	g. temperature)			
Hr 1	3	U	0	6/5	Z	2	1		1ºC				
Hr 2	4	W	2	5/8	2	2	0						
Hr 3	3	لك	0	7/8	2	2	6						
Hr 4	3	su	0	6/8	2	2	0		Soc				
Hr 5	3	SU	2	7/8	2	2	0						
Hr 6	3	Su	2	7/8	2	2	0						
Hr 7	4	sw	2	8/8	1	2	0		700				
Hr 8 Field Notes	4	SW	2	8/8	1	2	0		7°C				
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14     15     16       Inthe 170 m     18       Legend     BBS/W       buffer of appendit       Duffer of appendit       Pipe row       Greater Dut       Breeding/win       Page 9 of 18       0       Scale: 17,500	WO survey bounds of route supplied 20 ed to previous bour ute (supplied 20170 blin Drainage nter bird survey 3 3	eetMagrand s. Creative Share Aike ary (250 m 170405 ndary) 2405)
14     15     16       14     15     16       17     18       18     17       18     18       17     18       18     16       17     18       18     16       19     16       19     16       10     17       10     17       10     17       10     17       10     16       10     16       10     16       10     16       10     16       10     16       10     16       10     16       10     16       11     17       15     16       16     16       17     18       18     16       10     16       10     16       10     16       10     16       10     16       10     16       10     16       10     16       10     16       10     16       10     16       10     16       10     16       10     16	WO survey bounds of route supplied 20 ed to previous bour ute (supplied 20170 blin Drainage nter bird survey 3 3	eetMagrand s. Creative Share Alke any (250 m 170405 ndary) 2405)



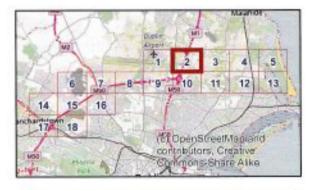
Surveyor: N.1	lecte			
Date: 13/	11/17			
Start time:	En	d time:		
*Please attach wea Notes:	ther sheet			
			Malarize ,	
19 M	1	2 3	4 5	1
6 7 14 15 16 17 18 17 18		0perSife Instators Instators	1 12 13 stMapians Creative	
Legend BBS/WV buffer of appende		DpenSifier triatitions himonasSi boundary lied 2017 us bound	1 12 13 etMapiane Creative are Alike (250 m 70405 lary)	
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Legend BBS/VVV buffer o appende Pipe rou Greater Dub Breeding/win	VO survey of froute suppled to previou the (supplied	boundary lied 2017 201704	1 12 13 etMapiane Creative are Alike (250 m 70405 lary)	

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Surveyor: N.a	· Veal	
Date: 13/11	117	
Start time:	End time:	



Legend

BBS/WWO survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)

Pipe route (supplied 20170405)

Greater Dublin Drainage

Breeding/winter bird survey

Page 2 of 18

	0 . L I	200 m	1
	Scale: 1:7,500	6A3	21
	Date: 06/04/2017	Job No: SEC7909	Rev: c
1	Drawn: CH	Checked DRAFT	Approved DRAFT
		29902 butors: Reproduced from the G	Orchence Survey Of Instand by

RPS Weather Sheet		eet	Wind \$	Speed Beauto	ort Mph	Direction	Rain/S	now		Cloud Cover		loud Height	Visibility		
Site		:00		Calm Light ai	0	>1 1-3	N NE	None Drizzle/			In eighths e.g. 3/8	ab	aight of cloud cove average	Poor (<1km) Moderate (1-3km)	0
Date		+11117		Light br Gentle	eeze 2	4-7 8-12	ESE	Light sh	the second se				viewshed of viewshed of viewshed	Good (>3km) 2	
Survey				Mod. br	eeze 4	13-18	S	Heavy r				-			
Observer		WHO		Fresh breeze 5 19-24 Strong breeze 6 25-31		19-24 25-31	SW W	Lying	Lying Snow	Frost		150-500m 1 >500m 2			
		Nich Veal		Mod. ga	ale 7	32-38	NW	None		_	None 0	Please be as accurate as possible, with			uith
Start Time		9:00		Fresh gale Strong gale		39-46 47-54		On site High ground	ound		Ground 1 All day 2	weather details, entering only one	ntering only one fig	Jure	
Finish Tin	ne	6:00		Whole Storm	gale 10			000000				not a range, e.g. WS - 5, not 5-6. Use notes for extra info.			
Sheet 1/	&[]	Maps atta	ched	Hurrica								E.g. WS - 5, gusting 6 [in notes].			
Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes(e	.g.	temperatu	ire)			
Hr 1	4	W	1	8/8	1	1	-	_	10%						
Hr 2	5	U	0	8/8	L	2									
Hr 3	5	SU	2	5/8	2	2	-								
Hr 4	4	SW	0	6/8	2	2	-		lic						
Hr 5	4	W	0	618	2	2	-		1						
Hr 6	4	SU	0	6/8	2	2									
Hr 7	4	SU	0	5/8	2	Z			12°C						
Hr 8	5	Sw	0	418	2	2									
Field Notes Maps at	-														
For office us Initial AND d		B- Logged	1	Databa	ise Enter	ed D	atabase '	Validate	d Gl	SE	intered		GIS Val	idated	_

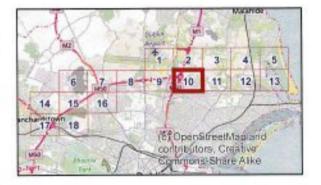


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10.5	

Surveyor N. V	ech	
Date: 14/1	1/17	
Start time:	End time:	
		_

8

\*Please attach weather sheet Notes:



Legend

BBS/WWO survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)

Pipe route (supplied 20170405)

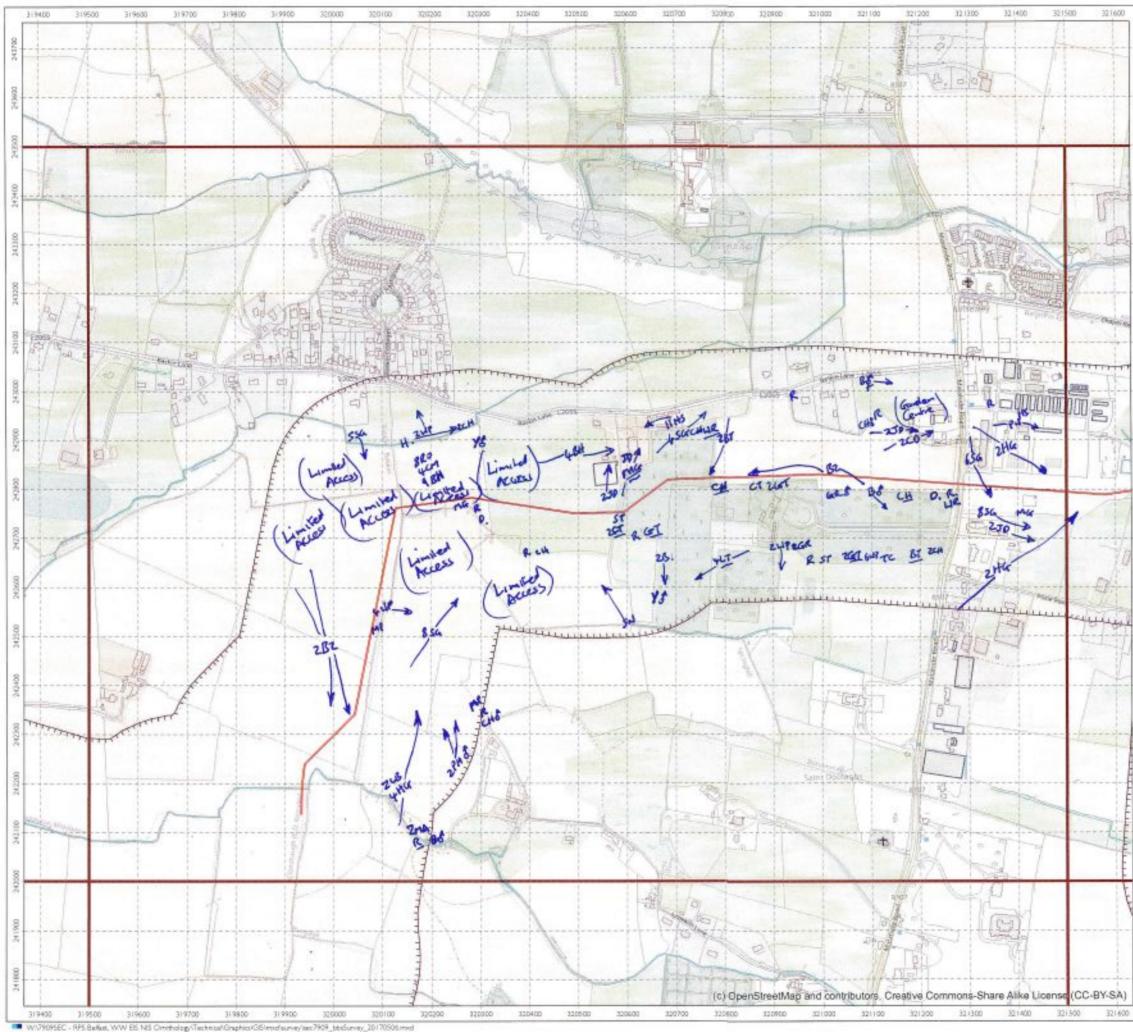
Greater Dublin Drainage

Breeding/winter bird survey

Page 10 of 18

0	200 m	4
Scale: 1:7,500	(@A3	**
Date: 06/04/2017	Job Na: SEC7909	Rev: c
Drawn: CH	Checked: DRAFT	Approved: DRAFT
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D		)(	21
LV.	г		21

Surveyor: N.C	n Veale	
Date: 14/11/2	קוב	
Start time:	End time:	

q

\*Please attach weather sheet Notes:



Legend

BBS/WWO survey boundary (250 m builter of route supplied 20170405 appended to previous boundary)

Pipe route (supplied 20170405)

Greater Dublin Drainage

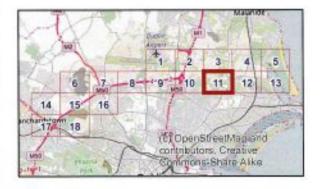
Breeding/winter bird survey

Page 3 of 18

0 L	200 m	1
Scale: 1	7,500 @A3	-
Date: 06/04/	2017 Job No: SEC7909	Rev: c
Drawn: CH	Checked: DRAFT	Approved: DRAFT
	d, EPSG 29902 ap contributors: Reproduced from th Government, License, No. 3-3-34	te Orchance Survey Of Instand by



RPS	10	
Surveyor: N. Vea		
Date: 14/11/1	7	
Start time:	End time:	



Legend

BBS/WWO survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)

Pipe route (supplied 20170405)

Greater Dublin Drainage

Breeding/winter bird survey

Page 11 of 18

0 LI	200 m	1
Scale: 1:7,500	@A3	~
Date: 06/04/2017	job No: SEC7909	Rev: c
Drawn: CH	Checked DRAFT	Approved DRAFT
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RPS	w	eather Sh	eet	Wind	Beaute		Direction	Rain/S			Cloud Cover	Cloud Height Height of cloud	Visibility		
Site G		600		500		Calm Light a		>1 1-3	N NE	None Drizzle/	Mist	0	In eighths e.g. 3/8	above average height of	Poor (<1km) ( Moderate (1-3km) 1
Date	2	4/4/17	7		breeze 3	4-7 8-12	E SE	Light showers Heavy showers		23		viewshed	Good (>3km) 2		
Survey	C	VUO		Mod. b Fresh t		13-18 19-24	S SW	Heavy r		4	Frost	<150m 0 150-500m 1			
Observer	K	Juli Ve	ab		breeze 6	25-31 32-38	w			_		>500m 2			
Start Time		8:50		Fresh	hgale 8 35		NW None On site	n site 1	1 Ground	Ground 1	Please be as acc	Please be as accurate as possible, with			
Finish Tin	ne 1	5:30		Strong Whole				High ground	bund	not a		not a range. e.g. \	details, entering only one figure, ge. e.g. WS - 5, not 5-6.		
Sheet 1/	100 C 100	Maps atta	ached	Storm Hurrica	11 ine 12							Use notes for extr E.g. WS - 5, gusti			
Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes(e	.g.	temperatur	e)			
Hr 1	5	W	0	3/8	2	2	-	-	200						
Hr 2	5	W	0	5/8	2	Z		_	1.1						
Hr 3	5	N	02	5/8	2	2	-		3.0						
Hr 4	4	W	1	618	2	2	-			_					
Hr 5	5	W	2	6/8	2	2	-		4°C						
Hr 6	5	W	2	6/8	2	2	-	-							
Hr 7	5	W	0	7/8	2	2	-		4°C						
Hr 8 Field Notes	5	L	0	5/8	2	2	-								

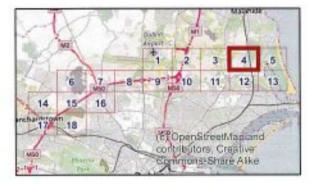


RPS	

Notes:

Surveyor. N. Veale						
Date: 24/	11/2017					
Start time:	End time:					

11



Legend

BBS/WWO survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)

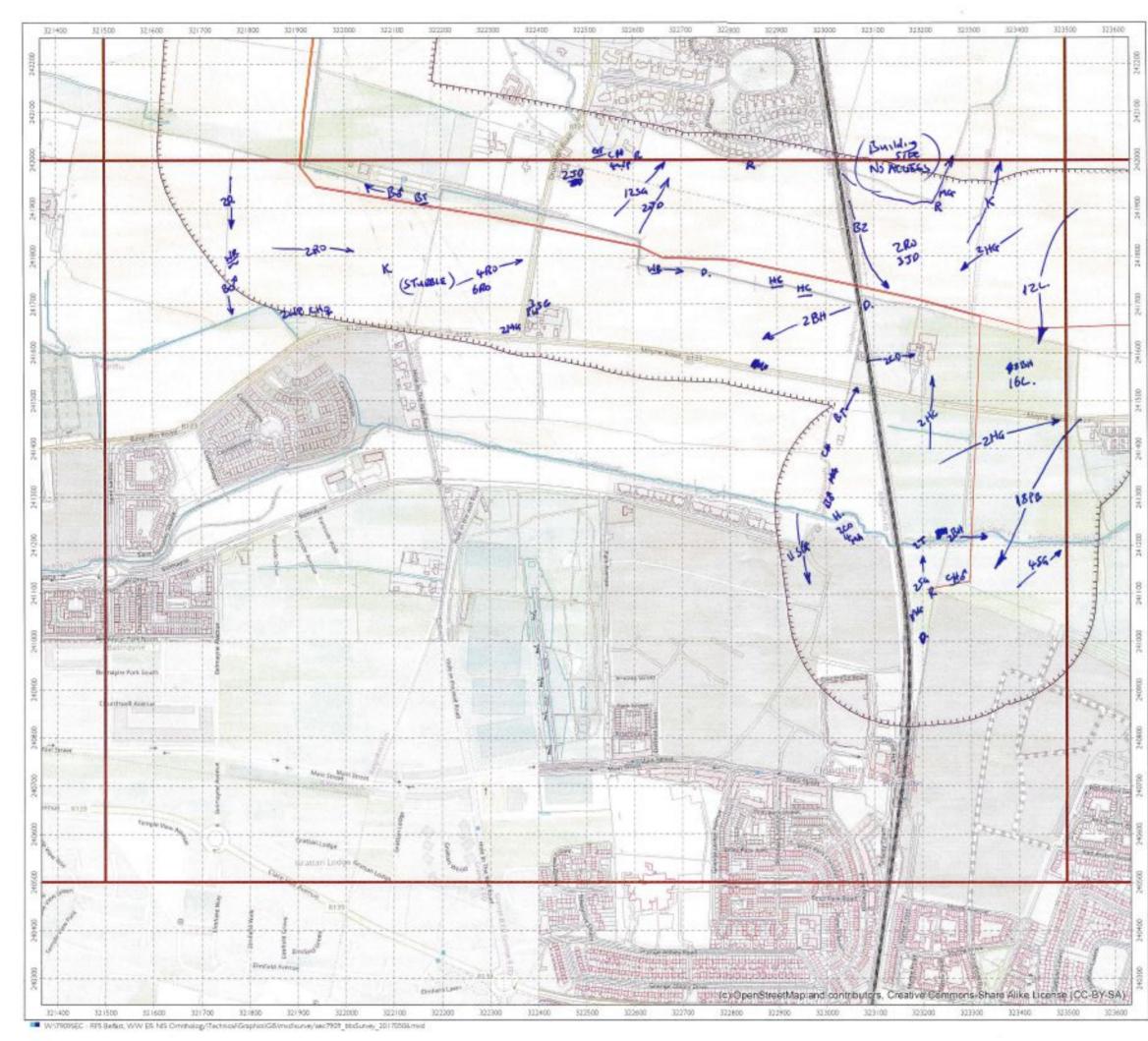
Pipe route (supplied 20170405)

Greater Dublin Drainage

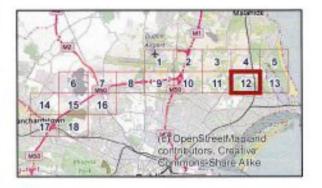
Breeding/winter bird survey

Page 4 of 18

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RPS	12
Surveyor: N	leave
Date: 24+	28/11/2017
Start time:	End time:



Legend



BBS/WWO survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)

Pipe route (supplied 20170405)

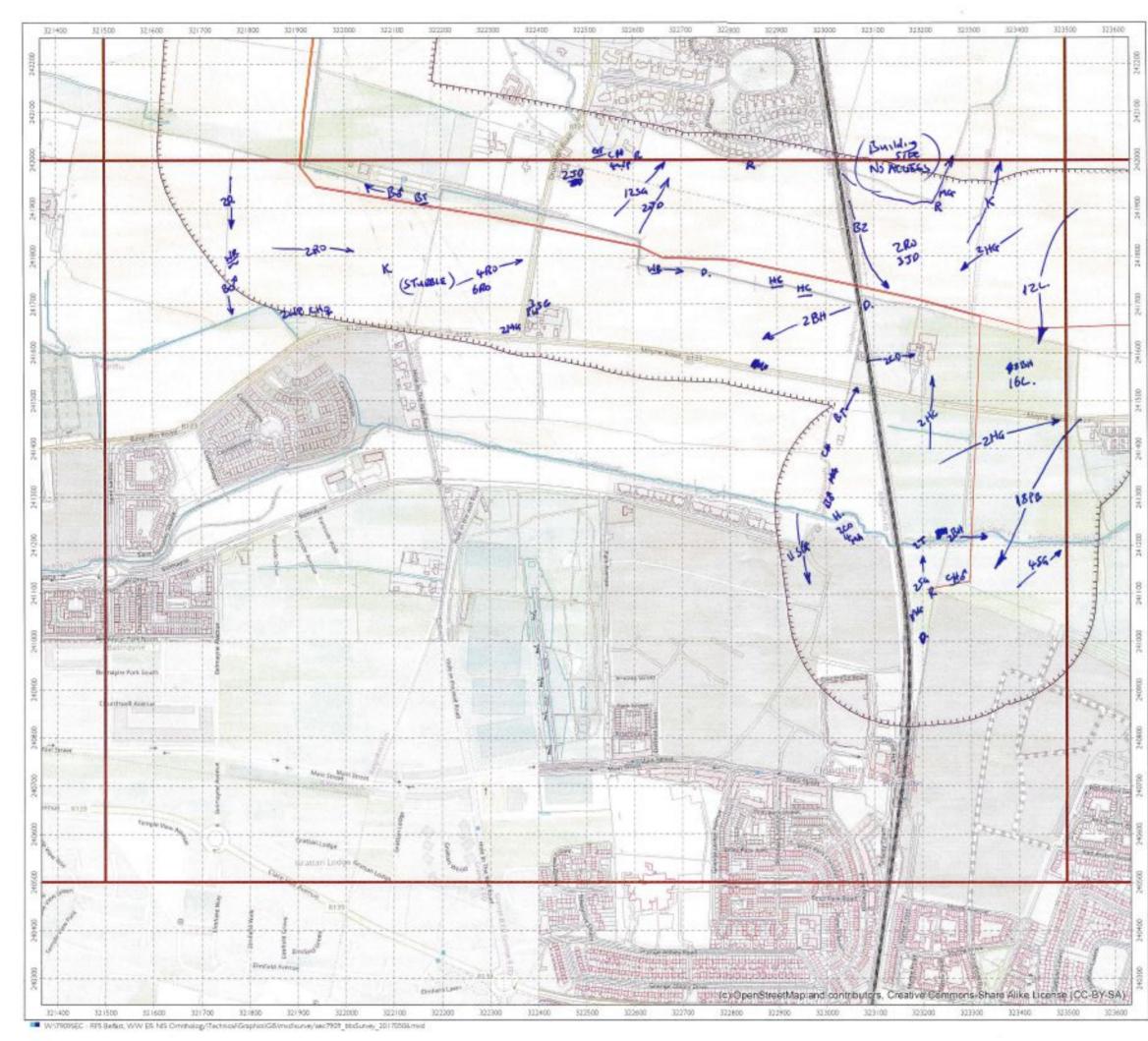
Greater Dublin Drainage

Breeding/winter bird survey

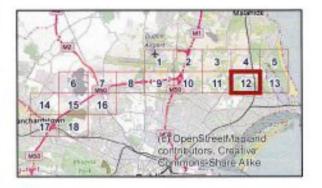
Page 12 of 18

0 Ll Scale: 17,500	200 m	~
Scale: 19,500	(LAIG)	100.00
Date: 06/04/2017	Jab No: SEC7909	Rev: c
Drawn: CH	Checked: DRAFT	Approved: DRAFT
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RPS Site Date Survey Observer	G 24 1	hather Sheet		Wind S Calm Light ai Light br Gentle Mod. br Fresh b Strong	Beauth 0 r 1 teeze 2 breeze 3 reeze 4 treeze 5 breeze 6	>1 1-3 4-7 8-12 13-18 19-24 25-31	Direction N E SE S SW W NW	Rain/S None Drizzle/I Light sh Heavy s Heavy r Lying S	0 Mist 1 owers 2 howers 3 ain 4 Snow	Frost	Cloud He Height of c above ave height of viewshed <150m 150-500m >500m	cloud erage 0	Visibility Poor (<1km) Moderate (1-3km) Good (>3km)	0 1 2			
Start Time				Mod. gale 7 32-38 Fresh gale 8 39-46 Strong gale 9 47-54			NWV	On site High gro	0 1 2 und	Ground 1	Please be	Please be as accurate as possible, with weather details, entering only one figure,					
Finish Tir	ne							Strong gale 9 47-54 Whole gale 10 55-63 Storm 11 64-72			Lugir git	2010	not a range. e.g. WS - 5, no Use notes for extra info.			/S - 5, not 5-6.	it 5-6.
Sheet 1/	&[]	Maps atta	ched	Hurrica							E.g. WS -	5, gustin	g 6 [in notes].				
Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes(e.g	g. temperatu	ire)						
Hr 1	5	NW	0	318	2	2	1	-	Ooc								
Hr 2	4	NW	0	3/8	2	2	l –	-	100								
Hr 3	4	W	0	418	2	2	0	-	100								
Hr 4	5	U I	0	3/8	2	2	0	-	200			1000					
Hr 5	5	NW	0	2/8	2	2	0	-	3°	Euste	upto	for	e 7				
Hr 6	5	NU	0	4/8	2	2	0	-	5°C								
Hr 7	5	NJ	9	3/8	2	2	0	-	soc					252			
Hr 8	5	NW	0	4/8	2	2	0	-	Soc								
Field Notes Maps at																	
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RPS	12
Surveyor: N	leave
Date: 24+	28/11/2017
Start time:	End time:



Legend



BBS/WWO survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)

Pipe route (supplied 20170405)

Greater Dublin Drainage

Breeding/winter bird survey

Page 12 of 18

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Scale: 19,500	(LAIG)	100.00
Date: 06/04/2017	Jab No: SEC7909	Rev: c
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RPS	13
Surveyor: Nick	Ved
Date: 28	111)2011
Start time:	End time:



Legend

BBS/WWO survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)

Pipe route (supplied 20170405)

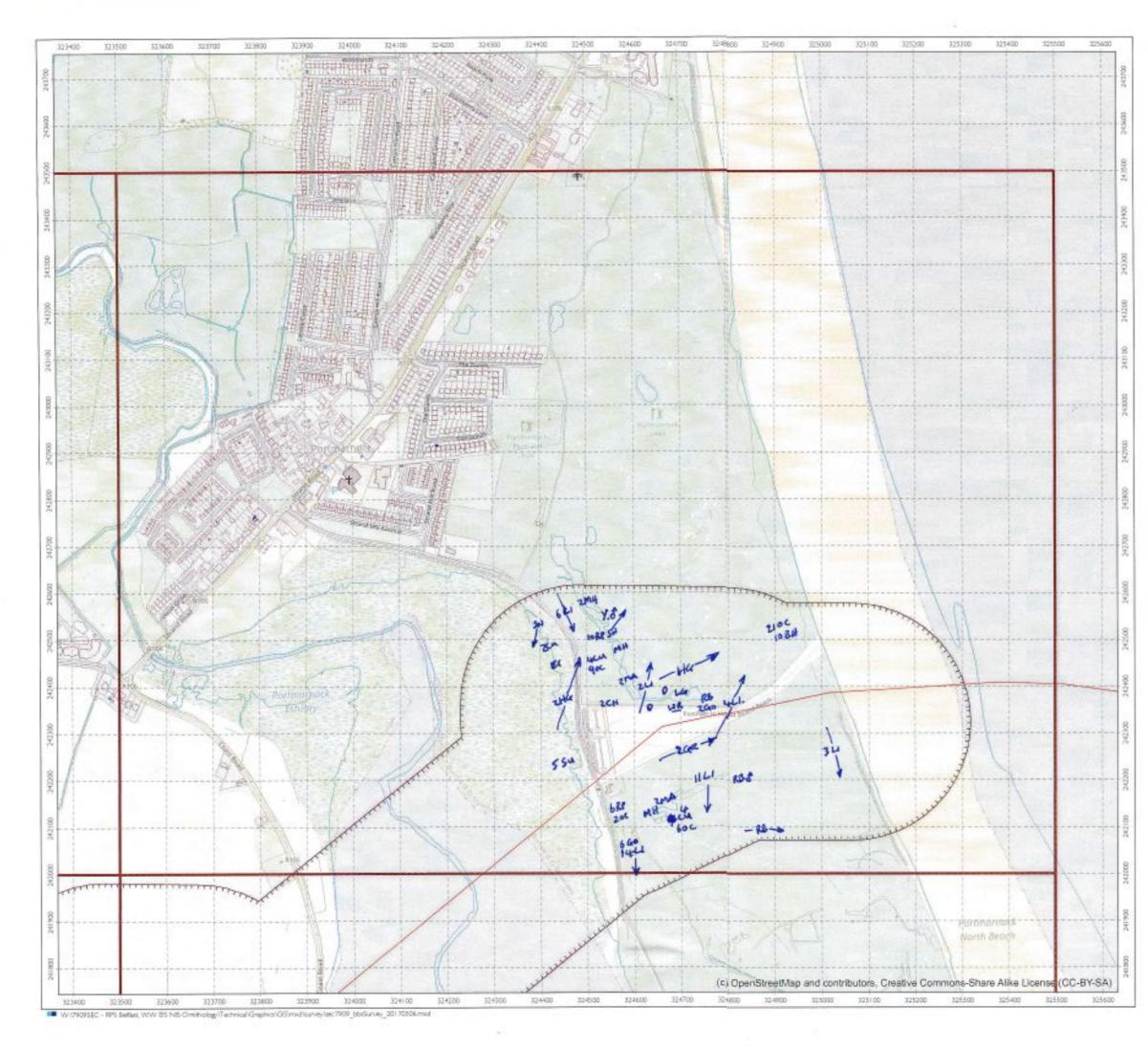
Greater Dublin Drainage

Breeding/winter bird survey

Page 13 of 18

Scale: 1:7,500	(BA3	**
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RPS	



Surveyor: N. Ve	inte	-
Date: 28/1	1/2017	
Start time:	End time:	



Legend

BBS/WWO survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)

Pipe route (supplied 20170405)

Greater Dublin Drainage

Breeding/winter bird survey

Page 5 of 18

0	200 m	1
Scale: 1:7,500	0.@A3	
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## GDD Oral Hearing Response to Inspector's Questions

## APPENDIX 6 SUMMER 2015 (APRIL AND JUNE)

The data from the April and June 2015 breeding walkover surveys were mapped, and are enclosed below (along with the associated survey recording sheets).

RRS	W	eather Sh	eet	Wind	Speed		Direction	Rain/S	now	Cloud Cover	Cloud Height	Visibility
Site GDP Date IS/04/2015 Survey Breeding Birds Observer Nick Vecle Start Time 07.00 Finish Time 1300		Light air 1 1-3 N Light breeze 2 4-7 E Gentle breeze 3 8-12 Si Mod. breeze 4 13-18 S Fresh breeze 5 19-24 Si Strong breeze 6 25-31 W			N NE E SE S SW W	None Drizzle/ Light sh Heavy s Heavy r Lying s	owers 2 howers 3 ain 4		Height of cloud above average height of viewshed <150m 0 150-500m 1 >500m 2	Poor (<1km) 0 Moderate (1-3km) 1 Good (>3km) 2		
			Mod. gale         7         32-38         NV           Fresh gale         8         39-46         39-46           Strong gale         9         47-54         47-54           Whole gale         10         55-63         55           Storm         11         64-72         56		NW None 0 On site 1 High ground 2		1 Ground 1	Please be as accurate as possible, with weather details, entering only one figure, not a range, e.g. WS - 5, not 5-6. Use notes for extra info.				
Sheet 1/	&[]	Maps atta	ched	Hurrica		· · · · · · · · · · · · · · · · · · ·					E.g. WS - 5, gustin	ng 6 [in notes].
Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes(e.g	. temperatur	re)	
Hr 1 07:00	2	SW	0	6/8	2	2	0	0	6°C			
Hr 205:00	3	SU	0	6/8	2	2	0	0	8°C			
Hr 3 Chao	3	W	1	8/8	2	1	0	0	8°C			
Hr 4 105.00	12	W	0	8/8	2	2	0	0	9°C	A lines		
Hr 5)]:00	3	W	0	8/8	2	2	0	0	11°C			
Hr 6 12:00	2	W	2	8/8	2	2	0	0	11°C			
Hr 7												
Hr 8												
Field Notes Maps att												
Initial AND da	e only. NB- ate <u>ALL</u>	For office use only. NB- Initial AND date ALL boxes.			se Enter	ed Da	atabase V	/alidated	GIST	Entered	GIS Vali	dated



RPS

Surveyor Nick Vecle 12015 Date: End time: 13:00 Start time: 07:00 \*Please attach weather sheet Notes: Transact vonte >1 1 \* Dipper Nest Active (under bridge) 2 the Digger Nest morise (under bonding) 8 3 \* Kinggesher Nest (Aduit seen going in + and ) 1-2-2-4 50 6 7 8 9 10 11 12 13 14 15 16 17-18 (c) OpenStreetMap and contributors, Creative Commons-Share Alike Legend

BBS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage

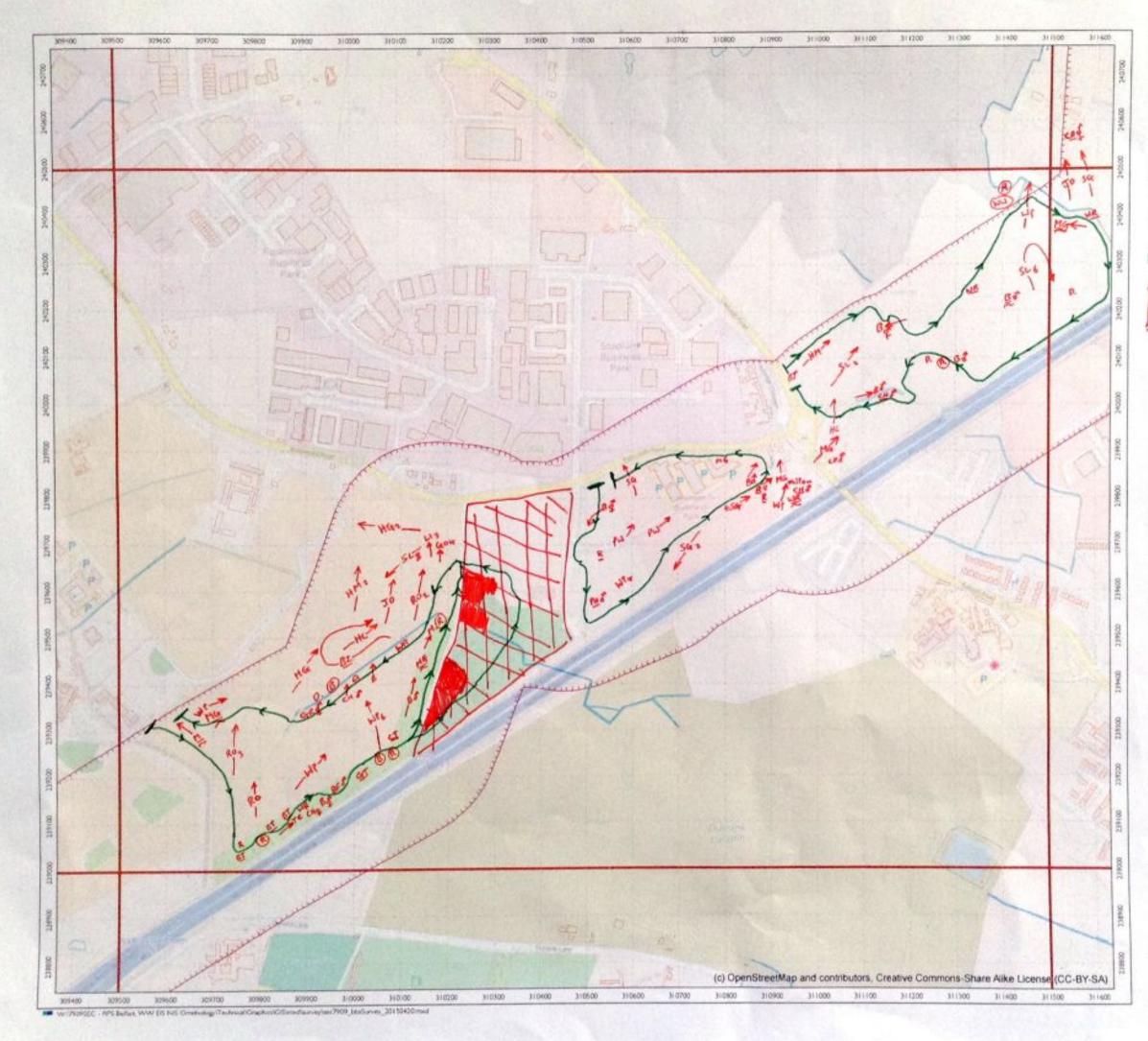
Breeding bird survey

Page 17 of 18

Drawn: OH	Checked DRAFT	Approved DRAFT
Date: 20/04/2015		Rev: a
Scale: 17,500	(A)	-
L	200 m	1

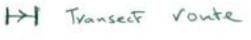
magroup.znet

RPS		eather Sh	eet	Wind Speed Beaufort Mph Calm 0 >1			Direction Rain/Snow		0	Cloud Cover In eighths e.g. 3/8	Cloud Height Height of cloud above average	Visibility Poor (<1km) 0 Moderate (1-3km) 1
Date16042015SurveyBreeding BirdsObserverN. VealeStart Time06:50Finish Time12:50Sheet 1/ & [] Maps attached		Light air 1 1-3 Light breeze 2 4-7 Gentle breeze 3 8-12 Mod. breeze 4 13-18 Fresh breeze 5 19-24			NE         Drizzle/Mist           E         Light showers           SE         Heavy showers           S         Heavy rain           SW         Lying Snow		owers 2 howers 3 ain 4	2 3	height of viewshed <150m 0 150-500m 1 >500m 2	Good (>3km) 2		
		ched	Strong breeze         6         25-31           Mod. gale         7         32-38           Fresh gale         8         39-46           Strong gale         9         47-54           Whole gale         10         55-63           Storm         11         64-72           Hurricane         12         73+		On site High ground		0 1 sund 2	1 Ground 1	>500m 2 Please be as accurate as possible weather details, entering only one not a range, e.g. WS - 5, not 5-6. Use notes for extra info. E.g. WS - 5, gusting 6 [in notes].			
Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow		. temperatu	re)	
Hr 1 0650	2	E	0	718	2	2	0	0	4° c			
Hr 20750	3		0	718	2	2	0	0	7°C			
Hr 308.50	and the second se	LUL	0	618	2	22	0	0	T°C			
Hr 409:50	3	E	0	5/8	2	2	0	8	9°C	(Constant)		A CONTRACTOR
Hr 510.50	3	E	0	518	2	2	0	0	10°C			
Hr 6 11:50	4	E	0	5/8	2	2	0	0	10°C		No. 1 Land	
Hr 7 12.50		1		-	11.2							
Hr 8									Press Press	COLL-		No. of Contraction
Field Notes: Maps att												
For office use Initial AND da	e only. NB- ite <u>ALL</u>	Logged		Databa	se Enter	ed Da	atabase V	alidated	GIST	Entered	GIS Val	idated



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R	Р	5	l
		-	,

Surveyor Nick Veck Date: 16 04/2015 Start time: 🥮 06:50 End time: 12:50



No Access (Traveler Holding site)

1-12 24 4 53 7-8-1-9 10 11 12 13 (c) OpenStreetMap and contributors, Creative Commons-Share Alike

## Legend

BBS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage

Breeding bird survey

Page 15 of 18

0	200 m	1
Scale 17.	500 @A3	
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	EPSG 29902 contributors Reproduced hors the	Orginance Survey Of Invited In

rpagroup.com



RPS
Surveyor Nick Vecle Date: 23/04/2015
Date: 23/04/2015
*Please attach weather sheet Notes
Transect Routes
A Providence
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contributors. Creative Commons-Share Alike
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Legend
BBS survey boundary (250 m buffer,
supplied 20140420)
Greater Dublin Drainage
Breeding bird survey
Page 7 of 18
0 200 m
Scale 17,500 (0A) "I Date 20/04/2015 Job No. SEC7909 Rev. a
Date: 20/04/2015 Job No: SEC/90/ Nev A Drawn: CH Checked: DRAFT Approved: DRAFT
and National Oriol. (PSG 2000) # Opendeworklap constitutions, Reproduced from the Ordnance Sumey Of Initian Its Permation of the Openment License No. 3-3-34

RPS		eather Sh	eet	Wind :	Speed Beauf 0	ort Mph	Direction	Rain/S	now 0	Cloud Cover	Cloud Height Height of cloud above average	Visibility Poor (<1km) 0
Site		DD		Light a	r 1	1-3	NE	Drizzle/I Light sh		e.g. 3/8	height of	Moderate (1-3km) 1 Good (>3km) 2
Date	2	3/04/2	015	Gentle	breeze 3	8-12	SE	Heavy s	howers 3		<150m 0	
Survey	B	rocaling P	Sirds	Mod. b Fresh t		13-18 19-24	S SW	Heavy n		Frost	150-500m 1	
Observer	N	ick Ve	de	Strong Mod. g	breeze 6	25-31 32-38	W NW	None	0	None 0	>500m 2	
Start Time		6:30		Fresh	pale 8			On site	1	Ground 1	weather details, er	rate as possible, with itering only one figure
Finish Tir		2:30		Strong Whole	gale 1	0 55-63		High gro	ound 2	All day 2	not a range, e.g. V Use notes for extra	VS - 5, not 5-6.
Sheet 1/		Maps atta	ched	Storm	1 ne 1						E.g. WS - 5, gustin	
Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes(e.g	. temperatur	e)	
Hr 1 06:30	0	/	O	0/8	2	2	0	0	8c			
Hr 207.30	0	-	0	0/8	2	2	0	0	10°C			
Hr 3 08 5	1	SE	0	0/8	2	2	0	0	13°C			
Hr 401:30	1	SE	D	48	2	2	0	0	16°C	11025		
Hr 510.30	1	SE	0	1/8	2	2	0	0	11°С			
Hr 611:30	1	SE	0	1/8	2	2	0	0	17°C			
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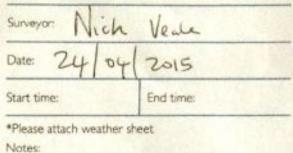
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BBS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage

Breeding bird survey

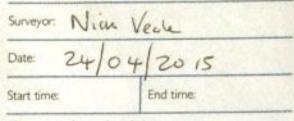
Page 3 of 18

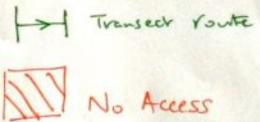
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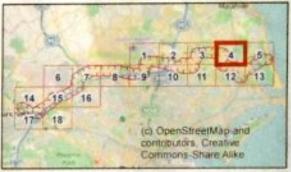
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BBS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage

Breeding bird survey

Page 4 of 18

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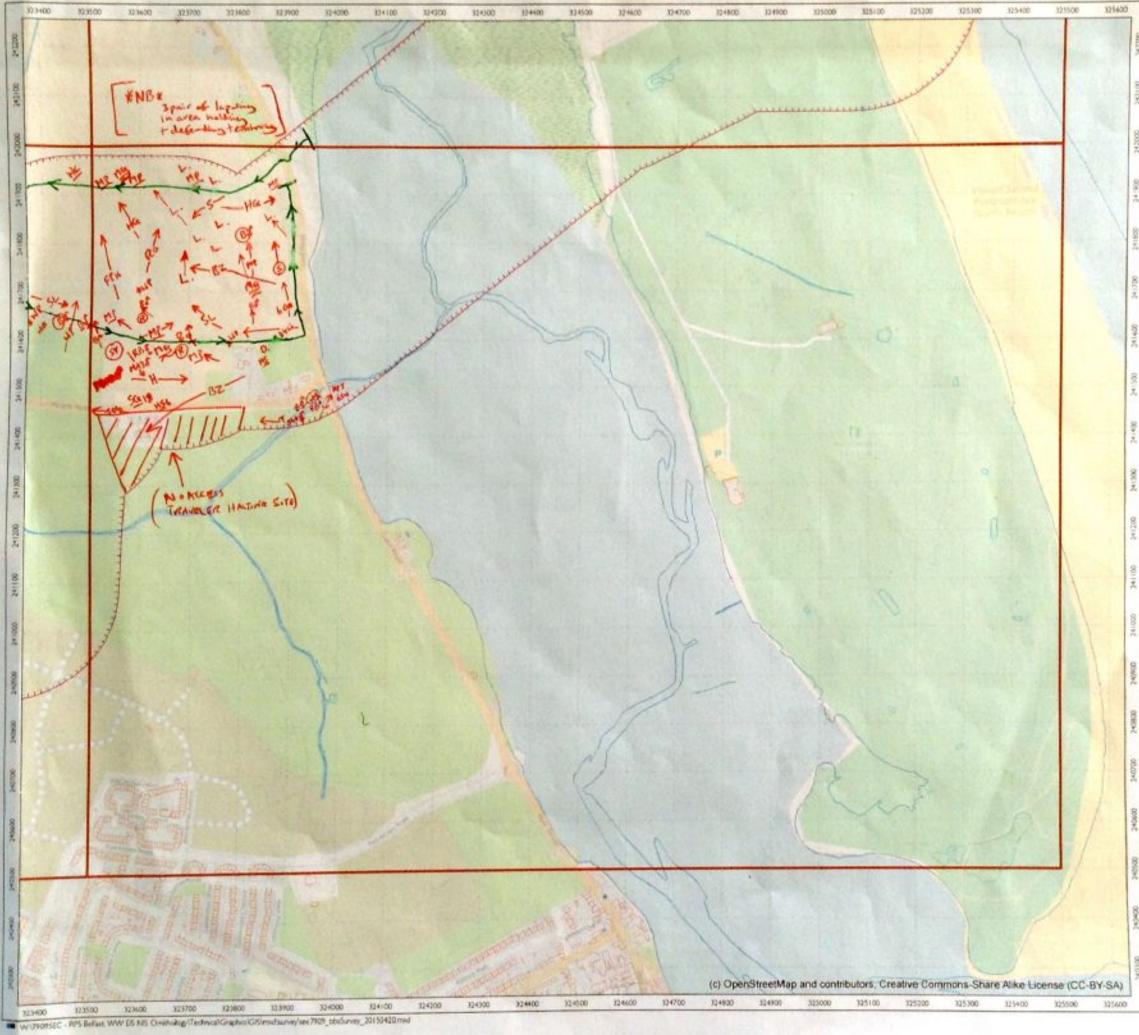
Greater Dublin Drainage

Breeding bird survey

Page 5 of 18

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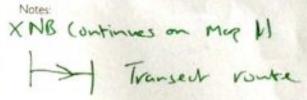
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Surveyor: N ick Vede 28/04/2015 Date: Start time: 06:25 End time: 12:25





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BBS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage

Breeding bird survey

Page 10 of 18

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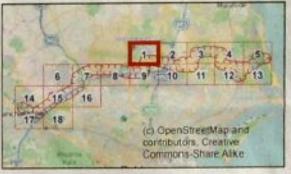
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RPS surveyor Nich Vede Date 28/04/2015 Start time: 06:25 End time: 12:25 \*Please attach weather sheet Notes: XNB Continued from Map 10 F>1 Transect Voute 6 7 8 9 10 11 12 13 14 15 16 17. 18 (c) OpenStreetMap and contributors, Creative Commons-Share Alike Legend BBS survey boundary (250 m buffer. supplied 20140420) Greater Dublin Drainage Breeding bird survey Page 11 of 18 200 m 1 Scale: 17,500 @A3 Date: 20/04/2015 Job No: SEC7909 Rev: a Drawn, CH Checked DRAFT Approved DRAFT Insh Netional Grid. EPSC 19902 © Opendementing constructions Reproduced from the Orchance Survey Of Instand by Permission of the Covernment License Net 3-5-34 rpsgroup.com





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Date	28/04/2	2015			
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Legend

BBS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage

Breeding bird survey

Page | of 18

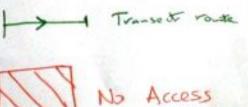
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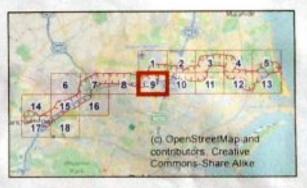
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Surveyor N. VEALE Date: 28/04/2015 End time: 12:25 Start time: 06:25





Legend

BBS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage

Breeding bird survey

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SURVEYOR N. VEALE Date: 28/04/2015 End time: 12:25 Start time: 06:25 \*Please attach weather sheet Notes: XNBX Transets Cross Maps 1+2 6 7 8 9 10 11 12 13 14 18 16 17 18 (c) OpenStreetMap and contributors, Creative. Commons-Share Alike Legend BBS survey boundary (250 m buffer, supplied 20140420) Greater Dublin Drainage Breeding bird survey Page 2 of 18 200 m

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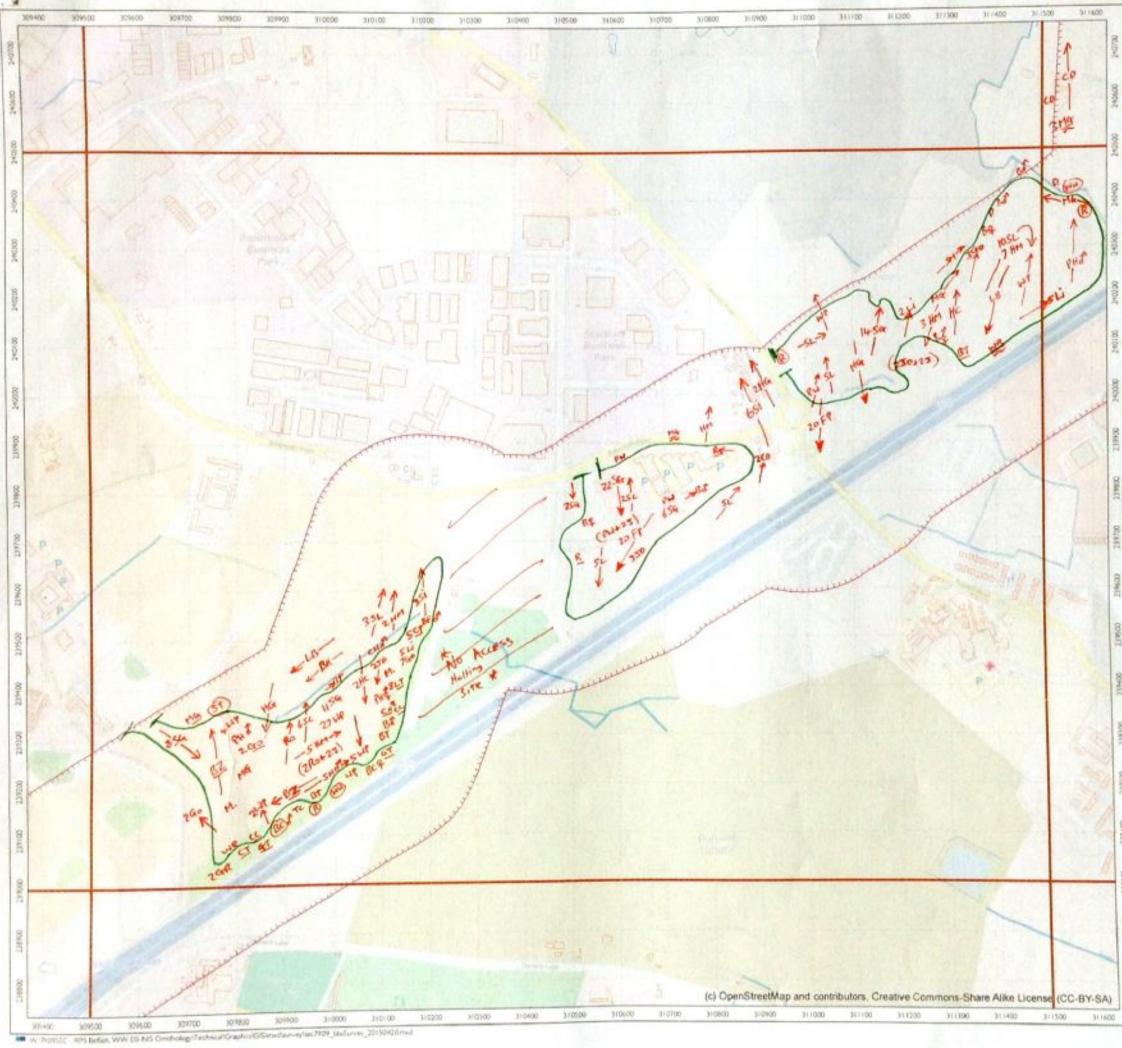


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Greater Dublin Drainage Breeding bird survey Page 17 of 18 0 20 200 m Scale: 1.7500 @A3 Date: 20/04/2015 job No: SEC7909 Rev: a Drawn: OH Checked: DRAFT Approved DRAFT

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Surveyor Nick Veck Date: 03/06/2015 Start time: 05:4-5 End time: 11:4-5

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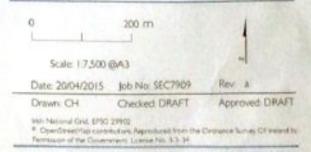
Legend

BBS survey boundary (250 m buffer, supplied 20140420)

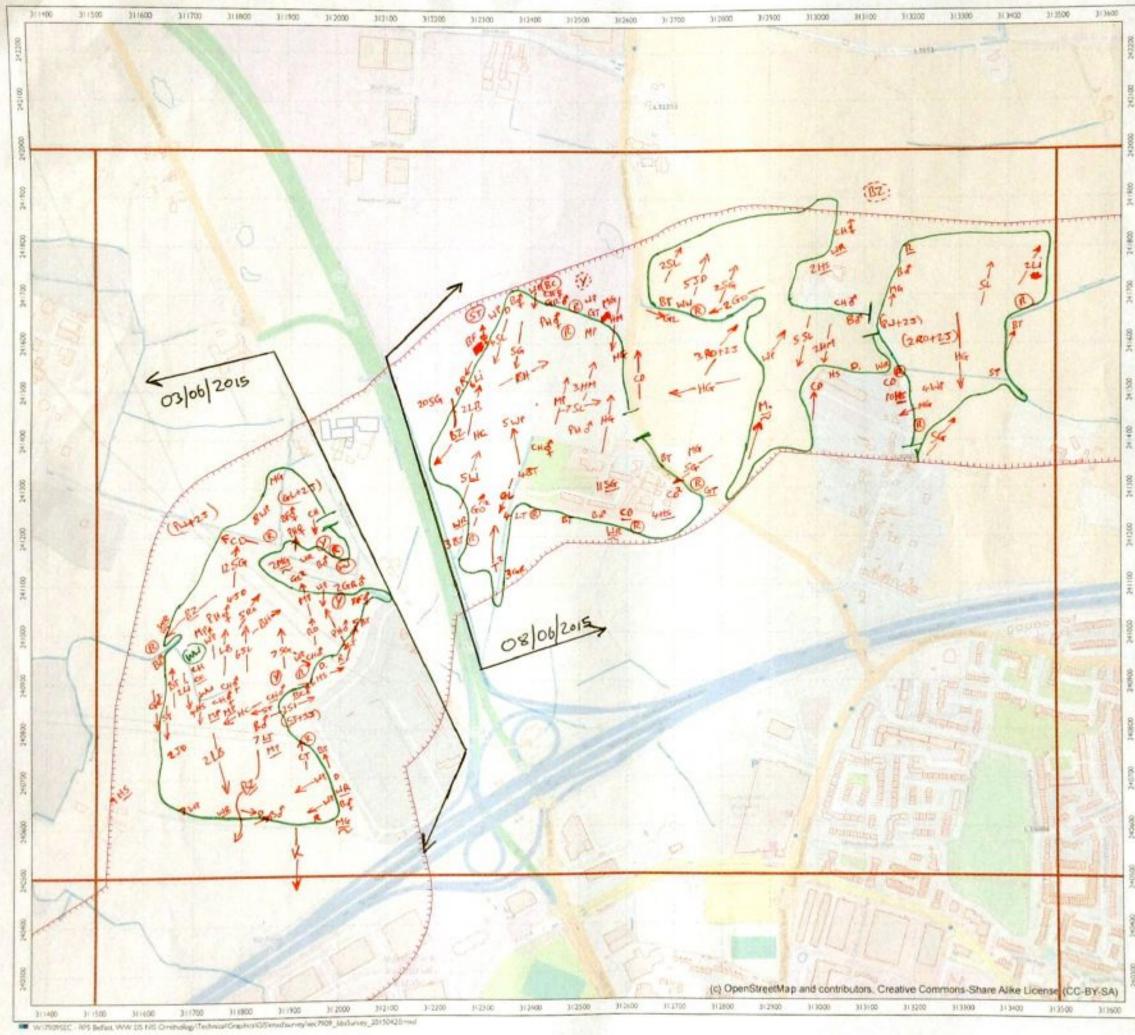
Greater Dublin Drainage

Breeding bird survey

Page 15 of 18



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Surveyor: N. Veale Date: 03/06/2015+08	l. Jane
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BBS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage

Breeding bird survey

Page 7 of 18

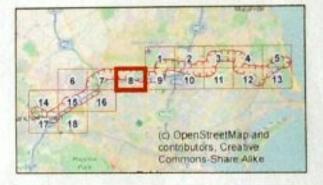
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RPS Surveyor: Nick Vede Date: 08/06/2015 Start time: 05:30 End time: 11:30

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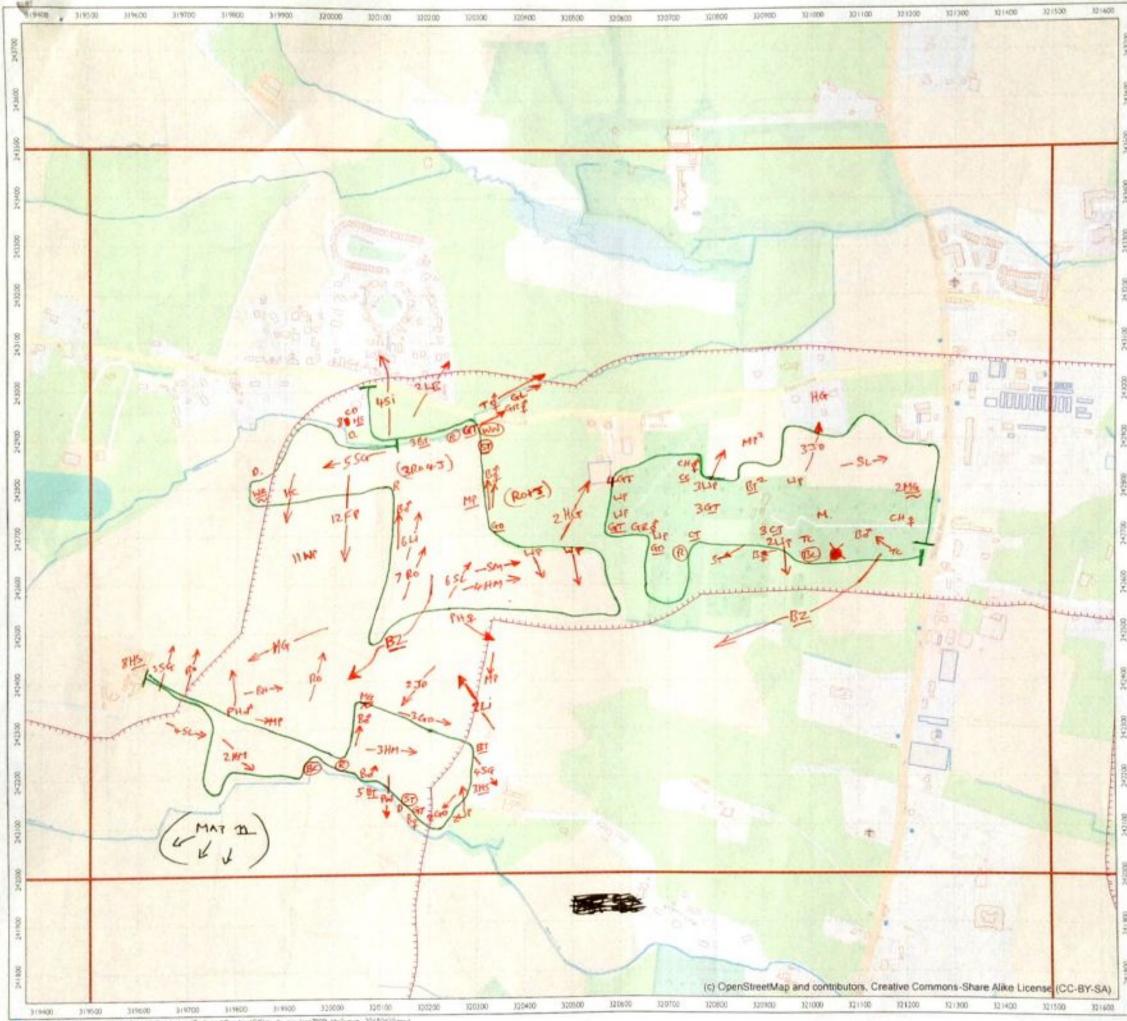
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BBS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage Breeding bird survey Page 8 of 18

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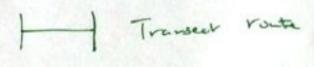
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Surveyor:	Nich	Vecle
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\*Please attach weather sheet Notes:





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BBS survey boundary (250 m buffer, supplied 20140420)

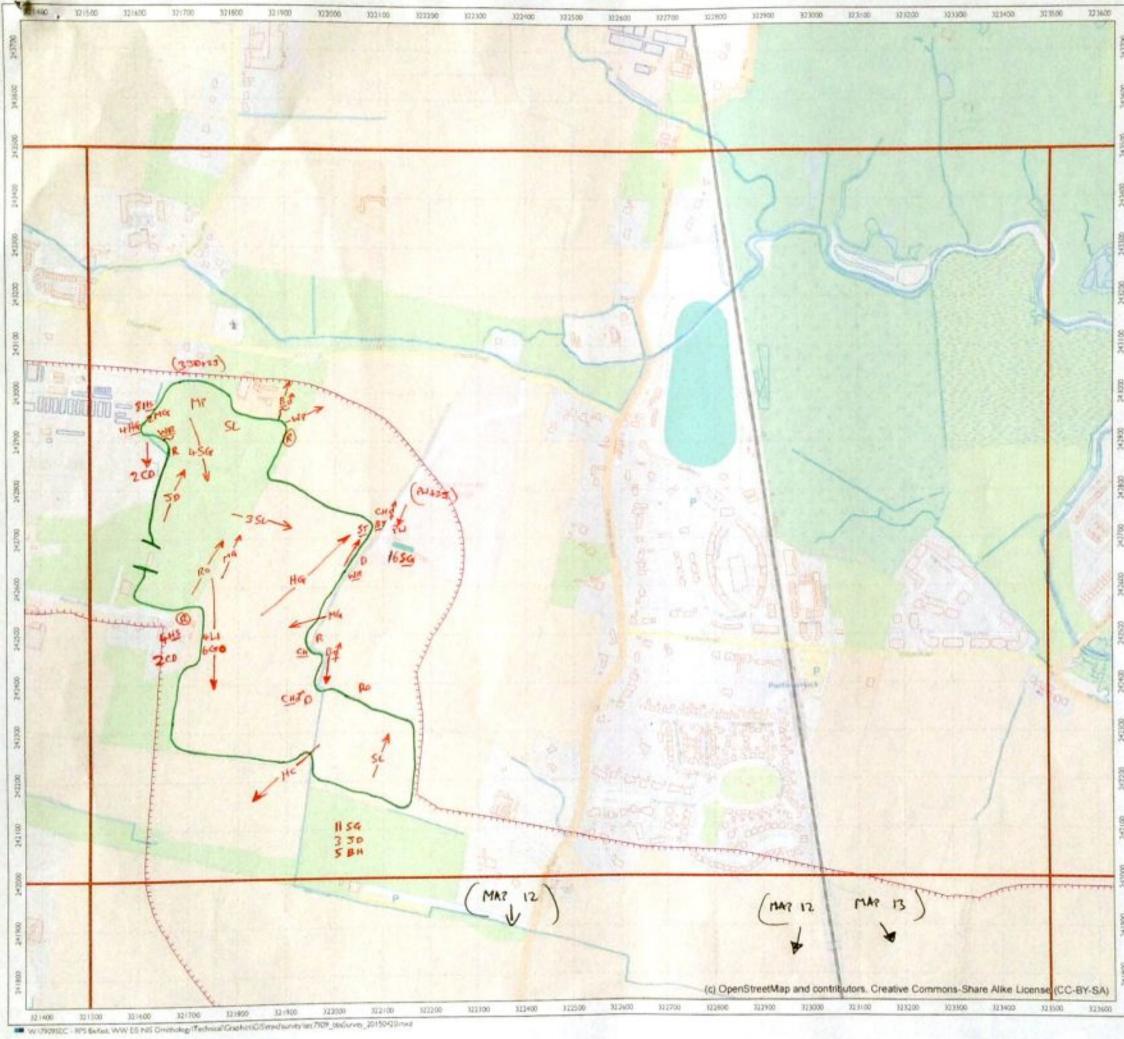
Greater Dublin Drainage

Breeding bird survey

Page 3 of 18

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BBS survey boundary (250 m buffer. supplied 20140420)

Greater Dublin Drainage

Breeding bird survey

Page 4 of 18

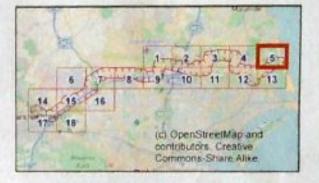
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BBS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage

Breeding bird survey

Page 5 of 18

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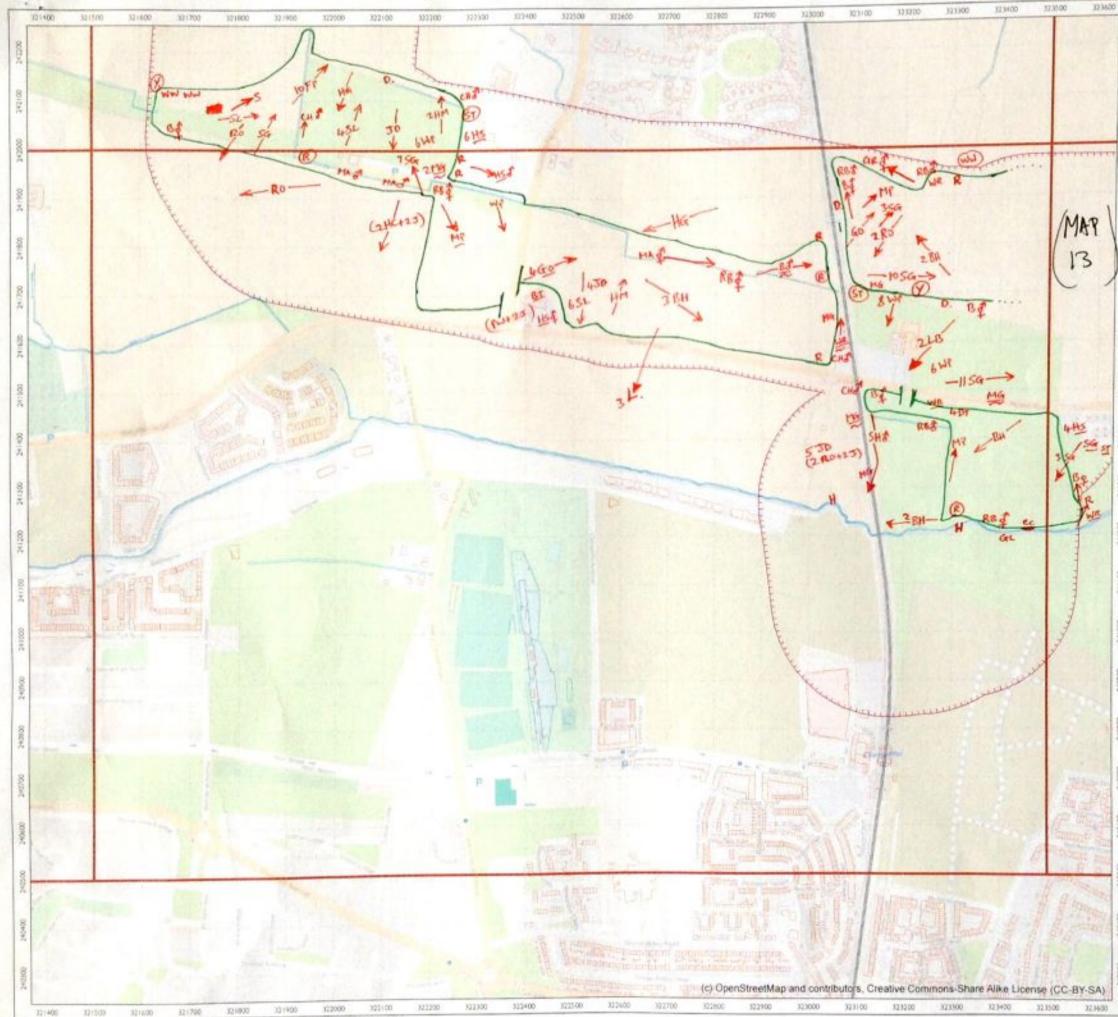
Greater Dublin Drainage

Breeding bird survey

Page 13 of 18

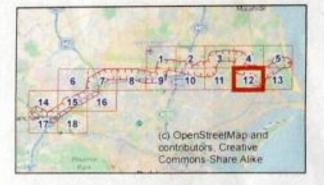
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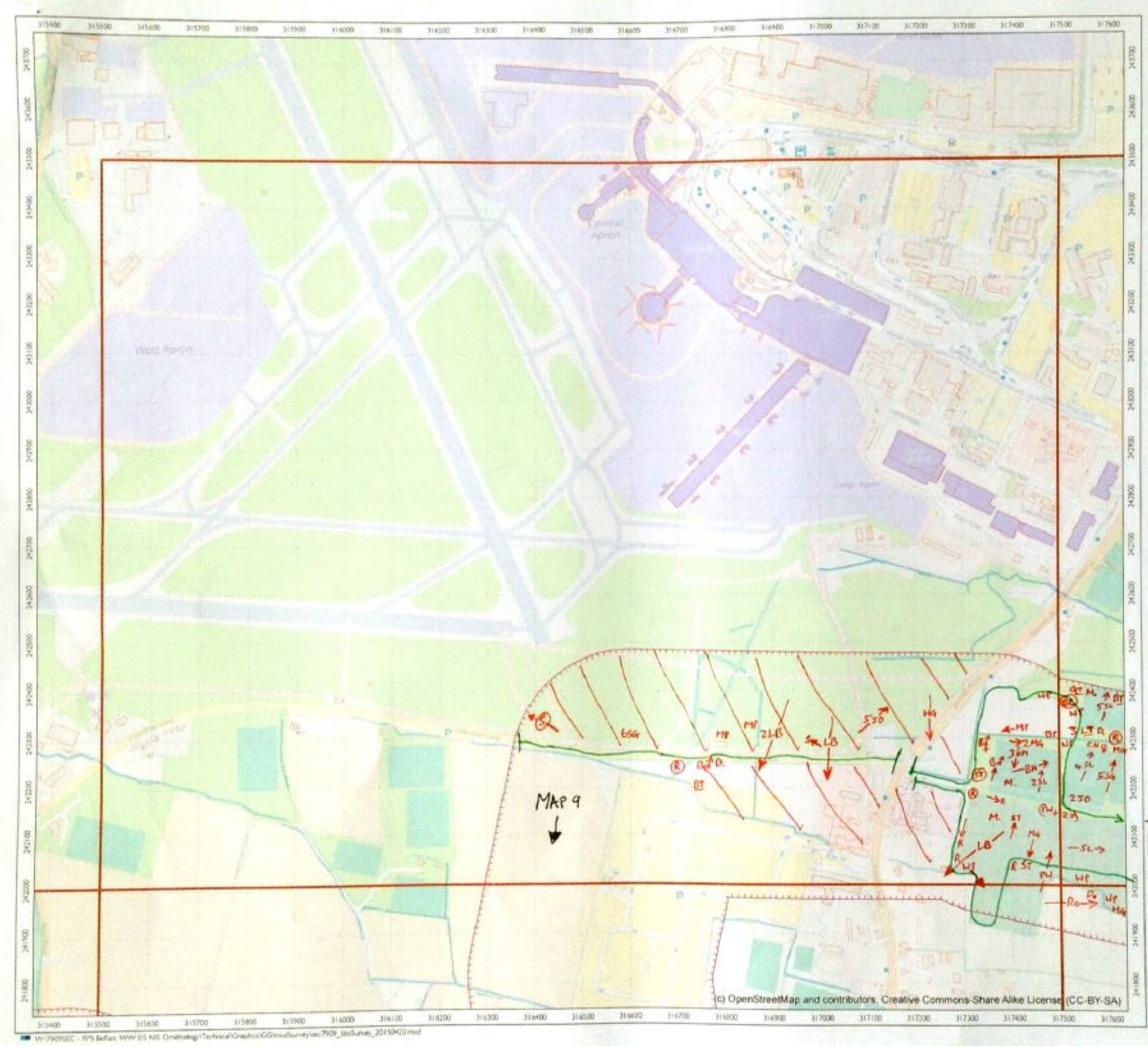
Greater Dublin Drainage

Breeding bird survey

Page 12 of 18

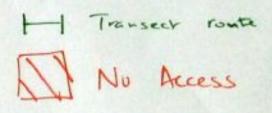
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Surveyor Nick Veale 12/06/2015 Date: Start time: US:40 End time: 11:40 \*Please attach weather sheet Notes:



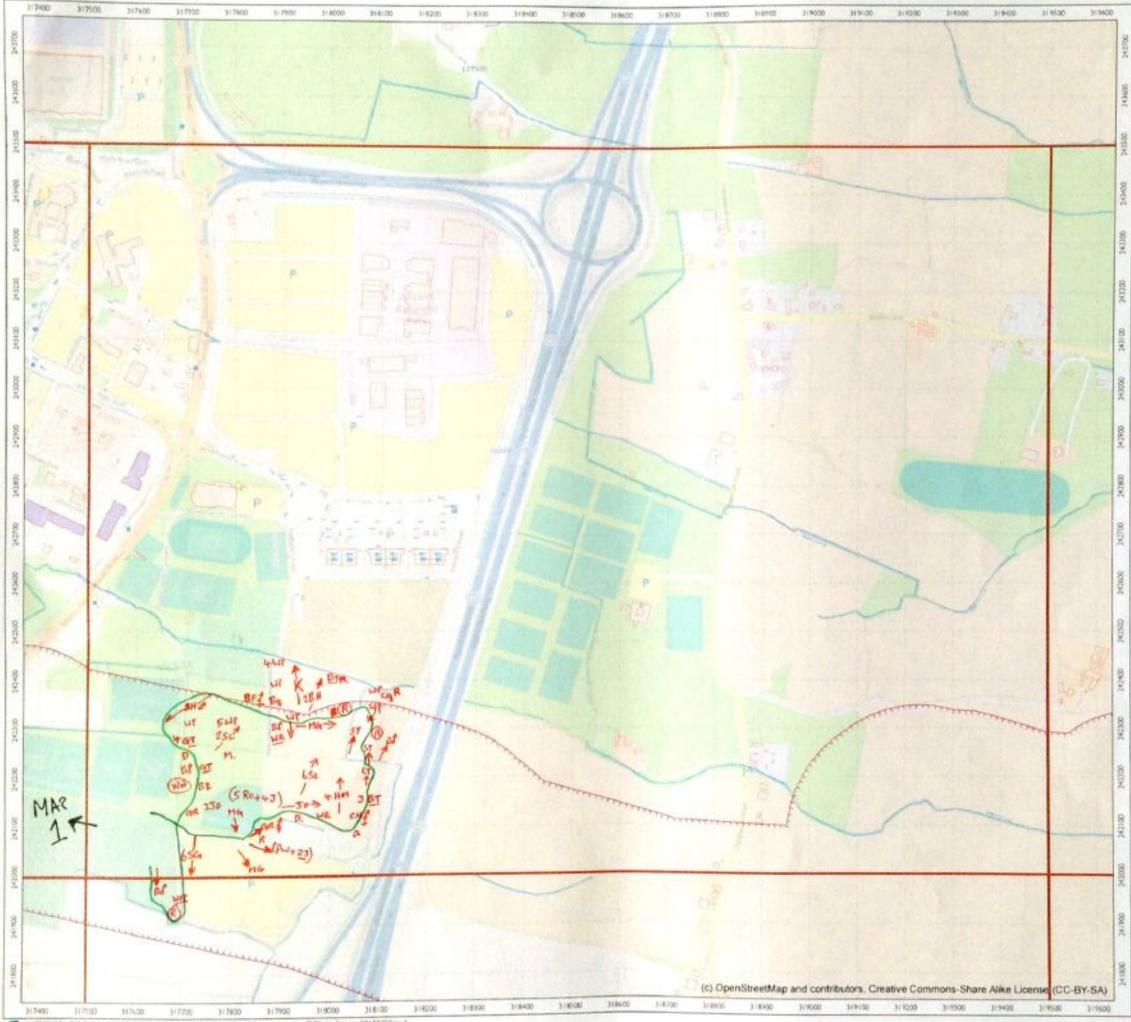


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Greater Dublin Drainage Breeding bird survey Page | of 18 3 200 m 0 Scale: 17500 (8A3 Date: 20/04/2015 Job No: SEC7909 Rev: a Drawn CH Checked DRAFT Approved DRAFT Insh National Grid, EPSG 20102 \* OpenDreteChap contributing Reproduced from the Optimized Scruey OF related by Permission of the Optimizer License No. 3-3-34

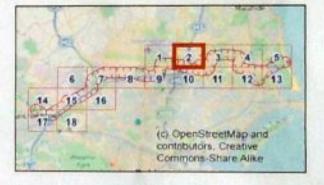
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BBS survey boundary (250 m buffer, supplied 20140420)

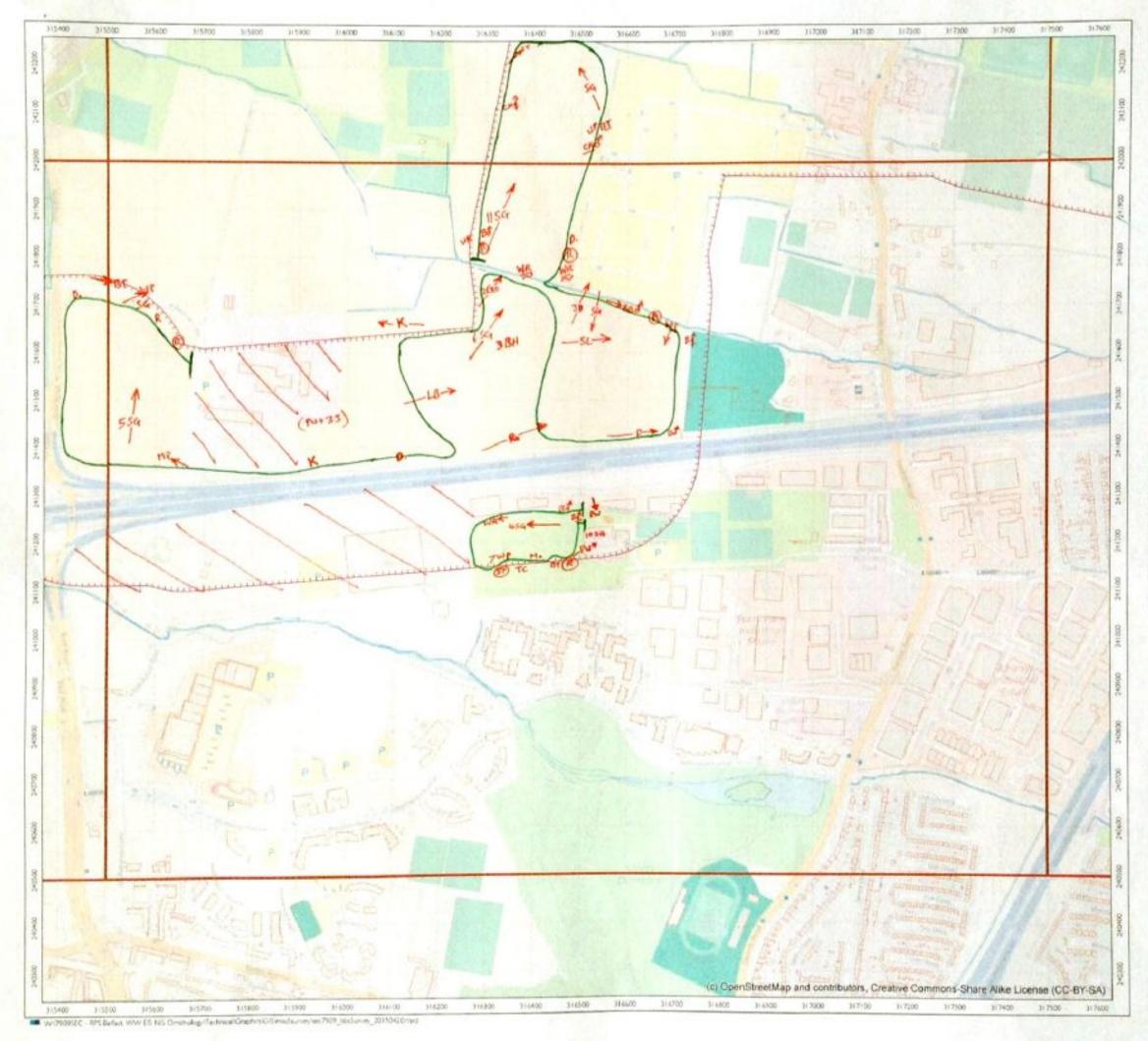
Greater Dublin Drainage

Breeding bird survey

Page 2 of 18

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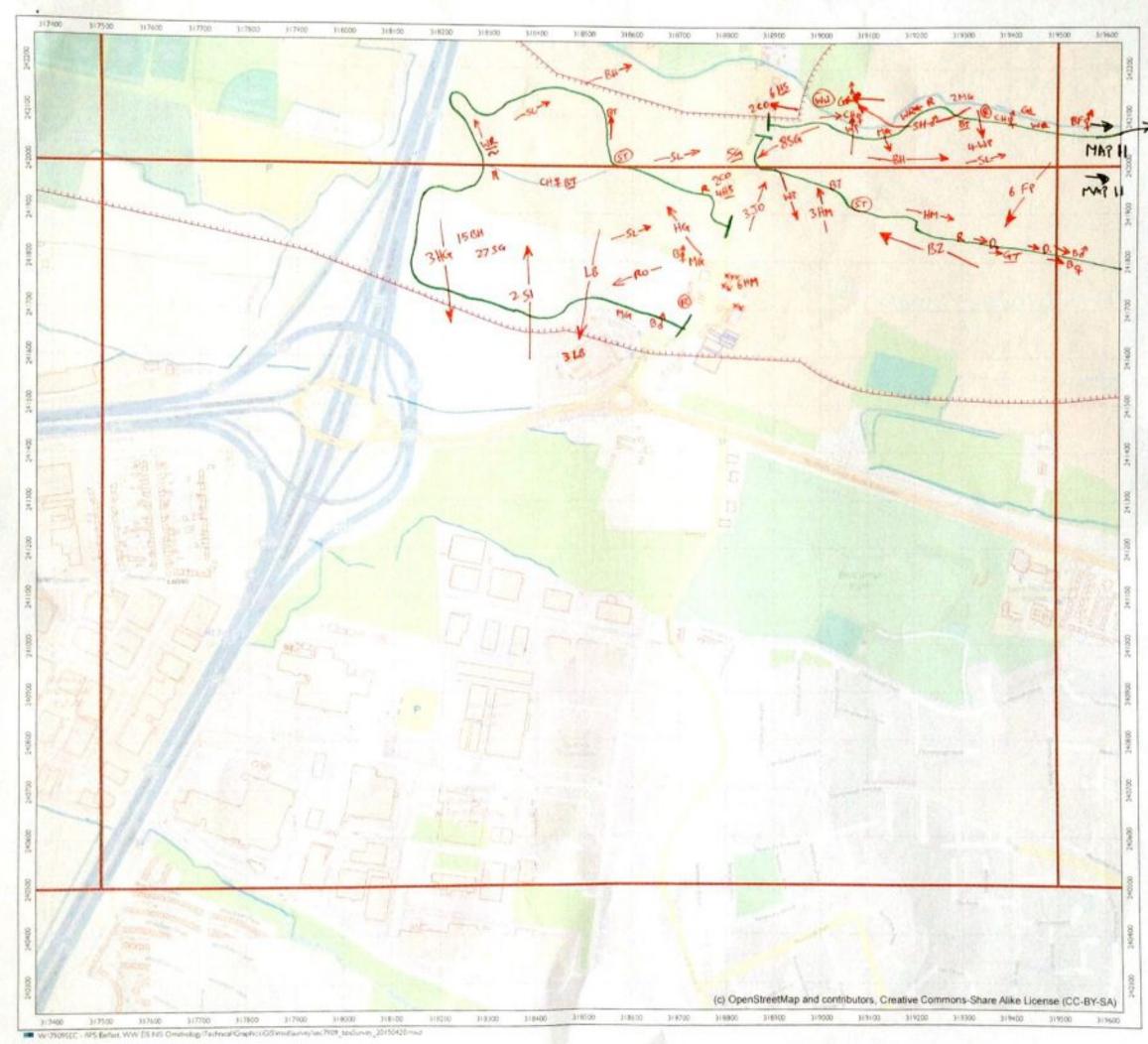
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Greater Dublin Drainage
Breeding bird survey
Page 9 of 18
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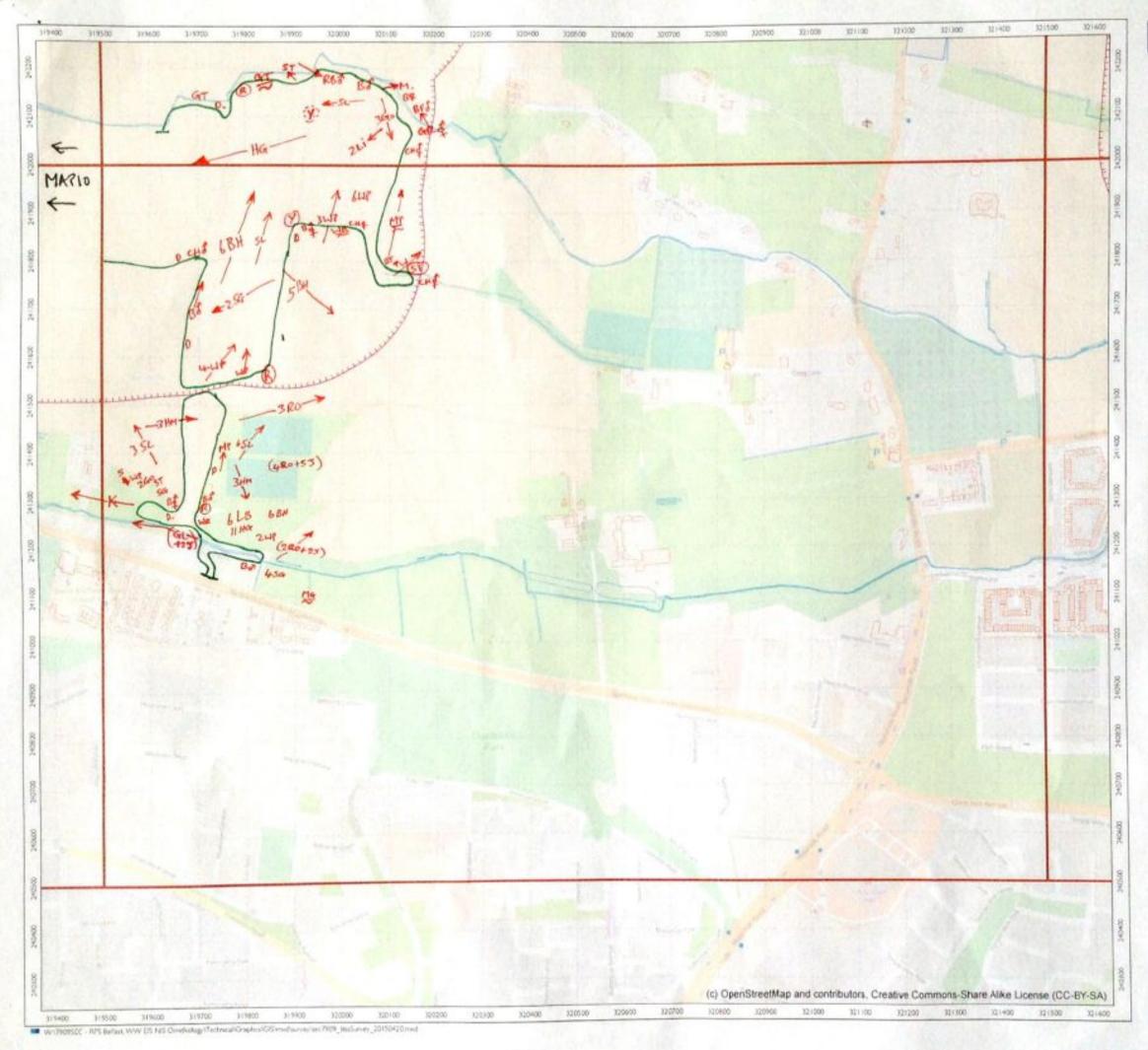
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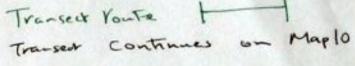
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RPS

Surveyor Nick Veale Date: 12/06/2015 Start time: 05:40 End time: 11:40





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BBS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage

Breeding bird survey

Page 11 of 18

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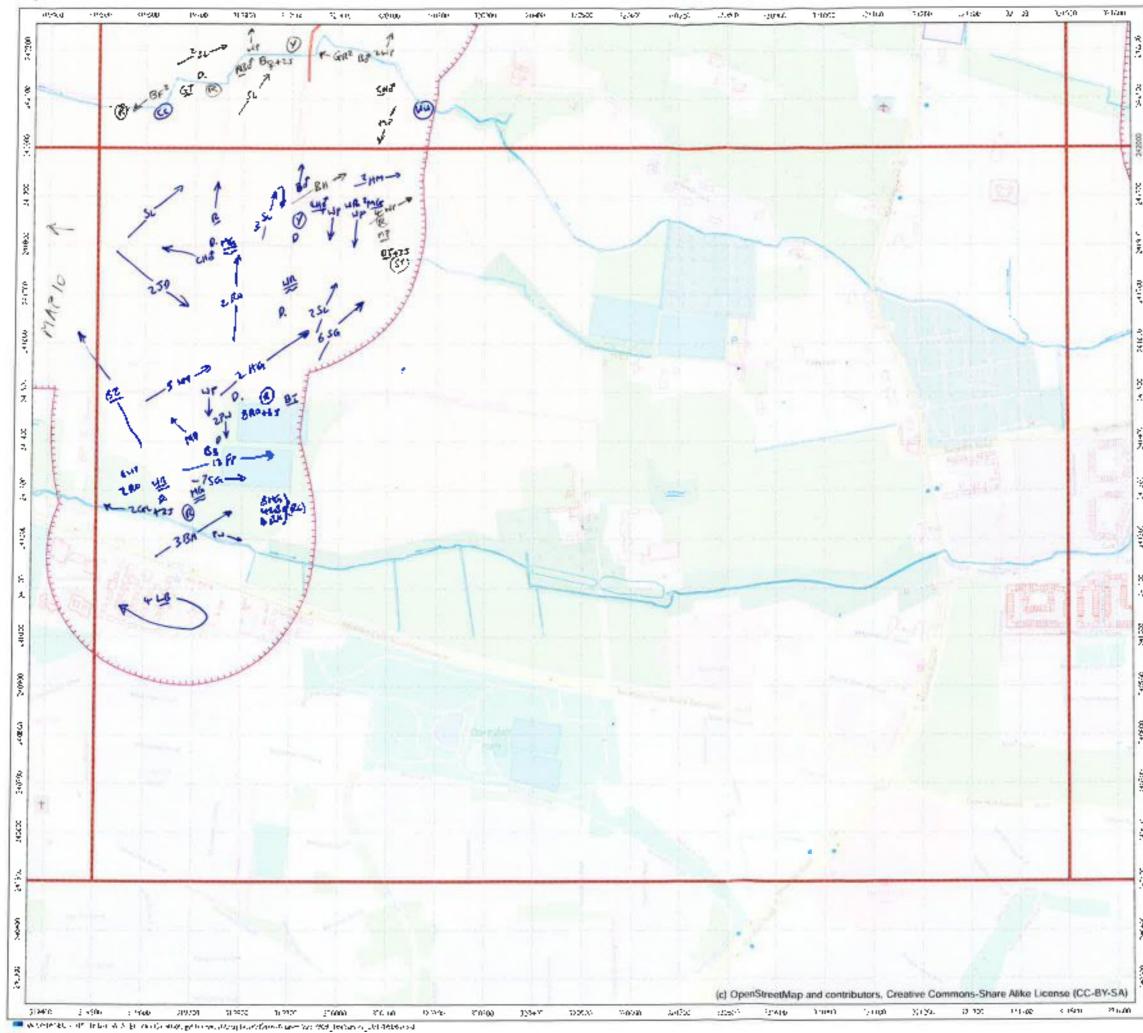
rpagenup.com

## GDD Oral Hearing Response to Inspector's Questions

## APPENDIX 7 SUMMER 2017 (MAY AND JUNE)

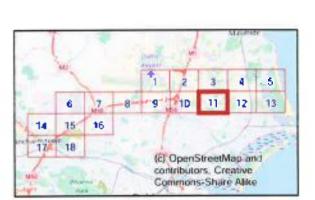
The data from the May and June 2017 summer walkover surveys were mapped, and are enclosed below (along with the associated survey recording sheets).

	We	Weather Sheet	Te a	S pulm	peed		Direction	AsinSnow	3	Cloud Cover	Cloud Height	Visibility
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Date 13	1001	2017	
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BBS/WAVO survey boundary (250 m. buffer of route supplied 20170405 appended to previous boundary)

Pipe route (supplied 20170405).

Greater Dublin Drainage

Breeding/winter bird survey

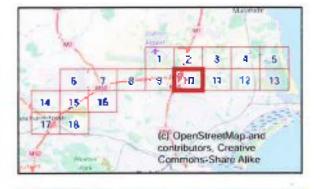
Page 11 of 18

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BBS/WWO survey boundary (250 m buffer of mule supplied 20170405 appended to previous boundary)

Pipe route (supplied 20170405).

Greater Dublin Drainage

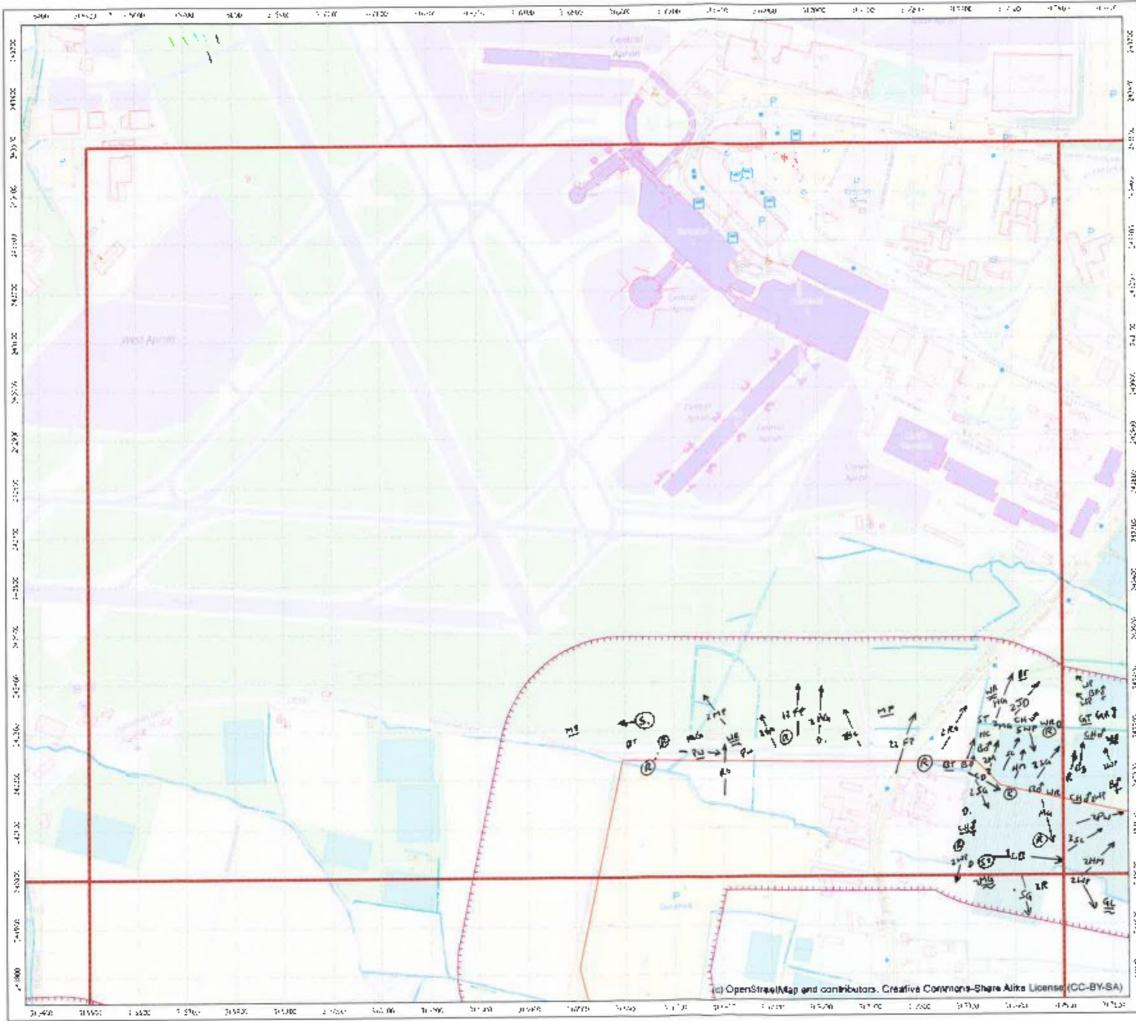
Breeding/winter bird survey

Page 10 of 18

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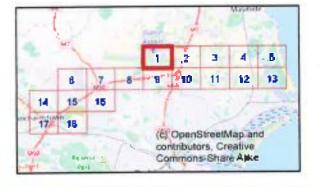


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BBS/WWO survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)

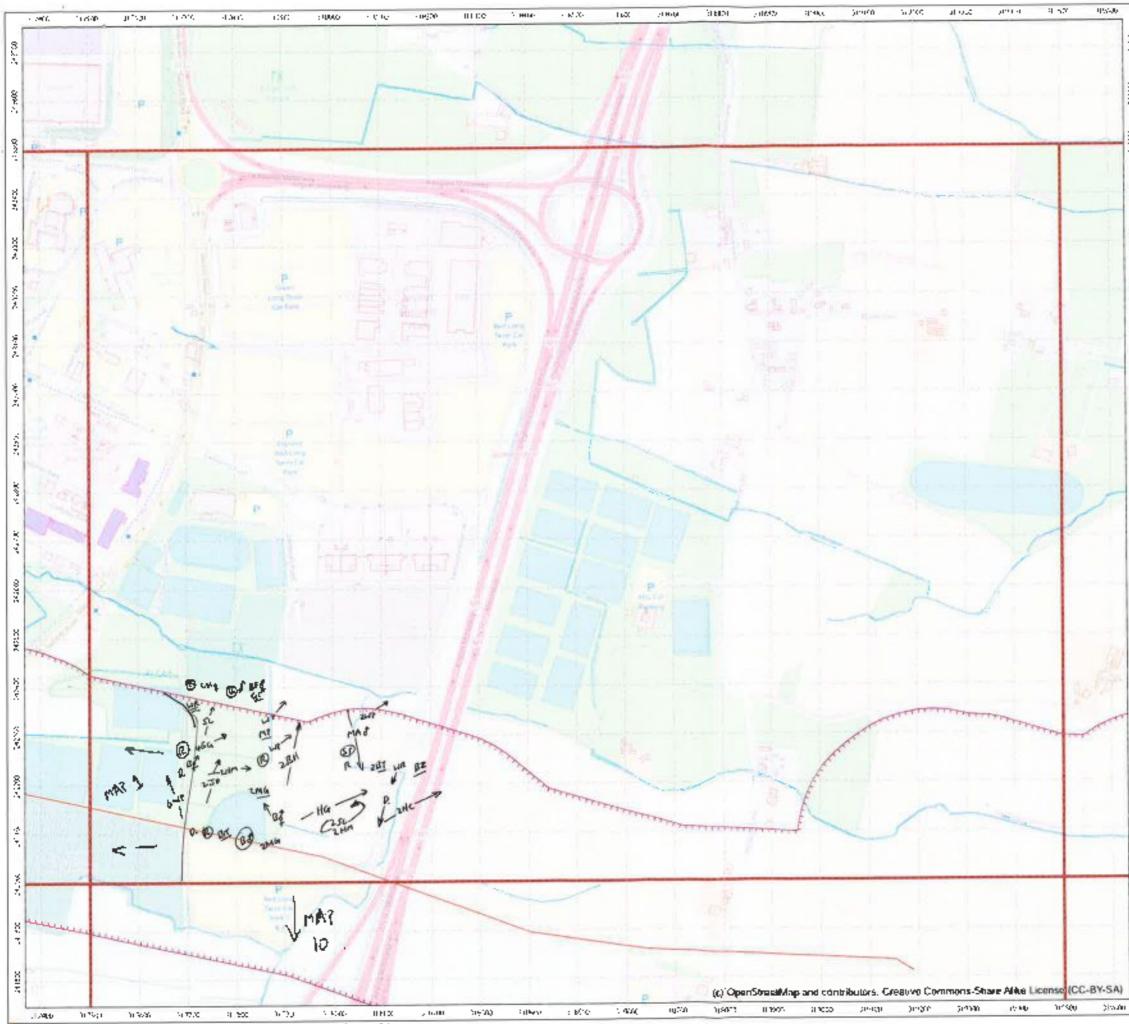
Pipe route (supplied 20170405).

Greater Dublin Drainage

Breeding/winter bird survey

Page I of B

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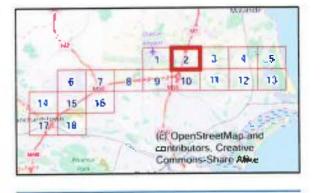


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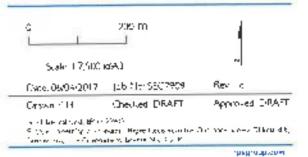
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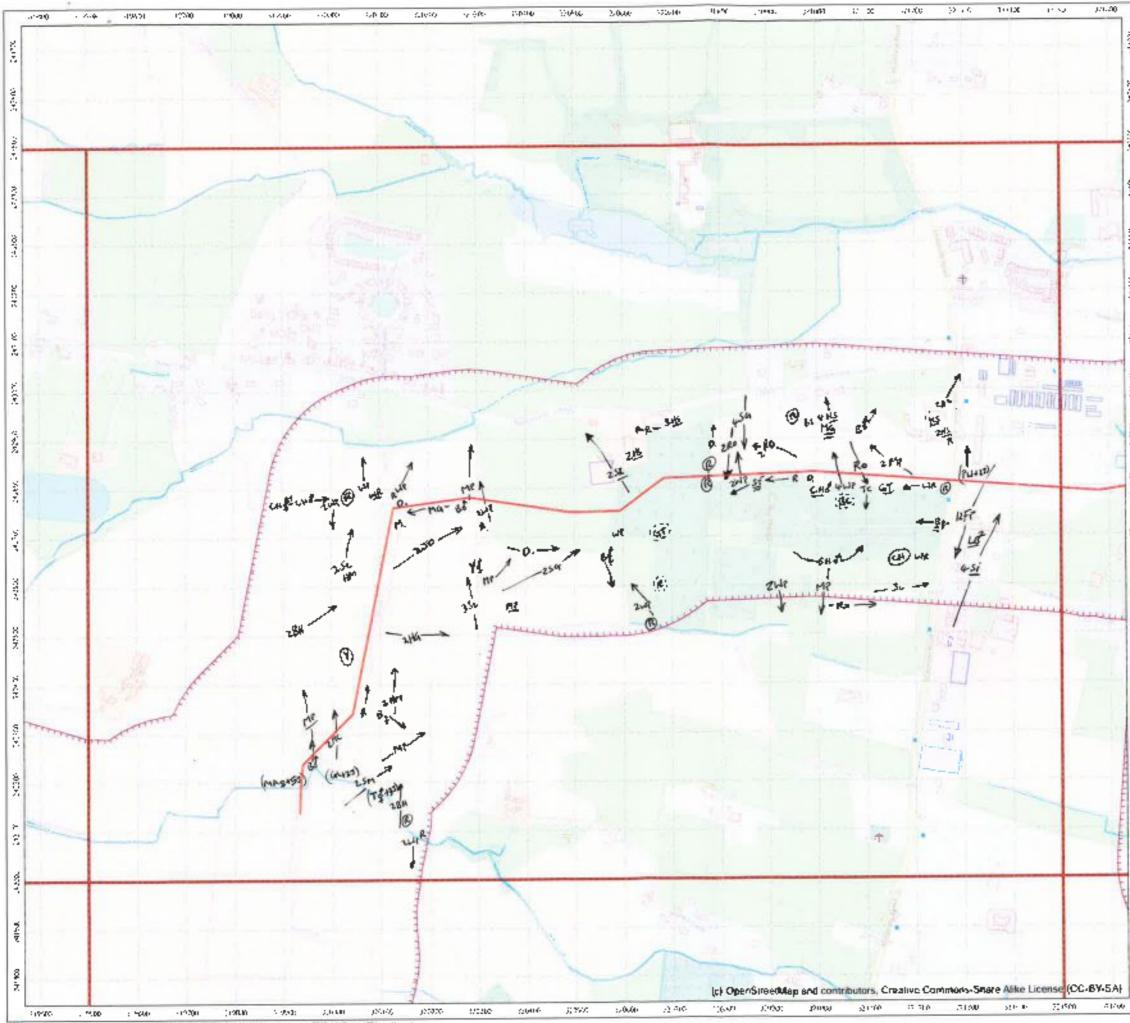
Pipe route (supplied 20170405)

Greater Dublin Drainage

Breeding/winter bird survey

Page 2 of 18



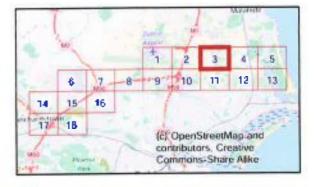


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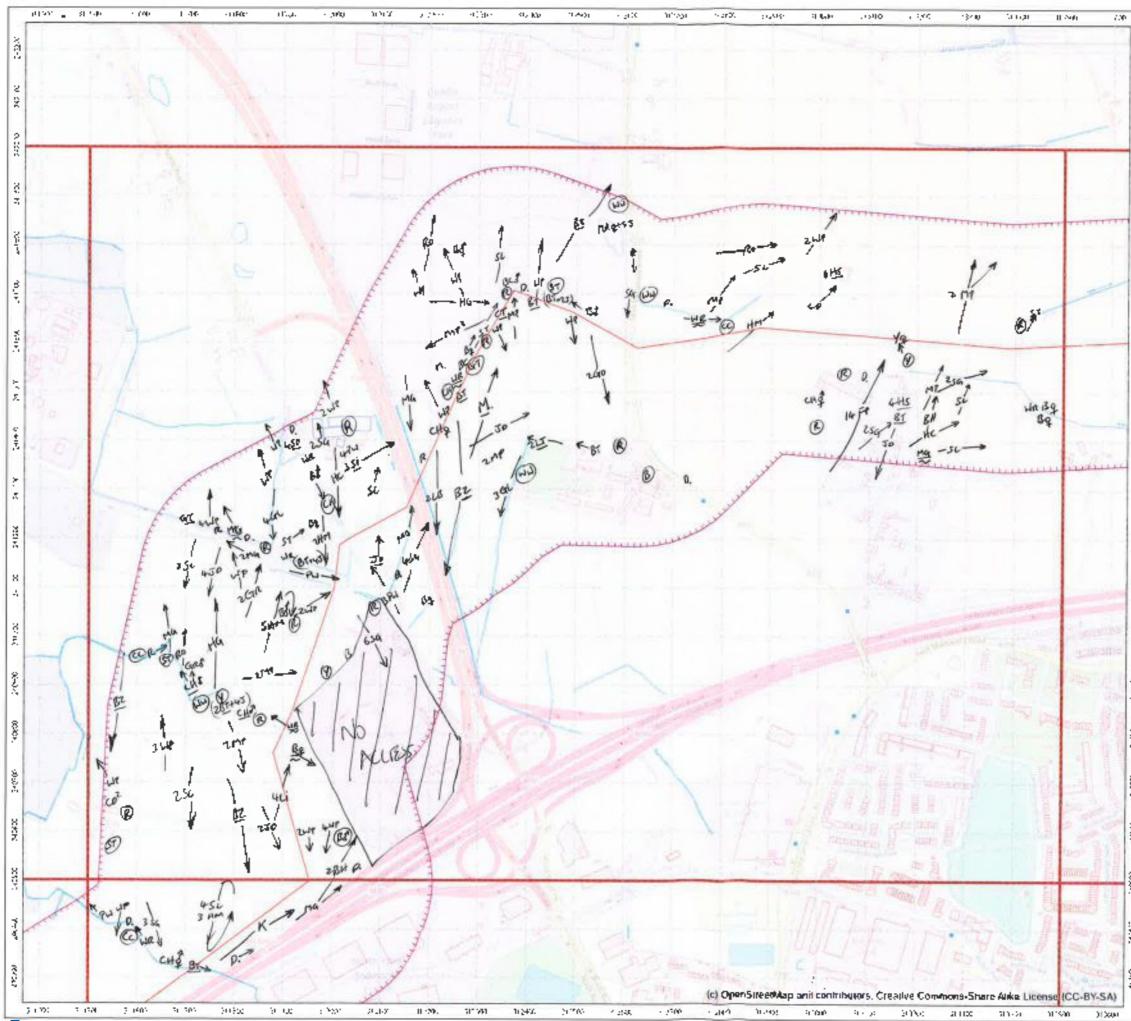
Greater Dub in Drainage

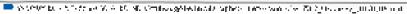
Breeding/winter bird survey

Page 3 of 19

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BBS/WWO survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary).

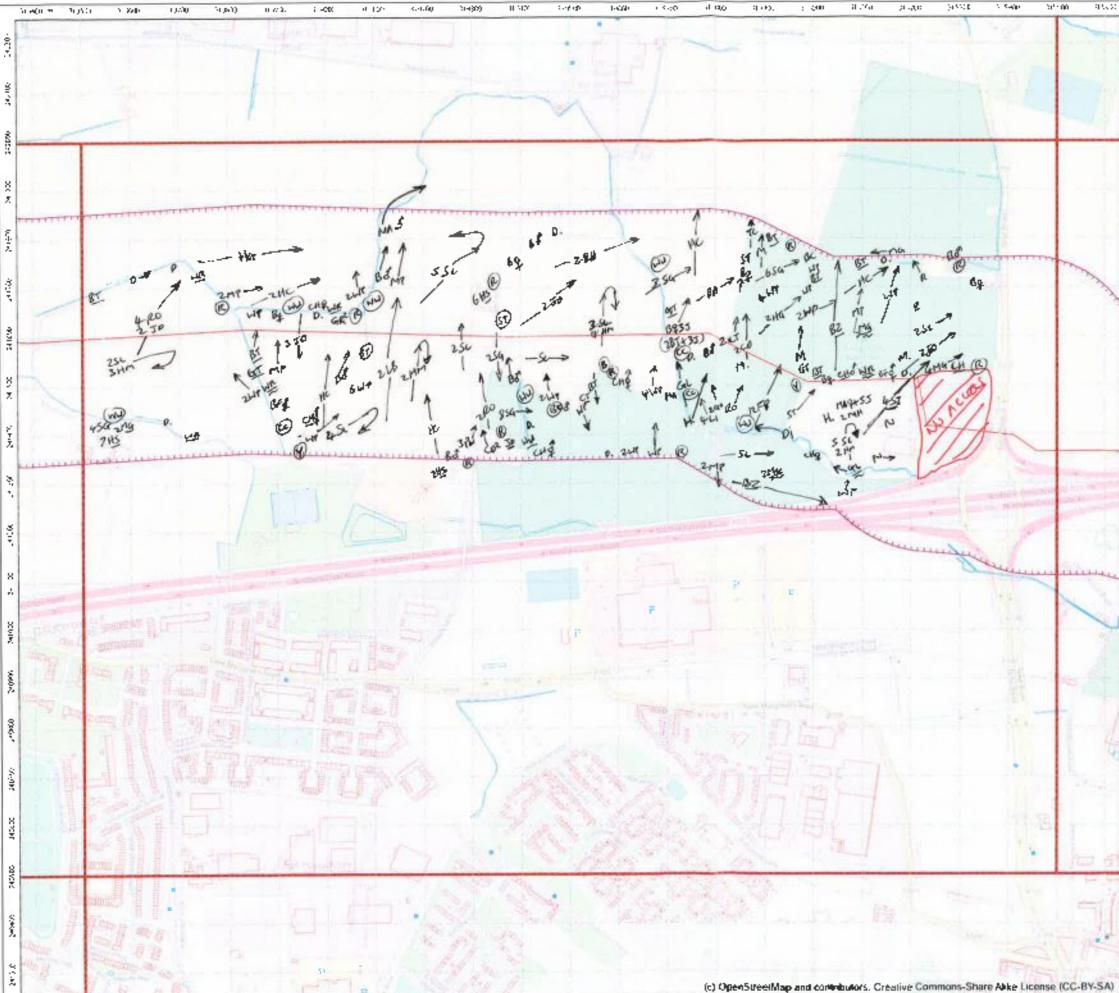
- Pipe route (supplied 20170409)

Greater Dub in Drainage

Breeding/winter bird survey

Page 7 of 18

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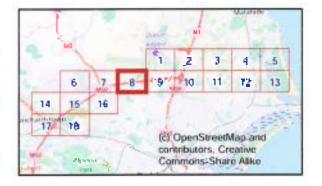
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- Pipe route (supplied 20) 70405)

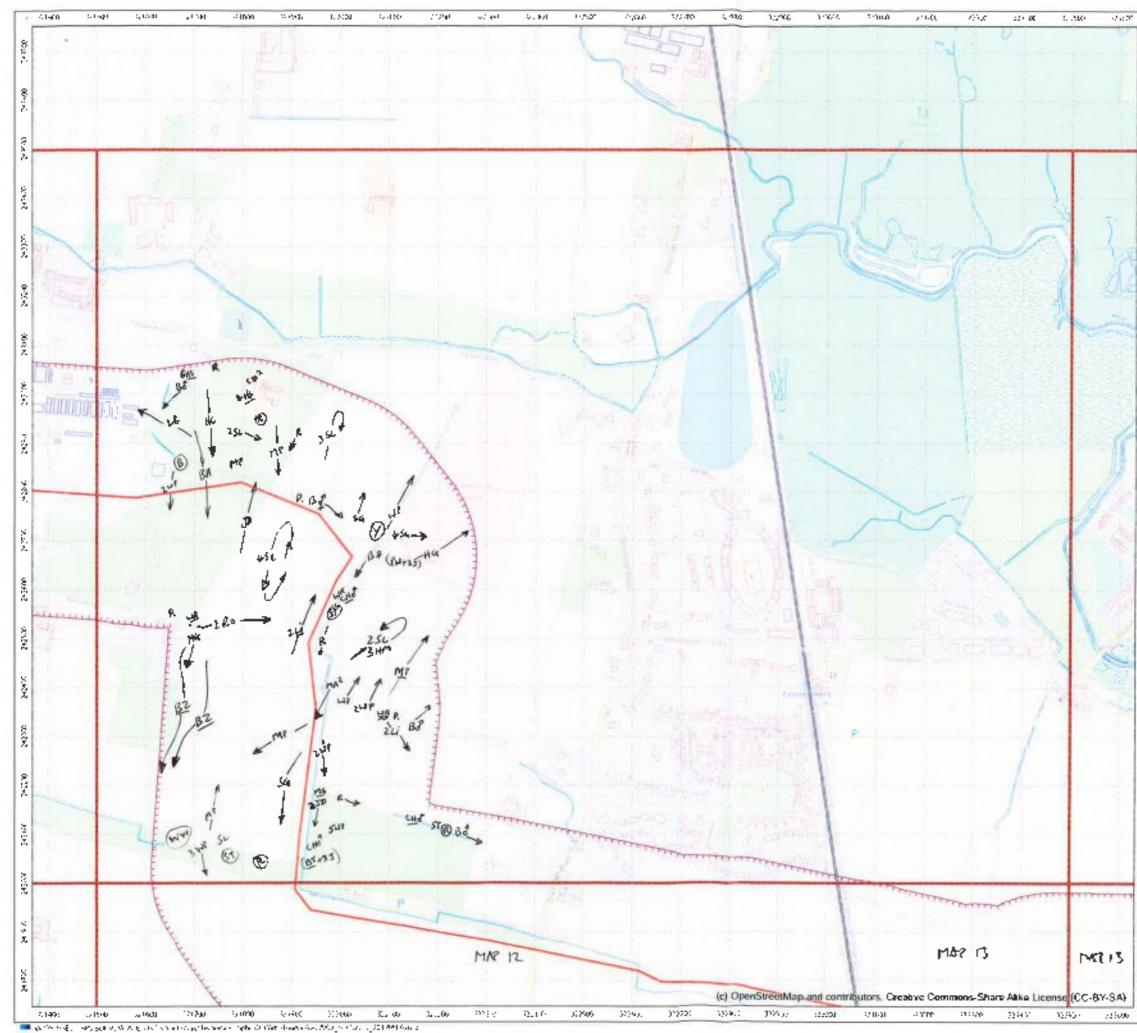
Greater Dublin Drainage

Breeding/winter bird survey

Page 8 of 18

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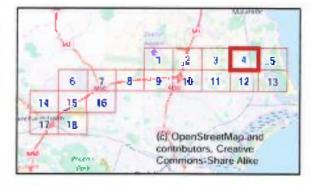
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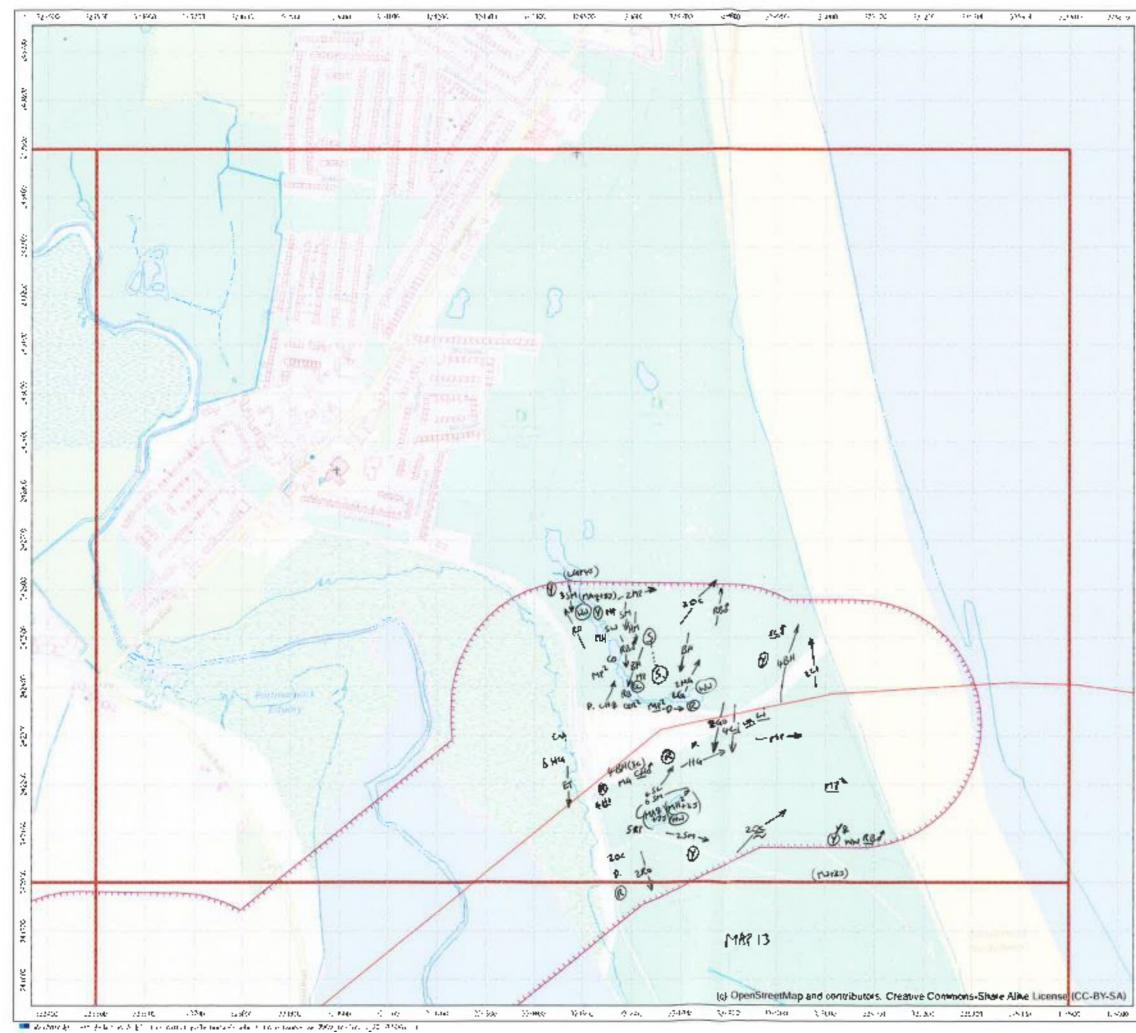
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Greater Dublin Drainage

Breeding/winter bird survey

Page 4 of 18

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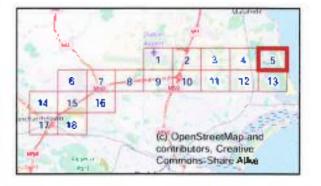


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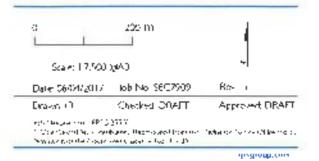
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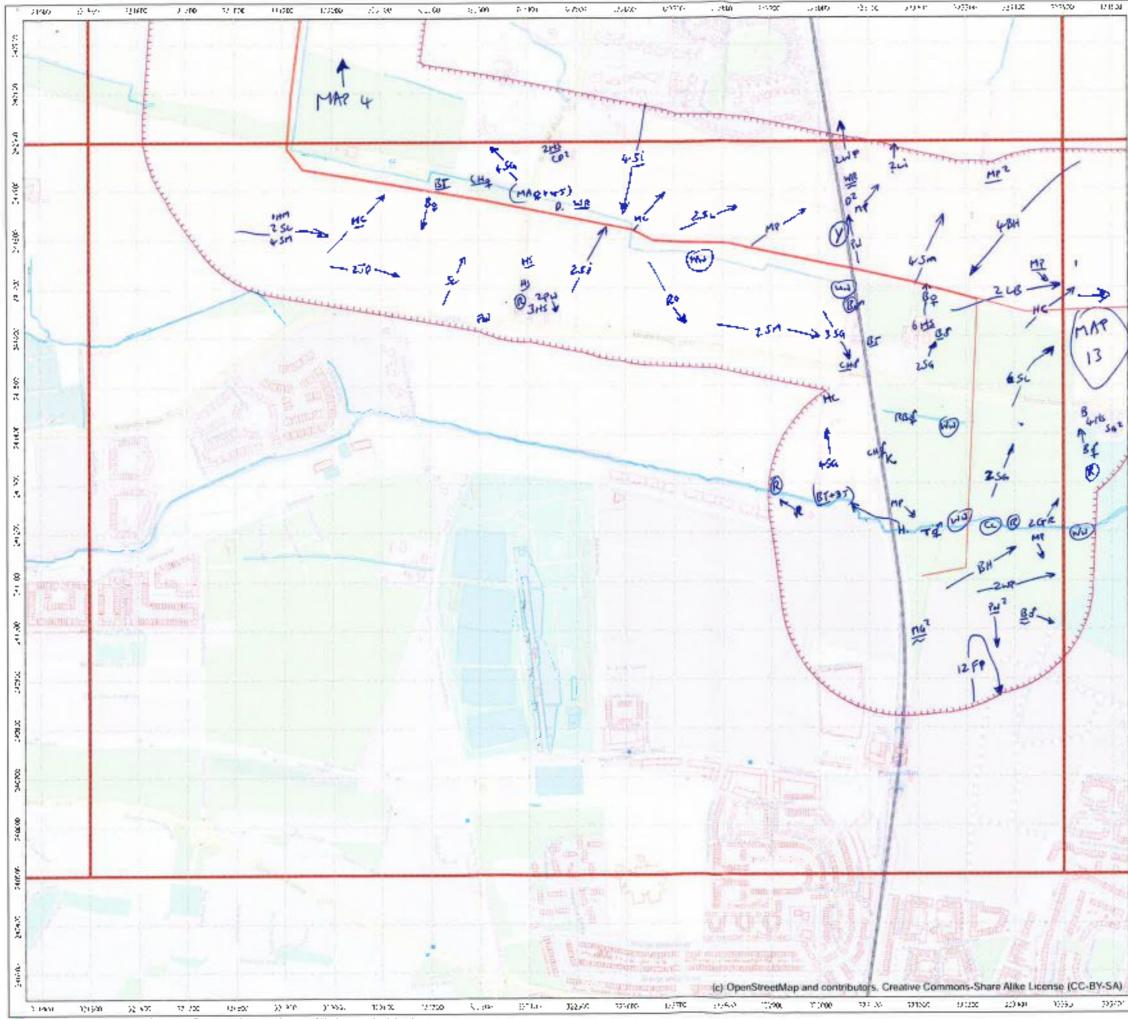
Greater Dublin Drainage

Breeding/winter bird survey

Page 5 of i8



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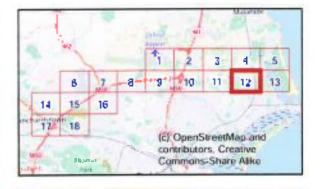
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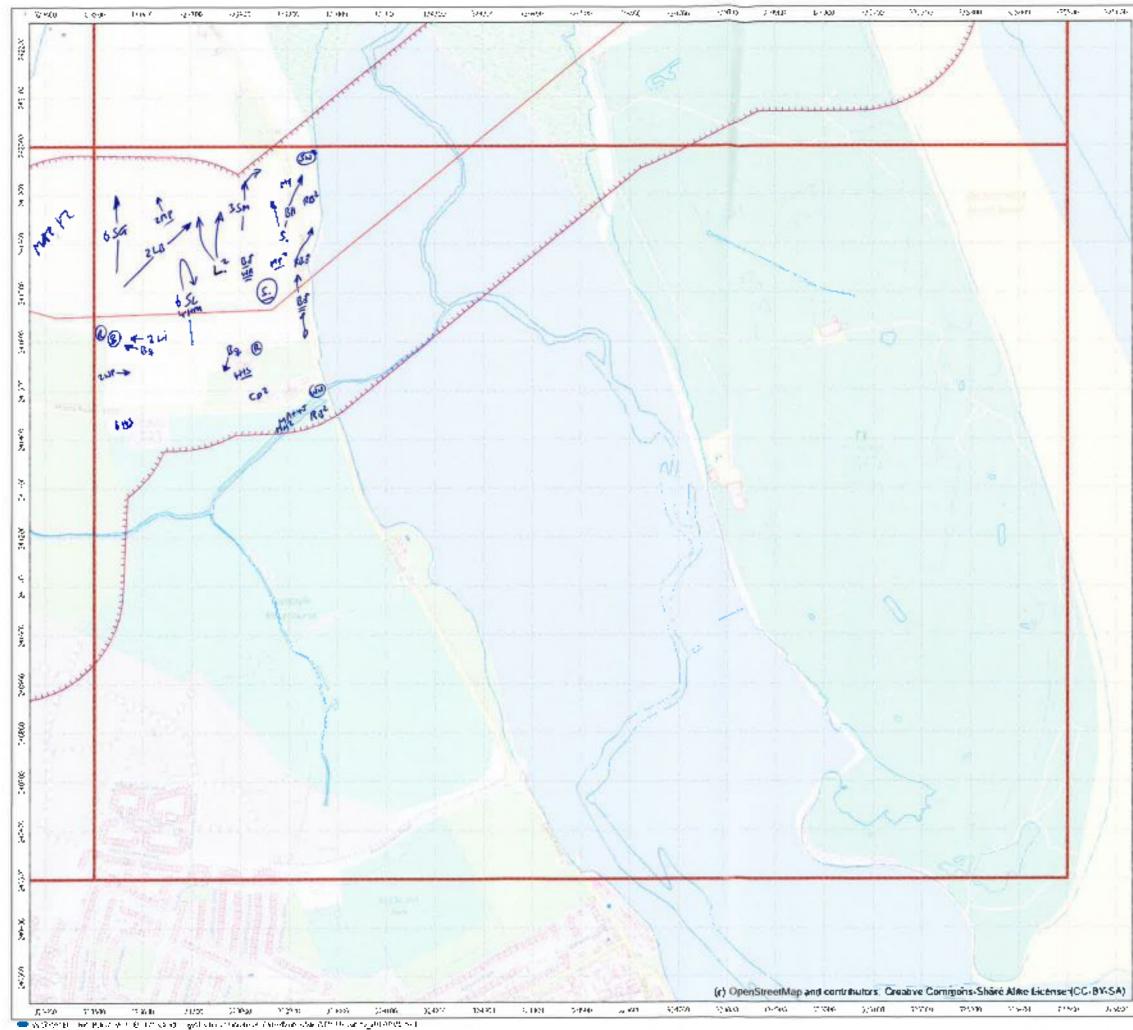
Greater Dublin Drainage

Breeding/winter bird survey.

Page 12 of 18

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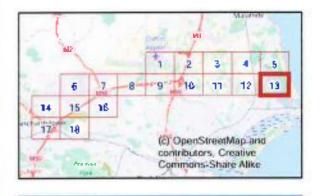




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Legend



BBS/WWO survey boundary (250 m) buffer of note supplied 20170405 appended to previous housiliary).

Pipe route (supplied 20170405)

Greater Dublin Drainage

Breeding/winter bird survey

Page 13 of 18

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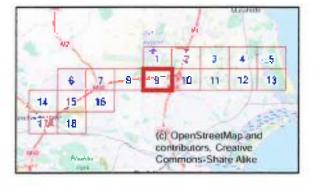
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Hr 4	~	2	0	8/9	ب	2	1	1				
Hr S	М	2	0	8/8	~	2		1				
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Surveyor Nich	Veale
Date: 02   /	
Start time. 0540	End time /2.300

\*Please attach weather sheet Notes.



Legend

BBS/WWO survey boundary (250 m tx.ffer of route supplied 20170405 appended to previous boundary).

Pipe route (supplied 20170405)

Greater Dub'in Dirainage

Breeding/winter bird survey

Page 9 of 13

		(Mala) Negati (Marak-and Marada) Angel (Marada) (Mala)	Concerne server of the area
Drawn (	н	Checked DNA-T	Approven DRAM
Date: 00	04/2017	Job No: SEC7909	Bez (
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respired to the

RPS	Ň	Weather Sheet	eet	Wind Speed	S <b>peed</b> Beautort	ort Mah	Direction	Rain/Snow	MOL	Cover	Cloud Height	Visibility
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Oate	10	2102 90 10	~	Light breeze Genile breeze	crite 2 Diéeze 3	4 <del>0</del> 2 - 4	шщ	Light chowers Heary showers	Numers 2		height of viewshed	Good (>3km) 2
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Observer	2	Nich Vere	4	Sound breeze		12-22	N.			1601	>500m 2	
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Finish Time		12:00		Stiong gale Whole gale	_			High ground		A day	_	wrather delats, effering only one figure. Not a range, e.g. IVS - 5, not 5-6.
Sheet 1/	- - - -	) Maps attached	iched	Storm		12 64 72					Use noies for extra into. E.g. WS - 5, gusting 6 (in notes).	a into. ng 6 (m noteși.
Weather	Wind speed	Wind direction	Rain	Cloud	Cloud	Visibility	Frost	SDOW	Notes(e.g	Notes(e.g. temperature)	(e)	
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Hr 4	54	s	0	3/5	0	~		1				
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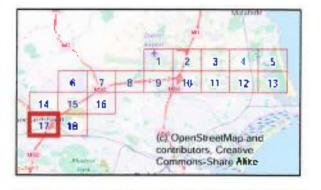
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RPS	

Surveyer	Nich	Verla
Date D/	106/2	017
Start fime 🕻	5:30	End time. 12400

"Please attach weather sheet Note:.



### Legend



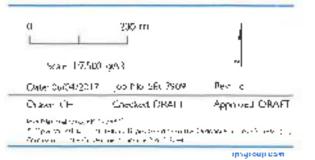
BB5/WWO survey boundary (250 m buffer of coute supplied 20170405 appended to previous boundary).

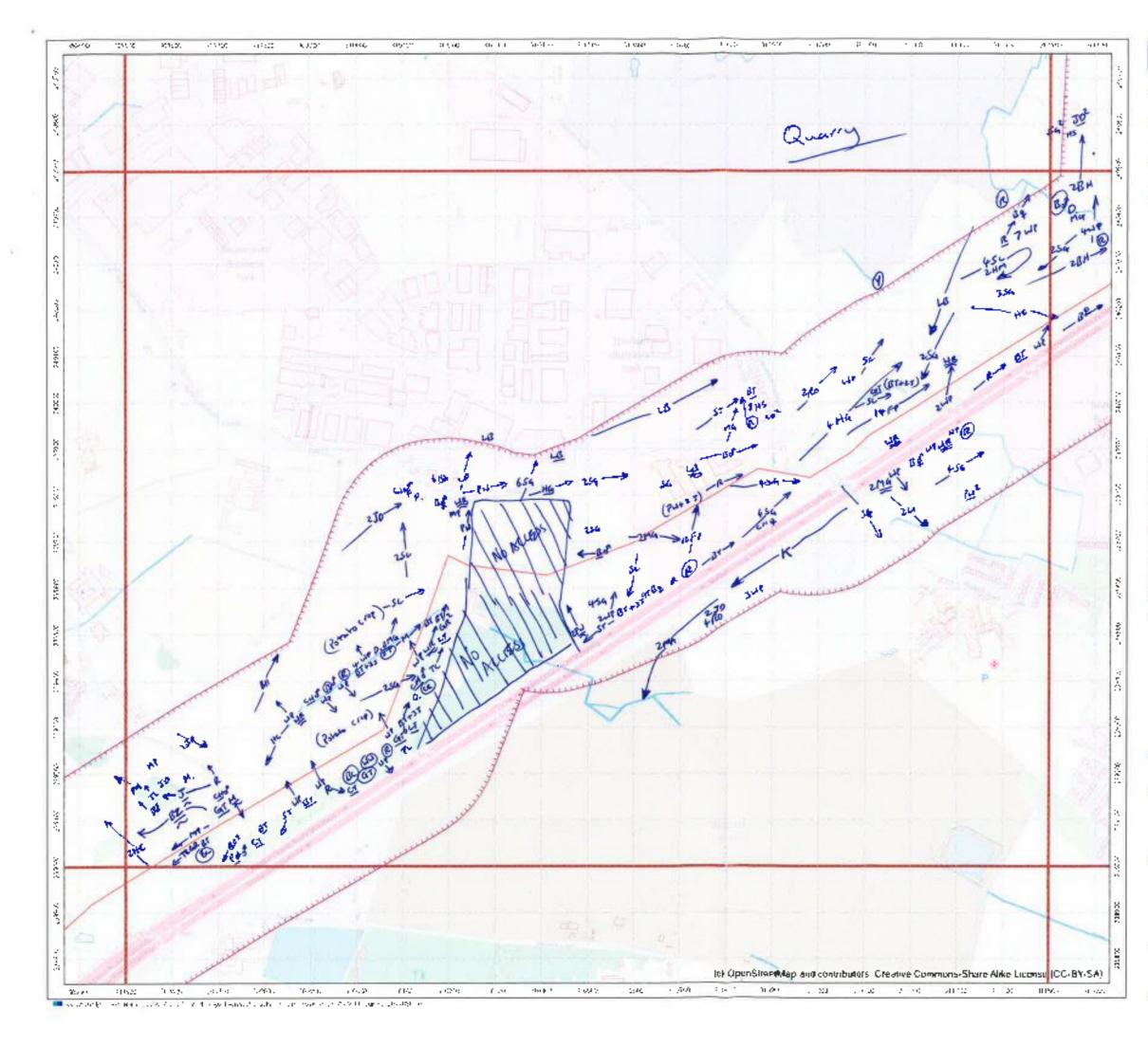
Pipe route (supplied 20170405).

Greater Dublin Drainage

Breeding/winter bird survey.

Page 17 of 18



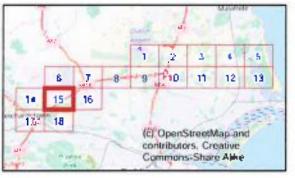


RPS	
TCI U	,

Surveyor Nich Vecc 06/2017 Date 01 End time (2:0 Start time. 05:70

"Please attach weather sheet Notes:

02/06/2017 05:40 - 12:00



# Legend



BPS/WWO survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)

Pipe route (supplied 20170405)

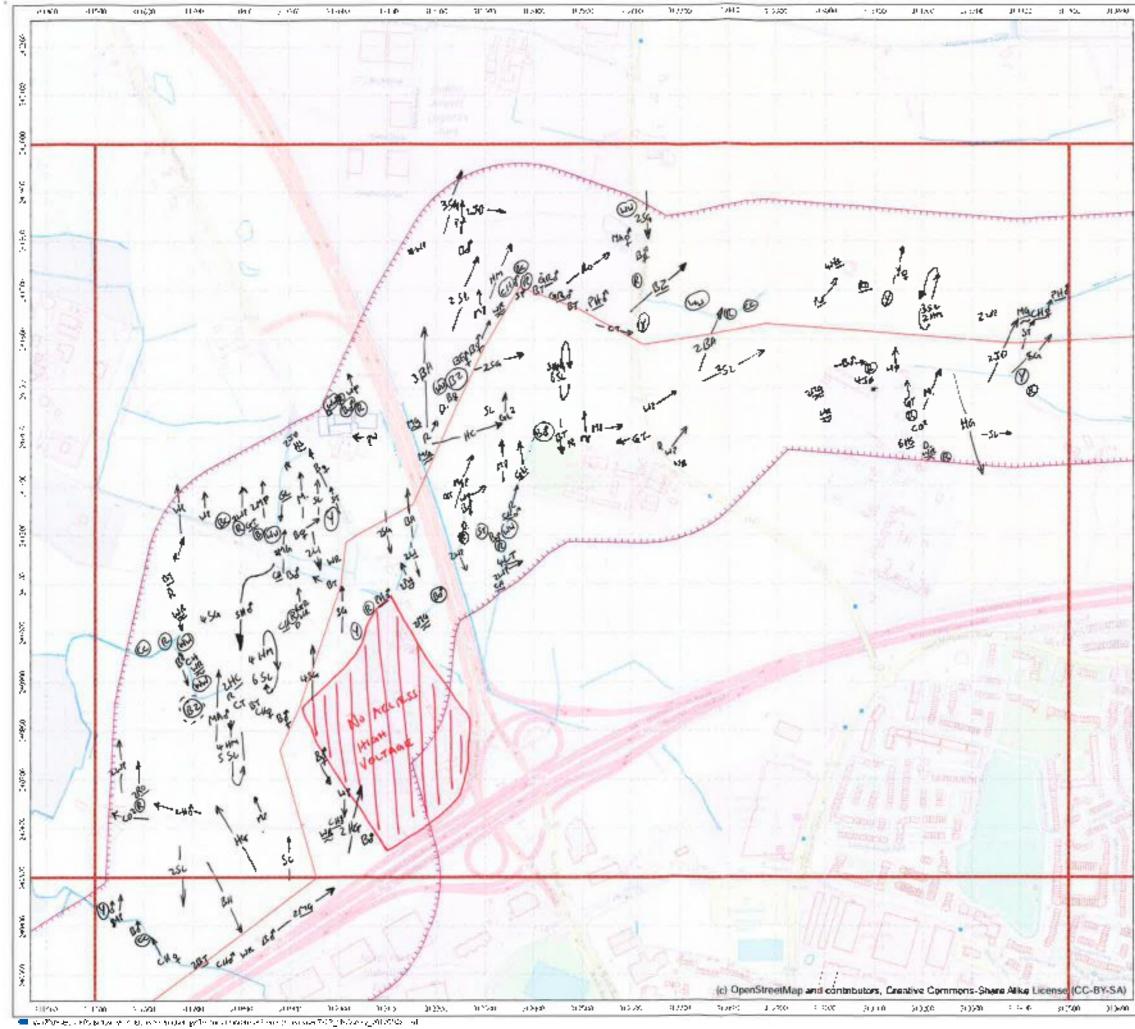
Greater Dublin Drainage

Breeding/winter bird survey.

Page 15 of 18

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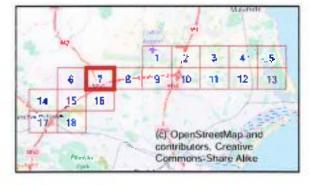
RPS	M	Weather Sheet	eet	Wind Speed	S <b>peed</b> Beauforf	fart Moh	Direction	Rain/Show	NO.	Cover		Cloud Height	Visibility
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Date	2	31 (05/2017	_	Light breeze Gentle breez	breaze 2 breaze 3	• ••	ц	Light showers Heavy showers	Wels 2	_		lieight of viewshed	Good (>3km/ 2
Survey	2	13.8.5		Kod breaze			5	Heavy rain		-	Ť	c150m ()	
Observer		Nich Ved	3	Slong	Shong breaze 5		NA 1	Lying anow		_		150-500m 1 >500m 2	
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Surveyor N. Veak	-
Date 3/ /05/1	7
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\*Please attach weather sheet Notes



## Legend



BBS/MMMO survey boundary (250 m buffer of mute supplied 20170405 appended to previous boundary).

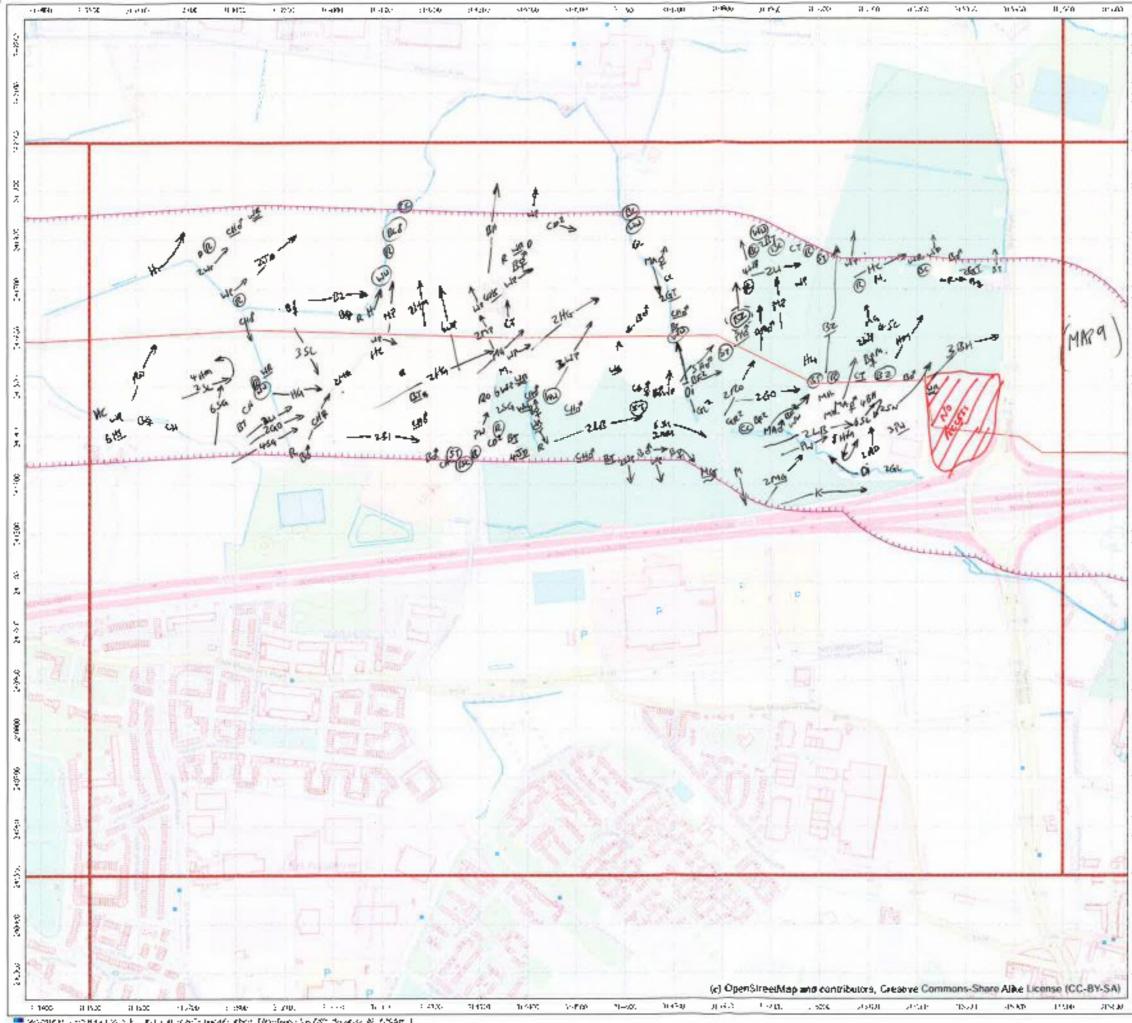
Pipe route (supplied 20170405)

Greater Dublin Drainage

Breeding/winter bird survey

Page 7 of 18

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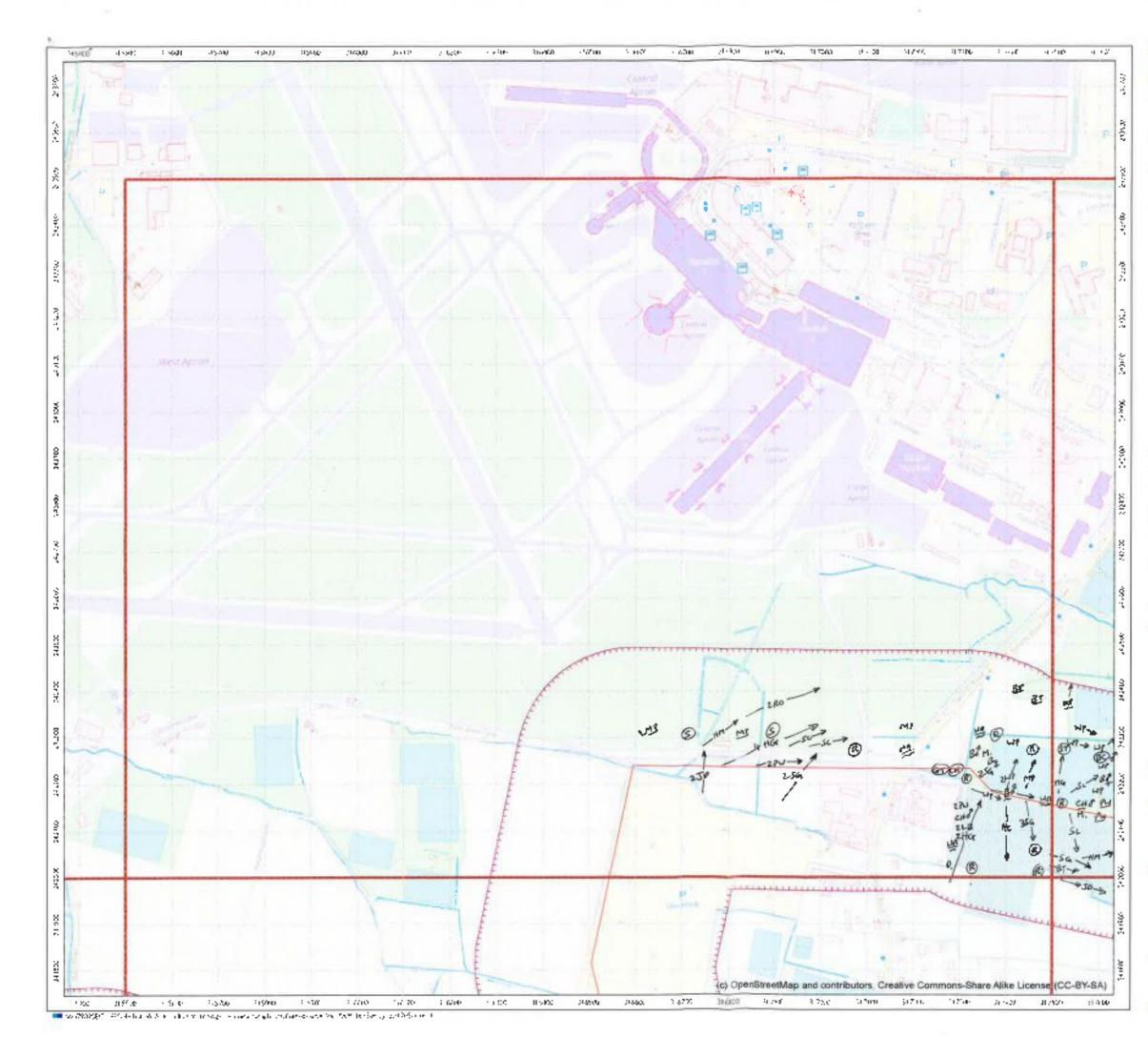


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Page	813a <i>8</i> 3				
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RPS	3	Weather Sheel	sel	Wind	Wind Speed Beaufort	or Mah	Direction	Rain/Snow	MOW	Cloud Caver	Cloud Height	Visibility
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Weather	Wind	Wind direction	Rain	Cloud	Cloud	VilidiaiV	Frost	Snow	Notes(e.	Notes(e.g. femperature)	ure)	
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Hr 3	Ч	w	0	S/V	0	~				-		
Hr 4	2	w	0	SP	~	~			14.25			
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RPS

Surveyon: Nick Vede. Date: 25/05/17 Endtime 12100 Start time 05.30

\*Please attach weather sheet Notes



Legend

BBS/WWO survey boundary (250 m. buffer of route supplied 20170405 appended to previous boundary).

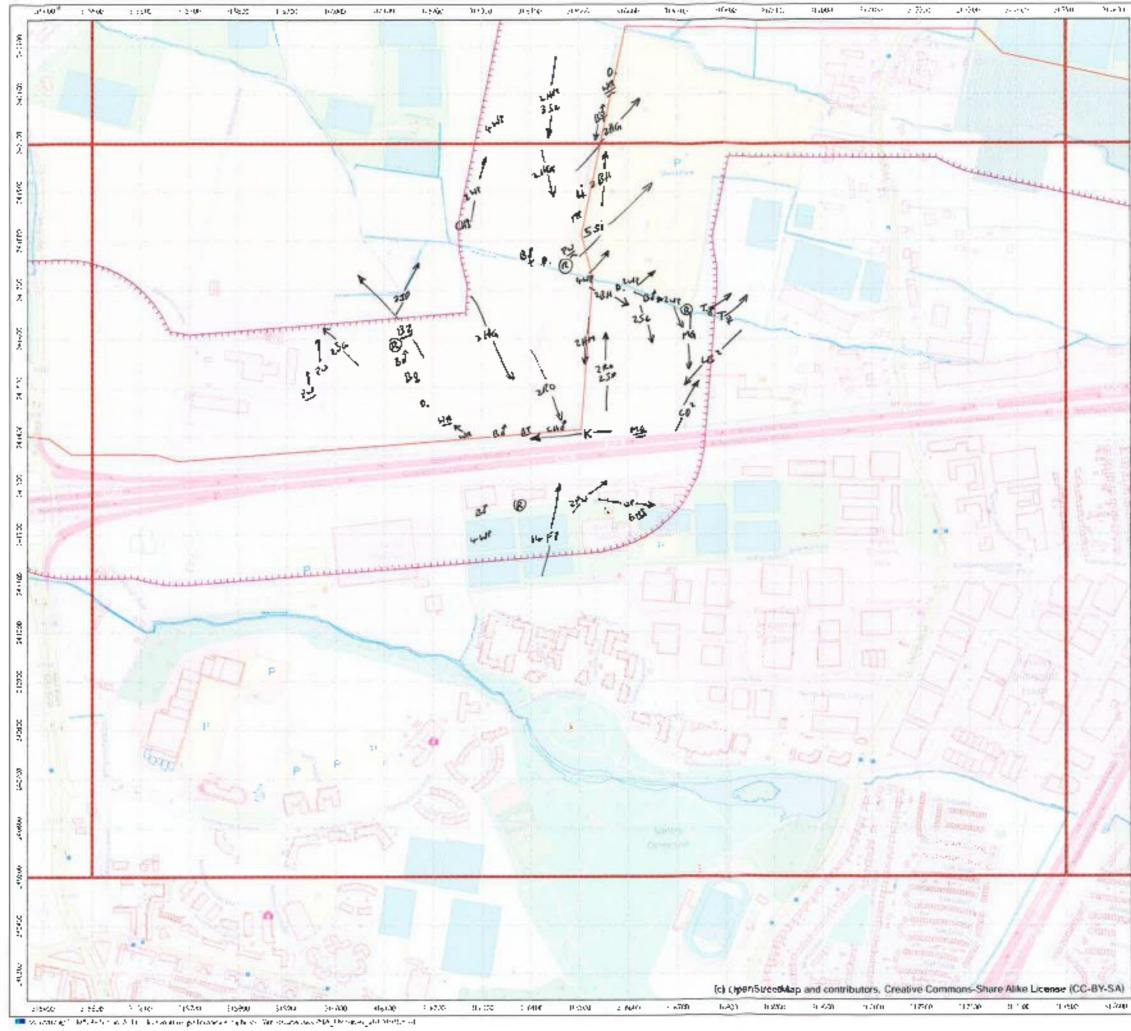
Pipe route (supplied 2017040b).

Greator Dublin Drainago

Breeding/winter bird survey

Page 1 of 18

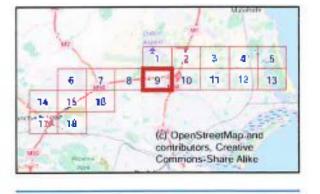
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RPS	

Surveyor N.V	
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Start true: 05:30	End time 12:00

\*Please attach weather theet Notes:



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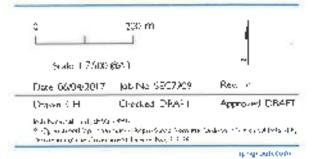
RBS/WWO survey boundary (250 m. buffer of route supplied 20170405 appended to orevious boundary)

Pipe route (supplied 20170405).

Greater Dublin Drainage

Breeding/winter bird survey

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	5	Weather Sheet	je	Wind Sp	τ.		Direction	Rein/Snow	-	Cover	Cloud Height	Visitivity	1
Srte		600	1	Calm Link ai	с. • •		z	None		hr aighte	Height of cloud above average	Poor (<1km)	9
Date	2	24 OS 2017	2	Ligh breaze Gentie Prease	Light breaze 2 Gentle Prease 3	4	۳	Light showers		0.00	height of	Moderate (1-3km) Good (>3km)	- N
Survey	F	Ras		Mod. breaza		13-18	ก้อง	Heavy rain			<150m 0		
Observer		N-Jeale	Γ	Strong breeze	5	19-24 25-31	NS N	Lying Snow	NON	Frost	150-500m 1 >500m 2		
Start Time		02:20		Mod. gale Fresh gale	ale 7 pale 8	8 8 8 8	MN	None On site	• -	None 0	Please be as accu	Please be as accurate as moreible units	1 4
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Sheet 1/		] Maps attached	ched	Storm							Lise notes for extra info. E.g. WS - 5, guebrog 8 [in notes].	a info. 19 6 [in notes],	
Weather	Wind speed	Wind direction	Rain	Cloud	Cloud	Visibility	Frost	Snow	Notes(e.g.	Noles(e.g. temperature)	e)		
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е г Г	2	SW	0	7/9	<b>ا</b> م ا	5		1	1001				
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Hr 6	2	5	0	8/8	2	N	5	1					
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Date: 2.4	105/2	2017

\*Please attach weather sheet

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Legend



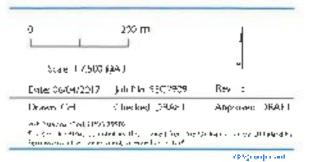
BBS/VVVO survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)

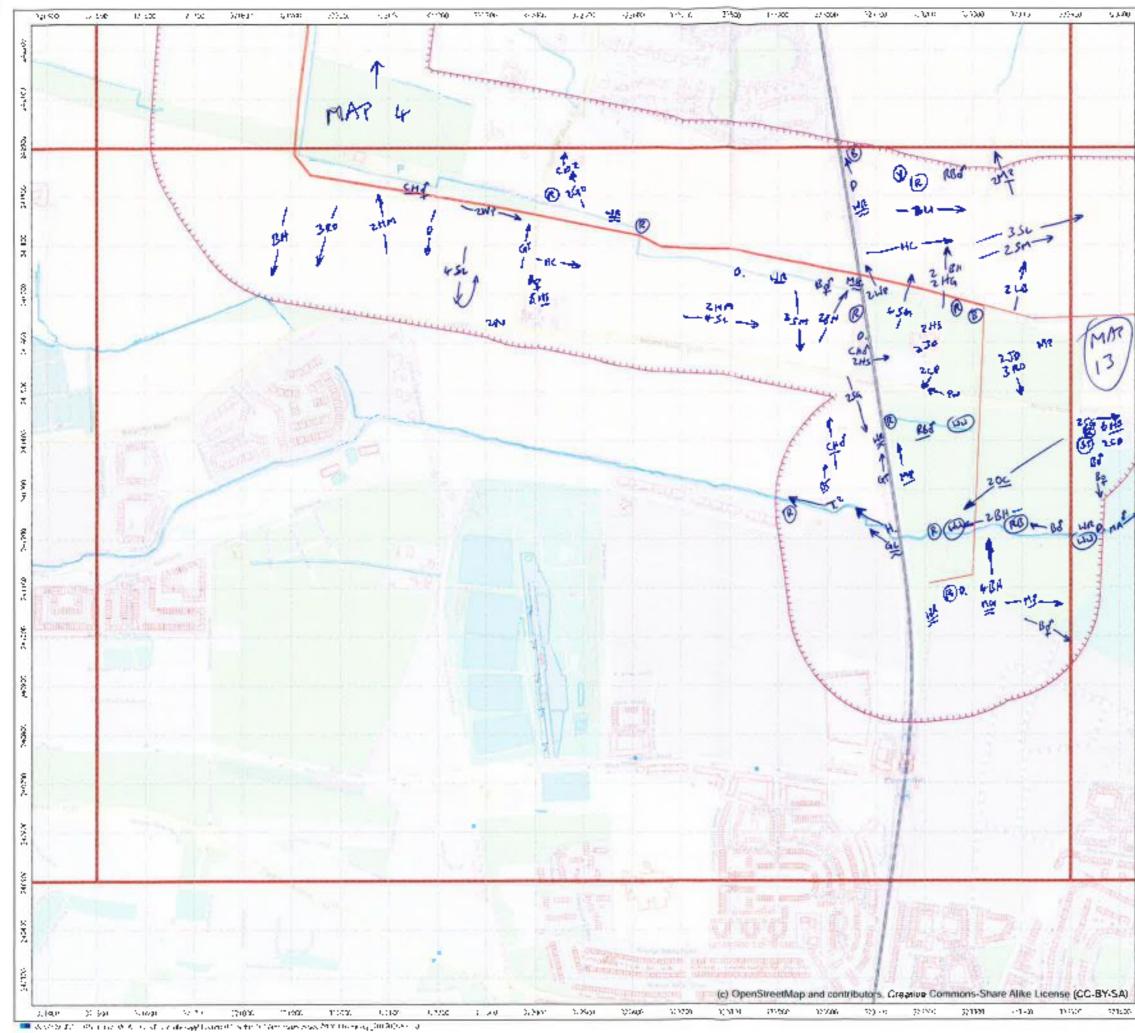
Pipe route (supplied 20170405).

Greater Dublin Drahage

Breeding/winter bird survey

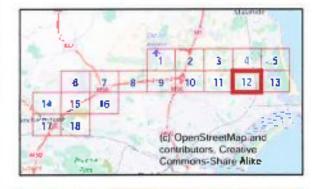
Page 4 of 18





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Start time 05/20	Fact time. 2:00

Notes



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BBS/WWO survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)

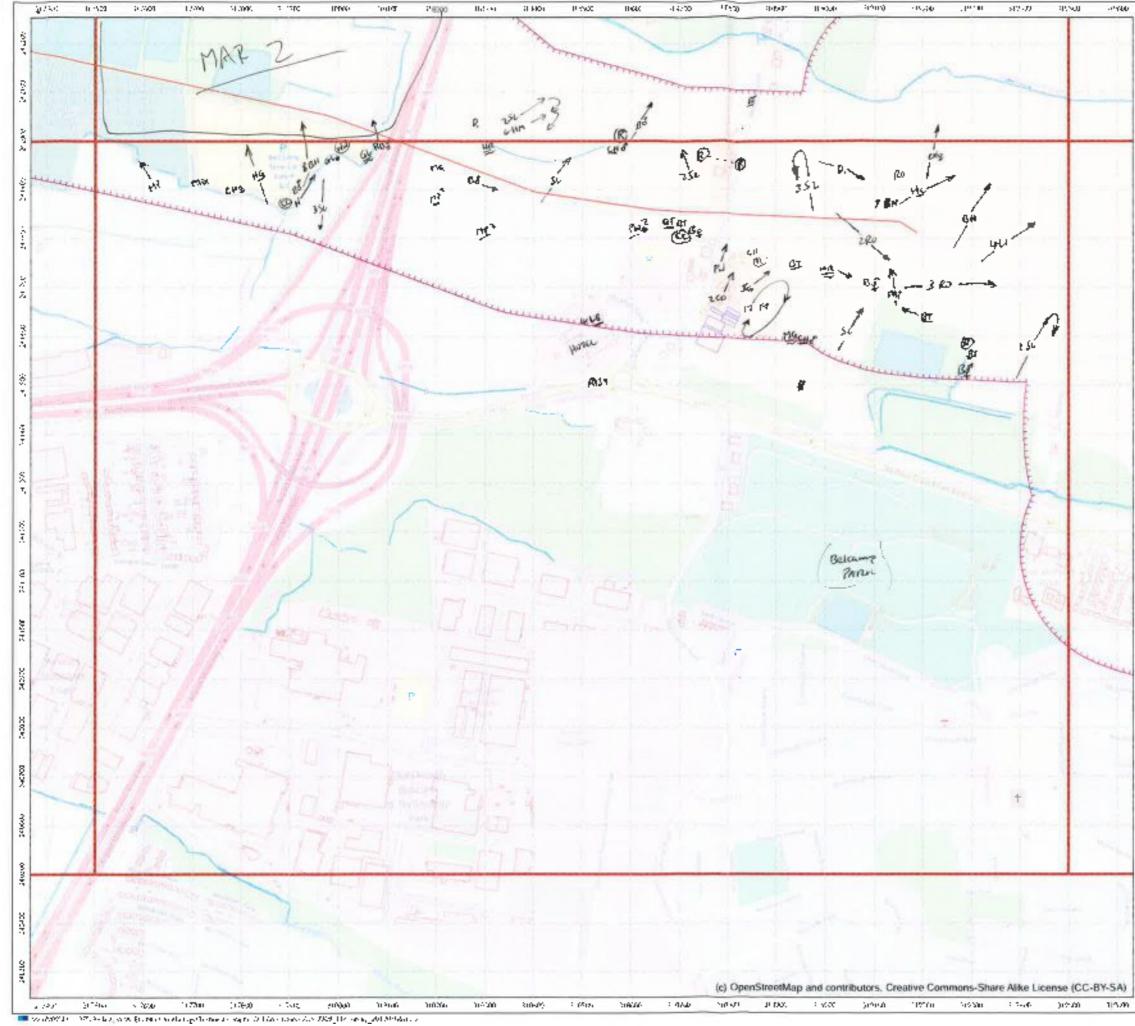
Pipe route (supplied 20170405).

Greater Dublin Drainage

Breeding/winter bird survey

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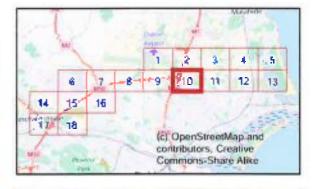
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Surveyor	Nuck	Verh
Date.	24 10	5)2017
Start time.	05:20	End time: ) 2 につゆ

\*Please attach weather sheet Notes.



## Legend

BBS/MMMO survey boundary (250 m b. ffer of route supplied 20170405 appended to previous boundary).

Pipe route (supplied 20170405)

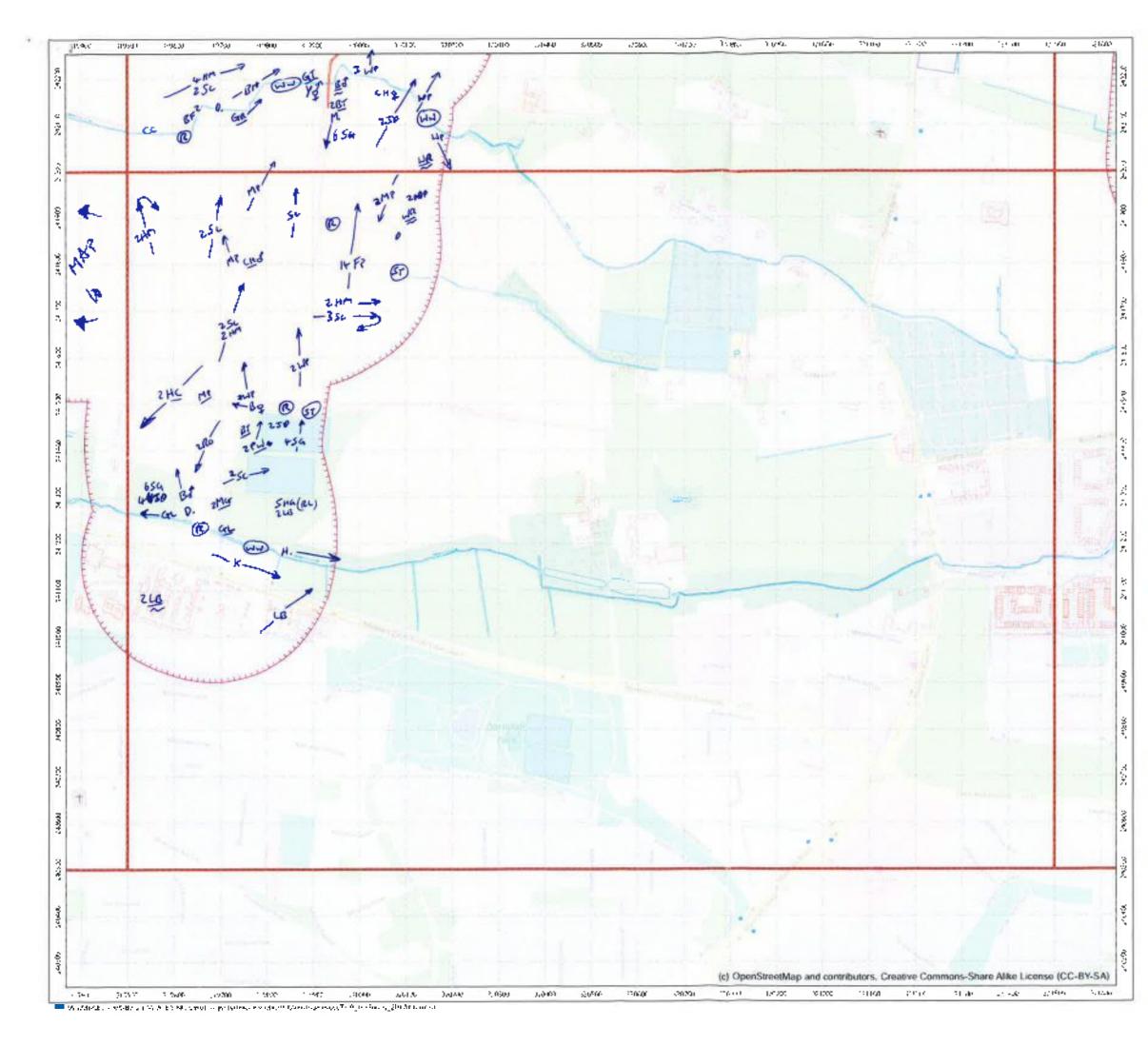
Greater Dublin Drainage

Breeding/winter bird survey

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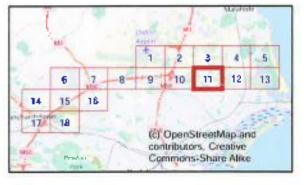
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RPS			
Surveyor N. Veale			
Date 24 /05	12017		
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"Please attach weather sheet Notes:



Legend



BBS/WWO survey boundary (250 m puffer of route supplied 20170405 appended to previous boundary).

Pipe route (supplied 20170405).

Greater Dublin Drainage

Breeding/winter bird survey

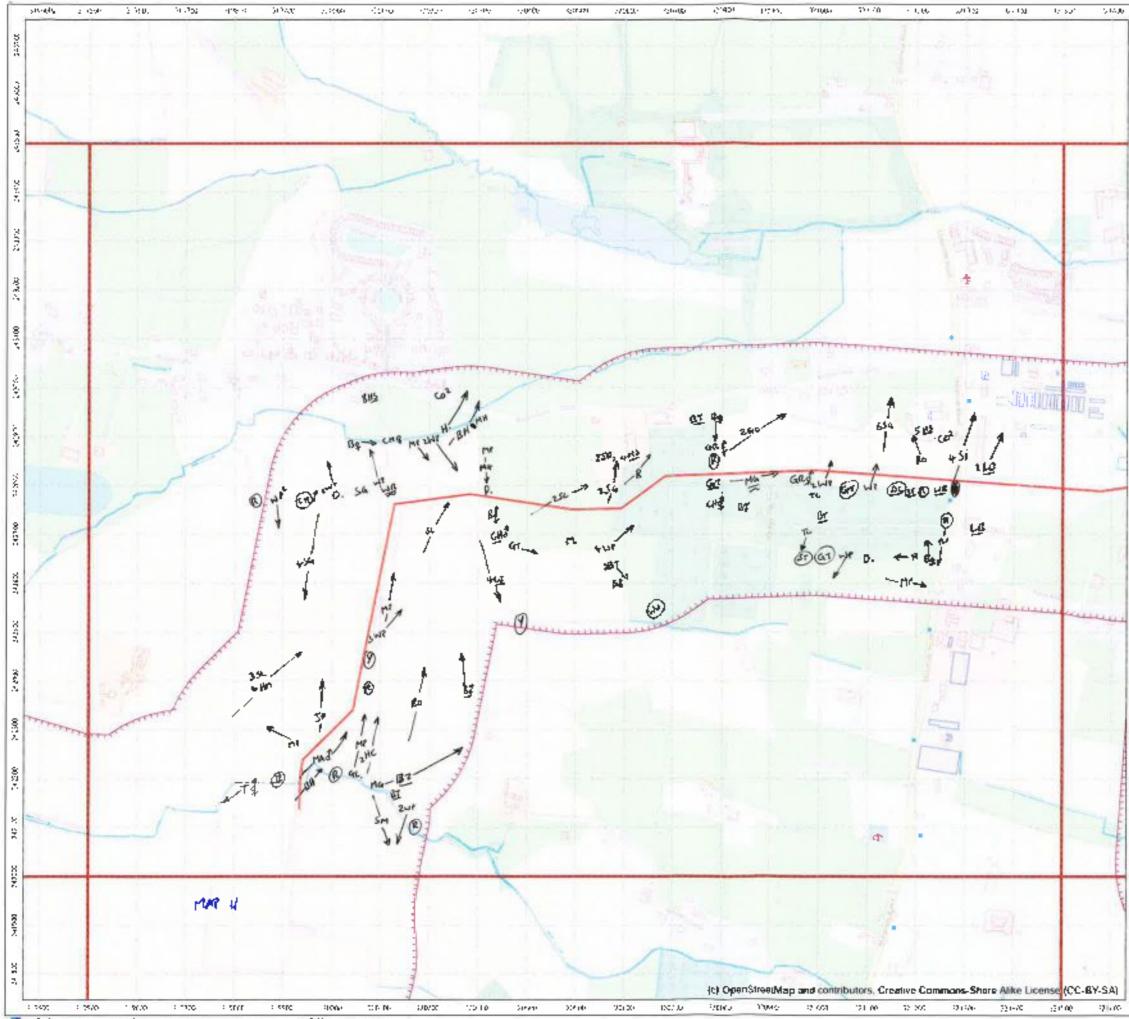
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0 5caler ( 7,500	200 m	4
Owner C&/04/0017	US NU SEC7909	Kero k
Drawn (H	Chevent DRAFT	Approved ORAFT

spage outploom

Calm     Calm       Rey     255/05/2a17       Rey     25/05/2a17       Rey     25/05/2a17       Rey     25/05/2a17       Rey     25/05/2a17       Rey     26/05/2a17       Rey     27/07	- 4 <b>8</b> €	None Drizzbe/Mist			
25/os/2+17     Ught brease       Pr     1/5/5       Pr     Nod. brease       Prod. pate     2       Prod. pate     11       Prod. pate     12       Prod. pate     12 <td< th=""><th>2 4 7 8 -12 13-18</th><th></th><th>ar Miss</th><th>6.G. 30</th><th>Height of choud Poor (&lt; 1km) 0 above average Moderate I. 3km) 1</th></td<>	2 4 7 8 -12 13-18		ar Miss	6.G. 30	Height of choud Poor (< 1km) 0 above average Moderate I. 3km) 1
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erver     N. Vert- Not use     Strong breeze       I Time     OS'.30     Fresh gale       ah Time     ITime     OS'.30       ah Time     ITime     Strong press       ah Time     ITime     Itime       ah Time     Itime     Strong       ah Time     Itime     Strong       ah Time     Itime     Strong       ah Time     Itime     Itime       ah Time     Itime     Itime       ah Time     Itime     Itime       ah Time     Itime     Itime <td></td> <td>-</td> <td></td> <td>Evel 1</td> <td>c150m 0 160.600m 1</td>		-		Evel 1	c150m 0 160.600m 1
Time     OX.30     Free gale       ah Time     12.au     Strong and       ah Time     12.au       bit 1/     & I       Nich gale     Strong and       et 1/     & I       Speed     direction       Speed     direction       Row     Cloud       Cound     Cloud       Nucl     Nucl       Nucl     Nucl       Nucl     Nucl       Nucl     Nucl       Stom     Cloud       Stom     Cloud       Stom     Cloud       Nucl     Stom       Nucl     Nucl       Stom     Cloud       Stom     Cloud       Nucl     Stom       Nucl     Stom       Nucl     Stom       Nucl     Stom       Stom					
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Wind     Wind     Wind     Rain     Cloud     Cloud       speed     direction     cover     height       2     Nu     0     S/V     2       3     U     0     7/K     2       3     U     0     7/K     2	11 64-72 12 73+	_			use nomes for axora inteo. E.g. WS • 5, guating 5 (in notes),
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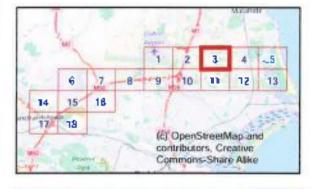
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Legend



BBS/WWO survey boundary (250 m buffer of raute supplied 20170405 appended to previous boundary).

Pipe route (supplied 20) 70405);

Greater Dublin Drainage

Breeding/winter bird survey

Page 3 of 8

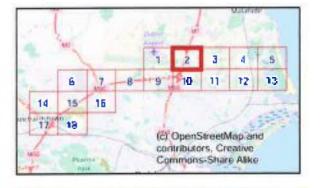






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### Legend



BBS/WWO survey boundary (250 m) buffer of route supplied 20170405 appended to previous boundary)

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Greater Dublin Drainage

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Page 2 of 8

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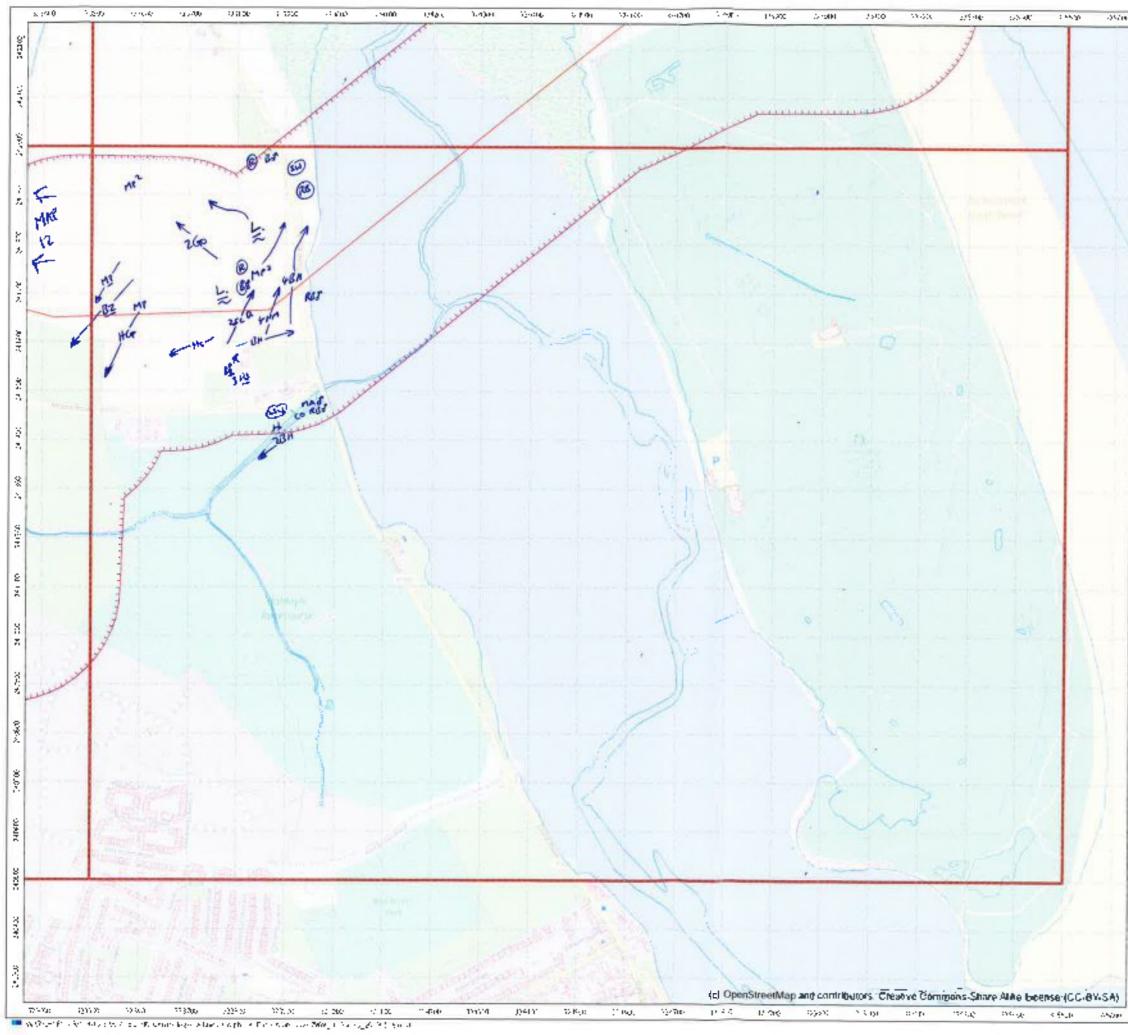
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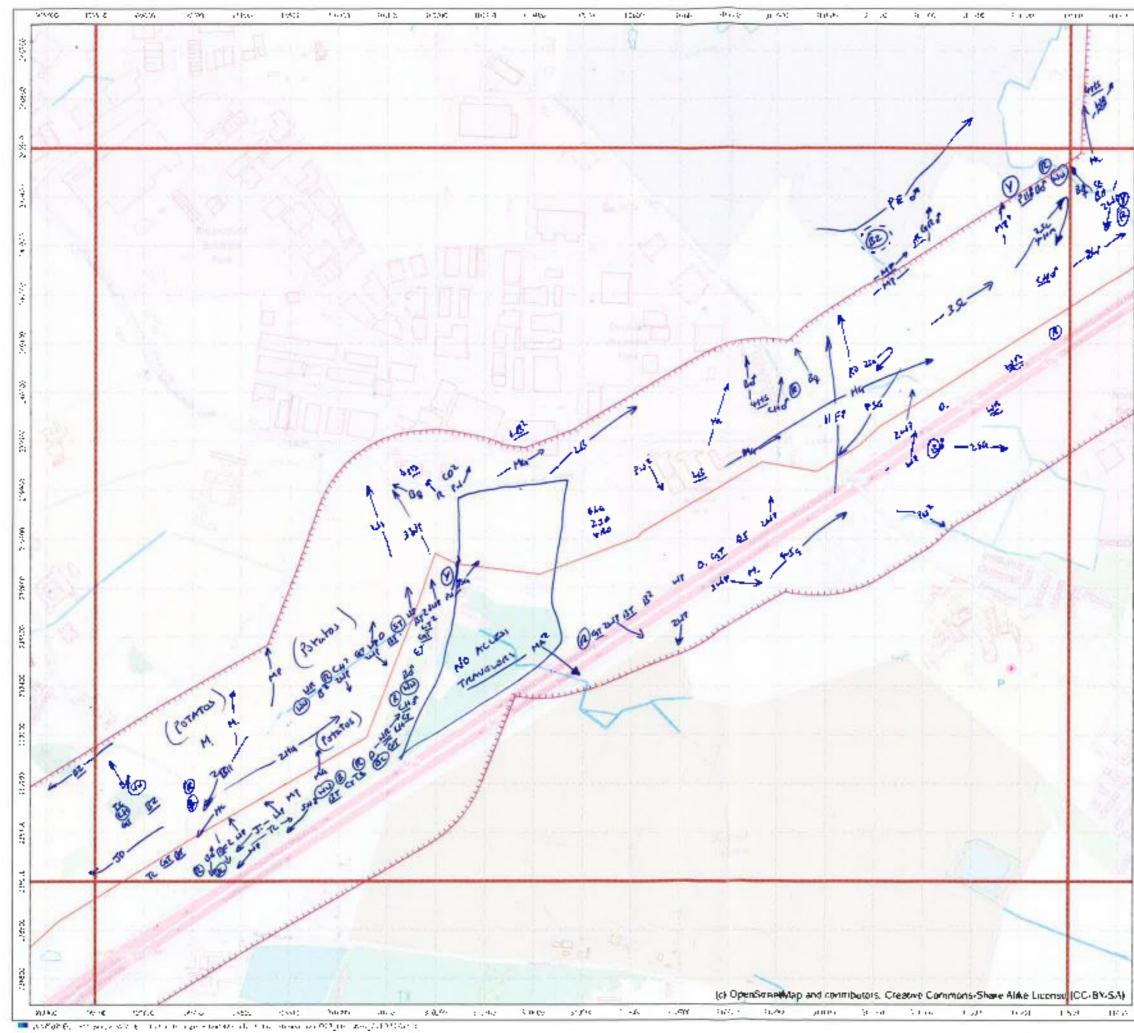
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	Greater Dublin Drainage
	Breeding/winter bird survey
	Page 13 of 18
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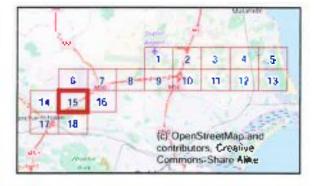
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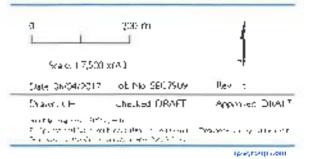
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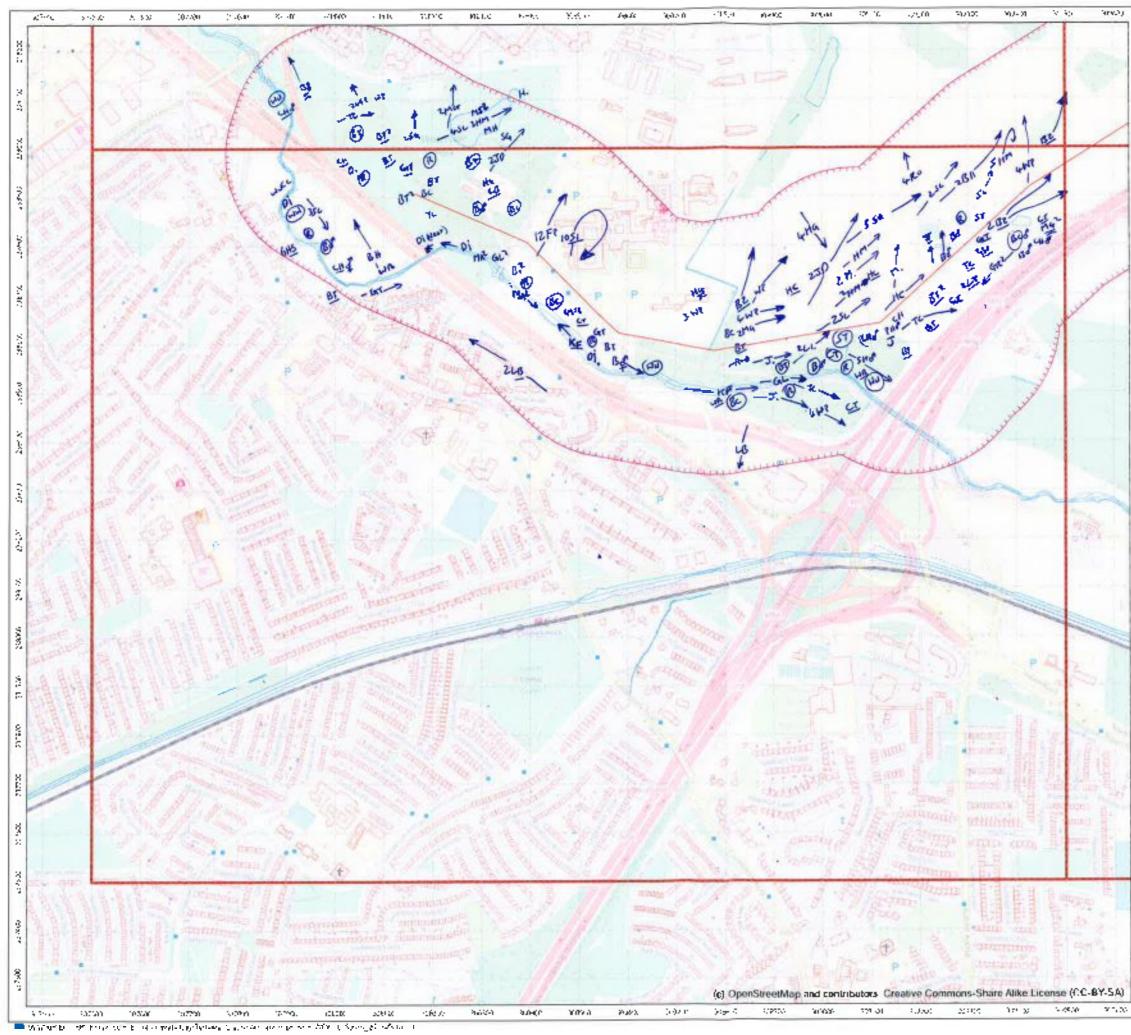
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Greater Dublin Drahage

Breeding/winter bird survey

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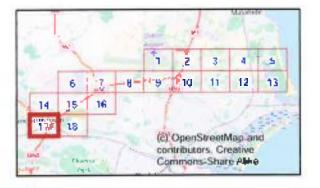




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Greater Dublin Drainage

Breeding/winter bird survey

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