

Greater Dublin Drainage Project Addendum

**Environmental Impact Assessment Report Addendum:
Volume 3A Part B of 6**

**Appendix A10.3 - Written Responses to Biodiversity (Marine
Ornithology) Queries at the 2019 Oral Hearing**

Uisce Éireann

October 2023

An Bord Pleanála Oral Hearing

Irish Water

Greater Dublin Drainage

Response to Questions raised by the Inspector

1. Response to Issues Raised on Breeding and Wintering Birds In Relation to Clonshagh Waste Water Treatment Plant:

Dr. Simon Zisman 27.03.2019

Response to Issues Raised on Breeding and Wintering Birds In Relation to Clonshagh Waste Water Treatment Plant:

Evidence on Biodiversity (Terrestrial and Aquatic):

- 1 This statement responds to the issues raised on birds around the proposed Waste Water Treatment Plant (WwTP).
- 2 The first part of the statement addresses the Inspectors comment on nesting birds (including raptors).
- 3 The second part addresses the wintering bird surveys that were completed for the Proposed Project, including survey method, dates of surveys and a summary of the results to understand the bird usage of the site.
- 4 Lastly the habitat and current use (intensive horticulture use) of the proposed WwTP site will be discussed in the context of its suitability for brent geese and other Special Protection Area (SPA) qualifying species.

Baldoyle Bay Special Protection Area (SPA) in Relation to the WwTP

- 5 Baldoyle Bay SPA is over 5km from the Clonshagh WwTP. The WwTP (as explained below) is of no importance for Special Conservation Interest species of this or any other SPA. This includes for brent geese, and also for all other migratory waders and wildfowl. The construction and operation of the WwTP will therefore have no adverse impact on the integrity of the SPA.

Breeding Birds (Including Raptors) at the WwTP

Terrestrial Breeding Bird Surveys (Including Raptors)

- 6 Breeding bird surveys were carried out along the terrestrial section of the route, as set out in section 11.2.3 of Chapter 11 of the Environmental Impact Assessment Report (EIAR) (Volume 3 Part A) (with underlying terrestrial bird survey data submitted to the Hearing).
- 7 Breeding bird surveys of the proposed WwTP were carried out in June 2012, April and June 2013, and repeated again between April and June in 2015 and May and June in 2017 using an abridged version of the British Trust for Ornithology's (BTO's) Common Bird Census Technique (Bibby et al. 2000; Gilbert et al. 1998). This method captured data on breeding bird activity within the survey area surrounding the proposed WwTP during the optimal survey window (April to July).
- 8 The survey extended 250m around each component of the Proposed Project along the route and at Clonshagh.

Results

- 9 From breeding bird surveys carried out along the proposed route and at Clonshagh WwTP, three raptor species were recorded:- kestrel, sparrowhawk and buzzard. Records were all of birds in flight, and no nests of any of these raptor species were identified in vegetation that would need to be removed for the Proposed Project.
- 10 From the Inspector's reference to 'large bird of prey', this would have been a buzzard.
- 11 Buzzards are a common tree-nesting raptor, resident all year round in this kind of farmland habitat.

Baseline Information in the Application

- 12 Baseline results for breeding birds are presented in section 11.3.5 of Chapter 11 of the Environmental Impact Assessment Report (Volume 3 Part A), including Table 11.12 which gives the birds recorded in 2015 and 2017 at the proposed WwTP site at Clonshagh.

Assessment of Effects from Construction

- 13 The effects of the Construction Phase of the Proposed Project on breeding terrestrial birds are covered in section 11.4.5 of Chapter 11 of the Environmental Impact Assessment Report (Volume 3 Part A).
- 14 There is potential risk of disturbance to nesting birds during the Construction Phase. However, this would be mitigated through a combination of pre-commencement nest checks by the Ecological Clerk of Works (ECoW), followed by assessment of any risk of disturbance to nests. This assessment would consider the nature of proposed construction activity (notably noise levels, the number of personnel and plant operating, and the lines of sight from the nest to these personnel and machinery). In order for disturbance to be avoided, the ECoW would therefore ensure the appropriate buffer distance was put in place between construction and nesting, so that the birds were not prevented from nesting successfully by associated noise or activity.
- 15 These measures are all tried and tested standard ornithological mitigation measures, used successfully in similar construction projects.
- 16 No impacts are predicted from the Operational Phase of the Proposed Project on this or any other bird species.

Conclusion in Relation to Breeding Birds Including Particular Reference to Raptors

- 17 The presence of buzzard noted by the Inspector is in line with breeding bird survey findings. Mechanisms are included in the application documentation to mitigate any impacts through identification and enforcement of suitable buffers around nests, to prevent disturbance from construction personnel or machinery. These measures would be implemented by the ECoW, as is standard and well-established practice on similar construction projects.

Winter Birds at the WwTP

Terrestrial Winter Bird Surveys (Including for Brent Geese and Other SPA Special Conservation Interest Species)

- 18 Winter bird surveys were carried out along the terrestrial section of the route, as set out in section 11.2.3 of Chapter 11 of the Environmental Impact Assessment Report (EIAR) (Volume 3 Part A) (with underlying terrestrial bird survey data submitted to the Hearing) and at the Clonshagh site.
- 19 The survey method used was the standard Winter Walkover Survey (Bibby et al. 2000; Gilbert et al. 1998). This method captured data on winter bird activity within the survey area surrounding the proposed WwTP during the optimal survey window (September to March).
- 20 The survey extended 250m around each component of the Proposed Project.
- 21 The choice and frequency of surveys were informed by desk study and scoping. Surveys were completed by highly experienced professional bird surveyors with extensive knowledge of birds that inhabit this type of farmland landscape in Ireland.

- 22 The survey method covered migratory waders and wildfowl (including SPA Special Conservation Interest species), as well as other bird species.
- 23 The survey data have been tabled as part of the precis submitted to the Hearing, at the request of the Inspector following evidence presented by Dr. Simon Zisman. As can be seen from the survey data supplied, the Proposed Project route was covered over a period of days, for each survey round.
- 24 Four surveys along the Proposed Project route (including the WwTP) were completed overall:
- The first survey was completed in 2015 on the 30th January;
 - The second survey was completed in 2017 and comprised visits over the 24th and 27th November;
 - The third survey covered the route from 20th to 23rd March and the 27th and 30th March 2017; and
 - The fourth survey was completed on the 13th and 14th November 2017.

Baseline Information in the Application

- 25 Baseline results for winter birds are presented in section 11.3.5 of Chapter 11 of the Environmental Impact Assessment Report (Volume 3 Part A). This confirmed:-

“There were no agglomerations of winter birds, such as geese or other wildfowl, or species reliant on farmland. The Proposed Project study area is therefore of no more than local importance for wintering birds”.

- 26 These findings were consistent with pre-existing desk study results that confirmed the WwTP area was not known as a site of any importance for wintering birds, including any migratory waders or wildfowl (including Special Conservation Interest of SPAs).
- 27 The sequence of three winter surveys (and corroborated by a fourth), using the industry-standard Winter Walkover Survey method, and completed by experienced professional surveyors over a spread of months through the winter period, and spanning multiple years, therefore generated highly robust baseline data on the birds using the WwTP area, from which to inform the EIAR.

Assessment of Effects on Wintering Birds (Including Waders and Wildfowl)

- 28 The effects of the Construction Phase of the Proposed Project on wintering birds is covered in section 11.4.5 of Chapter 11 of the Environmental Impact Assessment Report (Volume 3 Part A).

Construction Phase

- 29 In the case of the proposed WwTP site there will be the permanent loss of habitat, although the great majority of this is again, characteristically, intensively farmed fields chiefly of local importance (lower value)

Operational Phase

- 30 No operational phase impacts are predicted.

Conclusion in Relation to Wintering Birds Including Waders and Wildfowl

- 31 The WwTP area has been comprehensively surveyed over successive winter periods. The surveys were completed at Clonshagh using an appropriate survey method, by highly experienced professional bird surveyors, over an appropriate spread of winter months and over multiple years. The site is not used in any meaningful way by any Special Conservation Interest species from Baldoyle Bay or any SPA (including brent geese). Underpinned by the comprehensive site-specific data collected, the assessment shows there are no predicted impacts on wintering birds from either the Proposed Project's Construction or Operational Phase. This includes Special Conservation Interest species from Baldoyle Bay, Irelands Eye or other SPAs.

Description of Habitat the Proposed WwTP site For Breeding and Wintering Birds

- 32 The limited number and diversity of breeding and winter bird species recorded at the WwTP site is entirely consistent with the habitat characteristics and farming land use at the site.
- 33 The Phase 1 Habitat Survey results (Figure 11.5 in Chapter 11 and described in 11.3.2) show limited extent of hedgerows on site, and extensive monocultures of arable crops. The dominant habitat is therefore heterogeneous arable fields. During the crop growing season, once plants become established, the area is therefore of negligible value for breeding or wintering birds.
- 34 As noted in Chapter 19 'Agronomy' of the EIAR, and drawing on discussions with the farmers, the WwTP lands are referred to as being used for intensive horticultural operations, producing a rotation of cabbage, cauliflower and broccoli, with spring-sewn wheat or barley grown as a break crop.
- 35 As commonly occurs in intensive agricultural operations with high value crops, bird scarers have been deployed to protect crops from foraging birds (as noted during bird surveys completed at the proposed WwTP site). This further restricts the value of this proposed WwTP area for breeding and wintering birds.

Conclusion in Relation to Wintering Birds Including Waders and Wildfowl

- 36 Given the intensity of agricultural production, the site at Clonshagh is therefore of low value for breeding or wintering birds, including Special Conservation Interest species of Baldoyle Bay or other SPAs.

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Response to Inspector's Questions

Biodiversity (Marine & Terrestrial Ornithology) – Simon Zisman

**GDD Oral Hearing
Response to Inspector's Questions**

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 al¹. (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).

¹ 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	Godwit	LE	Long-eared Owl	SM	Sand Martin
AE	Arctic Tern	GX	Gannet	LT	Long-tailed Tit	SS	Sanderling
AV	Avocet	GW	Garden Warbler	MG	Magpie	TE	Sandwich Tern
BO	Barn Owl	GY	Garganey	MA	Mallard	VI	Saw's Warbler
BY	Barnacle Goose	GC	Goldcrest	MAN	Mandarin Duck	SG	Scarlet Rosefinch
BA	Bar-tailed Godwit	EA	Golden Eagle	MX	Manx Shearwater	SP	Scaup
BR	Bearded Tit	OL	Golden Oriole	MR	Marsh Harrier	CY	Scottish Crossbill
BS	Berwick's Swan	GF	Golden Pheasant	MT	Marsh Tit	SW	Sedge Warbler
BT	Bittern	GP	Golden Plover	MW	Marsh Warbler	NIS	Serin
BK	Black Grouse	GN	Goldeneye	MP	Meadow Pipit	SA	Shag
TY	Black Guillemot	GO	Goldfinch	MU	Mediterranean Gull	SU	Shelduck
BX	Black Redstart	GD	Goosander	ML	Merlin	SX	Shorelark
BJ	Black Tern	GI	Goshawk	M	Mistle Thrush	SE	Short-eared Owl
B	Blackbird	GH	Grasshopper Warbler	MO	Montagu's Harrier	SV	Showeler
BC	Blackcap	GB	Great Black-backed Gull	MH	Moorhen	SK	Siskin
BH	Black-headed Gull	GG	Great Crested Grebe	MS	Mute Swan	S	Skylark
BN	Black-necked Grebe	ND	Great Northern Diver	N	Nightingale	SZ	Slovanian Grebe
BW	Black-tailed Godwit	NX	Great Skua	NI	Nighthjar	SN	Snipe
BV	Black-throated Diver	GS	Great Spotted Woodpecker	NH	Nuthatch	SB	Snow Bunting
BT	Blue Tit	GT	Great Tit	OP	Osprey	ST	Song Thrush
BU	Bluthroat	GE	Green Sandpiper	OC	Oystercatcher	SH	Sparrowhawk
BL	Brambling	G	Green Woodpecker	PX	Peafowl/Peacock	AK	Spotted Cuckoo
BG	Brent Goose	GR	Greenfinch	PE	Peregrine	SF	Spotted Flycatcher
BF	Bullfinch	GK	Greenshank	PH	Pheasant	DR	Spotted Redshank
BZ	Buzzard	H	Gray Heron	PF	Pied Flycatcher	SG	Starling
CG	Canada Goose	P	Gray Partridge	PW	Pied Wagtail	SD	Stock Dove
CP	Capercaillie	GV	Grey Plover	PG	Pink-footed Goose	SC	Stonchat
C	Carrian Crow	GL	Grey Wagtail	PT	Pintail	TN	Stone-curlew
CW	Cattil's Warbler	GI	Greylag Goose	PO	Pochard	TM	Storm Petrel
CH	Chaffinch	GU	Guillemot	PM	Pomigian	SL	Swallow
CC	Chiffchaff	FW	Guineafowl (Helmeted)	PU	Puffin	SI	Swift
CF	Chough	HF	Hawlinch	PS	Purple Sandpiper	TO	Tawny Owl
CL	Cirl Bunting	HH	Hen Harrier	Q	Quail	T	Teal
CT	Coal Tit	HG	Herring Gull	RN	Raven	TK	Temminck's Stint
CD	Collared Dove	HY	Hobby	RA	Razorbill	TP	Tree Pipit
CM	Common Gull	HZ	Honey Buzzard	RG	Red Grouse	TS	Tree Sparrow
CS	Common Sandpiper	HC	Hooded Crow	KT	Red Kite	TC	Treecreeper
CX	Common Scoter	HP	Hoopoe	ED	Red-backed Shrike	TU	Tufted Duck
CN	Common Tern	HM	House Martin	RM	Red-breasted Merganser	TT	Tunstone
CO	Coat	HS	House Sparrow	RQ	Red-crested Pochard	TD	Turtle Dove
CA	Cormorant	JD	Jackdaw	FV	Red-footed Falcon	TW	Twite
CB	Corn Bunting	J	Jay	RL	Red-legged Partridge	WA	Wulver Roal
CE	Comercallie	K	Kestrel	NK	Red-necked Phalarope	W	Wheatear
CI	Crested Tit	KF	Kingfisher	LR	Redpoll (Lesser)	WM	Whimbrel
CR	Crossbill (Common)	KI	Kittiwake	RK	Redshank	WC	Whinchat
CK	Cuckoo	KN	Knot	RT	Redstart	WG	White-fronted Goose
CU	Curlew	LM	Lady Amherst's Pheasant	RH	Red-throated Diver	WH	Whitethroat
DW	Dartford Warbler	LA	Lapland Bunting	RE	Redwing	WS	Whooper Swan
DI	Dipper	L	Lapwing	RB	Red Bunting	WN	Wigeon
DO	Dottrel	TL	Leach's Petrel	RW	Red Warbler	WT	Willow Tit
DN	Dunlin	LB	Lesser Black-backed Gull	RZ	Ring Ouzel	WV	Willow Warbler
D	Dunrock	LS	Lesser Spotted Woodpecker	RP	Ringed Plover	OD	Wood Sandpiper
EG	Egyptian Goose	LW	Lesser Whitethroat	RI	Ring-necked Parakeet	WO	Wood Warbler
E	Eider	LI	Linnat	R	Rabin	WK	Woodcock
EP	Feral Pigeon	ET	Little Egret	DV	Rock Dove (not feral)	WL	Woodlark
ZI	Feral/hybrid goose	LG	Little Grebe	RC	Rock Pipit	WP	Woodpigeon
ZF	Feral/hybrid mallard type	LU	Little Gull	RO	Rook	WR	Wren
FF	Fieldfare	LO	Little Owl	RS	Roseate Tern	WY	Wryneck
FC	Fitzcrest	LP	Little Ringed Plover	RY	Ruddy Duck	YW	Yellow Wagtail
F	Fulmar	AF	Little Tern	RU	Ruff	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.

Figure 3.3

(continued)



A When nesting between two points, the solid line indicates it was definitely the same bird.



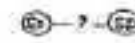
Two Warden records for same bird, i.e. definitely different birds. The dashed line indicates a simultaneous combination with other possible separating activities.



Two Warden records occupied by two mutually exclusive belonging to different pairs. This is another example of the value of order (not. Only adjacent nests are able to be shared).



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

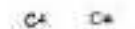


A question-marked solid line indicates that the registrations probably refer to the same bird. The confusion is important one when the bird was close (starts to do) was already covered – it is possible to mark the position of (probably the same) bird's records before, without the use of colour marking, if one was recorded without using the question-marked solid line, observation of continuous record.



WR, WR

When there are two joining the registrations, this indicates that the birds are probably different. (It is possible to make question-marked solid line, indicating that the registrations were almost certainly different birds.)



CA, CA

When adjacent pairs are marked with a line, it will also be assumed that they were two and second, third, or a replacement nest to cover an entire colony.

To show confusion, indicate when registrations relate to different birds, and when it is the same bird. This proper use is essential for the accurate assessment of clusters.

It is also the standard ITO code (unless both should be used).

Some territories will mark the plot boundary and several ways of tracking will have an unmarked bird. Normally it is necessary to mark birds outside the plot. In the field, this can be accomplished by recording everything determined by 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.

C. Making recordings

Unless you are making a detailed study of birds on a plot, it may be necessary to describe its vegetation in some way (Figures 1.1). Since the best data are mapped, it is best also to map the vegetation in some habitat notation by birds. A like plot are each relatively uniform and the same type of other standards from one another, it might be sufficient to find the maximum the variation without mapping it.

Variations of the method

Up until now, we have concentrated on the BIRD's German Bird Census, where it is important that the method does not vary. The other systems a fundamental to vary the method in order to suit.

1. Restricting the list of species recorded

The CBC and ITO normally restricts include all species, so at least in most so far possible be recorded. In the purpose of the study is more restricted, its list of birds can be simplified. This helps to concentrate on the birds on the species list. The purpose of making a list of birds together enough data to register in studies of species differing in their breeding and nesting systems. If only one species is being studied, the time at the nest-stopping birds starts and ends, it may be useful.

Recognizing the limitations between activities of birds of the same species is the single most important of territory mapping. In a single plot or a particular species, more often can be put into feeding neighbours in a particular or lighting. The question should be repeated after each bird use. In this way, it would be observed that some are some where it was going to be difficult to resolve the number and pattern of clusters. Last field effort could be made in three places on subsequent visits.

2. Making responses

The observer can increase the chance of finding birds and obtaining simultaneous registrations by using a tape to play studies of song of the target species and recording any responses. If a tape is played in place that has been territory boundaries, it might help to see whether or not there is a response from both birds. Owners of territories who respond to less than when the registrations are close. A tape recorder could increase the chance of getting sufficient records for a cluster. Many migrants only sing early in the breeding season, but a tape recorder can give a response while birds are nesting and have largely stopped singing. Thought should be given, however, to the risk of disturbance caused by the method.

In some cases birds, they can be used to increase the chance of obtaining registrations. The tape recorder need to cover registration and the feeding calls of birds in studies. It goes without saying that any birds are well trained beyond handling are needed if this method is to do more good for the research than it costs the BIRD.

Figure 3.2
Standard
codes for
mapping
birds

BD	Bank Swallow	MT	Marsh Tit
CB	Great Spotted Woodpecker	WT	White Tit
S	Sparrow	CT	Cuckoo Tit
TP	Tree Pipit	DT	Dunn Tit
WH	Wren	GT	Great Tit
P	Polecat	NH	Nuthatch
N	Nightingale	TJ	Tree Sparrow
SC	Scops Owl	MO	Mistle Thrush
B	Bracknell	FO	Fox
ST	Scot Thrush	C	Canary Crow
SW	Song Warbler	PK	Pheasant
RW	Red Wattlebird	SO	Song Sparrow
OW	Osprey	CH	Chaffinch
WB	Whimbrel	OR	Orchard Oriole
OW	Golden Oriole	CO	Coal Tit
BC	Blackbird	L	Linnit
WO	Wood Warbler	LP	Lizard
CC	Chiffchaff	SP	Sparrow
OC	Owl	V	Vermin
HF	Red Phalarope	RI	Redstart
LT	Long-tailed Tit	CI	Counting

A selection of standard species codes developed by the British Trust for Ornithology for British passerine species commonly recorded in Common Bird Census plots. This full list (British Birds 1994) can be used for assignment and recording in all habitats and conditions throughout the Western Palearctic.

3. Bird recording

The identity and activity of all birds are mapped with small and self-writing in pencil or ballpoint pens. If the observer can, please take care, ballpoint do not write on a wet map but pencils will do. It is helpful to use a standard list of codes for bird species. Codes for some British birds are shown in Fig. 3.4. An observer can also place records on a map (Fig. 3.5). Dates should be noted whenever it is practical to do so, such as the sex and age of the bird. The official critical in analysis is to know whether a multiple observation is a pair of juveniles. Were two different birds recorded, the male and female of a pair, or bird of the same sex and thus presumably near a territory boundary?

The most important concentration in this location of individuals of the same 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 multivariate regression. It may not be clear if a singing bird is different from one seen earlier, a short discussion on whether singing or registration should be joined to a line with respect that to indicate that the observer is not sure whether they are the same bird or not. This is quite likely to be the case. If they truly are different, the observer should indicate that both will appear in subsequent data on a different visit.

Figure 3.3

Standard
symbols for
bird
activity

CH	Chaffinch	CH g	Chaffinch singing, with age, sex or number of birds if appropriate. CH indicates one pair, 2CH means two pairs together.
CH juv	Chaffinch	CH juv	Immature Chaffinch with parent(s) in attendance.
R	Robin	R	Adult Robin.
R juv	Robin	R juv	Immature Robin (age, sex or number of birds if appropriate). Note that song thoughts have strong territorial significance.
R song	Robin	R song	A Robin in song.
R & R	Robins	R & R	An aggressive encounter between two Robins.
R & R juv	Robins	R & R juv	An aggressive encounter of Robins, do not mark unpaired birds, which are of no territorial significance by themselves.
R BT	Robin	R BT	Due to nesting a specially proved site (eg nestbox).
R W on	Robin	R W on	Robin singing with an adult sitting.
R W juv	Robin	R W juv	Robin singing with a juvenile.
R W feed	Robin	R W feed	Robin singing with food.

Movements of birds can be indicated using the following conventions:

GR	Greenfield	GR	Greenfield flying over own territory in flight.
GR	Greenfield	GR	Greenfield flying over own territory in flight.
GR	Greenfield	GR	Greenfield flying over own territory in flight.

(continued)

The standard IBC list of conventions is shown. These are designed for clear and unambiguous recording. Symbols can be combined where necessary. Additional symbols of territorial significance, such as displaying or nesting, 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.

BIRDS USING SITE

SURVEY SECTION	DATE	B.	BF	BH	BT	BZ	CD	CH	CM	CT	D.	DI	ET	FF	GC	GL	GO	GP	GT	GR	H	HC	HG	HS	JD	K.	L.	LI	LT	M.	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						11					1	10		11			27		
Railway - R106	30/01/15	6									2			2			1																				3		8			4		

BIRDS IN FLIGHT ONLY

SG	SH	SN	ST	TS	WP	WR	Y.	B.	BF	BH	BT	BZ	CH	CM	CT	D.	FF	GC	GO	GP	GT	GR	H	HC	HG	HS	JD	L.	LI	LT	M.	MG	MP	MS	PW	R.	RB	RE	RN	RO	S	SG	SH	SN	ST	TS	WP	WR	Y.					
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																		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																								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																				3				
16	1		5		40	6	1					2							2					2		11				4	5	10																			32			
					10	3		1				1		14											14						4																					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).

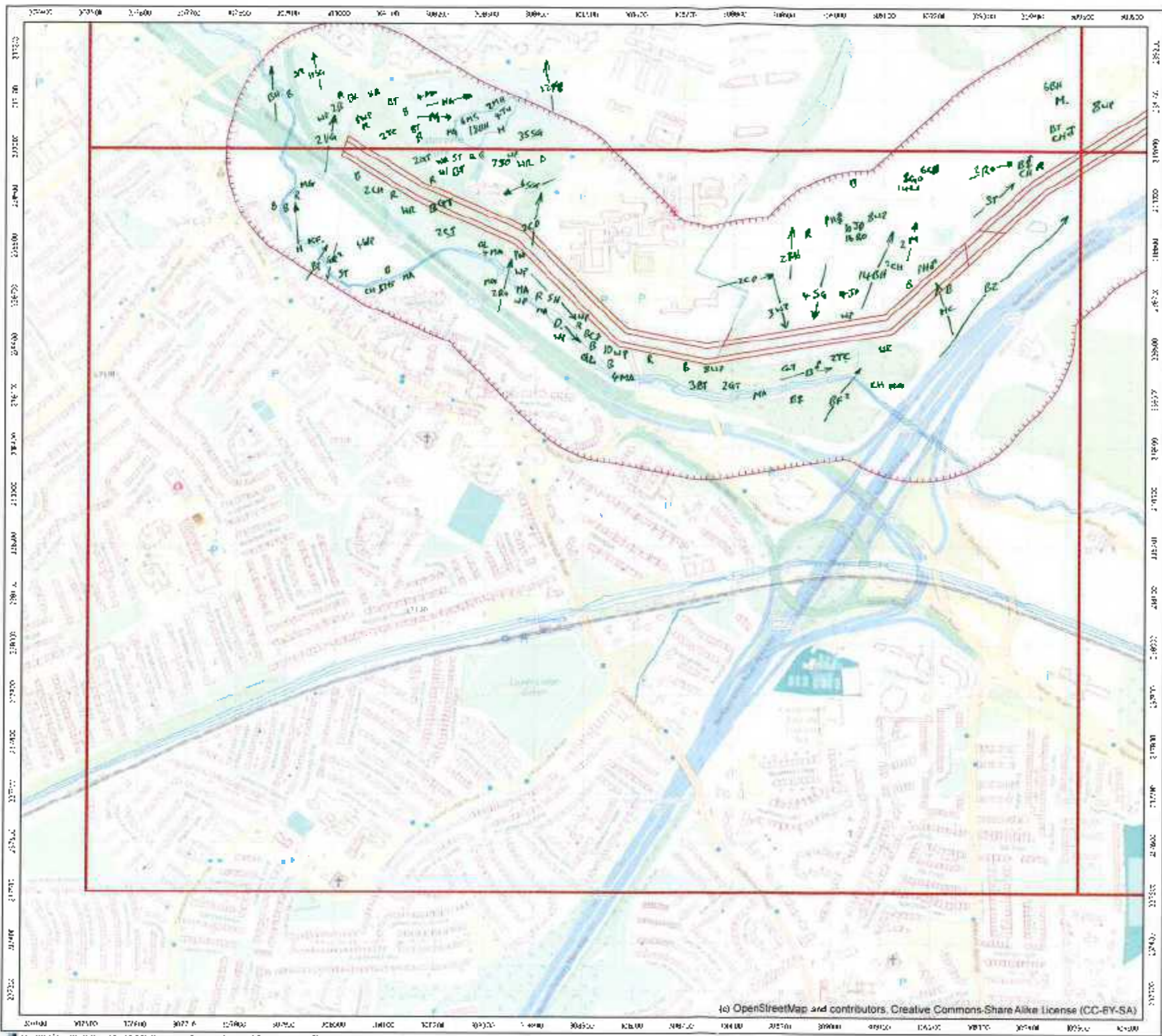
RPS	Weather Sheet
Site	GDD
Date	16/11/2015
Survey	Winker W.O.
Observer	N. Veale
Start Time	08:30
Finish Time	15:30
Sheet 1/ & [] Maps attached	

Wind Speed	Direction	Rain/Snow	Cloud Cover	Cloud Height	Visibility
Calm Light air Light breeze Gentle breeze Mod breeze Fresh breeze Strong breeze Mod gale Fresh gale Strong gale Whole gale Storm Hurricane	N NE E SE S SW W NW	None Drizzle/Mist Light showers Heavy showers Heavy rain Lying Snow None On cells High ground	In eights e.g. 3/8 Frost None Ground All day	Height of cloud above average height of viewshed <150m 150-500m >500m	Poor (<1km) Moderate (1-3km) Good (>3km)
0 1 2 3 4 5 6 7 8 9 10 11 12	1 2 3 4 5 6 7 8 9 10 11 12	0 1 2 3 4 0 1 2	0 1 2	0 1 2	0 1 2

Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes (e.g. temperature)
Hr 18:30	3	SW	0	6/8	2	2	---	---	7°C
Hr 29:30	3	SW	0	6/8	2	2	---	---	8°C
Hr 30:30	4	SW	0	6/8	2	2	---	---	8°C
Hr 41:30	3	SW	2	6/8	1	2	---	---	9°C
Hr 52:30	3	SW	1	7/8	1	1	---	---	9°C
Hr 63:30	4	SW	2	8/8	1	2	---	---	8°C
Hr 74:30	4	SW	2	8/8	1	2	---	---	8°C
Hr 8									

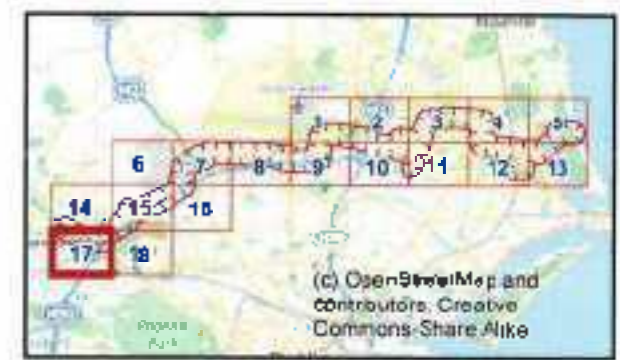
Field Notes:
Maps attached

For office use only. NB- Initial AND date ALL boxes.	Logged	Database Entered	Database validated	GIS Entered	GIS Validated




*Please attach weather sheet

Notes:



Legend

 B36/VVO survey boundary (250 m buffer, supplied 20140420, plus 250 m buffer of protruding access track supplied 201509 7)

Greater Dublin Drainage

Breeding/winter bird survey

Page 17 of 18



Scale 1:7,500 @A3

Date 20/07/15 Job No. 507909 Rev. 0

Drawn C-H Checked DRAFT Approved DRAFT

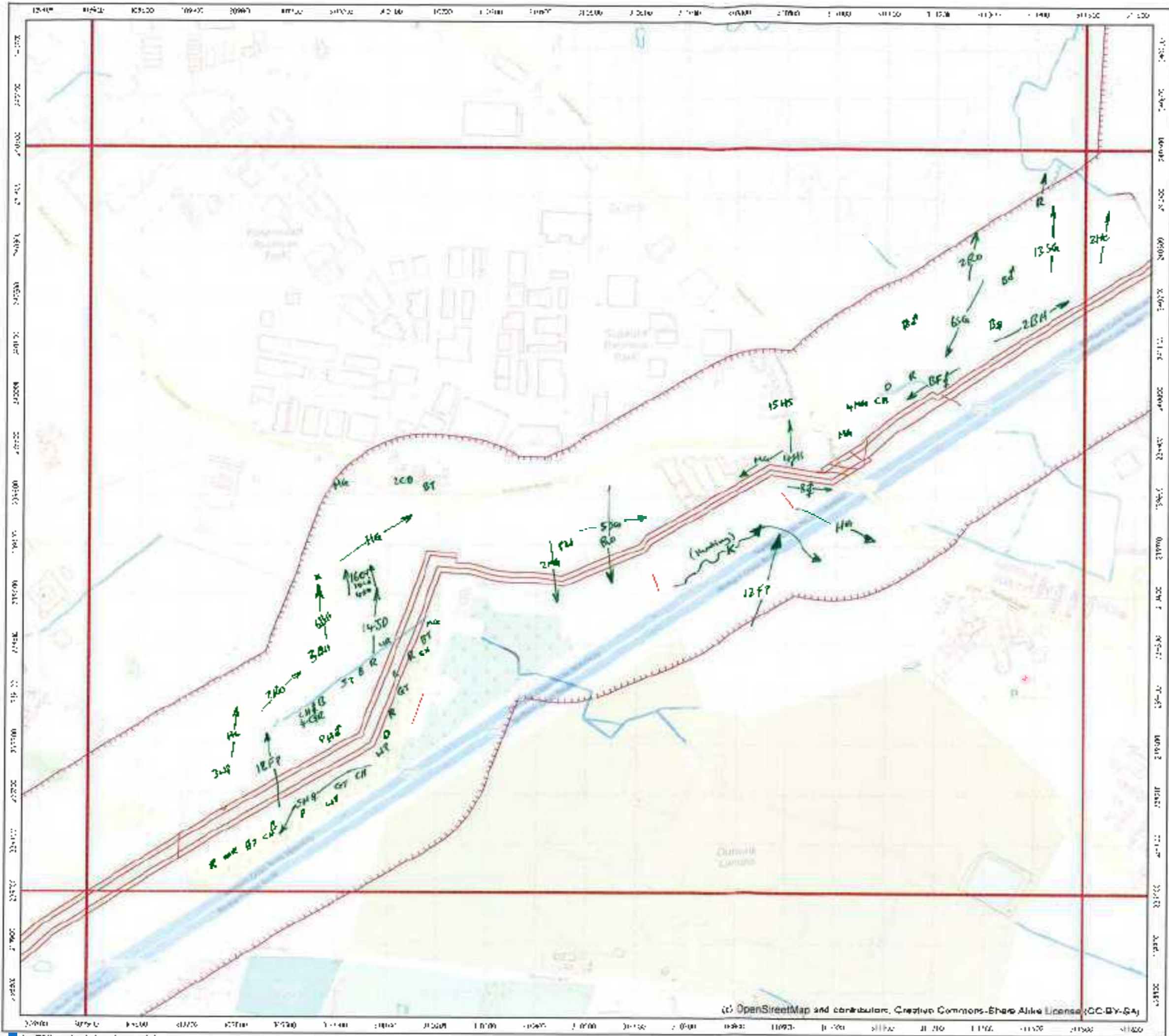
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RIPS	Weather Sheet
Site	GPO
Date	17/11/2015
Survey	Winter W.O.
Observer	Nick Vede
Start Time	08:45
Finish Time	14:05
Sheet 1/ & 1] Maps attached	

Wind Speed		Direction		Rain/Snow		Cloud Cover		Cloud Height		Visibility	
Beaufort	Mph										
Calm	0	N	None	0	In eights	Height of cloud above average height of viewshed	0	Poor (<1km)			
Light air	1-3	NE	Drizzle/Mist	1	e.g. 3/8		1	Moderate (1-3km)			
Light breeze	4-7	E	Light showers	2			2	Good (>3km)			
Genlle breeze	8-12	SE	Heavy showers	3							
Mod breeze	13-18	S	Heavy rain	4							
Fresh breeze	19-24	SW	Lying Snow								
Strong breeze	25-31	W	None	0	None						
Mxd gale	32-38	NW	On site	1	Ground						
Fresh gale	39-46		High ground	2	All day						
Strong gale	47-54										
Whole gale	55-63										
Storm	64-72										
Hurricane	73+										

Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes (e.g. temperature)
Hr 1 08:45	2	E	0	8/8	2	2	---	---	7°C
Hr 2 09:45	3	SE	2	8/8	2	2	---	---	8°C
Hr 3 10:45	3	SE	2	8/8	2	2	---	---	9°C
Hr 4 11:45	3	SSE	2	8/8	1	1	---	---	10°C
Hr 5 12:45	4	S	2	8/8	1	2	---	---	13°C
Hr 6 13:45	4	SW	2	8/8	1	2	---	---	Survey stopped at 14:05, High Winds
Hr 7 14:45	6-8	SW	Surf V.M	Stopped			---	---	Gale force Winds from SW
Hr 8									

Field Notes: Maps attached			
For office use only. NE-Initial AND date ALL boxes.	Logged	Database Entered	Database validated
			GIS Entered
			GIS validated



RPS Winter Walk over

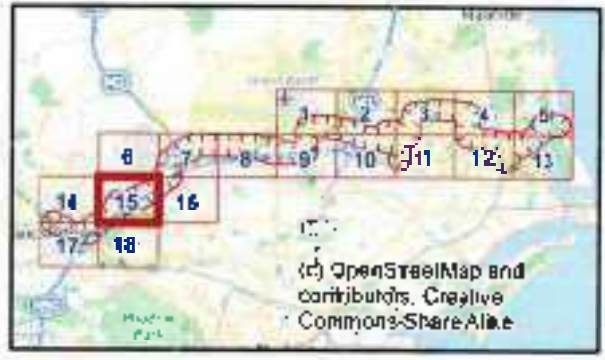
Surveyor: N. Venter

Date: 17/11/2015

Start time: 08:45 End time: 14:05

*Please attach weather sheet

Notes:



Legend

BBB/WVO survey boundary (250 m buffer, supplied 20140420, plus 350 m buffer of protruding access track supplied 20 509 7)

Greater Dublin Drainage

Breeding/winter bird survey

Page 15 of 18

0 100 m

Scale: 1:7500 @A1

Date: 20/10/2015 Job No: SEC 909 Rev: b

Drawn: CH Checked: DRAFT Approved: DRAFT

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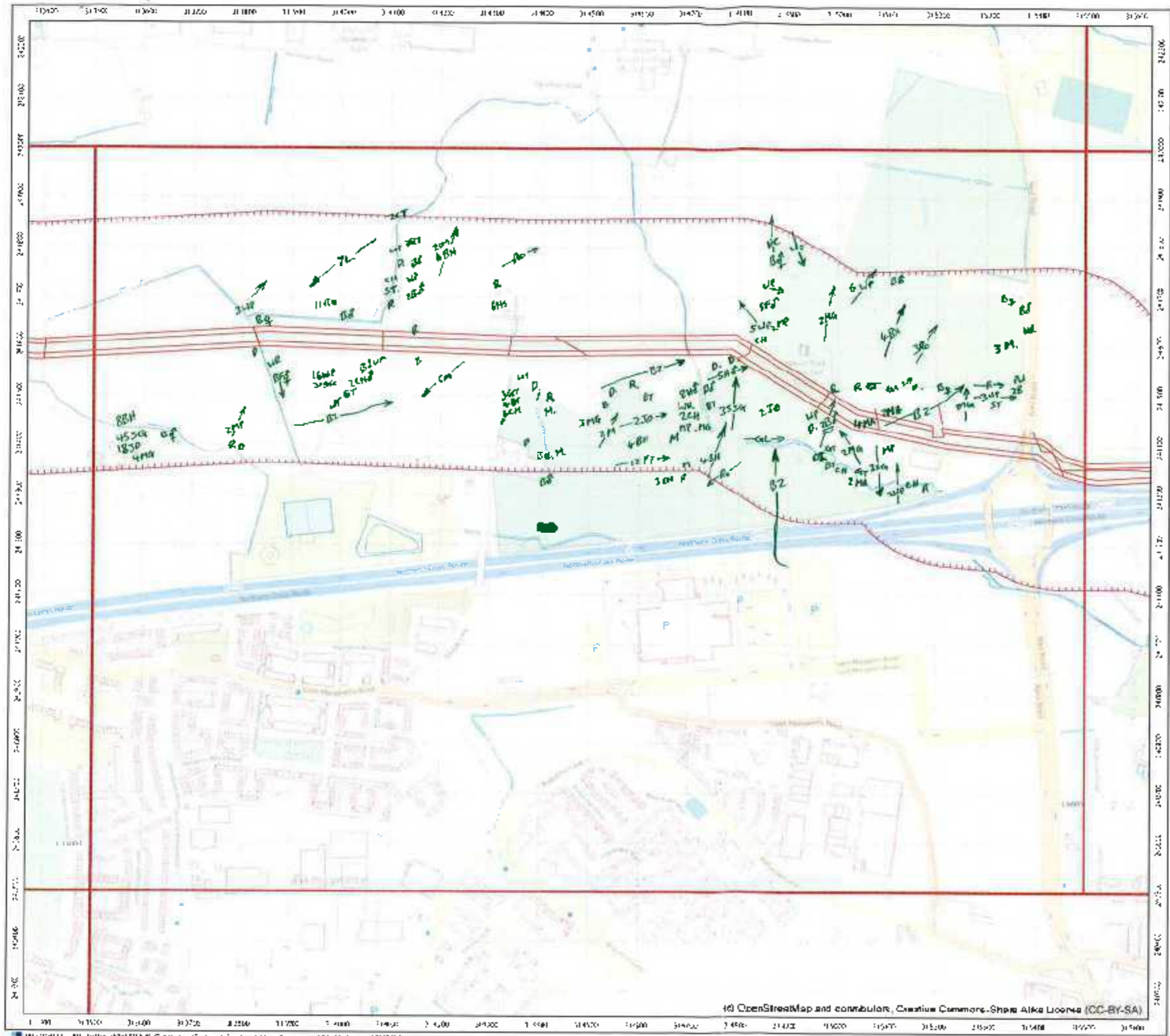
RPS	Weather Sheet
Site	G-00
Date	20/11/2015
Survey	Winter W.O.
Observer	N. Vede
Start Time	8:00
Finish Time	14:15
Sheet 1/ & [] Maps attached	

Wind Speed		Direction		Rain/Snow	Cloud Cover	Cloud Height	Visibility
Calm	Beaufort	Mph					
0	0	<1	N	None	0	Height of cloud above average	Poor (<1km)
1	1	1-3	NE	Drizzle/Mist	1	height of viewshed	Moderate (1-3km)
2	2	4-7	E	Light showers	2		Good (>3km)
3	3	8-12	SE	Heavy showers	3		
4	4	13-18	S	Heavy rain	4		
5	5	18-24	SW	Lying Snow		<150m	
6	6	25-31	W			150-500m	
7	7	32-38	NW			>500m	
8	8	39-48		None	0	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).	
9	9	47-54		Onsets	1		
10	10	55-63		High ground	2		
11	11	64-72					
12	12	73+					

Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes (e.g. temperature)
Hr 1 8:00	3	SW	0	4/8	2	1			
Hr 2 9:00	4	SW	0	5/8	2	2			
Hr 3 10:00	4	W	0	6/8	2	2			
Hr 4 11:00	4	W	0	8/8	2	2			
Hr 5 12:00	4	W	0	8/8	2	2			
Hr 6 13:00	4	NW	3	8/8	1	1			
Hr 7 14:00	4	NW	3	8/8	1	1			Gale force gusts Sunday stopped at 14:15
Hr 8									

Field Notes:
 Maps attached

For office use only. NB - Initial AND date ALL boxes.	Logged	Database Entered	Database Validated	GIS Entered	GIS Validated
---	--------	------------------	--------------------	-------------	---------------



Surveyor: N. Veale

Date: 20/11/2015

Start time: 8:00

End time: 16:15

*Please attach weather sheet

Notes:



Legend

- BBS/WWO survey boundary (250 m buffer, supplie 20' 10420, plus 750 m buffer of protruding access track supplie 20' 50917)

Greater Dublin Drainage

Breeding/winter bird survey

Page 8 of 18



Scale: 1:7,500 @A3

Date: 20/11/2015 Job No: 500929 Rev: h

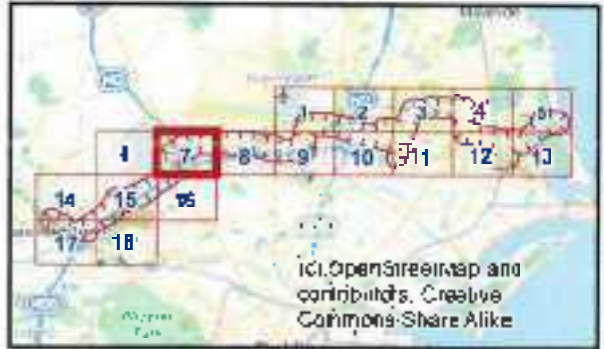
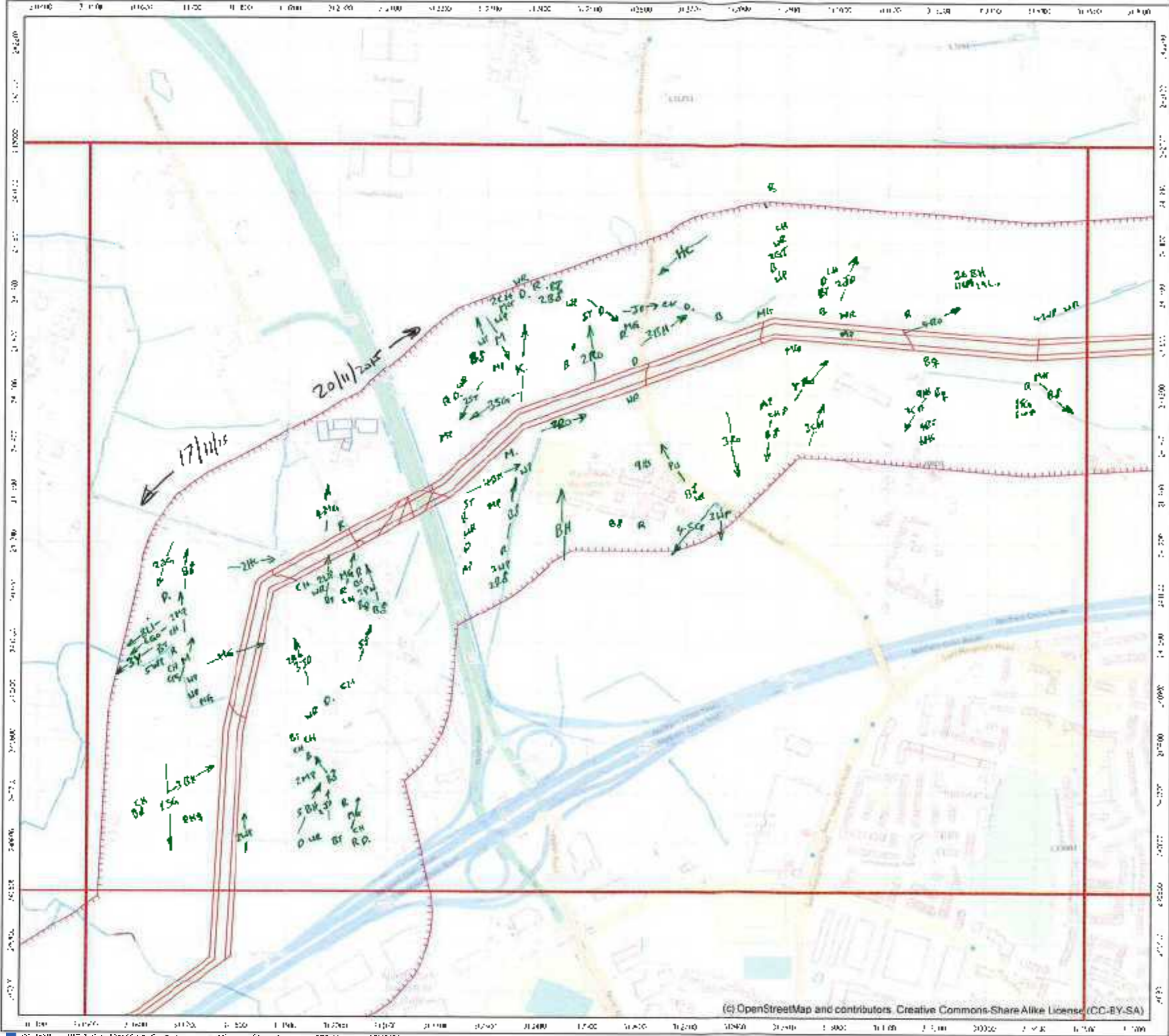
Drawn: CH Checked: DRAFT Approved: DRAFT

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Surveyor: N. Vede
Date: 17/11/2015 + 20/11/2015

Start time: End time:

*Please attach weather sheet
Notes:



Legend
BBS/WWD survey boundary (250 m buffer, supplied 20140420, plus 250 m buffer of protruding access track supplied 20150917)

Greater Dublin Drainage
Breeding/winter bird survey
Page 7 of 18

0 200 m
Scale 1:7500 @A1
Date 20/12/2015 Job No SEC1505 Rev: b
Drawn: CH Checked: DRA Approved: DRA
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mapbox.com

RPS	Weather Sheet
Site	G00
Date	24/11/2015
Survey	Winter U.O.
Observer	N. Veebe
Start Time	8:20
Finish Time	15:20
Sheet 1 / & [] Maps attached	

Wind Speed		Direction		Rain/Snow		Cloud Cover		Cloud Height		Visibility	
Calm	0	N	0	None	0	In eighths	Height of cloud	0	Below	<1km	0
Light air	1	NE	1	Drizzle/Mist	1	e.p. 3/8	above average	1	Moderate	(1-3km)	1
Light breeze	2	E	2	Light showers	2		height or	2	Good	(3-10km)	2
Gentle breeze	3	SE	3	Heavy showers	3		viewed	3			
Moderate breeze	4	S	4	Heavy rain	4			4			
Fresh breeze	5	SW	5	Lying Snow			<150m	0			
Strong breeze	6	W	6	None	0		150-500m	1			
Mod. gale	7	NW	7	None	0		>500m	2			
Fresh gale	8		8	On edge	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. E.g. WS - 5, gushing 6 (in notes).				
Strong gale	9		9	High ground	2						
Whole gale	10		10								
Storm	11		11								
Hurricane	12		12								

Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes (e.g. temperature)
Hr 1 8:20	3	SW	0	6/8	2	2			7°C
Hr 2 9:20	4	W	1	7/8	1	1			7°C
Hr 3 10:20	4	W	2	8/8	1	1			7°C
Hr 4 11:20	4	W	2	8/8	1	1			8°C
Hr 5 12:20	4	W	1	8/8	1	1			8°C
Hr 6 13:20	4	W	1	8/8	1	1			8°C
Hr 7 14:20	4	W	2	8/8	1	1			
Hr 8									

Field Notes:
 Maps attached

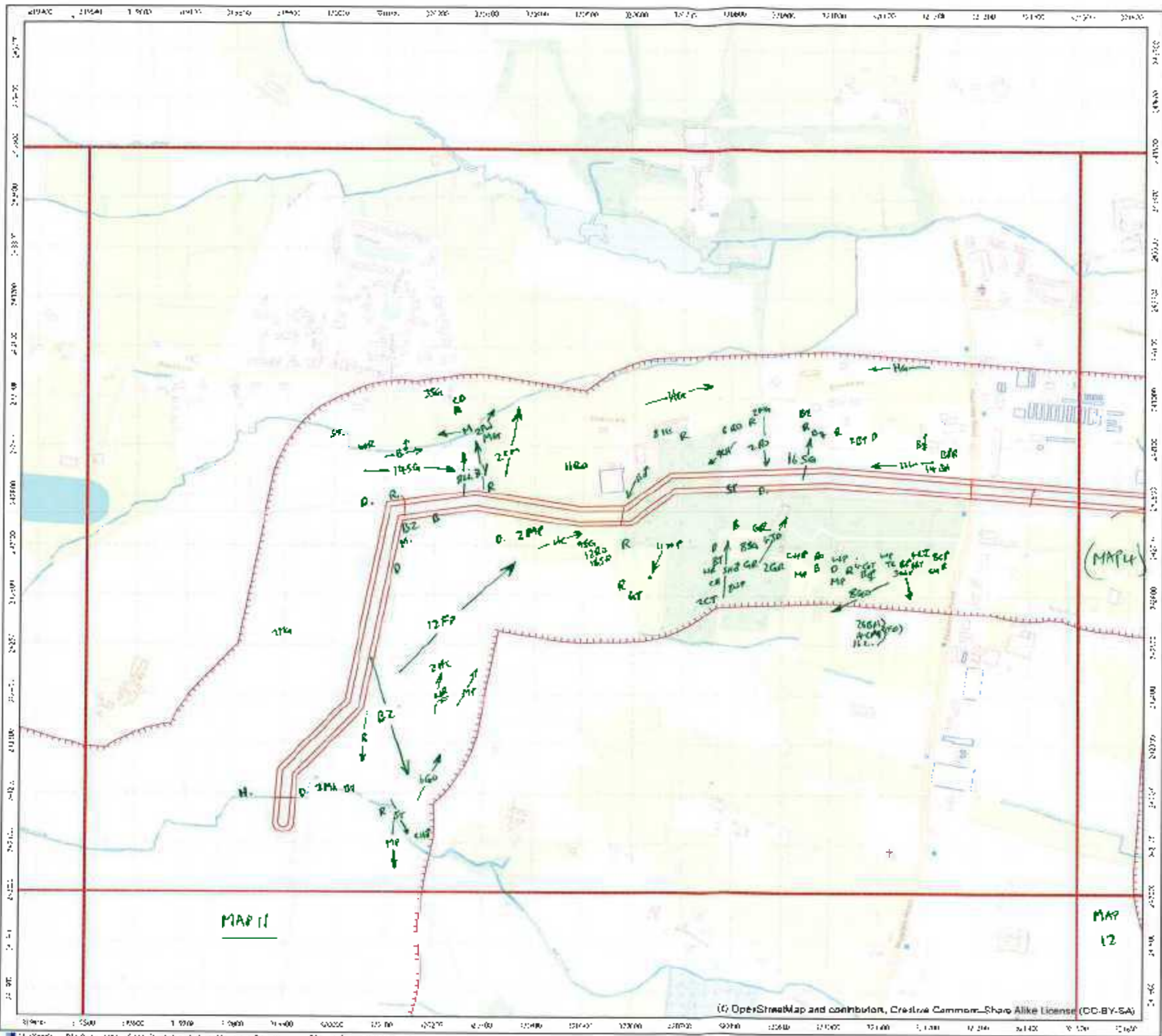
For office use only. NB. Initial AND date ALL boxes.	Logged	Database Entered	Database Validated	GIS Entered	GIS Validated
--	--------	------------------	--------------------	-------------	---------------

Surveyor: N. Veda


Date: 24/11/2015

Start time: 8:20 End time: 15:20

*Please attach weather sheet
Notes:



Legend

 BBS/WWC survey boundary (250 m buffer, supplied 20140420, plus 750 m buffer of protruding access track supplied 20150917)

Greater Dublin Drainage

Breeding/winter bird survey

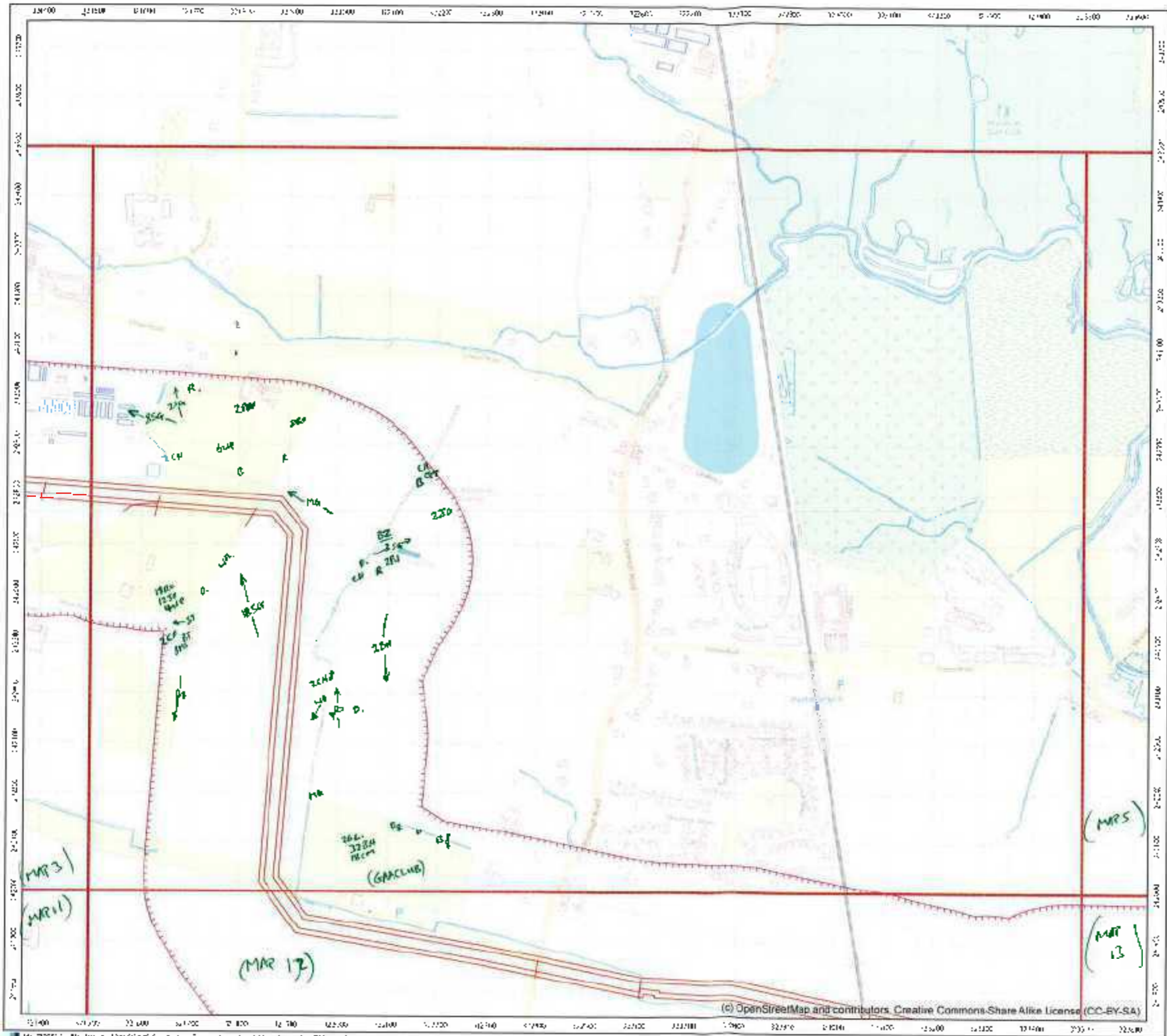
Page 3 of 18



Date: 30/10/2015 Job No: SEC7909 Rev: h

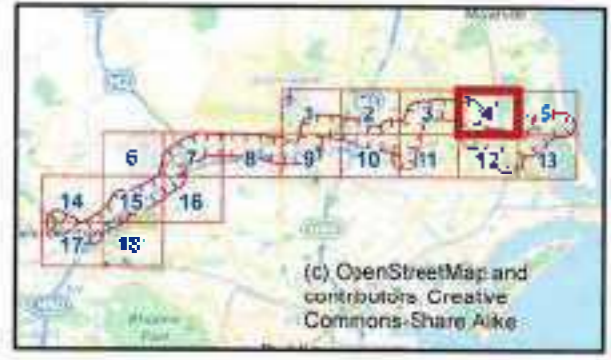
Drawn: C Checked: DRAFT Appr'd: DRAFT


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Surveyor **N. Veda**
 Date **24/11/2015**
 Start time **8:20** End time **15:20**

*Please attach weather sheet
 Notes:



Legend
 BBS/WWO survey boundary (750 m buffer, supplied 20140420, plus 250 m buffer of protruding access track supplied 20150917)

Greater Dublin Drainage
 Breeding/winter bird survey
 Page 4 of 18

Scale 1:7,500 @ A3
 Date 20/10/2015 Job No SFC7519 Team b

Drafter CH Checked DRAFT Approved DRAFT
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 www.rpsgroup.com

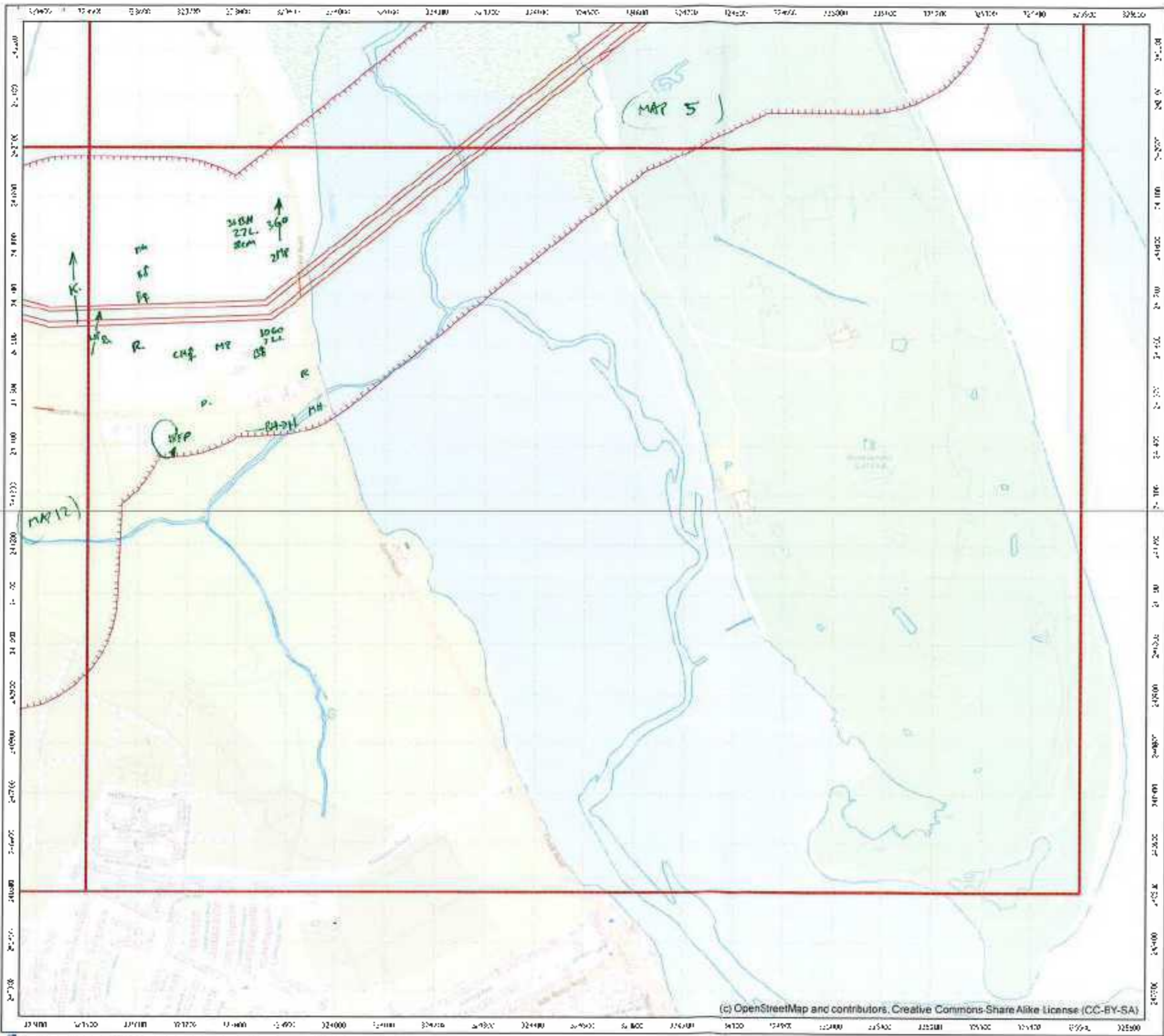
RPS	Weather Sheet
Site	GOD
Date	26/11/2015
Survey:	W.ite W.O.
Observer	N. Vele
Start Time	8:30
Finish Time	15:30
Sheet 1/ & 	J Maps attached

Wind Speed	Direction	Rain/Snow	Cloud Cover	Cloud Height	Visibility
Beaufort 0 Calm 1 Light air 2 Light breeze 3 Gentle breeze 4 Mod. breeze 5 Fresh breeze 6 Strong breeze 7 Mod. gale 8 Fresh gale 9 Strong gale 10 Whole gale 11 Storm 12 Hurricane	Mph >1 1-3 4-7 8-12 13-18 19-24 25-31 32-38 39-46 47-54 55-63 64-72 73+	None Drizzle/Mist Light showers Heavy showers Heavy rain Lying Snow None On site High ground	0 1 2 3 4 Frost None 0 1 2	Height of cloud above average height of viewshed <150m 150-500m >500m 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).	Poor (<1km) Moderate (1-2km) Good (>2km)

Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes(e.g. temperature)
Hr 1 8:30	2	W	1	6/8	1	1			10°C Drizzle
Hr 2 9:30	2	W	1	7/8	1	1			10°C Drizzle
Hr 3 10:30	3	W	0	8/8	1	1			12°C
Hr 4 11:30	2	SW	1	7/8	1	1			12°C Drizzle
Hr 5 12:30	3	SW	1	8/8	1	1			12°C Drizzle
Hr 6 13:30	3	SW	2	8/8	1	1			RAIN SHOWERS
Hr 7 14:30	3	SW	2	8/8	1	1			Continuous Rain
Hr 8									

Field Notes: Maps attached	Database Entered	Database Validated	GIS Entered	GIS Validated


For office use only. No-Initial AND data ALL boxes.



Surveyor: N. Veale
 Date: 26/11/2015
 Start time: 08:30 End time: 15:30

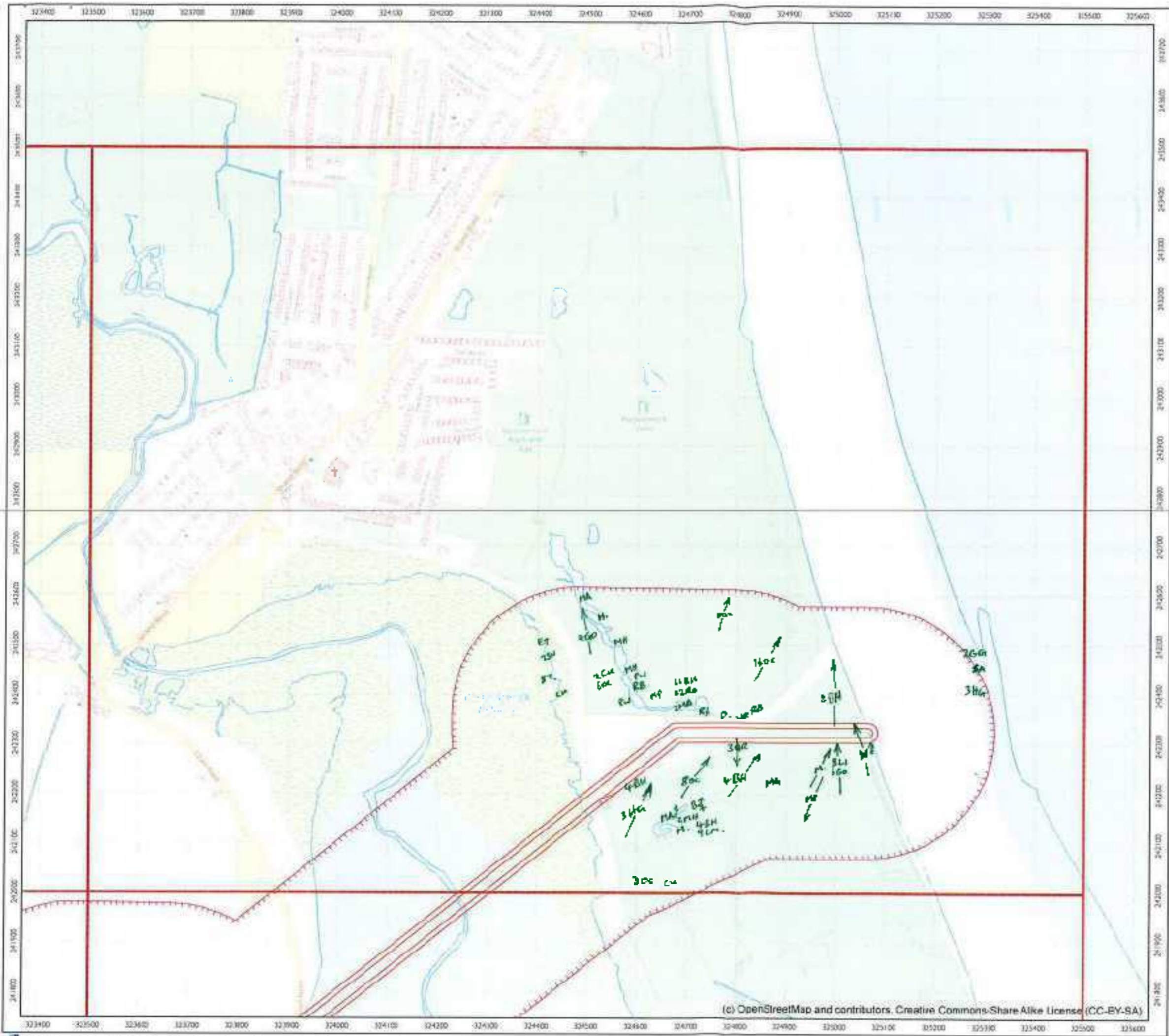
*Please attach weather sheet
 Notes:



Legend
 BBS/WWO survey boundary (250 m buffer, supplied 20140420, plus 250 m buffer of protruding access track supplied 20150917)

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

0 200 m
 Scale: 1:2,000 (pA1)
 Date: 2016/2015 Job No: 500909 Rev: b
 Drawn: CH Checked: DRAFT Approved: DRAFT
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 mapgroup.com



Surveyor: N. Veale

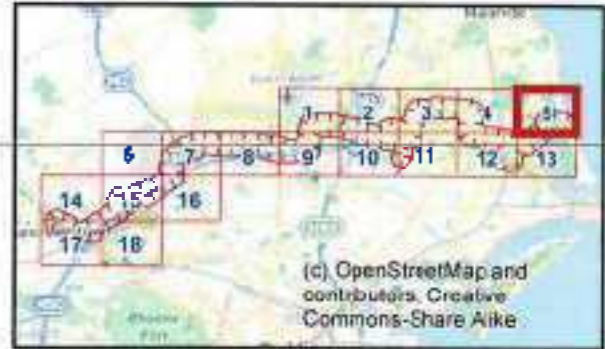
Date: 26/11/2015

Start time: 8:30


End time: 15:30

*Please attach weather sheet

Notes



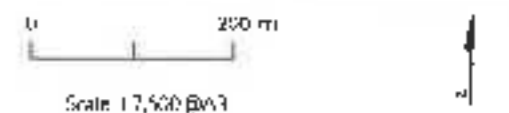
Legend

 SBS/WWD survey boundary (250 m buffer, supplied 20140420, plus 150 m buffer of protruding access track supplied 20150917)

Greater Dublin Drainage

Breeding/winter bird survey

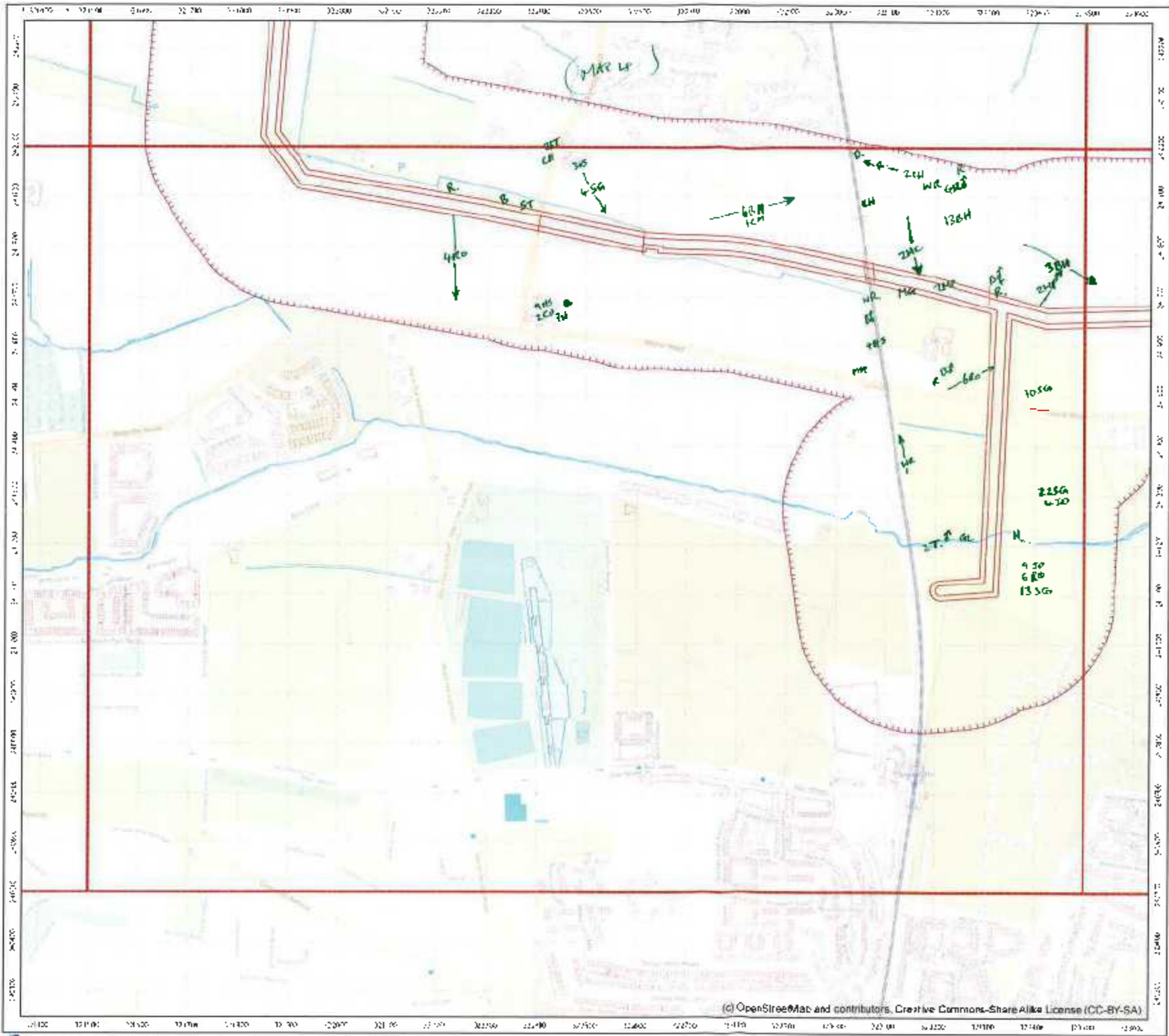
Page 5 of 18



Date: 20/11/2015 Job No: SEC7509 Rev: b

Drawn: CH Checked: DRAFT Approved: DRAFT

Web Mercator Line 1: 1000000
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Surveyor *Nick Veele*

Date *20/11/2015*

Start time: *08:30*

End time: *15:30*

*Please attach weather sheet

Notes:



Legend

BBS/WWO survey boundary (250 m buffer, supplied 20140420, plus 150 m buffer of protruding access track supplied 20150917)

Greater Dublin Drainage

Breeding/winter bird survey

Page 12 of 18

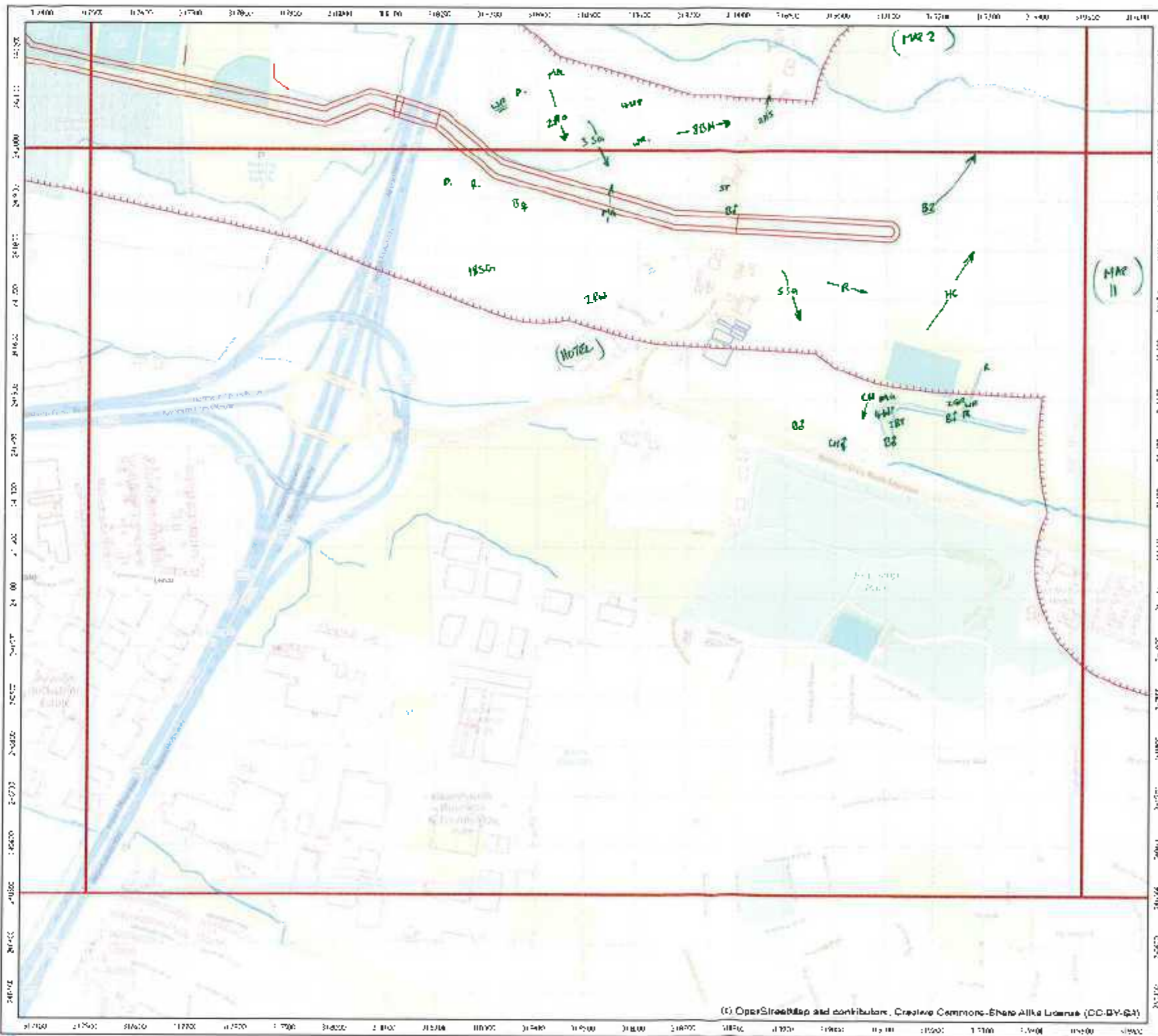


Scale: 1:500 @A3

Date: 20/10/2015 Job No: SDC1509 Rev: b

Drawn: CH Checked: GRH Approved: DRF

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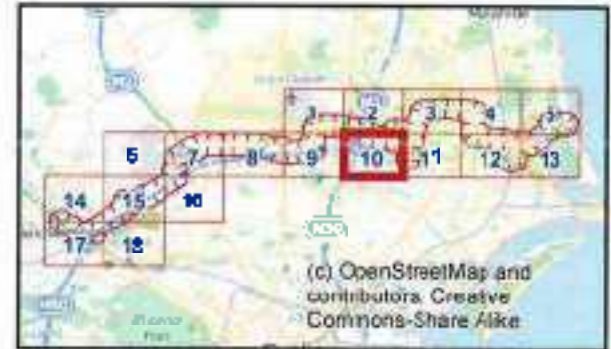
Surveyor: Nick Veale

Date: 27/11/2015 + 26/11/2015

Start time: 8:30 | End time: 14:50

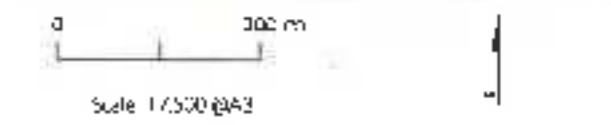
*Please attach weather sheet

Notes: (continued on MAR 11)



Legend
 BB5/WVO survey boundary (250 m buffer, supplied 20140470, plus 250 m buffer of protruding access track supplied 20150917)

Greater Dublin Drainage
 Breeding/winter bird survey
 Page 10 of 18



Date: 20/11/2015 | Job No: SEC1306 | Rev: b
 Drawn: CH | Checked: DRAFT | Approved: DRAFT

RPS	Weather Sheet
Site	6.66
Date	27/11/2015
Survey	Winter W.O.
Observer	Stuart Lewis
Start Time	08:30
Finish Time	14:50
Sheet 1 / & [] Maps attached	

Wind Speed		Direction		Rain/Snow		Cloud Cover		Cloud Height		Visibility	
Calm	0	N	0	None	0	In eights	Height of cloud above average height of viewshed	0	Poor (<1km)		
Light air	1	NE	1	Drizzle/Mist	1	e.g. 3/8		1	Moderate (1-3km)		
Light breeze	2	E	2	Light showers	2			2	Good (>3km)		
Gentle breeze	3	SE	3	Heavy showers	3			3			
Mod breeze	4	S	4	Heavy rain	4			4			
Fresh breeze	5	SW		Lying Snow		Frost					
Strong breeze	6	W		None	0	None					
Mod. gale	7	NW		On site	1	Ground					
Fresh gale	8			High ground	2	All dry					
Strong gale	9										
Whole gale	10										
Storm	11										
Hurricane	12										

Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes (e.g. temperature)
Hr 1 8:30	4	SW	0	6/8	2	2			
Hr 2 9:30	4	SW	0	7/8	2	2			
Hr 3 10:30	5	SW	1	8/8	1	1			
Hr 4 11:30	5	W	1	8/8	1	1			
Hr 5 12:30	5	NW	2	7/8	1	1			Crusher winds up to June 7 Survey stopped at 12:00
Hr 6 13:30	4	W	2	7/8	1	1			Survey cont... at 13:45 as Wind reset
Hr 7 14:30	5	NW	2	8/8	1	1			Survey stopped at 14:50, Freezing Winds
Hr 8									

Field Notes:
 Maps attached

For office use only. NB- Initial AND date ALL boxes.	Logged	Database Entered	Database Validated	GIS Entered	GIS Validated
--	--------	------------------	--------------------	-------------	---------------

Surveyor: N. Veale

Date: 27/11/2015

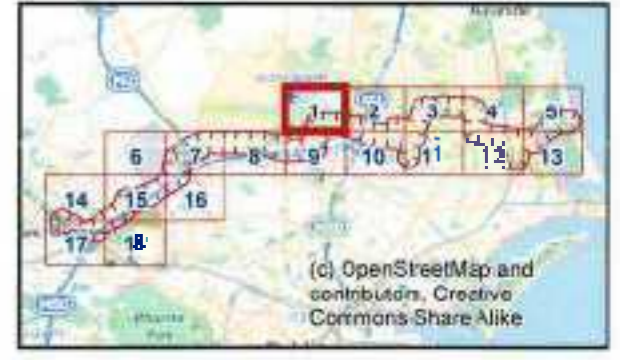
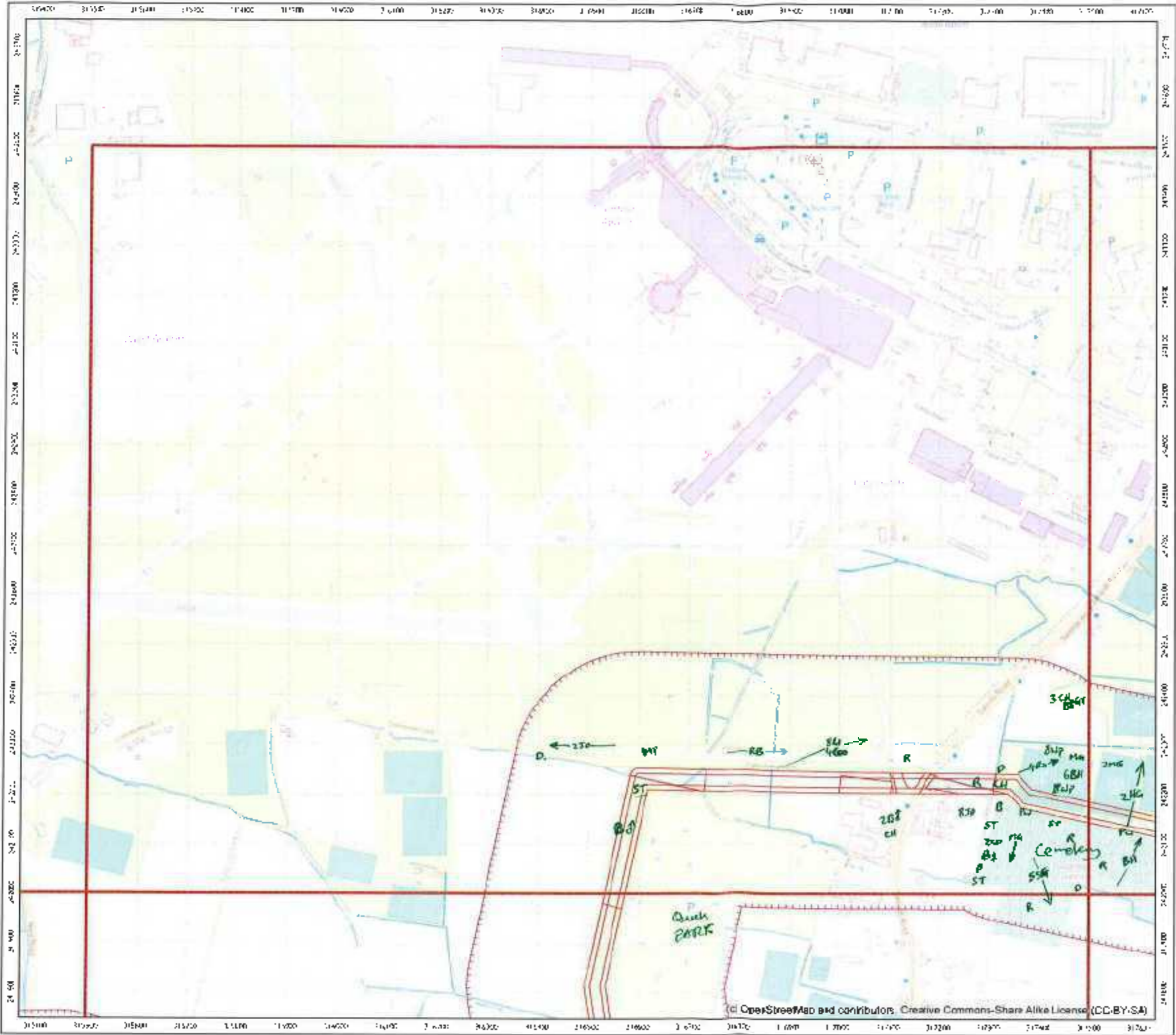
Start time: 08:30

End time: 14:50


Please attach weather sheet

Notes:

Transect cross streets
(1, 2, + 9)



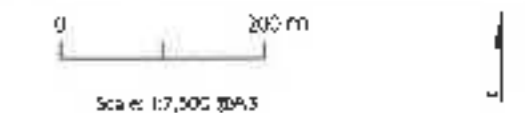
Legend

 BB5/VVO survey boundary (250 m buffer, supplied 20140420, plus 250 m buffer of protruding access track supplied 20150917)

Greater Dublin Drainage

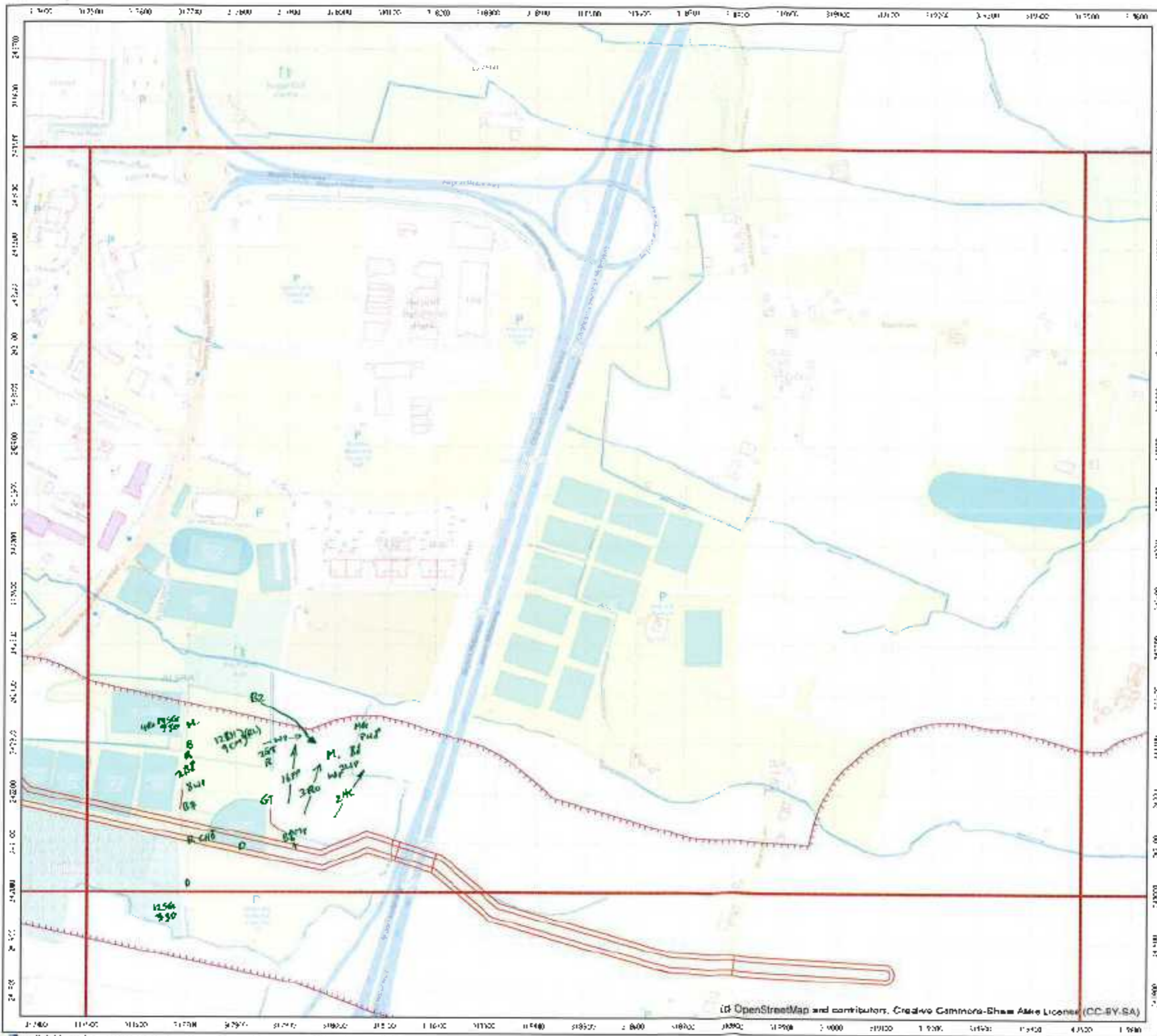
Breeding/winter bird survey

Page 1 of 18



Date: 20/10/2015 Job No: SEC7909 Rev: b
 Drawn: C11 Checked: DRA1 Approved: DRA1

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RPS

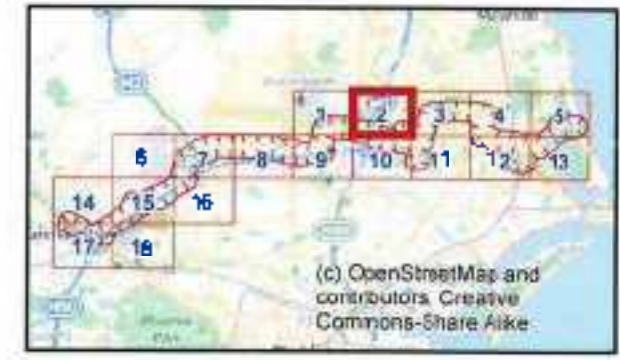
Surveyor: Nick Veda

Date: 27/11/2015

Start time: 0830 End time: 14:50

*Please attach weather sheet
Notes:

Transverse split over Maps
1, 2, + 9

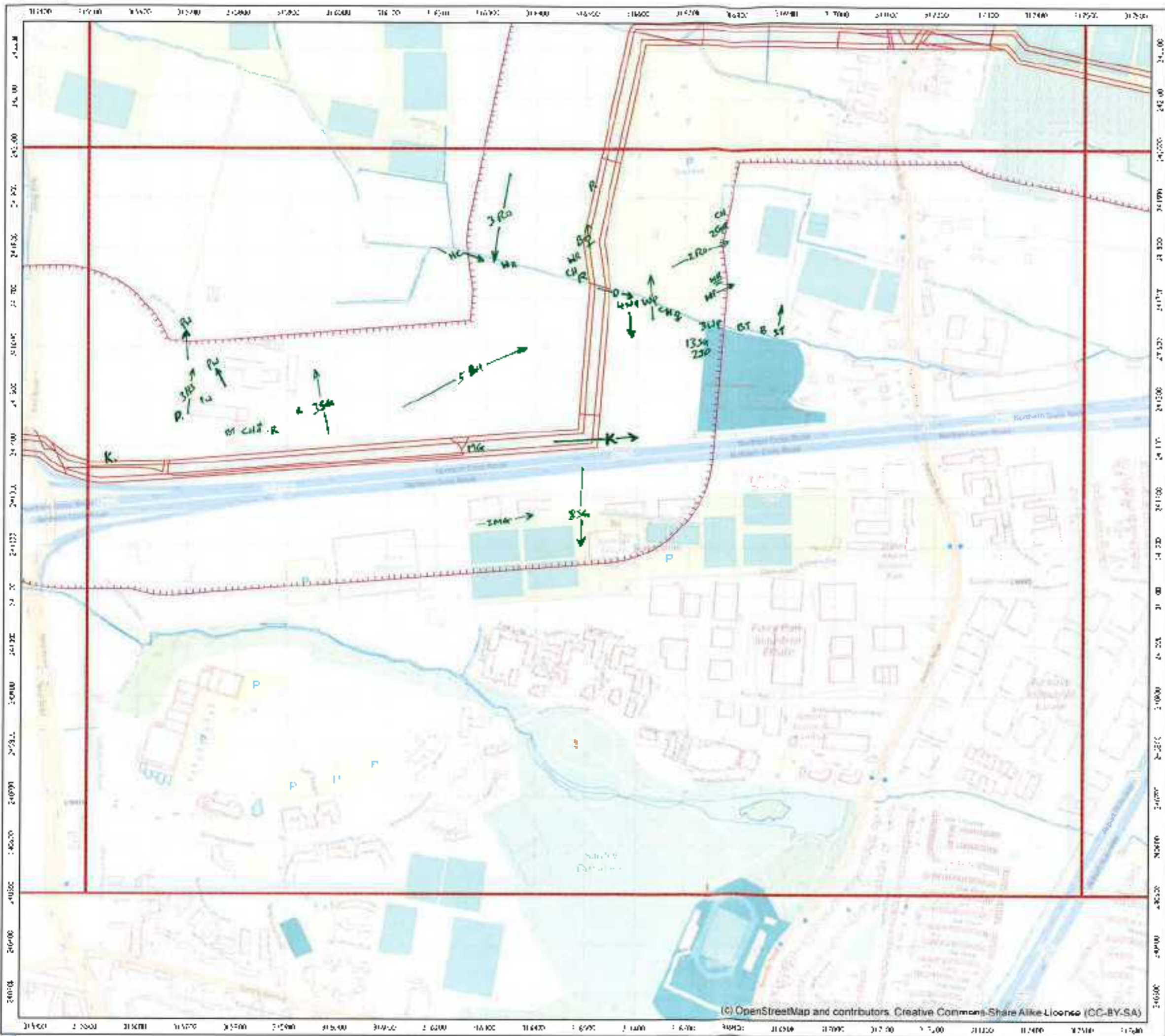


Legend
 BBS/WWO survey boundary (250 m buffer, supplied 20140420 plus 150 m buffer of protruding access track supplied 20150917)

Greater Dublin Drainage
 Breeding/winter bird survey
 Page 2 of 18

Scale 1:500 (GA)
 Date: 20/12/2015 Job No: SEC0909 Rev: 0
 Drawn: CH Checked: GRAFT Approved: DRAFT

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Surveyor: Nick Veele

Date 27/11/2015

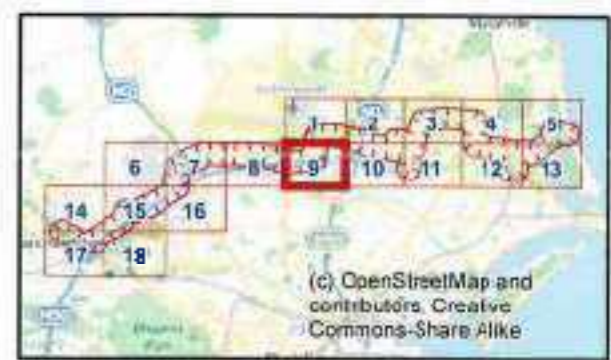
Start time 08:30

End time 14:30

Please attach weather sheet

Notes:

Targets split over
MAPS 1, 2, + 9



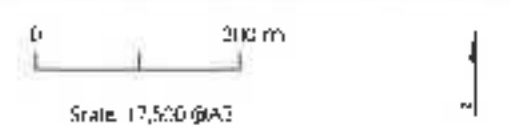
Legend

BBS/WWD survey boundary (250 m buffer, supplied 20140420, plus 250 m buffer of protruding access track supplied 20150917)

Greater Dublin Drainage

Breeding/winter bird survey

Page 9 of 18



Date 20/10/2015	Job No SEC7909	Rev: b
Drawn: CH	Checked: DRAFT	Approved: DRAFT

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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		Weather Sheet																																																																																					
Site	G00																																																																																						
Date	30/03/2017																																																																																						
Survey	W. to W.O.																																																																																						
Observer	N. Verbe																																																																																						
Start Time	07:15																																																																																						
Finish Time	15:00																																																																																						
Sheet 1/ & [] Maps attached																																																																																							
<table border="1"> <thead> <tr> <th>Wind Speed</th> <th>Direction</th> <th>Rain/Snow</th> <th>Cloud Cover</th> <th>Cloud Height</th> <th>Visibility</th> </tr> </thead> <tbody> <tr> <td>Calm 0</td> <td>N</td> <td>None 0</td> <td>heights</td> <td>Height of cloud above average</td> <td>Poor (<1km) 0</td> </tr> <tr> <td>Light air 1</td> <td>NE</td> <td>Drizzle/Mist 1</td> <td>e.g. 3/8</td> <td>height of viewshed</td> <td>Moderate (1-3km) 1</td> </tr> <tr> <td>Light breeze 2</td> <td>E</td> <td>Light showers 2</td> <td></td> <td><150m 0</td> <td>Good (>3km) 2</td> </tr> <tr> <td>Gentle breeze 3</td> <td>SE</td> <td>Heavy showers 3</td> <td></td> <td>150-500m 1</td> <td></td> </tr> <tr> <td>Mod. breeze 4</td> <td>S</td> <td>Heavy rain 4</td> <td></td> <td>>500m 2</td> <td></td> </tr> <tr> <td>Fresh breeze 5</td> <td>SW</td> <td>Lying Snow</td> <td>Frost</td> <td colspan="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 zeros for extra info. E.g. WS - 5, gusting 6 (In notes).</td> </tr> <tr> <td>Strong breeze 6</td> <td>W</td> <td>None 0</td> <td>None 0</td> <td></td> <td></td> </tr> <tr> <td>Mod. gale 7</td> <td>NW</td> <td>On site 1</td> <td>Ground 1</td> <td></td> <td></td> </tr> <tr> <td>Fresh gale 8</td> <td></td> <td>High ground 2</td> <td>All day 2</td> <td></td> <td></td> </tr> <tr> <td>Strong gale 9</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Whole gale 10</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Storm 11</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Hurricane 12</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				Wind Speed	Direction	Rain/Snow	Cloud Cover	Cloud Height	Visibility	Calm 0	N	None 0	heights	Height of cloud above average	Poor (<1km) 0	Light air 1	NE	Drizzle/Mist 1	e.g. 3/8	height of viewshed	Moderate (1-3km) 1	Light breeze 2	E	Light showers 2		<150m 0	Good (>3km) 2	Gentle breeze 3	SE	Heavy showers 3		150-500m 1		Mod. breeze 4	S	Heavy rain 4		>500m 2		Fresh breeze 5	SW	Lying Snow	Frost	Please be as accurate as possible, with weather details, entering only one figure, not a range. e.g. WS - 5, not 5-6. Use zeros for extra info. E.g. WS - 5, gusting 6 (In notes).		Strong breeze 6	W	None 0	None 0			Mod. gale 7	NW	On site 1	Ground 1			Fresh gale 8		High ground 2	All day 2			Strong gale 9						Whole gale 10						Storm 11						Hurricane 12					
Wind Speed	Direction	Rain/Snow	Cloud Cover	Cloud Height	Visibility																																																																																		
Calm 0	N	None 0	heights	Height of cloud above average	Poor (<1km) 0																																																																																		
Light air 1	NE	Drizzle/Mist 1	e.g. 3/8	height of viewshed	Moderate (1-3km) 1																																																																																		
Light breeze 2	E	Light showers 2		<150m 0	Good (>3km) 2																																																																																		
Gentle breeze 3	SE	Heavy showers 3		150-500m 1																																																																																			
Mod. breeze 4	S	Heavy rain 4		>500m 2																																																																																			
Fresh breeze 5	SW	Lying Snow	Frost	Please be as accurate as possible, with weather details, entering only one figure, not a range. e.g. WS - 5, not 5-6. Use zeros for extra info. E.g. WS - 5, gusting 6 (In notes).																																																																																			
Strong breeze 6	W	None 0	None 0																																																																																				
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Storm 11																																																																																							
Hurricane 12																																																																																							
Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes (e.g. temperature)																																																																														
Hr 17:15	3	SE	0	6/8	2	2	---	---	10°C																																																																														
Hr 28:15	2	SE	0	8/8	2	2	---	---	light drizzle																																																																														
Hr 39:15	3	SE	0	8/8	2	2	---	---	light drizzle																																																																														
Hr 410:15	3	SE	0	8/8	2	2	---	---	12°C																																																																														
Hr 511:15	3	SE	0	1/8	2	2	---	---	12°C																																																																														
Hr 612:15	3	SE	0	7/8	2	2	---	---																																																																															
Hr 713:15	3	SE	0	7/8	2	2	---	---	14°C																																																																														
Hr 814:15	4	SE	0	7/8	2	2	---	---																																																																															
Field Notes: Maps attached																																																																																							
For office use only. NB- Initial AND date ALL boxes.		Logged	Database Entered	Database Validated	GIS Entered	GIS Validated																																																																																	

RPS		Weather Sheet					Wind Speed		Direction	Rain/Snow	Cloud Cover	Cloud Height	Visibility
Site	GDD	Calm		0	>1	N	None	0	In heights e.g. 3/8	Height of cloud above average height of watershed	Poor (<1km)	0	
Date	27/03/2017	Light air		1	1-3	NE	Drizzle/Mist	1		Moderate (1-3km)	1		
Survey	Linton L.O.	Light breeze		2	4-7	E	Light showers	2		Good (>3km)	2		
Observer	Nick Vech	Gentle breeze		3	8-12	SE	Heavy showers	3		<100m	0		
Start Time	10:00	Mod. breeze		4	13-18	S	Heavy rain	4		150-500m	1		
Finish Time	10:15	Fresh breeze		5	19-24	SW	Lying Snow		Frost	>500m	2		
Sheet 1/ & { } Maps attached		Strong breeze		6	25-31	W	None	0	None	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].			
		Mod. gale		7	32-38	NW	On site	1	Ground				
		Fresh gale		8	39-46		High ground	2	At day				
		Strong gale		9	47-54								
		Whole gale		10	55-63								
		Storm		11	64-72								
		Hurricane		12	73+								
Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes (e.g. temperature)				
Hr 1 0:00	2	ESE	0	4/8	2	2	---		10°C				
Hr 2 1:00	2	E	0	3/8	2	2	---						
Hr 3 2:00	2	E	0	3/8	2	2	---						
Hr 4 3:00	3	E	0	3/8	2	2	---		12°C				
Hr 5 4:00	3	ESE	0	2/8	2	2	---						
Hr 6 5:00	3	NE	0	4/8	2	2	---		12°C				
Hr 7 6:00	3	NE	0	4/8	2	2	---		11°C				
Hr 8													
Field Notes: Maps attached													
For office use only. NB- Initial AND date ALL boxes.		Logged	Database Entered	Database Validated	GIS Entered	GIS Validated							

RPS		Weather Sheet		Wind Speed			Direction	Rain/Snow		Cloud Cover	Cloud Height	Visibility
Site	GDD	Calm	0	>1	#	None	0	None	0	Height of cloud above average height of newshed	Poor (<1km)	0
Date	23/03/2017	Light air	1	1-3	NE	Drizzle/Mist	1	Light showers	2	<150m	Moderate (1-3km)	1
Survey	Winter W.O.	Light breeze	2	4-7	E	Light showers	2	Heavy showers	3	150-500m	Good (>3km)	2
Observer	N. Verdu	Gentle breeze	3	8-12	SE	Heavy rain	4	Heavy rain	4	>500m		
Start Time	11:15	Mod. breeze	4	13-18	S	Lying Snow		Frost				
Finish Time	18:00	Fresh breeze	5	19-24	SW	None	1	None	0	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/ & [] Maps attached		Strong breeze	6	25-31	W	On site	1	Ground	1			
Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes (e.g. temperature)			
Hr 1 11:15	3	ENE	2	8/8	2	2	---		8°C			
Hr 2 12:15	3	ENE	0	"	"	2	---					
Hr 3 13:15	3	E	0	"	"	2	---		10°C			
Hr 4 14:15	3	E	1	7/8	"	1	---					
Hr 5 15:15	3	NNE	0	7/8	"	2	---		10°C			
Hr 6 16:15	3	E	0	7/8	"	2	---					
Hr 7 17:15	3	E	0	6/8	"	2	---		11°C			
Hr 8	3	E		6/8	"	2	---					
Field Notes: Maps attached												
For office use only. NB: Initial AND date ALL boxes		Logged	Database Entered	Database Validated	GIS Entered	GIS Validated						

RPS		Weather Sheet		Wind Speed			Direction	Rain/Snow		Cloud Cover	Cloud Height		Visibility	
Site	CSD	Beaufort	mph	Calm	0	>1		None	0	In heights e.g. 3-8	Height of cloud above average height of viewshed	Height of cloud above average height of viewshed	Poor (<1km)	0
Date	22/03/2017	Light air	1	1-3	Light breeze	2	4-7	Drizzle/Mist	1			Moderate (1-3km)	1	
Survey	W. inter. W.D.	Gentle breeze	3	8-12	Mod. breeze	4	13-18	Light showers	2			Good (>3km)	2	
Observer	N. Verbeke	Fresh breeze	5	19-24	Strong breeze	6	25-31	Heavy showers	3			<150m	0	
Start Time	06:20	Mod. gale	7	32-38	Fresh gale	8	39-46	Heavy rain	4			150-540m	1	
Finish Time	14:20	Strong gale	9	47-54	Whole gale	10	55-63	Lying Snow		Frost		>500m	2	
Sheet 1/ & [] Maps attached		Storm	11	64-72	Hurricane	12	73+	None	0	None	0	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).		
On site	1	Ground	1											
High ground	2	All day	2											
Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes (e.g. temperature)					
Hr 1 6:20	4	N	0	7/8	2	1	1	0	1°C					
Hr 2 7:20	4	N	1	8/8	2	1	0	0	2°C					
Hr 3 8:20	4	NE	1	"	2	1	0	0	4°C					
Hr 4 9:20	4	NE	2	"	2	1	0	0	4°C					
Hr 5 10:20	3	NE	3	"	2	1	0	0	5°C					
Hr 6 11:20	3	NE	2	"	2	1	0	0	5°C					
Hr 7 12:20	4	NE	2	"	2	1	0	0	5°C					
Hr 8 13:20	4	NE	3	"	2	1	0	0	5°C					
Field Notes: Maps attached														
For office use only. NB- INITIAL AND date ALL boxes.		Logged	Database Entered	Database Validated	GIS Entered	GIS Validated								

RPS		Weather Sheet		Wind Speed			Direction	Rain/Snow		Cloud Cover	Cloud Height	Visibility
Site	Date	Survey	Observer	Start Time	Finish Time	Sheet 1/ &] Maps attached		Beaufort	Mph	In nights e.g. 3/8	Height of cloud above average height of viewshed	Poor (<1km) 0 Moderate (1-3km) 1 Good (>3km) 2
GOD	21/03/2017	winter W.O	Nick Veele	07:50	14:30		Calm 0 >1	>1	N	None 0		
							Light air 1 1-3	1-3	NE	Drizzle/Mist 1		
							Light breeze 2 4-7	4-7	E	Light showers 2		
							Gentle breeze 3 8-12	8-12	SE	Heavy showers 3		
							Mod. breeze 4 13-18	13-18	S	Heavy rain 4		
							Fresh breeze 5 18-24	18-24	SW	Lying Snow	Frost	
							Strong breeze 6 25-31	25-31	W	None 0	None 0	
							Mod. gale 7 32-38	32-38	NW	On site 1	Ground 1	
							Fresh gale 8 39-46	39-46		High ground 2	All day 2	
							Strong gale 9 47-54	47-54				
							Whole gale 10 55-63	55-63				
							Gloom 11 64-72	64-72				
							Hurricane 12 73+	73+				
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).												
Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes (e.g. temperature)			
Hr 1 07:50	3	W	0	6/8	2	1	1	1	-1°C			
Hr 2 08:50	4	W	2	7/8	2	1	1	1	-1°C Snow - showers			
Hr 3 09:50	4	W	0	7/8	2	1	0	0	0°C			
Hr 4 10:50	4	W	0	6/8	2	2	0	0	2°C			
Hr 5 11:50	4	W	2	7/8	2	1	0	0	2°C (Sleet)			
Hr 6 12:50	3	SW	0	5/8	2	2	0	0				
Hr 7 13:50	3	SW	0	5/8	2	2	0	0	4°C			
Hr 8	3	SW	0	5/8	2	2						
Field Notes: Maps attached												
For office use only. NB- Initial AND date ALL boxes.		Logged	Database Entered	Database Validated	GIS Entered	GIS Validated						

RPS		Weather Sheet		Wind Speed			Direction	Rain/Snow		Cloud Cover	Cloud Height		Visibility		
Site	G00	Calm 0 >1 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 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+			N NE E SE S SW W NW	None 0 Drizzle/Mist 1 Light showers 2 Heavy showers 3 Heavy rain 4		Height of cloud above average height of viewshed <150m 0 150-500m 1 >500m 2	None 0 On site 1 High ground 2		None 0 Ground 1 All day 2	Poor (<1km) 0 Moderate (1-3km) 1 Good (>3km) 2			
Date	20/03/2017	Dep. 13-15 19-24 26-31 32-38 39-46 47-54 55-63 64-72 73+		Lying Snow None 0 On site 1 High ground 2		Frost None 0 Ground 1 All day 2			Please be as accurate as possible, with weather details, entering only one figure, not a range, e.g. WS - 5, not 5-8. Use notes for extra info. E.g. WS - 5, gusting 6 (in notes).						
Survey	Winter W.O	Sheet 1/ & [] Maps attached													
Observer	N. Veste	Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes (e.g. temperature)				
Start Time	07:30	Hr 17:30	4	W	0	7/8	2	2	---	---	7°C				
Finish Time	15:30	Hr 28:30	4	W	0	8/8	2	2	---	---					
		Hr 39:30	4	W	2	8/8	2	1	---	---	9°C				
		Hr 40:30	4	W	0	8/8	2	2	---	---					
		Hr 51:30	4	W	0	8/8	2	2	---	---	10°C				
		Hr 62:30	4	SW	0	8/8	2	2	---	---					
		Hr 73:30	4	SW	2	8/8	2	1	---	---	10°C				
		Hr 84:30	4	SW	2	8/8	2	1	---	---					
Field Notes: Maps attached															
For office use only. NB-Initial AND date ALL boxes.			Logged	Database Entered	Database Validated	GIS Entered	GIS Validated								

LEGEND

Map Scale 1:10,000 at A4



--- Pipeline buffer (100m) (250m)

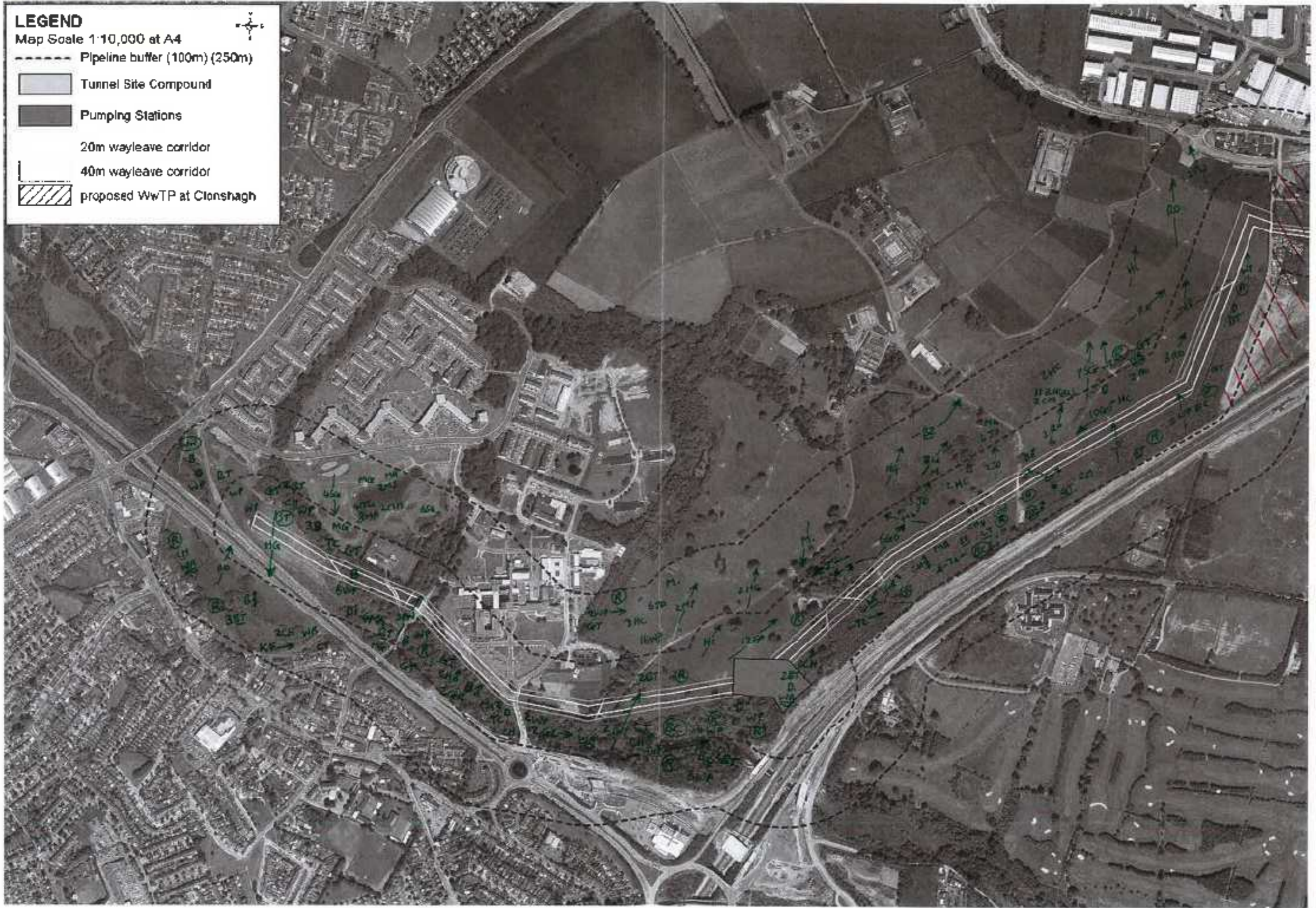
■ Tunnel Site Compound

■ Pumping Stations

20m wayleave corridor

40m wayleave corridor


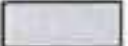




▨ proposed WwTP at Clonsagh

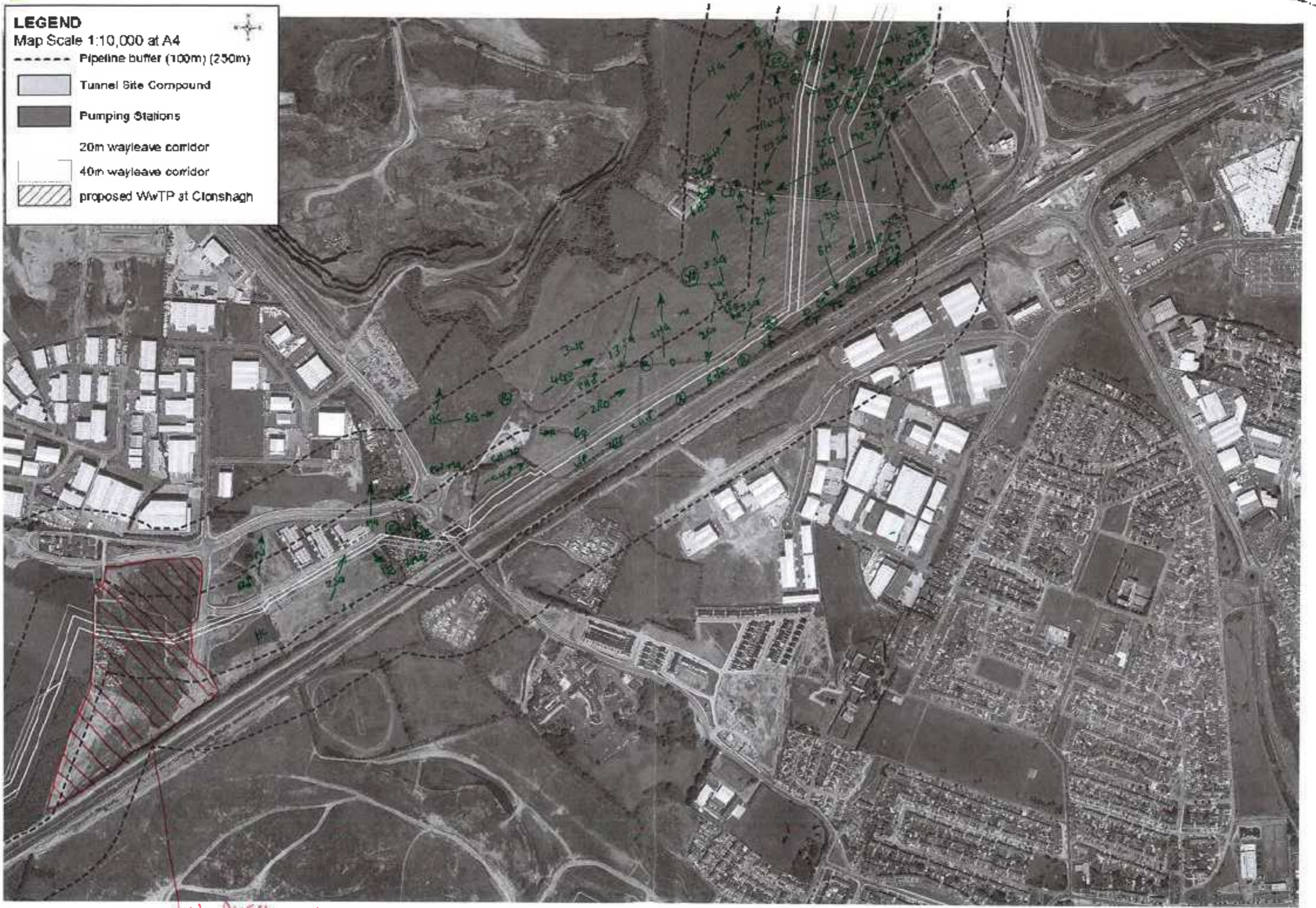


LEGEND

Map Scale 1:10,000 at A4



-  Pipeline buffer (100m) (250m)
-  Tunnel Site Compound
-  Pumping Stations
-  20m wayleave corridor
-  40m wayleave corridor
-  proposed WwTP at Clonsagh



No Access
(TRAVELER SITE)

LEGEND

Map Scale 1:10,000 at A4



----- Pipeline buffer (100m)-(250m)

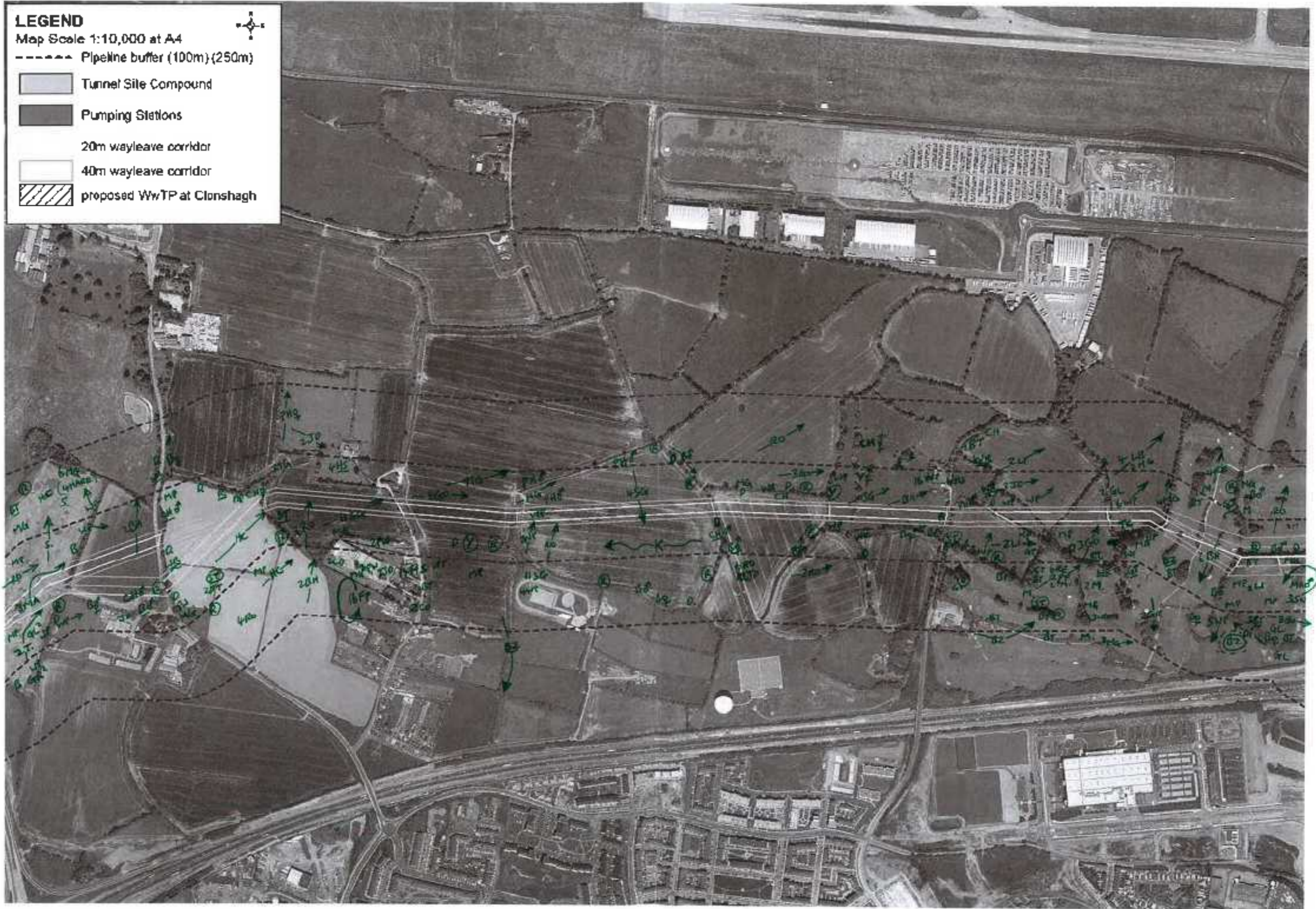
 Tunnel Site Compound

 Pumping Stations

20m wayleave corridor

 40m wayleave corridor

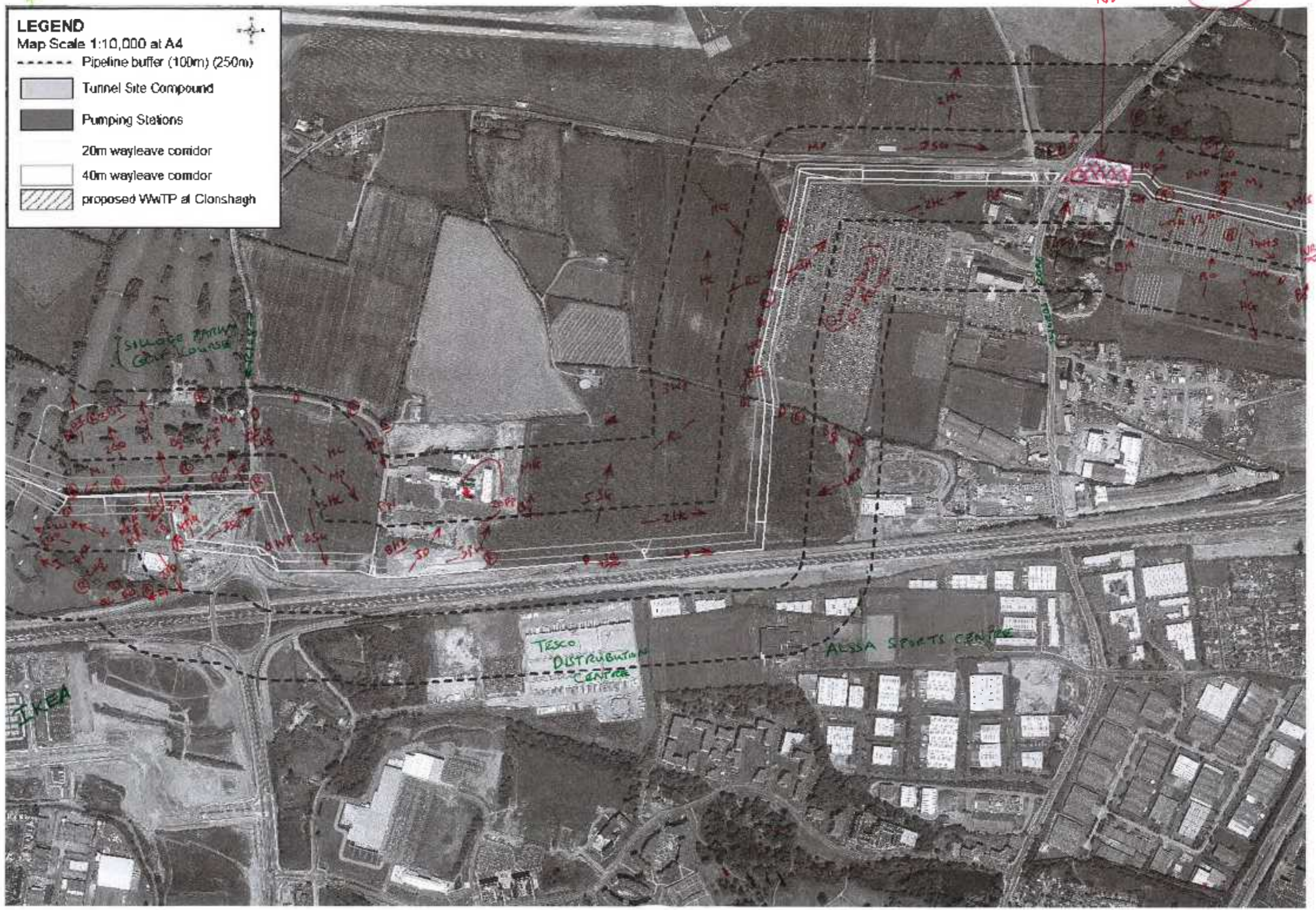
 proposed WwTP at Clonshagh



W100032
No Access **RED**

LEGEND
Map Scale 1:10,000 at A4

- Pipeline buffer (100m) (250m)
- █ Tunnel Site Compound
- █ Pumping Stations
- 20m wayleave corridor
- 40m wayleave corridor
- ▨ proposed WwTP at Clonshagh









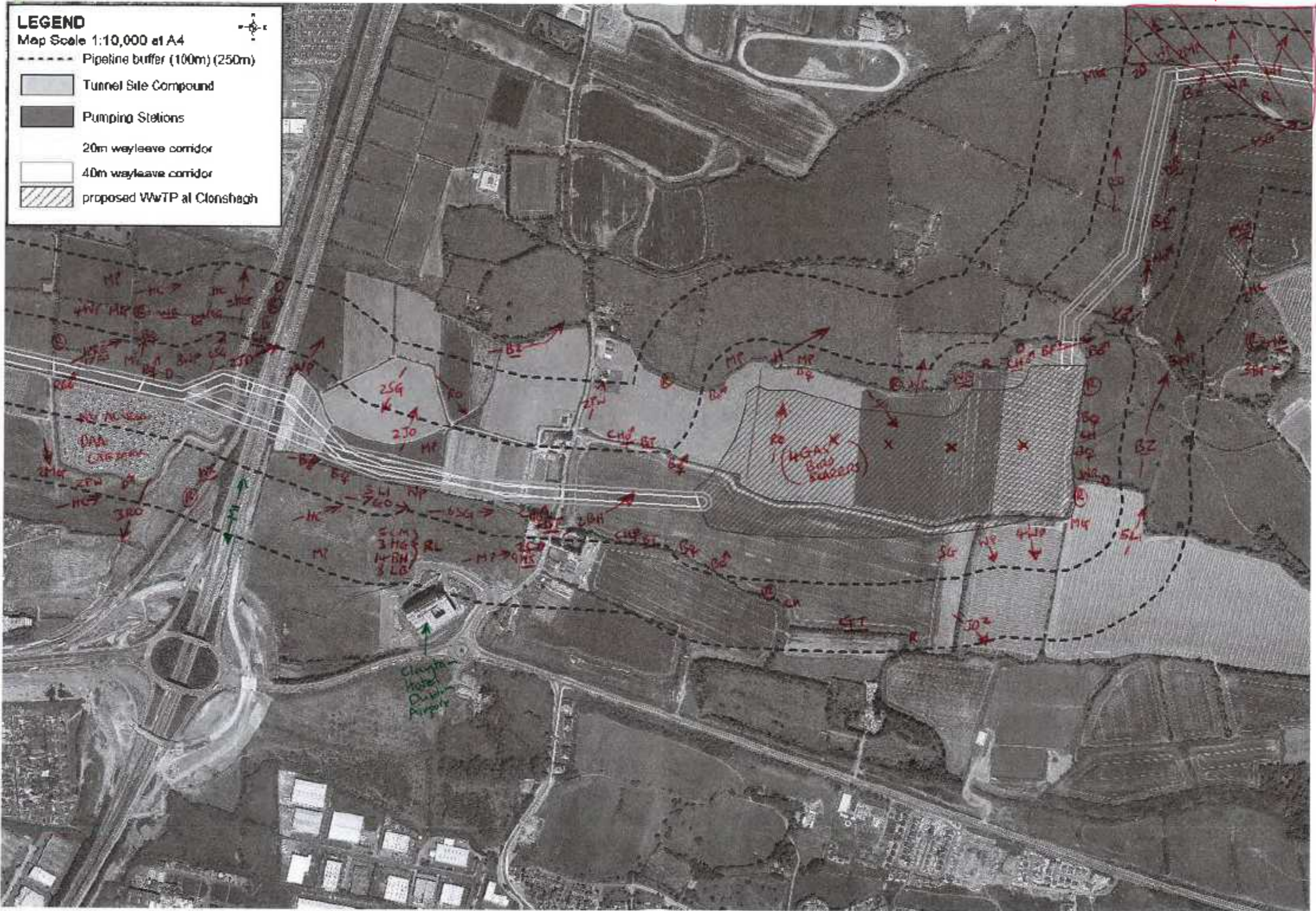
No Access

LEGEND

Map Scale 1:10,000 at A4



-  Pipeline buffer (100m) (250m)
-  Tunnel Site Compound
-  Pumping Stations
-  20m wayleave corridor
-  40m wayleave corridor
-  proposed WwTP at Clonsagh



6

W60037

W60038

(RED NO ACCESS)



LEGEND

Map Scale 1:10,000 at A4

--- Pipeline buffer (100m) (250m)

 Tunnel Site Compound

 Pumping Stations

 20m wayleave corridor

 40m wayleave corridor

 proposed WwTP at Clonsagh









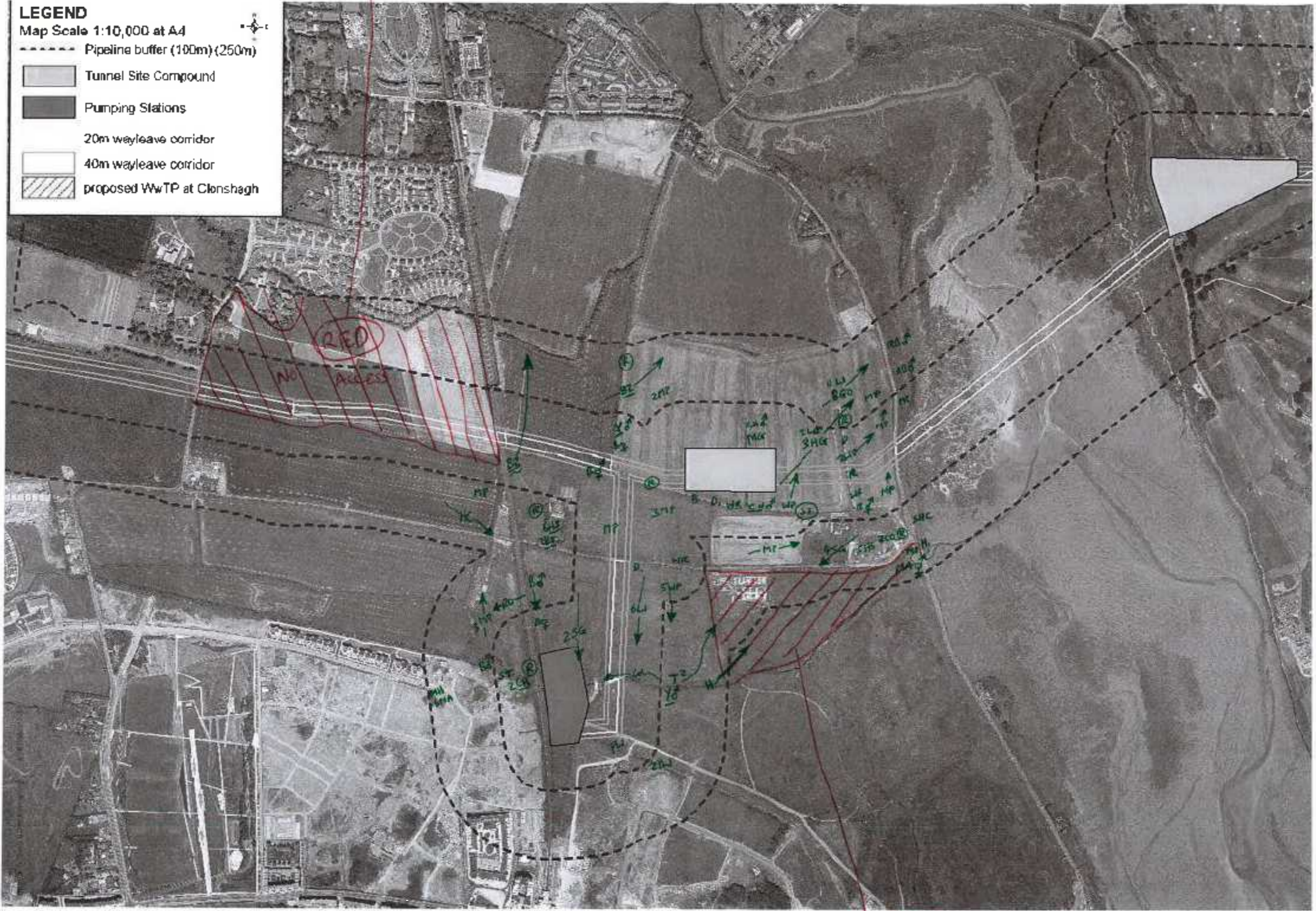
No Access
W60037

(WL0045) -

LEGEND

Map Scale 1:10,000 at A4

-  Pipeline buffer (100m) (250m)
-  Tunnel Site Compound
-  Pumping Stations
-  20m wayleave corridor
-  40m wayleave corridor
-  proposed WwTP at Clonshagh



No Access (TRAVELER HALTING SITE)

LEGEND

Map Scale 1:10,000 at A4



--- Pipeline buffer (100m) (250m)

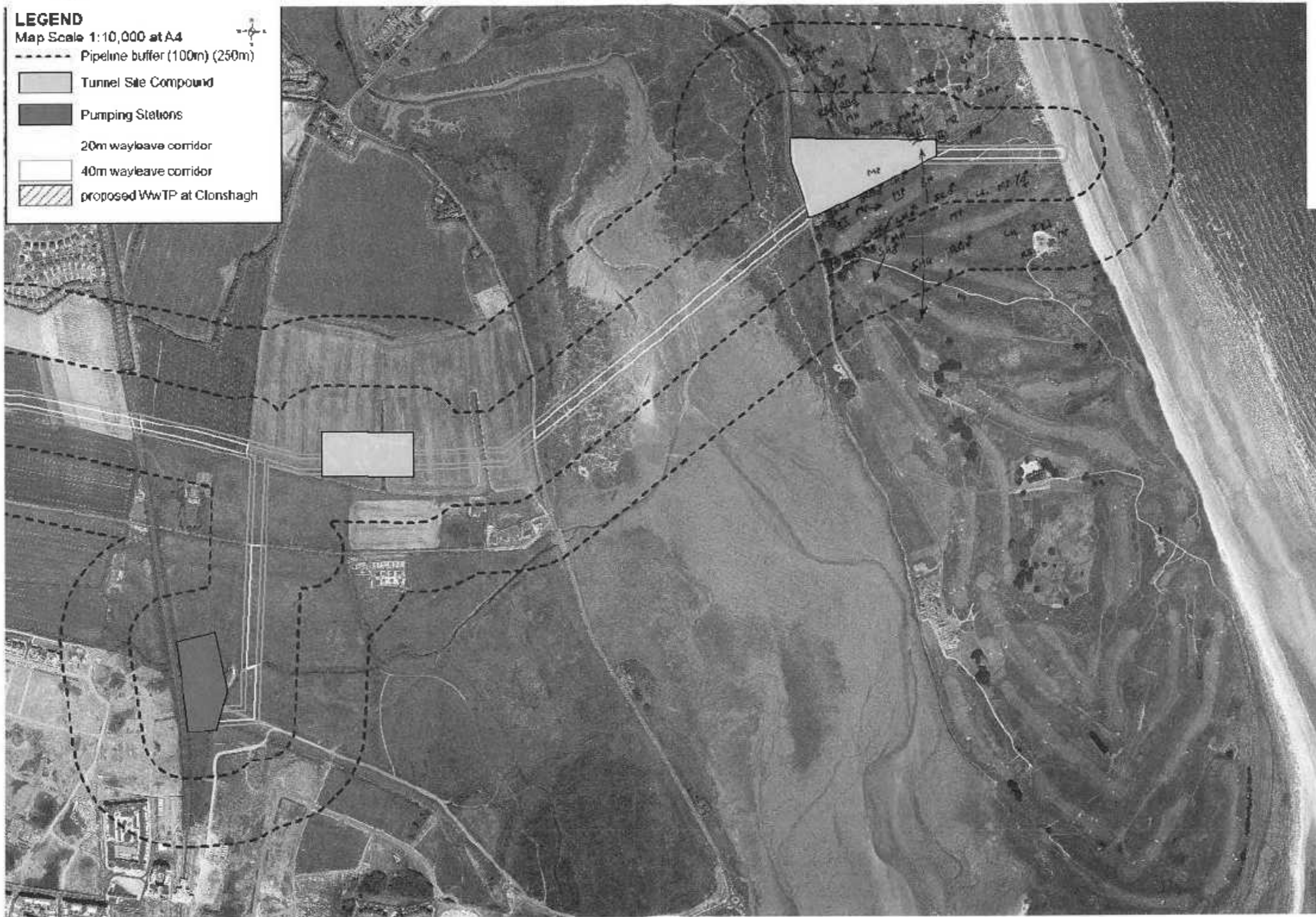
■ Tunnel Site Compound

■ Pumping Stations

20m wayleave corridor

40m wayleave corridor

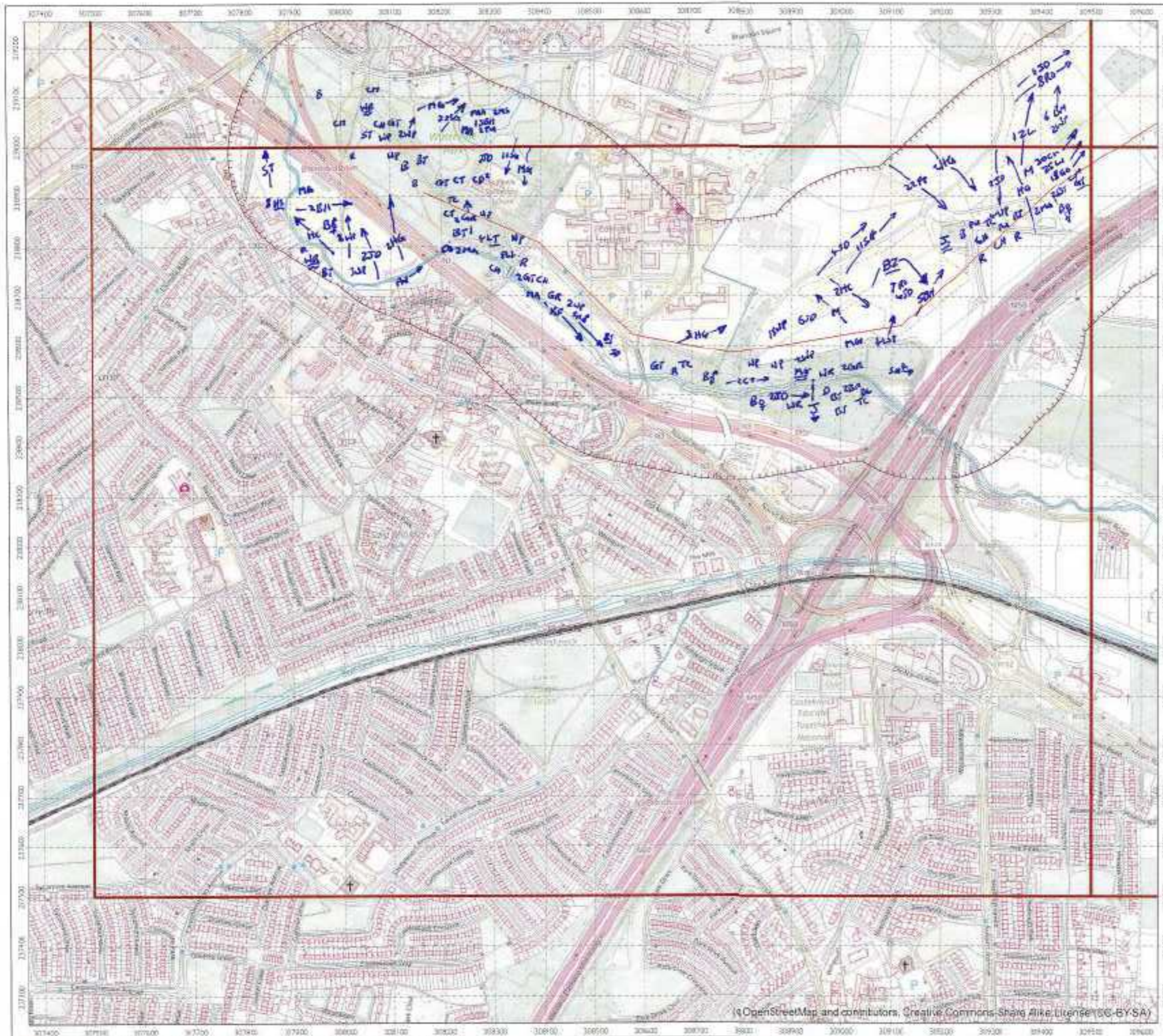
▨ proposed WwTP at Clonshagh



APPENDIX 5 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		Weather Sheet		Wind Speed		Direction	Rain/Snow		Cloud Cover	Cloud Height	Visibility
Site	Date	Survey	Observer	Start Time	Finish Time		Beaufort	Mph	None	In eighth e.g. 3/8	Height of cloud above average height of viewshed
GDD	8/11/17	WLD	N. Veitch	08:10	15:20	0	>1	None	0	<150m 0	
Sheet 1/ & [] Maps attached				1	1-3	NE	1-3	Drizzle/Mist	1	150-500m 1	
2	4-7	E	4-7	Light showers	2			Light showers	2	>500m 2	
3	8-12	SE	8-12	Heavy showers	3			Heavy showers	3	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].	
4	13-18	S	13-18	Heavy rain	4			Heavy rain	4		
5	19-24	SW	19-24	Lying Snow			Frost				
6	25-31	W	25-31	None	0	None	0	None	0		
7	32-38	NW	32-38	On site	1	Ground	1	On site	1		
8	39-46		39-46	High ground	2	All day	2	High ground	2		
9	47-54		47-54								
10	55-63		55-63								
11	64-72		64-72								
12	73+		73+								
Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes(e.g. temperature)		
Hr 1	4	SW	0	5/8	2	2	1	—	2°C		
Hr 2	4	SW	0	4/8	2	2	0	—			
Hr 3	3	SW	0	6/8	2	2	0	—			
Hr 4	3	SW	0	6/8	2	2	0	—	4°C		
Hr 5	4	SW	2	6/8	1	2	0	—			
Hr 6	4	SW	2	5/8	2	2	0	—			
Hr 7	3	SW	2	6/8	1	2	0	—			
Hr 8	4	SW	0	5/8	2	2	0	—	9°C		
Field Notes: Maps attached											
For office use only. NB- Initial AND date ALL boxes.		Logged	Database Entered	Database Validated	GIS Entered	GIS Validated					



Surveyor: Nick Vela

Date: 08/11/2017

Start time: End time:

*Please attach weather sheet

Notes:



- Legend
- BBS/WVO 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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Date: 06/04/2017 Job No: SEC7909 Rev: c
 Drawn: CH Checked: DRAFT Approved: DRAFT

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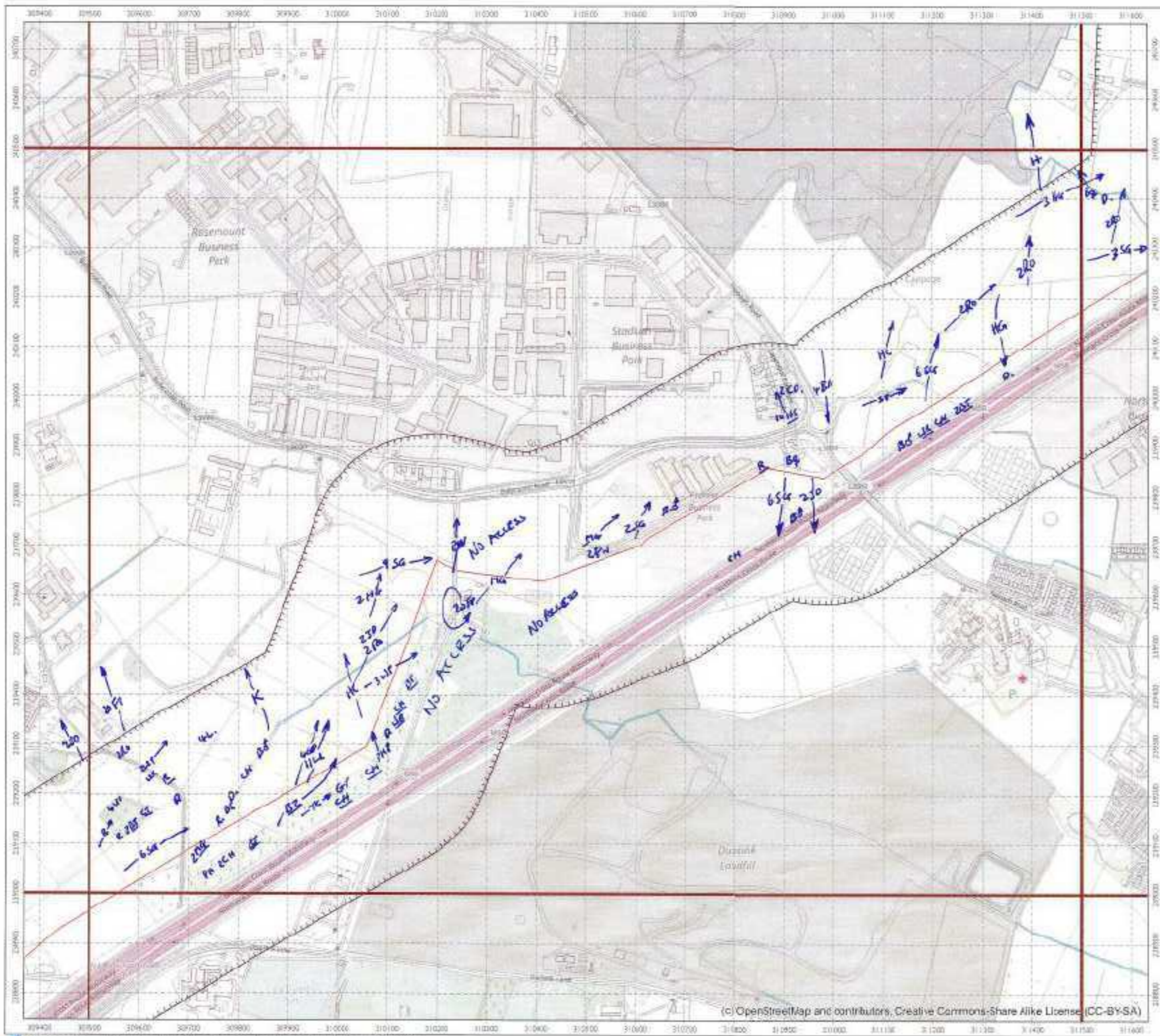
RPS

Surveyor: N. in Veale

Date: 8/11/2017 + 9/11/2017

Start time: End time:

*Please attach weather sheet
Notes:



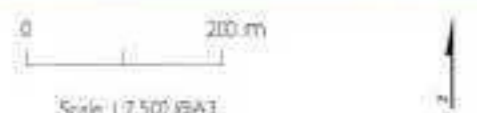
Legend

- 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

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Date: 06/04/2017	Job No: 5EC7909	Rev: c
Drawn: CH	Checked: DRAFT	Approved: DRAFT

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RPS		Weather Sheet		Wind Speed		Direction	Rain/Snow		Cloud Cover		Cloud Height		Visibility		
Site	Date	Survey	Observer	Start Time	Finish Time		Beaufort	Mph	None	0	In eighths e.g. 3/8	Height of cloud above average height of viewshed	Floor (<1km)	Moderate (1-3km)	Good (>3km)
GDD	9/11/17	WLO	Nick Veale	08:30	15:30	Calm	>1	None	0		<150m	0			
						Light air	1-3	Drizzle/Mist	1		150-500m	1			
						Light breeze	4-7	Light showers	2		>500m	2			
						Gentle breeze	8-12	Heavy showers	3						
						Mod. breeze	13-18	Heavy rain	4						
						Fresh breeze	19-24	Lying Snow	0	Frost					
						Strong breeze	25-31	None	0	None	0				
						Mod. gale	32-38	On site	1	Ground	1				
						Fresh gale	39-46	High ground	2	All day	2				
						Strong gale	47-54								
						Whole gale	55-63								
						Storm	64-72								
						Hurricane	73+								
Sheet 1/ & [] Maps attached															
Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes(e.g. temperature)						
	5	NW	1	8/8	1	2	---		8°C						
	4	W	1	8/8	1	2	---								
	4	W	0	6/8	1	2	---								
	4	NW	0	6/8	2	2	---		11°C						
	4	NW	0	6/8	2	2	---								
	4	NW	0	5/8	2	2	---								
	5	W	0	3/8	2	2	---		11°C						
	5	W	0	3/8	2	2	---								
Field Notes: Maps attached															
For office use only. NB-Initial AND date ALL boxes.		Logged	Database Entered	Database Validated	GIS Entered	GIS Validated									

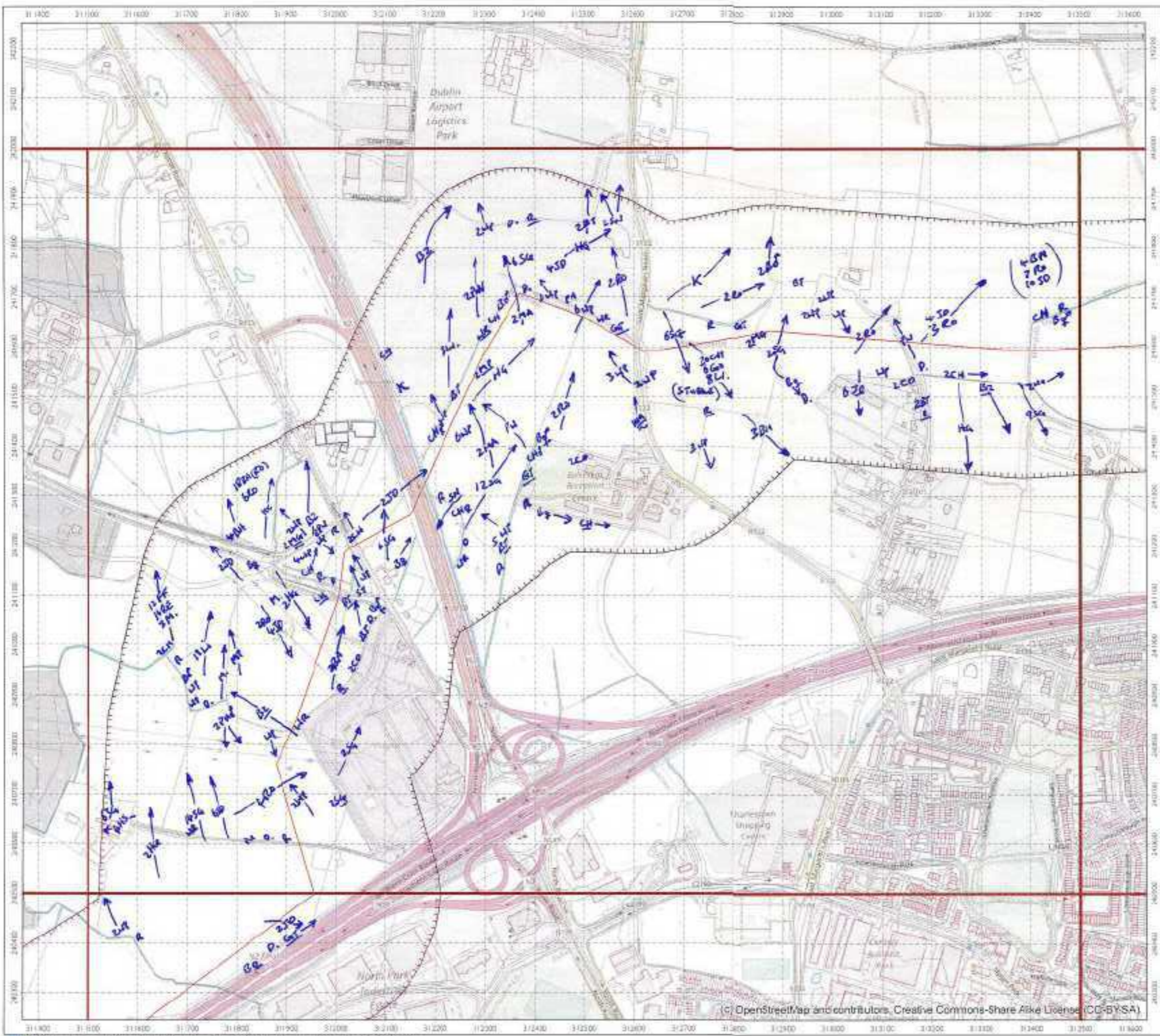
Surveyor: *Nicor Veale*

Date: *9/11/2017*

Start time: _____ End time: _____

*Please attach weather sheet

Notes:

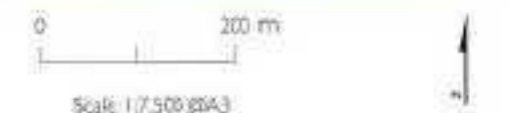


- Legend
- BBS/WVO survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)
 - Pipe route (supplied 20170405)

Greater Dublin Drainage

Breeding/winter bird survey

Page 7 of 18



Scale: 1:7,500 (843)
Date: 06/04/2017 Job No: 56C/909 Rev: 0
Drawn: CH Checked: DRAFT Approved: DRAFT

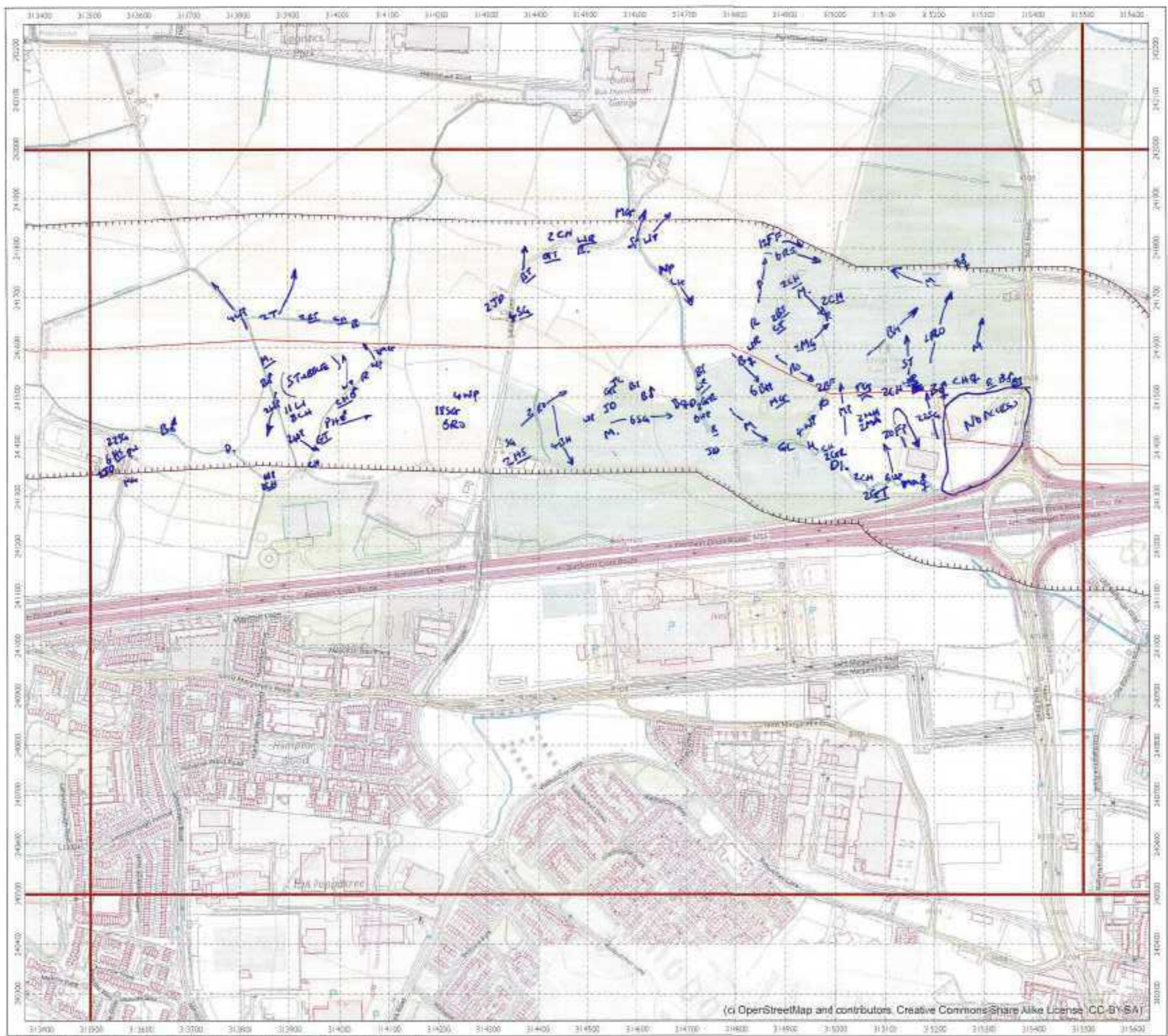
Surveyor: Nick Vack

Date: 9/11/17

Start time: End time:

*Please attach weather sheet.

Notes:



Legend

- BBS/WWO survey boundary (150 m buffer of route supplied 20170405 appended to previous boundary)
- Pipe route (supplied 20170405)

Greater Dublin Drainage

Breeding/winter bird survey

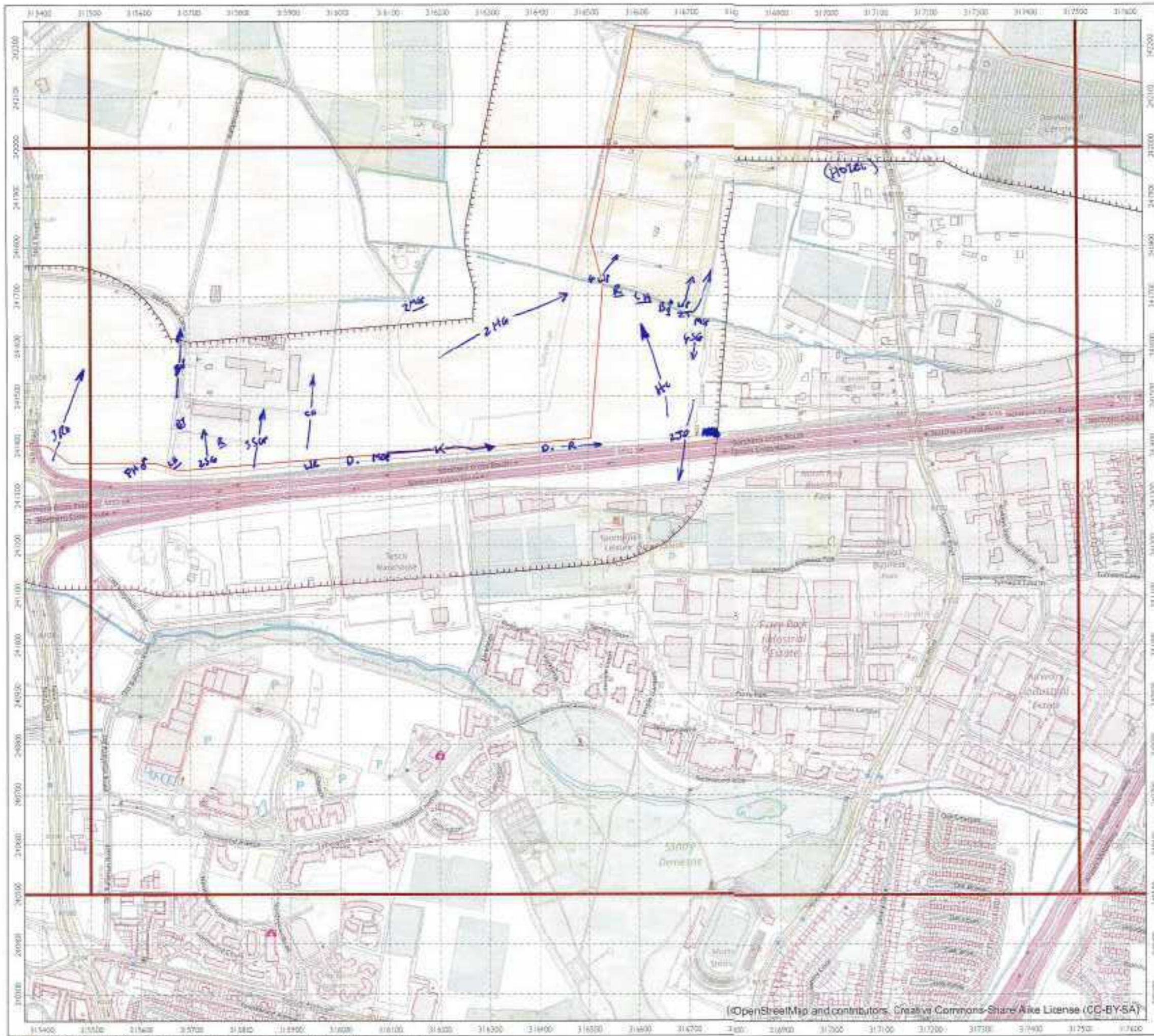
Page 8 of 18

Scale: 1:7,500 @A3

Date: 06/04/2017 Job No: 5EC790F Rev: 1
Drawn: CH Checked: DRAFT Approved: DRAFT

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W:\Projects\2017\BBS\WVO ES File\Drawings\Technical\GIS\DWG\Survey\2017\20170405.mxd
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rps@rps.ie

RPS		Weather Sheet		Wind Speed		Direction	Rain/Snow		Cloud Cover	Cloud Height	Visibility	
Site	GDD			Calm	0	>1	N	None	0	In eights e.g. 3/8	Height of cloud above average height of viewshed	Poor (<1km) 0 Moderate (1-3km) 1 Good (>3km) 2
Date	13/11/17			Light air	1	1-3	NE	Drizzle/Mist	1		<150m: 0	
Survey	WJO			Light breeze	2	4-7	E	Light showers	2		150-500m: 1	
Observer	N. Vede			Gentle breeze	3	8-12	SE	Heavy showers	3		>500m: 2	
Start Time	08:40			Mod. breeze	4	13-18	S	Heavy rain	4		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].	
Finish Time	15:40			Fresh breeze	5	19-24	SW	Lying Snow		Frost		
Sheet 1/ & [] Maps attached				Strong breeze	6	25-31	W	None	0	None	0	
				Mod. gale	7	32-38	NW	On site	1	Ground	1	
				Fresh gale	8	39-46		High ground	2	All day	2	
				Strong gale	9	47-54						
				Whole gale	10	55-63						
				Storm	11	64-72						
				Hurricane	12	73+						
Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes(e.g. temperature)			
Hr 1	3	V	0	6/8	2	2	1		10c			
Hr 2	4	W	0	5/8	2	2	0					
Hr 3	3	SW	0	7/8	2	2	0					
Hr 4	3	SW	0	6/8	2	2	0		50c			
Hr 5	3	SW	2	7/8	2	2	0					
Hr 6	3	SW	2	7/8	2	2	0					
Hr 7	4	SW	2	8/8	1	2	0		70c			
Hr 8	4	SW	2	8/8	1	2	0		70c			
Field Notes: Maps attached												
For office use only. NB- Initial AND date ALL boxes.	Logged	Database Entered	Database Validated	GIS Entered	GIS Validated							



RPS

Surveyor: N. Vede

Date: 13/11/17

Start time: _____ End time: _____

*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

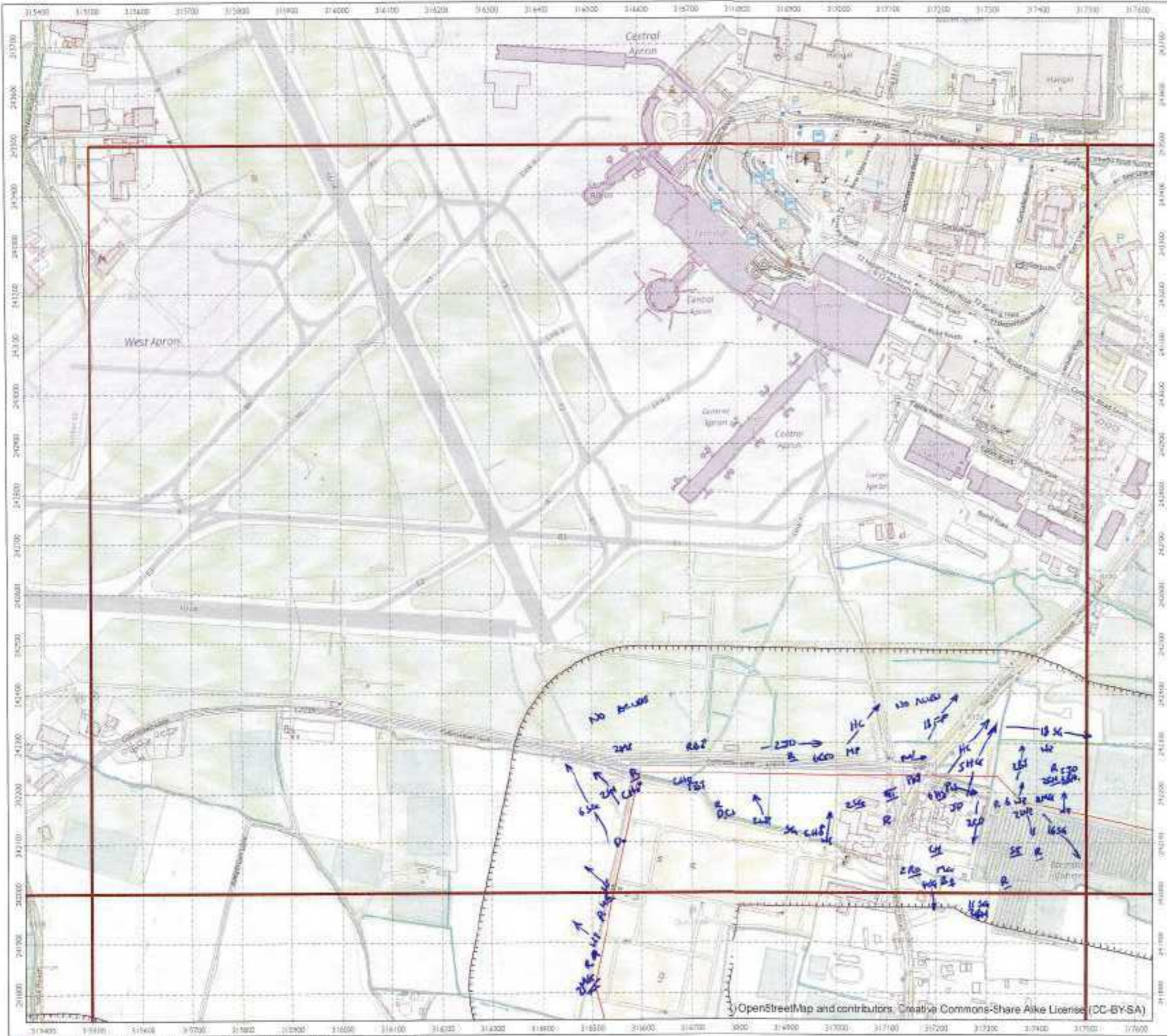
Breeding/winter bird survey

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Scale 1:7,500 @A3

Date: 06/04/2017 Job No: SEC7909 Rev: c

Drawn: CH Checked: DRAFT Approved: DRAFT



Surveyor: N. Veale
 Date: 13/11/17
 Start time: _____ End time: _____
 *Please attach weather sheet
 Notes: _____



Legend

- [Red dashed line] BBS/WVO survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)
- [Red solid line] Pipe route (supplied 20170405)

Greater Dublin Drainage
 Breeding/winter bird survey
 Page 1 of 18

0 200 m
 Scale 1:7,500 @A3
 Date: 06/04/2017 Job No: SEC/509 Rev: c
 Drawn: CH Checked: DRAFT Approved: DRAFT

Surveyor: *N. in Veale*

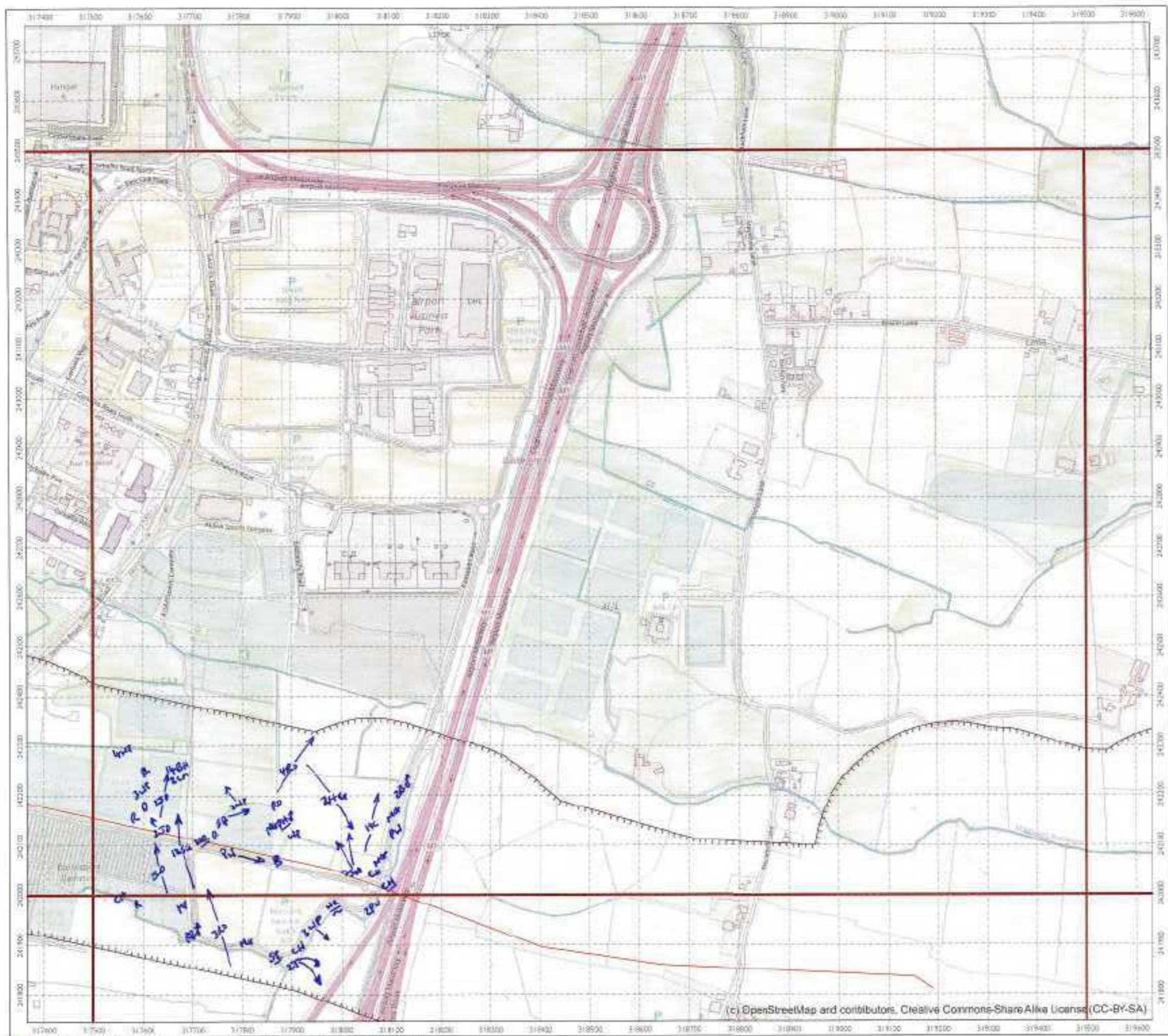
Date: *13/11/17*

Start time:

End time:

*Please attach weather sheet

Notes:



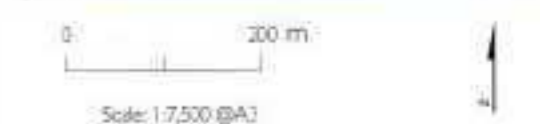
Legend

- BBS/WWD 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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Date: 06/04/2017 Job No: SEC7507 Rev: c
 Drawn: CH Checked: DRAFT Approved: DRAFT

RPS		Weather Sheet		Wind Speed		Direction	Rain/Snow		Cloud Cover		Cloud Height		Visibility			
Site	Date	Survey	Observer	Start Time	Finish Time		Beaufort	Mph	None	In eighths e.g. 3/8	Height of cloud above average height of viewshed	<150m	150-500m	>500m	Poor (<1km)	Moderate (1-3km)
GDD	14/11/17	WLO	Nick Veale	09:00	16:00	Calm	>1	None	0					0		
						Light air	1-3	Drizzle/Mist	1					1		
						Light breeze	4-7	Light showers	2					2		
						Gentle breeze	8-12	Heavy showers	3							
						Mod. breeze	13-18	Heavy rain	4							
						Fresh breeze	19-24	Lying Snow		Frost						
						Strong breeze	25-31	None	0	None	0					
						Mod. gale	32-38	On site	1	Ground	1					
						Fresh gale	39-46	High ground	2	All day	2					
						Strong gale	47-54									
						Whole gale	55-63									
						Storm	64-72									
						Hurricane	73+									
Sheet 1/ & [] Maps attached																
Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes(e.g. temperature)							
Hr 1	4	W	1	8/8	1	1			10°C							
Hr 2	5	W	0	8/8	1	2										
Hr 3	5	SW	2	5/8	2	2										
Hr 4	4	SW	0	6/8	2	2			11°C							
Hr 5	4	W	0	6/8	2	2										
Hr 6	4	SW	0	6/8	2	2										
Hr 7	4	SW	0	5/8	2	2			12°C							
Hr 8	5	SW	0	4/8	2	2										
Field Notes: Maps attached																
For office use only. NB- Initial AND date ALL boxes.		Logged	Database Entered	Database Validated	GIS Entered	GIS Validated										

Surveyor: N. Vech

Date: 14/11/17

Start time: _____ End time: _____

*Please attach weather sheet

Notes: _____



- Legend
- BBS/MWD 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

Scale: 1:7,500 @A3

Date: 06/04/2017 Job No: 502/709 Rev: C

Drawn: CH Checked: DRAFT Approved: DRAFT

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112group.com

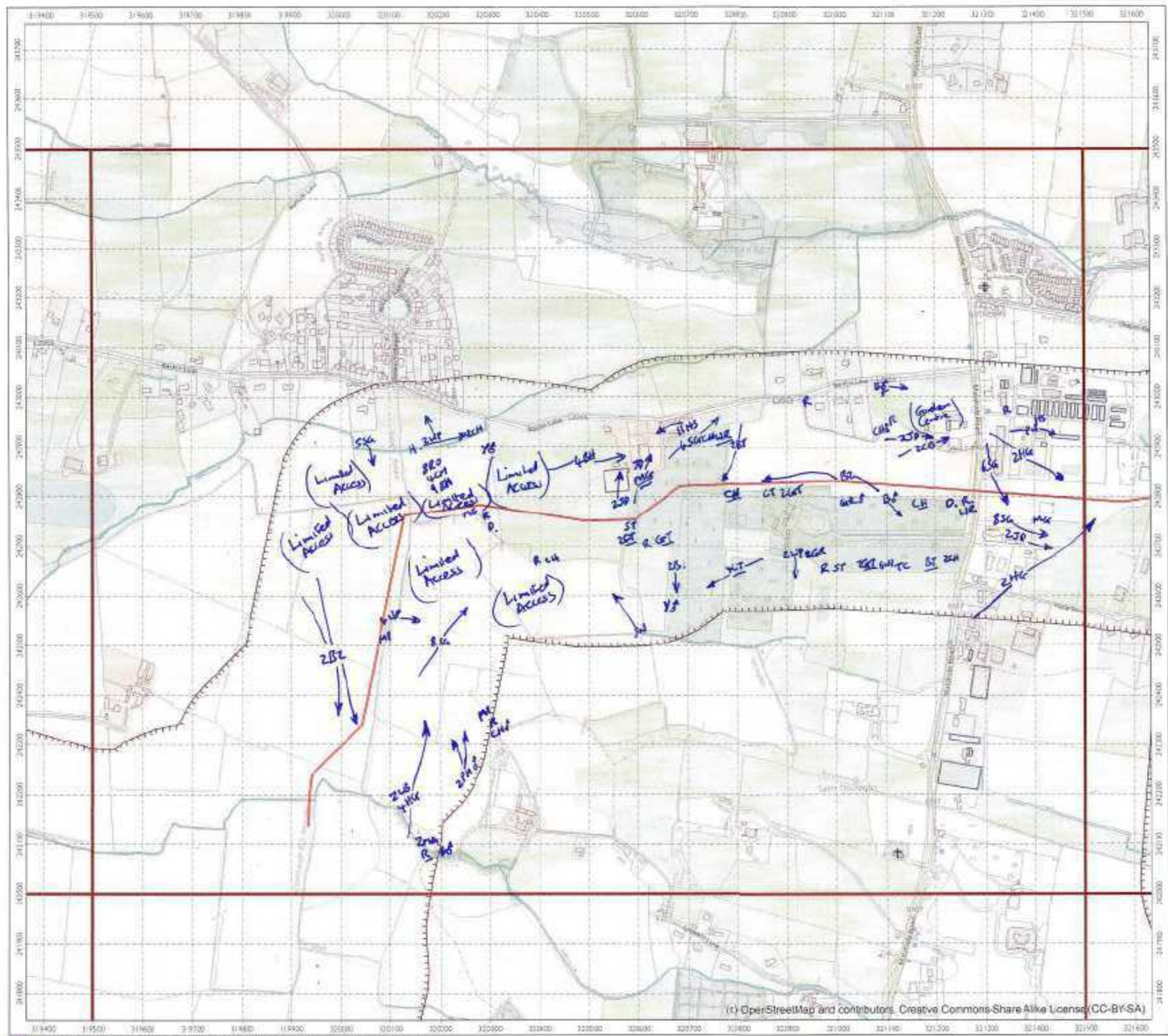
Surveyor: *Nick Veale*

Date: *14/11/2017*

Start time: _____ End time: _____

*Please attach weather sheet

Notes:



Legend

- BBS/WWD 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 3 of 18



Scale: 1:7,500 @A3

Date: 06/04/2017 Job No: SEC7909 Rev: c

Drawn: GH Checked: DRAFT Approved: DRAFT

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RPS

Surveyor: N. Veen

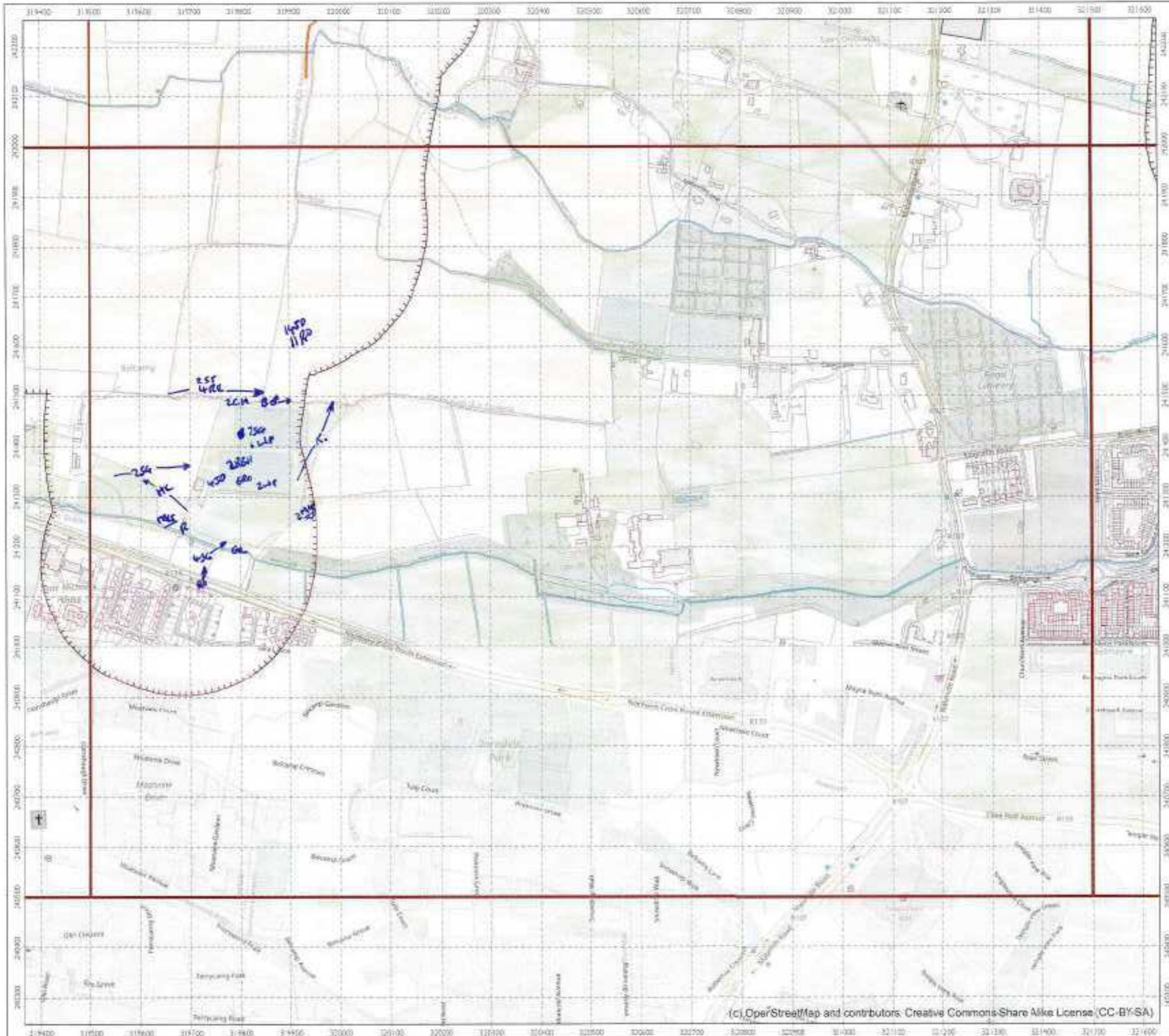
Date: 14/11/17

Start time:

End time:

*Please attach weather sheet.

Notes:



Legend

- BBS/WWD 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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0 200 m

Scale: 1:7500 @A3

Date: 06/04/2017 Job No: 56C7909 Rev: C

Drawn: CH Checked: DRAFT Approved: DRAFT

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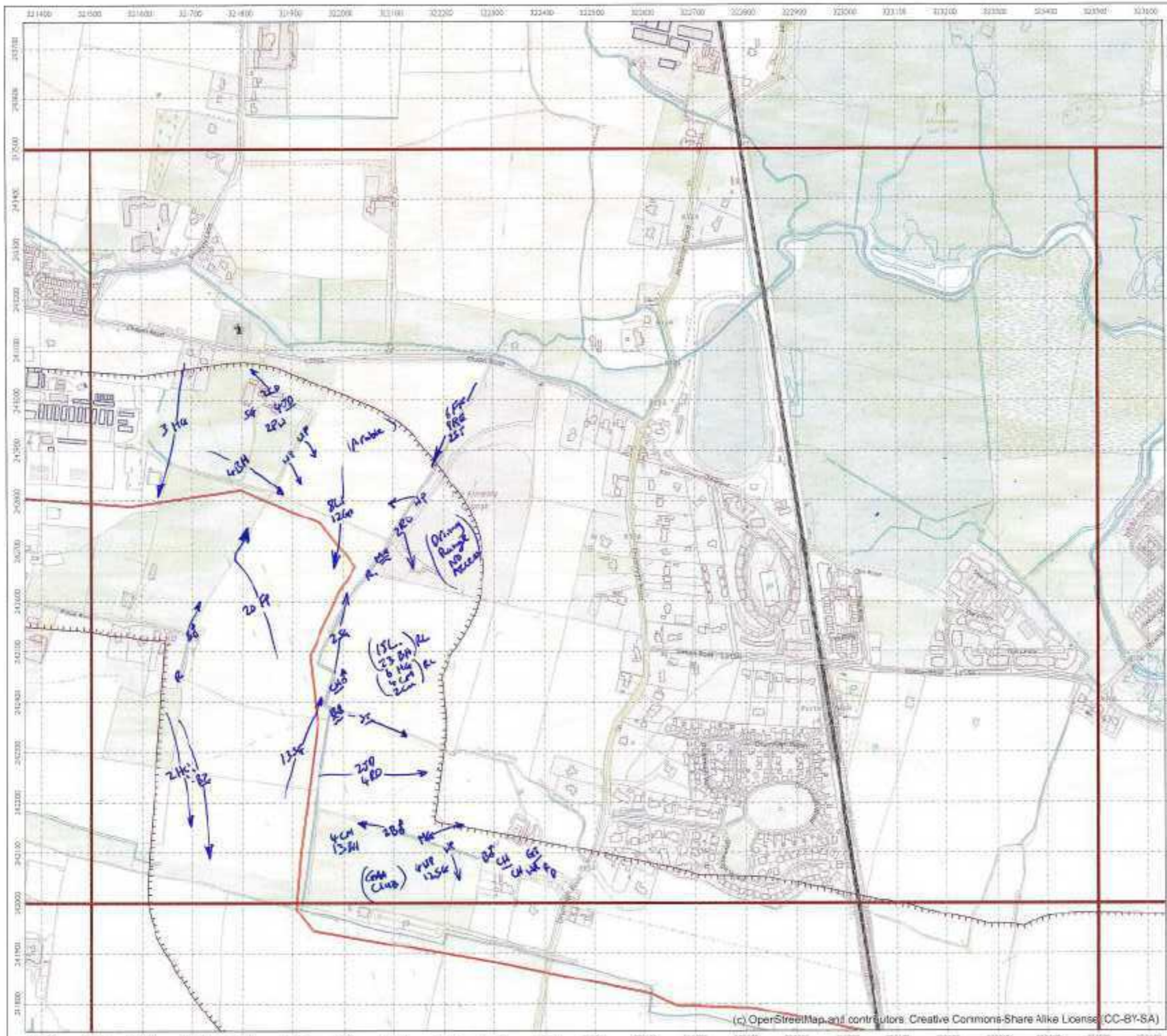
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RPS		Weather Sheet		Wind Speed		Direction	Rain/Snow		Cloud Cover		Cloud Height		Visibility	
Site	Date	Survey	Observer	Start Time	Finish Time		Beaufort	Mph	None	0	In eighths e.g. 3/8	Height of cloud above average height of viewshed	Poor (<1km)	0
GDD	24/4/17	WJO	Nicki Veale	08:50	15:30	1	1-3	Drizzle/Mist	1			Moderate (1-3km)	1	
Sheet 1/	[] Maps attached		2	2-4	2-4	2	4-7	Light showers	2			Good (>3km)	2	
3	3	8-12	3	8-12	3	8-12	3	Heavy showers	3		<150m	0		
4	4	13-18	4	13-18	4	13-18	4	Heavy rain	4		150-500m	1		
5	5	19-24	5	19-24	5	19-24	5	Lying Snow		Frost	>500m	2		
6	6	25-31	6	25-31	6	25-31	6	None	0	None				
7	7	32-38	7	32-38	7	32-38	7	On site	1	Ground				
8	8	39-46	8	39-46	8	39-46	8	High ground	2	All day				
9	9	47-54	9	47-54	9	47-54	9				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].			
10	10	55-63	10	55-63	10	55-63	10							
11	11	64-72	11	64-72	11	64-72	11							
12	12	73+	12	73+	12	73+	12							

Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes(e.g. temperature)
	5	W	0	3/8	2	2	---		2°C
	5	W	0	5/8	2	2	---		
	5	W	0	5/8	2	2	---		3°C
	4	W	1	6/8	2	2	---		
	5	W	2	6/8	2	2	---		4°C
	5	W	2	6/8	2	2	---		
	5	W	0	7/8	2	2	---		4°C
	5	W	0	5/8	2	2	---		

Field Notes:
Maps attached

For office use only. NB- Initial AND date ALL boxes.	Logged	Database Entered	Database Validated	GIS Entered	GIS Validated
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RPS

Surveyor: N. Veale

Date: 24/11/2017

Start time: _____ End time: _____

*Please attach weather sheet.

Notes: _____



- Legend**
- BBS/MWD 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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0 200 m

Scale: 1:7,500 @A3

Date: 06/04/2017 Job No: 5027007 Rev: 1

Drawn: CH Checked: DRAFT Approved: DRAFT

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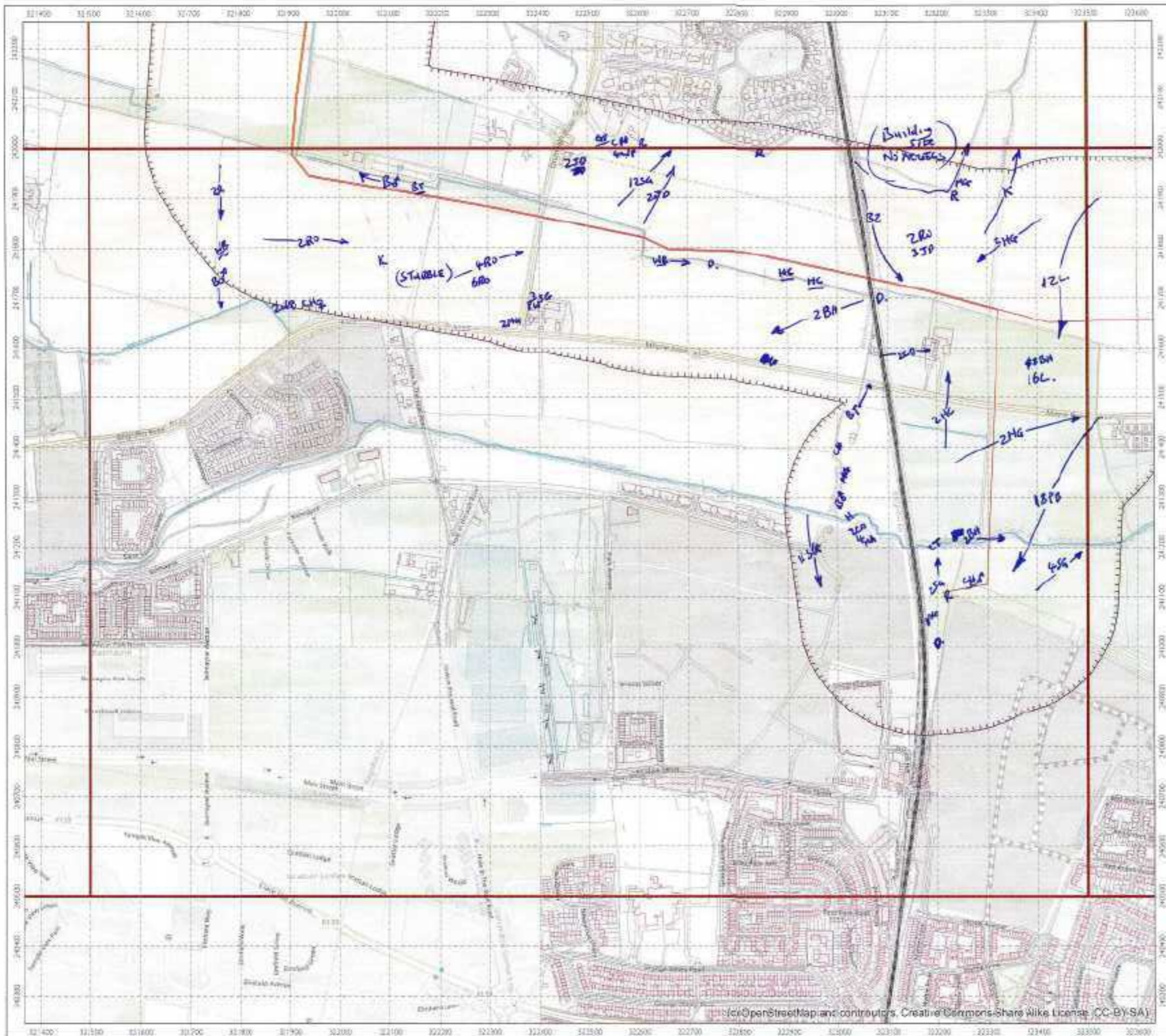
Surveyor: N. Vella

Date: 24 + 28 / 11 / 2017



Start time: | End time:

*Please attach weather sheet

Notes:



Legend

-  385/MWO 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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Date: 06/04/2017 Job No: 3623708 Rev: c
 Drawn: CH Checked: DRAFT Approved: DRAFT

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RPS		Weather Sheet		Wind Speed		Direction	Rain/Snow		Cloud Cover	Cloud Height	Visibility
Site	Date	Beaufort	Mph	None	0		In eighths e.g. 3/8	Height of cloud above average height of viewshed	Poor (<1km)	0	
GDD	28/11/17	1	1-3	Drizzle/Mist	1			Moderate (1-3km)	1		
Survey	WJO	2	4-7	Light showers	2			Good (>3km)	2		
Observer	Nikh Veda	3	8-12	Heavy showers	3			<150m	0		
Start Time		4	13-18	Heavy rain	4			150-500m	1		
Finish Time		5	19-24	Lying Snow	0	None	0	>500m	2		
Sheet 1/ & [] Maps attached		6	25-31	None	0	On site	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. E.g. WS - 5, gusting 6 [in notes].			
		7	32-38	On site	1	High ground	2				
		8	39-46	High ground	2						
		9	47-54								
		10	55-63								
		11	64-72								
		12	73+								
Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes(e.g. temperature)		
Hr 1	5	NW	0	3/8	2	2	1	—	0°C		
Hr 2	4	NW	0	3/8	2	2	1	—	1°C		
Hr 3	4	W	0	4/8	2	2	0	—	1°C		
Hr 4	5	W	0	3/8	2	2	0	—	2°C		
Hr 5	5	NW	0	2/8	2	2	0	—	3°C Gusting up to force 7		
Hr 6	5	NW	0	4/8	2	2	0	—	5°C		
Hr 7	5	NW	0	3/8	2	2	0	—	5°C		
Hr 8	5	NW	0	4/8	2	2	0	—	5°C		
Field Notes: Maps attached											
For office use only. NB. Initial AND date ALL boxes.	Logged	Database Entered	Database Validated	GIS Entered	GIS Validated						

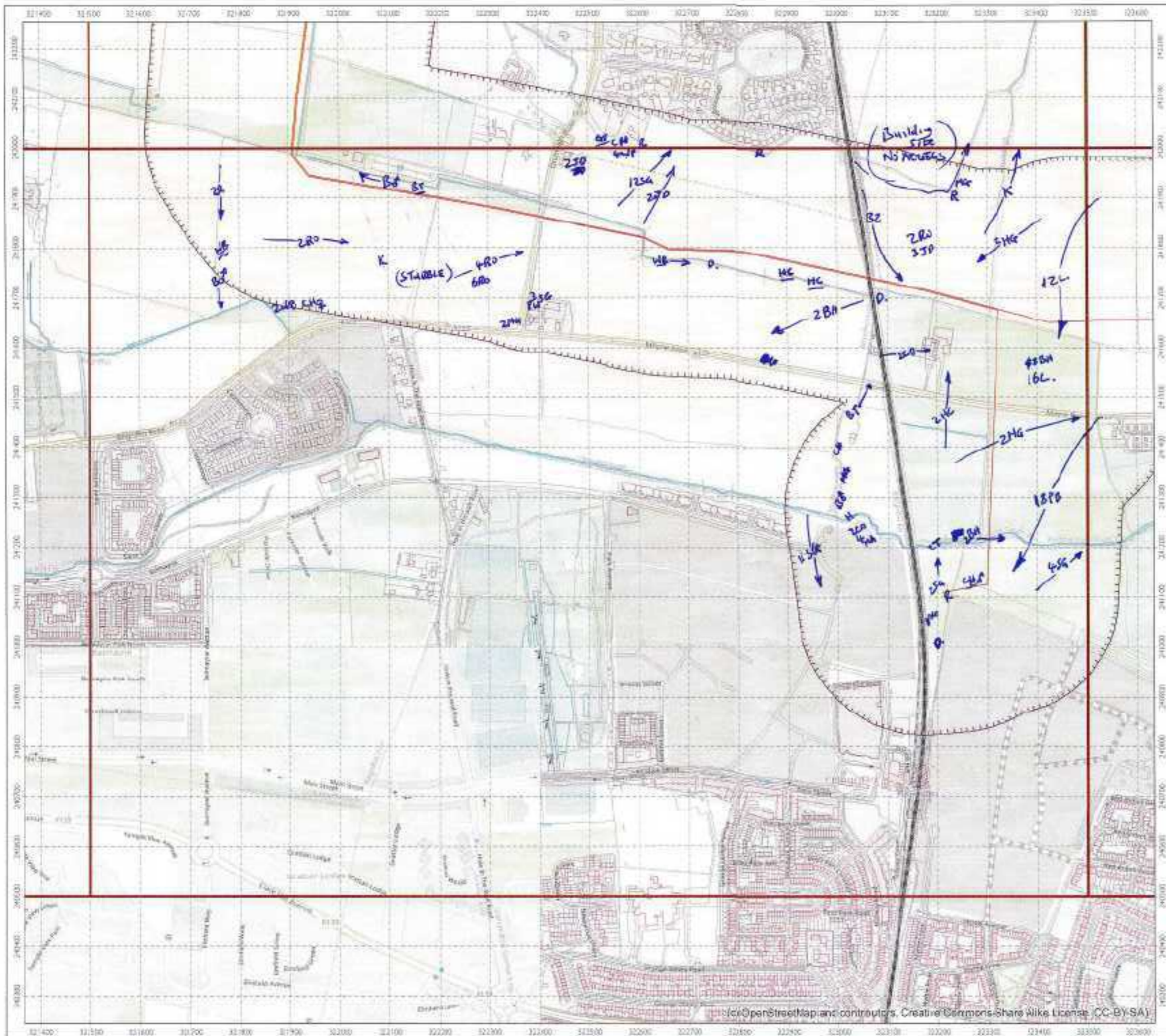


Surveyor: N. Vella

Date: 24 + 28 / 11 / 2017

Start time: End time:

*Please attach weather sheet
Notes:



- Legend
- 385/MWO survey boundary (350 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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Scale: 1:7,500 @A3
Date: 06/04/2017 Job No: 3621908 Rev: c
Drawn: CH Checked: DRAFT Approved: DRAFT

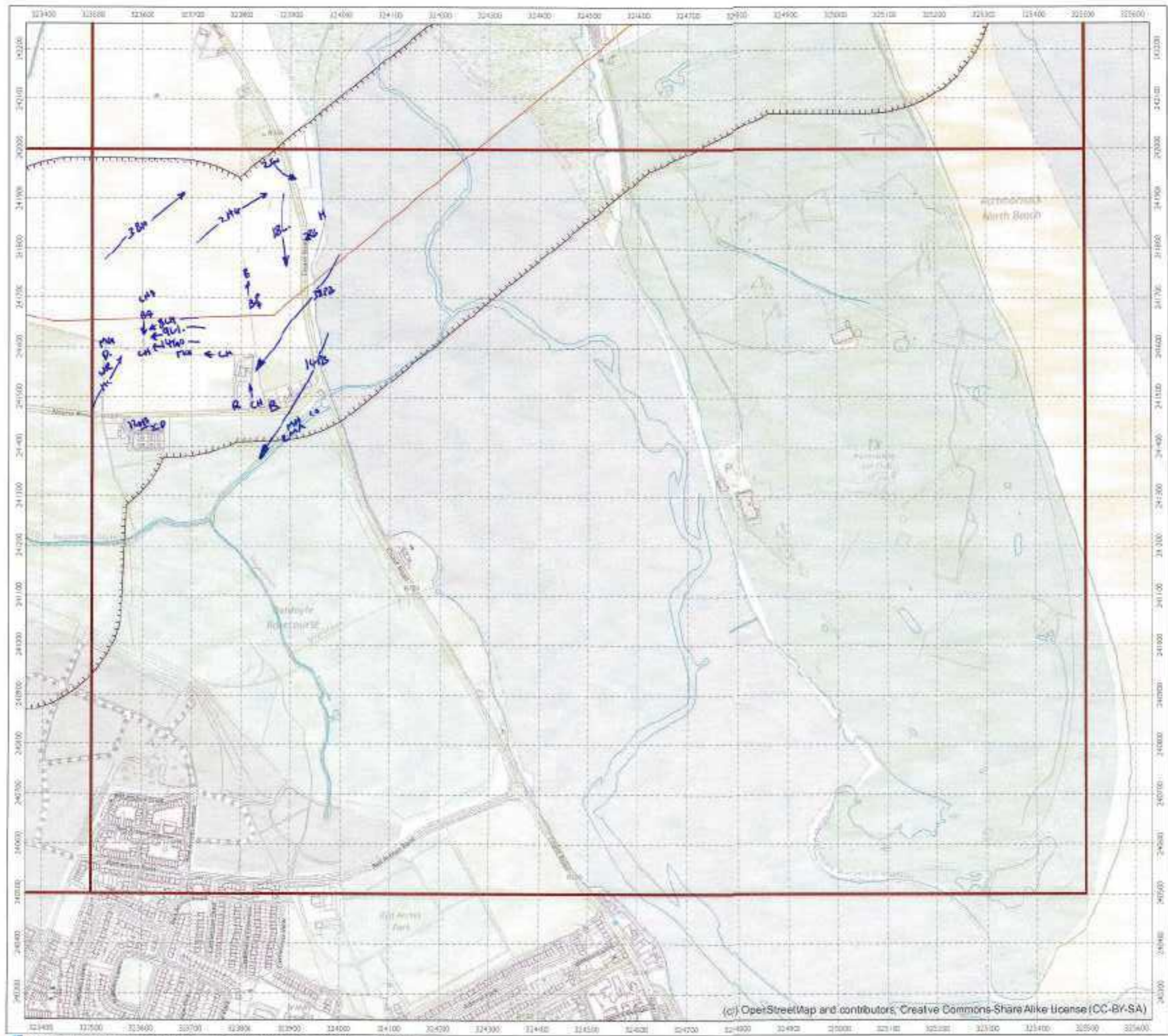
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Surveyor: Nick Veale

Date: 28/11/2017

Start time: _____ End time: _____

*Please attach weather sheet
Notes:



- Legend
- BBS/WWD 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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0 200 m

Scale: 1:7,500 @A3

Date: 06/04/2017 Job No: 56C7905 Rev: c

Drawn: CH Checked: DRAFT Approved: DRAFT

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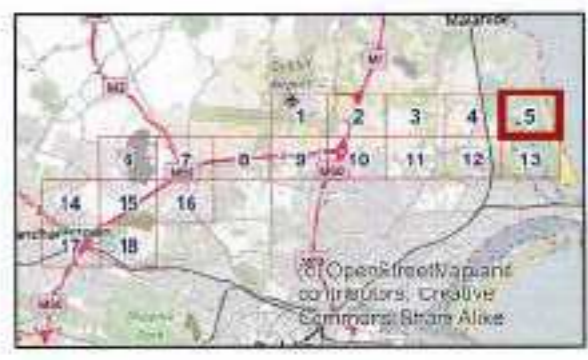
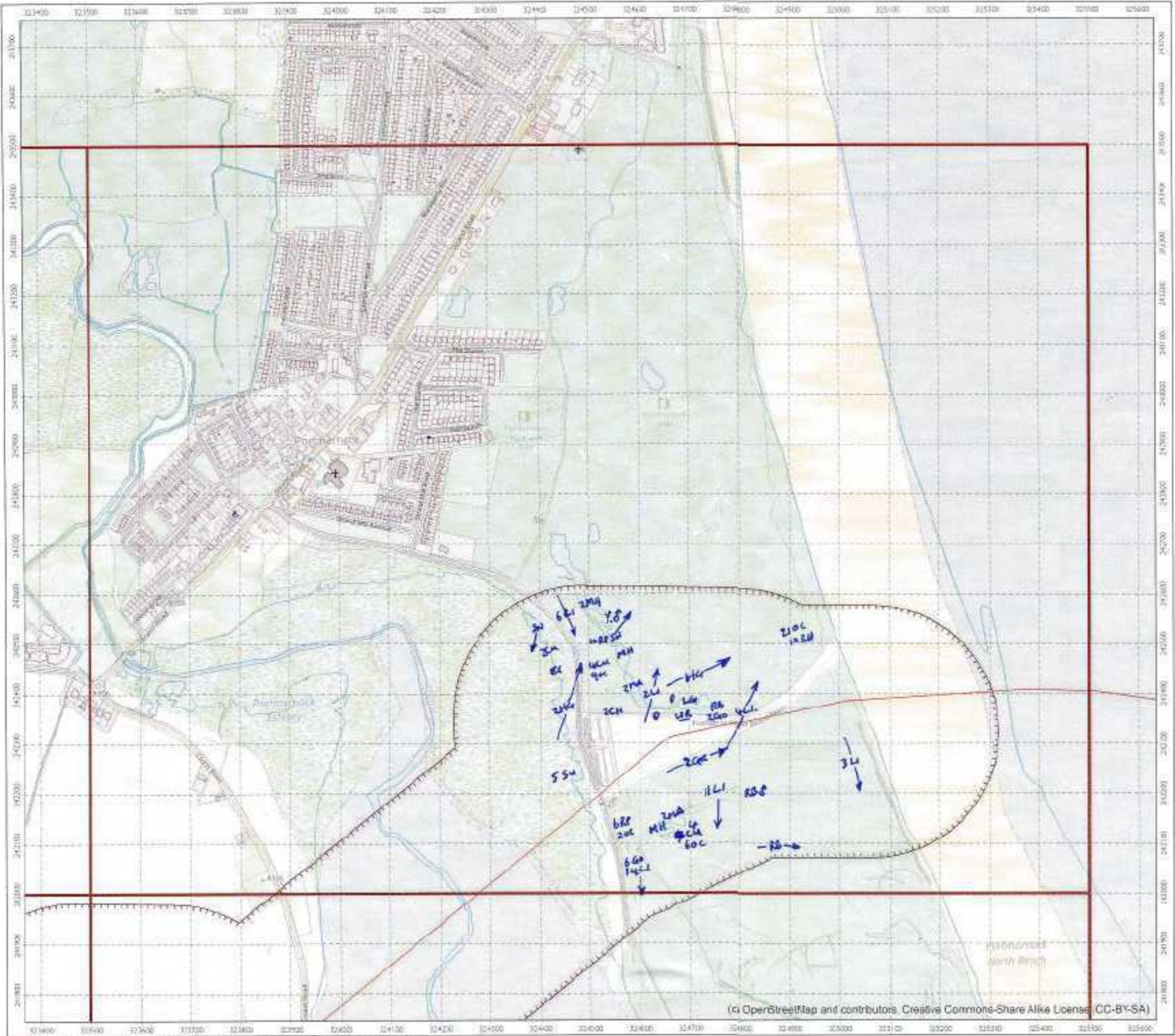
tpgroup.com

Surveyor: N. Veale

Date: 28/11/2017

Start time: End time:

*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)

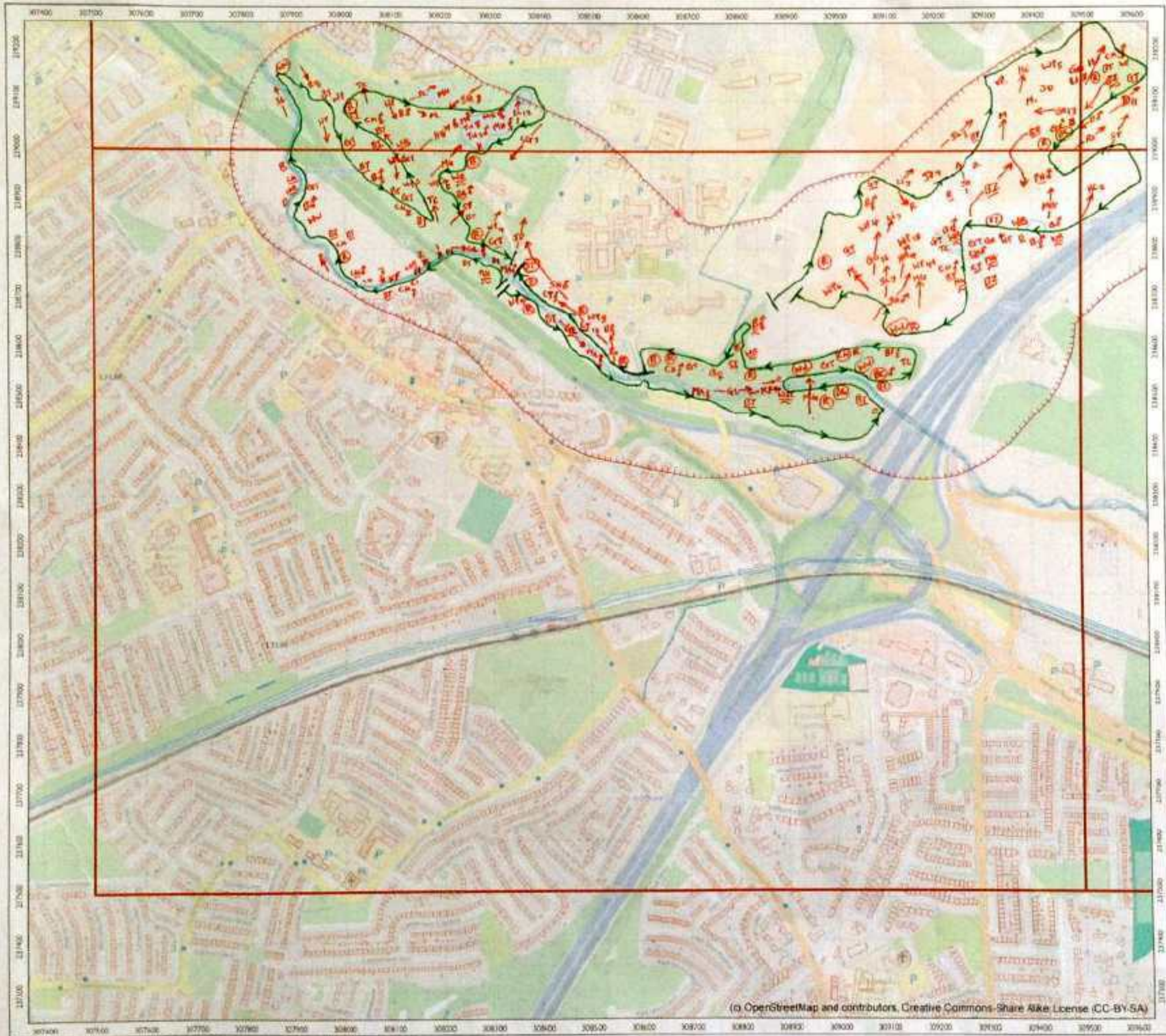
Greater Dublin Drainage
Breeding/winter bird survey
Page 5 of 18

Scale: 1:7,500 @A3
Date: 06/04/2017 Job No: 56C7909 Rev: c
Drawn: CH Checked: DRAFT Approved: DRAFT
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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).

RPS Weather Sheet		Wind Speed		Direction	Rain/Snow		Cloud Cover		Cloud Height		Visibility	
Site	Date	Beaufort	Mph		in eighths e.g. 3/8	None	0	None	0	Height of cloud above average height of viewshed	Poor (<1km)	0
GDP	15/04/2015	Calm	0	>1	N	None	0	None	0		Moderate (1-3km)	1
Survey	Breeding Birds	Light air	1	1-3	NE	Drizzle/Mist	1	Ground	1		Good (>3km)	2
Observer	Nick Vede	Light breeze	2	4-7	E	Light showers	2	All day	2	<150m	0	
Start Time	07:00	Gentle breeze	3	8-12	SE	Heavy showers	3			150-500m	1	
Finish Time	13:00	Mod. breeze	4	13-18	S	Heavy rain	4			>500m	2	
Sheet 1/ & [] Maps attached		Fresh breeze	5	19-24	SW	Lying Snow	None	None	0	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].		
		Strong breeze	6	25-31	W	On site	1					
		Mod. gale	7	32-38	NW	High ground	2					
		Fresh gale	8	39-46								
		Strong gale	9	47-54								
		Whole gale	10	55-63								
		Storm	11	64-72								
		Hurricane	12	73+								
Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes(e.g. temperature)			
Hr 1 07:00	2	SW	0	6/8	2	2	0	0	6°C			
Hr 2 08:00	3	SW	0	6/8	2	2	0	0	8°C			
Hr 3 09:00	3	W	1	8/8	2	1	0	0	8°C			
Hr 4 10:00	2	W	0	8/8	2	2	0	0	9°C			
Hr 5 11:00	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 attached												
For office use only. NB-Initial AND date ALL boxes.		Logged	Database Entered	Database Validated	GIS Entered	GIS Validated						



RPS

Surveyor: *Nick Veste*

Date: *15/4/2015*

Start time: *07:00* End time: *13:00*

*Please attach weather sheet

Notes:

→ Transect route

- 1 * Dipper Nest Active (under bridge)
- 2 * Dipper Nest Active (under bridge)
- 3 * Kingfisher Nest (Adult seen going in + out)



Legend

BBS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage

Breeding bird survey

Page 17 of 18

0 200 m

Scale 1:7500 (A3)

Date: 20/04/2015 Job No: SEC7909 Rev: a

Drawn: CH Checked: DRAFT Approved: DRAFT

Map National Grid, EPSG:29902
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RPS		Weather Sheet		Wind Speed			Direction	Rain/Snow	Cloud Cover	Cloud Height	Visibility
Site	GDD	Calm	0	>1		N	None	0	In eighths	Height of cloud above average height of viewshed	Poor (<1km) 0
Date	16/04/2015	Light air	1	1-3		NE	Drizzle/Mist	1	e.g. 3/8		Moderate (1-3km) 1
Survey	Breeding Birds	Light breeze	2	4-7		E	Light showers	2			Good (>3km) 2
Observer	N. Veale	Genfe breeze	3	8-12		SE	Heavy showers	3		<150m	0
Start Time	06:50	Mod. breeze	4	13-18		S	Heavy rain	4		150-500m	1
Finish Time	12:50	Fresh breeze	5	19-24		SW	Lying Snow		Frost	>500m	2
Sheet 1/ & [] Maps attached		Strong breeze	6	25-31		W	None	0	None	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].	
		Mod. gale	7	32-38		NW	On site	1	Ground		
		Fresh gale	8	39-46			High ground	2	All day		
		Strong gale	9	47-54							
		Whole gale	10	55-63							
		Storm	11	64-72							
		Hurricane	12	73+							
Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes(e.g. temperature)		
Hr 1 06:50	2	E	0	7/8	2	2	0	0	4°C		
Hr 2 07:50	3	E	0	7/8	2	2	0	0	7°C		
Hr 3 08:50	3	E	0	6/8	2	2	0	0	7°C		
Hr 4 09:50	3	E	0	5/8	2	2	0	0	9°C		
Hr 5 10:50	3	E	0	5/8	2	2	0	0	10°C		
Hr 6 11:50	4	E	0	5/8	2	2	0	0	10°C		
Hr 7 12:50											
Hr 8											
Field Notes: Maps attached											
For office use only. NB- Initial AND date ALL boxes.		Logged	Database Entered	Database Validated	GIS Entered	GIS Validated					



RPS

Surveyor: *Nick Veale*

Date: *16/04/2015*

Start time: *06:50* End time: *12:50*

*Please attach weather sheet

Notes:

→ Transect route

▨ No Access
(Traveler Holding Site)



Legend
 ▨ BBS survey boundary (250 m buffer, supplied 2014/4/20)

Greater Dublin Drainage

Breeding bird survey

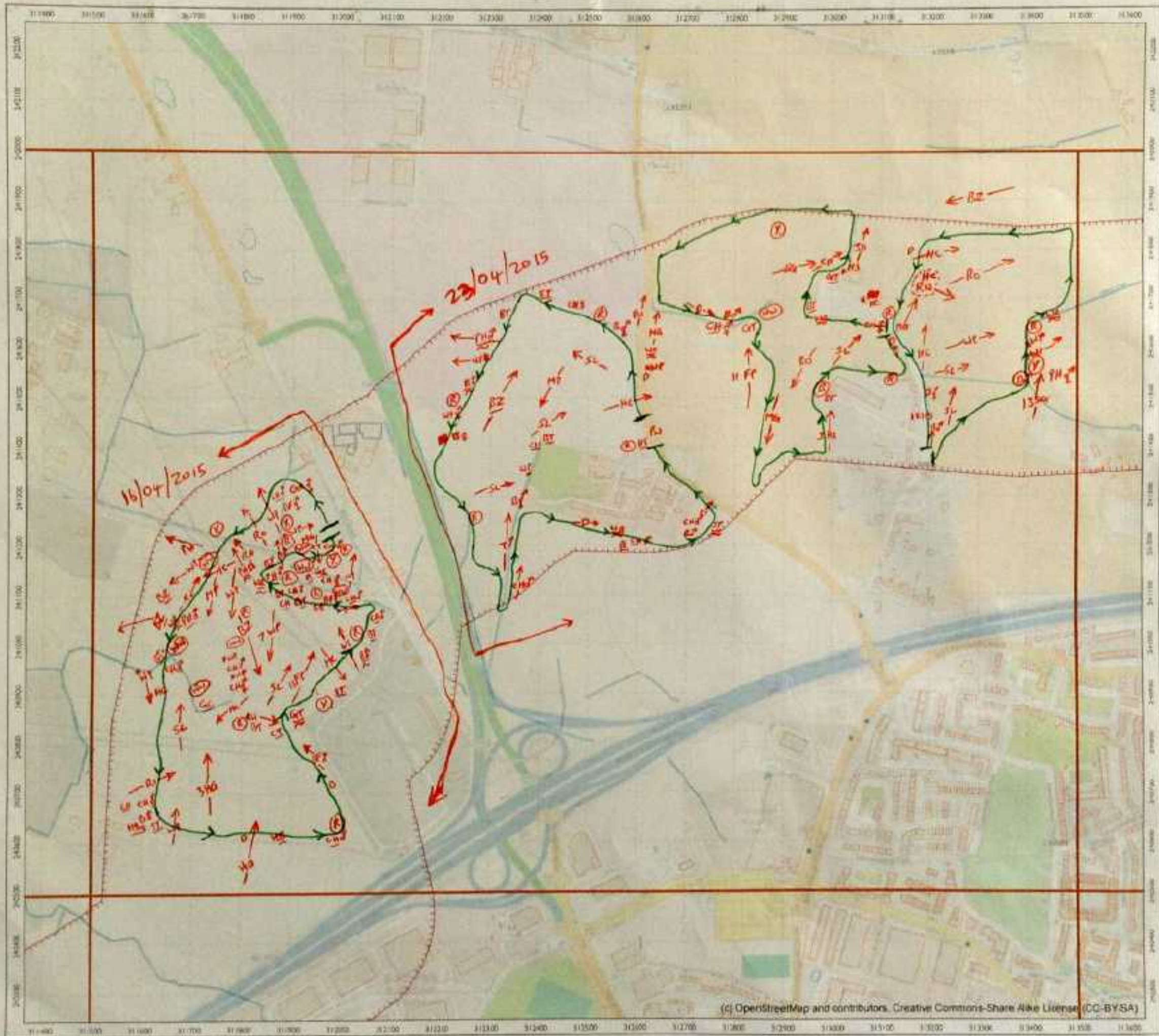
Page 15 of 18



Date: 20/04/2015 Job No: SEC7909 Rev: 2
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 rps@rps.ie

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RPS

Surveyor: *Nick Veale*
 Date: *16/04/2015*
23/04/2015
 Monday 06:50 - 12:50
 Start time: 06:30 End time
 23/04/15 06:30 12:30

*Please attach weather sheet
 Notes:

→ | → Transect Routes



Legend
 [Red dashed line] BBS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage
 Breeding bird survey
 Page 7 of 18

0 200 m
 Scale 1:7500 @A3
 Date: 20/4/2015 No: 40-SEC7909 Rev: a
 Drawn: CH Checked: DRAFT Approved: DRAFT
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 rps@rps.com

RPS		Weather Sheet		Wind Speed		Direction	Rain/Snow		Cloud Cover		Cloud Height		Visibility		
Site	Date	Survey	Observer	Start Time	Finish Time		Beaufort	Mph	Lying Snow		Frost		Height of cloud above average height of viewshed		Poor (<1km) 0 Moderate (1-3km) 1 Good (>3km) 2
GDD	23/04/2015	Brooding Birds	Nick Veda	06:30	12:30	Calm	0	>1	N	None	0	In eighths e.g. 3/8			
						Light air	1	1-3	NE	Drizzle/Mist	1				
						Light breeze	2	4-7	E	Light showers	2				
						Gentle breeze	3	8-12	SE	Heavy showers	3				
						Mod. breeze	4	13-18	S	Heavy rain	4				
						Fresh breeze	5	19-24	SW	Lying Snow		Frost			
						Strong breeze	6	25-31	W	None	0	None	0	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]	
						Mod. gale	7	32-38	NW	On site	1	Ground	1		
						Fresh gale	8	39-46		High ground	2	All day	2		
						Strong gale	9	47-54							
						Whole gale	10	55-63							
						Storm	11	64-72							
						Hurricane	12	73+							
Sheet 1/ & [] Maps attached															
Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes(e.g. temperature)						
Hr 1 06:30	0	/	0	0/4	2	2	0	0	8°C						
Hr 2 07:30	0	/	0	0/8	2	2	0	0	10°C						
Hr 3 08:30	1	SE	0	0/8	2	2	0	0	13°C						
Hr 4 09:30	1	SE	0	1/8	2	2	0	0	16°C						
Hr 5 10:30	1	SE	0	1/8	2	2	0	0	16°C						
Hr 6 11:30	1	SE	0	1/8	2	2	0	0	17°C						
Hr 7 12:30	2	S	0		2	2			18°C						
Hr 8	2	S	0												
Field Notes: Maps attached															
For office use only. NB- Initial AND date ALL boxes.		Logged	Database Entered	Database Validated	GIS Entered	GIS Validated									




RPS

Surveyor **Nick Veale**


Date: **23/04/2015**

Start time: **06:30** End time:

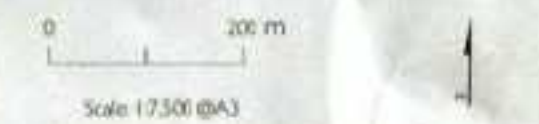
*Please attach weather sheet
Notes:

 No ACCESS Ring
indicated 3 days in a row
left numerous messages, no
contact.



Legend
 BBS survey boundary (250 m buffer, supplied 20140420)

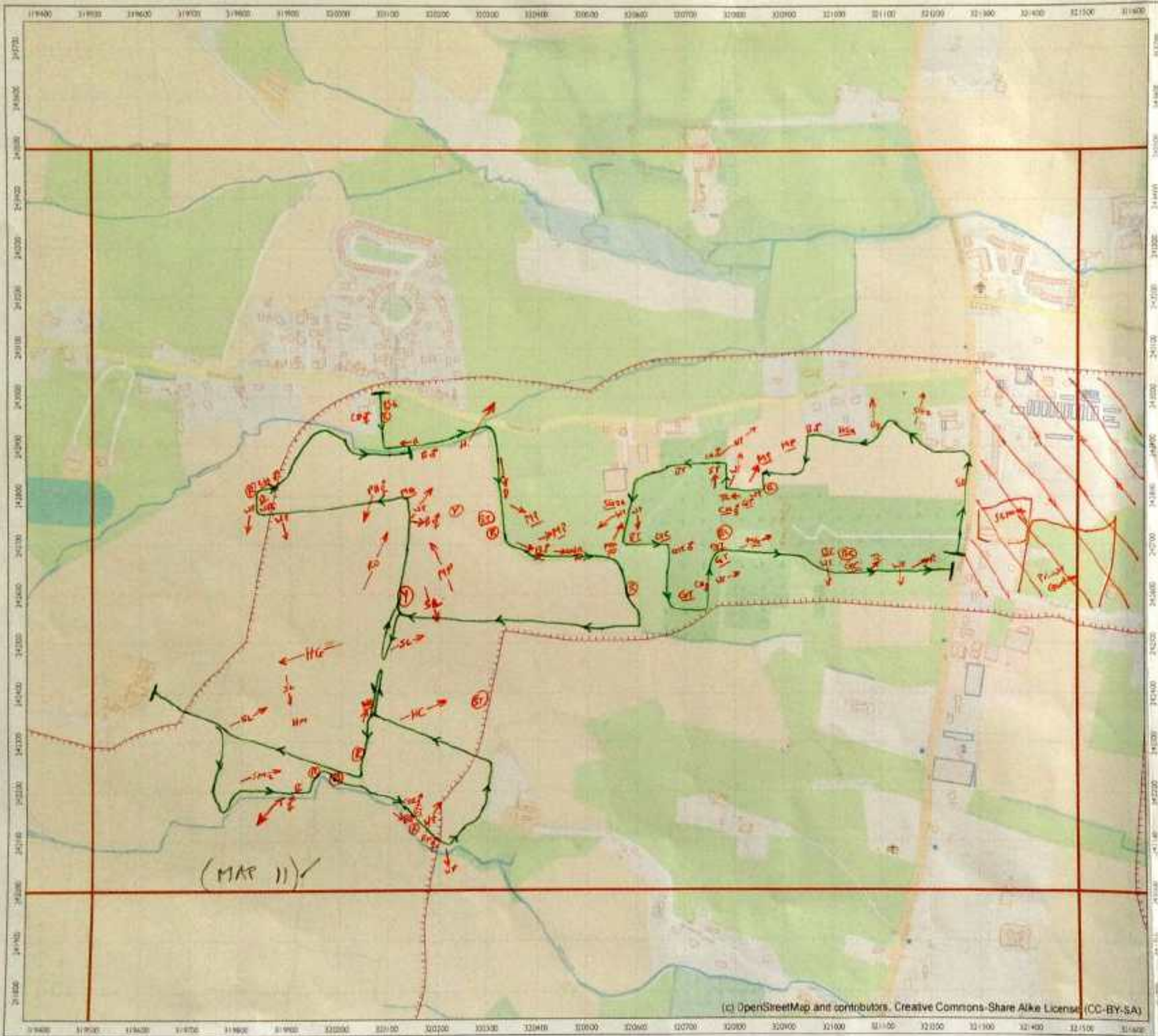
Greater Dublin Drainage
 Breeding bird survey
 Page 8 of 18



Date: 20/04/2015 Job No: DEC7907 Rev: 4
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RPS		Weather Sheet		Wind Speed		Direction	Rain/Snow		Cloud Cover	Cloud Height	Visibility
Site	GDD	Beaufort	Mph								
Date	24/04/2015	Calm	0	>1	N	None	0	In eighths	Height of cloud above average height of viewshed	Poor (<1km)	0
Survey	Breeding Birds	Light air	1	1-3	NE	Drizzle/Mist	1	e.g. 3/8		Moderate (1-3km)	1
Observer	N. Veala	Light breeze	2	4-7	E	Light showers	2			Good (>3km)	2
Start Time	06:30	Gentle breeze	3	8-12	SE	Heavy showers	3		<150m		
Finish Time	12:30	Mod. breeze	4	13-18	S	Heavy rain	4		150-500m	1	
Sheet 1/ & [] Maps attached		Fresh breeze	5	19-24	SW	Lying Snow			>500m	2	
		Strong breeze	6	25-31	W	None	0	None			
		Mod. gale	7	32-38	NW	On site	1	Ground			
		Fresh gale	8	39-46		High ground	2	All day			
		Strong gale	9	47-54							
		Whole gale	10	55-63							
		Storm	11	64-72							
		Hurricane	12	73+							
Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes(e.g. temperature)		
Hr 10630	3	W	0	3/8	2	2	0	0	5°C		
Hr 20730	4	W	0	3/8	2	2	0	0	7°C		
Hr 30830	4	SW	0	4/8	2	2	0	0	8°C		
Hr 40930	3	SW	0	2/8	2	2	0	0	10°C		
Hr 51030	3	SW	0	2/8	2	2	0	0	12°C		
Hr 61130	2	SE	0	2/8	2	2	0	0	13°C		
Hr 7											
Hr 8											
Field Notes: Maps attached											
For office use only. NB-Initial AND date ALL boxes.		Logged	Database Entered	Database Validated	GIS Entered	GIS Validated					



Surveyor: Nick Vella
 Date: 24/04/2015
 Start time: _____ End time: _____

*Please attach weather sheet.
 Notes:

→ Transect Route



Legend
 [Red dashed line] BBS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage
 Breeding bird survey
 Page 3 of 18

0 200 m
 Scale: 1:7500 (BA3)
 Date: 20/04/2015 Job No: SEC7909 Rev: a
 Drawn: CH Checked: DRAFT Approved: DRAFT

Map National Grid: ETRG 29802
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RPS


Surveyor: Niam Veck


Date: 24/04/2015

Start time: _____ End time: _____

*Please attach weather sheet


Notes:

 Transect route

 No Access



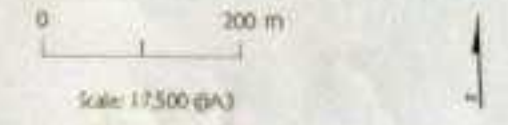
Legend

 BBS survey boundary (250 m buffer, supplied 10140420)

Greater Dublin Drainage

Breeding bird survey

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Date: 20/04/2015 Job No: SEC7909 Rev: 2

Drawn: CH Checked: DRAFT Approved: DRAFT

Map National Grid: EPG 2902
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RPS		Weather Sheet		Wind Speed		Direction	Rain/Snow		Cloud Cover		Cloud Height		Visibility	
Site	Date	Survey	Observer	Start Time	Finish Time		Beaufort	Mph	None	0	In eighths	Height of cloud above average height of viewshed	Poor (<1km)	0
GDO	27/04/2015	(CBS) Walkers	Nick Veale	06:32	12:32	0	>1	None	0	e.g. 3/8	<150m	0	Moderate (1-3km)	1
						1	1-3	Drizzle/Mist	1		150-500m	1	Good (>3km)	2
						2	4-7	Light showers	2		>500m	2		
						3	8-12	Heavy showers	3		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].			
						4	13-18	Heavy rain	4					
						5	19-24	Lying Snow	0	None				
						6	25-31	None	0	Ground				
						7	32-38	On site	1	All day				
						8	39-46	High ground	2					
						9	47-54							
						10	55-63							
						11	64-72							
						12	73+							
Sheet 1/ & [] Maps attached														
Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes(e.g. temperature)					
Hr 1	3	SW	0	2/8	2	2	0	0	3°C					
Hr 2	4	W	0	3/8	2	2	0	0	4°C					
Hr 3	5	W	2	4/8	2	2	0	0	7°C					
Hr 4	5	W	0	4/8	2	2	0	0	7°C					
Hr 5	4	W	0	5/8	2	2	0	0	10°C					
Hr 6	4	W	23	5/8	2	1	0	0	10°C					
Hr 7														
Hr 8														
Field Notes: Maps attached														
For office use only. NB- Initial AND date ALL boxes.			Logged	Database Entered	Database Validated	GIS Entered	GIS Validated							

Surveyor: Nick Veale
Date: 27/04/2015
Start time: 06:32 End time: 12:32

*Please attach weather sheet.
Notes

→ Transect Route

(Access: Elaine Quinn Parklands Golf Links (01 2666912) Area)

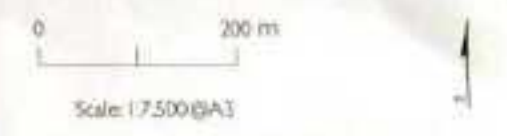


Legend
[Red dashed line] BRS survey boundary (250 m buffer, supplied 2014/04/20)

Greater Dublin Drainage

Breeding bird survey

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Date: 20/04/2015 Job No: SEC7909 Per: a
Drawn: CH Checked: DRAFT Approved: DRAFT

Map: National Grid, EPSG: 29902
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Surveyor Nick Vack

Date: 27/04/2015

Start time: 06:32

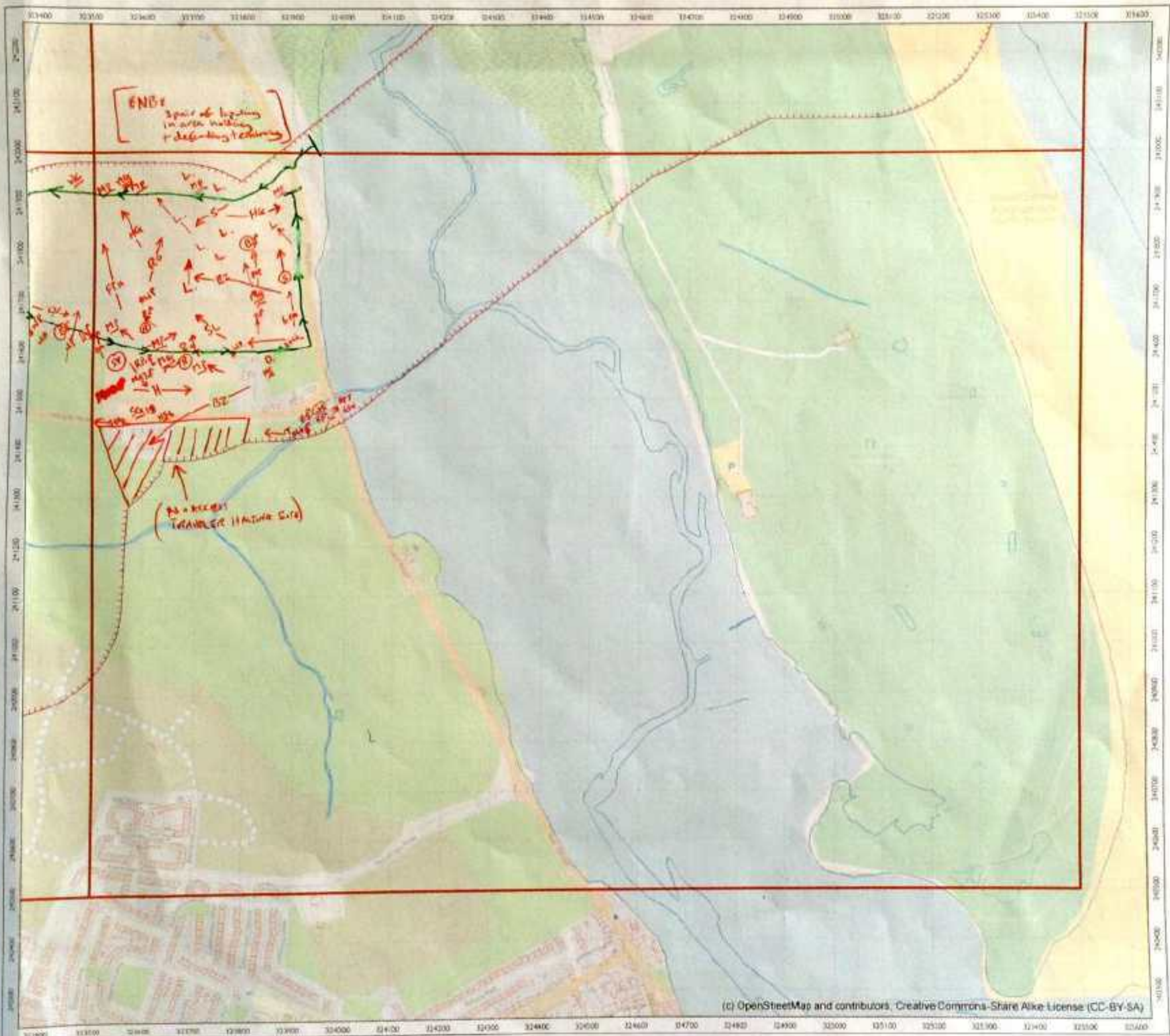
End time: 12:32

*Please attach weather sheet.

Notes:

→ Transit route

NB Transit continued on Map 12



Legend

RRS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage

Breeding bird survey

Page 13 of 18

0 200 m

Scale: 1:7,500 @ A3

Date: 20/04/2015 Job No: 36C7909 Rev: 1

Drawn: CH Checked: DRAFT Approved: DRAFT

For National Grid, EPSG:29903
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Surveyor Nick Veda

Date 27/04/2015

Start time 06:32

End time 12:32

*Please attach weather sheet

Notes:

→ Transect Route

▨ No Access, Security Fencing observations from outside perimeter



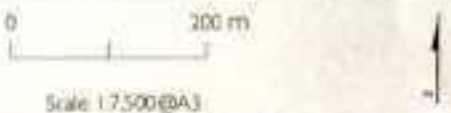
Legend

▨ BBS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage

Breeding bird survey

Page 12 of 18



Date: 20/04/2015 Job No: SEC7909 Rev: 1
Drawn: CH Checked: DRAFT Approved: DRAFT



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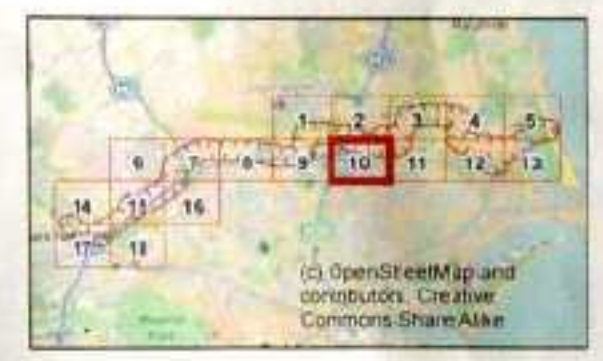
RPS		Weather Sheet		Wind Speed		Direction	Rain/Snow		Cloud Cover		Cloud Height		Visibility	
Site	Date	Survey	Observer	Start Time	Finish Time		Beaufort	Mph	None	In eighths e.g. 3/8	Height of cloud above average height of viewshed	Poor (<1km)	Moderate (1-3km)	Good (>3km)
GAD	28/04/2015	BIRD WALKER	Nick Vede	06:25	12:25	Calm	>1	None	0	<150m	0	0	0	
						Light air	1-3	Drizzle/Mst	1	150-500m	1	1	1	
						Light breeze	4-7	Light showers	2	>500m	2	2	2	
						Gentle breeze	8-12	Heavy showers	3	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].				
						Mod. breeze	13-18	Heavy rain	4					
						Fresh breeze	19-24	Lying Snow	0					
						Strong breeze	25-31	None	0					
						Mod. gale	32-38	On site	1					
						Fresh gale	39-46	High ground	2					
						Strong gale	47-54							
						Whole gale	55-63							
						Storm	64-72							
						Hurricane	73+							
Sheet 1/ & [] Maps attached														
Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes(e.g. temperature)					
Hr 1	3	WSW	0	1/8	2	2	1	0	1°C					
Hr 2	4	WSW	0	1/8	2	2	0	0	3°C					
Hr 3	4	W	0	2/8	2	2	0	0	6°C					
Hr 4	4	W	0	4/8	2	2	0	0	7°C					
Hr 5	4	W	0	4/8	2	2	0	0	9°C					
Hr 6	4	W	2	5/8	2	2	0	0	9°C					
Hr 7														
Hr 8														
Field Notes: Maps attached														
For office use only. NB- Initial AND date ALL boxes.		Logged	Database Entered	Database Validated	GIS Entered	GIS Validated								



RPS

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

*Please attach weather sheet
 Notes:
 XNB Continues on Map 11
 ↳ Transect route

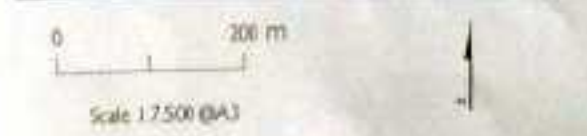


Legend
 [Red dashed line] BBS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage

Breeding bird survey

Page 10 of 18



Date: 20/04/2015 Job No: SEC709 Rev: a
 Drawn: CH Checked: DMFT Approved: DRAFT

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RPS

Surveyor: Nick Vele
 Date: 28/04/2015
 Start time: 06:25 End time: 12:25

*Please attach weather sheet
 Notes:
 XNB Continued from Map 10
 → Transect route



Legend
 [Red dashed line] BBS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage
 Breeding bird survey
 Page 1 | of 18

0 200 m
 Scale: 1:7500 @ A3
 Date: 2004/2015 Job No: SEC7959 Rev: 2
 Drawn: CH Checked: DRAFT Approved: DRAFT

Map National Grid: EPSG:29902
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Surveyor: **N. JEARZ**


Date: **29/04/2015**

Start time: **06:25** End time: **12:25**

*Please attach weather sheet

Notes

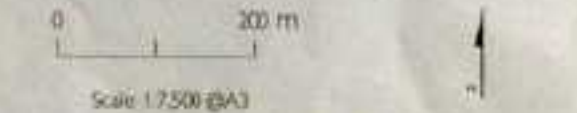


Legend
 RBS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage

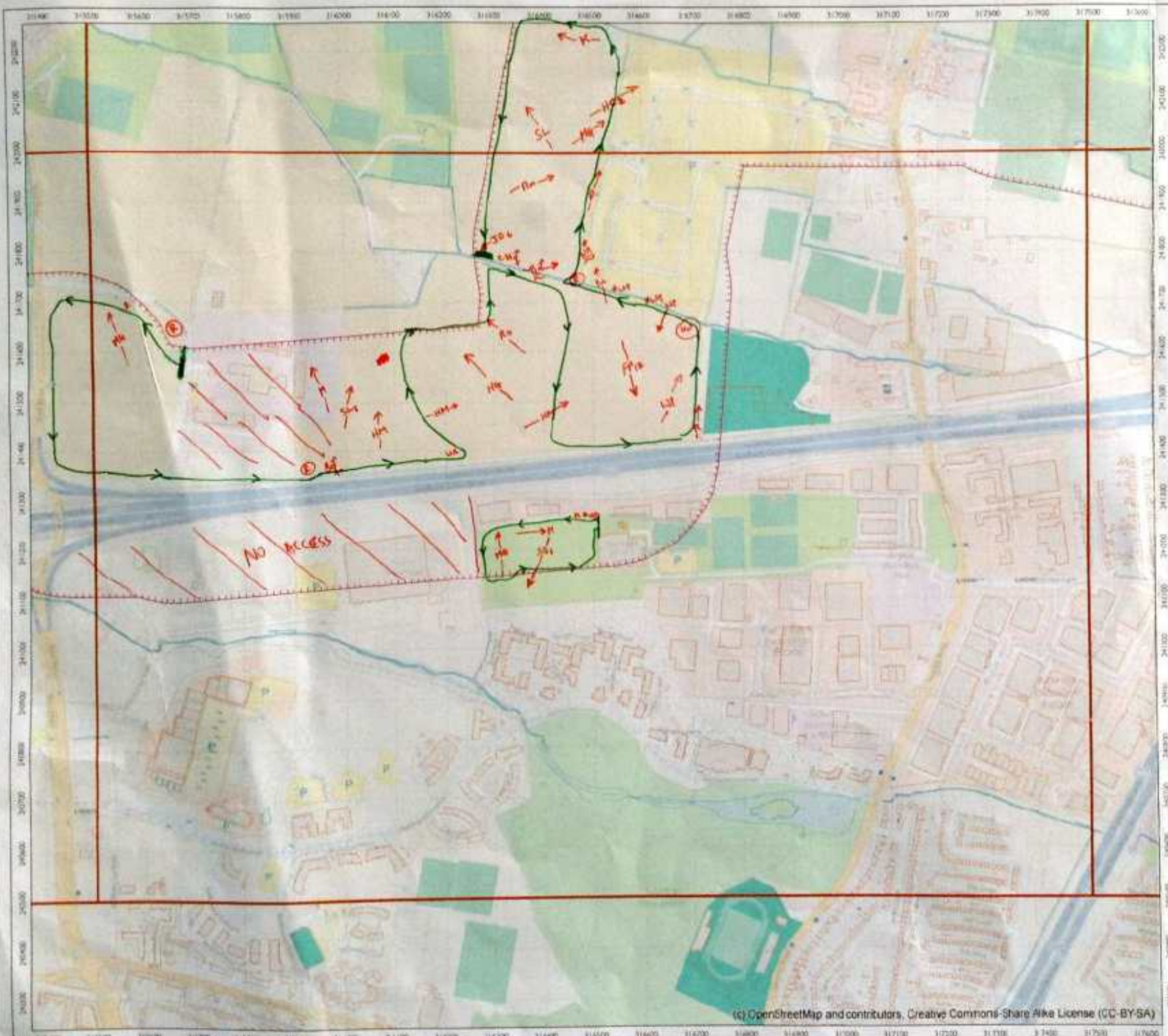
Breeding bird survey

Page 1 of 18



Date: 20/04/2015 Job No: SEC7909 Rev: 4
 Drawn: CH Checked: DRAFT Approved: DRAFT

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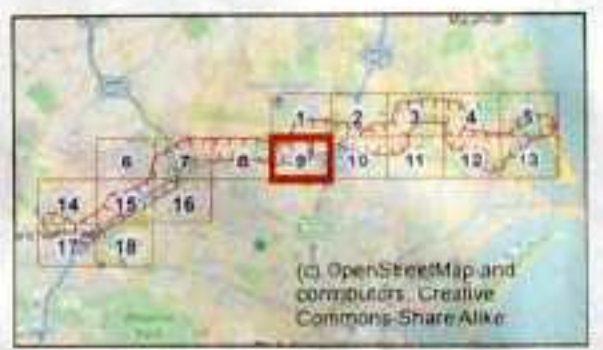
RPS

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

*Please attach weather sheet.
 Notes:

→ Transect route

▨ No Access



Legend
 ▨ BBS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage
 Breeding bird survey
 Page 9 of 18

0 300 m
 Scale 1:7500 @A3
 Date: 20/04/2015 Job No: SEC7909 Rev: 2
 Drawn: O4 Checked: DRAFT Approved: DRAFT

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 rpsgroup.com



RPS

Surveyor: **N. VEAVE**

Date: **28/04/2015**

Start time: **08:25** End time: **12:25**

*Please attach weather sheet

Notes:

→ Transect Route

XNB* Transects Cross Maps 1→2



Legend

885 survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage

Breeding bird survey

Page 2 of 18

0 200 m

Scale: 1:7,500 (BA3)

Date: 20/04/2015 Job No: 5007901 File: 4

Drawn: CH Checked: DRAFT Approved: DRAFT

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(MAP 10) ✓

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Surveyor: Nick Venke

Date: 02/06/2015

Start time: 05:40 End time:

*Please attach weather sheet

Notes

Transect Route

* Dipper nests appear empty at least 2 adult birds near Bridge with 3 juv.

* Kingfisher seen but not near nest site recorded in April.



Legend

BBS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage

Breeding bird survey

Page 17 of 18

0 300 m

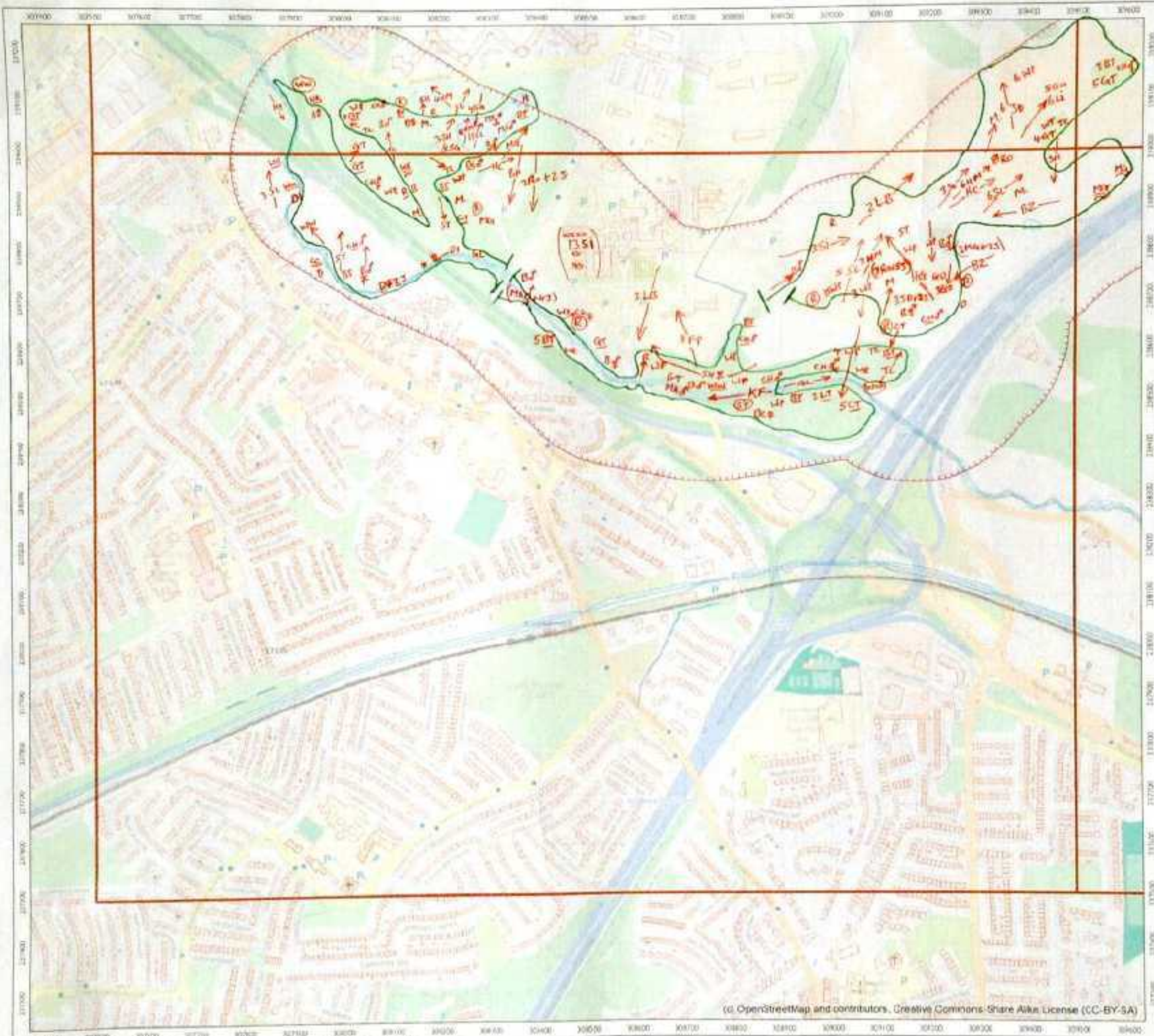
Scale: 1:7,500 @ A3

Date: 20/04/2015 Job No: SEC7909 Rev: a

Drawn: CH Checked: DRAFT Approved: DRAFT

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Surveyor: Nick Veela

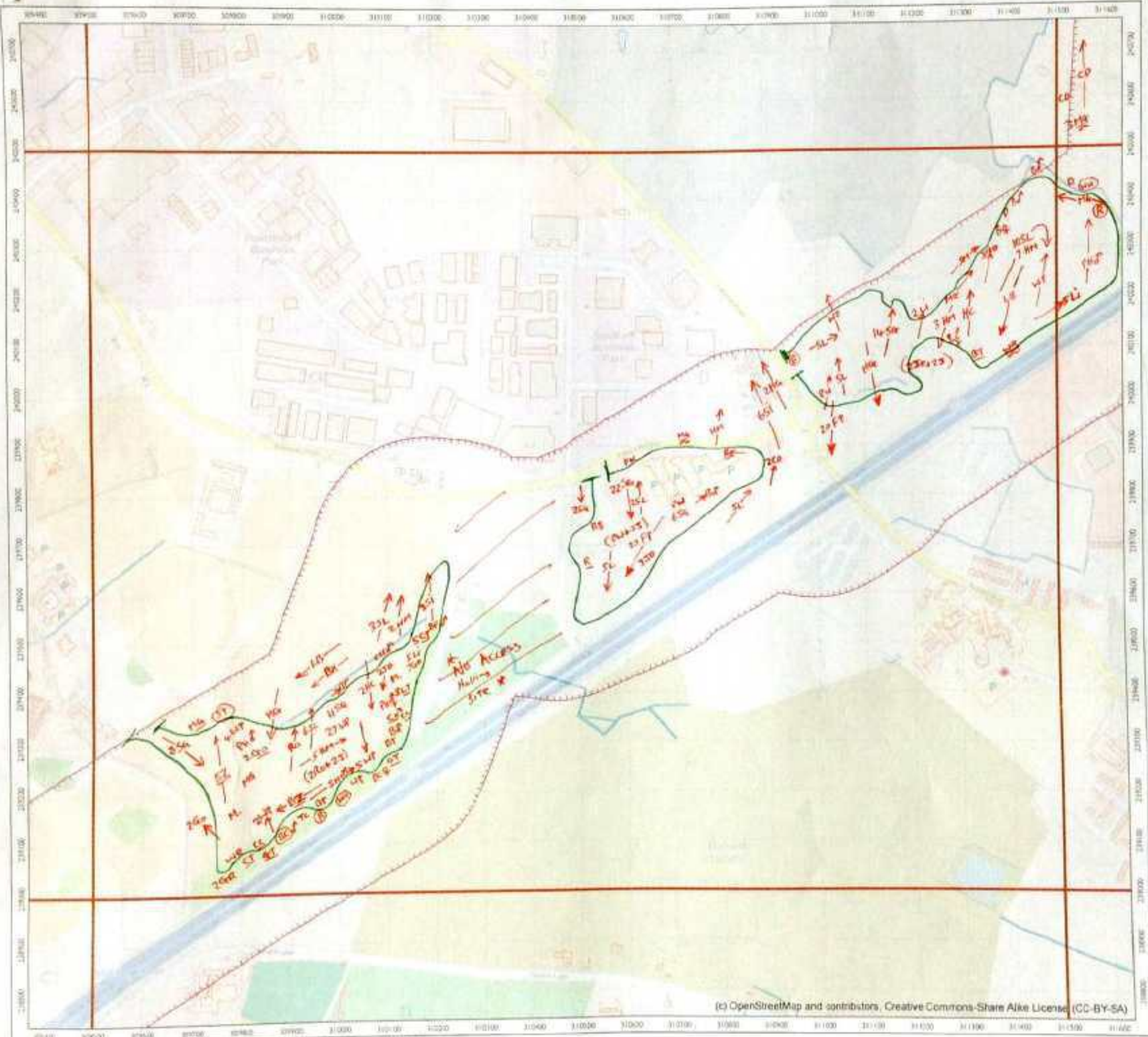
Date: 03/06/2015

Start time: 05:45 End time: 11:45

*Please attach weather sheet

Notes:

Transverse route



Legend

BBS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage

Breeding bird survey

Page 15 of 18

0 200 m

Scale: 1:2500 (A3)

Date: 20/04/2015 Job No: SEC7909 Rev: A

Drawn: CH Checked: DRAFT Approved: DRAFT

Map: National Grid, EPSG:29902
 * OpenStreetMap contributors. Reproduced from the OpenStreetMap data licensed to the Ordnance Survey under the terms of the OpenStreetMap License No. 2.5.34

Surveyor: N. Veale

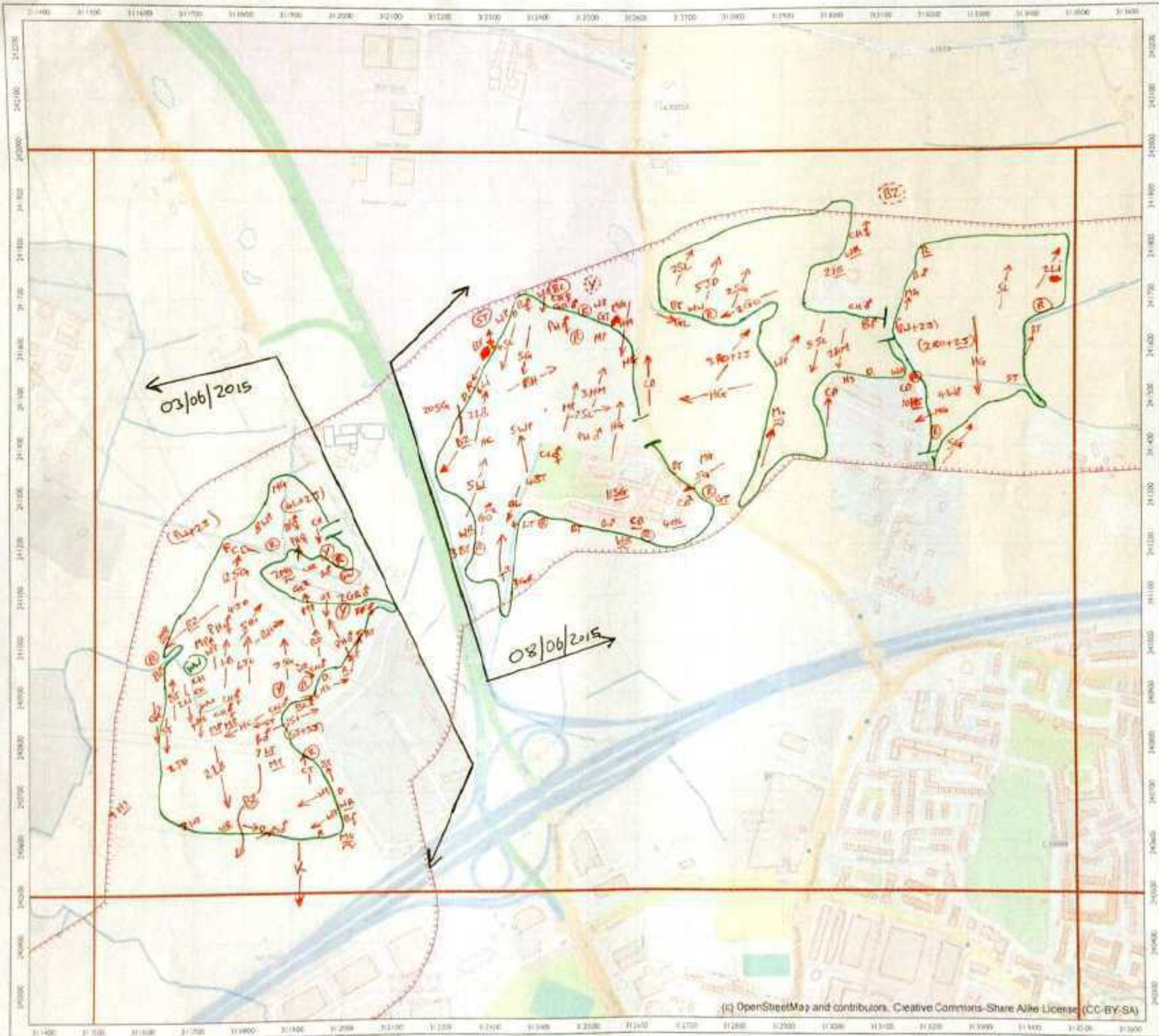
Date: 03/06/2015 + 08/06/2015

03/06/2015 - 05:45 11:45
Start time: End time:
08/06/2015 - 05:30 11:30

*Please attach weather sheet

Notes:

—|—|—| Transect route



Legend

--- BBS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage

Breeding bird survey

Page 7 of 18

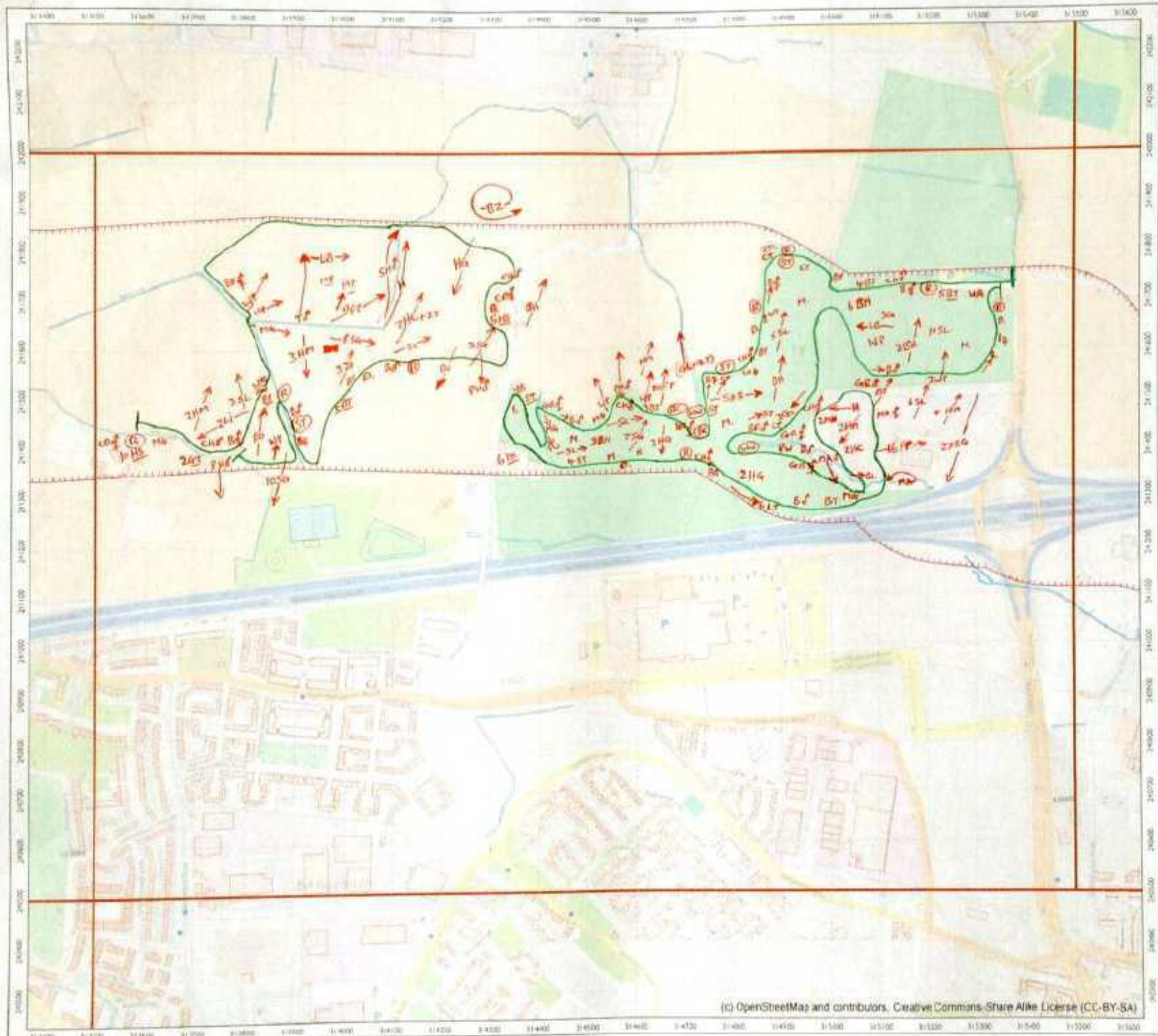
0 100 m

Scale: 1:7500 (GA)

Date: 20/04/2015 Job No: SEC709 Rev: 3

Drawn: CH Checked: DRAFT Approved: DRAFT

Not National Civil Engineering (NSCE) 1992
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RPS

Surveyor: Nick Veale

Date: 08/06/2015


Start time: 05:30 End time: 11:30

*Please attach weather sheet

Notes:



Legend

 BB5 survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage

Breeding bird survey

Page 8 of 18

0 300 m

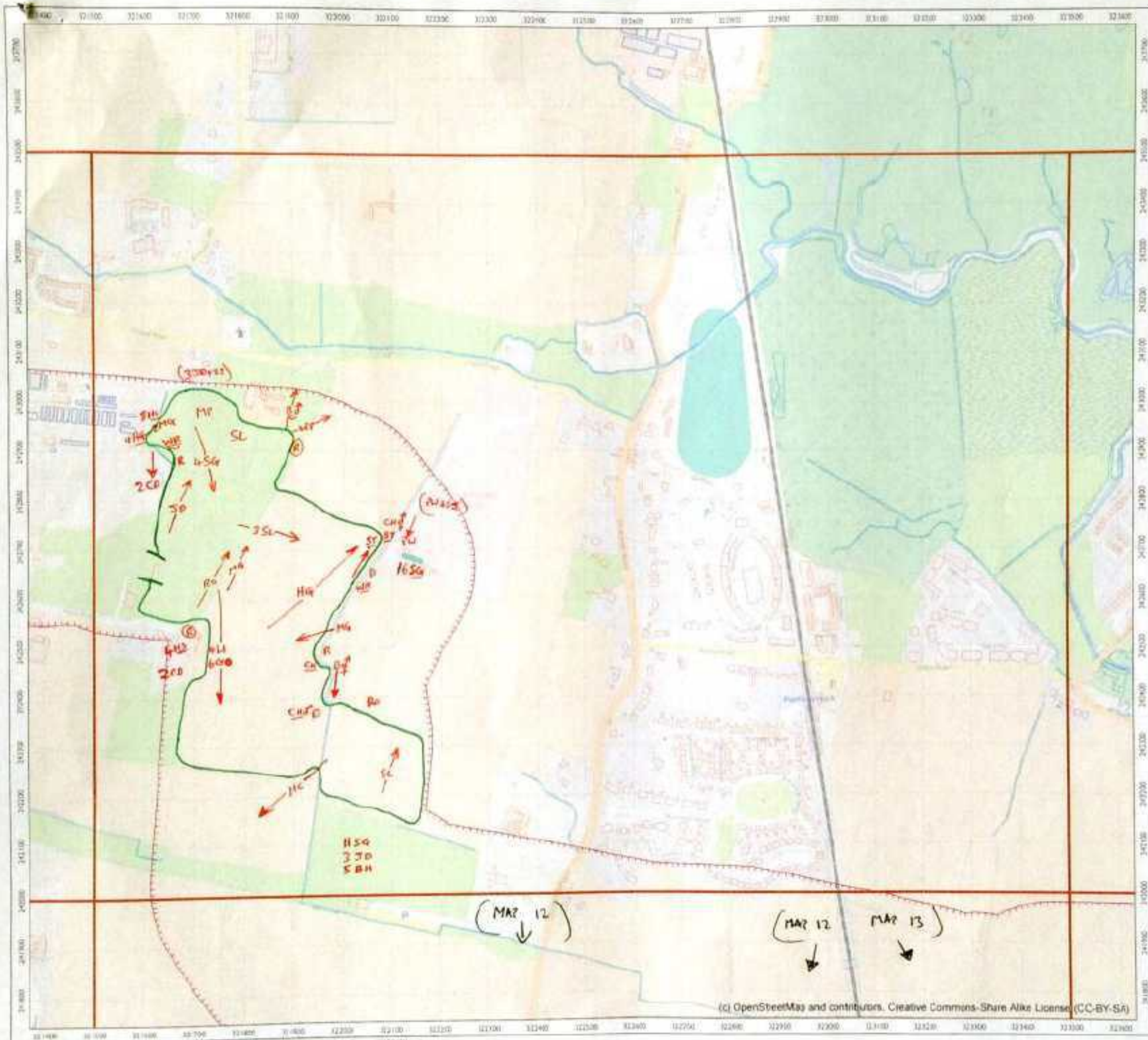
Scale: 1:7,500 @A3

Date: 20/04/2015 job No: SEC7909 Rev: 2

Drawn: OH Checked: DRAFT Approved: DRAFT

Irish National Grid, EPSG: 29902
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RPS

Surveyor: N. Vede

Date: 10/06/2015

Start time: 05:30

End time: 11:30

*Please attach weather sheet

Notes:



Legend

▭ BBS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage

Breeding bird survey

Page 4 of 18

0 100 200 m

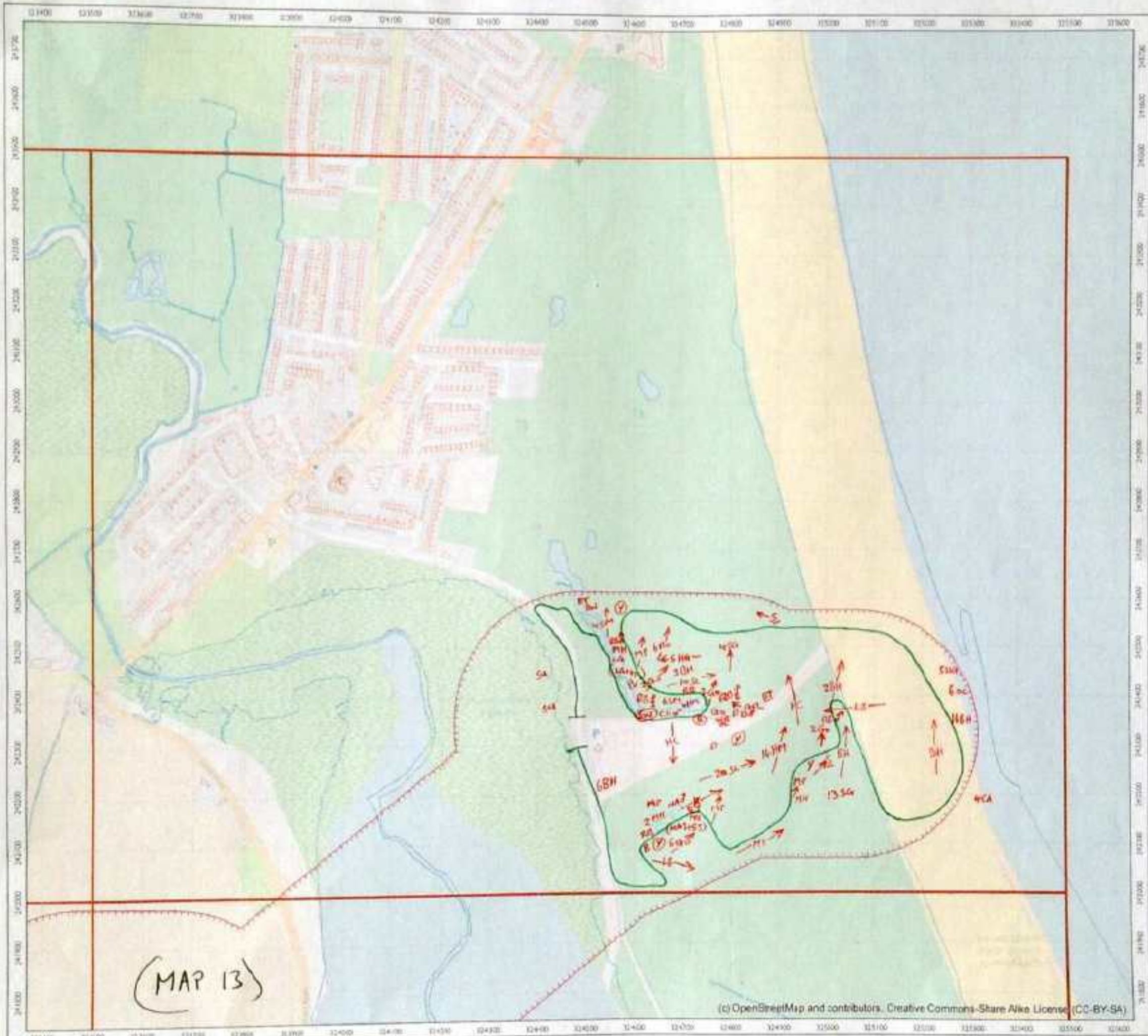
Scale: 1:7,500 @A3

Date: 20/04/2015 Job No: SEC709 Rev: x

Drawn: CH Checked: DRAFT Approved: DRAFT

Web National Grid: ETRG 2992
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(MAP 13)

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RPS

Surveyor: Nick Veale
 Date: 11/06/2015
 Start time: 05:30 End time: 11:30

*Please attach weather sheet
 Notes:

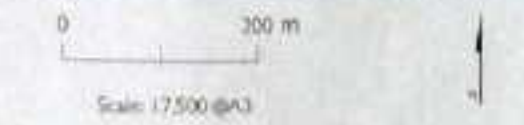


Legend
 [Red dashed line] BBS survey boundary (250 m buffer, supplied 20140120)

Greater Dublin Drainage

Breeding bird survey

Page 5 of 18



Date: 20/04/2015 Job No: 562709 Rev: 2
 Drawn: CH Checked: DRAFT Approved: DRAFT

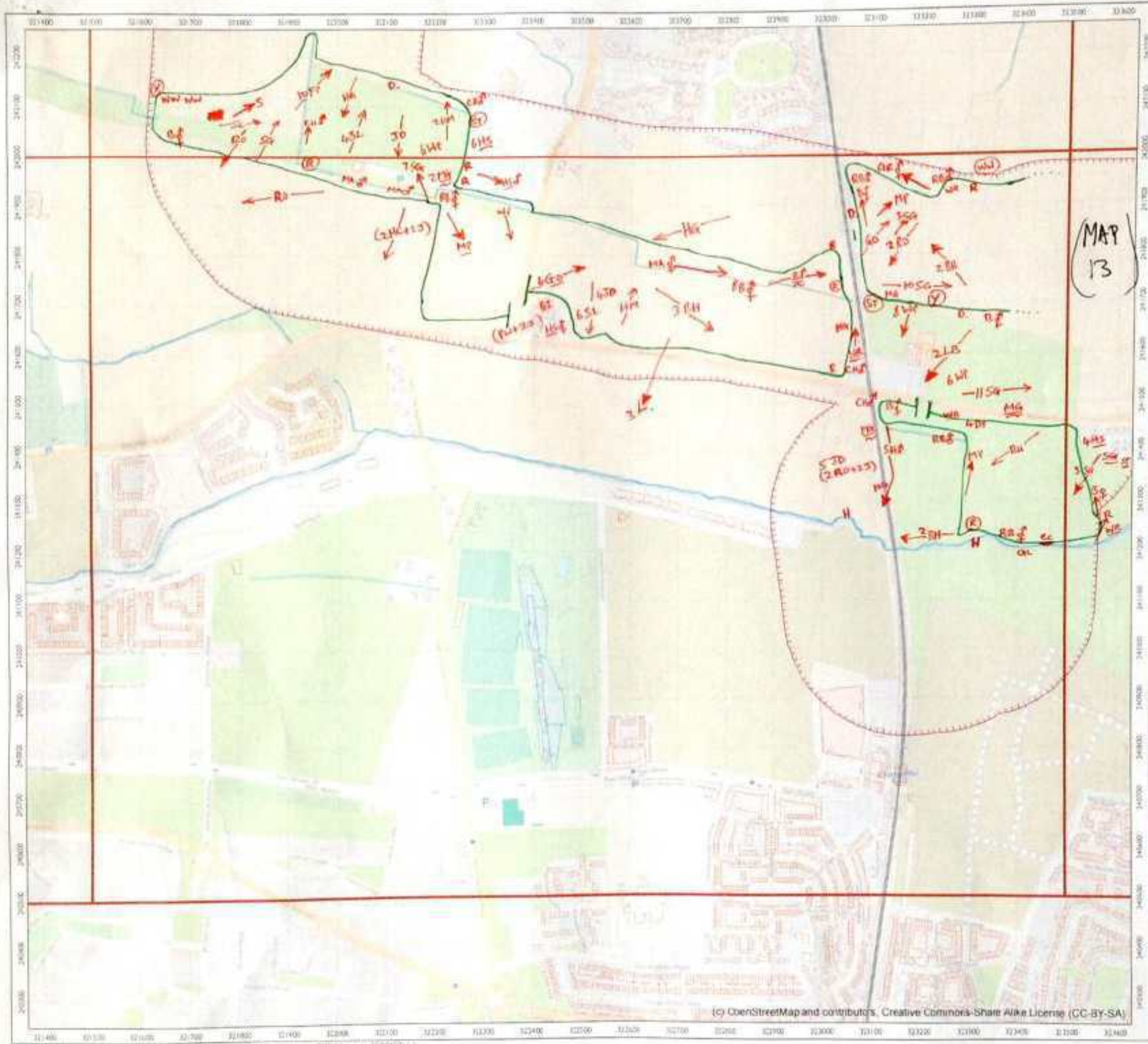
Irish National Grid: EPSG:29902
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Surveyor: Nick Veele

Date: 11/06/2015

Start time: 05:30 End time: 11:30

*Please attach weather sheet
Notes:



Legend
 BRS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage
 Breeding bird survey
 Page 12 of 18

0 200 m
 Scale: 1:7500 (BA3)
 Date: 20/04/2015 job No: 56C7909 Rev: 1
 Drawn: CH Checked: DRAFT Approved: DRAFT



RPS

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

*Please attach weather sheet
 Notes:

—|— Transect route
 [Red box with diagonal lines] No Access

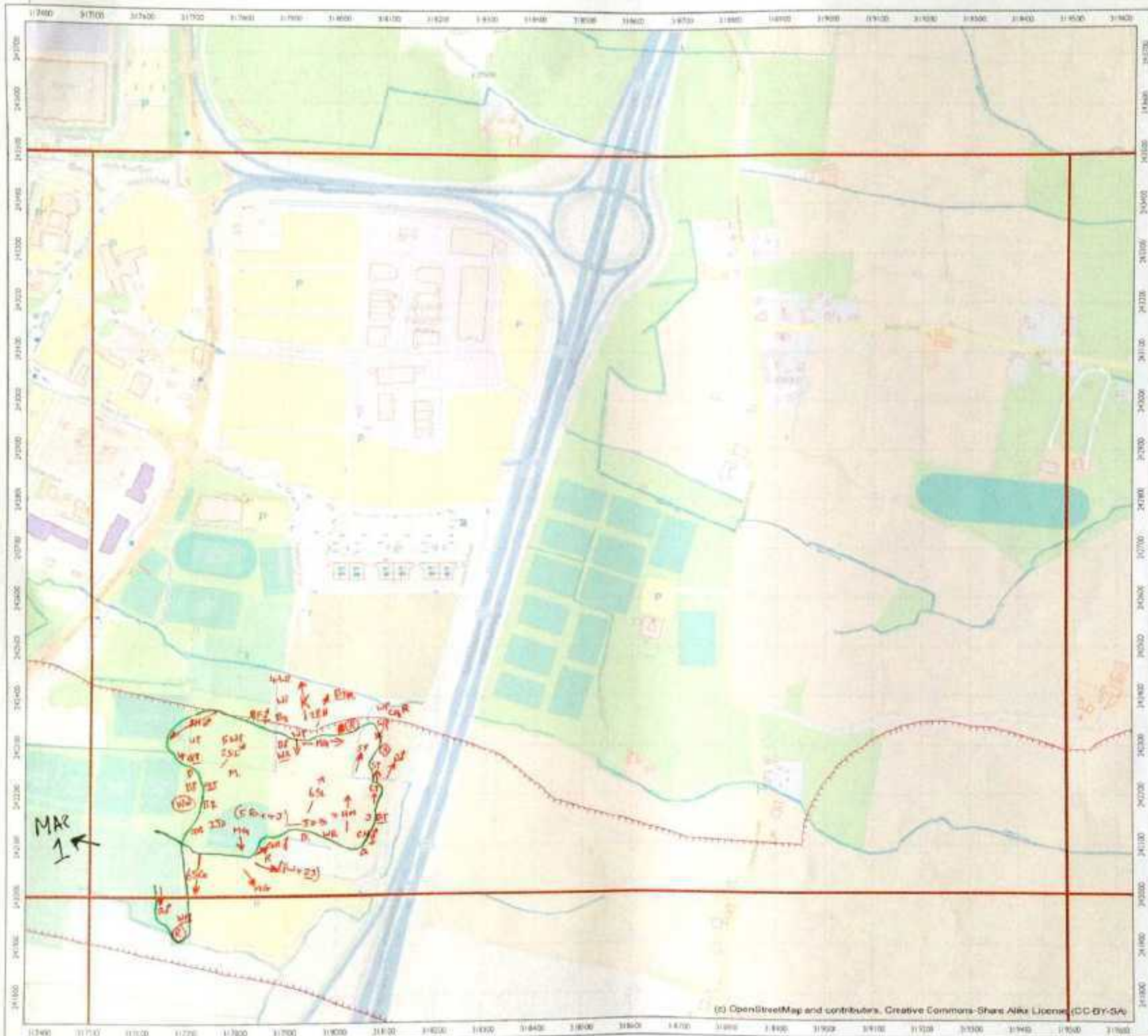


Legend
 [Red dashed line] BBS survey boundary (250 m buffer, supplied 10140420)

Greater Dublin Drainage
 → Breeding bird survey
 MAP 2
 Page 1 of 18

0 200 m
 Scale: 1:7500 @A3
 Date: 20/04/2015 | Job No: SEC2109 | Rev: a
 Drawn: CH | Checked: DRAFT | Approved: DRAFT
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RPS

Surveyor: N Veele

Date: 12/06/2015

Start time: 0540 End time: 11:40

*Please attach weather sheet

Notes:



Legend

BBS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage

Breeding bird survey

Page 2 of 18

0 200 m

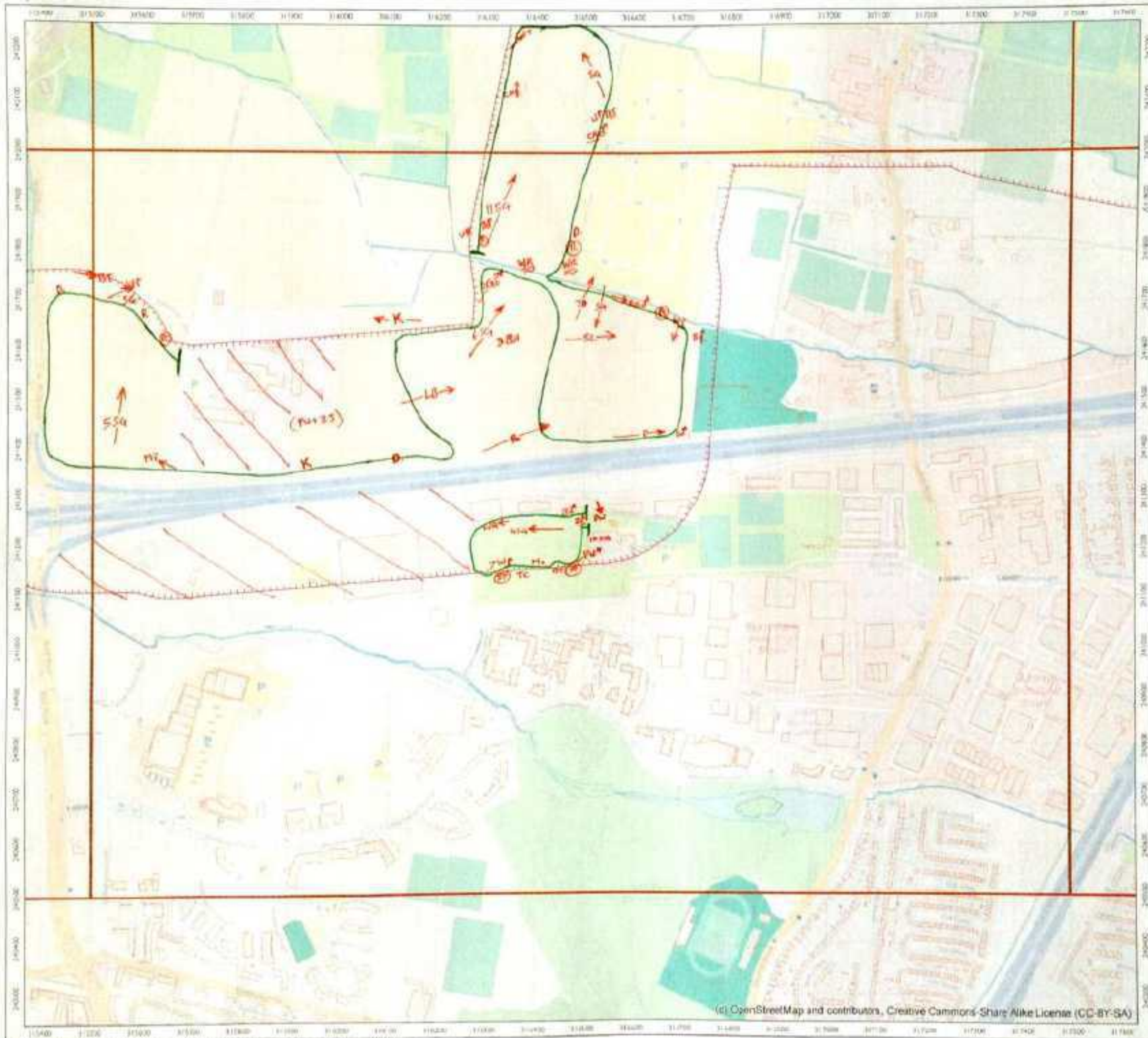
Scale: 1:7500 @A3

Date: 20/04/2015 Job No: 56C7909 Rev: 4

Drawn: CH Checked: DRAFT Approved: DRAFT

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RPS Nick Veale
 Surveyor: 12/06/2015
 Date:
 Start time: 05:40 End time: 11:40
 *Please attach weather sheet
 Notes:

— Traced route
 [Red hatched box] No Access

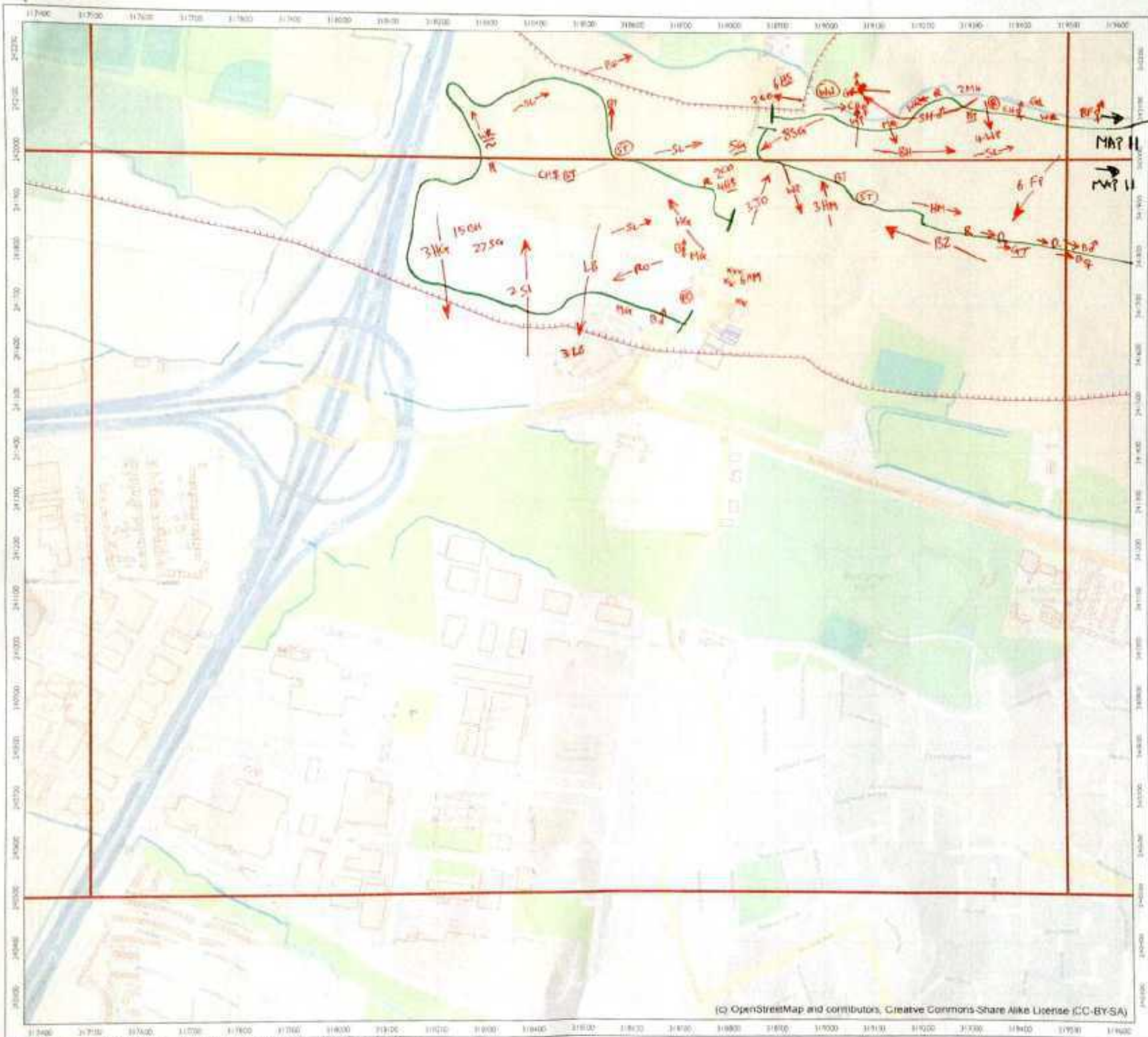


Legend
 [Red dashed box] BBS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage
 Breeding bird survey
 Page 9 of 18

0 200 m
 Scale: 1:7500 (BA3)
 Date: 20/04/2015 Job No: SEC7909 Rev: 5
 Drawn: CH Checked: DRAFT Approved: DRAFT

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RPS

Surveyor: Nick Veale

Date: 12/06/2015


Start time: 05:40 End time: 11:40

*Please attach weather sheet
Notes:

Transect continues on map 11

→ Transect route

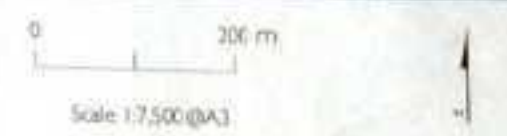


Legend
 BBS survey boundary (250 m buffer, supplied 20140420)

Greater Dublin Drainage

Breeding bird survey

Page 10 of 18



Date: 20/04/2015 Job No: SEC7909 Rev: 1
 Drawn: G4 Checked: DRAFT Approved: DRAFT

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Surveyor: Nick Veale

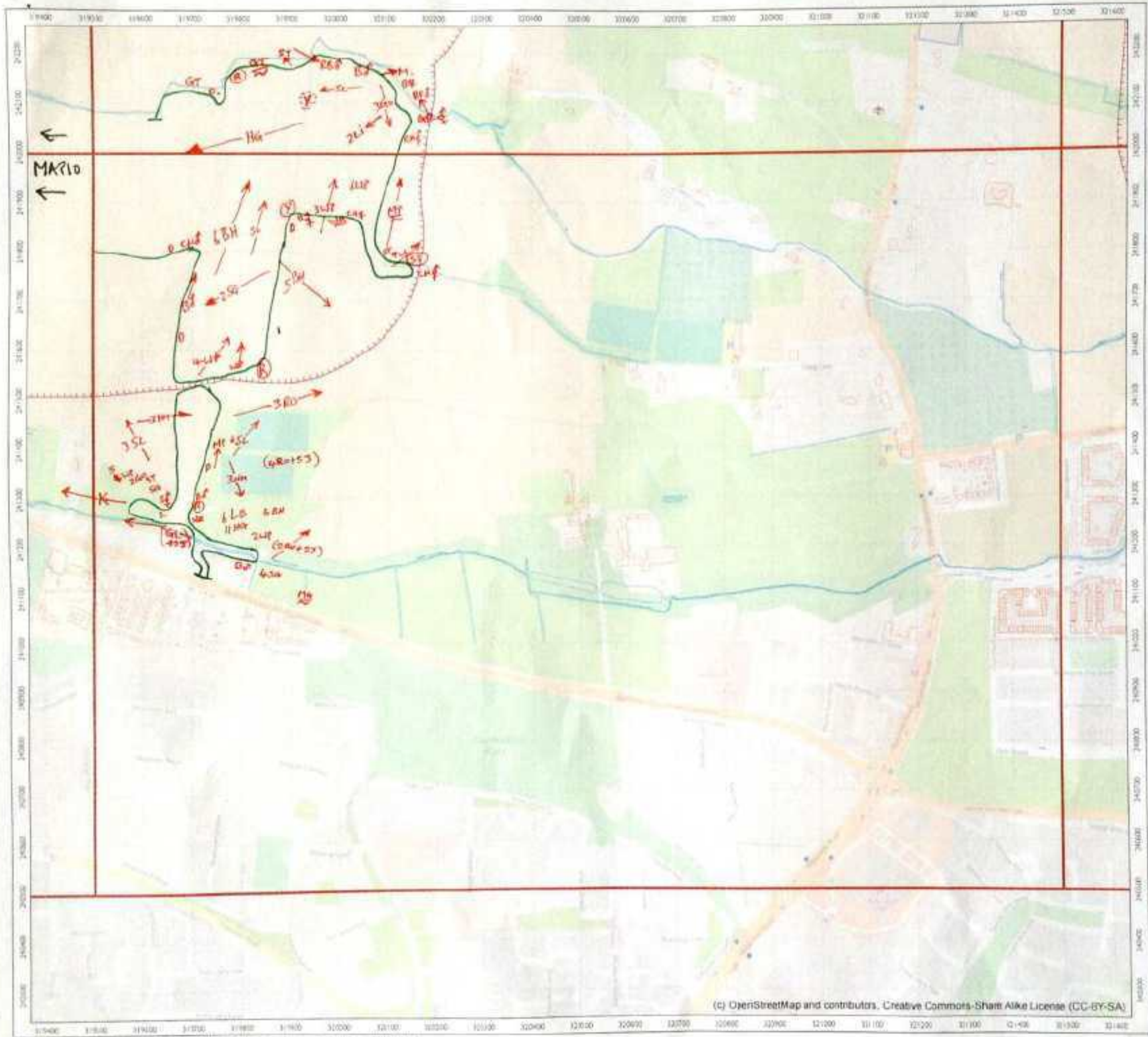
Date: 12/06/2015

Start time: 05:40 End time: 11:40

*Please attach weather sheet

Notes:

Transect Route
Transect continues on Map 10

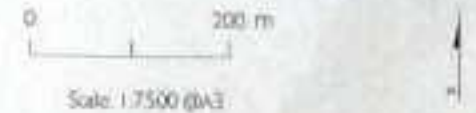


Legend
 BBS survey boundary (250 m buffer, supplied 20140410)

Greater Dublin Drainage

Breeding bird survey

Page 11 of 18



Date: 20/04/2015 Job No: SEC790V Rev: 1
 Drawn: CH Checked: DRAFT Approved: DRAFT

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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).

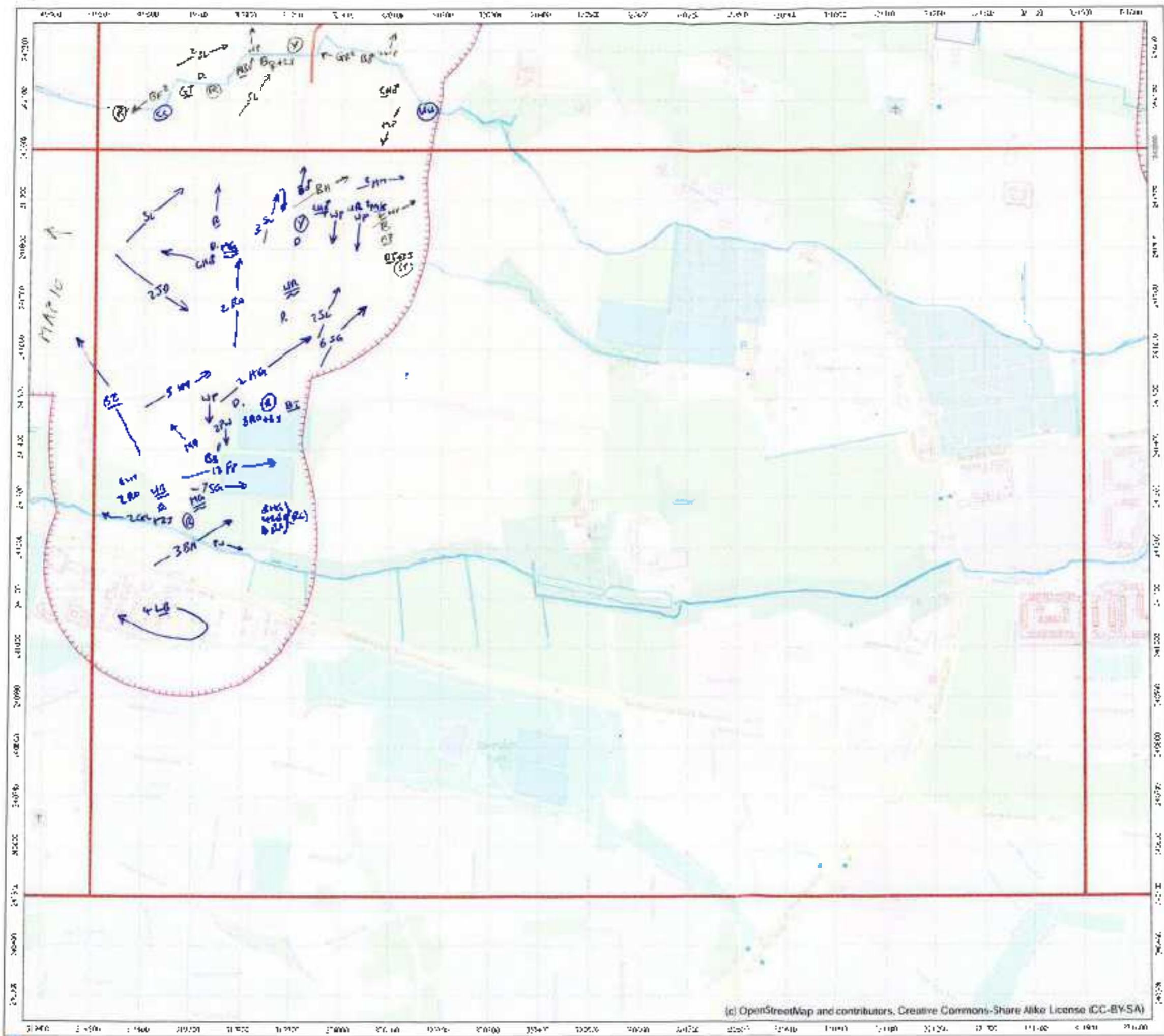
RPS	Weather Sheet
Site	GOP
Date	13/06/2017
Survey	BBS
Observer	N. Veale
Start Time	05:45
Finish Time	12:00
Sheet 1/ & [] Maps attached	

Wind Speed	Direction	Rain/Snow	Cloud Cover	Cloud Height	Visibility
Calm Light air Light breeze Gentle breeze Mod. breeze Fresh breeze Strong breeze Mod. gale Fresh gale Strong gale Whole gale Storm Hurricane	M NE E SE S SW W NW	None Drizzle/Mist Light showers Heavy showers Heavy rain Lying Snow None On site High ground	0 1 2 3 4 Frost None 0 1 2 All day	Height of cloud above average height of w/washed <150m 150-500m >500m	Poor (<1km) Moderate (1-5km) Good (>5km)

Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes(e.g. temperature)
Hr 1	3	SW	1	7/8	1	A1			13°C
Hr 2	3	SW	0	7/8	1	2			
Hr 3	3	SW	0	6/8	2	2			14°C
Hr 4	4	SW	0	6/8	2	2			
Hr 5	4	SW	0	7/8	2	2			16°C
Hr 6	4	SW	0	7/8	2	2			
Hr 7	3	SW	2	8/8	1	2			18°C Showers
Hr 8									

Field Notes:
 Maps attached

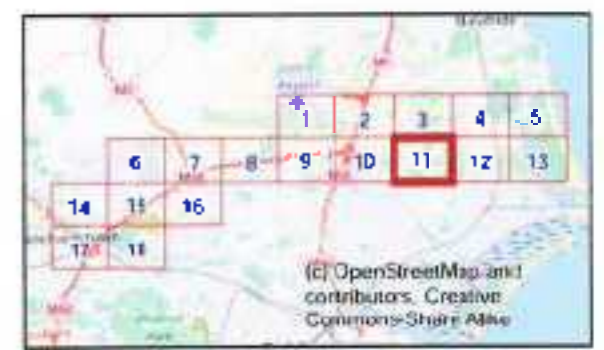
For office use only. NB- Initial AND date ALL boxes.	Logged	Database Entered	Database Validated	GIS Entered	GIS Validated
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RPS

Surveyor: N. Veale
 Date: 13/06/2017
 Start time: 05:45 End time: 12:00

*Please attach weather sheet
 Notes:

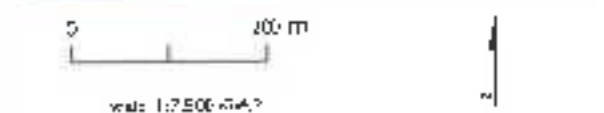


Legend
 BBS/WWD survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)
 2 pe route (supplied 20170405)

Greater Dublin Drainage

Breeding/winter bird survey

Page 11 of 18

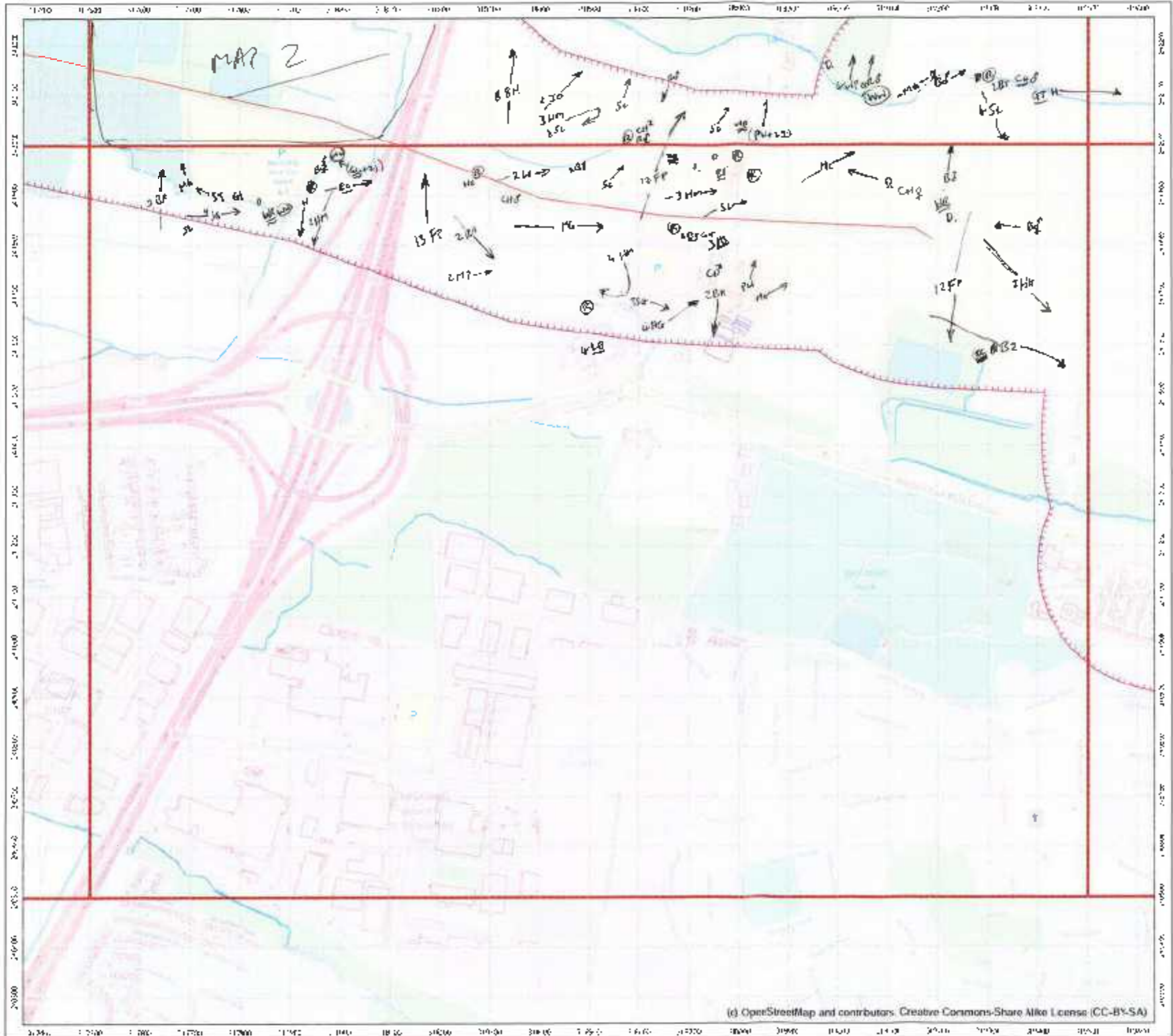


Date: 06/04/2017 Job No: 5627929 Rev: 1
 Drawn: JJ Checked: DRAFT Approved: DRAFT

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Surveyor Nick Veale
 Date 13/06/2017
 Start time 05:45 Endtime 12:00
 + please attach weather sheet
 Notes



Legend
 - - - - - BBS/WVVD 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 16

0 200 m
 Scale 1:7,000 (approx)
 Date 06/06/2017 Job No SEC2009 Rev c
 Drawn CH Checked JVA/T Approved JVA/T
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 RPS Ltd. 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

RPS		Weather Sheet							
Site		GGPO							
Date		06/06/2017							
Survey		BBS							
Observer		Nick Veeva							
Start Time		06:00							
Finish Time		12:00							
Sheet 1/	& []	Maps attached							
Weather	Wind speed	Wind direction	Rain	Wind Speed	Direction	Rain/Snow	Cloud Cover	Cloud Height	Visibility
				Calm	W	None	In sight	Height of cloud above average height of vegetation	Poor (<1km)
				Light air	NE	Breezy/Mist	0-3		Moderate (1-3km)
				Light breeze	E	Light showers	4-7		Good (>3km)
				Gentle breeze	SE	Heavy showers	8-12		
				Mod. breeze	S	Heavy rain	13-18		
				Fresh breeze	SW	Lying Snow	19-24		
				Strong breeze	W	None	25-31		
				Mod. gale	NW	On site	32-38		
				Fresh gale		High ground	39-46		
				Strong gale			47-54		
				Whole gale			55-63		
				Storm			64-72		
				Hurricane			73+		
Weather	Wind speed	Wind direction	Rain	Cloud cover	Visibility	Frost	Snow	Notes(e.g. temperature)	
Hr 1	4	W	0	5/8	2			8°C	
Hr 2	4	W	0	6/8	2			9°C	
Hr 3	5	W	0	4/8	2			11°C	
Hr 4	4	W	0	4/8	2			12°C	
Hr 5	5	W	0	5/8	2			13°C	
Hr 6	5	W	0	5/8	2			13°C	
Hr 7	5	W	0	6/8	2			14°C	
Hr 8									
Field Notes: Maps attached									
For office use only: NB - Initial AND date ALL boxes.			Logged	Database Entered	Database Validated	GIS Entered	GIS Validated		

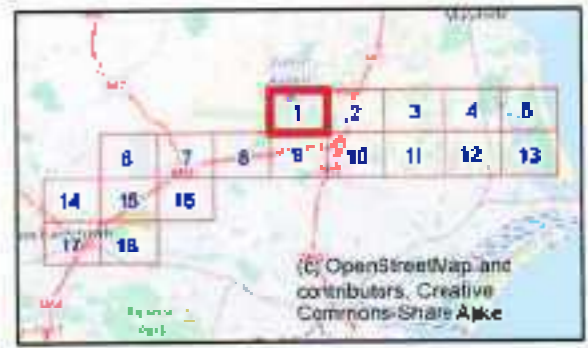
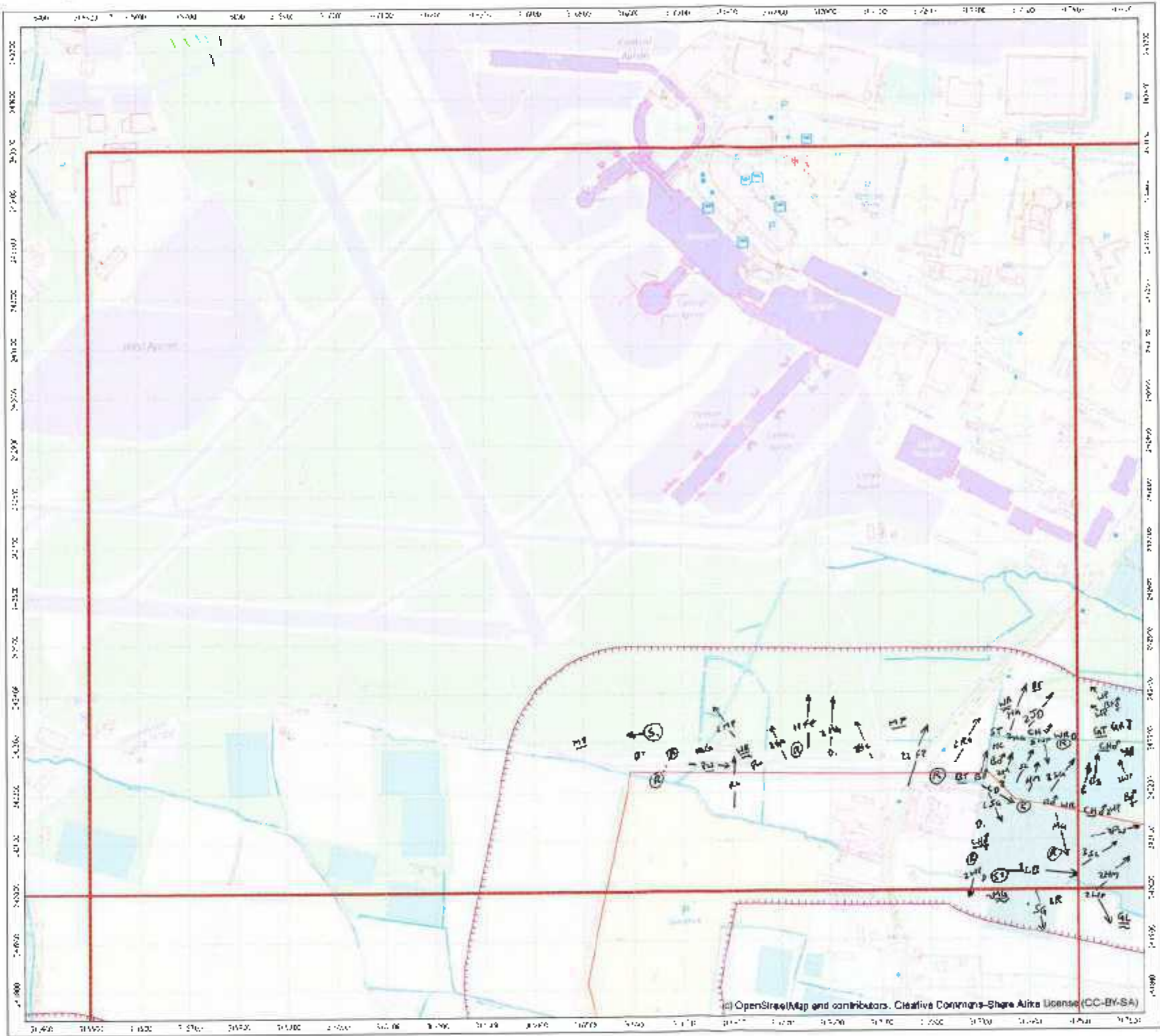
Surveyor *N. Veer*

Date *06/06/17*

Start time *06:30* Endtime *12:00*

*Please attach weather sheet

Notes



Legend

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

Greater Dublin Drainage

Breeding/winter bird survey

Page 1 of 8



Scale 1:7500 (A0)

Date *06/04/17* Job No. *SG7929* Rev *0*
 Drawn *CH* (Checked *DRIFT* Approved *DRIFT*)

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Surveyor Nick Veale

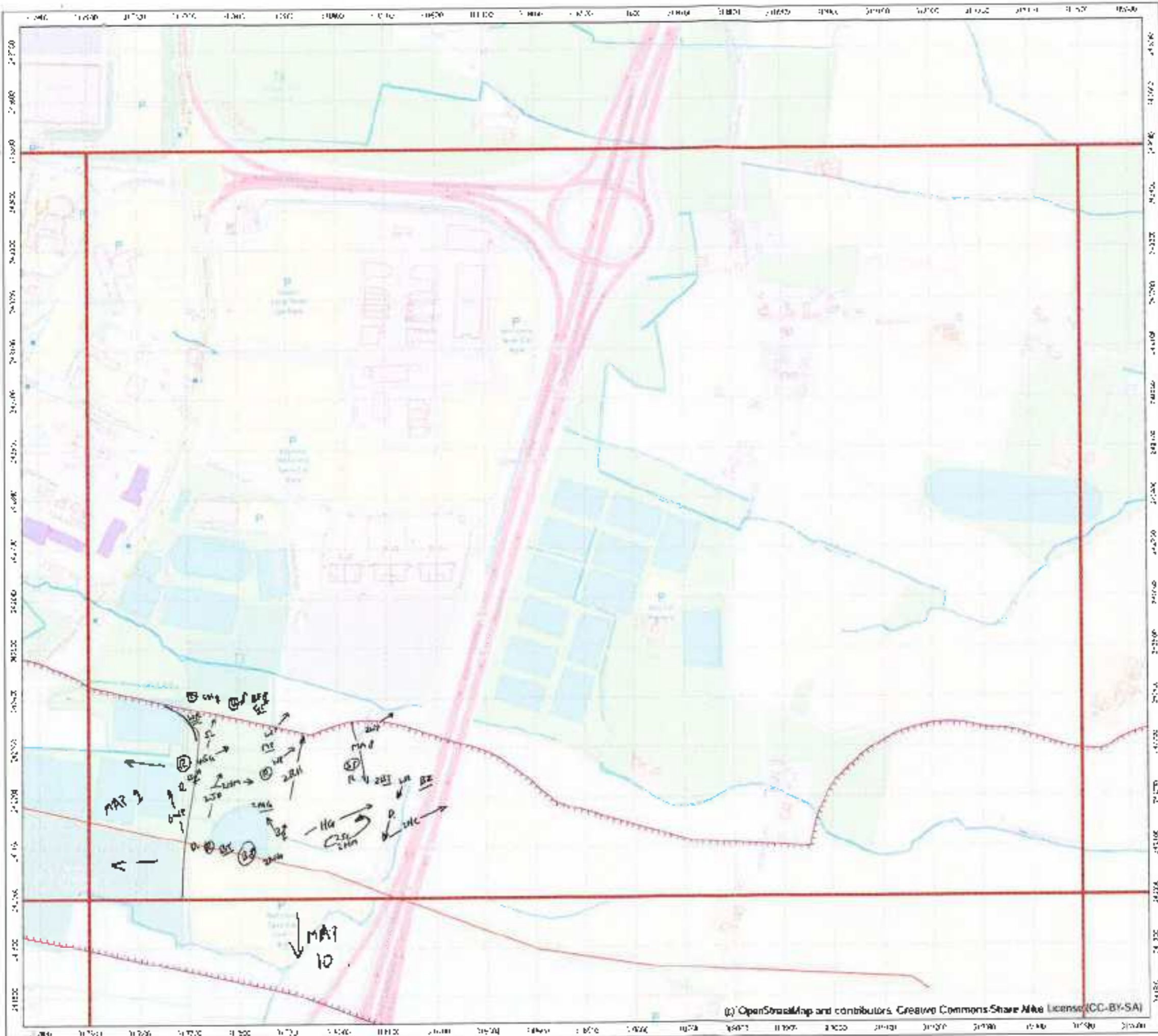
Date 06/06/17

Start time 06:00

End time 12:00

*Please attach weather sheet

Notes



Legend

- BBS/WVD 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

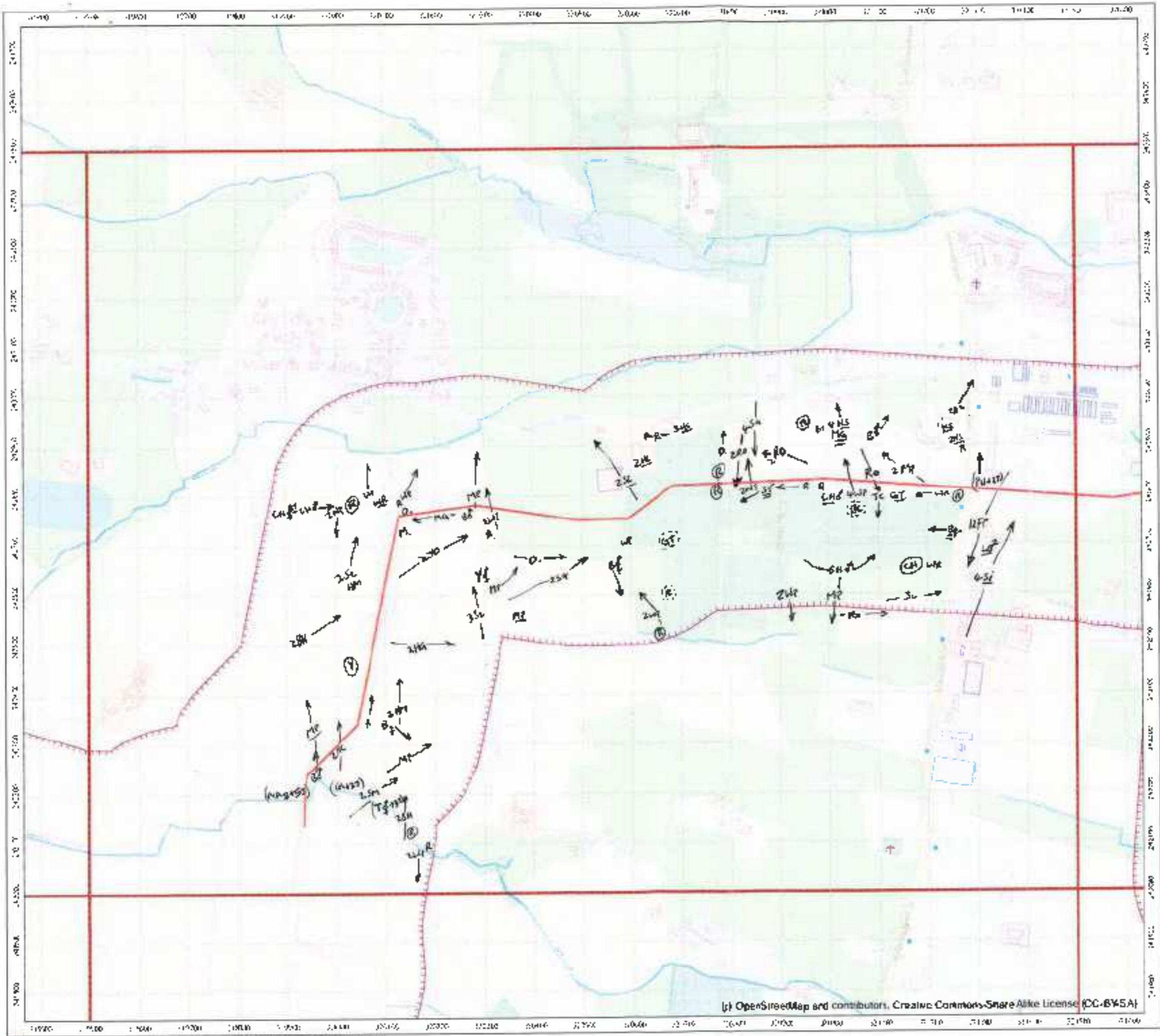


Date: 06/06/2017 Job #: 5627809 Rev: 0
 Drawn: N.V. Checked: DRAFT Approved: DRAFT

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 RPS is a registered firm in Ireland. Registered number: 121484. Registered address: RPS, 100, South Circular Road, Dublin 8, Ireland. Tel: +353 1 490 2000. Fax: +353 1 490 2001. Email: info@rps.ie

Surveyor N. Veale
 Date 06/06/2017
 Start time 0630 Endtime: 12:00

*Please attach weather sheet
 Notes:



- Legend
- BBS/WWC survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)
 - Pipe route (supplied 20170405)

Greater Dub in Drainage
 Breeding/winter bird survey
 Page 3 of 18

Scale 1:7500 (2A3)
 Date 06/06/2017 Job No 5902628 Rev 1
 Drawn CH Checked DNATF Approved DNATF

RPS	Weather Sheet
Site	GDD
Date	05/04/2017
Survey	BBS
Observer	N.J. Veen
Start Time	05:30
Finish Time	12:00
Sheet 1/ & [] Maps attached	

Wind Speed	Direction	Rain/Snow	Cloud Cover	Cloud Height	Visibility
Beaufort 0 Calm 1 Light air 2 Light breeze 3 Gentle breeze 4 Mod. breeze 5 Fresh breeze 6 Strong breeze 7 Mod. gale 8 Fresh gale 9 Strong gale 10 Whole gale 11 Storm 12 Hurricane	N NE E SE S SW W NW	None Drizzle/Mist Light showers Heavy showers Heavy rain Lying Snow None On site High ground	0 1 2 3 4 0 1 2 None Ground All day	Height of cloud above average height of newsheds <150m 150-500m >500m	Poor (<1km) Moderate (1-3km) Good (>3km)

Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes (e.g. temperature)
Hr 1	3	SW	2	8/8	1	1	---	---	13°C
Hr 2	3	SW	2	8/8	1	1	---	---	12°C
Hr 3	4	SW	0	8/8	1	1	---	---	11°C
Hr 4	4	SW	0	8/8	1	2	---	---	12°C
Hr 5	4	SW	0	8/8	2	2	---	---	14°C
Hr 6	4	SW	0	7/8	2	2	---	---	15°C
Hr 7	3	SW	0	6/8	2	2	---	---	15°C
Hr 8									

Field Notes:
Maps attached

For office use only. NB- Initial <u>date</u> <u>ALL</u> boxes.	Logged	Database Entered	Database Validated	GIS Entered	GIS Validated
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Surveyor: *Nick Veale*

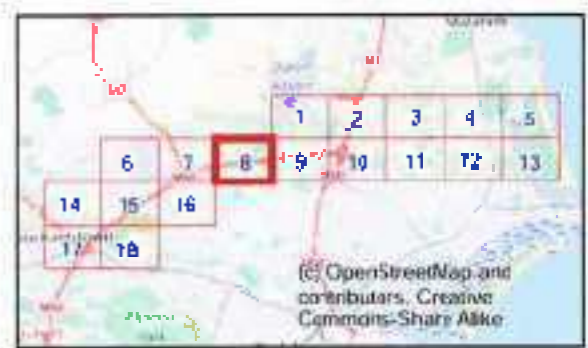
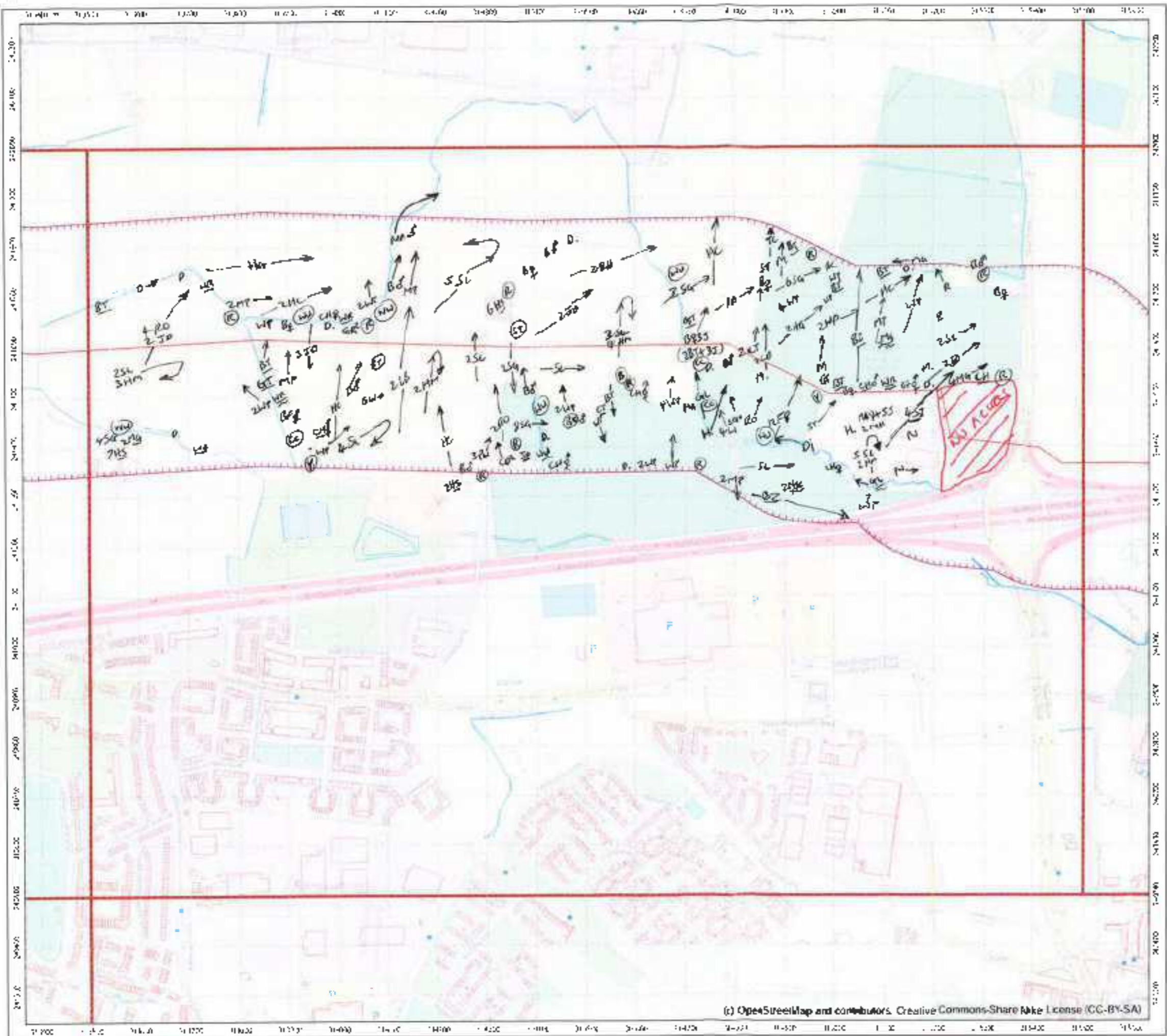
Date: *05/06/2017*

Start time: *05:30*

End time: *12:00*

*Please attach weather sheet

Notes:

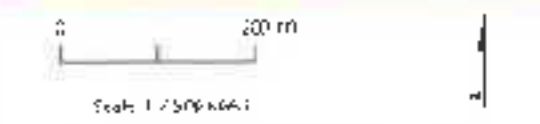


- Legend
- BBS/WWC survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)
 - Pipe route (supplied 20170405)

Greater Dublin Drainage

Breeding/winter bird survey

Page 6 of 18



Date: *05/06/2017* Job No: *520709* Rev: *1*

Drawn: *CH* Checked: *EMAF* Approved: *DMAT*

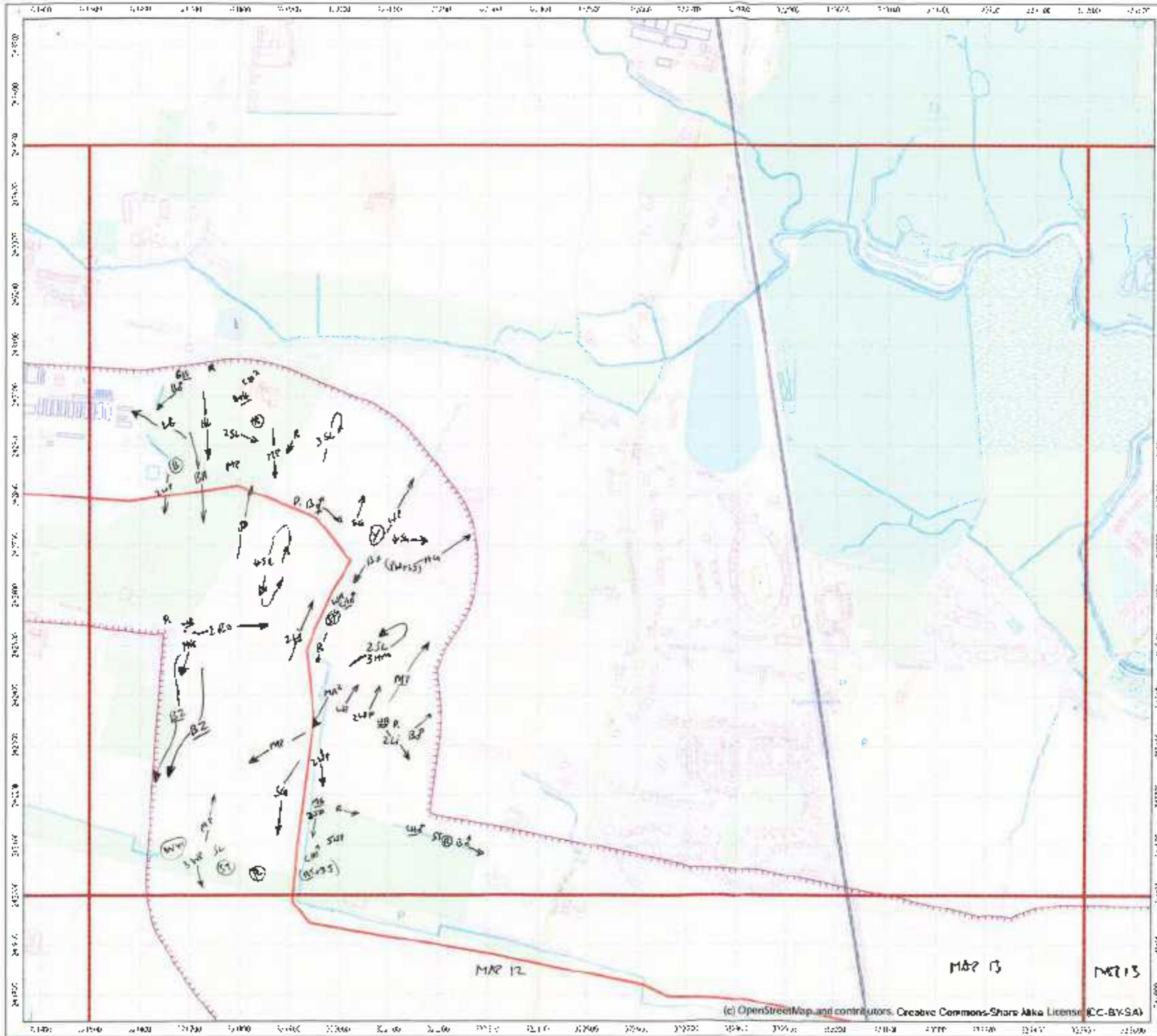
RPS	Weather Sheet
Site	G00
Date	07/06/2017
Survey	BSS
Observer	Nick Veda
Start Time	05:30
Finish Time	12:00
Sheet 1/ & [] Maps attached	

Wind Speed	Direction	Rain/Snow	Cloud Cover	Cloud Height	Visibility
Calm Light air Light breeze Gentle breeze Mod. breeze Fresh breeze Strong breeze Mod. gale Fresh gale Strong gale Whole gale Storm Hurricane	N NE E SE S SW W NW	Name 0 On site 1 High ground 2	In sight e.g. 3/8 0 1 2 3 4 None Ground All day	Height of cloud above average height or washed <150m 150-500m >500m	Poor (<1km) Moderate (1-3km) Good (>3km)
Beaufort	0	0	0	0	0
Mph	>1	0	0	0	0
1	1-3	1	1	1	1
2	4-7	2	2	2	2
3	8-12	3	3	3	3
4	13-18	4	4	4	4
5	19-24	5	5	5	5
6	25-31	6	6	6	6
7	32-38	7	7	7	7
8	39-46	8	8	8	8
9	47-54	9	9	9	9
10	55-63	10	10	10	10
11	64-72	11	11	11	11
12	73+	12	12	12	12

Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes (e.g. temperature)
Hr 1	63	W	0	3/8	2	2			8°C
Hr 2	3	W	0	2/8	2	2			12°C
Hr 3	3	W	0	2/8	2	2			13°C
Hr 4	4	W	0	2/8	2	2			15°C
Hr 5	4	W	0	3/8	2	2			15°C
Hr 6	4	W	0	4/8	2	2			17°C
Hr 7	3	W	0	4/8	2	2			17°C
Hr 8									

Field Notes:
Maps attached

For office use only. NB. Initial AND date ALL boxes	Logged	Database Entered	Database Validated	GIS Entered	GIS Validated
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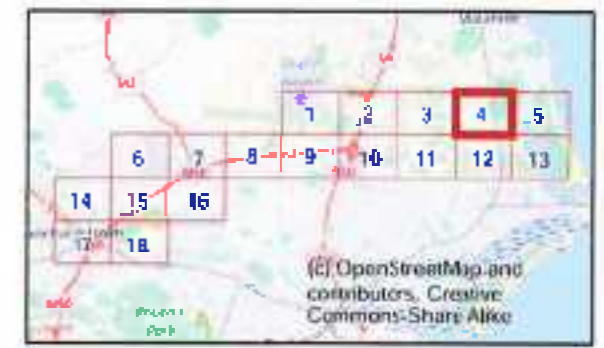
RPS



Surveyor: N. V.

Date: 07/06/2017

Start time: 05:30 End time: 12:00

*Please attach weather sheet
Notes:

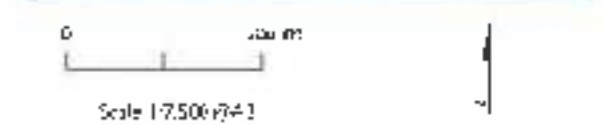


- Legend
-  885/WNO survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)
 -  Pipe route (supplied 20170405)

Greater Dublin Drainage

Breeding/winter bird survey

Page 4 of 18

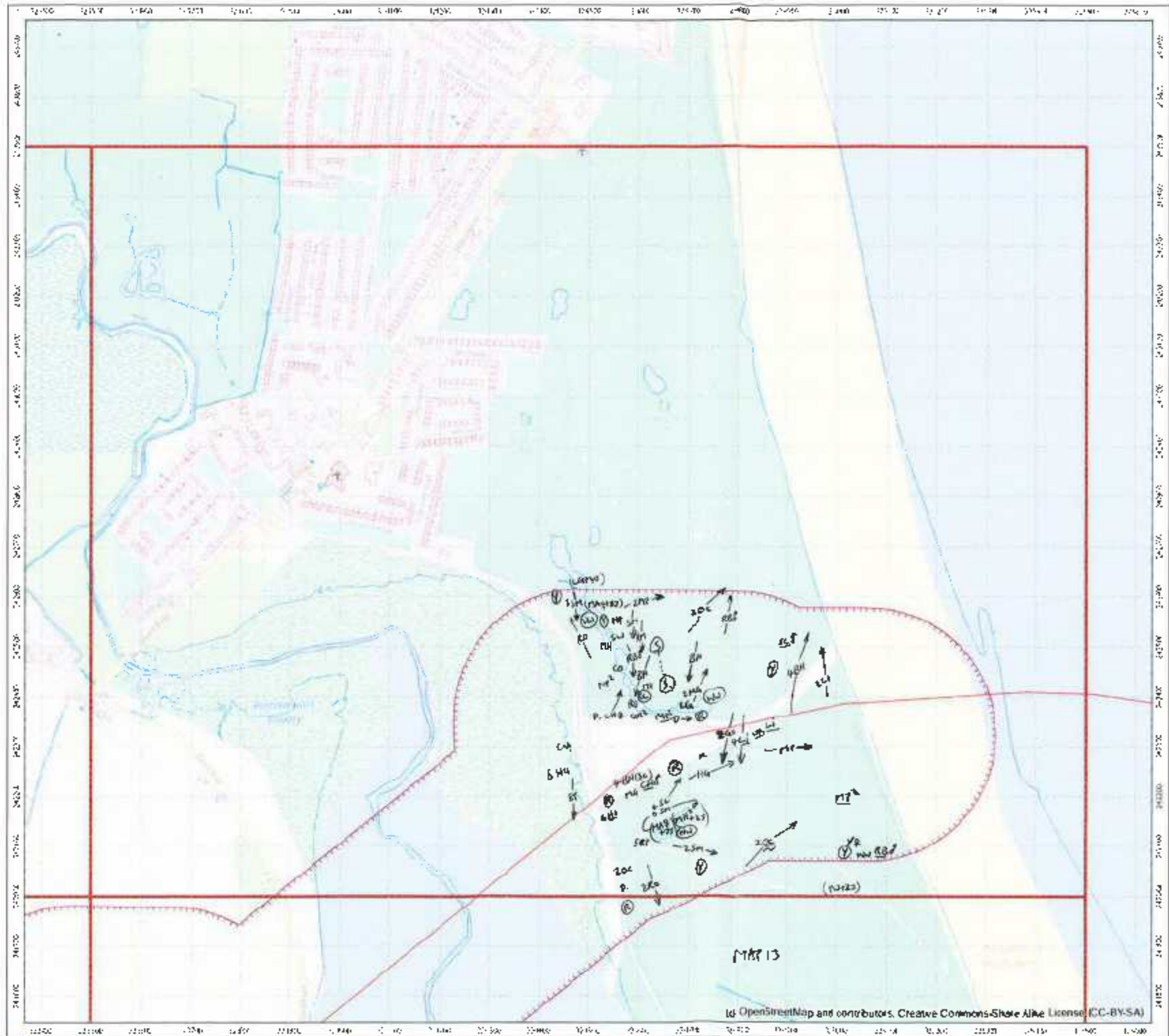


Scale 1:7500 (A1)

Date: 04/06/2017 Job No: SEC7909 Rev: 1

Drawn: C11 Checked: DRAFT Approved: DRAFT

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Surveyor: Nick Veale
 Date: 07/06/2017
 Start time: 05:30 | End time: 12:00

*Please attach weather sheet
 Notes:



- Legend
- BBS/MWG survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)
 - Pipe route (supplied 20 70405)

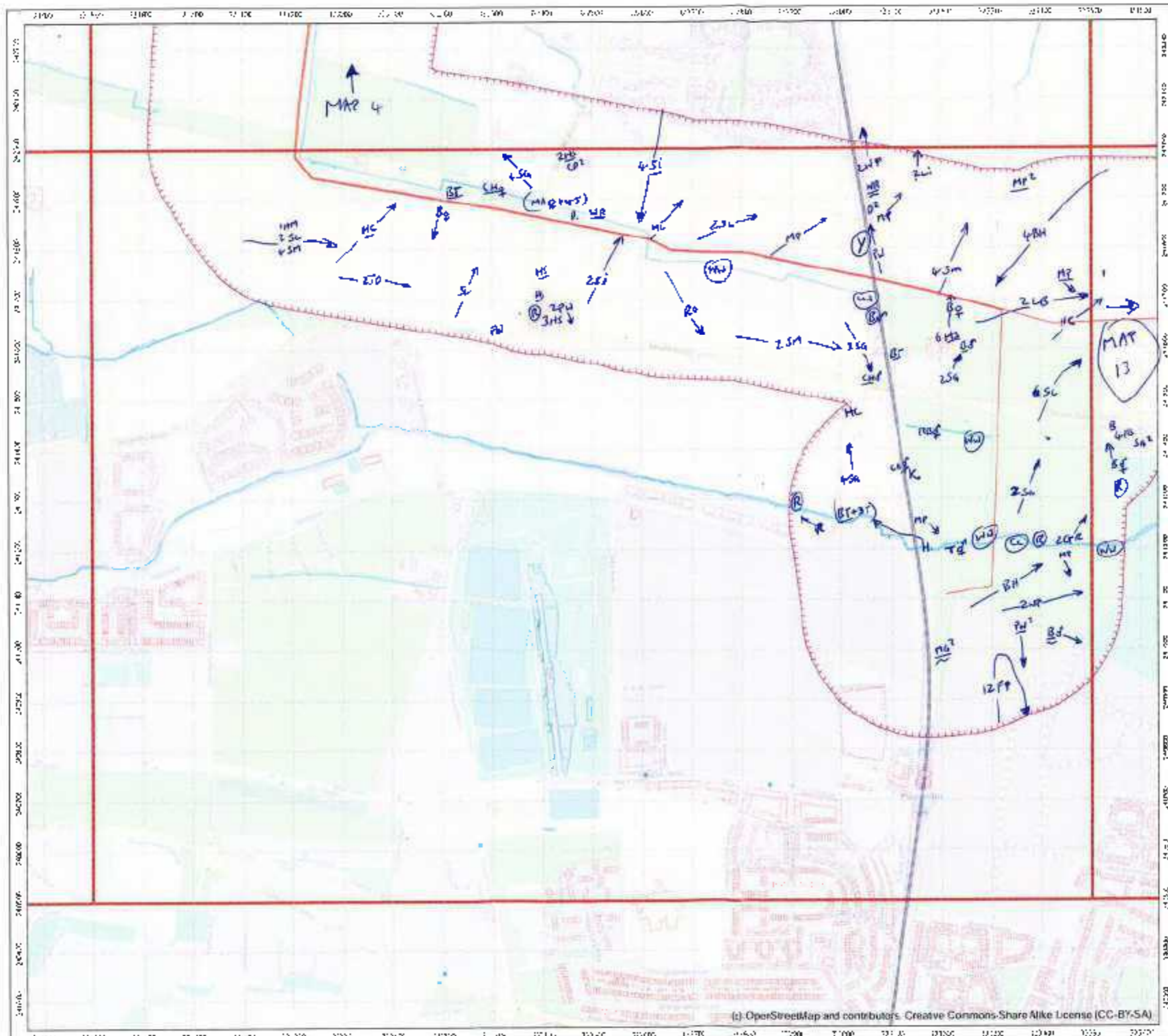
Greater Dublin Drainage
 Breeding/winter bird survey
 Page 5 of 18

Scale 1:7,500 (CAD)

Date: 06/01/2017 | Job No: SEC7509 | Rev: 1

Drawn: 17 | Checked: DRAFT | Approved: DRAFT

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RPS *Nicki Veele*

Surveyor: *07/06/2017*

Date: *07*

Start time: *05:30* End time: *12:00*

*Please attach weather sheet

Notes:



- Legend**
- BBS/WWC> survey boundary (250 m buffer of route supplied 20 70405 appended to previous boundary)
 - Pipe route (supplied 20170405)

Greater Dublin Drainage

Breeding/winter bird survey

Page 12 of 8

0 200 m

Scale: 1:7,500 (9A3)

Date: 07/06/2017	Job No: SEC750H	Rev: c
Drawn: DJ	Checked: (DRAFT)	Approved: DRAFT

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Project: Greater Dublin Drainage

Project No: 20170405

Project Name: Breeding/winter bird survey

Project Location: Greater Dublin Drainage

Project Date: 07/06/2017

Project Status: DRAFT

Project Contact: Nicki Veele

Project Email: nveele@rps.ie

Project Phone: 01 454 4000

Project Website: www.rps.ie

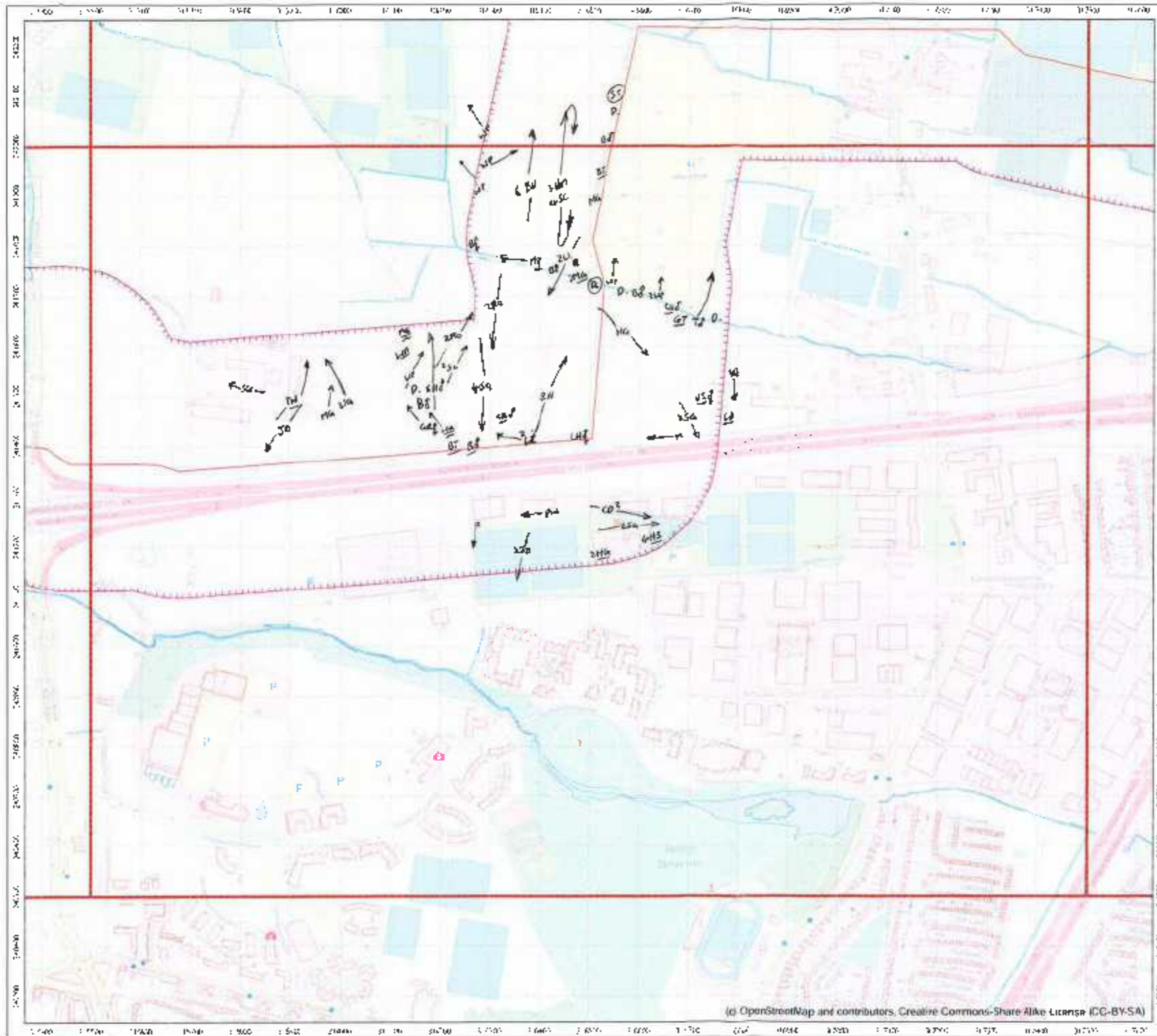
RPS	Weather Sheet
Site	G00
Date	02/06/2007
Survey	B335
Observer	N. Veale
Start Time	05:40
Finish Time	12:00
Sheet 1/ & []	Maps attached

Wind Speed	Direction	Rain/Snow	Cloud Cover	Cloud Height	Visibility				
						Beaufort	Mph	N	NE
Calm		None	In puffs e.g. 3/8	Height of cloud above average height of newsheds	Poor (<1km) 0 Moderate (1-3km) 1 Good (>3km) 2				
Light air		Drizzle/Mist		<150m					
Light breeze		Light showers		150-500m					
Gentle breeze		Heavy showers		>500m					
Mod. breeze		Heavy rain							
Fresh breeze		Lyfng Snow	Frost						
Strong breeze		None	None						
Mod. gale		On site	Ground						
Fresh gale		High ground	All day						
Strong gale									
Whole gale									
Storm									
Hurricane									

Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes (e.g. temperature)
Hr 1	1	W	2	7/8	2	2	---	---	10°C
Hr 2	1	SW	0	8/8	2	2	---	---	
Hr 3	2	SW	0	7/8	2	2	---	---	
Hr 4	2	W	0	6/8	2	2	---	---	
Hr 5	3	W	0	6/8	2	2	---	---	
Hr 6	3	W	0	8/8	2	2	---	---	
Hr 7	3	W	0	7/8	2	2	---	---	
Hr 8									

Field Notes:
Maps attached

For office use only, NB - Initial AND date ALL boxes.	Logged	Database Entered	Database Validated	GIS Entered	GIS Validated
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RPS

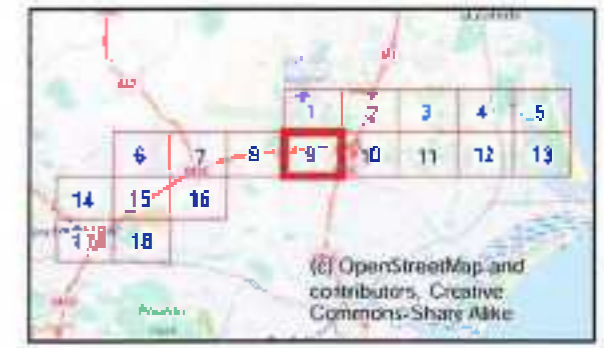
Surveyor Nick Veale

Date 02 / 10 / 17

Start time 05:40 End time 12:00

*Please attach weather sheet

Notes



- Legend**
- 3BS/MVO survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)
 - Pipe route (supplied 20170405)

Greater Dub'in Drainage

Breeding/winter bird survey

Page 9 of 13

0 100 m

Scale 1:7,500 (GAJ)

Date: 02/10/2017 Job No: 5277929 Rev: 1

Drawn: CH Checked: DVA-T Approver: DRAFT

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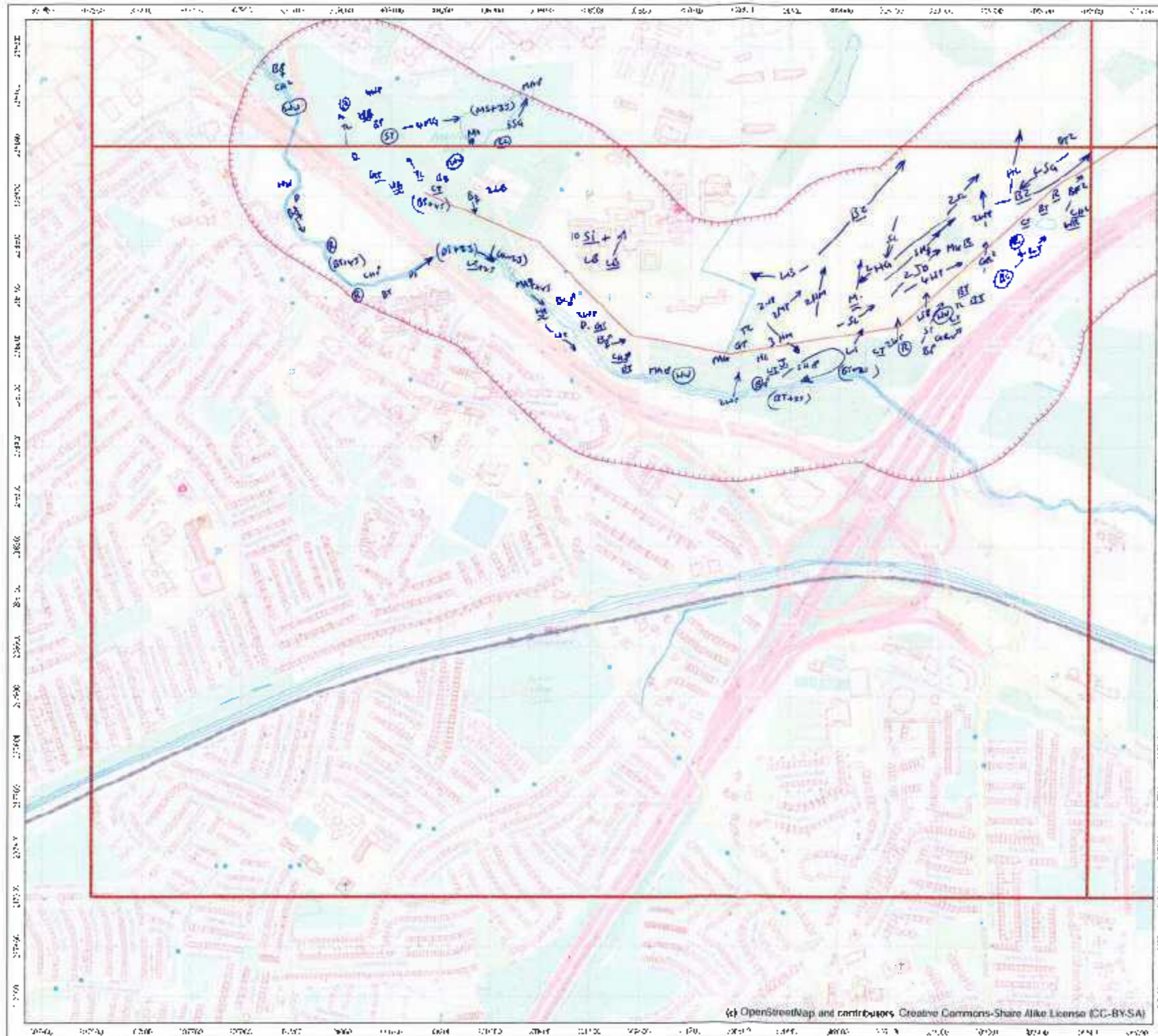
RPS	Weather Sheet
Site	GPO
Date	01/06/2017
Survey	RPS
Observer	Nick Vene
Start Time	05:30
Finish Time	12:00
Sheet 1/ & [] Maps attached	

Wind Speed	Direction	Rain/Snow	Cloud Cover	Cloud Height	Visibility
Beaufort 0 Calm 1 Light air 2 Light breeze 3 Gentle breeze 4 Mod. breeze 5 Fresh breeze 6 Strong breeze 7 Mod. gale 8 Fresh gale 9 Strong gale 10 Whole gale 11 Storm 12 Hurricane	N NE E SE S SW W NW	None Drizzle/Mist Light showers Heavy showers Heavy rain Lying Snow None On site High ground	In thirds e.g. 3/8 Frost None Ground All day	Height of cloud above average height of wishest <150m 150-500m >500m	Poor (<1km) Moderate (1-3km) Good (>3km)

Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes (e.g. temperature)
Hr 1	3	S	0	7/8	2	2	---	---	14°C
Hr 2	2	S	0	6/8	2	2	---	---	15°C
Hr 3	2	S	0	4/8	2	2	---	---	16°C
Hr 4	2	S	0	5/8	2	2	---	---	17°C
Hr 5	3	S	0	8/8	2	2	---	---	
Hr 6	3	SE	0	9/8	2	2	---	---	
Hr 7	3	SE	0	8/8	2	1	---	---	
Hr 8									

Field Notes:
 Maps attached

For office use only. NB - Initial AND date ALL boxes.	Logged	Database Entered	Database Validated	GIS Entered	GIS Validated
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RPS

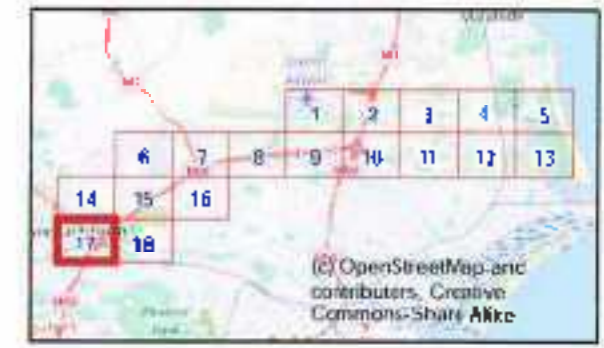
Surveyor: Nick Vella

Date: 01/06/2017

Start time: 05:30 | End time: 12:00

*Please attach weather sheet

Note:



- Legend**
- BBS/VVO 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

0 200 m

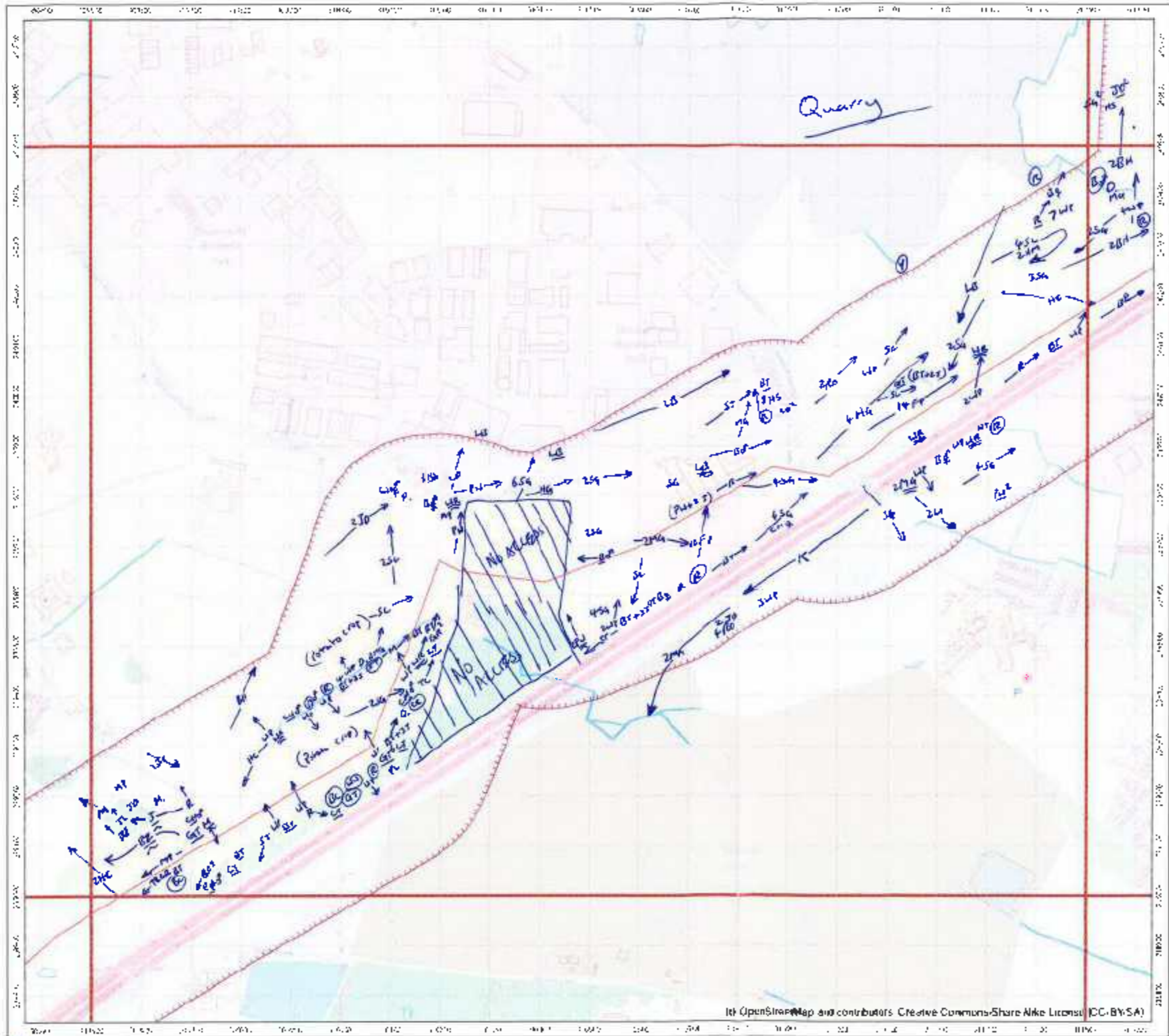
Scale 1:7,500 (A3)

Date: 01/06/2017 | Job No: 5617909 | Rev: c

Drawn: CV | Checked: DRAH | Approved: DRAFT

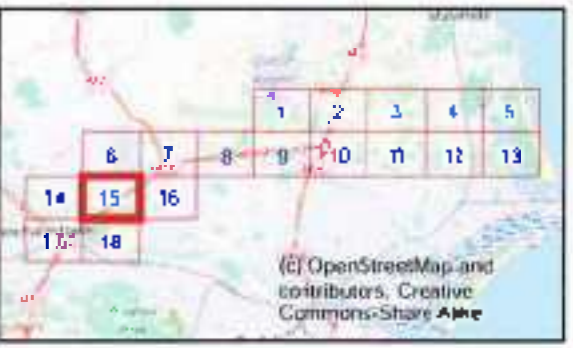
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RPS

Surveyor Nien Vee
 Date 01/06/2017
 Start time 05:30 End time 12:00
 *Please attach weather sheet
 Notes
02/06/2017
05:40 - 12:00



Legend
 [Red dashed line] 3PS/WVO survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)
 [Red solid line] Pipe routes (supplied 20170405)

Greater Dublin Drainage
 Breeding/winter bird survey
 Page 15 of 18

0 100 m
 Scale 1:7,500 (m)
 Date 01/06/2017 Job No. SQUAD Rev. 2
 Drawn: N.V. Checked: DRAFT Approved: DRAFT
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RPS		Weather Sheet	
Site	GSD		
Date	31/05/2017		
Survey	BBS		
Observer	Nick Veda		
Start Time	05:00		
Finish Time	12:00		
Sheet 1/ & []	Maps attached		

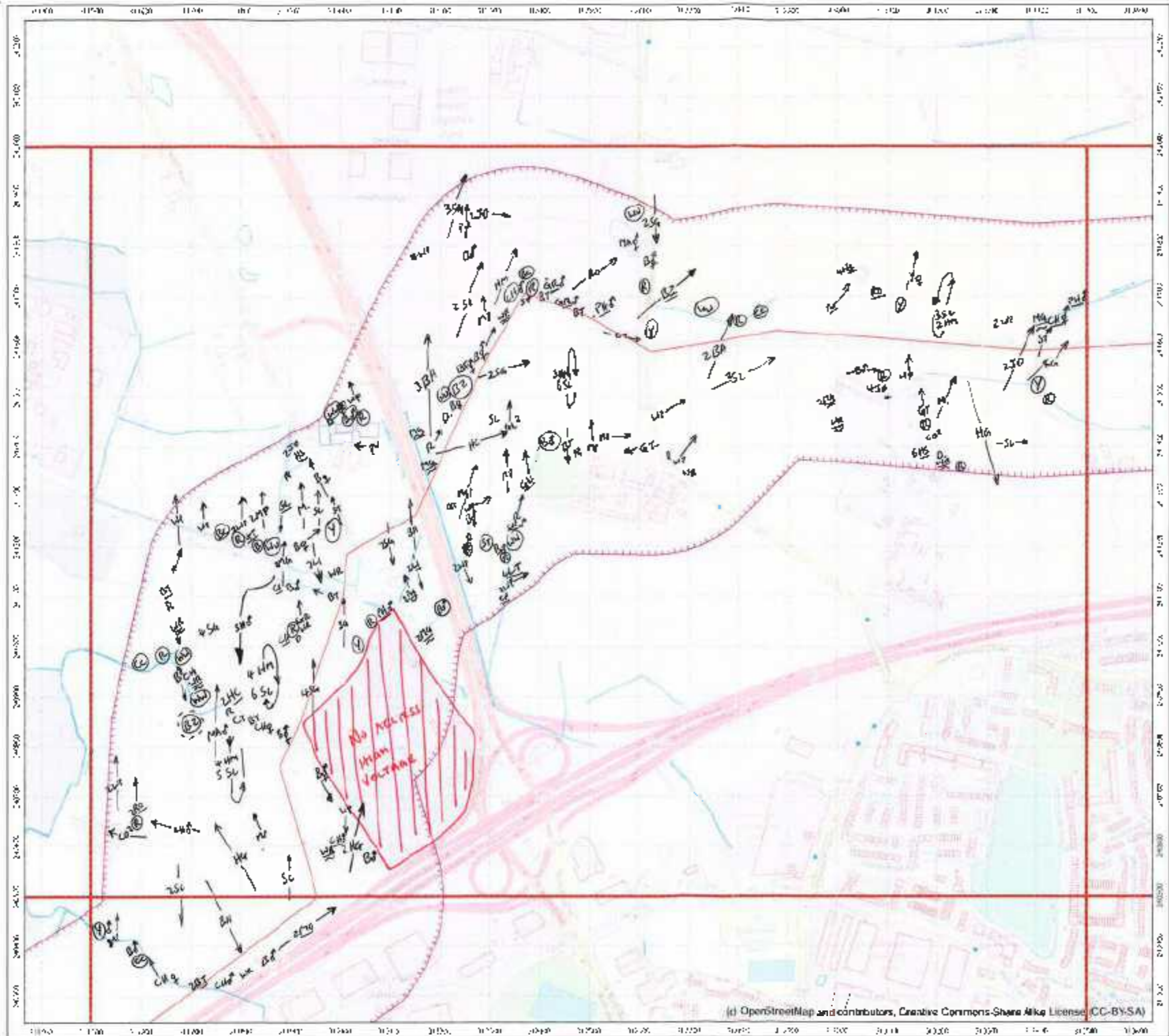
Wind Speed	Direction	Rain/Snow	Cloud Cover	Cloud Height	Visibility
Calm 0	N	None	0	<150m	0
Light air 1	NE	Drizzle/Mist	1	150-500m	1
Light breeze 2	E	Light showers	2	>500m	2
Gentle breeze 3	SE	Heavy showers	3		
Mod breeze 4	S	Heavy rain	4		
Fresh breeze 5	SW	Lying snow			
Strong breeze 6	W	None	0		
Mod. gale 7	NW	On site	1		
Fresh gale 8		High ground	2		
Strong gale 9					
Whole gale 10					
Storm 11					
Hurricane 12					

Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes (e.g. temperature)
Hr 1	2	E	0	3/8	1	0			Partial fog 7°C Visibility > 500m
Hr 2	2	E	0	4/8	1	0			Partial fog 8°C " > 500m
Hr 3	2	SE	0	5/8	1	1			11°C
Hr 4	3	SE	0	5/8	2	2			12°C
Hr 5	3	SE	0	6/8	2	2			
Hr 6	4	SE	0	6/8	2	2			
Hr 7	4	SE	0	5/8	2	2			14°C
Hr 8									

Field Notes: Maps attached

Some localized fog but Visibility over 500m so fine for BBS

For office use only. NB - Initial AND date ALL boxes.	Logged	Database Entered	Database Validated	GIS Entered	GIS Validated
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RPS

Surveyor: N. Veale

Date: 31/05/17

Start time: 05:00 | End time: 18:00

*Please attach weather sheet

Notes:



- Legend**
- BBS/MVO survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)
 - Pipe route (supplied 20170105)

Greater Dublin Drainage

Breeding/winter bird survey

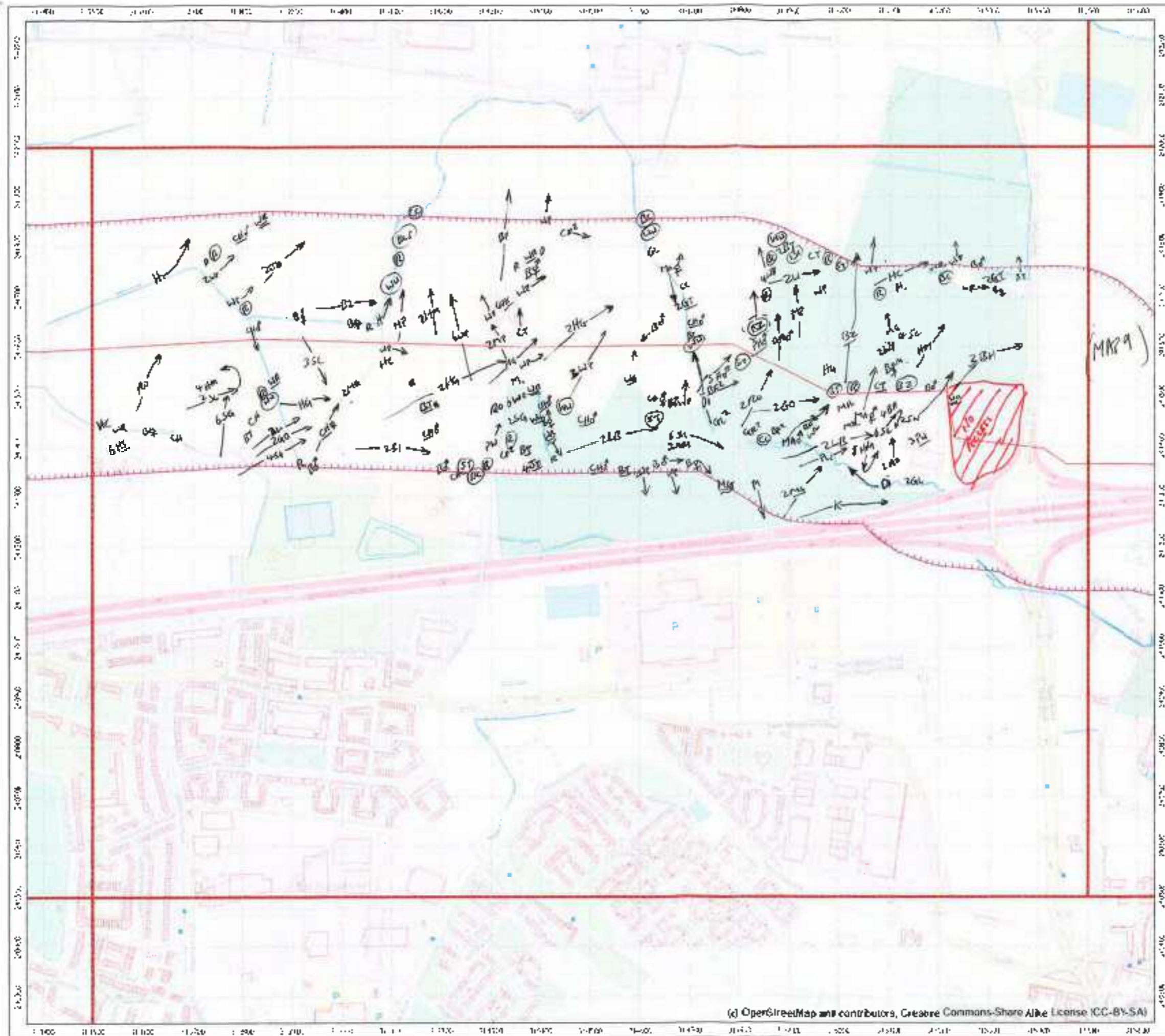
Page 7 of 18

Scale: 1:7500 (NAS)

Date: 06/14/2017 | Job No: SEC7509 | Rev: 1

Drawn: J.H. | Checked: DRAIT | Approved: DRAIT

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RPS

Surveyor: N. Veale

Date 31 / 05 / 2017

Start time 05:00 End time 12:00

*Please attach weather sheet
Notes:



- Legend
- 885/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

Scale 1:200 (0m)

Date: 06/04/2017 Job No: 1617509 Rev: c

Drawn: CH Checked: (DEAF) Approved: (DRA-T)

Project: (1617509) Project: (1617509) Project: (1617509)

Project: (1617509) Project: (1617509) Project: (1617509)

Project: (1617509) Project: (1617509) Project: (1617509)

Project: (1617509) Project: (1617509) Project: (1617509)

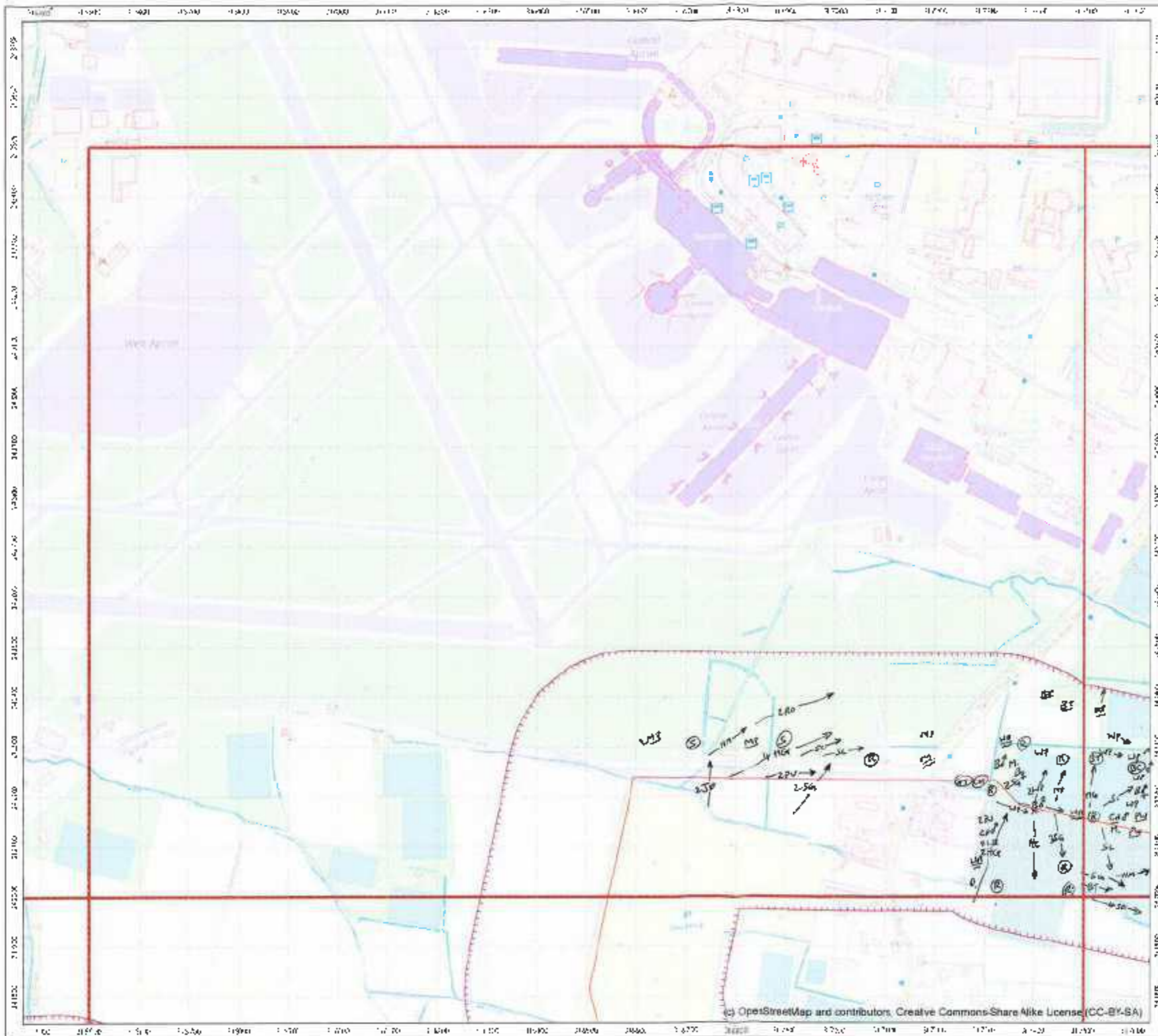
RPS		Weather Sheet	
Site		GOD	
Date		25/05/2017	
Survey		BBS	
Observer		N. Veck	
Start Time		05:30	
Finish Time		12:00	
Sheet 1/ & [] Maps attached			

Wind Speed		Direction		Rain/Snow		Cloud Cover		Cloud Height		Visibility	
Calm	Besouff	N	NE	Name	In nights	Height of cloud	Poor (<1km)	above average	Moderate (1-2km)	Good (>3km)	
Light air	1	E	SE	Drizzle/Mist	0	height of	0	height of	1	1	
Gentle breeze	2	SE	SE	Light showers	1	viewshed	0	viewshed	1	2	
Mod. breeze	3	S	SE	Heavy showers	2	<150m	0	<150m	0	2	
Fresh breeze	4	SW	SE	Heavy rain	3	150-500m	1	150-500m	1	2	
Strong breeze	5	W	SW	Lying Snow	4	>500m	2	>500m	2	2	
Strong gale	6	NW	SW	None	0	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).					
Fresh gale	7			On site	1						
Strong gale	8			High ground	2						
Whole gale	9				0						
Storm	10				1						
Hurricane	11				2						
	12				2						

Weather	Wind speed	Wind direction	Rain	Frost	Visibility	Cloud cover	Cloud height	Snow	Notes(e.g. temperature)
Hr 1	3	SE	0	---	1	6/8	1	---	11°C - Patchy fog
Hr 2	2	SE	0	---	1	5/8	1	---	11°C Patchy fog
Hr 3	2	E	0	---	2	5/8	2	---	
Hr 4	2	E	0	---	2	4/8	2	---	14°C
Hr 5	3	SE	0	---	2	4/8	2	---	
Hr 6	3	SE	0	---	2	3/8	2	---	18°C
Hr 7	3	E	0	---	2	3/8	2	---	
Hr 8									

Field Notes:
Maps attached

For office use only, NB. Initial AND date ALL boxes.	Logged	Database Entered	Database Validated	GIS Entered	GIS Validated



Surveyor: Nick Vede

Date: 25/05/17

Start time 05:30 End time 12:00

*Please attach weather sheet
Notes

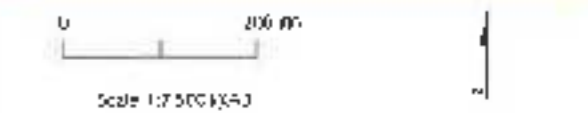


- Legend
- BSI/WVO survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)
 - Pipe route (supplied 20170405)

Greater Dublin Drainage

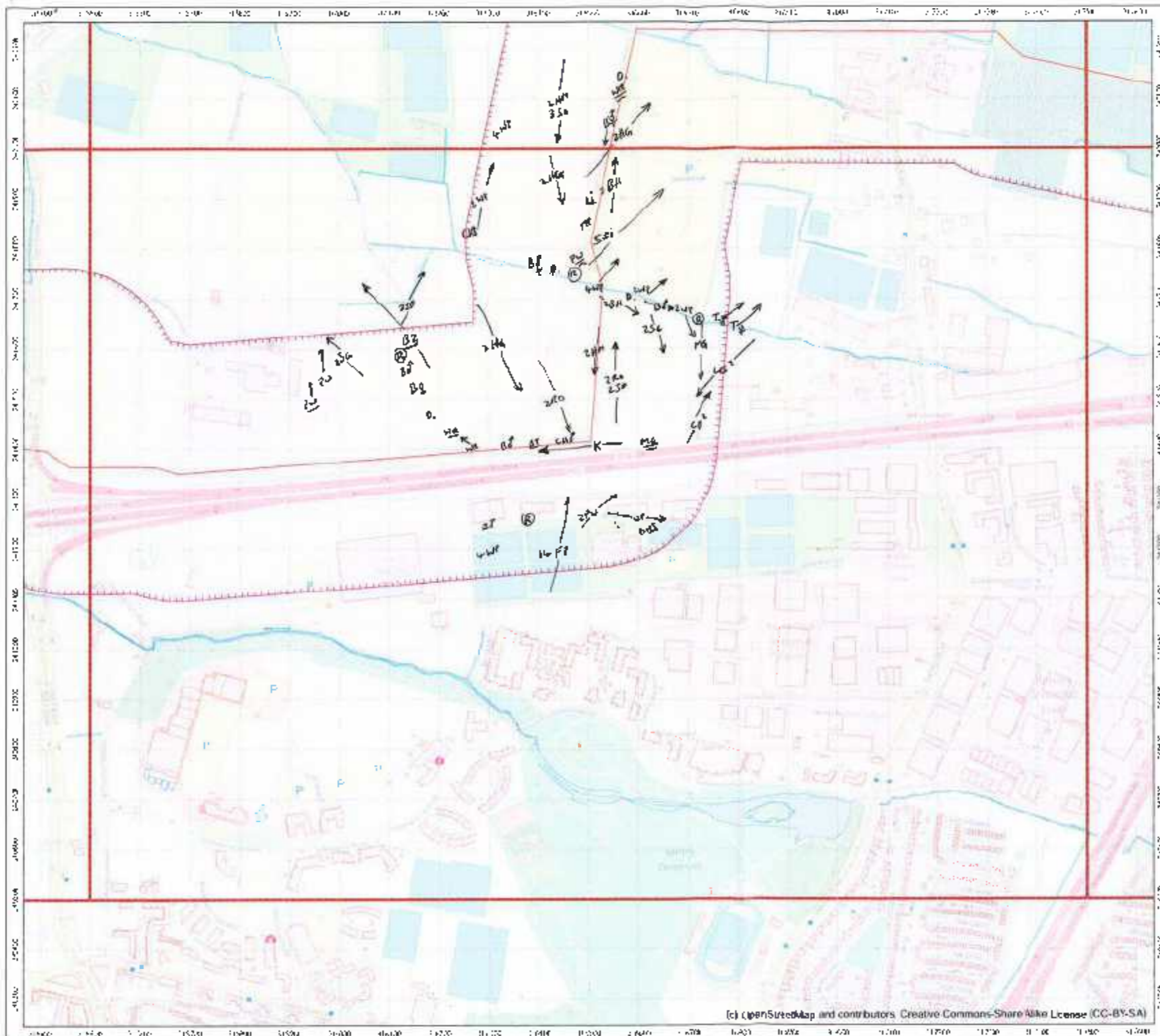
Breeding/winter bird survey

Page 1 of 18



Drawn: CH Checked: DRAFT Approved: E-444

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RPS

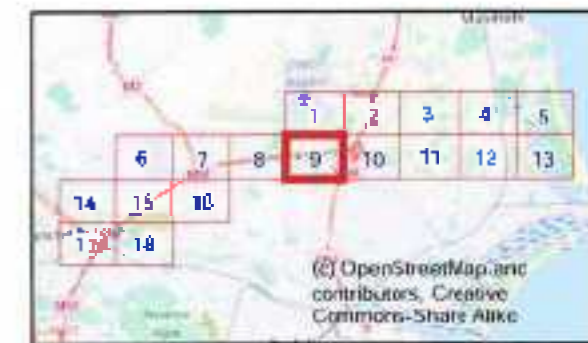
Surveyor: N.V

Date: 25/05/17

Start time: 05:30 | End time: 12:00

*Please attach weather sheet:

Notes:



- Legend
- RBS/WVO 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 7 of 18

0 30 m

Scale 1:7500 (approx)

File: 06042017 Job No: SEC709 Rev: 1

Drawn: CH Checked: CFA-1 Approved: CRAFT

Watershed: 101204-000
 City: 00000000
 Watercourse: 101204-000
 Watercourse: 101204-000

RBS	Weather Sheet
Site	GDD
Date	24/05/2017
Survey	RBS
Observer	N. Veele
Start Time	05:20
Finish Time	12:40
Sheet 1/ & [] Maps attached	

Wind Speed Calm Light air Light breeze Gentle breeze Mod. breeze Fresh breeze Strong breeze Mod. gale Fresh gale Strong gale Whole gale Storm Hurricane	Beaufort 0 1 2 3 4 5 6 7 8 9 10 11 12	mph >1 1-3 4-7 8-12 13-18 19-24 25-31 32-38 39-46 47-54 55-63 64-72 73+	Direction N NE E SE S SW W NW	Rain/Snow None Drizzle Light showers Heavy showers Heavy rain Lying Snow None On sills High ground	Cloud Cover In eighths e.g. 3/8 Frost None Covered All day	Cloud Height Height of cloud above average height of snowshed <150m 150-500m >500m	Visibility Poor (<1km) Moderate (1-3km) Good (>3km)
---	---	---	--	---	--	---	---

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].

Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes (e.g. temperature)
Hr 1	3	SW	0	7/8	2	2			14°C
Hr 2	3	SW	0	6/8	2	2			
Hr 3	3	SW	0	7/8	2	2			18°C
Hr 4	2	SW	0	7/8	2	2			
Hr 5	1	S	0	8/8	2	2			19°C
Hr 6	2	SE	0	8/8	2	2			
Hr 7	3	SE	0	8/8	2	2			20°C
Hr 8									

Field Notes:
Maps attached

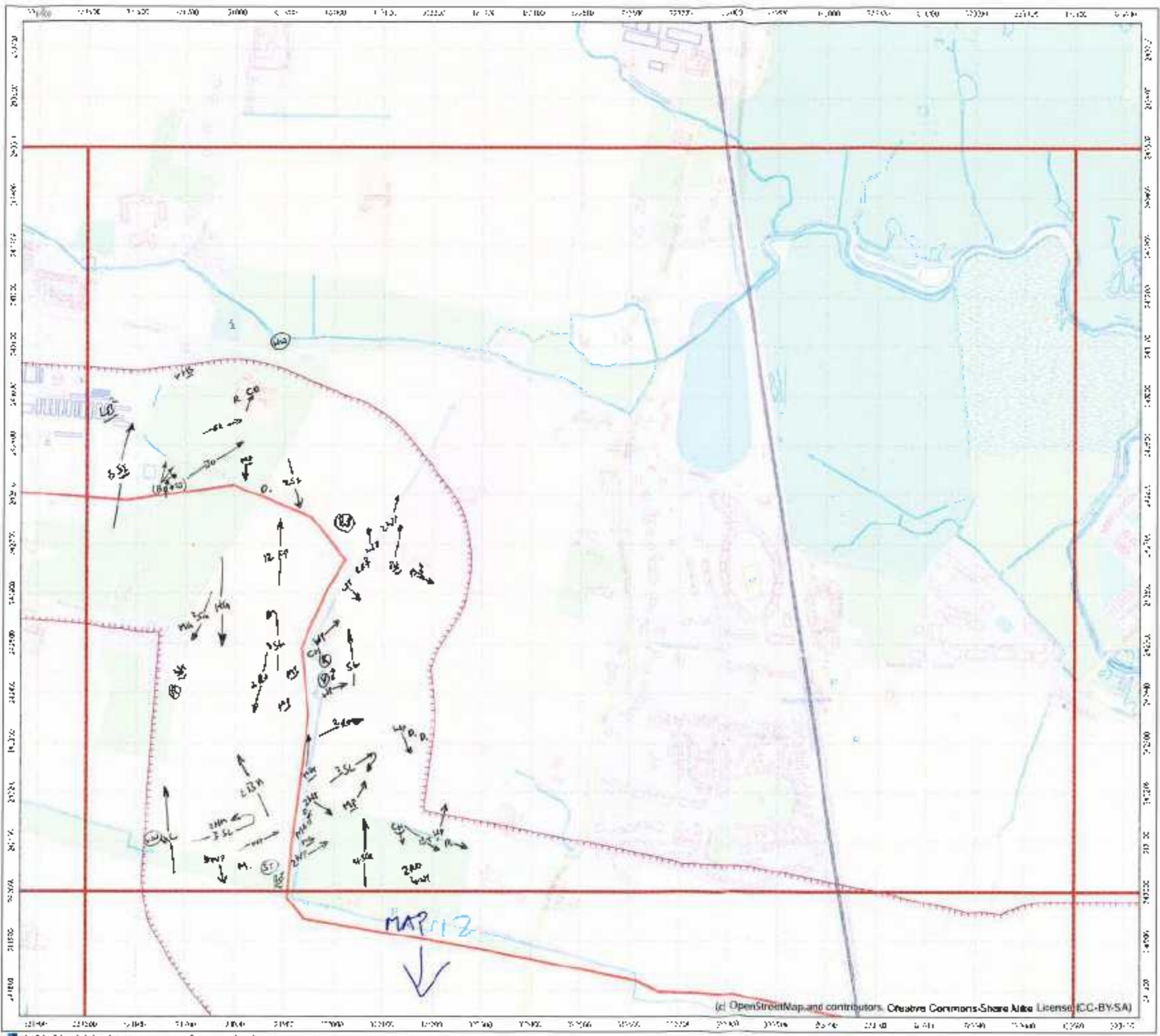
For office use only. NB - Initial AND date ALL boxes	Logged	Database Entered	Database Validated	GIS Entered	GIS Validated
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Surveyor Nick Veale

Date 24/05/2017

Start time 05:20 Finish time 12:00

*Please attach weather sheet
Notes:



- Legend
- BBS/WWC survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)
 - Pipe route (supplied 20170405)

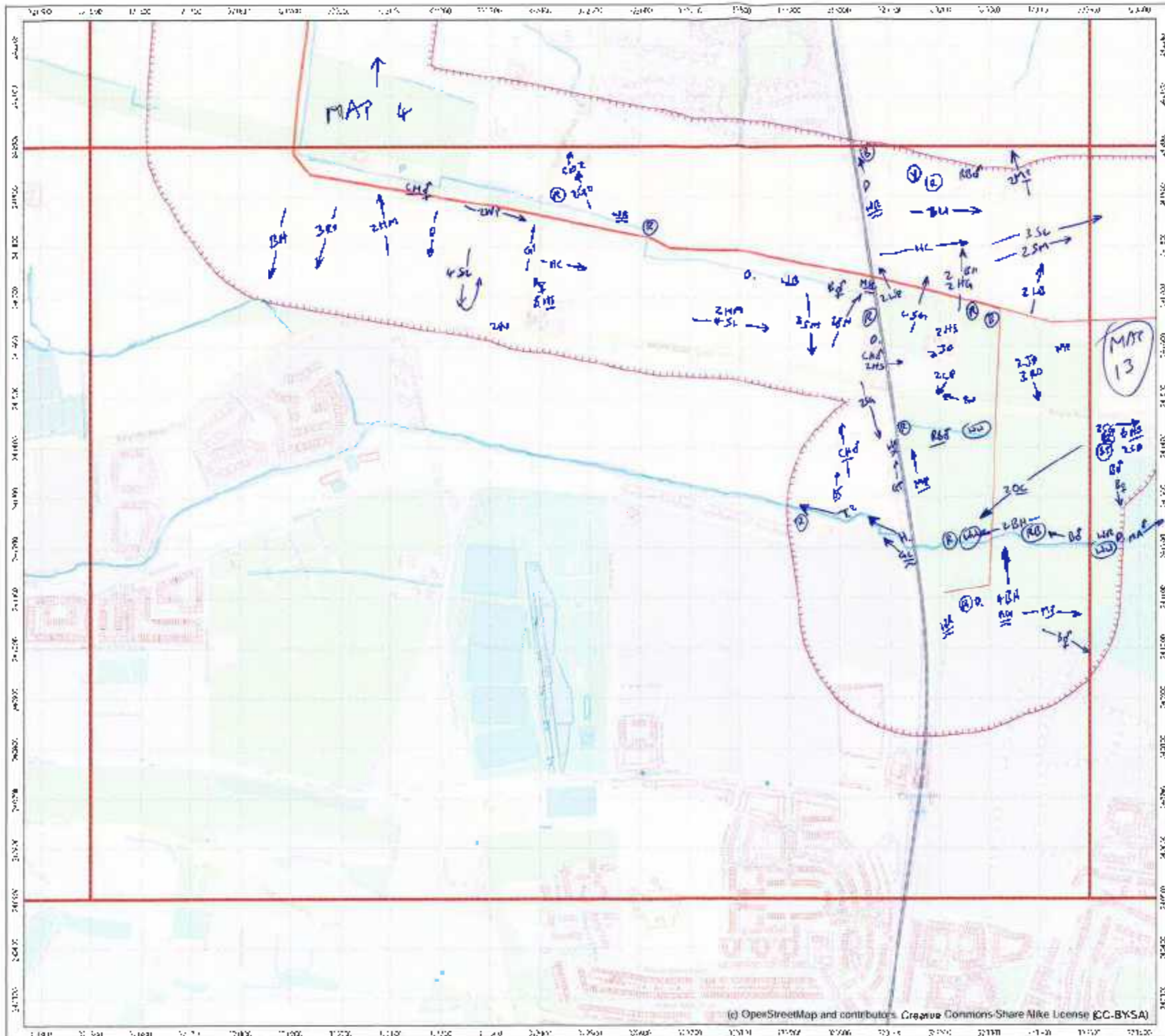
Greater Dublin Drainage

Breeding/winter bird survey

Page 4 of 18



Date: 06/04/2017 Job No: 1507909 Rev: 2
 Drawn: CH Checked: JH/1 Approved: DRA/1
 RPS Project No: 1507909
 This drawing is intended for use by the client and is not to be used for any other purpose without the written consent of RPS.



RPS

Surveyor **N. Veda**

Date **24/05/2017**

Start time **05:20** | End time **12:00**

*Please attach weather sheet

Notes



Legend

- BBS/WAVC 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

0 200 m

Scale 1:7500 (MSL)

Date 26/04/2017 | Job No 5007903 | Rev c

Drawn C.I. | Checked J.M.F. | Approved DRAFT

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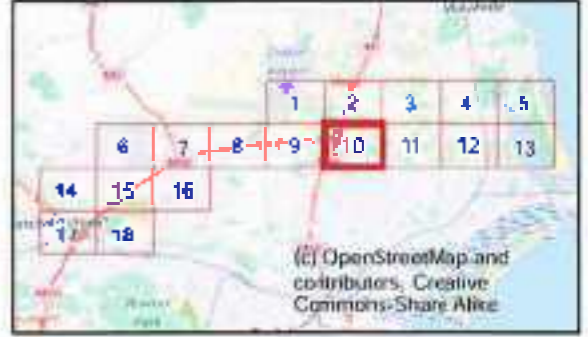
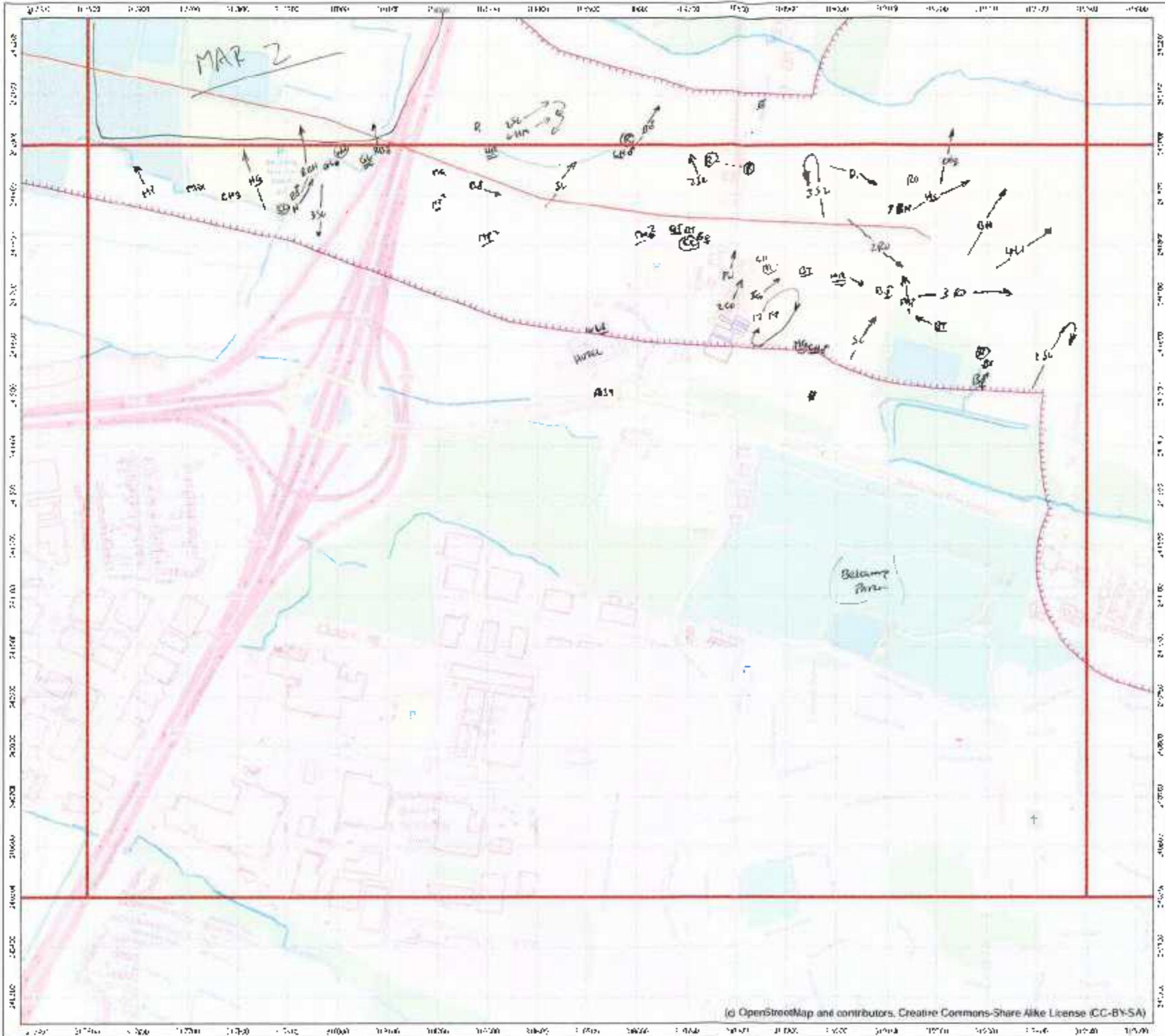
www.rps.ie



Surveyor Niall Veale

Date 24/05/2017

Start time 08:20 End time 12:00

Please attach weather sheet
Notes:



- Legend
-  SBS/MVO survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)
 -  Pipe route (supplied 20170405)

Greater Dublin Drainage

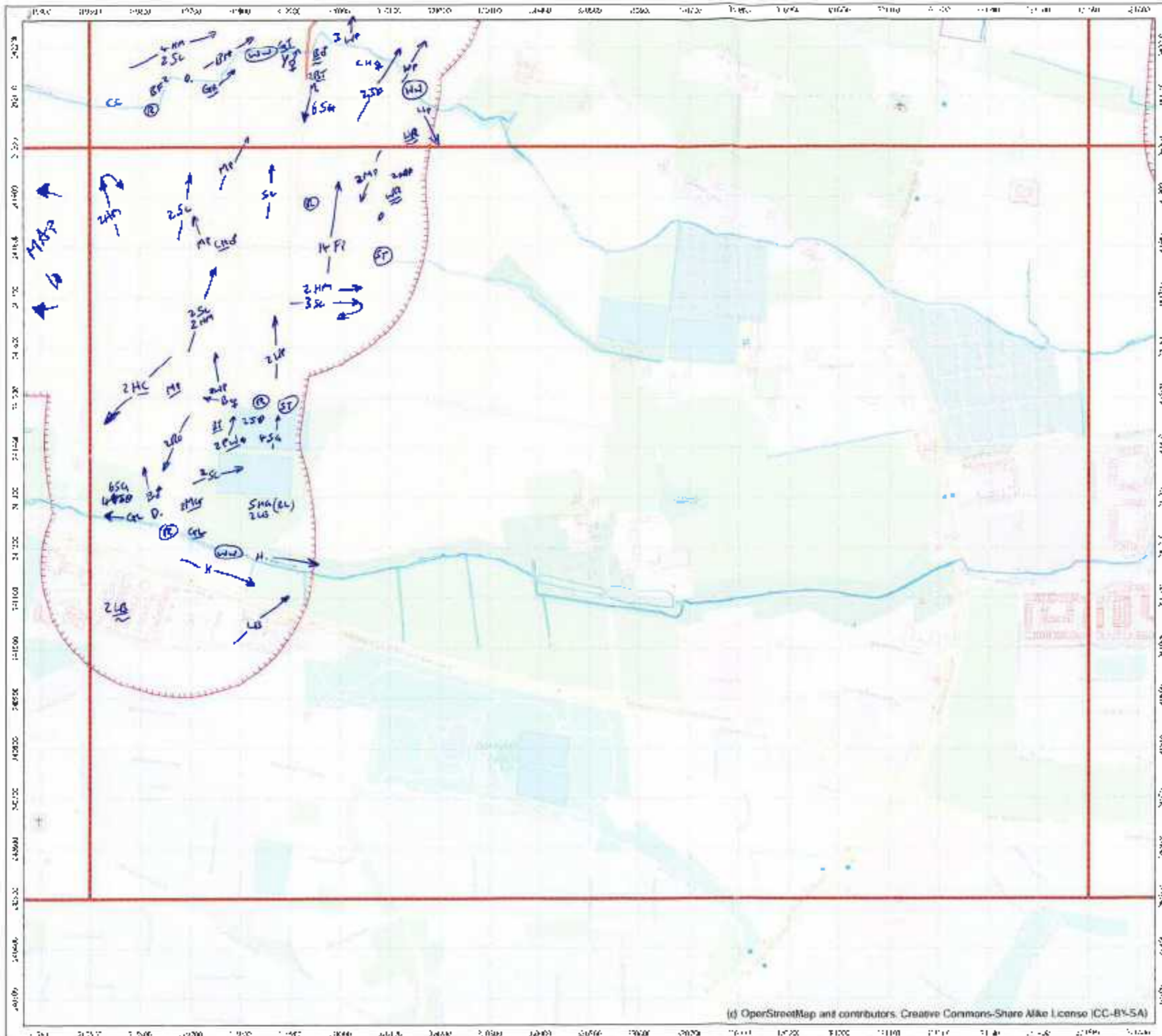
Breeding/winter bird survey

Page 10 of 18



Date: 24/05/2017 Job No: SEC7000 Rev: 1
Drawn: CH Checked: DRAFT Approved: DRAFT

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RPS

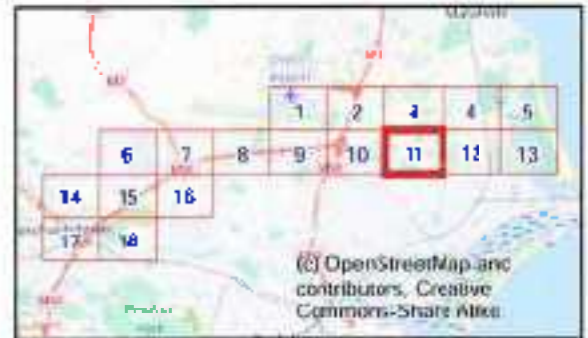
Surveyor: N. Veale

Date: 24/05/2017

Start time: 05:20 End time: 12:40

*Please attach weather sheet

Notes:

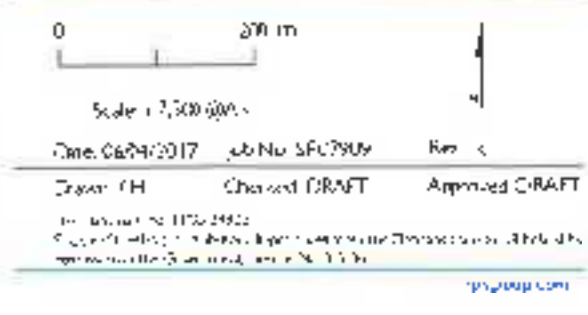


- Legend
- BBS/WWID survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)
 - Pipe route (supp ed 20170405)

Greater Dublin Drainage

Breeding/winter bird survey

Page 11 of 18



KPS	Weather Sheet
Site	600
Date	23/05/2017
Survey	RBBS
Observer	N. Vee
Start Time	08:00
Finish Time	12:00
Sheet 1/ & [] Maps attached	

Weather	Wind Speed		Wind Direction		Rain/Snow		Cloud Cover		Cloud Height		Visibility	
	Wind speed	Wind direction	Rain	Rain	Cloud cover	Cloud height	Visibility	Notes (e.g. temperature)				
Hr 1	2	NW	0	0	5/8	2	2	13°C				
Hr 2	2	W	0	0	7/8	2	2	14°C				
Hr 3	2	W	0	0	7/8	2	2	16°C				
Hr 4	3	W	0	0	8/8	2	2	18°C				
Hr 5												
Hr 6												
Hr 7												
Hr 8												

Field Notes:
 Maps attached

For office use only. NB - Initial AND date ALL boxes	Logged	Database Entered	Database Validated	GIS Entered	GIS Validated
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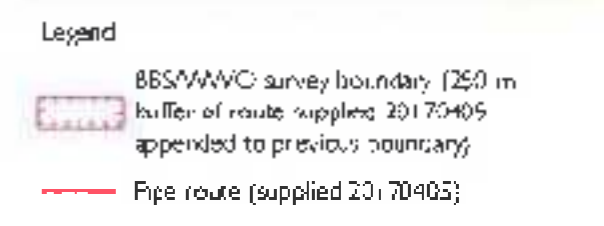
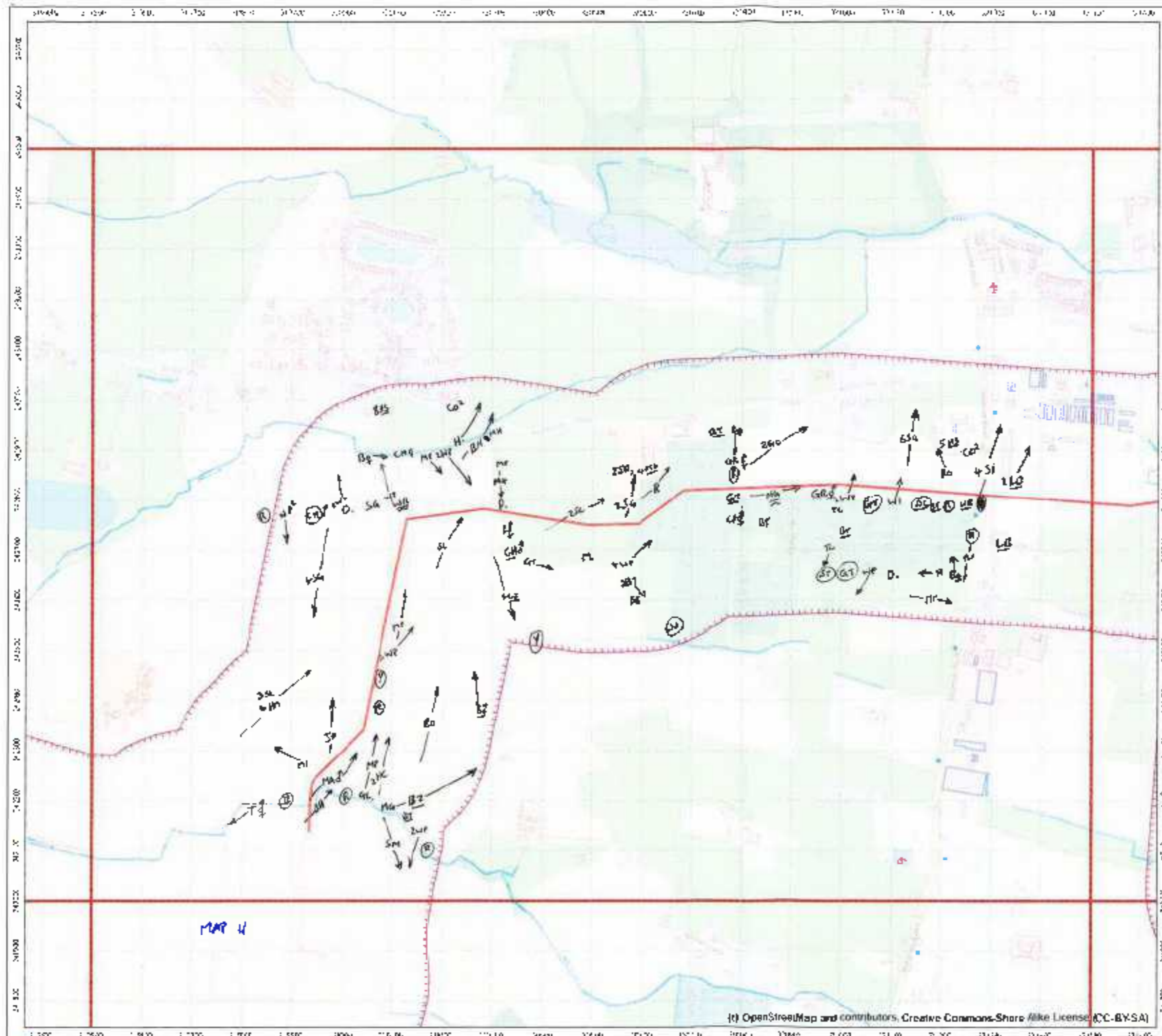
Surveyor: Nich Veale

Date: 23/05/2017

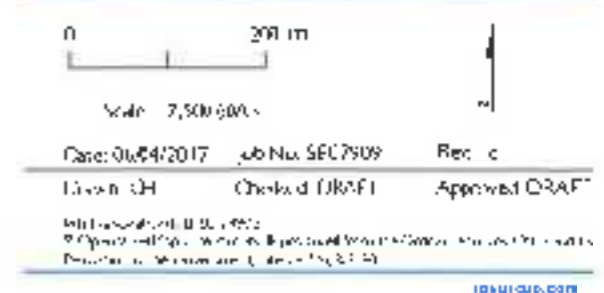
Start time: 08:00 End time: 17:00

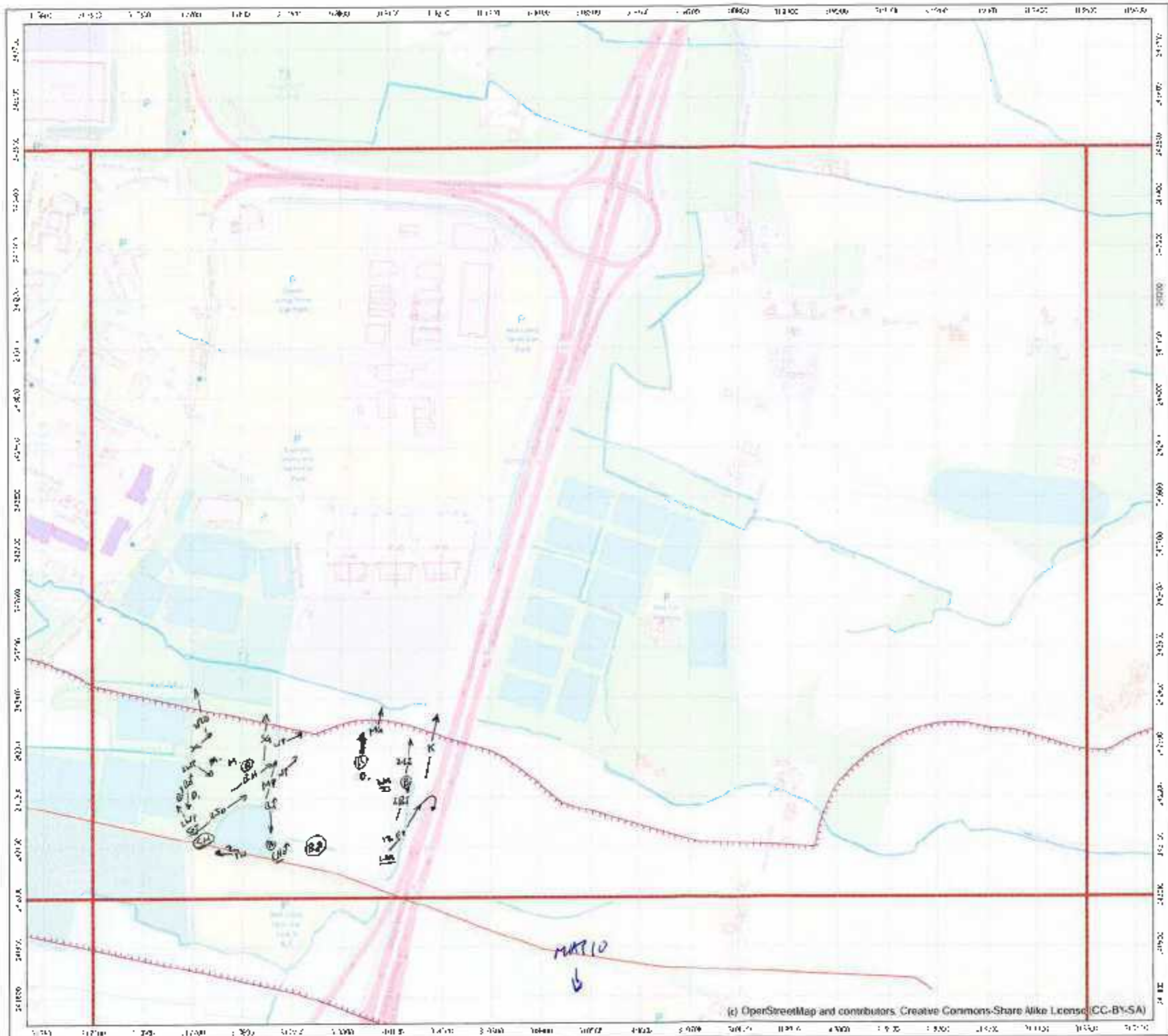
*Please attach weather sheet

Notes:



Greater Dublin Drainage
Breeding/winter bird survey
Page 3 of 8





RPS

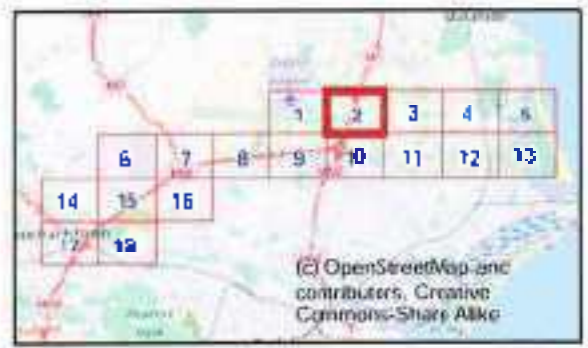
Surveyor N. Veale

Date 7/3/05/2017

Start time 08.00 End time: 12.00

*Please attach weather sheet

Notes



- Legend**
- BBS/WVC survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)
 - Pipe route (supp ed 20170405)

Greater Dublin Drainage

Breeding/winter bird survey

Page 2 of 8

Scale 1:7500 (1:2500)

Date: 26/04/2017 Job No: SEC7909 Rev: 0

Drawn: G.I Checked: DRAFT Approved: DVAIT

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Weather Sheet

Site: G00
 Date: 19/05/2017
 Survey: RSS
 Observer: N. Vella
 Start Time: 08:00
 Finish Time: 12:00

Wind Speed	Direction	Rain/Snow	Cloud Cover	Cloud Height	Visibility
Calm	N	None	In square e.g. 3/2	Height of cloud above average height of windward	Poor (<1km) 0 Moderate (1-5km) 1 Good (>5km) 2
Light air	NE	Drizzle/Mist		<150m 0 150-500m 1 >500m 2	
Light breeze	E	Light showers			
Gentle breeze	SE	Heavy showers			
Mod. breeze	S	Heavy rain			
Fresh breeze	SW	Lying snow	Fog		
Strong breeze	W	None	None		
Mod. gale	NW	On site	Cloud		
Strong gale		High ground	All day		
Whole gale					
Storm					
Hurricane					

Sheet 1/ 8 [] Maps attached

Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes: e.g. temperature
	Hr 1	3 SW	0	2/8	2	2	—	—	9°C
	Hr 2	3 SW	0	3/9	2	2	—	—	10°C
	Hr 3	3 W	0	2/8	2	2	—	—	11°C
	Hr 4	3 W	0	3/8	2	2	—	—	11°C
	Hr 5								
	Hr 6								
	Hr 7								
	Hr 8								

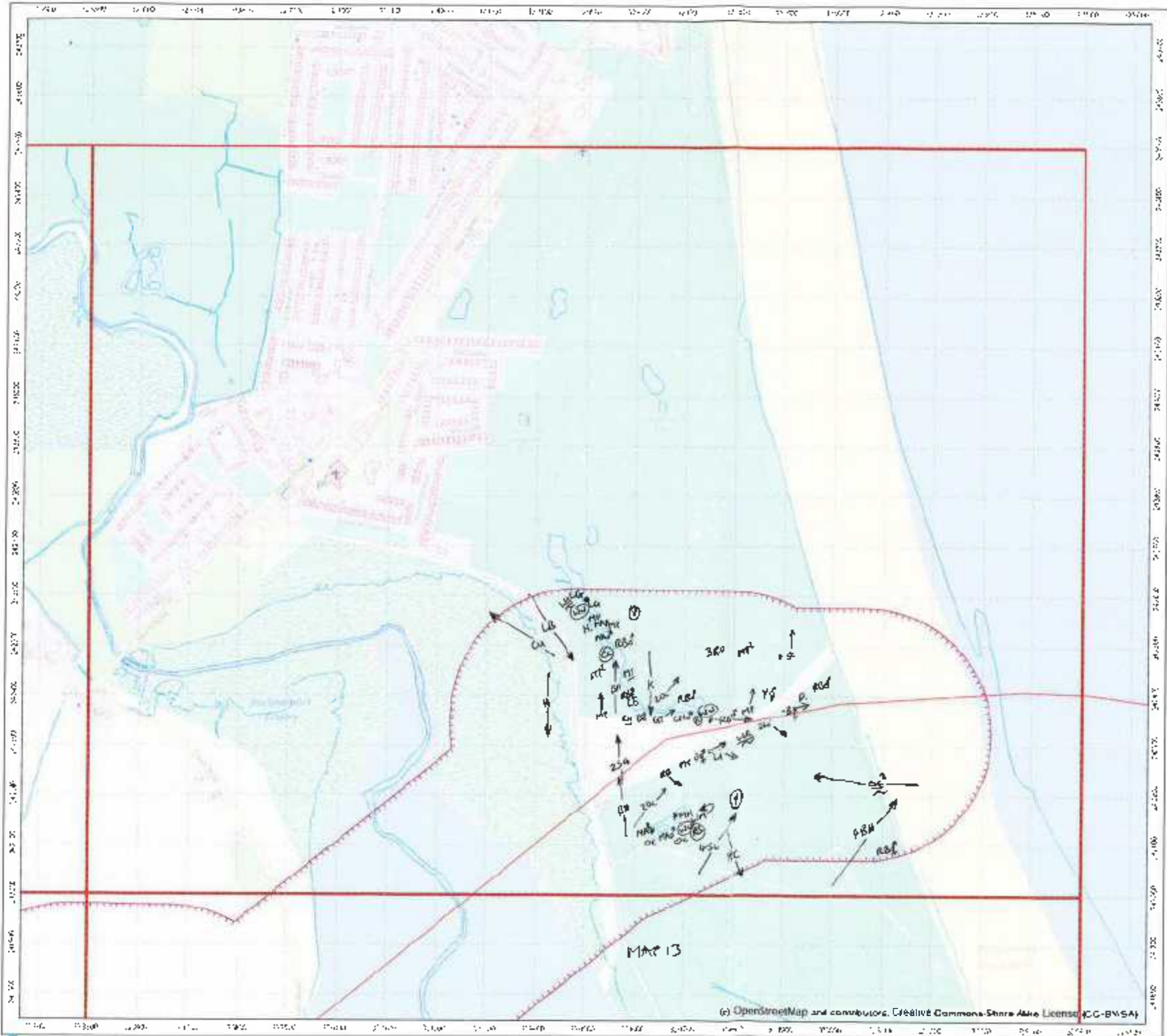
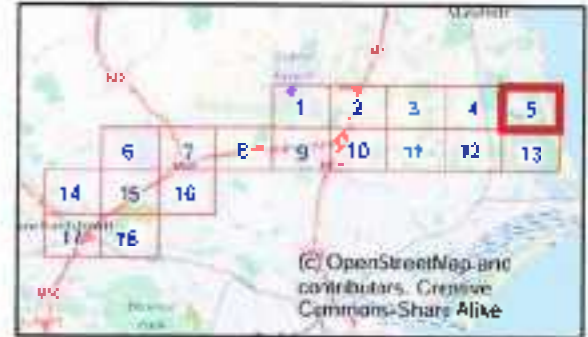
Field Notes:
 Maps attached
 NB* (Now allowed to shut or down 05:20 Due to clients access restrictions)

For office use only: Initial AND date ALL boxes

Logged	Database Entered	Database Validated	GIS Entered	GIS Validated
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Surveyor: N. Veale
 Date: 19/05/2017
 Start time: 08:00 End time: 17:00

*Please attach weather sheet
 Notes:



- Legend
- SBS/AVC survey boundary (250 m buffer of route supplied 20 70405 appended to previous boundary)
 - Pipe route (supplied 20 100405)

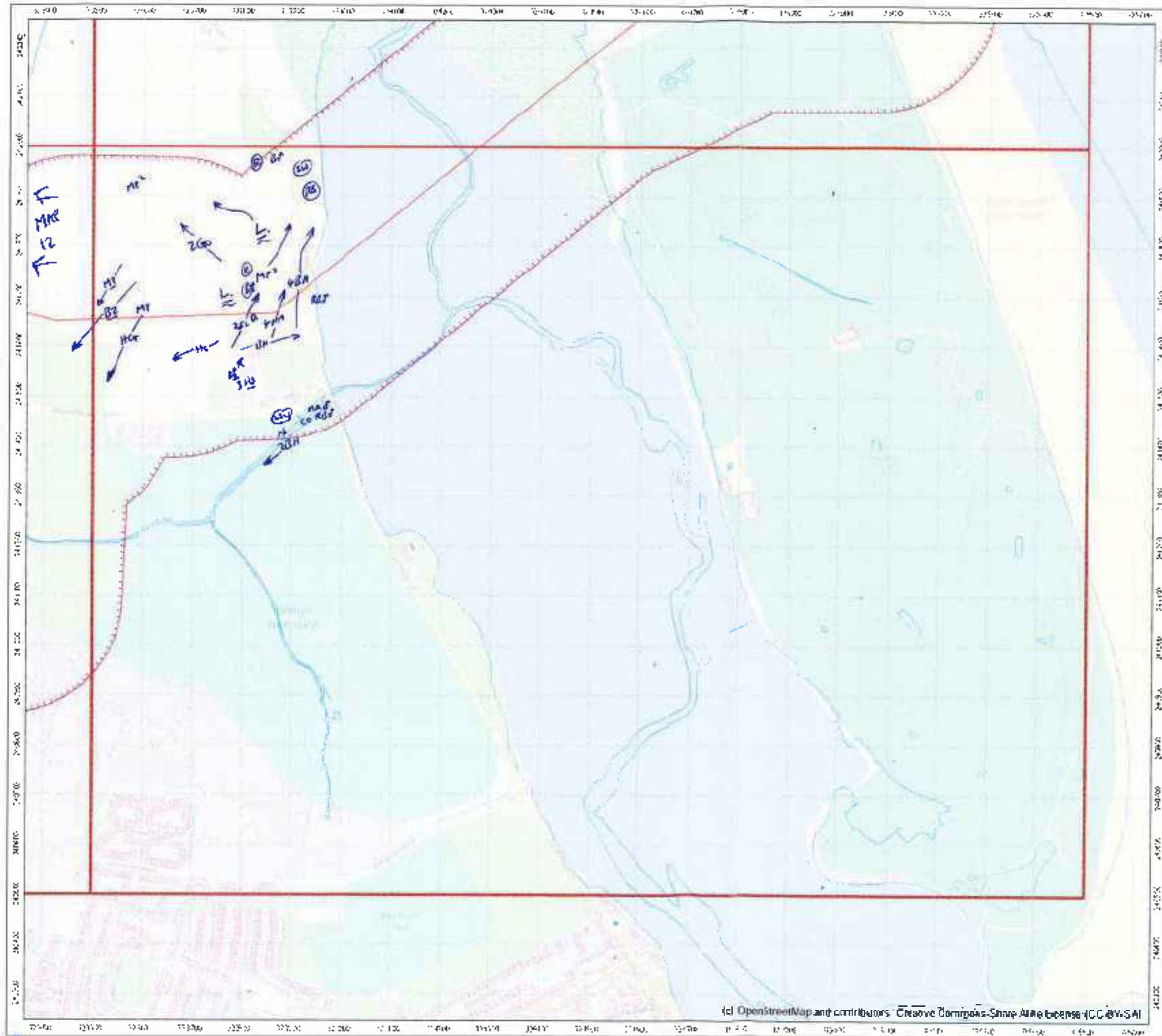
Greater Dublin Drainage
 Breeding/winter bird survey
 Page 5 of 18

Scale: 1:10,000 (ppA)

Date: 20/04/2017 Job No: 5507909 Rev: 1

Drawn: CH Checked: JMAFT Approved: JMAFT

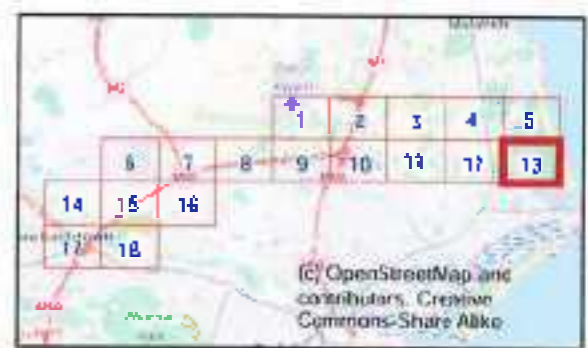
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RPS

Surveyor: Nick Venter
 Date: 14/05/2017
 Start time: 08:00 | End time: 12:00

*Please attach weather sheet
 Notes:
 *Note 2 existing holding territories

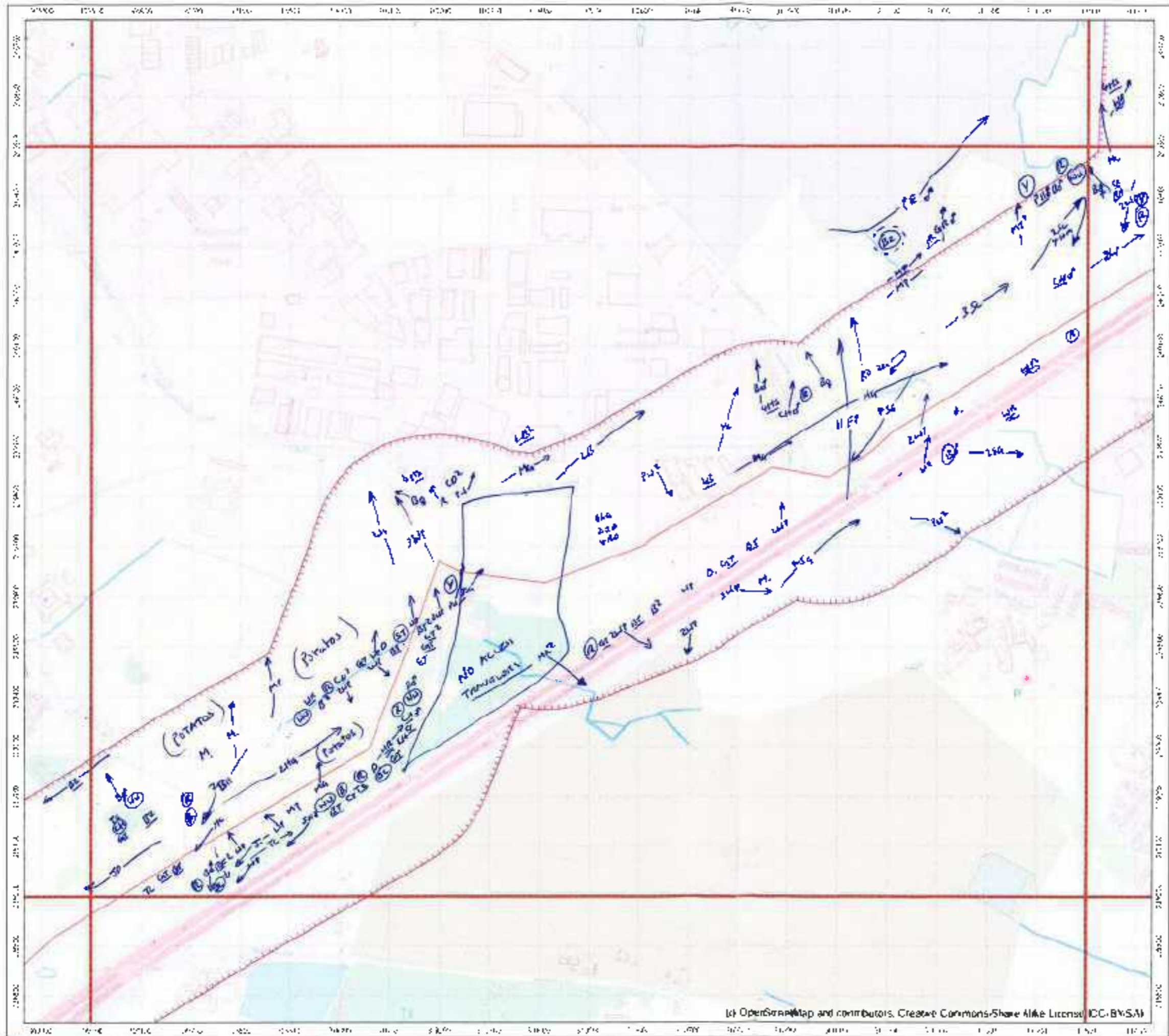


- Legend
- BBS/WWC survey boundary (250 m buffer of route supplied 20170405 appended to previous boundary)
 - Pipe route (supplied 20170405)

Greater Dublin Drainage
 Breeding/winter bird survey
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0 100 m
 Scale 1:250 (BA)
 Date: 04/04/2017 Job No: SEC7909
 Drawn: JH Checked: DRAFT Approved: DRAFT
 RPS Group Ltd

EPS Weather Sheet		Wind Speed			Direction		Rain/Snow		Cloud Cover		Cloud Height		Visibility	
Site	GPD,	Calm	0	>1	N	None	0	In sight	Height of cloud above average height of viewshed	Poor (<1km)	0	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 8 (in notes).		
Date	22/05/2017	Light air	1	1-3	NE	Drizzle/Mist	1	e.g. 3/8	<150m	0	Moderate (1-3km)			
Survey	BBS	Light breeze	2	4-7	E	Light showers	2		150-500m	1	Good (>3km)	2		
Observer	Nick Verr	Gentle breeze	3	8-12	SE	Heavy showers	3		>500m	2				
Start Time	08:00	Mod. breeze	4	13-18	S	Heavy rain	4							
Finish Time	12:00	Fresh breeze	5	19-24	SW	Lying Snow								
Sheet 1/ & [] Maps attached		Strong breeze	6	25-31	W	None	0	None						
		Mod. gale	7	32-38	NW	On site	1	Ground						
		Fresh gale	8	39-46		High ground	2	All day						
		Strong gale	9	47-54										
		Whole gale	10	55-63										
		Storm	11	64-72										
		Hurricane	12	73+										
Weather	Wind speed	Wind direction	Rain	Cloud cover	Cloud height	Visibility	Frost	Snow	Notes (e.g. temperature)					
Hr 1	2	SE	0	4/8	2	2	---	---	13°C					
Hr 2	2	SE	0	5/8	2	2	---	---	14°C					
Hr 3	3	SE	0	5/8	2	2	---	---	15°C					
Hr 4	3	SE	0	7/8	2	2	---	---	18°C					
Hr 5														
Hr 6														
Hr 7														
Hr 8														
Field Notes: Maps attached														
For office use only. NB- Initial AND date ALL boxes.		Logged	Database Entered	Database Validated	GIS Entered	GIS Validated								



RPS

Surveyor: N. Vele

Date: 22/05/2017 + 19/05/2017

Start time: 08:00 End time: 12:00

Please attach weather sheet
Notes:



- Legend
- BES/WVD 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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Scale 1:7,500 xRAJ

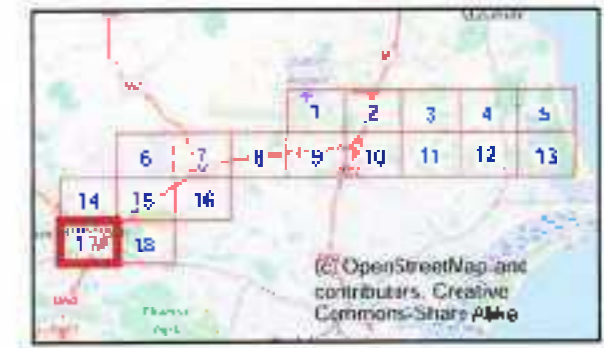
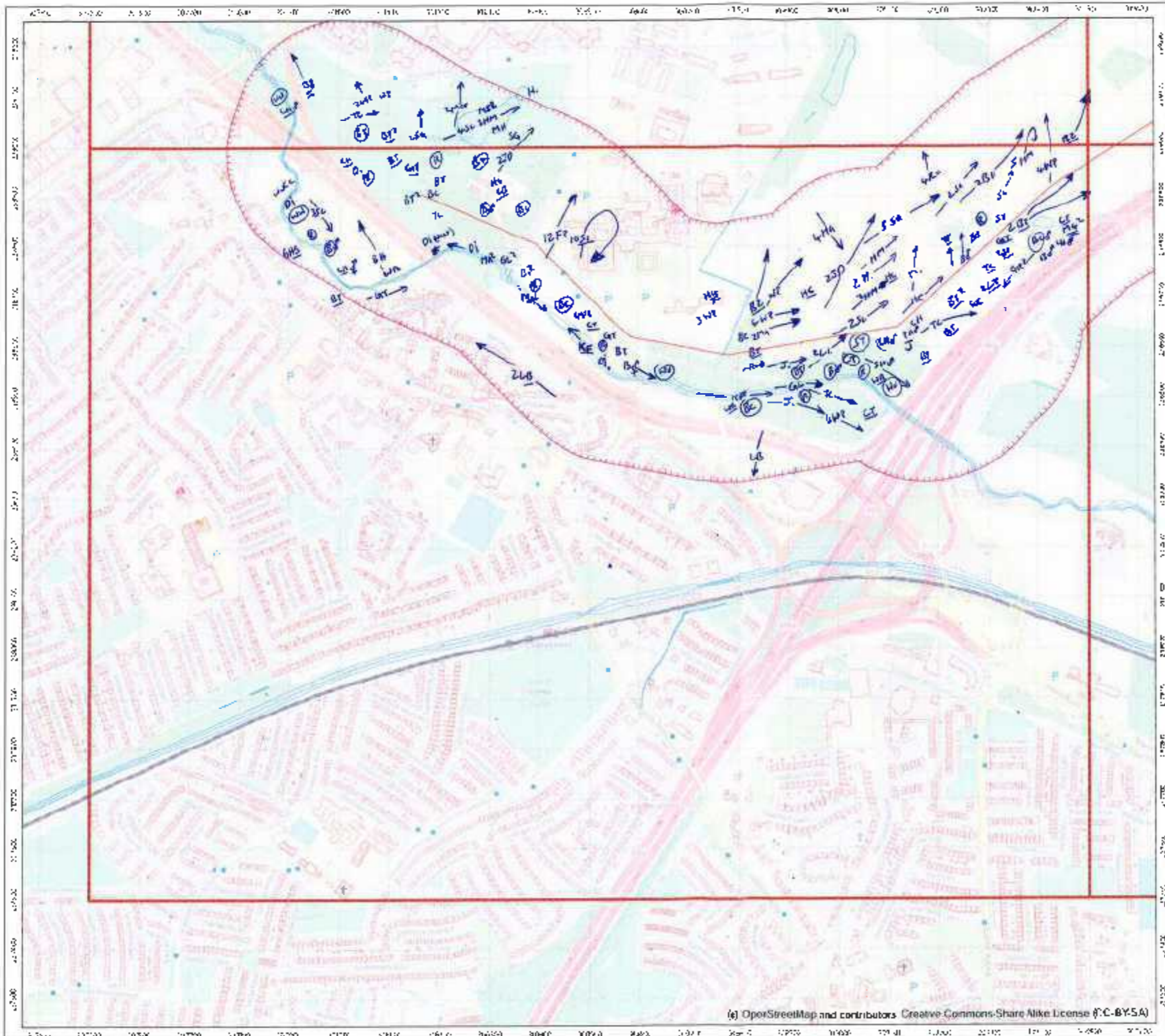
Date: 26/04/2017 of No: SEC2509 Rev: 1

Drawn: JH Checked: DRAFT Approved: DRAFT

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Surveyor: Nick Yeala
 Date: 22/05/2017
 Start time: 08:00 | End time: 12:00

*Please attach weather sheet
 Notes:
Dipper nesting under N3 bridge



- Legend
- gis/vvvc2 survey boundary (250 m buffer of route supplied 20 70405 appended to previous boundary)
 - Pipe route (supplied 20170405)

Greater Dublin Drainage
 Breeding/winter bird survey
 Page 17 of 18

0 100 m

Scale 1:7500 (A4)

Date: 22/05/2017 | Job No: SP.7929 | Km: 1

Drawn: CH | Checked: DJ/FT | Approved: CR/FT

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