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M4 Corridor around Newport

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Wintering Bird Survey

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Wintering Bird Survey

M4 Corridor around Newport (M4CaN)

For

RPS

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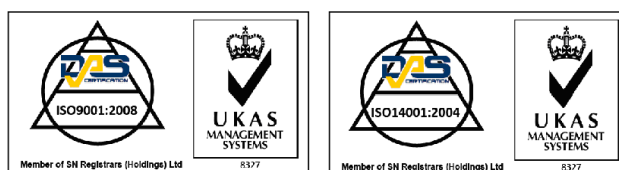
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1. Summary

- 1.1.1** Welsh Government proposes to build a new section of motorway to the south of Newport, Gwent. The proposals, including a range of Complementary Measures, are known as M4 Corridor around Newport (M4CaN) and will hereinafter be referred to as “the Scheme”. The proposed new section of motorway would be located between Castleton to the west and Magor to the east, extending approximately 23 km west to east (see Figure 1).
- 1.1.2** RPS commissioned Thomson Ecology on 12th October 2015 to undertake wintering bird surveys of five transect sections and two vantage points across the proposed new section of motorway. These were to supplement the previous surveys undertaken by Hyder Consulting (UK) Limited over the winter of 2014-15.
- 1.1.3** Hyder Consulting (UK) previously undertook surveys of seven transects. Five of these were within the Gwent Levels and the other two were at the western and eastern ends of the proposed new section of motorway. By agreement with Natural Resources Wales (NRW) this further survey focussed on the Gwent Levels sections of the route. Five wintering bird survey transects were undertaken on a monthly basis between October 2015 and March 2016, inclusive, omitting Hyder’s Sections 1 and 7 and with an amended boundary between Sections 3 and 4. A list of qualifying species was recorded, mapped and counted. This was based on the list previously used by Hyder Consulting (UK) Limited in the 2014-15 surveys. All other species were recorded as incidental records.
- 1.1.4** The vantage point surveys were undertaken at the River Ebbw and River Usk, also on a monthly basis between October 2015 and March 2016, inclusive. Vantage point methodology largely followed Scottish Natural Heritage (SNH) guidelines, with amendments as per the previous surveys undertaken by Hyder Consulting (UK) Limited in 2014-15. Raptors, waders, wildfowl and gulls were recorded in flight and all other species were recorded during hourly point counts.
- 1.1.5** During the transect and vantage point surveys, four Severn Estuary Special Protection Area (SPA) Annex 1 Qualifying Species were recorded; curlew, pintail, redshank and shelduck.
- 1.1.6** During the transect and vantage point surveys, eight Severn Estuary SPA Assemblage Species were recorded; gadwall, wigeon, lapwing, teal, mallard, shoveler, pochard and tufted duck.
- 1.1.7** During the transect and vantage point surveys, eleven species listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) were recorded: pintail, hen harrier, peregrine, black-tailed godwit, green sandpiper, kingfisher, bearded tit, Cetti’s warbler, fieldfare, redwing and brambling. These species are afforded additional protection during the breeding season; wintering populations receive no additional protection.
- 1.1.8** Pond 1 and the nearby reens (ditches) in Section 3 (TATA) supported several species of waterfowl including peak counts for the survey of pintail, shelduck, gadwall, teal and pochard and lower numbers of shoveler, mallard and tufted duck (see Figures 5f, 6f, 7f, 8f, 9f and 10f). The sludge beds in Section 5 also supported waterfowl with a pair of shelduck and peak counts of shoveler and tufted duck (Figures 8c and 9c).

- 1.1.9** During the vantage point surveys, the River Ebbw and River Usk channels were found to be regularly used by commuting gulls (see Figure 3a). Numbers of redshank, teal and wigeon were recorded at the River Ebbw during both vantage point and transect surveys (see Figures 2 and 3b); with peak counts for the survey of 102 redshank (Figure 7b) and 43 wigeon (Figure 10b).
- 1.1.10** During transect and vantage point surveys, a range of species listed on the Birds of Conservation Concern (BoCC) Red and Amber Lists and under Section 42 of the Natural Environment and Rural Communities (NERC) Act 2006 were also recorded and these are detailed in the report. Incidental species recorded included buzzard and sparrowhawk.

2. Introduction

2.1 Development Background

- 2.1.1 Welsh Government proposes to build a new section of motorway to the south of Newport, Gwent. The proposals, including a range of Complementary Measures, are known as M4 Corridor around Newport (M4CaN) and will hereinafter be referred to as “the Scheme”. The proposed new section of motorway would be located between Castleton to the west and Magor to the east extending approximately 23 km west to east (see Figure 1).

2.2 Ecology Background

- 2.2.1 A desk study and wintering bird survey were undertaken for the proposed new section of motorway by Hyder Consulting (UK) Limited between September 2014 and April 2015. The wintering bird surveys included both transect surveys and vantage point surveys at proposed river crossing points at the Rivers Usk and Ebbw.
- 2.2.2 The desk study (Hyder, 2015) identified two Special Areas of Conservation (SAC) and one Special Protection Area (SPA), Ramsar site and Important Bird Area (IBA) within 5 km of the proposed new section of motorway, and 12 Sites of Special Scientific Interest (SSSIs) within 2 km of the proposed new section of motorway. These included:
- Severn Estuary SPA, Ramsar Site, IBA, and SSSI;
 - Gwent Levels SSSIs: St Brides SSSI, Nash and Gold Cliff SSSI, Whitson SSSI, Rumney and Peterstone SSSI, Redwick and Llandevenuey SSSI, and Magor and Undy SSSI;
 - River Usk SSSI;
 - Newport Wetland SSSI;
 - Magor Marsh SSSI;
 - Rectory Meadow SSSI; and
 - Rogiet and Penhow Woodlands SSSI.
- 2.2.3 The Hyder transect surveys recorded a range of over-wintering bird species including a number of qualifying species for the adjacent Severn Estuary Special Protection Area (SPA). Severn Estuary SPA Annex 1 qualifying species recorded included curlew (*Numenius arquata*), pintail (*Anas acuta*), redshank (*Tringa tetanus*), and shelduck (*Tadorna tadorna*). Eight of the species listed on the Severn Estuary SPA assemblage qualification were also present; these included gadwall (*Anas strepera*), wigeon (*Anas penelope*), lapwing (*Vanellus vanellus*), teal (*Anas crecca*), mallard (*Anas platyrhynchos*), shoveler (*Anas clypeata*), pochard (*Aythya farina*) and tufted duck (*Aythya fuligula*).
- 2.2.4 The results of the Hyder vantage point surveys showed that the River Ebbw and River Usk were used by a variety of species. Severn Estuary SPA Annex 1 qualifying species recorded included ringed plover (*Charadrius hiaticula*), curlew, dunlin (*Calidris alpina*), redshank, and shelduck. Five of the species listed on the Severn Estuary SPA Assemblage qualification were also recorded, these included gadwall, wigeon, lapwing, teal, and mallard.

2.2.5 A summary of the conservation status and legal protection of these species is given in Annex A.

2.3 The Brief and Objectives

2.3.1 RPS commissioned Thomson Ecology on 12th October 2015 to undertake wintering bird surveys of selected transects and vantage points previously surveyed by Hyder Consulting (UK) Limited in 2014-15. Hyder Consulting (UK) previously undertook surveys of seven transects. Five of these were within the Gwent Levels and the other two were at the western and eastern ends of the proposed new section of motorway. By agreement with Natural Resources Wales (NRW) this further survey focussed on the Gwent Levels sections of the route.

2.3.2 The brief included the following:

- wintering bird transect surveys on six occasions at monthly intervals from October 2015 to March 2016, inclusive;
- wintering bird vantage point surveys at two locations, where the proposed motorway route crosses the River Usk and the River Ebbw, on six occasions at monthly intervals from October 2015 to March 2016, inclusive;
- a report on the survey giving the methods and results of the survey; and
- a digitised map of the survey results.

2.3.3 For each of the six visits, transects and vantage points within the survey area were to be covered by a team of five surveyors over a two day period. However due to access restrictions an additional person was required to undertake the Cuckoo Bridge Road transects for Visits 5 and 6 in February and March 2016 respectively.

2.4 Limitations

2.4.1 For all transect survey visits access could not be arranged to the land parcels 215a, 215h, 215p, 215j or to two small areas of Section 5; one of these was overgrown with scrub and another had an inaccessible track. These access restrictions are shown in Figure 1.

2.4.2 On some visits certain transect sections or parts of sections were inaccessible. These were:

- Visit 4 (January 2016): Section 5 at Cuckoo Bridge Road (see Figures 8b-c);
- Visit 5 (February 2016): Section 3 (TATA) around Pond 1 and the reens (drains), (see Figure 9e-f); and
- Visit 6 (March 2016): parts of Sections 5 and 6 (See Figures 10a-c).

2.4.3 On Visit 5 (February 2016) part of Section 5 at the Cuckoo Bridge Road had to be completed the day after the rest of the transect surveys (18th February as opposed to 17th February) due to access restrictions. This might have led to some double-counting of birds.

2.4.4 It rained on five out of six transect survey visits and two out of six vantage point survey visits. This should not have affected waterfowl counts but may have affected raptor and passerine counts. Weather is not as important a factor in wintering bird surveys as in breeding bird surveys

as mapping of singing birds is not required, so this should not have significantly affected the results of the survey.

- 2.4.5** Where possible, six point counts were carried out during vantage point surveys, however on some visits fewer were undertaken. This is not felt to be a major limitation. See Section 3.2.5 of this report and Annex E for more details.

2.5 Surveyors

- 2.5.1** The surveyors were Janine Burnham MRes BSc (Hons), Justin Groves BSc (Hons) GradCIEEM, Stephen Hewitt BSc (Hons), Crona McMonagle MSc BA (International), Michal Ostalowski MSc (Hons) BSc (Hons), Emily Power MSc BSc (Hons) GradCIEEM, Emily Wallace MSc BSc (Hons) GradCIEEM.
- 2.5.2** All surveyors are competent bird surveyors with experience of carrying out wintering bird surveys in the UK.

3. Methodology

3.1 Transect Surveys

- 3.1.1** Five wintering bird survey transects were undertaken on six occasions between October 2015 and March 2016, inclusive. Surveyors noted the bird species present within the footprint of the proposed new section of motorway and up to 500 m from the boundary of the footprint (see Figure 2 and Figures 5 to 10). Surveys were undertaken on the same day by utilising a high number of surveyors (a minimum of five people) to allow for consistency and to limit double counting. Where possible, each survey visit took place during a six-hour window centred on high tide (i.e. three hours either side of high water). The transect surveys times, tide times and weather conditions recorded on each survey visit are presented in Table 1 below.

Table 1: Transect Survey Times, Tide Times and Weather

Visit No.	Month	Day	Date	Transect Survey Times	High Tide	Weather Conditions
1	Oct 2015	Thu	22/10/15	11:35 - 17:35	14:35	Rain, 11°C, light breeze.
2	Nov 2015	Tue	17/11/15	07:30 - 13:30	10:05	Rain, 14°C, light wind.
3	Dec 2015	Thu	17/12/15	07:45 - 13:45	10:45	Rain, 13°C, light breeze.
4	Jan 2016	Mon	18/01/16	10:24 - 16:24	13:24	Rain, 6°C, light breeze.
5	Feb 2016	Wed	17/02/16	11:11 - 17:11	14:11	Rain, 6°C, light breeze.
6	Mar 2016	Wed	16/03/15	09:26 - 15:26	12:26	Dry, 8°C, light breeze.

- 3.1.2** As far as possible, transects followed those undertaken by Hyder Consulting (UK) Limited in 2014-15 with the survey area split into seven sections. Sections 1 and 7 were excluded from the brief as RPS had agreed with NRW that repeat surveys were unnecessary in these areas as the focus was on the Gwent Levels section of the route. Due to access and health and safety issues, Sections 3 and 4 were altered; being split into TATA Steel and non-TATA Steel owned land. These sections are named Section 3 (TATA) and Section 4 (non-TATA) throughout this report. All survey sections can be seen on Figure 1.
- 3.1.3** The transects were surveyed both by walking them and viewing open areas from set locations. The surveyors prioritised viewing as many fields and open areas as possible to locate any groups of wildfowl and waders that were present. All surveyors walked their transects from west to east to avoid double-counting birds.

3.1.4 During each survey the following target bird species were recorded and counted and their activity noted:

- species which form the qualifying features of the Severn Estuary SPA and Ramsar site;
- species afforded protection under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended);
- waterfowl species which form part of the qualifying features of the SSSIs within 2 km of the proposed new section of motorway;
- birds listed as priority species for Wales under Section 42 of the Natural Environment and Rural Communities (NERC) Act 2006; and
- 'Red list' and 'Amber list' bird species within the RSPB 'Birds of Conservation Concern'.

3.1.5 This target species list is provided in Annex A. The list was updated in December 2015 when the updated Birds of Conservation Concern (BoCC) was published and twenty species were added to the red list (Eaton *et al.* 2015).

3.1.6 A list was also compiled of all other bird species recorded but these species were not counted or mapped. These incidental records are provided in Annex B.

3.2 Vantage Point Surveys

3.2.1 The proposed new section of motorway would involve the construction of road bridges at the River Ebbw and River Usk. As in the previous surveys undertaken by Hyder Consulting (UK) Limited, monthly vantage point surveys were carried out at these locations. These surveys were to locate any large groups of feeding or roosting waterfowl and to identify any well-used bird flyways along the rivers that could potentially be disrupted by construction of the proposed bridges.

3.2.2 The vantage point surveys were undertaken on six occasions; once a month between October 2015 and March 2016 inclusive. The methodology largely followed that undertaken previously by Hyder Consulting (UK) Limited. This is a slight variation on standard vantage point survey methodology recommended by Scottish Natural Heritage (SNH) for use at wind farm sites (SNH 2014).

3.2.3 The surveys were undertaken across a full tidal cycle (i.e. six hours between high water to low water or vice versa - alternated between months where possible). The vantage point survey dates, tide times and weather conditions are provided in Table 2 below.

Table 2: Vantage Point Survey Times, Tide Times and Weather (Times in **bold** are high tides)

Visit No.	Month	Day	Date	Survey Times	Tide State	Tide Times	Weather Conditions
1	Oct 2015	Fri	23/10/15	9:45 - 16:15	Low to High	09:45 - 16:05	Dry, 10°C, light breeze.
2	Nov 2015	Mon	16/11/15	09:30 - 15:58	High to Low	9:30 - 15:50	Rain, 12°C, light wind.
3	Dec 2015	Wed	16/12/15	10:00 - 16:28	High to Low	10:00 - 16:28	Rain, 7°C, light breeze.
4	Jan 2016	Tue	19/01/16	08:17 - 14:45	Low to High	8:17 - 14:39	Dry, 1°C, calm.
5	Feb 2016	Thu	18/02/16	09:23 - 15:51	Low to High	9:23 - 15:29	Dry, 4°C, calm.
6	Mar 2016	Tue	15/03/16	11:24 - 17:52	High to Low	11:24 - 17:52	Dry, 6°C, light breeze.

3.2.4 On each survey visit, the vantage points were watched for two periods of three hours, with half an hour break in between (i.e. six hours per survey visit). Although the previous survey by Hyder Consulting (UK) Limited used the same target species list (see Annex A) for vantage point surveys as for transect surveys this was not deemed practical as it would mean trying to identify and map small passerines in flight at a considerable distance. Therefore for vantage point flight recording only raptors, wildfowl, waders and gulls were recorded. Flight-paths of these target species were mapped and the average flight heights and durations were recorded.

3.2.5 Ideally, once an hour during each vantage point survey visit, a point count was undertaken recording all other species and any birds not in flight. However the point counts were omitted during Visit 1 to the River Usk vantage point in October 2015 and only five were undertaken at the Rivers Usk and Ebbw on Visit 3 in December 2015 and Visit 5 in February 2016. This is not a major limitation as the point counts were intended to record mainly incidental records of species of secondary importance. With the exception of Visit 1 to the River Usk (in October 2015), when no point counts were undertaken and therefore some non-target species might have been missed, all species seen or heard during vantage point surveys were recorded during either flight recording or point counts.

3.2.6 During vantage point Visit 4 in January 2016 and Visit 6 in March 2016 all non-target species and perched birds were recorded systematically throughout the first three hours of survey (i.e. Point Count 1) and again throughout the second three hours of survey (i.e. Point Count 2). This produced more complete species lists than six separate point counts and more closely followed

standard vantage point methodology whereby non-target species and perched birds are recorded throughout the survey at five minute intervals (SNH, 2014).

- 3.2.7** As visibility from the vantage points was not comprehensive, surveyors spent approximately 45 minutes to an hour per day walking a short transect either side of the vantage point locations. Again this followed the methodology previously used by Hyder Consulting (UK) Limited.
- 3.2.8** As in the previous survey by Hyder Consulting (UK) Limited, flight-paths of gulls were only recorded along the river corridors. This was because of very high gull numbers and flight activity around the landfill site at the River Ebbw.

4. Results

4.1.1 A summary of all transect survey results is presented in Figure 2 and Annex C. The transect survey results for the six visits from October 2015 to March 2016 are shown on Figures 5 to 10. The highest peak monthly counts for each species in each transect section are given in Table 4 below.

4.1.2 Vantage point survey results for the River Ebbw are presented in Figures 3 and 11 and Annex D. Vantage point survey results for the River Usk are presented in Figures 4 and 12 and Annex D.

4.2 Severn Estuary SPA Annex 1 Qualifying Species

4.2.1 The Severn Estuary qualifies as an SPA under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 1% of the biogeographical populations of the following regularly-occurring migratory species during the winter period and on passage; ringed plover (on passage), curlew (over winter), dunlin (over winter), pintail (over winter), redshank (over winter), and shelduck (over winter). Four of these species were recorded during transect and vantage point surveys as described below.

Curlew (Numenius arquata)

4.2.2 During the transect surveys, small numbers of curlew were recorded. The species was recorded once in Section 1 (Visit 2, November 2015), three times in Section 5 (Visits 1, 4 and 5, October 2015, and January and February 2016), and twice in Section 6 (Visits 2 and 6, November 2015 and March 2016). The peak count was two birds in Section 6 on Visit 2 in November 2015 (Figure 6b).

4.2.3 During the vantage point surveys at the River Usk small numbers of curlew were recorded flying through on all of the six visits. Numbers did not exceed two birds on any visit. Curlew was not recorded in flight at the River Ebbw but one individual was recorded during a point count on Visit 1 in October 2015. These numbers were lower than in the previous survey, with Hyder Consulting (UK) Limited recording a peak count of 125 birds flying over at the River Ebbw in February 2015 (Hyder, 2015).

Pintail (Anas acuta)

4.2.4 During the transect surveys pintail was recorded on Pond 1 in Section 3 (TATA) on Visit 3 in December 2015 and Visit 6 in March 2016. One male was present in December and three males and two females were recorded in March (Figures 7f and 10f). Pintail was also recorded at this location in the previous survey by Hyder Consulting (UK) Limited (Hyder, 2015).

4.2.5 Pintail was not recorded during the vantage point surveys at the River Ebbw or River Usk.

Redshank (Tringa totanus)

- 4.2.6 During the transect surveys, redshank was recorded mainly in Section 5 along the banks of the River Ebbw (Figure 2). The peak count at this location was 102 on Visit 3 in December 2015 (Figure 7b).
- 4.2.7 During the vantage point surveys, redshank was recorded flying through at both the River Usk and River Ebbw. The peak count of birds in flight was 17 at the River Usk on Visit 1 in October 2015. Flight-paths can be seen in Figures 3b and 4b. Redshank was also recorded using the river channels at the Ebbw and Usk during point counts, with a peak count of at least 100 at the River Ebbw on Visits 2 and 3 in November and December 2015. These counts are lower than those recorded in the previous survey when there was a peak count of 690 at the River Ebbw in December 2014 (Hyder, 2015).

Shelduck (Tadorna tadorna)

- 4.2.8 During the transect surveys, shelduck was recorded mainly on Pond 1 in Section 3 (TATA). There were single birds here on Visits 2 and 3 in November and December 2015 and a pair here on Visit 6 in March 2016 (Figures 6f, 7f and 10f). A pair of birds was also recorded at the sludge bed in Section 5 on Visit 5 in February 2016 (Figure 9c).
- 4.2.9 During the vantage point surveys, shelduck was recorded once on Visit 5 in February 2016 when two birds were in flight at the River Ebbw (Figure 11e).
- 4.2.10 These numbers were slightly lower than those in the previous survey, when peak counts were four birds in flight at the River Usk in March 2015 and thirteen birds during transect surveys in Section 5 (Hyder, 2015).

4.3 Severn Estuary SPA Assemblage Species

- 4.3.1 The Severn Estuary SPA also qualifies under article 4.2 of the Directive (79/409/EEC) by regularly supporting over 20,000 waterbirds in any season. In the non-breeding season, the area regularly supports 93,986 individual water birds (five year peak mean 1991/92-1995/6), including: gadwall, wigeon, lapwing, teal, mallard, shoveler, pochard, tufted duck, grey plover (*Pluvialis squatarola*), white-fronted goose (*Anser albifrons*) and whimbrel (*Numenius phaeopus*). Eight of these species were recorded during the survey as described below.

Gadwall (Anas strepera)

- 4.3.2 During the transect surveys gadwall was recorded in Section 3 (TATA) on Visits 1, 2, 3 and 6 in October, November and December 2015 and March 2016. There were 17 birds in October, 30 in November, 20 in December and 16 in March. On each of these occasions the birds were flushed from Pond 1 and the wide reed (drain) to the east of it (Figures 5f, 6f, 7f and 10f).
- 4.3.3 These figures are comparable with a peak count of 33 gadwall found in the same section during the previous transect survey in October 2014 (Hyder, 2015).

- 4.3.4 During the vantage point surveys at the Rivers Usk and Ebbw gadwall was not recorded. Only a single gadwall was recorded at the vantage points in the previous survey (Hyder, 2015).

Wigeon (Anas penelope)

- 4.3.5 During the transect surveys wigeon was recorded in Section 5 with counts of 27 on Visit 3 in December 2015, seven on Visit 4 in January 2016 and a peak of 43 at the River Ebbw channel on Visit 6 in March 2016 (Figures 7b, 8c and 10b). Wigeon was also recorded during transect surveys in Section 5 by Hyder Consulting (UK) Limited, with a peak count of 25 birds recorded in Section 3 (TATA) (Hyder, 2015).

- 4.3.6 During the vantage point surveys at the River Usk and River Ebbw, wigeon was recorded only on Visit 2 in November 2015 at the River Ebbw during a point count, when three birds were on the river channel. In the previous survey single birds were also recorded in flight at these locations (Hyder, 2015).

Lapwing (Vanellus vanellus)

- 4.3.7 During the transect surveys lapwing was recorded in Sections 2 and 5 with a peak of 95 birds in Section 5 on Visit 3 in December 2015 (Figure 7b). This was a similar count to the peak of 100 birds recorded during the previous transect survey (Hyder, 2015).

- 4.3.8 Lapwing was not recorded during the vantage point surveys at the River Usk or River Ebbw. This differed from the previous survey when the peak count was up to 100 birds flying over and foraging at the River Usk (Hyder, 2015).

Teal (Anas crecca)

- 4.3.9 During the transect surveys teal was recorded in Section 3 (TATA) on all six survey visits with a peak of 111 birds on Visit 4 in January 2016 (Figure 8f). Birds were often flushed from the large reens in Section 3 (TATA) section (Hyder, 2015). The peak count was similar to the peak count of 102 here in the previous survey (Hyder, 2015).

- 4.3.10 Teal was also recorded in Section 2 (Visit 5 in February 2016), Section 4 (Non-TATA) (Visit 1 in October 2015), and Section 5 (Visits 5 and 6, February and March 2016).

- 4.3.11 During the vantage point surveys small numbers of teal were recorded in flight at both the River Usk and River Ebbw, but most were flushed from the bank of the River Ebbw during point counts. The maximum count at the River Ebbw was 75. This is similar to the peak count of 79 here in the previous survey (Hyder, 2015).

Mallard (Anas platyrhynchos)

- 4.3.12 During the transect surveys mallard was recorded on all six survey visits. The peak count was 107 birds in Section 6 on Visit 2 in November 2015 (Figures 6a and 6b). A lower peak mallard count of 60 birds was also in Section 6 in February 2015 during the previous survey (Hyder, 2015).

- 4.3.13** During the vantage point surveys mallard was recorded at both the River Ebbw and River Usk vantage points on all six survey visits (Figures 3 and 4). The peak count at the River Usk was 33 birds during a point count on Visit 4 in January 2016 and the peak count at the River Ebbw was at least 30 birds during a point count on Visit 3 in December 2015. These were slightly lower counts than the peak of 59 birds at the River Ebbw in December 2014 (Hyder, 2015).

Shoveler (Anas clypeata)

- 4.3.14** During the transect surveys small numbers of shoveler were regularly recorded in Section 3 (TATA) at Pond 1 and the adjacent reens, with a peak count of seven on Visit 2 in November 2015 (Figure 6f). These numbers are similar to those recorded in this section in the previous survey when six was the peak count here (Hyder, 2015). Shoveler was also recorded at the sludge bed in Section 5 on Visits 4 and 5 in January and February 2016 when there were 16 birds present on both occasions (Figures 8c and 9c).

- 4.3.15** As in the previous survey (Hyder, 2015), shoveler was not recorded during the vantage point surveys at the Rivers Usk or Ebbw.

Pochard (Aythya farina)

- 4.3.16** During the transect surveys three pochard flew over Section 3 (TATA) on Visit 5 in February 2016 (Figure 9d) and five were on Pond 1 here on Visit 6 in March 2016 (Figure 10f). Twenty-eight were recorded in the same section in January 2015 during the previous survey (Hyder, 2015).

- 4.3.17** As in the previous survey (Hyder, 2015), pochard was not recorded during the vantage point surveys at the Rivers Usk or Ebbw.

Tufted duck (Aythya fuligula)

- 4.3.18** During the transect surveys tufted duck was recorded on Visits 1, 4, 5 and 6 in October 2015 and January, February and March 2016 in Section 3 (TATA), Section 4 (non-TATA), and Section 5 (Figure 2). The peak count was ten birds in Section 5 on Visit 5 in February 2016 (Figure 9c). In Section 3 (TATA) five birds were on Pond 1 on Visit 6 in March 2016 (Figure 10f).

- 4.3.19** As in the previous survey (Hyder, 2015), pochard was not recorded during the vantage point surveys at the Rivers Usk or Ebbw.

4.4 Schedule 1 Species

- 4.4.1** Eleven species listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) were recorded during the surveys. These species are given additional protection during the breeding season only and wintering populations receive no additional protection. Table 3 below provides a summary of these records.

Table 3: Schedule 1 species recorded during the 2015/16 Wintering Bird Survey

Common Name	Scientific Name	Description
Pintail	<i>Anas acuta</i>	Recorded in Section 3 (TATA) during the transect surveys. See Figures 7f and 10f and report sections 4.2.4 and 4.2.5 above.
Hen harrier	<i>Circus cyaneus</i>	Single "ringtail" (female or immature male) birds were recorded in Section 3 (TATA) and Section 4 (non-TATA) sections during the transect surveys on Visit 3 in December 2015 and Visit 4 in January 2016. See Figures 7d and 8d.
Peregrine	<i>Falco peregrinus</i>	During transect surveys single birds were recorded in Section 2 on Visit 1 in October 2015 (Figure 5f) and Section 5 on Visit 2 in November 2015 (Figure 6d) and Visit 5 in February 2016 (Figure 9b). During vantage point surveys one was recorded at the River Ebbw on Visit 1 in October 2015 (Figure 11a).
Green sandpiper	<i>Tringa ochropus</i>	Recorded at the River Ebbw vantage point. See Figure 11f and report section 4.5.7 and 4.5.8 below.
Black-tailed godwit	<i>Limosa limosa</i>	Recorded at the River Ebbw vantage point. See Figure 11f and report section 4.5.9 below.
Kingfisher	<i>Alcedo atthis</i>	During transect surveys one was recorded in Section 4 (non-TATA) on Visit 3 in December 2015 (Figure 7e) and one in Section 5 on Visit 5 in February 2016 (Figure 9b). During vantage point survey point counts one was at the River Ebbw on Visit 3 in December 2015.
Bearded tit	<i>Panurus biarmicus</i>	During transect surveys three birds were recorded in Section 2 on Visit 1 in October 2015 (Figure 5g).
Cetti's warbler	<i>Cettia cetti</i>	During the transect surveys Cetti's warbler was recorded in all sections with a peak count of 12 singing males in the reedbeds in Section 3 (TATA) on Visit 6 in March 2016 (Figures 10d and 10e). During the vantage point survey point counts single Cetti's warblers were recorded at the River Ebbw vantage point on Visit 1 in October 2015 and Visits 4 and 5 January and March 2016.

Common Name	Scientific Name	Description
Fieldfare	<i>Turdus pilaris</i>	Fieldfare was recorded in all transect survey sections with a peak count of 140 birds in Section 2 on Visit 2 in November 2015 (Figure 6g).
Redwing	<i>Turdus iliacus</i>	Redwing was recorded in all transect survey sections with a peak count of 195 in Section 5 on Visit 5 in February 2016 (Figure 9c).
Brambling	<i>Fringilla montifringilla</i>	One brambling was recorded in Section 4 (non-TATA) on Visit 2 in November 2016 (Figure 6d).

4.5 Other Target List Waterfowl

Mute swan (Cygnus olor)

4.5.1 During the transect surveys, mute swan was recorded on all survey visits with a peak count of 84 swans in Section 6 on Visit 5 in February 2016 (Figure 9b). This was similar to the peak count of 86 in the same section in January 2015 (Hyder, 2015).

4.5.2 During the vantage point surveys at the River Ebbw, mute swan was recorded on every survey visit with a peak of 43 birds during a point count on Visit 2 in November 2015. This peak count was lower than that recorded in the previous survey (Hyder, 2015). Mute swan was not recorded at the River Usk vantage point. Hyder Consulting (UK) Limited recorded a peak count of two mute swans at the River Usk during the previous survey (Hyder, 2015).

Greylag goose (Anser anser)

4.5.3 During the transect surveys a peak count of 80 greylag geese flew over Section 3 (TATA) on Visit 1 in October 2015 (Figure 5f). Thirteen birds were at Section 4 (non-TATA) on Visit 2 in November 2015 (Figure 6e). These counts were higher than the peak counts in the previous survey (Hyder, 2015).

4.5.4 As in the previous survey (Hyder, 2015), greylag goose was not recorded during the vantage point surveys at the Rivers Usk and Ebbw.

Oystercatcher (Haematopus ostralegus)

4.5.5 During the transect surveys oystercatcher was recorded in Section 5 on Visit 6 in March 2016, with four birds counted at and near the River Ebbw (Figure 10b).

4.5.6 During the vantage point surveys, two birds flew over the River Ebbw on Visit 6 in March 2016 at a height of less than 20m (Figure 11f). These findings were near identical to those of the last report when the peak count was also four birds during point count in Section 5 along the River Ebbw (Hyder, 2015).

Green sandpiper (Tringa ochropus)

- 4.5.7 A total of two were recorded in 2014 during the previous transect surveys (Hyder, 2015). None were recorded during the 2015/16 transect surveys.
- 4.5.8 During the vantage point surveys at the River Ebbw, one green sandpiper was recorded on Visit 6 in March 2016. It was in flight at a height of less than 20 m (Figure 11f).

Black-tailed godwit (Limosa limosa)

- 4.5.9 During the vantage point surveys at the River Ebbw black-tailed godwit was recorded once when seven birds flew over on Visit 6 in March 2016 at a height of approximately 20 m (Figure 11f). This species was not recorded at the River Usk vantage point or during the transect surveys. Only one black-tailed godwit was recorded during the previous vantage point survey by Hyder Consulting (UK) Limited (Hyder, 2015).

Snipe (Gallinago gallinago)

- 4.5.10 During the transect surveys snipe was recorded on all survey visits with a peak count of ten in Section 6 on Visit 3 in December 2015 (Figure 10b). At the River Ebbw vantage point, two snipe flew over on Visit 1 in October 2015 (Figure 11a) and one flew over on Visit 3 in December 2015 (Figure 11c). These counts were lower than in the previous survey when the peak count was 50 birds during a transect survey in Section 4 (Hyder, 2015).

Woodcock (Scolopax rusticola)

- 4.5.11 Two woodcock were recorded in Section 3 (TATA) during the transect survey on Visit 3 in December 2015 (Figure 7e).

Gulls (Laridae)

- 4.5.12 Four gull species were recorded during the transect surveys and vantage point surveys. These were herring gull (*Larus argentatus*), black-headed gull (*Croicocephalus ridibundus*), lesser black-backed gull (*Larus fuscus*) and great black-backed gull (*Larus marinus*). There were large numbers of gulls associated with the landfill site on the east bank of the River Ebbw. As stated above (report section 3.2.8), during the vantage point survey, gulls were only recorded in flight along the river channels.
- 4.5.13 The peak herring gull count in flight during the vantage point surveys was approximately 300 birds at a height of approximately 15 m at the River Ebbw on Visit 3 in December 2015 (Figure 11c). During point counts the peak count was over 400 birds at the River Ebbw on Visit 1 in October 2015. On the transect surveys, the peak count was 208 birds in Section 2 also on Visit 3 in December 2015 (Figures 7f and 7g). These counts are very similar to peak counts in the previous survey (Hyder, 2015).
- 4.5.14 The peak black-headed gull count was 73 birds in flight at the River Usk on Visit 2 in November 2015 and the peak count at the River Ebbw was 300 birds during a point count on Visit 3 in

December 2015. During the transect surveys the peak count was 300 birds in Section 2 on Visit 3 in December 2015 (Figure 7f).

4.5.15 The peak lesser black-backed gull count in flight during the vantage point surveys was six birds at the River Usk on Visit 3 in December 2015 and visit 6 in March 2016 (Figure 12c and 12f). During point counts the peak was 52 birds at the River Usk, also on Visit 6 in March 2016. Four lesser black-backed gulls were recorded at the River Ebbw during a point count on Visit 1 in October 2015. These counts are considerably lower than the peaks of 150 birds flying along the River Ebbw channel during the previous surveys (Hyder, 2015).

4.5.16 The peak great black-backed gull count during the vantage point surveys at the River Usk was four during a point count on Visit 6 in March 2016. The peak at the River Ebbw was 20 birds during a point count on Visit 1 in October 2015. During the transect surveys, only one great black-backed gull was recorded; in Section 2 in October 2016 (Figure 5g).

4.6 Non-Target List Waterfowl

Canada goose (Branta canadensis)

4.6.1 During the transect surveys, a peak count of 46 Canada geese flew over Section 6 on Visit 2 in November 2015 (see Annex B).

4.6.2 During the vantage point surveys at the Ebbw River, the peak count was 45 flying over on Visit 3 in December 2015 at a height of less than 20 m (Figure 11c). There were also 23 at the Ebbw River during a point count in January 2016. Canada goose was not recorded at the River Usk vantage point.

4.6.3 These peak counts were higher than the peak counts in the previous survey (Hyder, 2015).

Water rail (Rallus aquaticus)

4.6.4 Water rail was recorded during the transect surveys in Section 4 (non-TATA) on Visit 2 in November 2015 and in Section 3 (TATA) on Visit 6 in March 2016 (Annex B); with single birds recorded on both occasions. Water rail was not recorded during the vantage point surveys.

4.6.5 These numbers are lower than during the previous surveys when a peak count of three birds was recorded on a transect survey in Section 3 (Hyder, 2015).

Little egret (Egretta garzetta)

- 4.6.6** During the transect surveys, incidental records of little egret were recorded on Visits 1, 2, 3 and 6 in October, November and December 2015 and March 2016 with a peak count of three birds flying over Section 5 in November 2015 (see Annex B).
- 4.6.7** During the vantage point surveys, little egret was recorded on all six visits at the River Ebbw. The peak number of birds in flight was five birds at a height of approximately 30 m on Visit 3 in December 2015 (Figure 11e) and the peak count was twelve birds feeding in the river channel during a point count on Visit 3 in December 2015.
- 4.6.8** The peak little egret count on the previous surveys by Hyder Consulting (UK) Limited was ten birds during vantage point surveys (Hyder, 2015).

Little grebe (Tachybaptus ruficollis)

- 4.6.9** During the transect surveys, one little grebe was recorded in Section 3 (TATA) on Visit 6 in March 2016 (see Annex B). Little grebe was not recorded during the vantage point surveys at the River Usk or River Ebbw.
- 4.6.10** These results were similar to the previous survey when the peak count was one little grebe during transect surveys (Hyder, 2015).

Grey heron (Ardea cinerea)

- 4.6.11** During the transect surveys, grey heron was recorded on Visits 1, 2 and 3 in October, November and December 2015 with a peak count of three in Section 2 on Visit 2 (Annex B). During the vantage point surveys grey heron was recorded at both the River Usk and River Ebbw (Figures 3 and 4) with a peak count of four at the River Ebbw in October 2015 during a point count.
- 4.6.12** A peak count of ten birds was recorded in January 2015 during the previous transect surveys (Hyder, 2015).

Moorhen (Gallinula chloropus)

- 4.6.13** During the transect surveys, incidental records of moorhen were recorded in all sections on Visits 1 and 2 in October and November 2015. The peak count was eight birds in Section 2 in November (Annex B).. During the vantage point surveys, moorhen was only recorded during point counts at the River Ebbw with single birds recorded in October and November 2015 and on Visit 4 in January 2016.
- 4.6.14** The peak count during the previous transect surveys was 26 birds in Section 2 in March 2015 (Hyder, 2015).

Coot (Fulica atra)

4.6.15 During the transect surveys coot was not recorded. During the vantage point surveys coot was only recorded at the River Usk where one bird was present during a point count on Visit 5 in February 2016.

4.6.16 The peak count on the previous transect survey was eight birds in Section 5 in December 2014 (Hyder, 2015).

Cormorant (Phalacrocorax carbo)

4.6.17 During the transect surveys, cormorant was recorded on Visits 2 and 3 in November and December 2015 and on Visit 6 in March 2016 with a peak count of seven birds in Section 5 in December 2015.

4.6.18 During the vantage point surveys, cormorant was recorded on Visits 1 to 4 from October 2015 to January 2016 with a peak count of five birds at the River Usk in December 2015 (Figure 12c). The species was recorded at both the River Usk and River Ebbw with flight-heights varying from approximately 5 m to 50 m.

4.6.19 During the previous transect surveys the peak cormorant count was six birds (Hyder, 2015).

4.7 All Species of Conservation Importance

4.7.1 The highest monthly peak counts per transect section of all species of conservation importance are given in Table 4 below. This includes species on the 2015 Red and Amber Lists of Birds of Conservation Concern (BoCC) (Eaton *et al.* 2015), priority species under Section 42 of the Natural Environment and Rural Communities (NERC) Act 2006 and species listed under the Wildlife and Countryside Act 1981 (as amended).

4.7.2 In addition to the records in Table 4, a short-eared owl (*Asio flammeus*) was recorded just outside the area of Section 5 during the February 2016 transect survey.

Table 4: Highest monthly counts per transect section of species of conservation importance during the 2015/16 Wintering Bird Survey

Common Name	Scientific Name	Conservation Status				Peak Count				
		Red List	Amber List	Sch. 1 (during breeding season only)	Section 42	Section 2	Section 3 (TATA)	Section 4 (Non- TATA)	Section 5	Section 6
Bearded tit	<i>Panurus biarmicus</i>		*	*		3	-	-	-	-
Black-headed gull	<i>Coicocephalus ridibundus</i>		*			300	-	55	64	250
Brambling	<i>Fringilla montifringilla</i>			*		-	-	1	-	-
Bullfinch	<i>Pyrrhula pyrrhula</i>		*			4	1	3	2	2
Cetti's warbler	<i>Cettia cetti</i>			*		1	12	2	1	2
Coal tit	<i>Periparus ater</i>		*			-	1	3	2	-
Curlew	<i>Numenius arquata</i>	*			*	1	-	-	1	2
Dunnock	<i>Prunella modularis</i>		*	*		10	1	1	5	2

Common Name	Scientific Name	Conservation Status				Peak Count				
		Red List	Amber List	Sch. 1 (during breeding season only)	Section 42	Section 2	Section 3 (TATA)	Section 4 (Non-TATA)	Section 5	Section 6
Fieldfare	<i>Turdus pilaris</i>			*		140	100	54	1	11
Gadwall	<i>Anas strepera</i>		*			-	30	-	-	-
Goldcrest	<i>Regulus regulus</i>		*			6	3	1	2	2
Great black-backed gull	<i>Larus marinus</i>		*			1	-	-	-	-
Green woodpecker	<i>Picus viridis</i>		*			-	-	-	2	-
Greylag goose	<i>Anser anser</i>		*			-	80	13	-	-
Grey wagtail	<i>Motacilla cinerea</i>	*				-	-	-	-	1
Hen harrier	<i>Circus cyaneus</i>	*		*		-	1	1	-	-
Herring gull	<i>Larus argentatus</i>	*			*	279	17	113	203	86

Common Name	Scientific Name	Conservation Status				Peak Count				
		Red List	Amber List	Sch. 1 (during breeding season only)	Section 42	Section 2	Section 3 (TATA)	Section 4 (Non- TATA)	Section 5	Section 6
House sparrow	<i>Passer domesticus</i>	*			*	8	-	11	12	24
Kestrel	<i>Falco tinnunculus</i>		*			4	2	2	1	2
Kingfisher	<i>Alcedo atthis</i>		*	*		-	-	1	1	-
Lapwing	<i>Vanellus vanellus</i>	*			*	50	-	-	95	2
Lesser black-backed gull	<i>Larus fuscus</i>		*			3	-	20	16	8
Lesser redpoll	<i>Carduelis cabaret</i>	*			*	-	4	-	1	-
Linnet	<i>Carduelis cannabina</i>	*				-	-	-	22	3
Little egret	<i>Egretta garzetta</i>		*			1	-	1	3	-
Little grebe	<i>Tachybaptus ruficollis</i>		*			-	1	-	-	-

Common Name	Scientific Name	Conservation Status				Peak Count				
		Red List	Amber List	Sch. 1 (during breeding season only)	Section 42	Section 2	Section 3 (TATA)	Section 4 (Non- TATA)	Section 5	Section 6
Long-tailed tit	<i>Aegithalos caudatus</i>		*			9	20	30	11	9
Mallard	<i>Anas platyrhynchos</i>		*			39	41	40	79	107
Meadow pipit	<i>Anthus pratensis</i>		*			9	3	4	-	6
Mistle thrush	<i>Turdus viscivorus</i>	*				3	3	2	1	3
Mute swan	<i>Cygnus olor</i>		*			22	9	11	29	84
Oystercatcher	<i>Haematopus ostralegus</i>		*			-	-	-	4	-
Peregrine	<i>Falco peregrinus</i>			*		1	-	-	1	-
Pintail	<i>Anas acuta</i>		*			-	5	-	-	-
Pochard	<i>Aythya ferina</i>	*				-	5	-	-	-

Common Name	Scientific Name	Conservation Status				Peak Count				
		Red List	Amber List	Sch. 1 (during breeding season only)	Section 42	Section 2	Section 3 (TATA)	Section 4 (Non- TATA)	Section 5	Section 6
Redshank	<i>Tringa totanus</i>		*			10	-	-	102	-
Redwing	<i>Turdus iliacus</i>	*		*		54	101	170	9	195
Reed bunting	<i>Emberiza schoeniclus</i>		*			4	3	8	4	-
Shelduck	<i>Tadorna tadorna</i>		*			-	2	-	2	-
Shoveler	<i>Anas clypeata</i>		*			-	7	-	16	-
Skylark	<i>Alauda aervensis</i>	*		*		1	-	-	2	1
Snipe	<i>Gallinago gallinago</i>		*			-	1	6	3	10
Song thrush	<i>Turdus philomelos</i>	*			*	2	-	2	2	3
Starling	<i>Sturnus vulgaris</i>	*			*	192	9	380	423	1180

Common Name	Scientific Name	Conservation Status				Peak Count				
		Red List	Amber List	Sch. 1 (during breeding season only)	Section 42	Section 2	Section 3 (TATA)	Section 4 (Non- TATA)	Section 5	Section 6
Teal	<i>Anas crecca</i>		*			14	111	10	20	-
Wigeon	<i>Anas penelope</i>		*			-	-	-	43	-
Woodcock	<i>Scolopax rusticola</i>	*				-	2	-	-	-

5. Conclusions

5.1 Severn Estuary SPA Annex 1 Qualifying Species

- 5.1.1** During the transect and vantage point surveys, four qualifying species for the adjacent Severn Estuary SPA were recorded. These were curlew, pintail, redshank and shelduck. Curlew was present in small numbers with a peak count of only two birds (Figure 6b). Pintail was recorded at Pond 1 in Section 3 (TATA Steel) with a peak count of five birds (Figure 10f). Redshank favoured the River Ebbw channel with peak counts here of 102 during transect surveys (Figure 7b) and at least 100 during vantage point survey point counts. Small numbers of shelduck also frequented Pond 1 in Section 3 (TATA) with a pair here on Visit 6 in March 2016 (Figure 10f). A shelduck pair were also recorded at the sludge bed in Section 5 (Figure 9c).

5.2 Severn Estuary SPA Assemblage Species

- 5.2.1** Pond 1 and the adjacent reens (drains) in Section 3 (TATA) proved suitable for a range of Severn Estuary SPA Assemblage species; namely gadwall, teal, mallard, shoveler, pochard and tufted duck. Peak counts of these species in Section 3 (TATA) can be found in Table 4 and in the species accounts in Section 4 of this report.
- 5.2.2** The sludge bed in Section 5 also supported shoveler and tufted duck with overall peak counts for the transect survey of 16 and 10 respectively (Figures 8c and 9c).
- 5.2.3** The other two Severn Estuary SPA Assemblage species recorded were wigeon and lapwing. Like redshank, wigeon favoured the channel of the River Ebbw with a peak count of 43 recorded here during Visit 6 transect surveys in March 2016 (Figure 10b). Teal was also common at the River Ebbw with a peak count of 75 birds recorded here during a vantage point survey point count. Lapwing was recorded during transect surveys in Sections 2 and 5 with a peak count of 95 birds in Section 5 (Figure 7b).

5.3 Schedule 1 Species

- 5.3.1** Eleven species listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) were recorded; these species receive additional protection during the breeding season only. No additional protection is afforded to wintering populations. A list of these species can be seen in Table 3.
- 5.3.2** Single hen harriers were recorded in Section 3 (TATA) and Section 4 (non-TATA) (Figures 7d and 8d) while single peregrines were recorded in Sections 2 and 5, and during vantage point surveys at the River Ebbw (Figures 5f, 6d, 9b and 11a). Black-tailed godwit, green sandpiper, bearded tit and brambling were each recorded only once and details are in Table 3.
- 5.3.3** The reedbeds in Section 3 (TATA) supported the highest numbers of Cetti's warbler with a peak count here of 12 singing birds on Visit 6 in March 2016 (Figure 10d). Redwing and fieldfare were recorded in all transect survey sections with peak counts of 140 and 195 respectively (Figures 6g and 9c).

5.4 Other Species of Conservation Interest

5.4.1 Peak counts of all species of conservation interest can be found in Table 4. This includes species on the 2015 Red and Amber Lists of Birds of Conservation Concern (BoCC) (Eaton *et al.* 2015), priority species under Section 42 of the Natural Environment and Rural Communities (NERC) Act 2006 and species listed under the Wildlife and Countryside Act 1981 (as amended).

5.4.2 Of these species, the gulls were mainly associated with the landfill site at the River Ebbw with commuting flight-lines along the River Ebbw and River Usk. Details can be found in sections 4.5.14 to 4.5.18 of this report. Further waterfowl species accounts can be found in sections 4.5 and 4.6 of this report. A peak count of four kestrels in Section 2 on Visit 1 in October 2015 is notable (Figures 5f and 5g).

5.4.3 Notable peak counts of passerine species were:

- 10 dunnocks (*Prunella modularis*) on Visit 2 in November 2015 in Section 2 (Figure 6g);
- 30 long-tailed tits (*Aegithalos caudatus*) on Visit 1 in October 2015 (Figure 5d) and eight reed buntings (*Emberiza schoeniclus*) on Visit 6 in March 2016 (Figure 10d) in Section 4 (Non-TATA);
- 22 linnets (*Carduelis cannabina*) on Visit 4 in January 2016 in Section 5 (Figure 8c) ;
- 24 house sparrows (*Passer domesticus*) on Visit 6 in March 2016 in Section 6 (Figures 10a and 10b); and
- 3000+ starlings (*Sturnus vulgaris*) during a point count on Visit 2 in November 2015 at the River Ebbw vantage point.

5.5 Other Species

5.5.1 During transect surveys all other species were recorded as incidental records but were not counted or mapped. Flight-lines of some of these species (any raptors, waders, wildfowl or gulls) were also recorded during the vantage point surveys and details of these can be found in Annex D. These included buzzard (*Buteo buteo*) and sparrowhawk (*Accipiter nisus*) which were recorded regularly during both transect and vantage point surveys.

5.5.2 A list of all incidental records from transect surveys can be found in Annex B.

6. References

- 6.1.1 Eaton MA, Aebischer N, Brown A, Hearn R, Leigh L, Musgrove A, Noble D, Stroud D and Gregory R (2015) Birds of Conservation Concern 4: the population status of birds in the UK, Channel Islands and Isle of Man. *British Birds* 108, pp708-746.
- 6.1.2 Hyder (2015) Welsh Government M4 Corridor around Newport, Wintering Bird Survey Report 2015 Hyder Consulting (UK) Limited, Cardiff.
- 6.1.3 Scottish Natural Heritage (2014) *Recommended bird survey methods to inform impact assessment of onshore wind farms* Available online: <http://www.snh.gov.uk/docs/C278917.pdf>

Annex A: Target Species List

Table 5: Target species list with scientific name and conservation and legal protection status

Common Name	Scientific Name	Nerc S42	WCA S1	Red List	Amber List ¹	Severn Estuary	SSSI
Aquatic warbler	<i>Acrocephalus paludicola</i>	x		x			
Arctic skua	<i>Stercorarius parasiticus</i>			x			
Arctic tern	<i>Sterna paradisaea</i>				X		
Avocet	<i>Recurvirostra avosetta</i>		x		X		
Balearic shearwater	<i>Puffinus mauretanicus</i>	x		x			
Barn owl	<i>Tyto alba</i>		x				
Barnacle goose	<i>Branta leucopsis</i>				X		
Bar-tailed godwit	<i>Limosa lapponica</i>	x			X		
Bean goose	<i>Anser fabalis</i>				X		
Bearded tit	<i>Panurus biarmicus</i>		x		X		
Bee-eater	<i>Merops apiaster</i>		x				
Bewick's swan	<i>Cygnus columbianus</i>	x	x		X	x	

Common Name	Scientific Name	Nerc S42	WCA S1	Red List	Amber List ¹	Severn Estuary	SSSI
Bittern	<i>Botaurus stellaris</i>	x	x		X		
Black grouse	<i>Tetrao tetrix</i>	x		x			
Black guillemot	<i>Cepphus grylle</i>				X		
Black redstart	<i>Phoenicurus ochruros</i>		x	x			
Black tern	<i>Chlidonias niger</i>		x		x		
Black-headed gull	<i>Larus ridibundus</i>	x			x		
Black-necked grebe	<i>Podiceps nigricollis</i>		x		x		
Black-tailed godwit	<i>Limosa limosa</i>		x	x			
Black-throated diver	<i>Gavia arctica</i>		x		x		
Black-winged stilt	<i>Himantopus himantopus</i>		x				
Bluethroat	<i>Luscinia svecica</i>		x				
Brambling	<i>Fringilla montifringilla</i>		x				
Brent goose	<i>Branta bernicla</i>				x		
Bullfinch	<i>Pyrrhula pyrrhula</i>	x			x		
Capercaillie	<i>Tetrao urogallus</i>		x	x			

Common Name	Scientific Name	Nerc S42	WCA S1	Red List	Amber List ¹	Severn Estuary	SSSI
Caspian gull	<i>Larus cachinnans</i>				x		
Cetti's warbler	<i>Cettia cetti</i>		x				
Chough	<i>Pyrrhonorax pyrrhonorax</i>	x	x		x		
Cirl bunting	<i>Emberiza cirlus</i>		x	x			
Coal tit	<i>Periparus ater</i>				x		
Common gull	<i>Larus canus</i>				x		
Common sandpiper	<i>Actitis hypoleucos</i>				x		
Common scoter	<i>Melanitta nigra</i>	x	x	x			
Common tern	<i>Sterna hirundo</i>				x		
Corn bunting	<i>Emberiza calandra</i>	x		x			
Corncrake	<i>Crex crex</i>	x	x	x			
Crane	<i>Grus grus</i>				x		
Crested tit	<i>Lophophanes cristatus</i>		x				
Crossbills	<i>Loxia spp.</i>		x				
Cuckoo	<i>Cuculus canorus</i>	x		x			

Common Name	Scientific Name	Nerc S42	WCA S1	Red List	Amber List ¹	Severn Estuary	SSSI
Curlew	<i>Numenius arquata</i>	x		x		x	
Curlew sandpiper	<i>Calidris ferruginea</i>				x		
Dark-bellied brent goose	<i>Branta bernicla subsp. Bernicla</i>	x					
Dartford Warbler	<i>Sylvia undata</i>		x		x		
Dipper	<i>Cinclus cinclus</i>				x		x
Dotterel	<i>Charadrius morinellus</i>		x	x			
Dunlin	<i>Calidris alpina alpina</i>				x	x	
Dunnock	<i>Prunella modularis</i>	x			x		
Eider	<i>Somateria mollissima</i>				x		
Fieldfare	<i>Turdus pilaris</i>		x	x			
Firecrest	<i>Regulus ignicapilla</i>		x		x		
Fulmar	<i>Fulmarus glacialis</i>				x		
Gadwell	<i>Anas strepera strepera</i>				x	x	
Gannet	<i>Morus bassanus</i>				x		

Common Name	Scientific Name	Nerc S42	WCA S1	Red List	Amber List ¹	Severn Estuary	SSSI
Garganey	<i>Anas querquedula</i>		x		x		
Glaucous gull	<i>Larus hyperboreus</i>				x		
Golden oriole	<i>Oriolus oriolus</i>		x	x			
Golden plover	<i>Pluvialis apricaria</i>	x					
Goldeneye	<i>Bucephala clangula</i>				x		
Goshawk	<i>Accipiter gentilis</i>		x				
Grasshopper warbler	<i>Locustella naevia</i>	x		x			
Great black-backed gull	<i>Larus marinus</i>				x		
Great northern diver	<i>Gavia immer</i>		x		x		
Great skua	<i>Stercorarius skua</i>				x		
Green sandpiper	<i>Tringa ochropus</i>		x		x		x
Green woodpecker	<i>Picus viridis</i>				x		
Greenshank	<i>Tringa nebularia</i>		x		x		x
Grey partridge	<i>Perdix perdix</i>	x		x			
Grey plover	<i>Pluvialis squatarola</i>				x	x	

Common Name	Scientific Name	Nerc S42	WCA S1	Red List	Amber List ¹	Severn Estuary	SSSI
Grey wagtail	<i>Motacilla cinerea</i>			x			x
Greylag goose	<i>Anser anser</i>				x		
Guillemot	<i>Uria aalge</i>				x		
Gyr Falcon	<i>Falco rusticolus</i>		x				
Hawfinch	<i>Coccothraustes coccothraustes</i>	x		x			
Hebridean song thrush	<i>Turdus philomelos</i> subsp. <i>Hebridensis</i>			x			
Hen harrier	<i>Circus cyaneus</i>	x	x	x			
Herring gull	<i>Larus argentatus</i>	x		x			
Hobby	<i>Falco Subbuteo</i>		x				
Honey buzzard	<i>Pernis apivorus</i>		x		x		
Hoopoe	<i>Upupa epops</i>		x				
House martin	<i>Delichon urbicum</i>				x		
House sparrow	<i>Passer domesticus</i>	x		x			
Iceland gull	<i>Larus glaucooides</i>				x		

Common Name	Scientific Name	Nerc S42	WCA S1	Red List	Amber List ¹	Severn Estuary	SSSI
Indet. Diver	<i>Gavia spp.</i>		x				
Indet. harrier	<i>Circus spp.</i>		x				
Jack snipe	<i>Limnocyptes minimus</i>				x		
Kentish plover	<i>Charadrius alexandrinus</i>		x				
Kestrel	<i>Falco tinnunculus</i>	x			x		
Kingfisher	<i>Alcedo atthis</i>		x		x		x
Kittiwake	<i>Rissa tridactyla</i>			x			
Knot	<i>Calidris canutus</i>				x		
Lapland bunting	<i>Calcarius lapponicus</i>		x		x		
Lapwing	<i>Vanellus vanellus</i>	x		x			
Leach's petrel	<i>Oceanodroma leucorhoa</i>		x		x		
Lesser black-backed gull	<i>Larus fuscus</i>				x		
Lesser redpoll	<i>Carduelis cabaret</i>	x		x			
Lesser spotted woodpecker	<i>Dendrocopos minor</i>	x		x			
Linnet	<i>Carduelis cannabina</i>	x		x			

Common Name	Scientific Name	Nerc S42	WCA S1	Red List	Amber List ¹	Severn Estuary	SSSI
Little bittern	<i>Ixobrychus minutus</i>		x				
Little gull	<i>Larus minutus</i>		x		x		
Little ringed plover	<i>Charadrius dubius</i>		x				
Little tern	<i>Sternula albifrons</i>		x		x		
Long-tailed duck	<i>Clangula hyemalis</i>		x	x			
Mallard	<i>Anas platyrhynchos</i>				x		
Manx shearwater	<i>Puffinus puffinus</i>				x		
Marsh harrier	<i>Circus aeruginosus</i>		x		x		
Marsh tit	<i>Poecile palustris</i>	x		x			
Marsh warbler	<i>Acrocephalus palustris</i>		x	x			x
Meadow pipit	<i>Anthus pratensis</i>				x		
Mealy redpoll	<i>Carduelis flammea flammea</i>				x		
Mediterranean gull	<i>Larus melanocephalus</i>		x		x		
Merlin	<i>Falco columbarius</i>		x	x			

Common Name	Scientific Name	Nerc S42	WCA S1	Red List	Amber List ¹	Severn Estuary	SSSI
Mistle thrush	<i>Turdus viscivorus</i>			x			
Montagu's harrier	<i>Circus pygargus</i>		x		x		
Mute swan	<i>Cygnus olor</i>				x		
Nightingale	<i>Luscinia megarhynchos</i>			x			
Nightjar	<i>Caprimulgus europaeus</i>	x			x		
Osprey	<i>Pandion haliaetus</i>		x		x		
Oystercatcher	<i>Haematopus ostralegus</i>				x		
Parrot crossbill	<i>Loxia pytyopstittacus</i>				x		
Peregrine	<i>Falco peregrinus</i>		x				
Pied flycatcher	<i>Ficedula hypoleuca</i>	x		x			
Pink-footed goose	<i>Anser brachyrhynchus</i>				x		
Pintail	<i>Anas acuta</i>				x	x	
Pochard	<i>Aythya farina</i>			x		x	
Puffin	<i>Fratercula arctica</i>			x			
Purple heron	<i>Ardea purpurea</i>		x				

Common Name	Scientific Name	Nerc S42	WCA S1	Red List	Amber List ¹	Severn Estuary	SSSI
Purple sandpiper	<i>Calidris maritima</i>		x		x		
Quail	<i>Coturnix coturnix</i>		x		x		
Razorbill	<i>Alca torda</i>				x		
Red grouse	<i>Lagopus lagopus</i>	x			x		
Red kite	<i>Milvus milvus</i>		x				
Red-backed shrike	<i>Lanius collurio</i>	x	x	x			
Red-necked grebe	<i>Podiceps grisegena</i>			x			
Red-necked phalarope	<i>Phalaropus lobatus</i>		x	x			
Redshank	<i>Tringa tetanus</i>				x	x	
Redstart	<i>Phoenicurus phoenicurus</i>				x		
Red-throated diver	<i>Gavia stellate</i>		x		x		
Redwing	<i>Turdus iliacus</i>		x	x			
Reed bunting	<i>Emberiza schoeniclus</i>	x			x		
Ring ouzel	<i>Turdus torquatus</i>	x		x			
Ringed plover	<i>Charadrius hiaticula</i>	x		x		x	

Common Name	Scientific Name	Nerc S42	WCA S1	Red List	Amber List ¹	Severn Estuary	SSSI
Roseate tern	<i>Sterna dougallii</i>	x	x	x			
Ruff	<i>Philomachus pugnax</i>		x	x			
Sand martin	<i>Riparia riparia</i>				x		x
Sanderling	<i>Calidris alba</i>				x		
Sandwich tern	<i>Sterna sandvicensis</i>				x		
Savi's warbler	<i>Locustella luscinioides</i>		x	x			
Scarlet rosefinch	<i>Carpodacus erythrurus</i>		x				
Scaup	<i>Aythya marila</i>		x	x			
Scottish crossbill	<i>Loxia scotica</i>		x		x		
Serin	<i>Serinus serinus</i>		x				
Shag	<i>Phalacrocorax aristotelis</i>			x			
Shelduck	<i>Tadorna tadorna</i>				x	x	
Shore lark	<i>Eremophila alpestris</i>		x		x		
Short-eared owl	<i>Asio flammeus</i>				x		
Short-toed treecreeper	<i>Certhia brachydactyla</i>		x				

Common Name	Scientific Name	Nerc S42	WCA S1	Red List	Amber List ¹	Severn Estuary	SSSI
Shoveler	<i>Anas clypeata</i>				x		
Skylark	<i>Alauda arvensis</i>	x		x			
Slavonian grebe	<i>Podiceps auritus</i>		x	x			
Smew	<i>Mergellus albellus</i>				x		
Snipe	<i>Gallinago gallinago</i>				x		
Snow bunting	<i>Plectrophenax nivalis</i>		x		x		
Snowy owl	<i>Bubo scandiaca</i>		x				
Song thrush	<i>Turdus philomelos</i>	x		x			
Spoonbill	<i>Platalea leucorodia</i>		x		x		
Spotted crane	<i>Porzana porzana</i>		x		x		
Spotted flycatcher	<i>Muscicapa striata</i>	x		x			
Spotted redshank	<i>Tringa erythropus</i>				x		
Starling	<i>Sturnus vulgaris</i>	x		x			
Stock dove	<i>Columba oenas</i>				x		
Stone-curlew	<i>Burhinus oedicephalus</i>		x		x		

Common Name	Scientific Name	Nerc S42	WCA S1	Red List	Amber List ¹	Severn Estuary	SSSI
Storm petrel	<i>Hydrobates pelagicus</i>				x		
Swallow	<i>Hirundo rustica</i>				x		
Swift	<i>Apus apus</i>				x		
Tawny owl	<i>Strix aluco</i>				x		
Teal	<i>Anas crecca</i>				x	x	x
Temminck's stint	<i>Calidris temminckii</i>		x	x			
Tree pipit	<i>Anthus trivialis</i>	x		x			
Tree sparrow	<i>Passer montanus</i>	x		x			
Tufted duck	<i>Aythya fuligula</i>					x	
Turnstone	<i>Arenaria interpres</i>				x		
Turtle dove	<i>Streptopelia turtur</i>	x		x			
Twite	<i>Carduelis flavirostris</i>	x		x			
Velvet scoter	<i>Melanitta fusca</i>		x	x			
Water pipit	<i>Anthus spinoletta</i>				x		
Wheatear	<i>Oenanthe oenanthe</i>				x		

Common Name	Scientific Name	Nerc S42	WCA S1	Red List	Amber List ¹	Severn Estuary	SSSI
Whimbrel	<i>Numenius phaeopus</i>		x	x		x	
Whinchat	<i>Saxicola rubetra</i>			x			
White-fronted goose	<i>Anser albifrons subsp. Flavirostris</i>	x		x		x	
White-tailed eagle	<i>Haliaeetus albicilla</i>		x	x			
Whitethroat	<i>Sylvia communis</i>				x		
Whooper swan	<i>Cygnus Cygnus</i>		x		x		
Wigeon	<i>Anas Penelope</i>				x	x	
Willow tit	<i>Poecile montanus</i>	x		x			
Willow warbler	<i>Phylloscopus trochilus</i>				x		
Wood sandpiper	<i>Tringa glareola</i>		x		x		
Wood warbler	<i>Phylloscopus sibilatrix</i>	x		x			
Woodcock	<i>Scolopax rusticola</i>			x			
Woodlark	<i>Lullula arborea</i>	x	x				
Wryneck	<i>Jynx torquilla</i>		x				

Common Name	Scientific Name	Nerc S42	WCA S1	Red List	Amber List ¹	Severn Estuary	SSSI
Yellow wagtail	<i>Motacilla flava</i>	x		x			x
Yellowhammer	<i>Emberiza citrinella</i>	x		x			
Yellow-legged gull	<i>Larus michahellis</i>				x		

Annex B: Incidental Records on Transect Surveys

Common Name	Scientific Name	Peak Count	
		Number Observed	Time and Location
Blackbird	<i>Turdus merula</i>	3	Section 2, Visit 2
Blue tit	<i>Cyanistes caeruleus</i>	4	Section 4, Visit 2
Buzzard	<i>Buteo buteo</i>	1	Various
Canada goose	<i>Branta canadensis</i>	46	Section 6, Visit 2
Carrion crow	<i>Corvus corone</i>	50	Section 6, Visit 2
Chaffinch	<i>Fringilla coelebs</i>	6	Section 2, Visit 2
Collared dove	<i>Streptopelia decaocto</i>	10	Section 6, Visit 2
Coot	<i>Fulica atra</i>	1	River Usk VP, Visit 5
Cormorant	<i>Phalacrocorax carbo</i>	7	Section 5, Visit 3
Feral pigeon	<i>Columba livia domestica</i>	Peak count data not collected	
Goldfinch	<i>Carduelis carduelis</i>	10	Section 4, Visit 1; and Section 6, Visit 2
Great tit	<i>Parus major</i>	6	Section 6, Visit 1
Great-spotted woodpecker	<i>Dendrocopus major</i>	2	Section 4, Visit 1
Greenfinch	<i>Chloris chloris</i>	9	Section 2, Visit 2
Grey heron	<i>Ardea cinerea</i>	3	Section 2, Visit 2
Jackdaw	<i>Corvus monedula</i>	20	Section 2, Visit 2
Jay	<i>Garrulus glandarius</i>	1	Section 2, Visit 1
Little egret	<i>Egretta garzetta</i>	3	Section 5, Visit 2
Little grebe	<i>Tachybaptus ruficollis</i>	1	Section 3, Visit 6
Long-tailed tit	<i>Aegithalos caudatus</i>	20	Section 3, Visit 4

Common Name	Scientific Name	Peak Count	
		Number Observed	Time and Location
Magpie	<i>Pica pica</i>	8	Section 6, Visit 1
Meadow pipit	<i>Anthus pratensis</i>	9	Section 2, Visit 3
Mistle thrush	<i>Turdus viscivorus</i>	3	Section 6, Visit 6
Moorhen	<i>Gallinula chloropus</i>	8	Section 2, Visit 2
Pied wagtail	<i>Motacilla alba yarelli</i>	6	Section 5, Visit 2
Raven	<i>Corvus corax</i>	1	Section 4, Visit 6
Robin	<i>Erithacus rubecula</i>	Peak count data not recorded	
Rook	<i>Corvus frugilegus</i>	30	Section 5, Visit 2
Song thrush	<i>Turdus philomelos</i>	Peak count data not recorded	
Sparrowhawk	<i>Accipiter nisus</i>	Peak count data not recorded	
Stonechat	<i>Saxicola rubicola</i>	2	Section 2, Visit 1
Treecreeper	<i>Certhia familiaris</i>	1	Section 1, Visit 6
Water rail	<i>Rallus aquaticus</i>	1	Section 4 (Non-TATA) Visit 2; and Section 3 (TATA) Visit 6
Wood pigeon	<i>Columba palumbus</i>	33	Section 2, Visit 1
Wren	<i>Troglodytes troglodytes</i>	2	Section 2, Visit 1

Annex C: Transect Survey Results

Table 6a: Visit 1 Transect Survey Results 22nd October 2015 (Figures 5a-g)

Common Name	Scientific Name	Section 2	Section 3 (TATA)	Section 4 (non-TATA)	Section 5	Section 6
Bearded tit	<i>Panurus biarmicus</i>	3	-	-	-	-
Black-headed gull	<i>Larus ridibundus</i>	-	-	-	4	-
Bullfinch	<i>Pyrrhula pyrrhula</i>	4	-	-	-	-
Cetti's warbler	<i>Cettia cetti</i>	-	8	1	-	-
Curlew	<i>Numenius arquata</i>	-	-	-	1	-
Dunnock	<i>Prunella modularis</i>	-	-	1	2	-
Fieldfare	<i>Turdus pilaris</i>	62	13	16	-	-
Gadwall	<i>Anas strepera</i>	-	17	-	-	-
Great black-backed gull	<i>Larus marinus</i>	1	-	-	-	-
Grey wagtail	<i>Motacilla cinerea</i>	-	-	-	-	1
Greylag goose	<i>Anser anser</i>	-	80	-	-	-
Herring gull	<i>Larus argentatus</i>	14	-	-	3	60

Common Name	Scientific Name	Section 2	Section 3 (TATA)	Section 4 (non-TATA)	Section 5	Section 6
House sparrow	<i>Passer domesticus</i>	8	-	11	-	11
Kestrel	<i>Falco tinnunculus</i>	4	-	-	-	-
Lesser redpoll	<i>Carduelis cabaret</i>	-	4	-	1	-
Marsh harrier	<i>Circus aeruginosus</i>	4	-	-	-	-
Mallard	<i>Anas platyrhynchos</i>	39	19	10	-	10
Meadow pipit	<i>Anthus pratensis</i>	2	2	4	-	-
Mistle thrush	<i>Turdus viscivorus</i>	3	-	2	-	-
Mute swan	<i>Cygnus olor</i>	11	4	4	5	-
Peregrine	<i>Falco peregrinus</i>	1	-	-	-	-
Redwing	<i>Turdus iliacus</i>	20	-	-	-	-
Reed bunting	<i>Emberiza schoeniclus</i>	4	-	-	2	-
Skylark	<i>Alauda arvensis</i>	-	-	-	-	1
Snipe	<i>Gallinago gallinago</i>	-	-	-	3	-
Song thrush	<i>Turdus philomelos</i>	-	-	1	-	-

Common Name	Scientific Name	Section 2	Section 3 (TATA)	Section 4 (non-TATA)	Section 5	Section 6
Starling	<i>Sturnus vulgaris</i>	19	9	10	105	85
Teal	<i>Anas crecca</i>	-	49	10	-	-
Tufted duck	<i>Aythya fuligula</i>	-	-	1	-	-

Table 6b: Visit 2 Transect Survey Results 17th November 2015 (Figures 6a-g)

Common name	Scientific Name	Section 2	Section 3 (TATA)	Section 4 (non-TATA)	Section 5	Section 6
Black-headed gull	<i>Larus ridibundus</i>	-	-	10	60	46
Brambling	<i>Fringilla montifringilla</i>	-	-	1	-	-
Bullfinch	<i>Pyrrhula pyrrhula</i>	-	-	-	-	2
Cetti's warbler	<i>Cettia cetti</i>	1	8	-	1	1
Corn bunting	<i>Emberiza calandra</i>	1	-	-	-	-
Curlew	<i>Numenius arquata</i>	1	-	-	-	2
Dunnock	<i>Prunella modularis</i>	3	-	-	5	1
Fieldfare	<i>Turdus pilaris</i>	140	11	54	-	11
Gadwall	<i>Anas strepera</i>	-	30	-	-	-
Grey wagtail	<i>Motacilla cinerea</i>	-	-	-	-	1
Greylag goose	<i>Anser anser</i>	-	-	13	-	-
Herring gull	<i>Larus argentatus</i>	60	-	113	85	83
House sparrow	<i>Passer domesticus</i>	6	-	-	-	7

Common name	Scientific Name	Section 2	Section 3 (TATA)	Section 4 (non-TATA)	Section 5	Section 6
Kestrel	<i>Falco tinnunculus</i>	1	-	-	-	1
Lapwing	<i>Vanellus vanellus</i>	-	-	-	6	2
Lesser black-backed gull	<i>Larus fuscus</i>	-	-	20	2	1
Mallard	<i>Anas platyrhynchos</i>	10	41	40	54	107
Meadow pipit	<i>Anthus pratensis</i>	-	3	2	-	-
Mistle thrush	<i>Turdus viscivorus</i>	-	-	-	-	2
Mute swan	<i>Cygnus olor</i>	20	7	-	15	60
Peregrine	<i>Falco peregrinus</i>	-	-	-	1	-
Redwing	<i>Turdus iliacus</i>	44	6	31	9	49
Reed bunting	<i>Emberiza schoeniclus</i>	1	-	-	-	-
Shelduck	<i>Tadorna tadorna</i>	-	1	-	-	-
Shoveler	<i>Anas clypeata</i>	-	7	-	-	-
Snipe	<i>Gallinago gallinago</i>	-	1	-	-	1
Song thrush	<i>Turdus philomelos</i>	1	-	1	-	3

Common name	Scientific Name	Section 2	Section 3 (TATA)	Section 4 (non-TATA)	Section 5	Section 6
Starling	<i>Sturnus vulgaris</i>	20	-	380	232	1180
Teal	<i>Anas crecca</i>	-	54	-	-	-

Table 6c: Visit 3 Transect Survey Results 17th December 2015 (Figures 7a-g)

Common Name	Scientific Name	Section 2	Section 3 (TATA)	Section 4 (non-TATA)	Section 5	Section 6
Black-headed gull	<i>Larus ridibundus</i>	300	-	55	50	121
Cetti's warbler	<i>Cettia cetti</i>	-	7	-	1	1
Coal tit	<i>Periparus ater</i>	-	1	-	-	-
Dunnock	<i>Prunella modularis</i>	1	-	-	5	-
Fieldfare	<i>Turdus pilaris</i>	16	3	1	1	3
Gadwall	<i>Anas strepera</i>	-	20	-	-	-
Grey wagtail	<i>Motacilla cinerea</i>	-	-	-	-	1
Greylag goose	<i>Anser anser</i>	-	-	1	-	-
Hen harrier	<i>Circus cyaneus</i>	-	-	1	-	-
Herring gull	<i>Larus argentatus</i>	208	-	2	203	19
House sparrow	<i>Passer domesticus</i>	-	-	5	-	-
Kingfisher	<i>Alcedo atthis</i>	-	-	1	-	-
Lapwing	<i>Vanellus vanellus</i>	50	-	-	95	-

Common Name	Scientific Name	Section 2	Section 3 (TATA)	Section 4 (non-TATA)	Section 5	Section 6
Lesser black-backed gull	<i>Larus fuscus</i>	-	-	-	16	-
Linnet	<i>Carduelis cannabina</i>	-	-	-	9	3
Mallard	<i>Anas platyrhynchos</i>	13	16	5	79	33
Meadow pipit	<i>Anthus pratensis</i>	9	-	-	-	6
Mistle thrush	<i>Turdus viscivorus</i>	-	3	2	1	1
Mute swan	<i>Cygnus olor</i>	22	7	2	29	19
Pintail	<i>Anas acuta</i>	-	1	-	-	-
Redshank	<i>Tringa totanus</i>	-	-	-	102	-
Redwing	<i>Turdus iliacus</i>	5	-	63	2	97
Shelduck	<i>Tadorna tadorna</i>	-	1	-	-	-
Shoveler	<i>Anas clypeata</i>	-	4	-	-	-
Snipe	<i>Gallinago gallinago</i>	-	-	2	-	10
Song thrush	<i>Turdus philomelos</i>	2	-	-	-	-
Starling	<i>Sturnus vulgaris</i>	192	-	15	423	65

Common Name	Scientific Name	Section 2	Section 3 (TATA)	Section 4 (non-TATA)	Section 5	Section 6
Teal	<i>Anas crecca</i>	-	50	-	-	-
Wigeon	<i>Anas penelope</i>	-	-	-	27	-
Woodcock	<i>Scolopax rusticola</i>	-	2	-	-	-

Table 6d: Visit 4 Transect Survey Results 18th January 2016 (Figures 8a-g)

Common name	Scientific Name	Section 2	Section 3 (TATA)	Section 4 (non-TATA)	Section 5	Section 6
Black-headed gull	<i>Larus ridibundus</i>	140	-	-	38	250
Bullfinch	<i>Pyrrhula pyrrhula</i>	3	1	-	2	1
Cetti's warbler	<i>Cettia cetti</i>	-	6	-	-	-
Curlew	<i>Numenius arquata</i>	-	-	-	1	-
Dunnock	<i>Prunella modularis</i>	10	-	1	1	-
Fieldfare	<i>Turdus pilaris</i>	2	100	-	-	5
Green woodpecker	<i>Picus viridis</i>	-	-	-	2	-
Firecrest	<i>Regulus ignicapillus</i>	-	-	-	2	-
Greylag goose	<i>Anser anser</i>	-	-	1	-	-
Hen harrier	<i>Circus cyaneus</i>	-	1	1	-	-
Herring gull	<i>Larus argentatus</i>	177	17	4	60	62
House sparrow	<i>Passer domesticus</i>	-	-	10	-	-
Kestrel	<i>Falco tinnunculus</i>	1	2	1	1	-

Common name	Scientific Name	Section 2	Section 3 (TATA)	Section 4 (non-TATA)	Section 5	Section 6
Lesser black-backed gull	<i>Larus fuscus</i>	1	-	8	-	-
Linnet	<i>Carduelis cannabina</i>	-	-	-	22	-
Mallard	<i>Anas platyrhynchos</i>	18	14	12	-	4
Meadow pipit	<i>Anthus pratensis</i>	-	-	1	-	-
Mistle thrush	<i>Turdus viscivorus</i>	2	1	-	-	-
Mute swan	<i>Cygnus olor</i>	11	9	2	-	2
Redshank	<i>Tringa totanus</i>	-	-	-	3	-
Redwing	<i>Turdus iliacus</i>	51	101	30	-	82
Reed bunting	<i>Emberiza schoeniclus</i>	-	3	-	-	-
Shoveler	<i>Anas clypeata</i>	-	6	-	16	-
Snipe	<i>Gallinago gallinago</i>	-	-	6	-	7
Song thrush	<i>Turdus philomelos</i>	1	-	2	1	2
Starling	<i>Sturnus vulgaris</i>	-	-	-	-	90
Teal	<i>Anas crecca</i>	-	111	-	-	-

Common name	Scientific Name	Section 2	Section 3 (TATA)	Section 4 (non-TATA)	Section 5	Section 6
Tufted duck	<i>Aythya fuligula</i>	-	-	-	1	-
Wigeon	<i>Anas penelope</i>	-	-	-	7	-

Table 6e: Visit 5 Transect Survey Results 17th and 18th February 2016 (Figures 9a-g)

Common name	Scientific Name	Section 2	Section 3 (TATA)	Section 4 (non-TATA)	Section 5	Section 6
Black-headed gull	<i>Larus ridibundus</i>	70	-	3	64	4
Bullfinch	<i>Pyrrhula pyrrhula</i>	-	1	3	-	2
Cetti's warbler	<i>Cettia cetti</i>	1	4	-	-	1
Coal tit	<i>Periparus ater</i>	-	-	3	2	-
Curlew	<i>Numenius arquata</i>	-	-	-	1	-
Dunnock	<i>Prunella modularis</i>	1	1	-	3	1
Fieldfare	<i>Turdus pilaris</i>	-	-	8	-	10
Greylag goose	<i>Anser anser</i>	-	-	1	-	-
Herring gull	<i>Larus argentatus</i>	279	6	14	19	86
House sparrow	<i>Passer domesticus</i>	-	-	-	12	2
Kestrel	<i>Falco tinnunculus</i>	-	-	2	-	2
Kingfisher	<i>Alcedo atthis</i>	-	-	-	1	-
Lesser black-backed gull	<i>Larus fuscus</i>	3	-	-	2	8

Common name	Scientific Name	Section 2	Section 3 (TATA)	Section 4 (non-TATA)	Section 5	Section 6
Mallard	<i>Anas platyrhynchos</i>	31	2	37	20	21
Meadow pipit	<i>Anthus pratensis</i>	-	-	-	-	6
Mistle thrush	<i>Turdus viscivorus</i>	-	1	-	-	-
Mute swan	<i>Cygnus olor</i>	4	-	-	4	84
Peregrine	<i>Falco peregrinus</i>	-	-	-	1	-
Pochard	<i>Aythya ferina</i>	-	3	-	-	-
Redshank	<i>Tringa totanus</i>	10	-	-	15	-
Redwing	<i>Turdus iliacus</i>	-	-	170	3	195
Reed bunting	<i>Emberiza schoeniclus</i>	-	-	-	2	-
Shelduck	<i>Tadorna tadorna</i>	-	-	-	2	-
Shoveler	<i>Anas clypeata</i>	-	-	-	16	-
Skylark	<i>Alauda arvensis</i>	-	-	-	2	-
Snipe	<i>Gallinago gallinago</i>	-	-	-	1	5
Song thrush	<i>Turdus philomelos</i>	-	-	-	2	3

Common name	Scientific Name	Section 2	Section 3 (TATA)	Section 4 (non-TATA)	Section 5	Section 6
Starling	<i>Sturnus vulgaris</i>	-	-	-	-	335
Teal	<i>Anas crecca</i>	14	1	-	20	-
Tufted duck	<i>Aythya fuligula</i>	-		-	10	-

Table 6f: Visit 6 Transect Survey Results 16th March 2016 (Figures 10a-e)

Common name	<i>Scientific Name</i>	Section 2	Section 3 (TATA)	Section 4 (non-TATA)	Section 5	Section 6
Black-headed gull	<i>Larus ridibundus</i>	-	-	-	42	1
Bullfinch	<i>Pyrrhula pyrrhula</i>	1	-	-	-	1
Cetti's warbler	<i>Cettia cetti</i>	-	12	2	-	2
Curlew	<i>Numenius arquata</i>	-	-	-	-	1
Dunnoek	<i>Prunella modularis</i>	6	-	-	5	2
Fieldfare	<i>Turdus pilaris</i>	-	-	-	-	5
Gadwall	<i>Anas strepera</i>	-	16	-	-	-
Greylag goose	<i>Anser anser</i>	4	-	-	-	-
Herring gull	<i>Larus argentatus</i>	2	-	3	7	18
House sparrow	<i>Passer domesticus</i>	-	-	7	-	24
Kestrel	<i>Falco tinnunculus</i>	-	-	-	1	1
Lapwing	<i>Vanellus vanellus</i>	-	-	-	-	1
Lesser black-backed gull	<i>Larus fuscus</i>	1	-	4	8	-

Common name	Scientific Name	Section 2	Section 3 (TATA)	Section 4 (non-TATA)	Section 5	Section 6
Mallard	<i>Anas platyrhynchos</i>	14	7	29	21	22
Meadow pipit	<i>Anthus pratensis</i>	-	-	1	-	-
Mistle thrush	<i>Turdus viscivorus</i>	-	-	-	-	3
Mute swan	<i>Cygnus olor</i>	3	2	11	11	15
Oystercatcher	<i>Haematopus ostralegus</i>	-	-	-	4	-
Pintail	<i>Anas acuta</i>	-	5	-	-	-
Pochard	<i>Aythya ferina</i>	-	5	-	-	-
Redshank	<i>Tringa totanus</i>	-	-	-	93	-
Redwing	<i>Turdus iliacus</i>	54	-	57	-	108
Reed bunting	<i>Emberiza schoeniclus</i>	-	2	8	4	-
Shelduck	<i>Tadorna tadorna</i>	-	2	-	-	-
Shoveler	<i>Anas clypeata</i>	-	3	-	-	-
Skylark	<i>Alauda arvensis</i>	1	-	-	-	-
Snipe	<i>Gallinago gallinago</i>	-	1	4	-	2

Common name	<i>Scientific Name</i>	Section 2	Section 3 (TATA)	Section 4 (non-TATA)	Section 5	Section 6
Starling	<i>Sturnus vulgaris</i>	-	-	70	-	55
Teal	<i>Anas crecca</i>	-	15	-	4	-
Tufted duck	<i>Aythya fuligula</i>	-	5	-	-	-
Wigeon	<i>Anas penelope</i>	-	-	-	43	-

Annex D: Vantage Point Survey Results (Flight-Lines)

Table 7a: Visit 1 Vantage Point Survey Results River Ebbw 23rd October 2015 (see Figure 11a)

Common Name	Scientific Name	Number observed	Flight Height (m)	Flight Duration (seconds)	Time	Target Note
Grey heron	<i>Ardea cinerea</i>	3	Not recorded	Not recorded	Not recorded	1
Snipe	<i>Gallinago gallinago</i>	2	Not recorded	Not recorded	Not recorded	2
Little egret	<i>Egretta garzetta</i>	1	Not recorded	Not recorded	Not recorded	3
Grey heron	<i>Ardea cinerea</i>	1	Not recorded	Not recorded	Not recorded	4
Sparrowhawk	<i>Accipiter nisus</i>	1	Not recorded	Not recorded	Not recorded	5
Little egret	<i>Egretta garzetta</i>	1	Not recorded	Not recorded	Not recorded	6
Black-headed gull	<i>Larus ridibundus</i>	2	Not recorded	Not recorded	Not recorded	7
Kestrel	<i>Falco tinnunculus</i>	1	Not recorded	Not recorded	Not recorded	8
Mallard	<i>Anas platyrhynchos</i>	4	Not recorded	Not recorded	Not recorded	9
Buzzard	<i>Buteo buteo</i>	1	Not recorded	Not recorded	Not recorded	10
Little egret	<i>Egretta garzetta</i>	1	Not recorded	Not recorded	Not recorded	11
Meadow pipit	<i>Anthus pratensis</i>	10	Not recorded	Not recorded	Not recorded	12

Common Name	Scientific Name	Number observed	Flight Height (m)	Flight Duration (seconds)	Time	Target Note
Sparrowhawk	<i>Accipiter nisus</i>	1	Not recorded	Not recorded	Not recorded	13
Grey heron	<i>Ardea cinerea</i>	1	Not recorded	Not recorded	Not recorded	14
Peregrine	<i>Falco peregrinus</i>	1	Not recorded	Not recorded	Not recorded	15

Table 7b: Visit 1 Vantage Point Survey Results River Usk 23rd October 2015 (see Figure 12a)

Common Name	Scientific Name	Number Observed	Flight Height (m)	Flight Duration (seconds)	Time	Target Note
Black-headed gull	<i>Larus ridibundus</i>	1	1	30	10:40:00	AM1
Curlew	<i>Numenius arquata</i>	1	1	45	11:11:00	AM2
Kestrel	<i>Falco tinnunculus</i>	1	20	160	11:21:00	AM3
Mallard	<i>Anas platyrhynchos</i>	4	2	15	11:27:00	AM4
Black-headed gull	<i>Larus ridibundus</i>	2	17.5	48	11:31:00	AM5
Mallard	<i>Anas platyrhynchos</i>	1	10	20	11:31:00	AM6
Herring gull	<i>Larus argentatus</i>	1	15	10	11:37:00	AM7
Black-headed gull	<i>Larus ridibundus</i>	1	17.5	104	11:44:00	AM8
Great black-backed gull	<i>Larus marinus</i>	1	12.5	30	12:14:00	AM9
Grey heron	<i>Ardea cinerea</i>	1	2.5	15	12:15:00	AM10
Redshank	<i>Tringa totanus</i>	1	1	22	12:26:00	AM11
Great black-backed gull	<i>Larus marinus</i>	1	25	65	12:30:00	AM12
Black-headed gull	<i>Larus ridibundus</i>	1	15	60	12:35:00	AM13

Common Name	Scientific Name	Number Observed	Flight Height (m)	Flight Duration (seconds)	Time	Target Note
Black-headed gull	<i>Larus ridibundus</i>	1	25	150	12:45:00	AM14
Curlew	<i>Numenius arquata</i>	1	2	30	13:40:00	PM1
Redshank	<i>Tringa totanus</i>	17	1	20	14:16:00	PM2
Mallard	<i>Anas platyrhynchos</i>	11	7.5	25	15:07:00	PM3
Cormorant	<i>Phalacrocorax carbo</i>	1	5	20	15:13:00	PM4
Cormorant	<i>Phalacrocorax carbo</i>	1	5	30	15:22:00	PM5
Mallard	<i>Anas platyrhynchos</i>	1	2.5	15	15:28:00	PM6
Mallard	<i>Anas platyrhynchos</i>	2	5	20	15:29:00	PM7
Mallard	<i>Anas platyrhynchos</i>	2	2.5	20	15:33:00	PM8

Table 7c: Visit 2 Vantage Point Survey Results River Ebbw 16th November 2015 (see Figure 11b)

Common name	Scientific Name	Number Observed	Flight Height (m)	Flight Duration (seconds)	Time	Target Notes
Kestrel	<i>Falco tinnunculus</i>	1	10	45	10:24:00	AM1
Little egret	<i>Egretta garzetta</i>	1	20	30	10:51:00	AM2
Mallard	<i>Anas platyrhynchos</i>	5	30	30	11:16:00	AM3
Sparrowhawk	<i>Accipiter nisus</i>	1	30	60	12:27:00	AM4
Little egret	<i>Egretta garzetta</i>	1	20	120	13:29:00	PM1
Cormorant	<i>Phalacrocorax carbo</i>	1	20	60	13:40:00	PM2
Buzzard	<i>Buteo buteo</i>	1	100	300	13:40:00	PM3
Buzzard	<i>Buteo buteo</i>	1	100	300	13:42:00	PM3
Buzzard	<i>Buteo buteo</i>	1	100	300	13:45:00	PM3
Little egret	<i>Egretta garzetta</i>	3	20	15	13:47:00	PM4
Kestrel	<i>Falco tinnunculus</i>	1	20	15	13:48:00	PM5
Little egret	<i>Egretta garzetta</i>	1	30	60	13:59:00	PM6

Table 7d: Visit 2 Vantage Point Survey Results River Usk 16th November 2015 (see Figure 12b)

Common name	Scientific name	Number observed	Flight Height (m)	Flight Duration (seconds)	Time	Target Notes
Mallard	<i>Anas platyrhynchos</i>	6	Not recorded	Not recorded	09:45:00	AM1
Curlew	<i>Numenius arquata</i>	1	5	60	10:30:00	AM2
Curlew	<i>Numenius arquata</i>	1	5	60	10:34:00	AM3
Mallard	<i>Anas platyrhynchos</i>	2	10	30	10:45:00	AM4
Lesser black-backed gull	<i>Larus fuscus</i>	1	60	Not recorded	11:47:00	AM5
Mallard	<i>Anas platyrhynchos</i>	1	40	35	11:55:00	AM6
Herring gull	<i>Larus argentatus</i>	9	25	Not recorded	12:15:00	AM7
Black-headed gull	<i>Larus ridibundus</i>	4	5	Not recorded	Not recorded	AM8
Herring gull	<i>Larus argentatus</i>	13	35	Not recorded	13:00:00	AM9
Herring gull	<i>Larus argentatus</i>	32	10	20	13:24:00	PM1
Buzzard	<i>Buteo buteo</i>	1	15	45	13:38:00	PM2
Curlew	<i>Numenius arquata</i>	2	5	20	13:38:00	PM3
Black-headed gull	<i>Larus ridibundus</i>	18	5	30	13:41:00	PM4

Common name	Scientific name	Number observed	Flight Height (m)	Flight Duration (seconds)	Time	Target Notes
Mallard	<i>Anas platyrhynchos</i>	2	Not recorded	Not recorded	13:42:00	PM5
Black-headed gull	<i>Larus ridibundus</i>	10	45	60	13:49:00	PM6
Mallard	<i>Anas platyrhynchos</i>	1	10	10	14:07:00	PM7
Herring gull	<i>Larus argentatus</i>	14	40	60	14:17:00	PM8
Lesser black-backed gull	<i>Larus fuscus</i>	3	Not recorded	Not recorded	14:17:00	PM9
Black-headed gull	<i>Larus ridibundus</i>	73	27.5	40	14:18:00	PM10
Curlew	<i>Numenius arquata</i>	2	10	20	14:47:00	PM11
Buzzard	<i>Buteo buteo</i>	1	5	20	15:00:00	PM12
Teal	<i>Anas crecca</i>	1	10	Not recorded	15:21:00	PM13
Mallard	<i>Anas platyrhynchos</i>	1	30	40	15:52:00	PM14
Curlew	<i>Numenius arquata</i>	1	15	Not recorded	14:48:00	PM15
Cormorant	<i>Phalacrocorax carbo</i>	1	50	20	15:00:00	PM16
Mallard	<i>Anas platyrhynchos</i>	1	Not recorded	Not recorded	13:42:00	PM17

Table 7e: Visit 3 Vantage Point Survey Results River Ebbw 16th December 2015 (see Figure 11c)

Common Name	Scientific Name	Number observed	Flight Height (m)	Flight Duration (seconds)	Time	Target Notes
Mallard	<i>Anas platyrhynchos</i>	4	10	30	11:00	AM1
Mute Swan	<i>Cygnus olor</i>	1	8	20	11:18	AM2
Little Egret	<i>Egretta garzetta</i>	5	10	25	11:35	AM3
Little Egret	<i>Egretta garzetta</i>	4	10	25	11:35	AM3
Mallard	<i>Anas platyrhynchos</i>	2	30	10	11:43	AM4
Canada Goose	<i>Branta canadensis</i>	40	10	15	11:45	AM5
Black-headed Gull	<i>Larus ridibundus</i>	50	10	60	12:27	AM6
Snipe	<i>Gallinago gallinago</i>	1	2	10	12:42	AM7
Herring Gull	<i>Larus argentatus</i>	1	15	20	13:50	PM1
Mallard	<i>Anas platyrhynchos</i>	2	20	20	15:50	PM2
Herring Gull	<i>Larus argentatus</i>	200	15	60	15:30	PM3
Herring Gull	<i>Larus argentatus</i>	300	15	45	15:45	PM4

Common Name	Scientific Name	Number observed	Flight Height (m)	Flight Duration (seconds)	Time	Target Notes
Mallard	<i>Anas platyrhynchos</i>	4	10	30	11:00	AM1
Canada Goose	<i>Branta canadensis</i>	45	15	60	15:50	PM5

Table 7f: Visit 3 Vantage Point Survey Results River Usk 16th December 2015 (see Figure 12c)

Common name	Scientific Name	Number observed	Flight Height (m)	Flight Duration (seconds)	Time	Target Notes
Mallard	<i>Anas platyrhynchos</i>	4	10	20	10:07	AM1
Herring gull	<i>Larus argentatus</i>	5	22.5	25	10:19	AM2
Black-headed gull	<i>Larus ridibundus</i>	1	10	30	10:22	AM3
Herring gull	<i>Larus argentatus</i>	5	10	20	10:40	AM4
Black-headed gull	<i>Larus ridibundus</i>	1	10	60	10:54	AM5
Herring gull	<i>Larus argentatus</i>	3	15	45	10:58	AM6
Herring gull	<i>Larus argentatus</i>	4	10	20	11:17	AM7
Mallard	<i>Anas platyrhynchos</i>	1	10	30	11:12	AM8
Mallard	<i>Anas platyrhynchos</i>	5	10	30	11:14	AM9
Lesser black-backed gull	<i>Larus fuscus</i>	2	15	20	11:20	AM10
Black-headed gull	<i>Larus ridibundus</i>	9	10	30	11:20	AM11
Mallard	<i>Anas platyrhynchos</i>	4	10	30	11:27	AM12
Black-headed gull	<i>Larus ridibundus</i>	3	15	30	11:40	AM13

Common name	Scientific Name	Number observed	Flight Height (m)	Flight Duration (seconds)	Time	Target Notes
Herring gull	<i>Larus argentatus</i>	10	10	30	11:41	AM14
Herring gull	<i>Larus argentatus</i>	6	2	30	11:45	AM15
Curlew	<i>Numenius arquata</i>	2	1	30	12:05	PM1
Lesser black-backed gull	<i>Larus fuscus</i>	1	20	30	12:15	PM2
Cormorant	<i>Phalacrocorax carbo</i>	1	20	30	15:30	PM3
Herring gull	<i>Larus argentatus</i>	9	60	60	12:15	PM4
Lesser black-backed gull	<i>Larus fuscus</i>	1	20	30	12:18	PM5
Lesser black-backed gull	<i>Larus fuscus</i>	6	10	30	12:38	PM6
Herring gull	<i>Larus argentatus</i>	29			12:23	PM7
Curlew	<i>Numenius arquata</i>	1	10	30	14:21	PM8
Black-headed gull	<i>Larus ridibundus</i>	10	10	30	12:28	PM9
Black-headed gull	<i>Larus ridibundus</i>	2	10	30	12:42	PM10
Herring gull	<i>Larus argentatus</i>	3			12:25	PM11
Black-headed gull	<i>Larus ridibundus</i>	27	25	95	14:17	PM12

Common name	Scientific Name	Number observed	Flight Height (m)	Flight Duration (seconds)	Time	Target Notes
Lesser black-backed gull	<i>Larus fuscus</i>	2	15	30	14:00	PM13
Black-headed gull	<i>Larus ridibundus</i>	2	Not recorded	Not recorded	14:46	PM14
Cormorant	<i>Phalacrocorax carbo</i>	5	40	30	15:33	PM15
Cormorant	<i>Phalacrocorax carbo</i>	5	50	30	15:35	PM16

Table 7g: Visit 4 Vantage Point Survey Results River Ebbw 19th January 2016 (see Figure 11d)

Common Name	Scientific Name	Number observed	Flight Height (m)	Flight Duration (seconds)	Time	Target Note
Redshank	<i>Tringa totanus</i>	1	2	30	09:55	AM1
Redshank	<i>Tringa totanus</i>	1	3	10	09:59	AM2
Redshank	<i>Tringa totanus</i>	1	1	10	10:29	AM3
Sparrowhawk	<i>Accipiter nisus</i>	1	2	30	10:34	AM4
Redshank	<i>Tringa totanus</i>	3	2	20	10:52	AM5
Buzzard	<i>Buteo buteo</i>	1	5	10	10:59	AM6
Redshank	<i>Tringa totanus</i>	2	2	20	12:00	PM1
Grey heron	<i>Ardea cinerea</i>	1	10	30	12:55	PM2
Redshank	<i>Tringa totanus</i>	1	2	30	13:15	PM3
Redshank	<i>Tringa totanus</i>	3	3	20	13:20	PM4
Redshank	<i>Tringa totanus</i>	1	2	10	13:22	PM5
Redshank	<i>Tringa totanus</i>	1	3	10	13:24	PM6
Buzzard	<i>Buteo buteo</i>	1	10	60	13:25	PM7

Common Name	Scientific Name	Number observed	Flight Height (m)	Flight Duration (seconds)	Time	Target Note
Redshank	<i>Tringa totanus</i>	1	6	30	13:30	PM8
Redshank	<i>Tringa totanus</i>	2	6	30	13:37	PM9
Redshank	<i>Tringa totanus</i>	1	5	30	14:22	PM10
Redshank	<i>Tringa totanus</i>	1	2	30	14:25	PM11
Little egret	<i>Egretta garzetta</i>	1	2	10	14:48	PM12

Table 7h: Visit 4 Vantage Point Survey Results River Usk 19th January 2016 (see Figure 12d)

Common Name	Scientific Name	Number Observed	Flight Height (m)	Flight Duration (seconds)	Time	Target Note
Redshank	<i>Tringa totanus</i>	1	5	5	08:40	AM1
Redshank	<i>Tringa totanus</i>	8	5	10	08:45	AM2
Lesser black-backed gull	<i>Larus fuscus</i>	1	10	25	08:50	AM3
Black-headed gull	<i>Larus ridibundus</i>	1	10	10	08:52	AM4
Black-headed gull	<i>Larus ridibundus</i>	2	10	10	09:10	AM5
Redshank	<i>Tringa totanus</i>	2	5	10	09:15	AM6
Herring gull	<i>Larus argentatus</i>	1	15	20	09:25	AM7
Redshank	<i>Tringa totanus</i>	1	1	20	09:48	AM8
Black-headed gull	<i>Larus ridibundus</i>	1	8	25	09:50	AM9
Herring gull	<i>Larus argentatus</i>	1	25	40	10:15	AM10
Herring gull	<i>Larus argentatus</i>	1	30	40	10:25	AM11
Redshank	<i>Tringa totanus</i>	4	2	10	10:31	AM12
Mallard	<i>Anas platyrhynchos</i>	3	15	20	10:45	AM13

Common Name	Scientific Name	Number Observed	Flight Height (m)	Flight Duration (seconds)	Time	Target Note
Redshank	<i>Tringa totanus</i>	1	3	10	11:30	AM14
Redshank	<i>Tringa totanus</i>	1	5	10	11:36	AM15
Redshank	<i>Tringa totanus</i>	12	15	20	12:51	PM1
Cormorant	<i>Phalacrocorax carbo</i>	1	25	40	12:50	PM2
Curlew	<i>Numenius arquata</i>	1	25	40	13:00	PM3
Herring gull	<i>Larus argentatus</i>	1	30	25	13:05	PM4
Redshank	<i>Tringa totanus</i>	1	3	15	13:05	PM5
Black-headed gull	<i>Larus ridibundus</i>	1	2	5	13:06	PM6
Mallard	<i>Anas platyrhynchos</i>	2	20	25	14:04	PM7
Black-headed gull	<i>Larus ridibundus</i>	1	15	25	14:41	PM8

Table 7i: Visit 5 Vantage Point Survey Results River Ebbw 18th February 2016 (see Figure 11e)

Common Name	Scientific Name	Number observed	Flight Height (m)	Flight Duration (seconds)	Time	Target Note
Buzzard	<i>Buteo buteo</i>	1	30	30	09:39	AM1
Little egret	<i>Egretta garzetta</i>	1	30	60	09:59	AM2
Buzzard	<i>Buteo buteo</i>	3	60	480	10:05	AM3
Little egret	<i>Egretta garzetta</i>	1	30	30	12:12	AM4
Kestrel	<i>Falco tinnunculus</i>	1	40	600	14:10	PM1
Shelduck	<i>Tadorna tadorna</i>	2	5	30	14:43	PM2
Mute swan	<i>Cygnus olor</i>	1	2	30	14:54	PM3
Little egret	<i>Egretta garzetta</i>	1	3	30	14:57	PM4

Table 7j: Visit 5 Vantage Point Survey Results River Usk 18th February 2016 (see Figure 12e)

Common name	Scientific Name	Number observed	Flight Height (m)	Flight Duration (seconds)	Time	Target Note
Herring gull	<i>Larus argentatus</i>	4	Not recorded	Not recorded	09:32	AM1
Herring gull	<i>Larus argentatus</i>	15	Not recorded	Not recorded	09:42	AM2
Black-headed gull	<i>Larus ridibundus</i>	2	Not recorded	Not recorded	09:45	AM3
Black-headed gull	<i>Larus ridibundus</i>	1	Not recorded	Not recorded	09:48	AM4
Black-headed gull	<i>Larus ridibundus</i>	7	Not recorded	Not recorded	09:58	AM5
Herring gull	<i>Larus argentatus</i>	5	Not recorded	Not recorded	10:48	AM6
Buzzard	<i>Buteo buteo</i>	1	Not recorded	Not recorded	11:04	AM7
Buzzard	<i>Buteo buteo</i>	2	Not recorded	Not recorded	11:06	AM8
Herring gull	<i>Larus argentatus</i>	8	Not recorded	Not recorded	11:45	AM9
Black-headed gull	<i>Larus ridibundus</i>	10	Not recorded	Not recorded	11:48	AM10
Curlew	<i>Numenius arquata</i>	1	Not recorded	Not recorded	11:50	AM11
Redshank	<i>Tringa totanus</i>	10	Not recorded	Not recorded	11:59	AM12
Lesser black-backed gull	<i>Larus fuscus</i>	6	Not recorded	Not recorded	12:01	PM1

Common name	Scientific Name	Number observed	Flight Height (m)	Flight Duration (seconds)	Time	Target Note
Black-headed gull	<i>Larus ridibundus</i>	7	Not recorded	Not recorded	12:10	PM2
Herring gull	<i>Larus argentatus</i>	3	Not recorded	Not recorded	12:52	PM3
Redshank	<i>Tringa totanus</i>	3	Not recorded	Not recorded	13:07	PM4
Mallard	<i>Anas platyrhynchos</i>	1	Not recorded	Not recorded	15:04	PM5
Curlew	<i>Numenius arquata</i>	1	Not recorded	Not recorded	14:47	PM6
Mallard	<i>Anas platyrhynchos</i>	2	Not recorded	Not recorded	15:04	PM7

Table 7k: Visit 6 Vantage Point Survey Results River Ebbw 15th March 2016 (see Figure 11f)

Common name	Scientific Name	Number observed	Flight Height (m)	Flight Duration (seconds)	Time	Target Number
Sparrowhawk	<i>Accipiter nisus</i>	1	50	180	11:25	AM1
Teal	<i>Anas crecca</i>	6	1	15	11:39	AM2
Redshank	<i>Tringa totanus</i>	1	1	10	11:39	AM3
Raven	<i>Corvus corax</i>	1	15	30	11:47	AM4
Buzzard	<i>Buteo buteo</i>	3	30	360	12:14	AM5
Buzzard	<i>Buteo buteo</i>	6	3	10	12:22	AM6
Sparrowhawk	<i>Accipiter nisus</i>	1	20	60	12:27	AM7
Mallard	<i>Anas platyrhynchos</i>	1	10	20	12:28	AM8
Buzzard	<i>Buteo buteo</i>	1	20	60	12:28	AM9
Grey heron	<i>Ardea cinerea</i>	1	2	10	12:42	AM10
Buzzard	<i>Buteo buteo</i>	1	10	30	12:45	AM11
Black-tailed godwit	<i>Limosa limosa</i>	7	20	30	12:54	AM12
Oystercatcher	<i>Haematopus ostralegus</i>	2	5	30	12:55	AM13

Common name	Scientific Name	Number observed	Flight Height (m)	Flight Duration (seconds)	Time	Target Number
Mallard	<i>Anas platyrhynchos</i>	2	20	30	15:35	PM1
Buzzard	<i>Buteo buteo</i>	1	20	120	15:39	PM2
Grey heron	<i>Ardea cinerea</i>	1	5	60	16:23	PM3
Mallard	<i>Anas platyrhynchos</i>	8	10	60	16:25	PM4
Green sandpiper	<i>Tringa ochropus</i>	1	3	30	16:28	PM5
Little egret	<i>Egretta garzetta</i>	1	2	30	17:00	PM6

Table 71: Visit 6 Vantage Point Survey Results River Usk 15th March 2016 (see Figure 12f)

Common Name	Scientific Name	Number Observed	Flight Height (m)	Flight Duration (seconds)	Time	Target Number
Mallard	<i>Anas platyrhynchos</i>	2	15	30	11:55	AM1
Mallard	<i>Anas platyrhynchos</i>	2	8	25	11:58	AM2
Grey heron	<i>Ardea cinerea</i>	2	20	30	12:00	AM3
Mallard	<i>Anas platyrhynchos</i>	2	5	10	12:25	AM4
Redshank	<i>Tringa totanus</i>	3	20	85	12:45	AM5
Redshank	<i>Tringa totanus</i>	2	2	15	12:55	AM6
Curlew	<i>Numenius arquata</i>	1	5	25	13:38	AM7
Mallard	<i>Anas platyrhynchos</i>	3	15	20	15:59	PM1
Herring gull	<i>Larus argentatus</i>	1	15	25	16:03	PM2
Black-headed gull	<i>Larus ridibundus</i>	2	1	10	16:58	PM3
Curlew	<i>Numenius arquata</i>	1	3	5	17:29	PM4
Lesser black-backed gull	<i>Larus fuscus</i>	3	3	5	17:37	PM5

Annex E: Vantage Point “Point Count” Results

Table 8a: Visit 1 Vantage Point “Point Count” Results River Ebbw 23rd October 2015

Common Name	Scientific Name	Count 1	Count 2	Count 3	Count 4	Count 5	Count 6
Black-headed gull	<i>Larus ridibundus</i>	-	Present	Present	-	Present	Present
Carrion crow	<i>Corvus corone</i>	Present	Present	Present	Present	Present	Present
Cetti's warbler	<i>Cettia cetti</i>	1	-	-	-	-	-
Curlew	<i>Numenius arquata</i>	-	-	1	-	-	-
Great black-backed gull	<i>Larus marinus</i>	-	-	-	-	2	20
Grey heron	<i>Ardea cinerea</i>	-	-	-	4	Present	-
Herring gull	<i>Larus argentatus</i>	6	Present	Present	Present	200	400
Jackdaw	<i>Corvus monedula</i>	-	-	-	Present	Present	Present
Kestrel	<i>Falco tinnunculus</i>	-	1	-	-	-	-
Lesser black-backed gull	<i>Larus fuscus</i>	-	-	-	-	4	-
Little egret	<i>Egretta garzetta</i>	-	1	-	-	-	-
Magpie	<i>Pica pica</i>	1	-	-	Present	-	-

Common Name	Scientific Name	Count 1	Count 2	Count 3	Count 4	Count 5	Count 6
Meadow pipit	<i>Anthus pratensis</i>	-	Present	1	-	-	-
Moorhen	<i>Gallinula chloropus</i>	-	-	1	-	Present	-
Mute swan	<i>Cygnus olor</i>	8	4	15	-	Present	-
Peregrine	<i>Falco peregrinus</i>	-	1	1	-	-	-
Pied wagtail	<i>Motacilla alba</i>	-	-	-	-	-	-
Redshank	<i>Tringa totanus</i>	40	20	6	-	-	-
Robin	<i>Erithacus rubecula</i>	Present	-	-	-	Present	-
Starling	<i>Sturnus vulgaris</i>	100	200	Present	Present	Present	-
Teal	<i>Anas crecca</i>	10	6	2	-	-	-
Wood pigeon	<i>Columba palumbus</i>	1	-	-	-	-	-
Wren	<i>Troglodytes troglodytes</i>	Present	-	-	-	-	-

Table 8b: Visit 2 Vantage Point “*Point Count*” Results River Ebbw 16th November 2015

Common Name	Scientific Name	Count 1	Count 2	Count 3	Count 4	Count 5	Count 6
Black-headed gull	<i>Larus ridibundus</i>	Present	Present	6	-	-	Present
Canada goose	<i>Branta canadensis</i>	-	-	12	-	-	-
Carrion crow	<i>Corvus corone</i>	Present	-	Present	Present	Present	Present
Cormorant	<i>Phalacrocorax carbo</i>	-	-	-	-	-	1
Great black-backed gull	<i>Larus marinus</i>	Present	-	1	-	-	Present
Great tit	<i>Parus major</i>	2	-	-	-	-	-
Grey heron	<i>Ardea cinerea</i>	-	1	1	-	2	-
Herring gull	<i>Larus argentatus</i>	Present	-	-	Present	Present	Present
Jackdaw	<i>Corvus monedula</i>	Present	Present	Present	Present		1000
Little egret	<i>Egretta garzetta</i>	-	1	-	-	-	-
Magpie	<i>Pica pica</i>	Present	Present	Present	-	-	Present
Mallard	<i>Anas platyrhynchos</i>	-	3	6	-	-	-
Meadow Pipit	<i>Anthus pratensis</i>	10	Present	-	Present	-	-
Moorhen	<i>Gallinula chloropus</i>	-	-	1	-	-	-

Common Name	Scientific Name	Count 1	Count 2	Count 3	Count 4	Count 5	Count 6
Mute swan	<i>Cygnus olor</i>	36	36	38	43	38	41
Pied wagtail	<i>Motacilla alba</i>	10	Present	Present	-	Present	-
Redshank	<i>Tringa totanus</i>	100	-	3	Present	6	-
Reed bunting	<i>Emberiza schoeniclus</i>	1	-	-	-	-	-
Robin	<i>Erithacus rubecula</i>	3	-	-	-	-	-
Rook	<i>Corvus frugilegus</i>	-	-	-	-	-	Present
Starling	<i>Sturnus vulgaris</i>	300	500	2000	Present	Present	3000
Teal	<i>Anas crecca</i>	60	1	2	-	12	-
Wigeon	<i>Anas penelope</i>	3	-	-	-	-	-
Wren	<i>Troglodytes troglodytes</i>	-	-	1	-	-	-

Table 8c: Visit 2 Vantage Point “Point Count” Results River Usk 16th November 2015

Common Name	Scientific Name	Count 1	Count 2	Count 3	Count 4	Count 5	Count 6
Blackbird	<i>Turdus merula</i>	2	-	-	1	-	2
Curlew	<i>Numenius arquata</i>	-	-	-	-	-	1
Dunnock	<i>Prunella modularis</i>	-	1	-	1	-	1
Goldfinch	<i>Carduelis carduelis</i>	-	5	-	14	-	-
Great black-backed gull	<i>Larus marinus</i>	-	-	-	-	-	-
Great tit	<i>Parus major</i>	-	-	-	-	-	1
Herring gull	<i>Larus argentatus</i>	-	-	-	1	-	Present
Magpie	<i>Pica pica</i>	-	2	-	1	-	-
Mallard	<i>Anas platyrhynchos</i>	3	-	-	2	-	-
Pied wagtail	<i>Motacilla alba</i>	-	-	1	-	-	-
Rook	<i>Corvus frugilegus</i>	7	-	1	-	2	3
Woodpigeon	<i>Columba palumbus</i>	2	1	-	-	1	1
Wren	<i>Troglodytes troglodytes</i>	1	-	-	-	-	1

Table 8d: Visit 3 Vantage Point “*Point Count*” Results River Ebbw 16th December 2015

Common Name	Scientific Name	Count 1	Count 2	Count 3	Count 4	Count 5
Blackbird	<i>Turdus merula</i>	Present	-	-	-	-
Black-headed gull	<i>Larus ridibundus</i>	80	-	Present	300	-
Buzzard	<i>Buteo buteo</i>	-	1	3	-	-
Carrion crow	<i>Corvus corone</i>	Present	Present	-	Present	Present
Goldfinch	<i>Carduelis carduelis</i>	Present	-	-	-	-
Great black-backed gull	<i>Larus marinus</i>	-	-	-	3	-
Grey heron	<i>Ardea cinerea</i>	Present	-	-	-	-
Herring gull	<i>Larus argentatus</i>	-	-	Present	300	-
Jackdaw	<i>Corvus monedula</i>	Present	Present	-	-	Present
Kingfisher	<i>Alcedo atthis</i>	-	-	-	1	-
Linnet	<i>Carduelis cannabina</i>	-	-	-	-	-
Little egret	<i>Egretta garzetta</i>	3	7	-	9	12
Magpie	<i>Pica pica</i>	-	-	-	-	-
Mallard	<i>Anas platyrhynchos</i>	20	10	-	Present	-

Common Name	Scientific Name	Count 1	Count 2	Count 3	Count 4	Count 5
Meadow pipit	<i>Anthus pratensis</i>	Present	Present	-	-	-
Mistle thrush	<i>Turdus viscivorus</i>	1	-	-	-	-
Mute swan	<i>Cygnus olor</i>	7	-	16	Present	13
Pied wagtail	<i>Motacilla alba</i>	Present	Present	-	-	-
Redshank	<i>Tringa totanus</i>	100	100	-	Present	-
Rook	<i>Corvus frugilegus</i>	Present	-	-	Present	-
Snipe	<i>Gallinago gallinago</i>	-	-	-	1	-
Starling	<i>Sturnus vulgaris</i>	Present	Present	6	Present	Present
Teal	<i>Anas crecca</i>	50	-	-	-	-
Wren	<i>Troglodytes troglodytes</i>	-	-	-	Present	-

Table 8e: Visit 3 Vantage Point “*Point Count*” Results River Usk 16th December 2015

Common Name	Scientific Name	Count 1	Count 2	Count 3	Count 4	Count 5
Black-headed gull	<i>Larus ridibundus</i>	-	2	-	-	25
Carrion crow	<i>Corvus corone</i>	-	4	-	1	-
Chaffinch	<i>Fringilla coelebs</i>	-	-	1	-	-
Curlew	<i>Numenius arquata</i>	-	-	2	-	-
Goldfinch	<i>Carduelis carduelis</i>	-	-	-	-	2
Herring gull	<i>Larus argentatus</i>	-	24	-	-	-
Lesser black-backed gull	<i>Larus fuscus</i>	-	2	-	-	-
Linnet	<i>Carduelis cannabina</i>	9	-	-	-	-
Magpie	<i>Pica pica</i>	-	1	-	-	-
Mallard	<i>Anas platyrhynchos</i>	9	7	1	-	3
Meadow pipit	<i>Anthus pratensis</i>	1	-	-	-	-
Pied wagtail	<i>Motacilla alba</i>	1	-	1	1	-
Redshank	<i>Tringa totanus</i>	-	-	-	1	10
Wood pigeon	<i>Columba palumbus</i>	-	2	-	1	-

Table 8f: Visit 4 Vantage Point “*Point Count*” Results River Ebbw 19th January 2016.

Only two point counts were carried out at the River Ebbw this month; one in the morning, one in the afternoon.

Common Name	Scientific Name	Count 1	Count 2
Black-headed gull	<i>Chroicocephalus ridibundus</i>	-	Present
Buzzard	<i>Buteo buteo</i>	1	-
Canada goose	<i>Branta canadensis</i>	23	-
Carrion crow	<i>Corvus corone</i>	Present	Present
Cetti's warbler	<i>Cettia cetti</i>	Present	Present
Chaffinch	<i>Fringilla coelebs</i>	-	Present
Collared dove	<i>Streptopelia decaocta</i>	2	-
Dunnock	<i>Prunella modularis</i>	Present	-
Fieldfare	<i>Turdus pilaris</i>	Present	-
Great black-backed gull	<i>Larus marinus</i>	-	Present
Herring gull	<i>Larus argentatus</i>	10	Present
House sparrow	<i>Passer domesticus</i>	Present	-

Common Name	Scientific Name	Count 1	Count 2
Jackdaw	<i>Corvus monedula</i>	Present	Present
Little egret	<i>Egretta garzetta</i>	Present	-
Mallard	<i>Anas platyrhynchos</i>	Present	-
Meadow pipit	<i>Anthus pratensis</i>	Present	Present
Moorhen	<i>Gallinula chloropus</i>	Present	-
Mute swan	<i>Cygnus olor</i>	Present	Present
Pied wagtail	<i>Motacilla alba</i>	Present	Present
Redshank	<i>Tringa totanus</i>	Present	Present
Redwing	<i>Turdus iliacus</i>	Present	-
Robin	<i>Erithacus rubecula</i>	Present	Present
Rook	<i>Corvus frugilegus</i>	-	Present
Sparrowhawk	<i>Accipiter nisus</i>	1	-
Starling	<i>Sturnus vulgaris</i>	Present	Present
Teal	<i>Anas crecca</i>	12	Present
Wood pigeon	<i>Columba palumbus</i>	Present	-

Table 8g: Visit 4 Vantage Point "Point Count" Results River Usk 19th January 2016

Common Name	Scientific Name	Count 1	Count 2	Count 3	Count 4	Count 5	Count 6
Blackbird	<i>Turdus merula</i>	-	-	-	-	3	3
Black-headed gull	<i>Larus ridibundus</i>	-	15	4	8	15	-
Blue tit	<i>Cyanistes caeruleus</i>	1	1	-	-	2	-
Carrion crow	<i>Corvus corone</i>	4	-	-	2	-	-
Curlew	<i>Numenius arquata</i>	1	-	-	-	-	-
Dunnock	<i>Prunella modularis</i>	-	-	-	-	-	6
Goldfinch	<i>Carduelis carduelis</i>	-	-	-	-	-	3
Grey heron	<i>Ardea cinerea</i>	1	-	-	-	1	-
Herring gull	<i>Larus argentatus</i>	-	-	-	-	1	-
Linnet	<i>Carduelis cannabina</i>	-	-	-	-	-	1
Magpie	<i>Pica pica</i>	1	1	-	-	-	-
Mallard	<i>Anas platyrhynchos</i>	10	4	7	7	5	-
Redshank	<i>Tringa totanus</i>	-	-	-	1	-	-

Common Name	Scientific Name	Count 1	Count 2	Count 3	Count 4	Count 5	Count 6
Robin	<i>Erithacus rubecula</i>	-	8	-	-	-	4
Wood pigeon	<i>Columba palumbus</i>	3	-	-	3	-	1
Wren	<i>Troglodytes troglodytes</i>	-	-	-	-	1	-

Table 8h: Visit 5 Vantage Point “*Point Count*” Results River Ebbw 18th February 2016

Common Name	Scientific Name	Count 1	Count 2	Count 3	Count 4	Count 5
Black-headed gull	<i>Larus ridibundus</i>	-	-	Present	-	Present
Blue tit	<i>Cyanistes caeruleus</i>	-	Present	-	-	Present
Carrion crow	<i>Corvus corone</i>	-	Present	Present	Present	Present
Great black-backed gull	<i>Larus marinus</i>	-	Present	-	-	1
Herring gull	<i>Larus argentatus</i>	-	-	Present	-	300
Jackdaw	<i>Corvus monedula</i>	-	Present	Present	-	Present
Linnet	<i>Carduelis cannabina</i>	-	Present	-	12	-
Magpie	<i>Pica pica</i>	-	Present	-	-	Present
Mallard	<i>Anas platyrhynchos</i>	3	Present	-	-	-
Meadow pipit	<i>Anthus pratensis</i>	Present	-	-	-	Present
Mute swan	<i>Cygnus olor</i>	-	Present	-	3	-

Common Name	Scientific Name	Count 1	Count 2	Count 3	Count 4	Count 5
Pied wagtail	<i>Motacilla alba</i>	Present	-	-	Present	-
Redshank	<i>Tringa totanus</i>	6	6	6	6	2
Rook	<i>Corvus frugilegus</i>	-	Present	-	-	-
Starling	<i>Sturnus vulgaris</i>	10	Present	-	-	Present
Teal	<i>Anas crecca</i>	5	Present	2	12	21

Table 8i: Visit 5 Vantage Point “*Point Count*” Results River Usk 18th February 2016

Common Name	Scientific Name	Count 1	Count 2	Count 3	Count 4	Count 5
Black-headed gull	<i>Larus ridibundus</i>	1	-	-	-	-
Blackbird	<i>Turdus merula</i>	-	1	-	-	-
Blue tit	<i>Cyanistes caeruleus</i>	-	-	4	-	-
Bullfinch	<i>Pyrrhula pyrrhula</i>	-	1	-	-	-
Carrion crow	<i>Corvus corone</i>	-	-	1	-	-
Coot	<i>Fulica atra</i>	-	-	1	-	-
Dunnock	<i>Prunella modularis</i>	1	-	1	-	-
Goldfinch	<i>Carduelis carduelis</i>	2	-	3	3	-
Grey heron	<i>Ardea cinerea</i>	1	-	-	-	-
Herring gull	<i>Larus argentatus</i>	2	20	-	-	-
Long-tailed tit	<i>Aegithalos caudatus</i>	-	1	-	-	-

Common Name	Scientific Name	Count 1	Count 2	Count 3	Count 4	Count 5
Long-tailed tit	<i>Aegithalos caudatus</i>	-	-	-	-	1
Magpie	<i>Pica pica</i>	-	1	-	-	-
Mallard	<i>Anas platyrhynchos</i>	3	-	-	-	-
Redshank	<i>Tringa totanus</i>	-	-	-	-	2
Robin	<i>Erithacus rubecula</i>	1	1	-	1	-
Wood pigeon	<i>Columba palumbus</i>	-	-	-	3	-
Wren	<i>Troglodytes troglodytes</i>	-	1	3		1

Table 8j: Visit 6 Vantage Point “*Point Count*” Results River Ebbw 15th March 2016.

Only two point counts were carried out at the River Ebbw this month; one in the morning, one in the afternoon.

Common Name	Scientific Name	Count 1	Count 2
Blackbird	<i>Turdus merula</i>	Present	-
Black-headed gull	<i>Larus ridibundus</i>	-	Present
Carrion crow	<i>Corvus corone</i>	Present	Present
Cetti's warbler	<i>Cettia cetti</i>	Present	-
Chaffinch	<i>Fringilla coelebs</i>	Present	-
Cormorant	<i>Phalacrocorax carbo</i>	Present	1
Dunnock	<i>Prunella modularis</i>	Present	-
Great black-backed gull	<i>Larus marinus</i>	Present	Present
Greenfinch	<i>Chloris chloris</i>	Present	-
Herring gull	<i>Larus argentatus</i>	Present	Present
Jackdaw	<i>Corvus monedula</i>	Present	Present
Magpie	<i>Pica pica</i>	Present	-
Mallard	<i>Anas platyrhynchos</i>	Present	3

Common Name	Scientific Name	Count 1	Count 2
Meadow pipit	<i>Anthus pratensis</i>	10	Present
Mute swan	<i>Cygnus olor</i>	23	21
Oystercatcher	<i>Haematopus ostralegus</i>	2	-
Pied wagtail	<i>Motacilla alba</i>	Present	Present
Redshank	<i>Tringa totanus</i>	-	30
Rook	<i>Corvus frugilegus</i>	Present	Present
Starling	<i>Sturnus vulgaris</i>	Present	Present
Teal	<i>Anas crecca</i>	-	20
Wood pigeon	<i>Columba palumbus</i>	Present	Present
Wren	<i>Troglodytes troglodytes</i>	Present	-

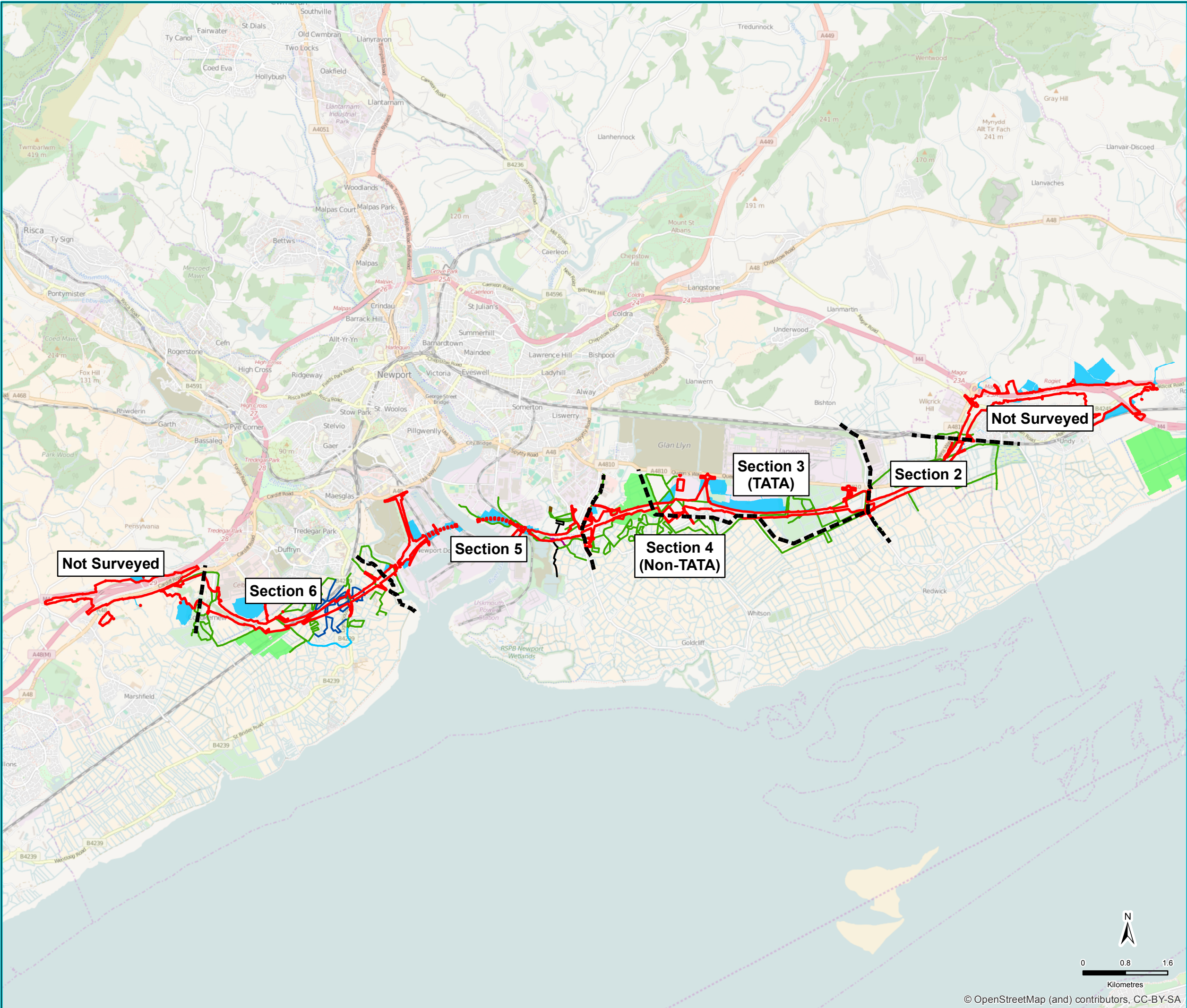
Table 8k: Visit 6 Vantage Point “Point Count” Results River Usk 15th March 2016

Common Name	Scientific Name	Count 1	Count 2	Count 3	Count 4	Count 5	Count 6
Black-headed gull	<i>Larus ridibundus</i>	-	-	23	4	20	12
Blue tit	<i>Cyanistes caeruleus</i>	-	-	2	-	-	-
Carrion crow	<i>Corvus corone</i>	-	2	4	-	1	-
Curlew	<i>Numenius arquata</i>	-	-	1	1	-	-
Dunnock	<i>Prunella modularis</i>	-	-	-	3	-	-
Goldfinch	<i>Carduelis carduelis</i>	-	-	3	-	-	-
Great black-backed gull	<i>Larus marinus</i>	-	-	4	-	-	-
Herring gull	<i>Larus argentatus</i>	12	4	4	4	4	-
Lesser black-backed gull	<i>Larus fuscus</i>	4	-	1	-	-	47
Mallard	<i>Anas platyrhynchos</i>	-	-	-	2	3	-
Redshank	<i>Tringa totanus</i>	-	-	3	-	-	-
Turnstone	<i>Arenaria interpres</i>	-	-	-	1	-	-
Woodpigeon	<i>Columba palumbus</i>	-	1	4	-	-	-
Wren	<i>Troglodytes troglodytes</i>	-	1	-	-	-	-

Figures

Figure 1	Site Location
Figure 2	Summary of Wintering Bird Transect Survey Results
Figure 3a-d	Summary of Wintering Bird Vantage Point Survey Results River Ebbw
Figure 4a-d	Summary of Wintering Bird Vantage Point Survey Results River Usk
Figures 5 - 12	Monthly Transect and Vantage Point Survey Result

Filepath: S:\Cardiff\Projects\MRPS108 M4 Widening\Reports\Mapping\Working\Wintering Bird Survey\MRPS108_Fig1_SiteLocation_KM_290316.mxd



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Legend

Permanent Land Take

Ecological Mitigation

Temporary Construction Land

Section

Transect Route

Original transect

New transect route

Access Issues

No access

Transects in Land Parcels
215a, 215h, 215p, 215j: No Access

Scrub in Section 5: No Access

Inaccessible Forest Track: No Access

Site Grid Reference: 334,685 185,754

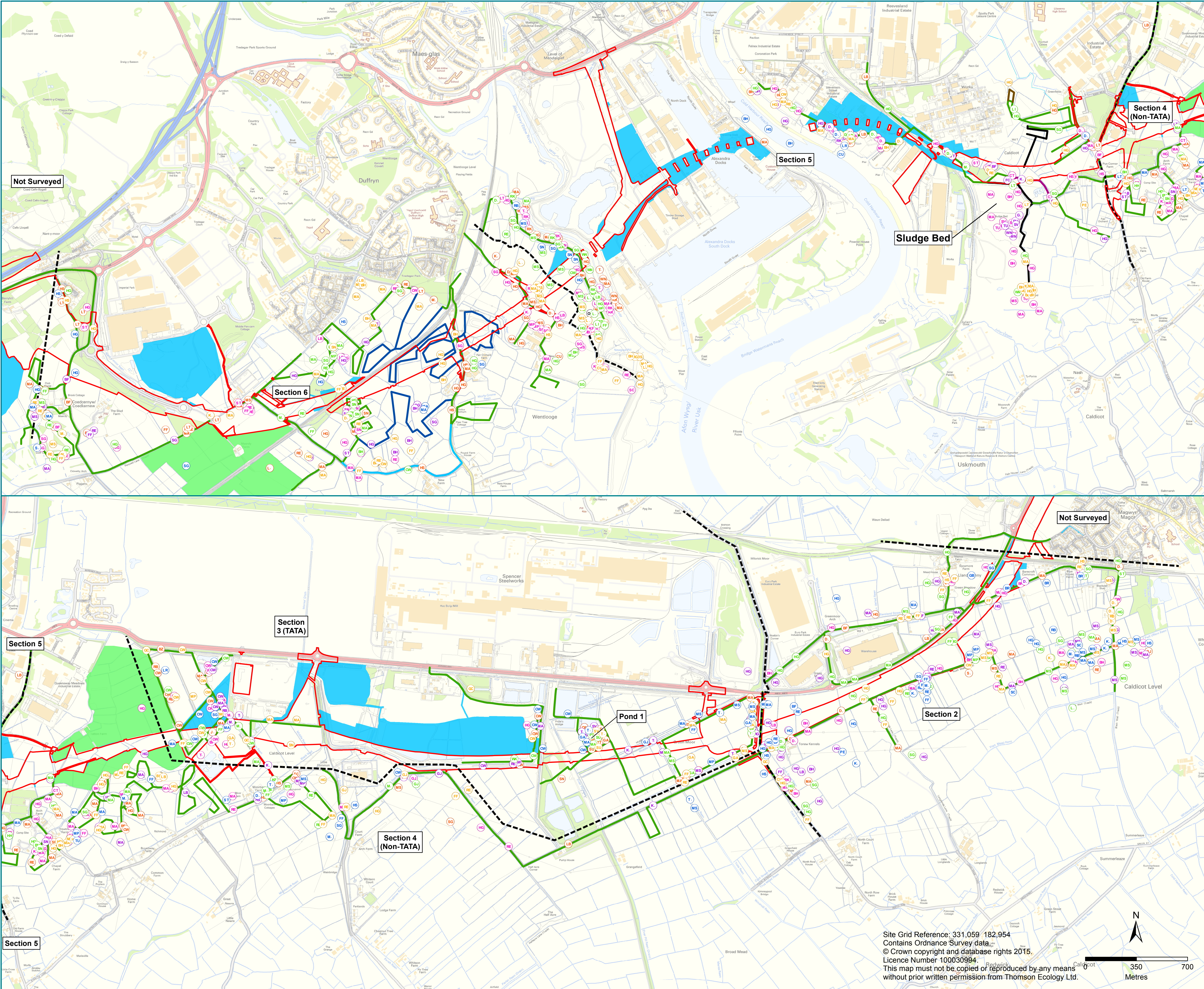
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Date	Date
September 2016	September 2016
Client	
RPS Group PLC	
Figure Number	
1	
Figure Title	
Appendix S10.4 - Site Location	

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Legend

- Permanent Land Take
- Ecological Mitigation
- Temporary
- Construction Land

Section

Transect Route

- Original transect
- New transect route

Access Issues

- No access
- Transects in Land Parcels 215a, 215h, 215p, 215j: No Access
- Scrub in Section 5: No Access
- Inaccessible
- Forest Track: No Access

Visit Number

- 1
- 2
- 3
- 4
- 5
- 6

Wintering Bird Species

- Bullfinch
- Black-headed Gull
- Brambling
- Bearded Tit
- Buzzard
- Coal Tit
- Curlew
- Cetti's Warbler
- Dunnock
- Firecrest
- Fieldfare
- Green Woodpecker
- Gadwall
- Great Black-backed Gull
- Goldcrest
- Greylag Goose
- Herring Gull
- Hen Harrier
- House Sparrow
- Jay
- Kestrel
- Kingfisher
- Lapwing
- Lesser Black-backed Gull
- Linnet
- Lesser Redpoll
- Long-tailed Tit
- Mistle Thrush
- Mallard
- Meadow Pipit
- Mute Swan
- Oystercatcher
- Peregrine
- Pochard
- Pintail
- Reed Bunting
- Redwing
- Redshank
- Skylark
- Stonechat
- Starling
- Snipe
- Song Thrush
- Shelduck
- Shoveler
- Teal
- Treecreeper
- Tufted Duck
- Woodcock
- Wigeon

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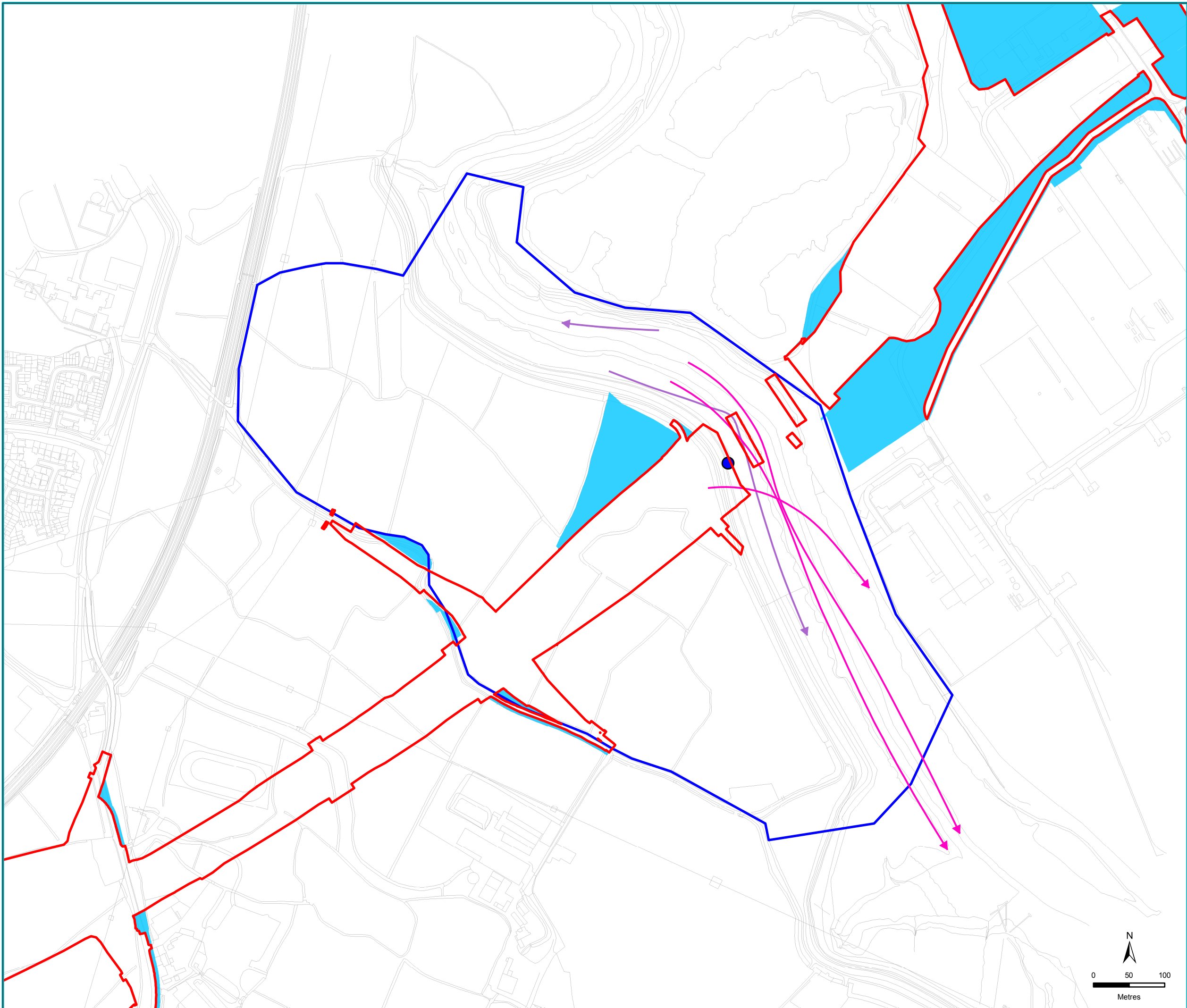
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Date September 2016	Date Spetember 2016

Client **RPS Group PLC**

Figure Number **2**

Figure Title **Appendix S10.4 - Summary of Wintering Bird Transect Survey Results**

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Legend

● Vantage Point Location

Gulls

→ Black-headed Gull

→ Herring Gull

Temporary Construction Land

Survey Boundary

Permanent Land Take

Site Grid Reference: 330,726 184,506

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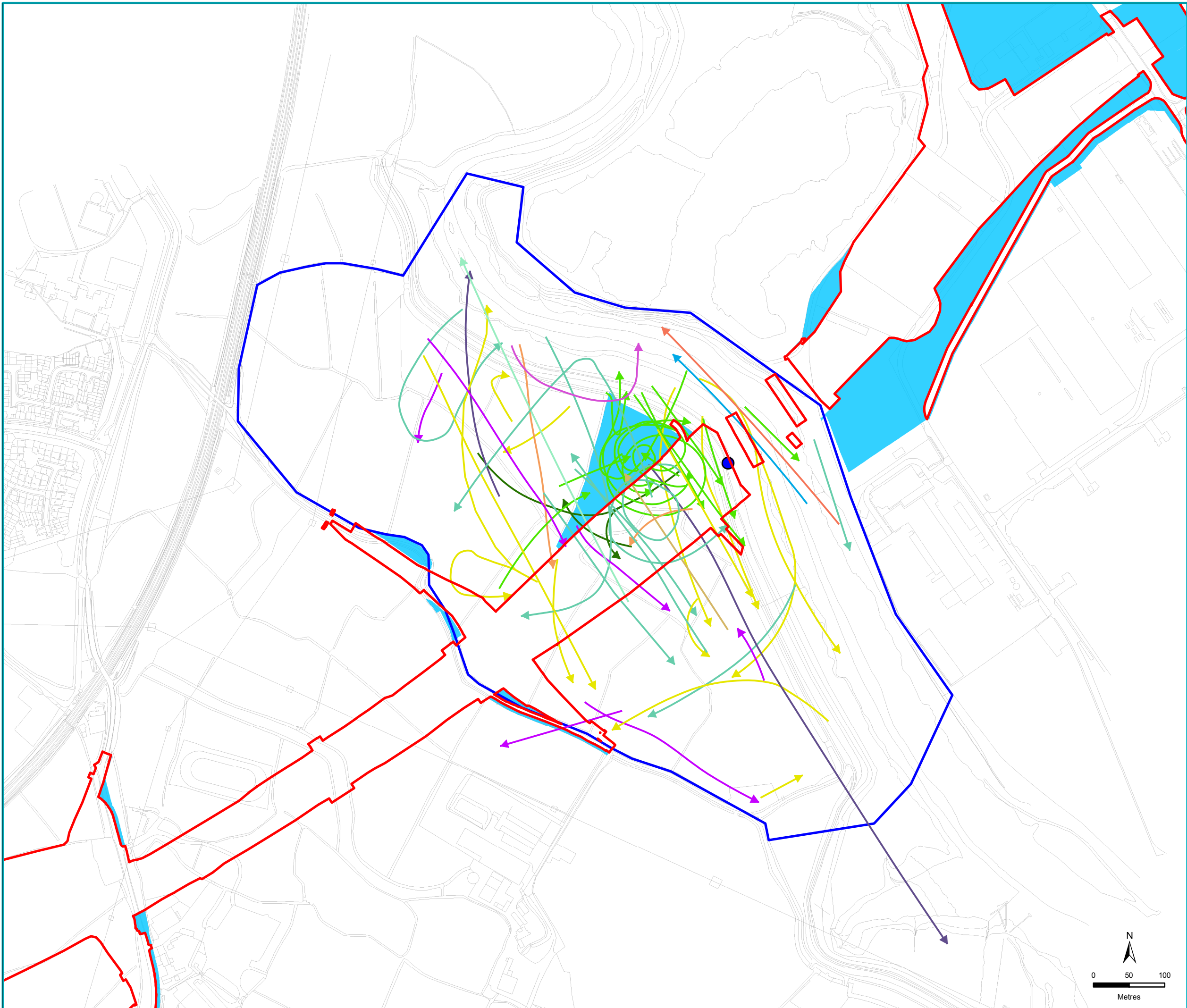
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Client
RPS Group PLC

Figure Number
3a

Figure Title
Appendix S10.4 -
Summary of Wintering Bird
Vantage Point Survey
Results River Ebbw Gulls

Filepath: S:\Cardiff\Projects\MRPS 108 M4 Widening\Reports\Mapping\Working\Wintering Bird Survey\MRPS108_Fig3_SummaryWinteringBirdVantagePointRiverEbbw_KM_310316.mxd



Legend

● Vantage Point Location

Waterfowl/Waders

→ Black-tailed Godwit

→ Canada Goose

→ Green Sandpiper

→ Grey Heron

→ Little Egret

→ Mallard

→ Mute Swan

→ Oystercatcher

→ Redshank

→ Shelduck

→ Snipe

→ Teal

Temporary Construction Land

Survey Boundary

Permanent Land Take

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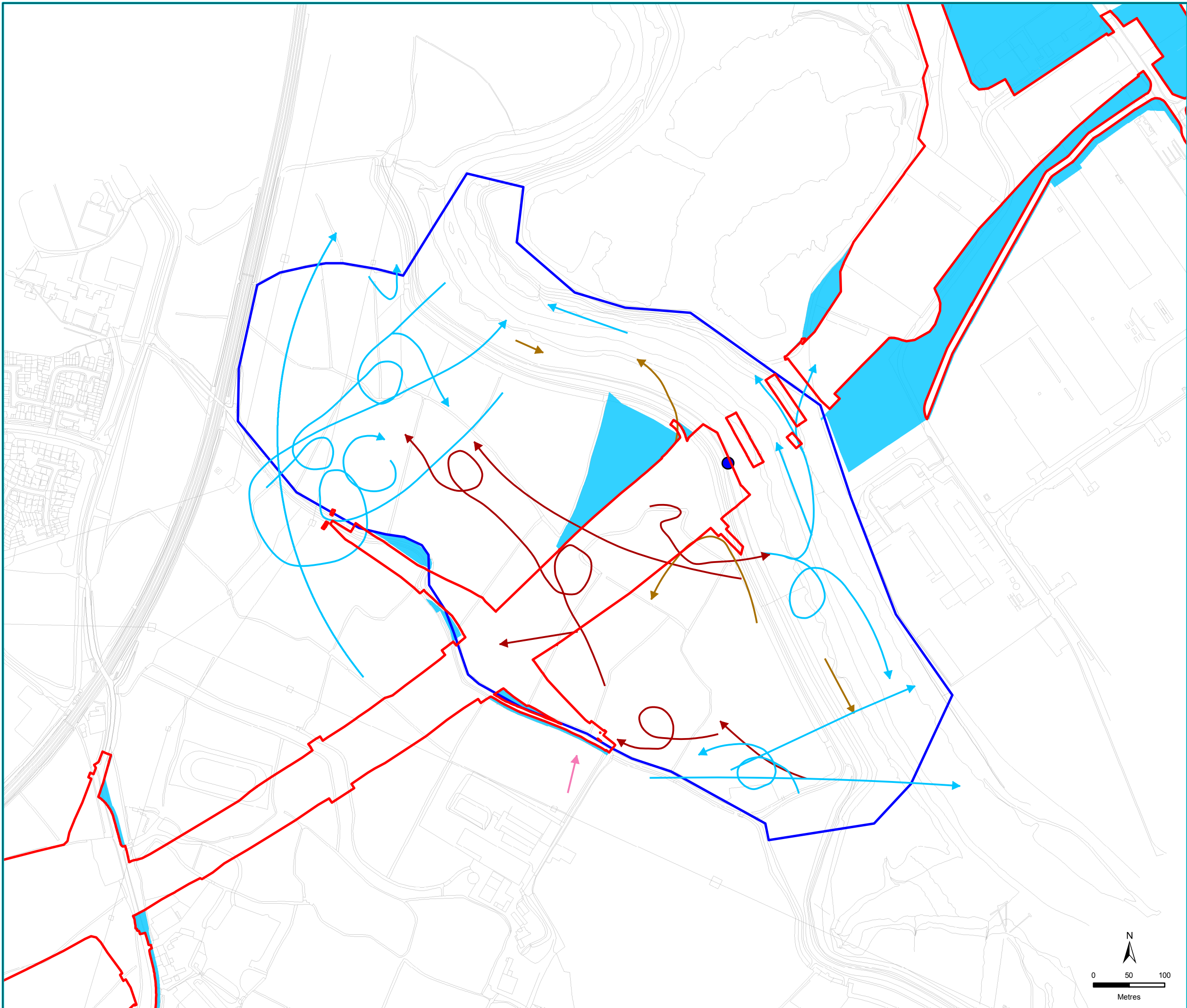
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Client
RPS Group PLC

Figure Number
3b

Figure Title
Appendix S10.4 -
Summary of Wintering Bird
Vantage Point Survey
Results River Ebbw
Waterfowl/Waders

Filepath: S:\Cardiff\Projects\MRPS 108 M4 Widening\Reports\Mapping\Working\Wintering Bird Survey\MRPS108_Fig3_SummaryWinteringBirdVantagePointRiverEbbw_KM_310316.mxd



Legend

● Vantage Point Location

Birds of Prey

→ Buzzard

→ Kestrel

→ Peregrine

→ Sparrowhawk

Temporary Construction Land

Survey Boundary

Permanent Land Take

Site Grid Reference: 330,726 184,506

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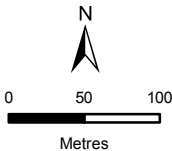
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Date September 2016	Date September 2016

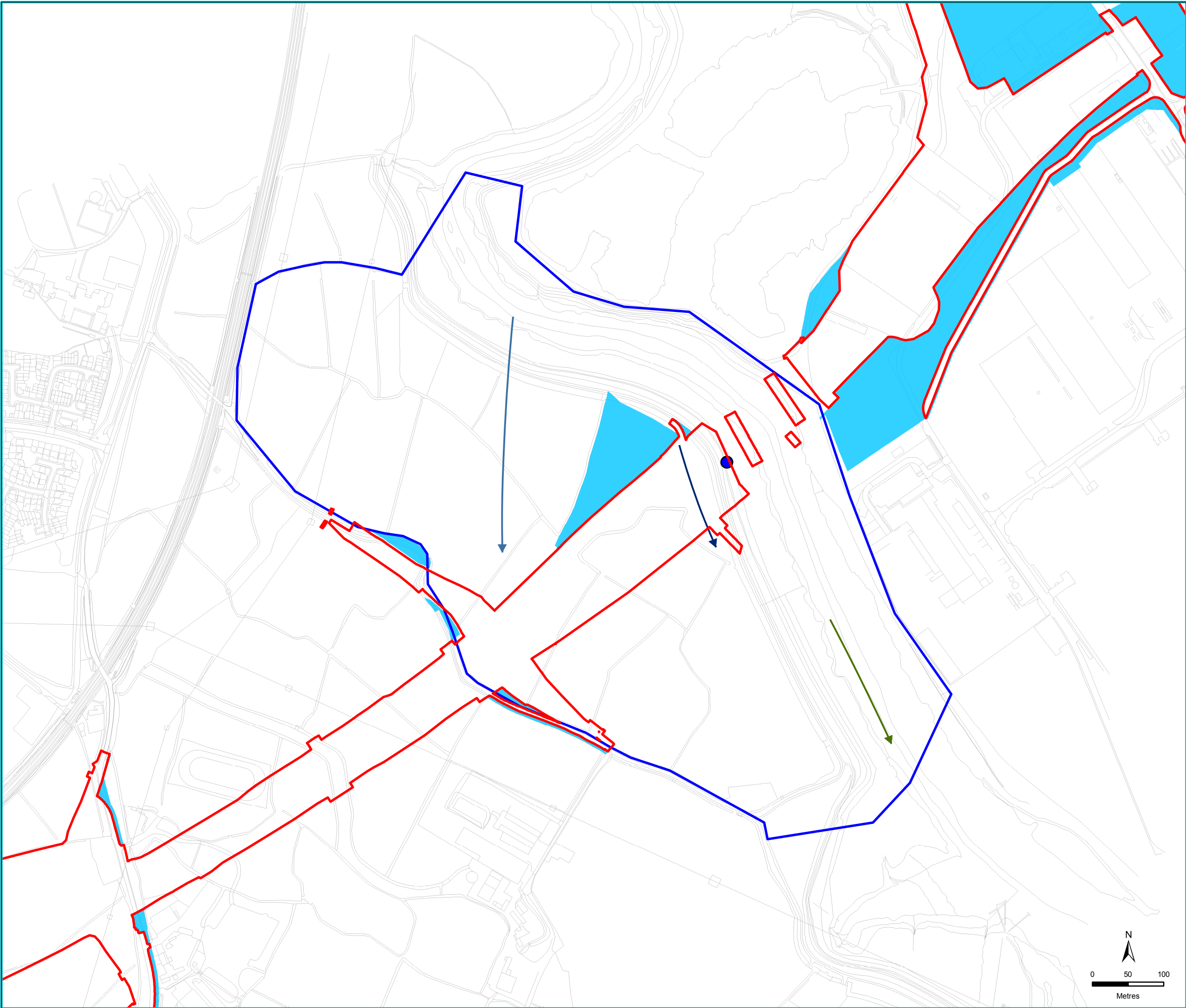
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Figure Number
3c

Figure Title
Appendix S10.4 -
Summary of Wintering Bird
Vantage Point Survey
Results River Ebbw Birds of
Prey



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- Legend
- Vantage Point Location
 - Other**
 - Cormorant
 - Meadow Pipit
 - Raven
 - Temporary Construction Land
 - Survey Boundary
 - Permanent Land Take

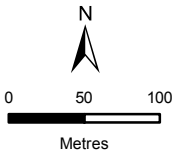
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Client		RPS Group PLC	
Figure Number		3d	
Figure Title			

Appendix S10.4 -
Summary of Wintering Bird
Vantage Point Survey
Results River Ebbw Other



Filepath: S:\Cardiff\Projects\MRPS 108 M4 Widening\Reports\Mapping\Working\Wintering Bird Survey\MRPS108_Fig4_Summary\Wintering Bird Vantage Point River Usk_KM_300316.mxd



Legend

- Vantage Point Location
- Gulls**
 - Black-headed Gull
 - Great Black-backed Gull
 - Herring Gull
 - Lesser Black-backed Gull
- Temporary Construction Land
- Survey Boundary
- Permanent Land Take

Site Grid Reference: 332,428 185,444

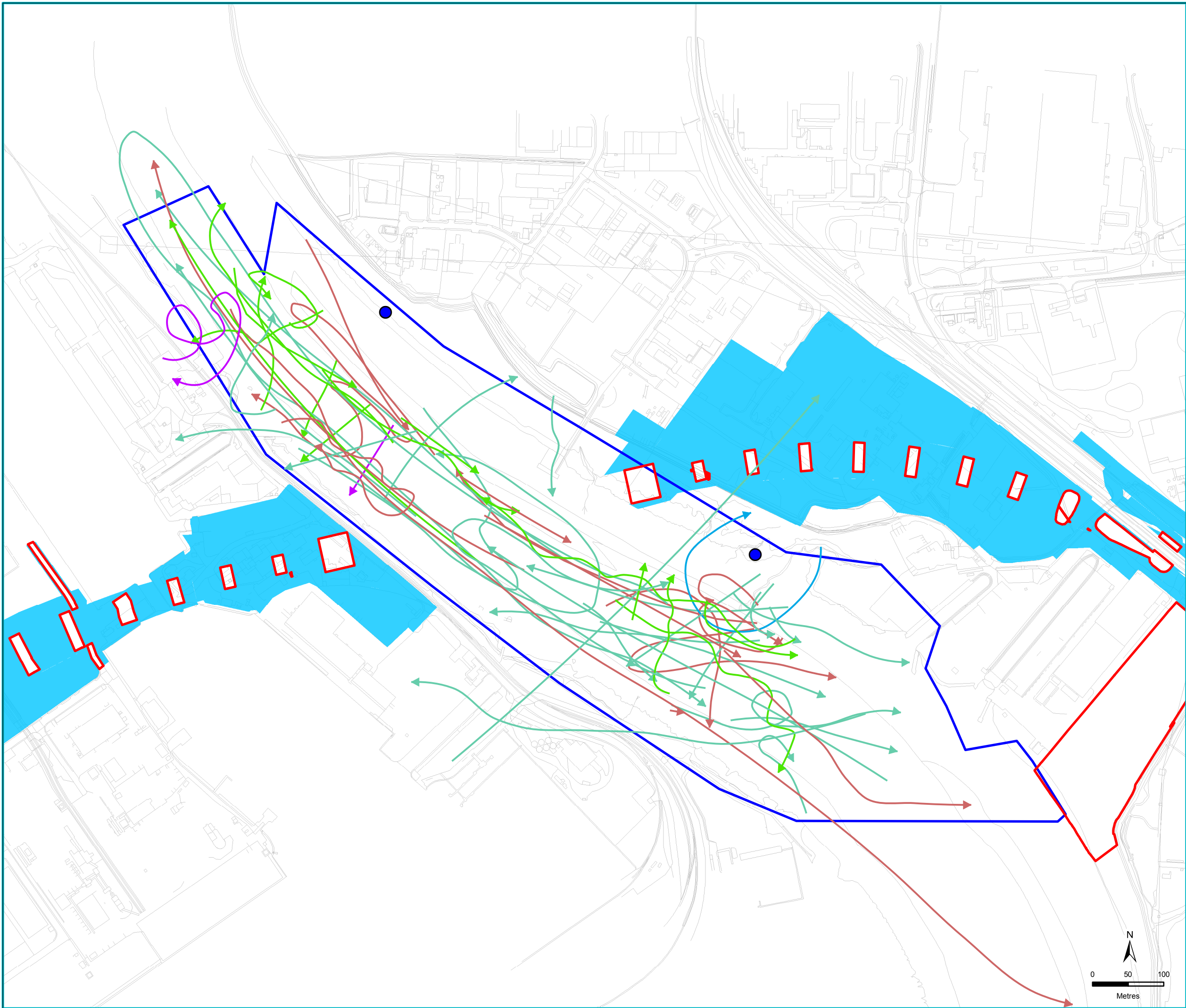
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Client		RPS Group PLC	
Figure Number		4a	

Figure Title
Appendix S10.4 -
Summary of Wintering Bird
Vantage Point Survey
Results River Usk Gulls

Filepath: S:\Cardiff\Projects\MRPS 108 M4 Widening\Reports\Mapping\Working\Wintering Bird Survey\MRPS108_Fig4_SummaryWinteringBirdVantagePointRiverUsk_KM_300316.mxd



Legend

● Vantage Point Location

Waterfowl/Waders

→ Curlew

→ Grey Heron

→ Mallard

→ Redshank

→ Teal

Temporary Construction Land

Survey Boundary

Permanent Land Take

Site Grid Reference: 332,428 185,444

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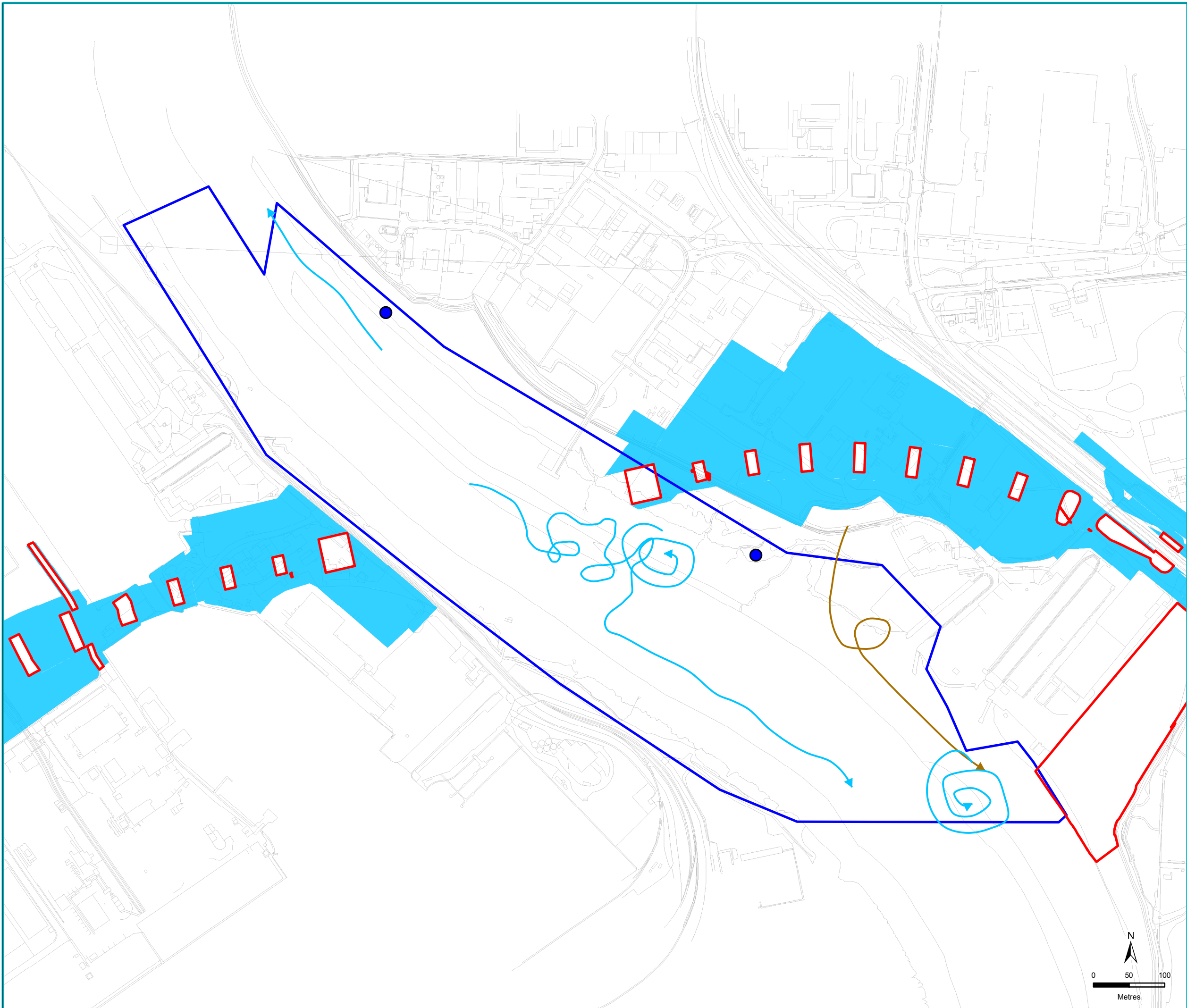
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Figure Number
4b

Figure Title
Appendix S10.4 -
Summary of Wintering Bird
Vantage Point Survey
Results River Usk
Waterfowl/Waders

Filepath: S:\Cardiff\Projects\MRPS 108 M4 Widening\Reports\Mapping\Working\Wintering Bird Survey\MRPS108_Fig4_SummaryWinteringBirdVantagePointRiverUsk_KM_300316.mxd



Legend

● Vantage Point Location

Birds of Prey

→ Buzzard

→ Kestrel

Temporary Construction Land

Survey Boundary

Permanent Land Take

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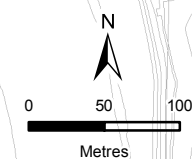
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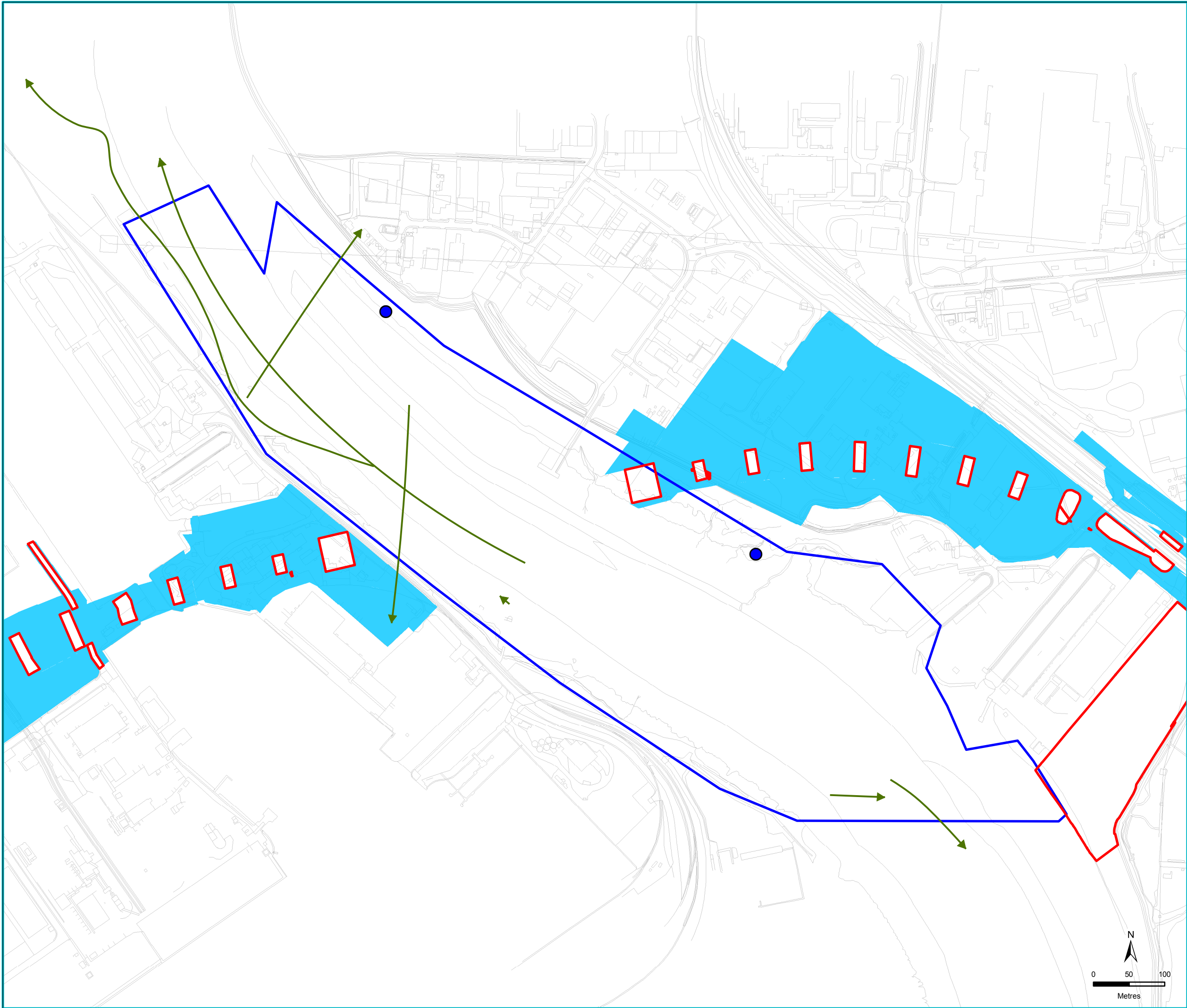
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Figure Number
4c

Figure Title
Appendix S10.4 -
Summary of Wintering Bird
Vantage Point Survey
Results River Usk Birds of
Prey



Filepath: S:\Cardiff\Projects\MRPS108 M4 Widening\Reports\Mapping\Working\Wintering Bird Survey\MRPS108_Fig4_SummaryWinteringBirdVantagePointRiverUsk_KM_300316.mxd



Legend

● Vantage Point Location

Other

→ Cormorant

Temporary Construction Land

Survey Boundary

Permanent Land Take

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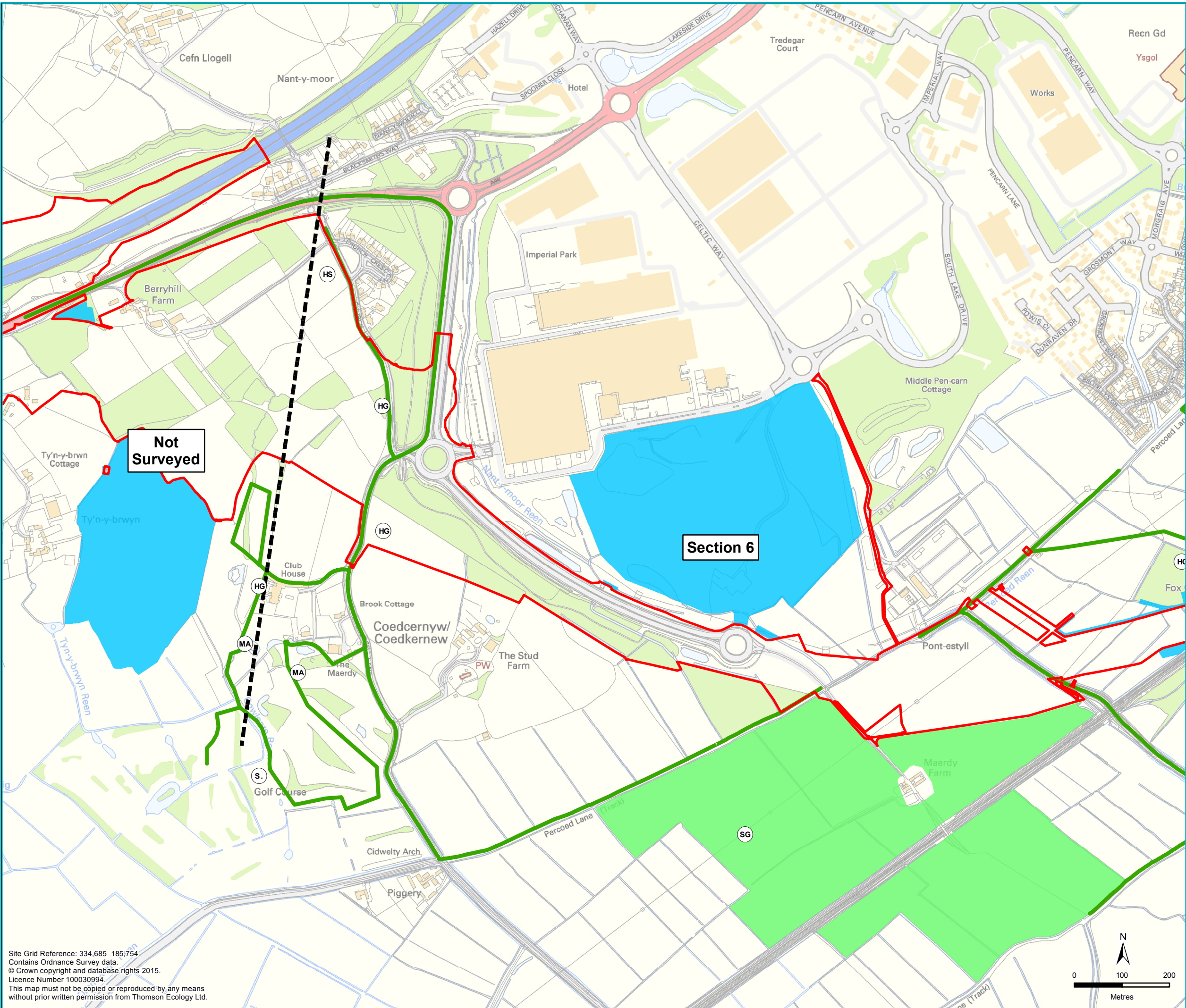
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Date September 2016	Date September 2016

Client
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Figure Number
4d

Figure Title
Appendix S10.4 -
Summary of Wintering Bird
Vantage Point Survey
Results River Usk Other

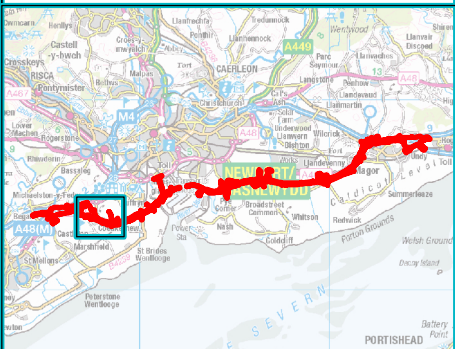
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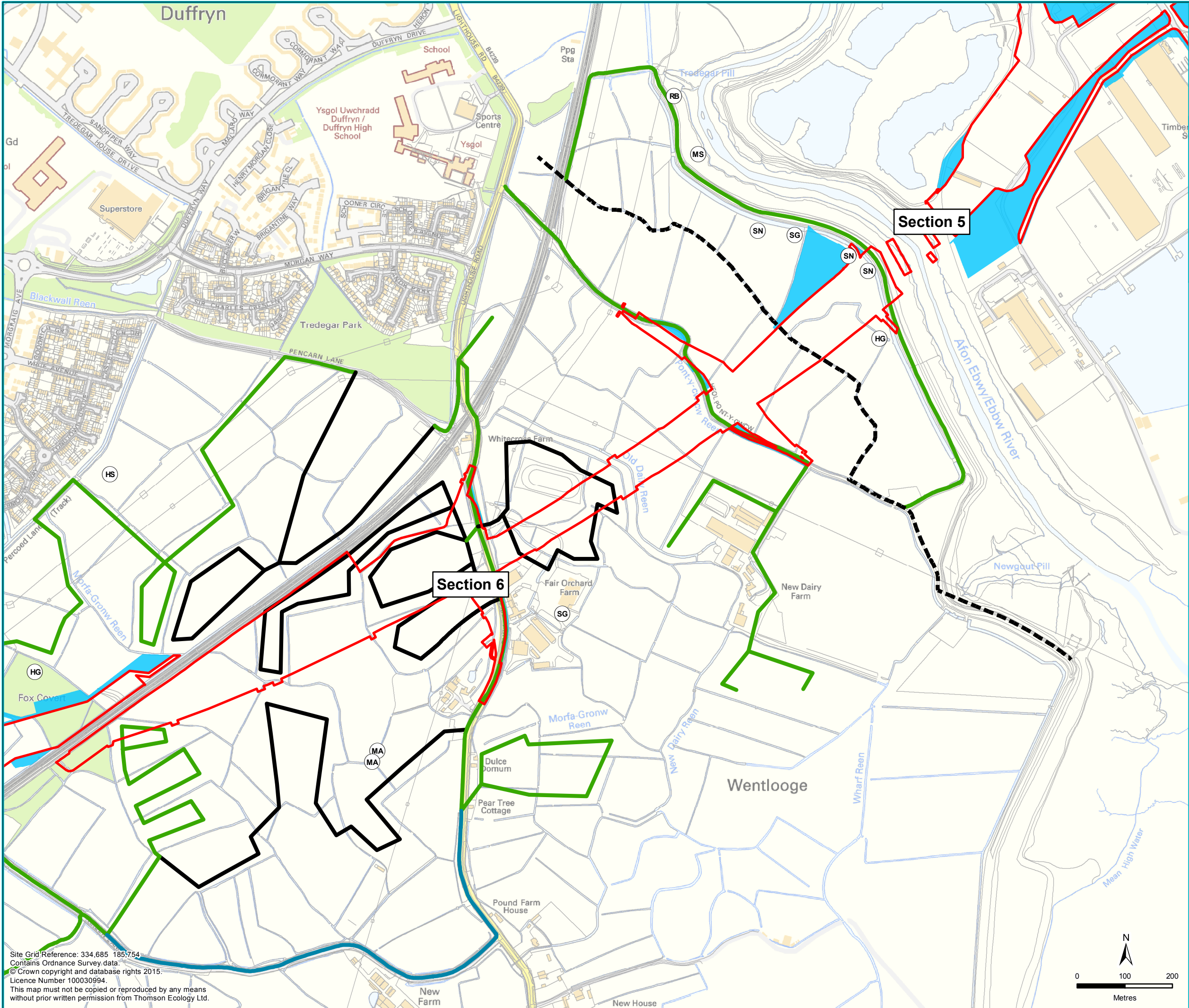
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- Legend
- Wintering Bird Species**
- ⓂHG Herring Gull
 - ⓂHS House Sparrow
 - ⓂMA Mallard
 - ⓂS Skylark
 - ⓂSG Starling
- Transect Route**
- Original transect
 - - - Section
 - Ecological Mitigation
 - Temporary Construction Land
 - Permanent Land Take

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Drawn	KM	Checked	NS
Date	September 2016	Date	September 2016
Client		RPS Group PLC	
Figure Number		5a	
Figure Title		Appendix S10.4 - Wintering Bird Transect Survey Results Visit 1	



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Legend

Wintering Bird Species

ⓂHG

Herring Gull

ⓂHS

House Sparrow

ⓂMA

Mallard

ⓂMS

Mute Swan

ⓂRB

Reed Bunting

ⓂSG

Starling

ⓂSN

Snipe

Transect Route

—

Original transect

—

New transect route

Access Issues

—

No access

- - -

Section

■

Temporary Construction Land

■

Permanent Land Take

Drawing Ref

MRPS108/20630/1

Scale at A3

1:7,500

Drawn

KM

Checked

NS

Date

September 2016

Date

September 2016

Client

RPS Group PLC

Figure Number

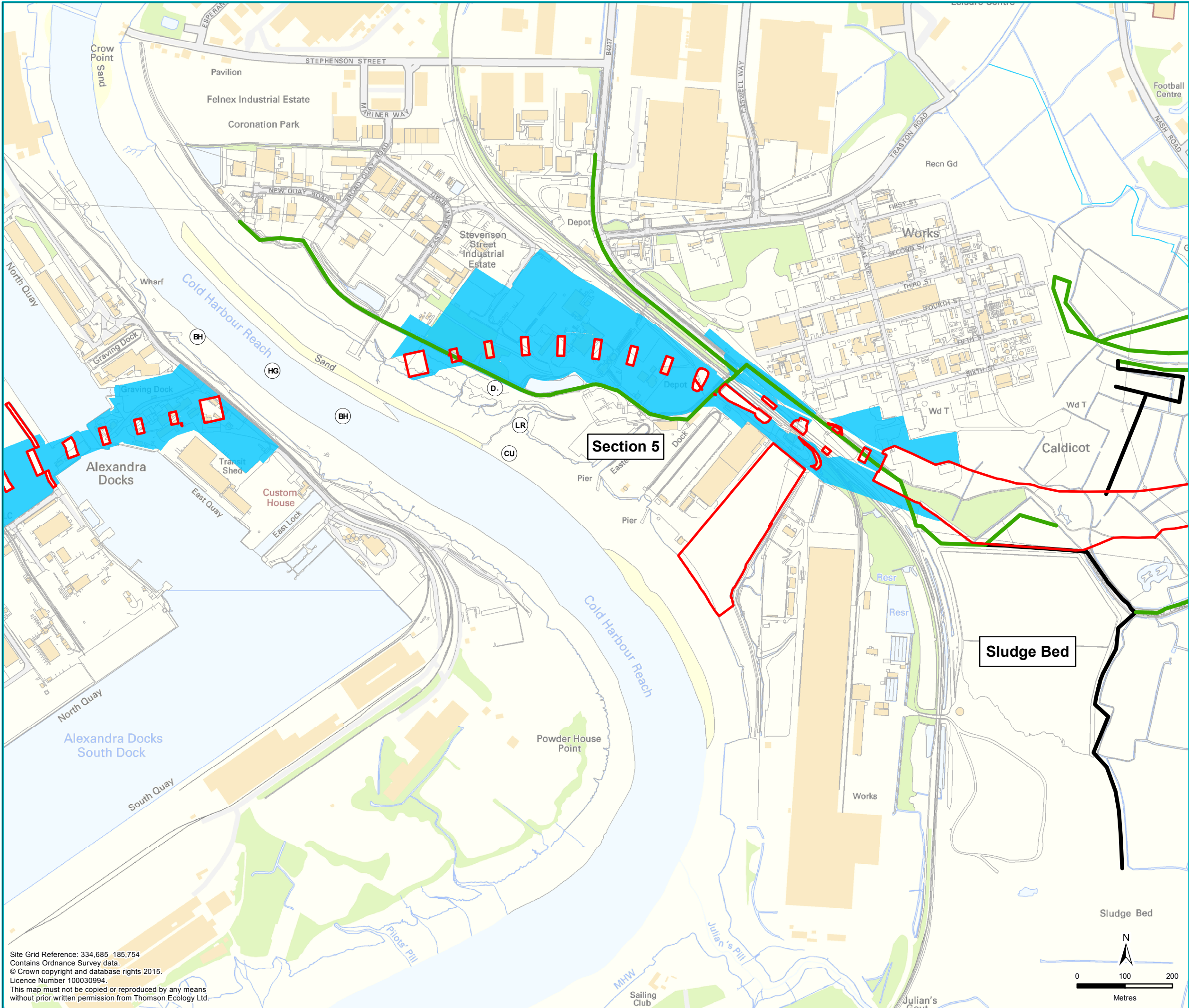
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Figure Title

Appendix S10.4 -
Wintering Bird Transect
Survey Results Visit 1

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Legend

Wintering Bird Species

BH

Black-headed Gull

CU

Curlew

D.

Dunnock

HG

Herring Gull

LR

Lesser Redpoll

Transect Route

Original transect

Access Issues

No access

Temporary Construction Land

Permanent Land Take

Drawing Ref

MRPS108/20631/1

Scale at A3

1:7,500

Drawn

KM

Checked

NS

Date

September 2016

Date

September 2016

Client

RPS Group PLC

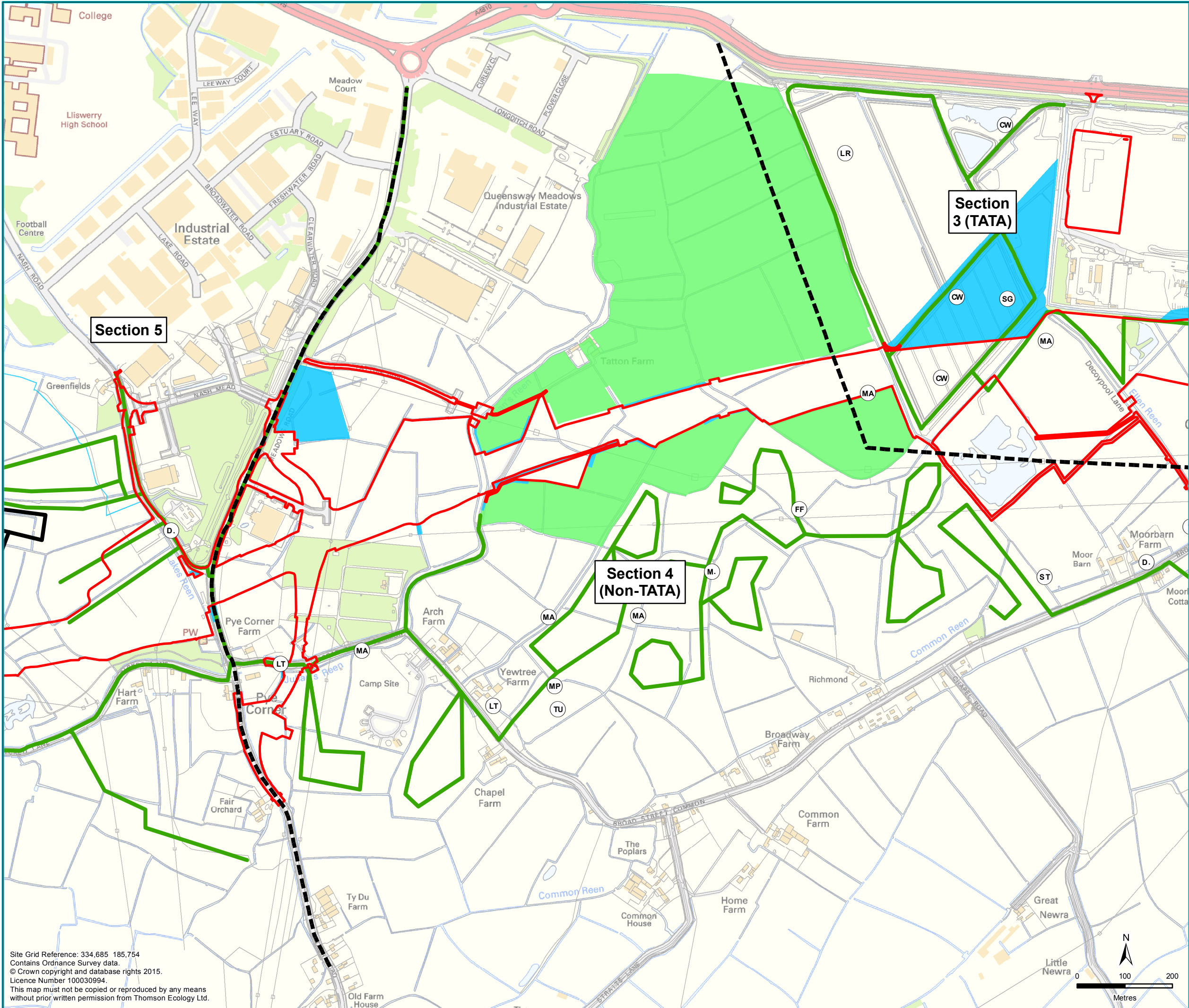
Figure Number

5c

Figure Title

Appendix S10.4 -
Wintering Bird Transect
Survey Results Visit 1

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Legend

Wintering Bird Species

CW

Cetti's Warbler

D.

Dunnock

FF

Fieldfare

LR

Lesser Redpoll

LT

Long Tailed Tit

M.

Mistle Thrush

MA

Mallard

MP

Meadow Pipit

SG

Starling

ST

Song Thrush

T.

Teal

TU

Tufted Duck

Transect Route

Original transect

Access Issues

No access

Section

Ecological Mitigation

Temporary Construction Land

Permanent Land Take

Drawing Ref

MRPS108/20632/1

Scale at A3

1:7,500

Drawn

KM

Checked

NS

Date

September 2016

Date

September 2016

Client

RPS Group PLC

Figure Number

5d

Figure Title

Appendix S10.4 -
Wintering Bird Transect
Survey Results Visit 1




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Filepath: S:\Cardiff\Projects\MRPS108 M4 Widening\Reports\Mapping\Wintering Bird Survey\MRPS108_Fig5_WinteringBirdSurveyResults\ist1_KM_290316.mxd



- (CW) Cetti's Warbler
- (D.) Dunnock
- (FF) Fieldfare
- (GA) Gadwall
- (HS) House Sparrow
- (LT) Long Tailed Tit
- (M.) Mistle Thrush
- (MA) Mallard
- (MP) Meadow Pipit
- (MS) Mute Swan
- (SG) Starling
- (T.) Teal

Transect Route

-  Original transect
 Section
 Temporary Construction Land
 Permanent Land Take

Drawing Ref **MRPS108/20633/1**

Scale at A3
1:7,500

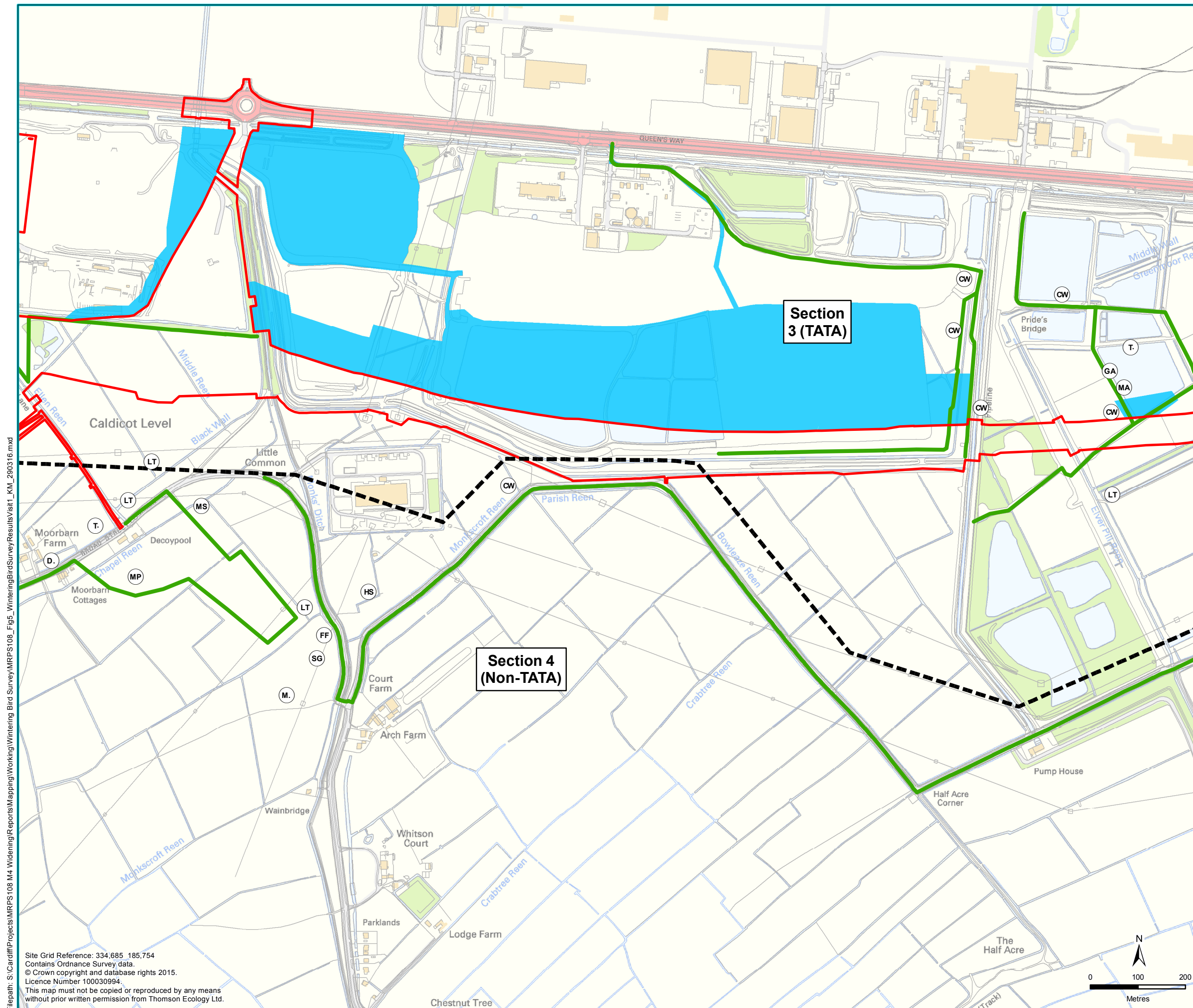
Drawn KM	Checked NS
Date September 2016	Date September 2016

Client	RPS Group PLC
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Figure Number 5e

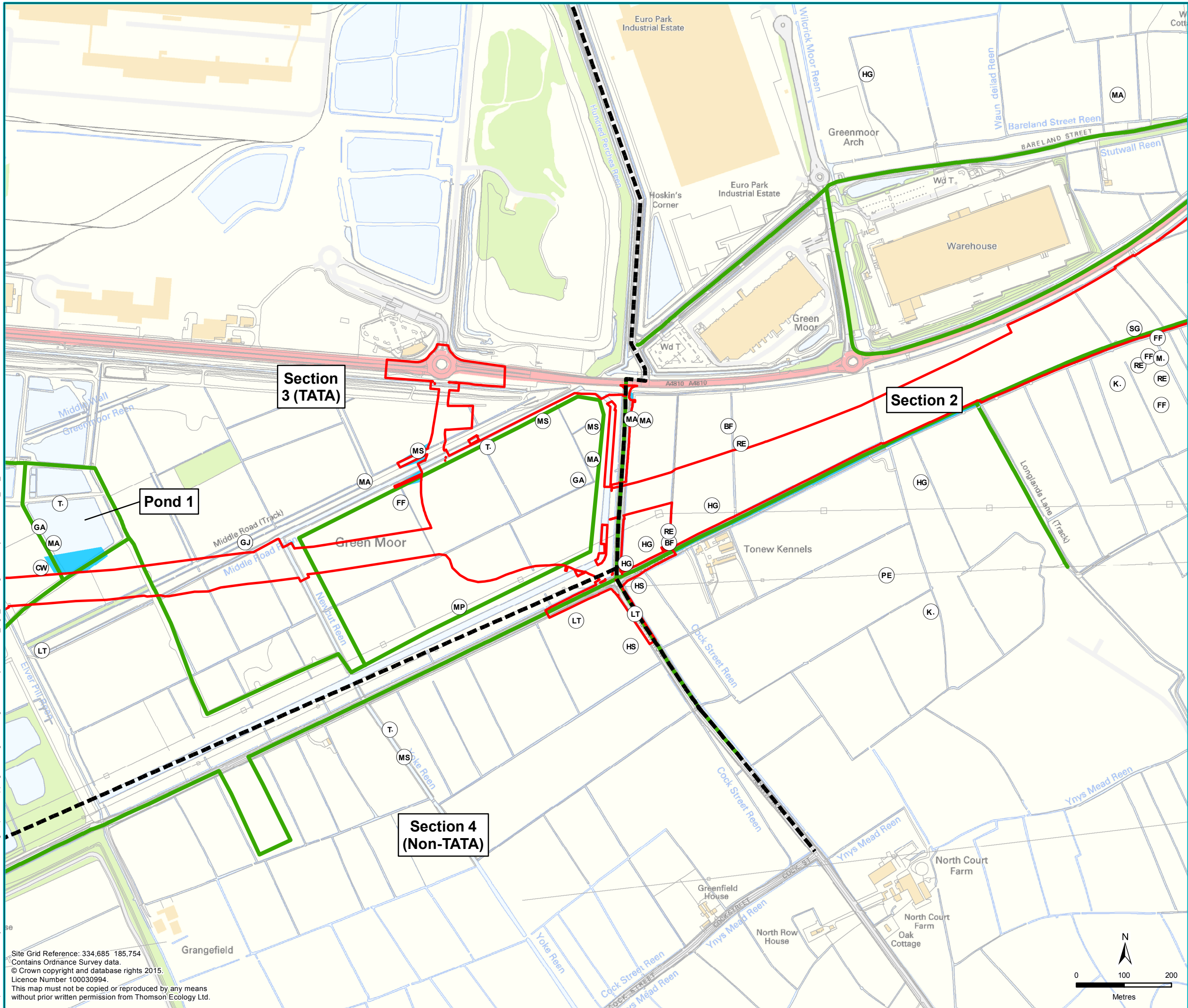
Figure Title

Appendix S10.4 -
Wintering Bird Transect
Survey Results Visit 1



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Filepath: S:\Cardiff\Projects\MRPS 108 M4 Widening\Reports\Mapping\Wintering Bird Survey\MRPS108_Fig5_WinteringBirdSurveyResults\ist1_KM_290316.mxd



Legend

Wintering Bird Species

- BF Bullfinch
- CW Cetti's Warbler
- FF Fieldfare
- GA Gadwall
- GJ Greylag Goose
- HG Herring Gull
- HS House Sparrow
- K. Kestrel
- LT Long Tailed Tit
- M. Mistle Thrush
- MA Mallard
- MP Meadow Pipit
- MS Mute Swan
- PE Peregrine
- RE Redwing
- SG Starling
- T. Teal

Transect Route

- Original transect
- Section
- Temporary Construction Land
- Permanent Land Take

Drawing Ref
MRPS108/20634/1

Scale at A3
1:7,500

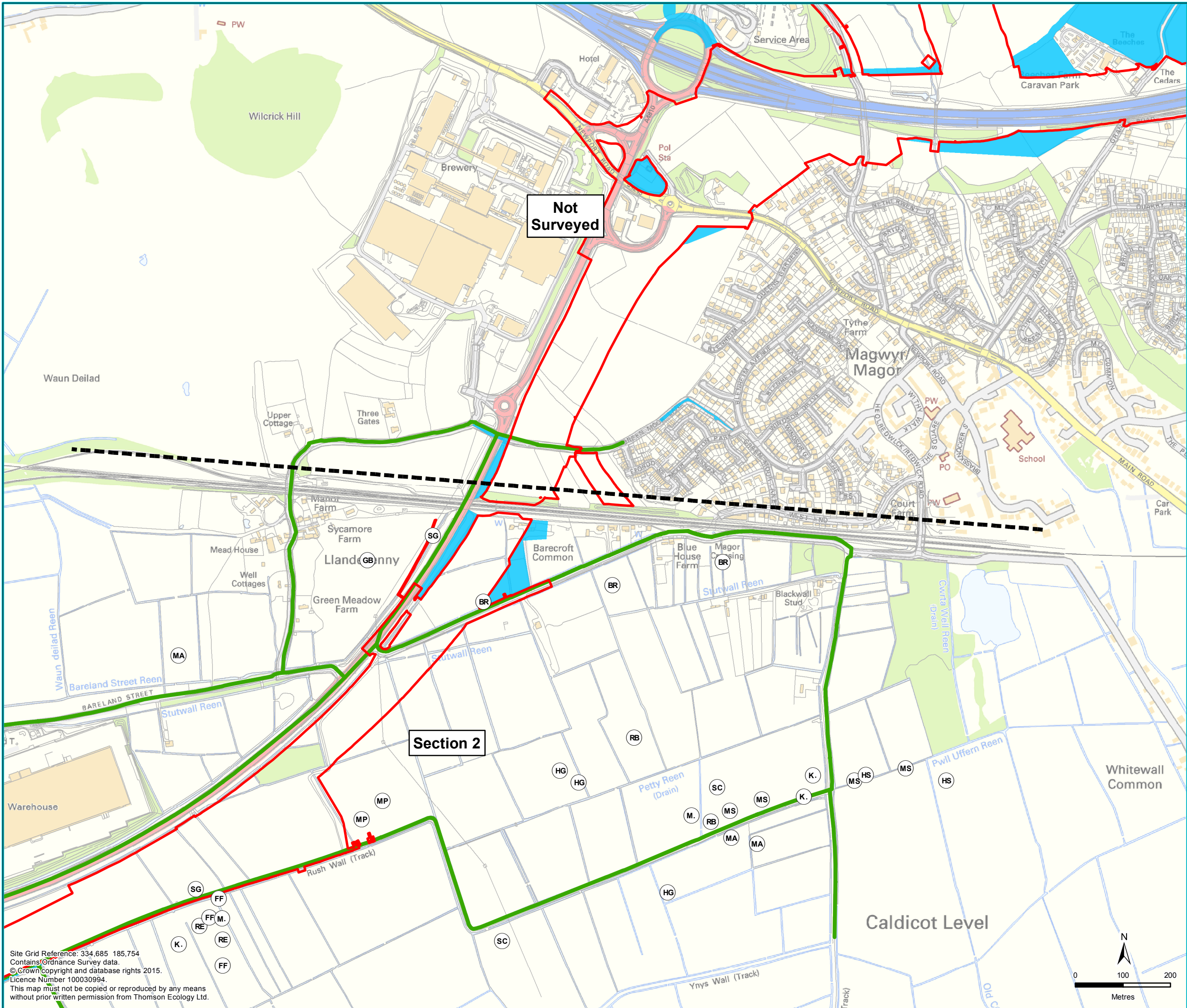
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Date September 2016	Date September 2016

Client
RPS Group PLC

Figure Number
5f

Figure Title
Appendix S10.4 -
Wintering Bird Transect
Survey Results Visit 1

Filepath: S:\Cardiff\Projects\MRPS 108 M4 Widening\Reports\Mapping\Working\Wintering Bird Survey\MRPS108_Fig5_WinteringBirdSurveyResults\ist1_KM_290316.mxd



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Legend

Wintering Bird Species

BR

 Bearded Tit

FF

 Fieldfare

GB

 Great Black-backed Gull

HG

 Herring Gull

HS

 House Sparrow

K.

 Kestrel

M.

 Mistle Thrush

MA

 Mallard

MP

 Meadow Pipit

MS

 Mute Swan

RB

 Reed Bunting

RE

 Redwing

SC

 Stonechat

SG

 Starling

Transect Route

Original transect

Section

Temporary Construction Land

Permanent Land Take

Drawing Ref

MRPS108/20635/1

Scale at A3

1:7,500

Drawn

KM

Checked

NS

Date

September 2016

Date

September 2016

Client

RPS Group PLC

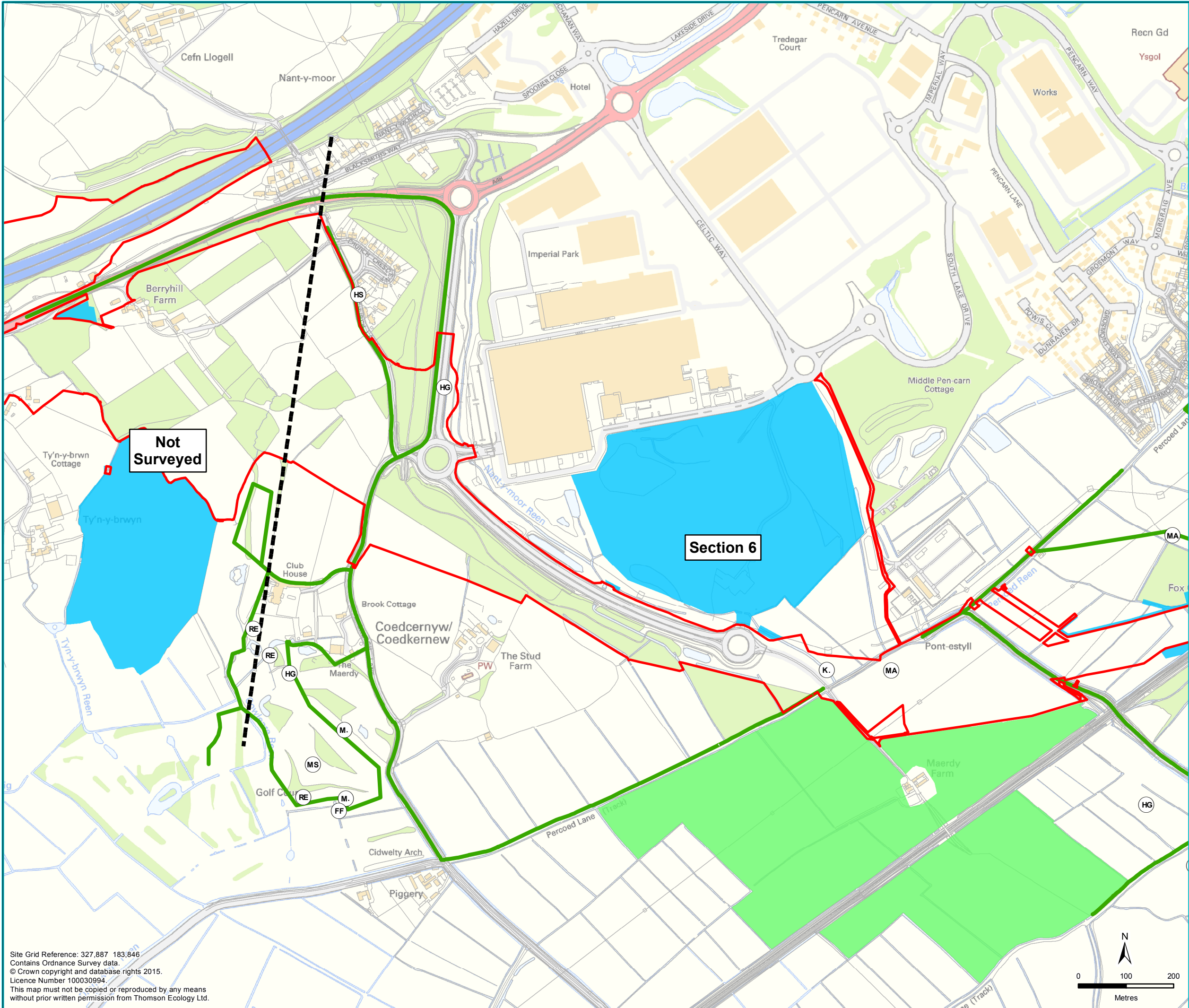
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5g

Figure Title

Appendix S10.4 -
Wintering Bird Transect
Survey Results Visit 1

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Legend

Wintering Bird Species

FF

Fieldfare

HG

Herring Gull

HS

House Sparrow

K.

Kestrel

M.

Mistle Thrush

MA

Mallard

MS

Mute Swan

RE

Redwing

Transect Route

Original transect

- - -

Section

Ecological Mitigation

Temporary Construction Land

Permanent Land Take

Drawing Ref

MRPS108/20636/1

Scale at A3

1:7,500

Drawn

KM

Checked

NS

Date

September 2016

Date

September 2016

Client

RPS Group PLC

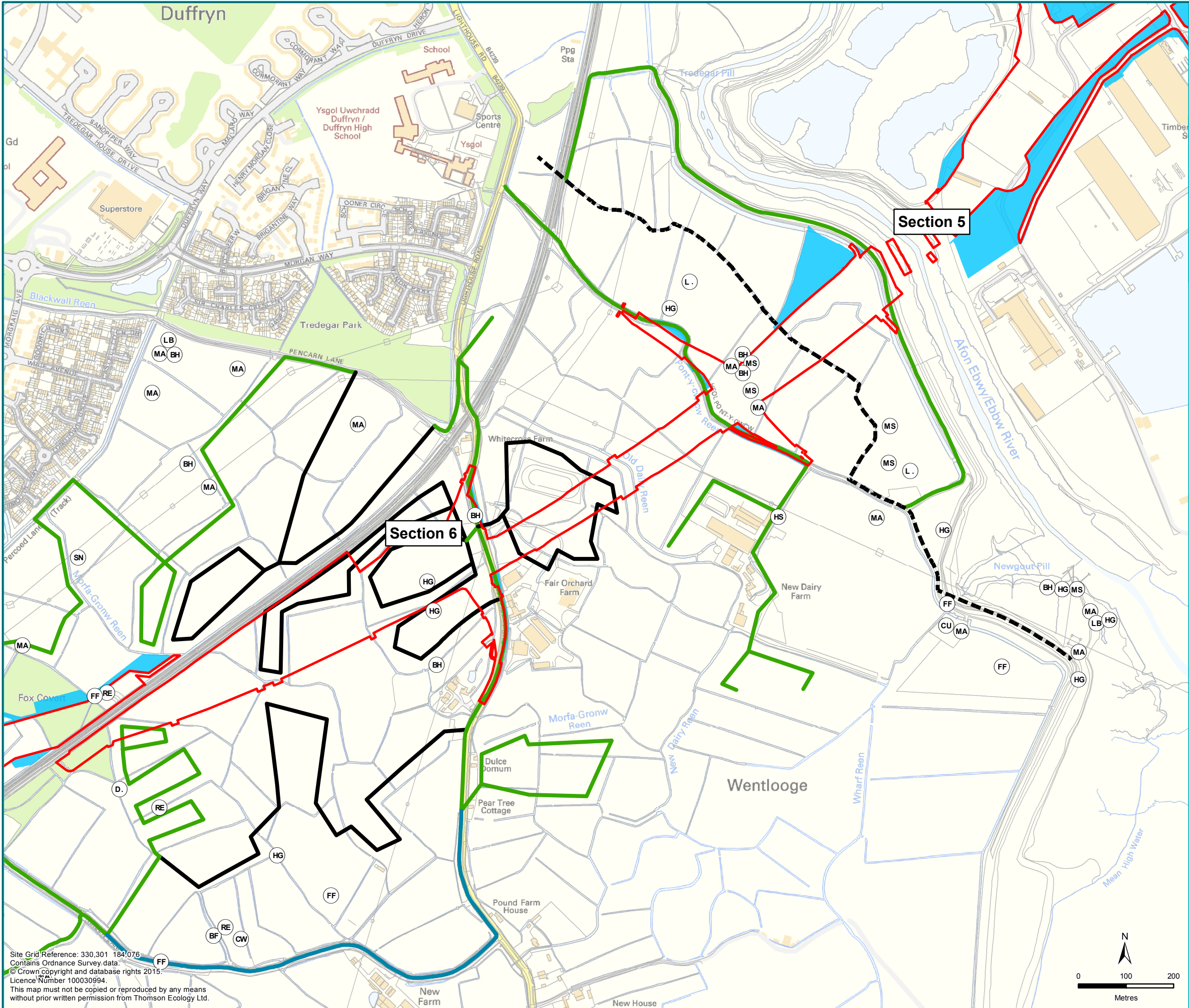
Figure Number

6a

Figure Title

Appendix S10.4 -
Wintering Bird Transect
Survey Results Visit 2

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Legend

Wintering Bird Species

- BF Bullfinch
- BH Black-headed Gull
- CU Curlew
- CW Cetti's Warbler
- D. Dunnock
- FF Fieldfare
- HG Herring Gull
- HS House Sparrow
- L. Lapwing
- LB Lesser Black-backed Gull
- MA Mallard
- MS Mute Swan
- RE Redwing
- SN Snipe

Transect Route

- Original transect
- New transect route

Access Issues

- No access
- Section

Land Take

- Temporary Construction Land
- Permanent Land Take

Drawing Ref: MRPS108/20637/1

Scale at A3: 1:7,500

Drawn: KM	Checked: NS
Date: September 2016	Date: September 2016

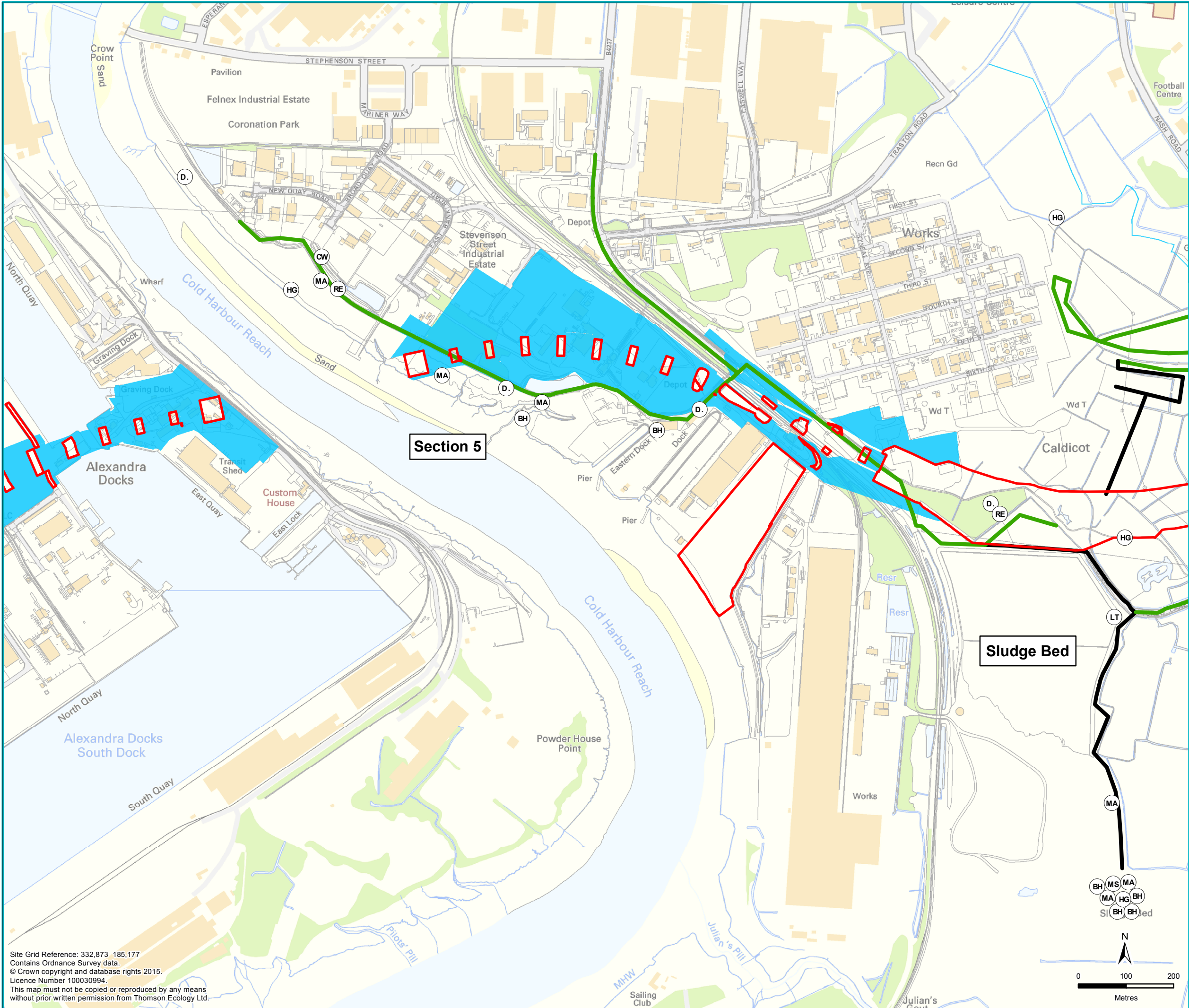
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Figure Number: 6b

Figure Title: Appendix S10.4 - Wintering Bird Transect Survey Results Visit 2

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Legend

Wintering Bird Species

BH

Black-headed Gull

CW

Cetti's Warbler

D.

Dunnock

HG

Herring Gull

LT

Long Tailed Tit

MA

Mallard

MS

Mute Swan

RE

Redwing

Transect Route

Original transect

Access Issues

No access

Temporary Construction Land

Permanent Land Take

Drawing Ref

MRPS108/20638/1

Scale at A3

1:7,500

Drawn

KM

Checked

NS

Date

September 2016

Date

September 2016

Client

RPS Group PLC

Figure Number

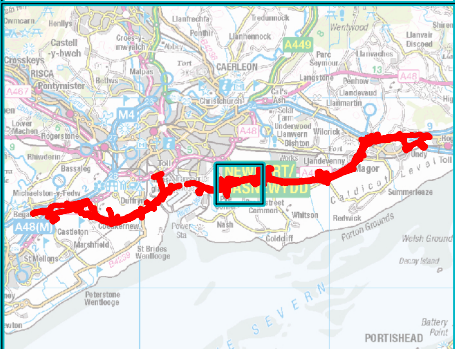
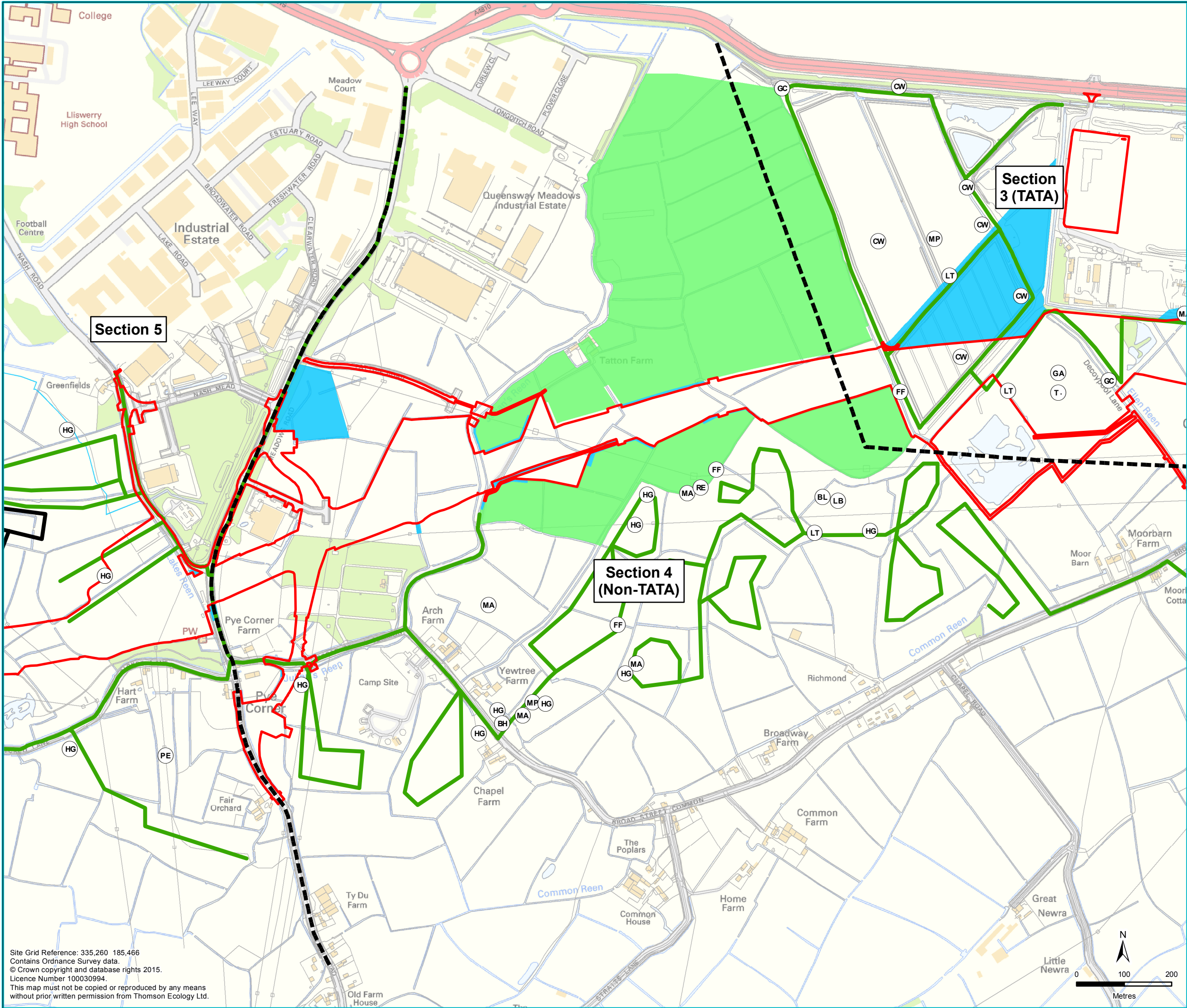
6c

Figure Title

Appendix S10.4 -
Wintering Bird Transect
Survey Results Visit 2

Filepath: S:\Cardiff\Projects\MRPS108 M4 Widening\Reports\Mapping\Wintering Bird Survey\MRPS108_Fig6_WinteringBirdSurveyResults\ist2_KM_290316.mxd

Site Grid Reference: 332,873 185,177
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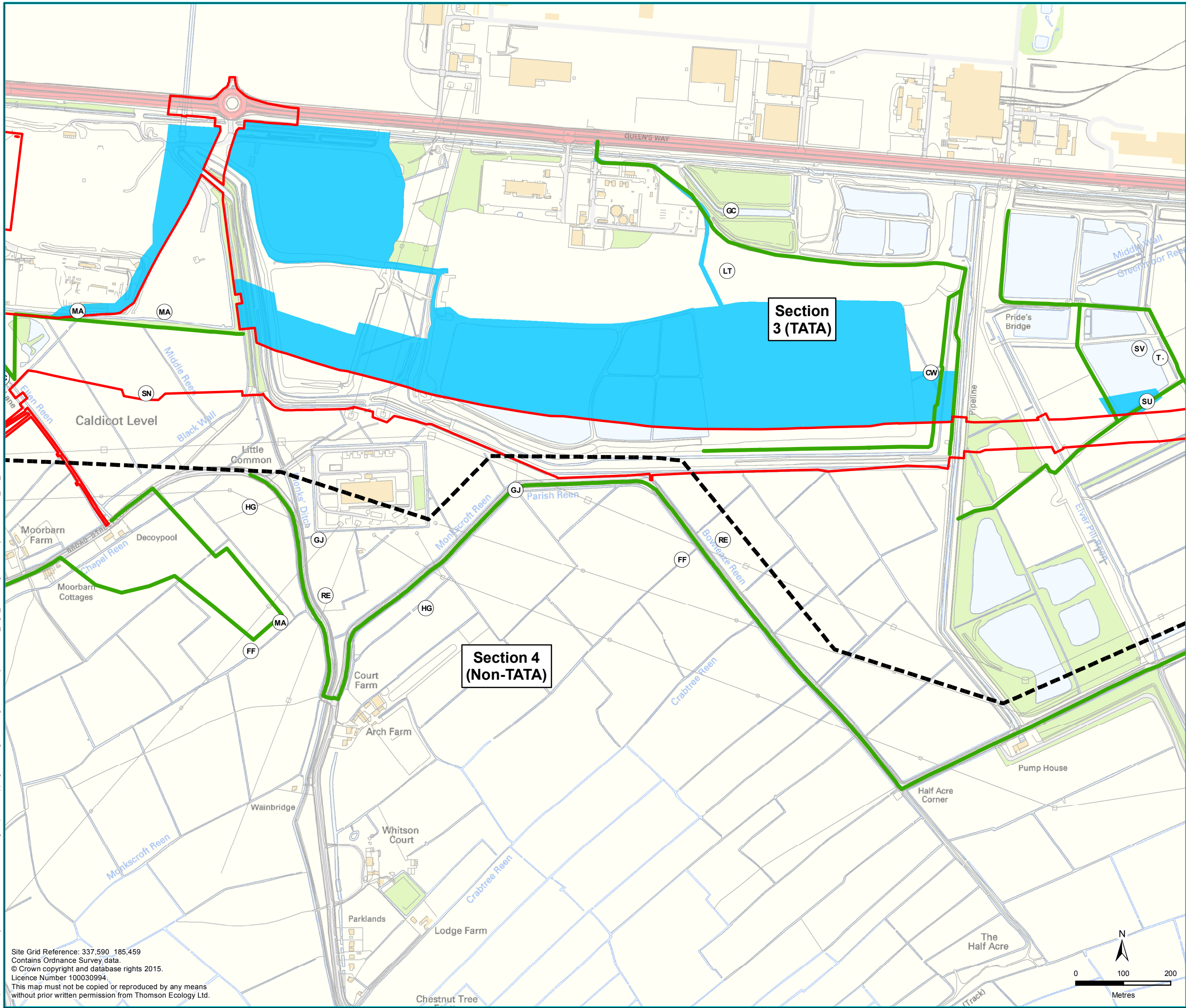


- Legend
- Wintering Bird Species**
- (BH) Black-headed Gull
 - (BL) Brambling
 - (CW) Cetti's Warbler
 - (FF) Fieldfare
 - (GA) Gadwall
 - (GC) Goldcrest
 - (HG) Herring Gull
 - (LB) Lesser Black-backed Gull
 - (LT) Long Tailed Tit
 - (MA) Mallard
 - (MP) Meadow Pipit
 - (PE) Peregrine
 - (RE) Redwing
 - (T) Teal
- Transect Route**
- Original transect
- Access Issues**
- No access
 - Section
 - Ecological Mitigation
 - Temporary Construction Land
 - Permanent Land Take

Drawing Ref		MRPS108/20639/1	
Scale at A3		1:7,500	
Drawn	KM	Checked	NS
Date	September 2016	Date	September 2016
Client		RPS Group PLC	
Figure Number		6d	
Figure Title			

Appendix S10.4 -
Wintering Bird Transect
Survey Results Visit 2

Filepath: S:\Cardiff\Projects\MRPS108 M4 Widening\Reports\Mapping\Wintering Bird Survey\Results\ist2_KM_290316.mxd



- Legend
- Wintering Bird Species**
- CW Cetti's Warbler
 - FF Fieldfare
 - GC Goldcrest
 - GJ Greylag Goose
 - HG Herring Gull
 - LT Long Tailed Tit
 - MA Mallard
 - RE Redwing
 - SN Snipe
 - SU Shelduck
 - SV Shoveler
 - T Teal
- Transect Route**
- Original transect
 - Section
 - Temporary Construction Land
 - Permanent Land Take

Drawing Ref
MRPS108/20640/1

Scale at A3
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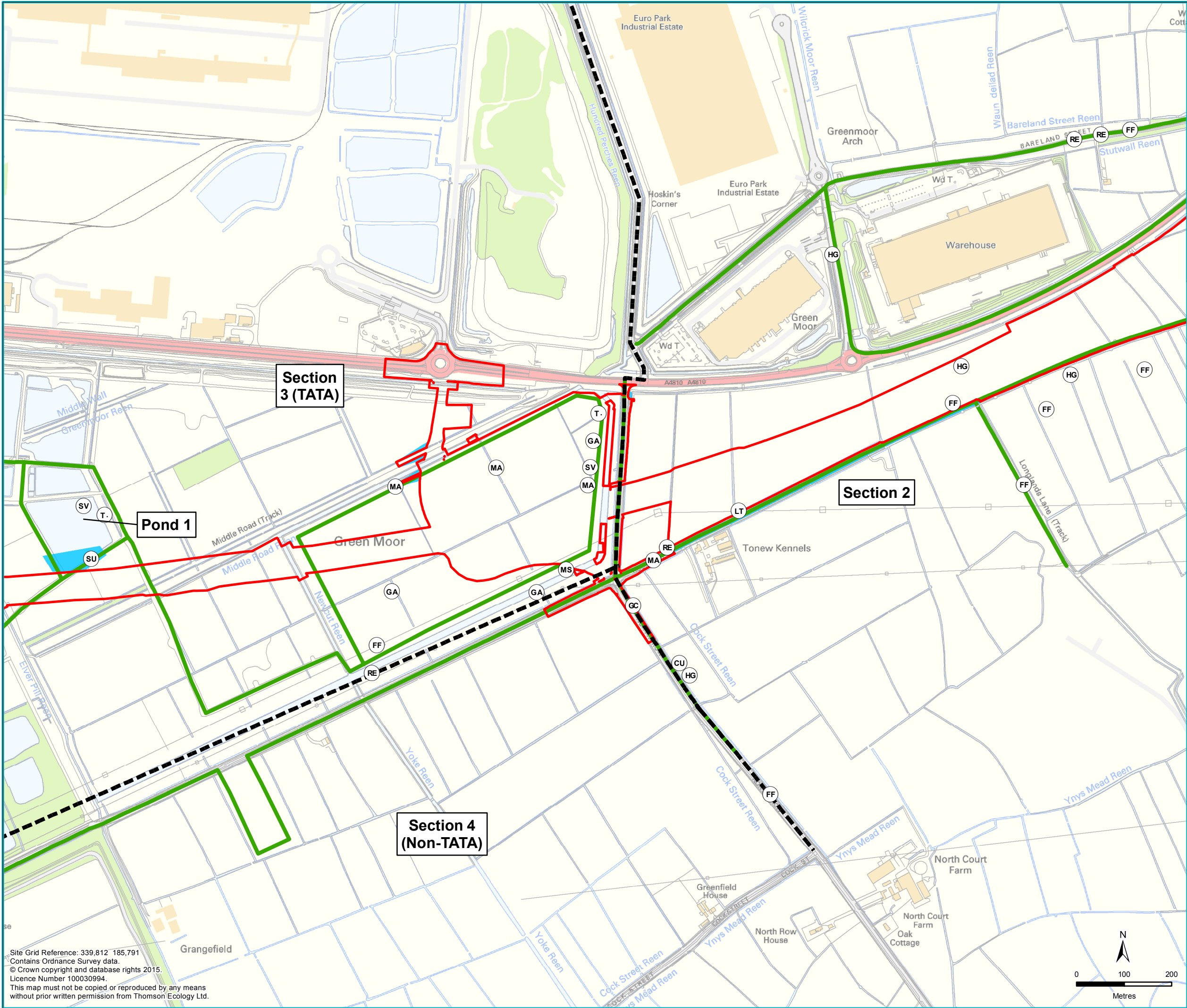
Drawn KM	Checked NS
Date September 2016	Date September 2016

Client
RPS Group PLC

Figure Number
6e

Figure Title
Appendix S10.4 -
Wintering Bird Transect
Survey Results Visit 2

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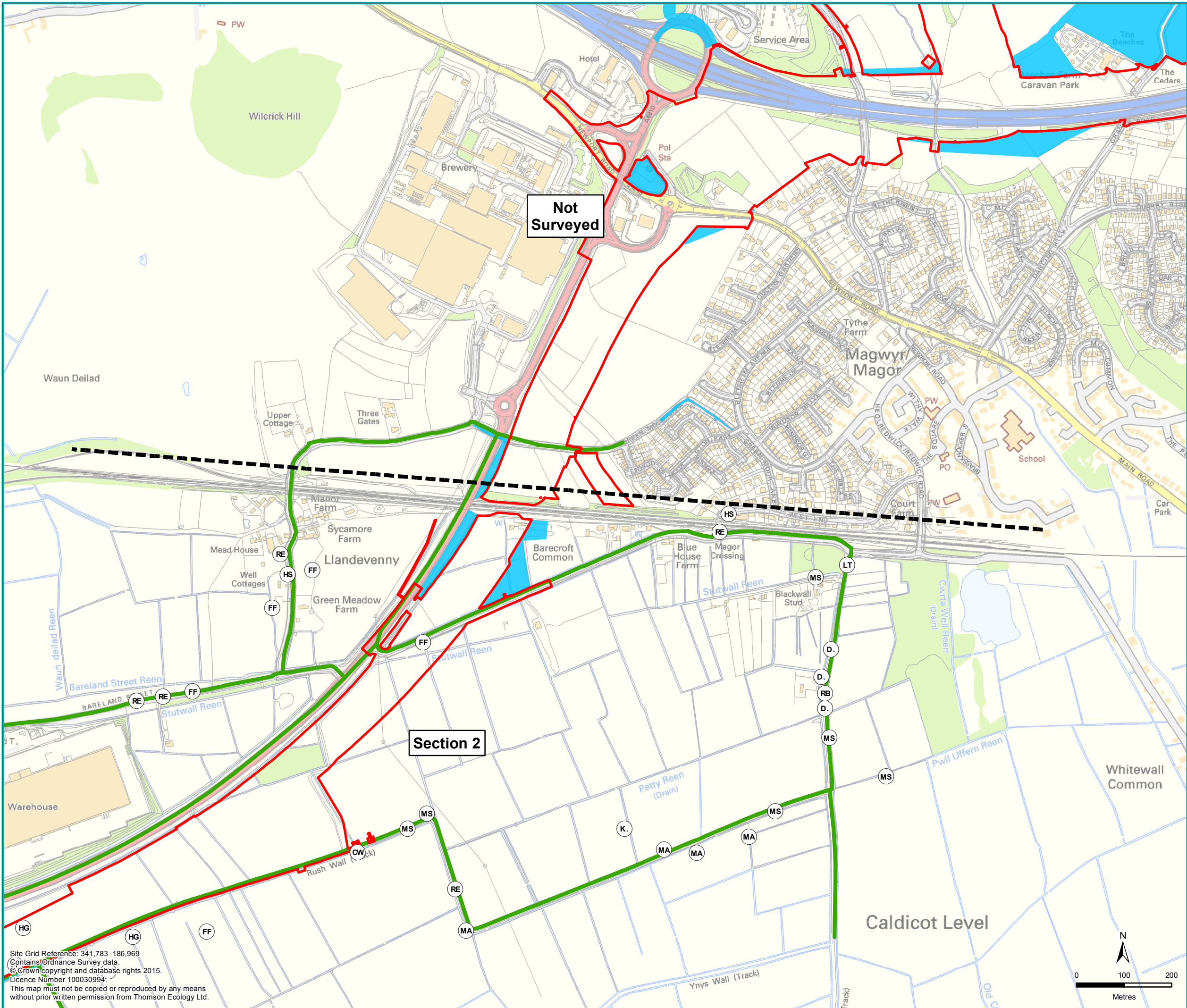
- Legend
- Wintering Bird Species**
- CU Curlew
 - FF Fieldfare
 - GA Gadwall
 - GC Goldcrest
 - HG Herring Gull
 - LT Long Tailed Tit
 - MA Mallard
 - MS Mute Swan
 - RE Redwing
 - SU Shelduck
 - SV Shoveler
 - T Teal
- Transect Route**
- Original transect
 - Section
 - Temporary Construction Land
 - Permanent Land Take

Drawing Ref		MRPS108/20641/1	
Scale at A3		1:7,500	
Drawn	KM	Checked	NS
Date	September 2016	Date	September 2016
Client		RPS Group PLC	
Figure Number		6f	

Figure Title

Appendix S10.4 -
Wintering Bird Transect
Survey Results Visit 2

Filepath: S:\Cardiff\Projects\MRPS 108 M4 Widening\Reports\Mapping\Working\Wintering Bird Survey\MRPS108_Fig6_WinteringBirdSurveyResults\ist2_KM_290316.mxd



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Legend

Wintering Bird Species

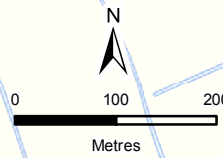
- CW Cetti's Warbler
- D. Dunnock
- FF Fieldfare
- HG Herring Gull
- HS House Sparrow
- K. Kestrel
- LT Long Tailed Tit
- MA Mallard
- MS Mute Swan
- RB Reed Bunting
- RE Redwing

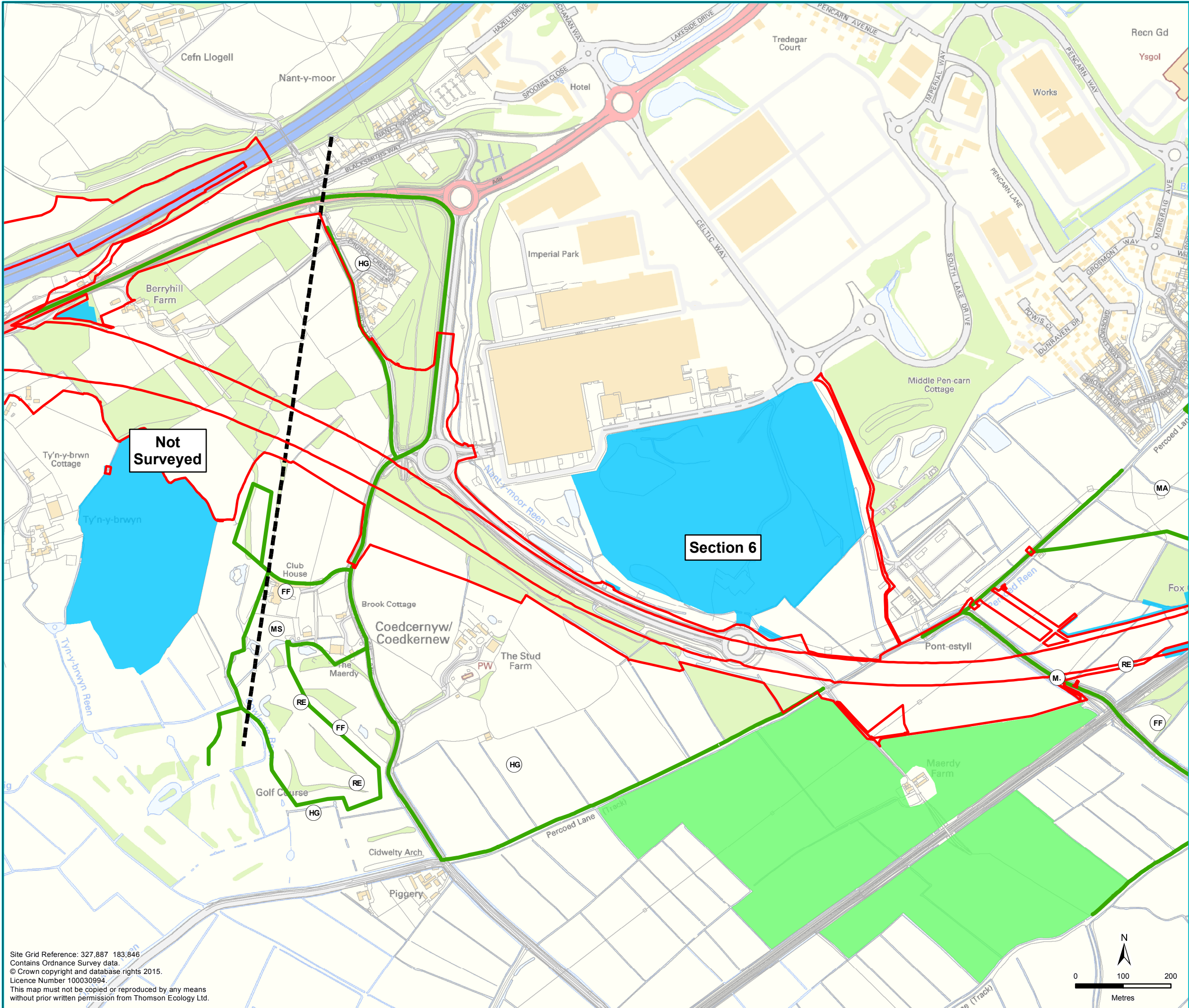
Transect Route

- Original transect
- Section
- Temporary Construction Land
- Permanent Land Take

Drawing Ref	
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Date	Date
September 2016	September 2016
Client	
RPS Group PLC	
Figure Number	
6g	
Figure Title	
Appendix S10.4 - Wintering Bird Transect Survey Results Visit 2	

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Legend

Wintering Bird Species

- FF Fieldfare
- HG Herring Gull
- M. Mistle Thrush
- MA Mallard
- MS Mute Swan
- RE Redwing

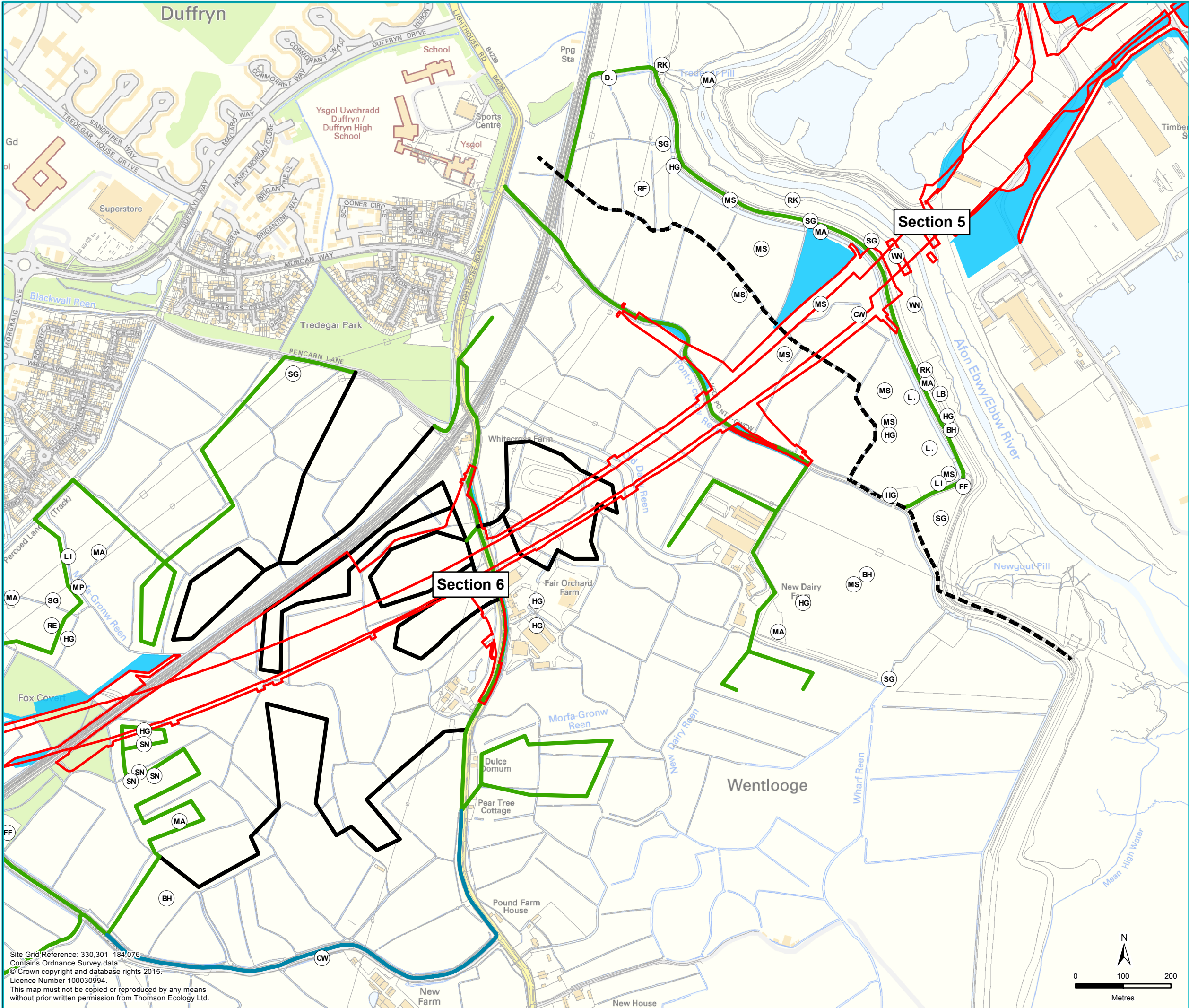
Transect Route

- Original transect
- Section
- Ecological Mitigation
- Temporary Construction Land
- Permanent Land Take

Drawing Ref	
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Scale at A3	
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KM	NS
Date	Date
September 2016	September 2016
Client	
RPS Group PLC	
Figure Number	
7a	
Figure Title	
Appendix S10.4 - Wintering Bird Transect Survey Results Visit 3	

Filepath: S:\Cardiff\Projects\MRPS108 M4 Widening\Reports\Mapping\Wintering Bird Survey\MRPS108_Fig7_WinteringBirdSurveyResults\istk3_KM_300316.mxd

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Legend

Wintering Bird Species

BH

Black-headed Gull

CW

Cetti's Warbler

D.

Dunnock

FF

Fieldfare

HG

Herring Gull

L.

Lapwing

LB

Lesser Black-backed Gull

LI

Linnet

MA

Mallard

MP

Meadow Pipit

MS

Mute Swan

RE

Redwing

RK

Redshank

SG

Starling

SN

Snipe

WN

Wigeon

Transect Route

Original transect

New transect route

Access Issues

No access

Section

Temporary Construction Land

Permanent Land Take

Drawn

Report

MRPS108/20644/1

Scale at A3

1:7,500

Drawn

KM

Checked

NS

Date

September 2016

Date

September 2016

Client

RPS Group PLC

Figure Number

7b

Figure Title

Appendix S10.4 -
Wintering Bird Transect
Survey Results Visit 3

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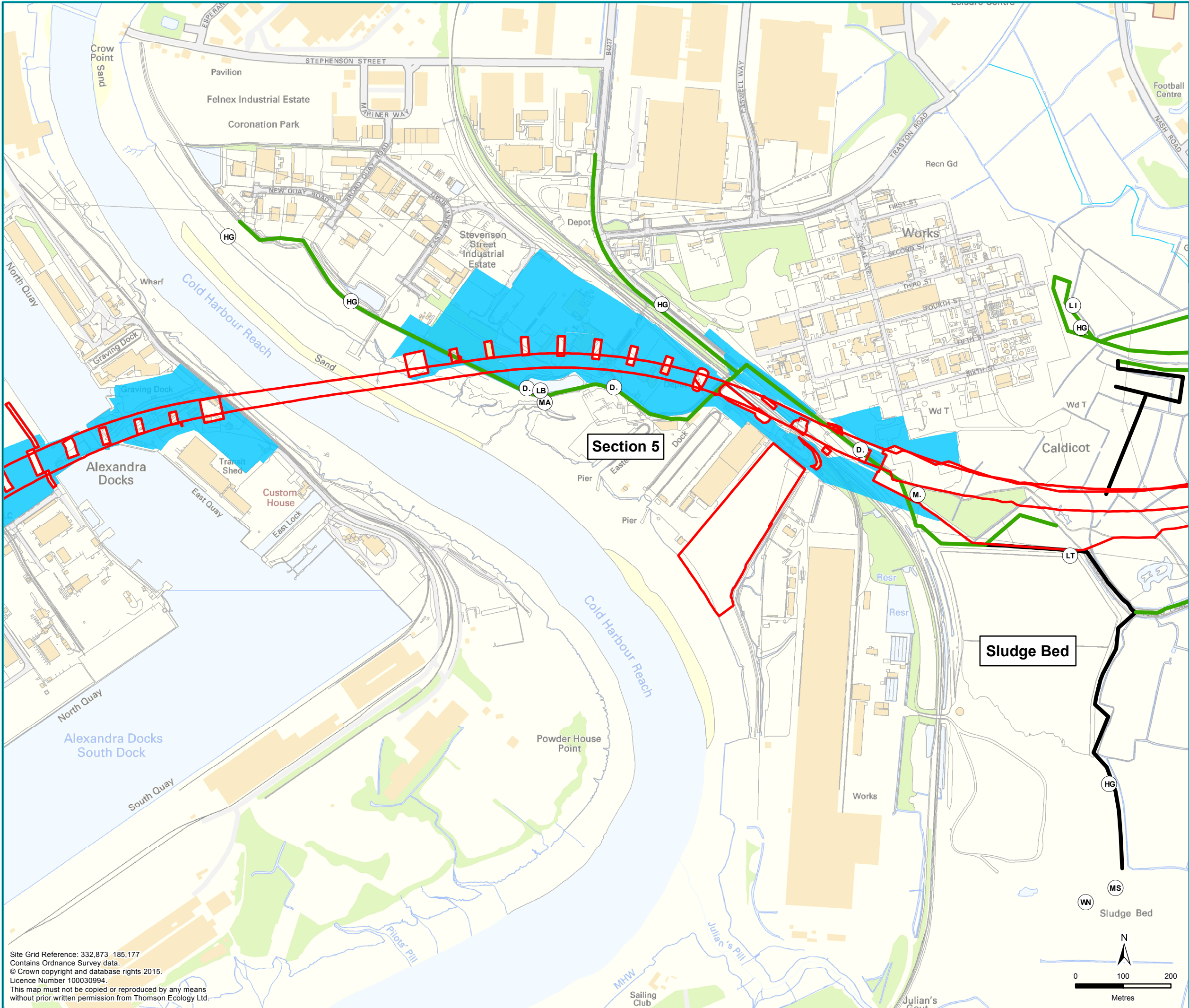
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Legend

Wintering Bird Species

D.

Dunnock

HG

Herring Gull

LB

Lesser Black-backed Gull

LI

Linnet

LT

Long Tailed Tit

M.

Mistle Thrush

MA

Mallard

MS

Mute Swan

WN

Wigeon

Transect Route

Original transect

Access Issues

No access

Temporary Construction Land

Permanent Land Take

Drawing Ref

MRPS108/20645/1

Scale at A3

1:7,500

Drawn

KM

Checked

NS

Date

September 2016

Date

September 2016

Client

RPS Group PLC

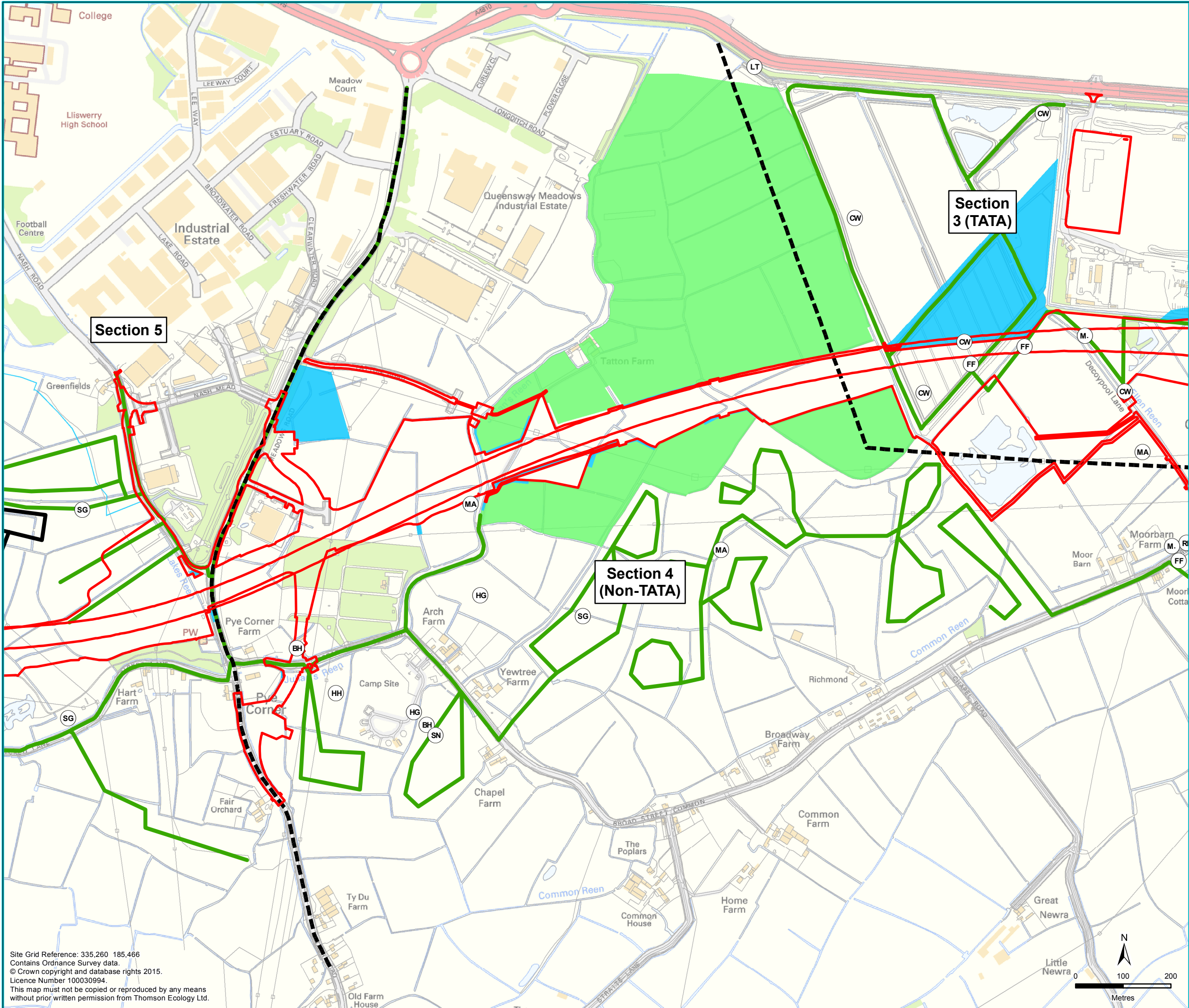
Figure Number

7c

Figure Title

Appendix S10.4 -
Wintering Bird Transect
Survey Results Visit 3

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Legend

Wintering Bird Species

- BH Black-headed Gull
- CW Cetti's Warbler
- FF Fieldfare
- HG Herring Gull
- HH Hen Harrier
- LT Long Tailed Tit
- M Mistle Thrush
- MA Mallard
- RE Redwing
- SG Starling
- SN Snipe

Transect Route

- Original transect

Access Issues

- No access
- Section
- Ecological Mitigation
- Temporary Construction Land
- Permanent Land Take

Drawing Ref
MRPS108/20646/1

Scale at A3
1:7,500

Drawn
KM

Checked
NS

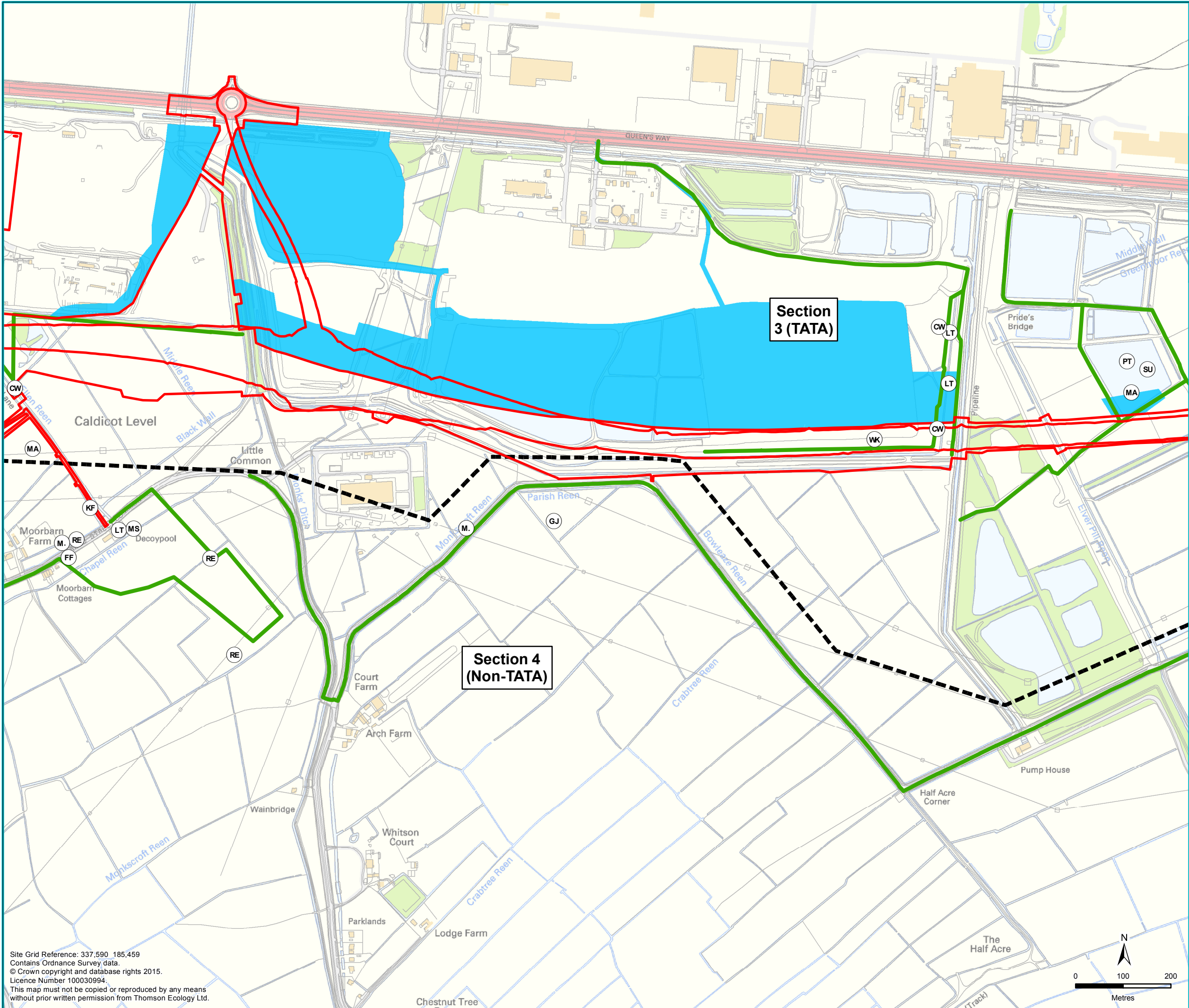
Date
September 2016

Date
September 2016

Client
RPS Group PLC

Figure Number
7d

Figure Title
Appendix S10.4 -
Wintering Bird Transect
Survey Results Visit 3



Legend

Wintering Bird Species

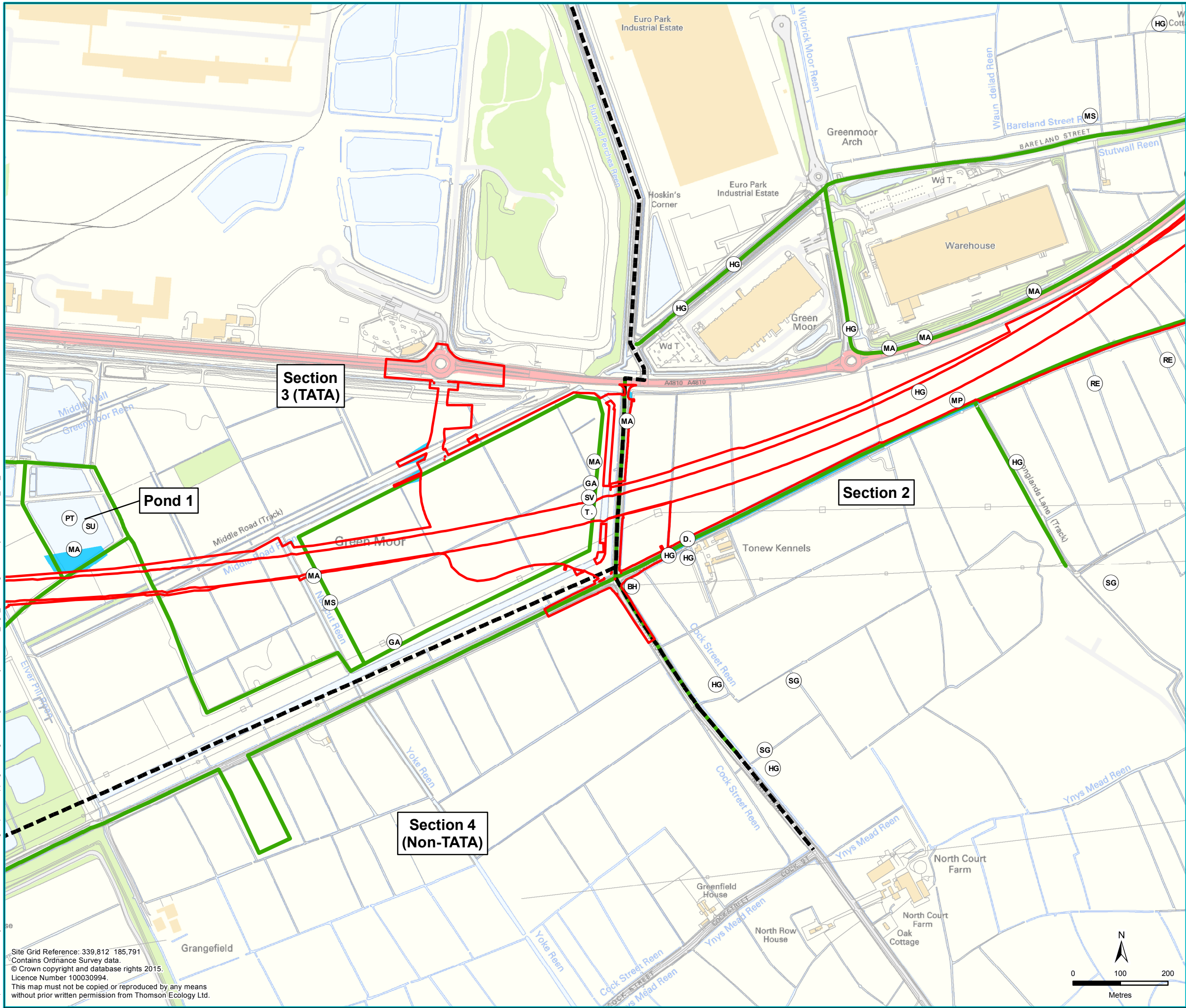
- CW Cetti's Warbler
- FF Fieldfare
- GJ Greylag Goose
- KF Kingfisher
- LT Long Tailed Tit
- M Mistle Thrush
- MA Mallard
- MS Mute Swan
- PT Pintail
- RE Redwing
- SU Shelduck
- WK Woodcock

Transect Route

- Original transect
- Section
- Temporary Construction Land
- Permanent Land Take

Drawing Ref		MRPS108/20647/1	
Scale at A3		1:7,500	
Drawn	KM	Checked	NS
Date	September 2016	Date	September 2016
Client		RPS Group PLC	
Figure Number		7e	
Figure Title			
Appendix S10.4 - Wintering Bird Transect Survey Results Visit 3			

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Legend
Wintering Bird Species

- (BH) Black-headed Gull
- (D.) Dunnock
- (GA) Gadwall
- (HG) Herring Gull
- (MA) Mallard
- (MP) Meadow Pipit
- (MS) Mute Swan
- (PT) Pintail
- (RE) Redwing
- (SG) Starling
- (SU) Shelduck
- (SV) Shoveler
- (T.) Teal

Transect Route

- Original transect
- Section
- Temporary Construction Land
- Permanent Land Take

Drawing Ref
MRPS108/20648/1

Scale at A3
1:7,500

Drawn
KM

Checked
NS

Date
September 2016

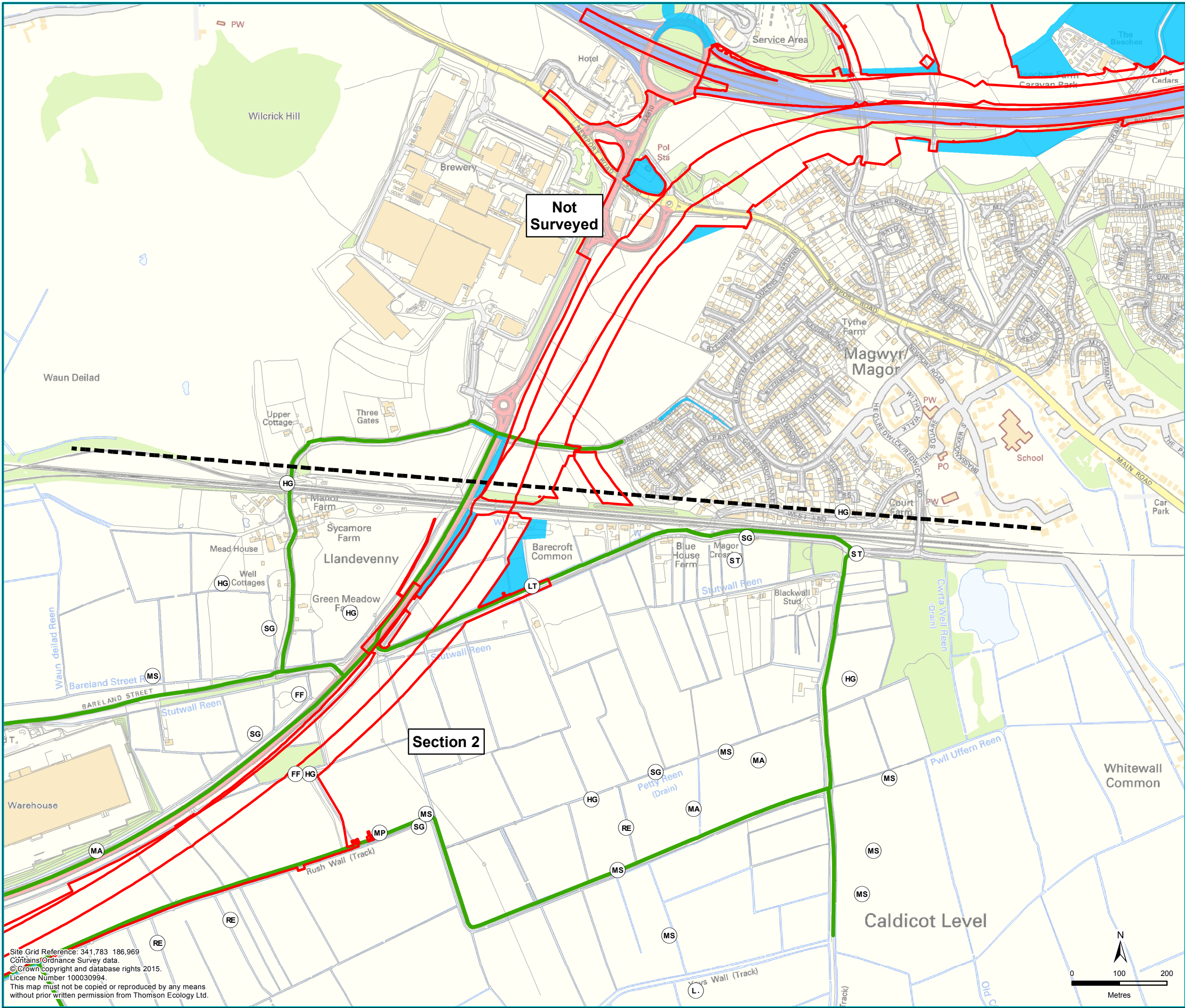
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Client
RPS Group PLC

Figure Number
7f

Figure Title
Appendix S10.4 -
Wintering Bird Transect
Survey Results Visit 3

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Legend

Wintering Bird Species

FF

Fieldfare

HG

Herring Gull

L

Lapwing

LT

Long Tailed Tit

MA

Mallard

MP

Meadow Pipit

MS

Mute Swan

RE

Redwing

SG

Starling

ST

Song Thrush

Transect Route

Original transect

Section

Temporary Construction Land

Permanent Land Take

Drawing Ref

MRPS108/20649/1

Scale at A3

1:7,500

Drawn

KM

Checked

NS

Date

September 2016

Date

September 2016

Client

RPS Group PLC

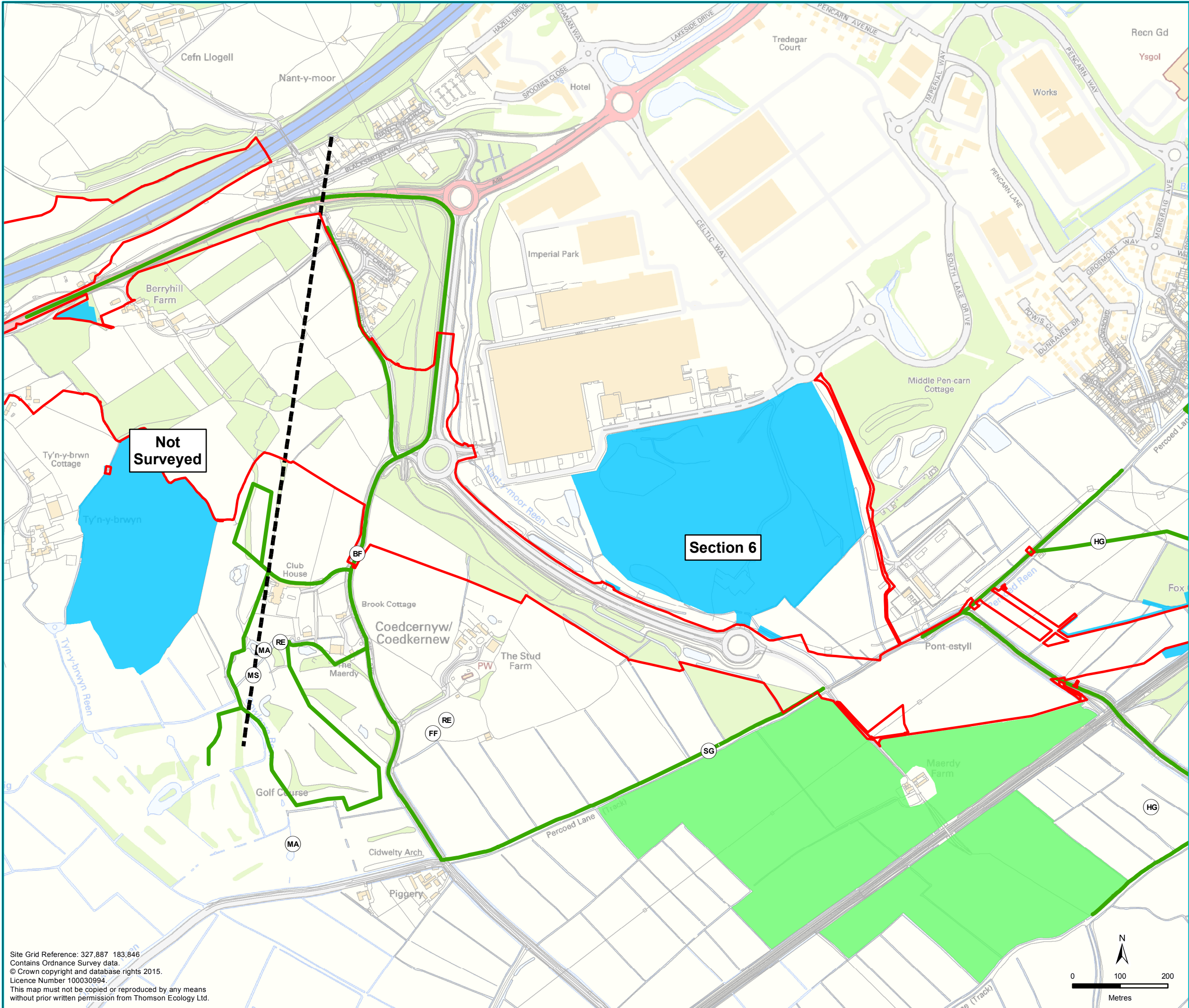
Figure Number

7g

Figure Title

Appendix S10.4 -
Wintering Bird Transect
Survey Results Visit 3

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Legend

Wintering Bird Species
(BF) Bullfinch
(FF) Fieldfare
(HG) Herring Gull
(MA) Mallard
(MS) Mute Swan
(RE) Redwing
(SG) Starling

Transect Route
Original transect
Section
Ecological Mitigation
Temporary Construction Land
Permanent Land Take

Drawing Ref
MRPS108/20650/1

Scale at A3
1:7,500

Drawn
KM

Checked
NS

Date
September 2016

Date
September 2016

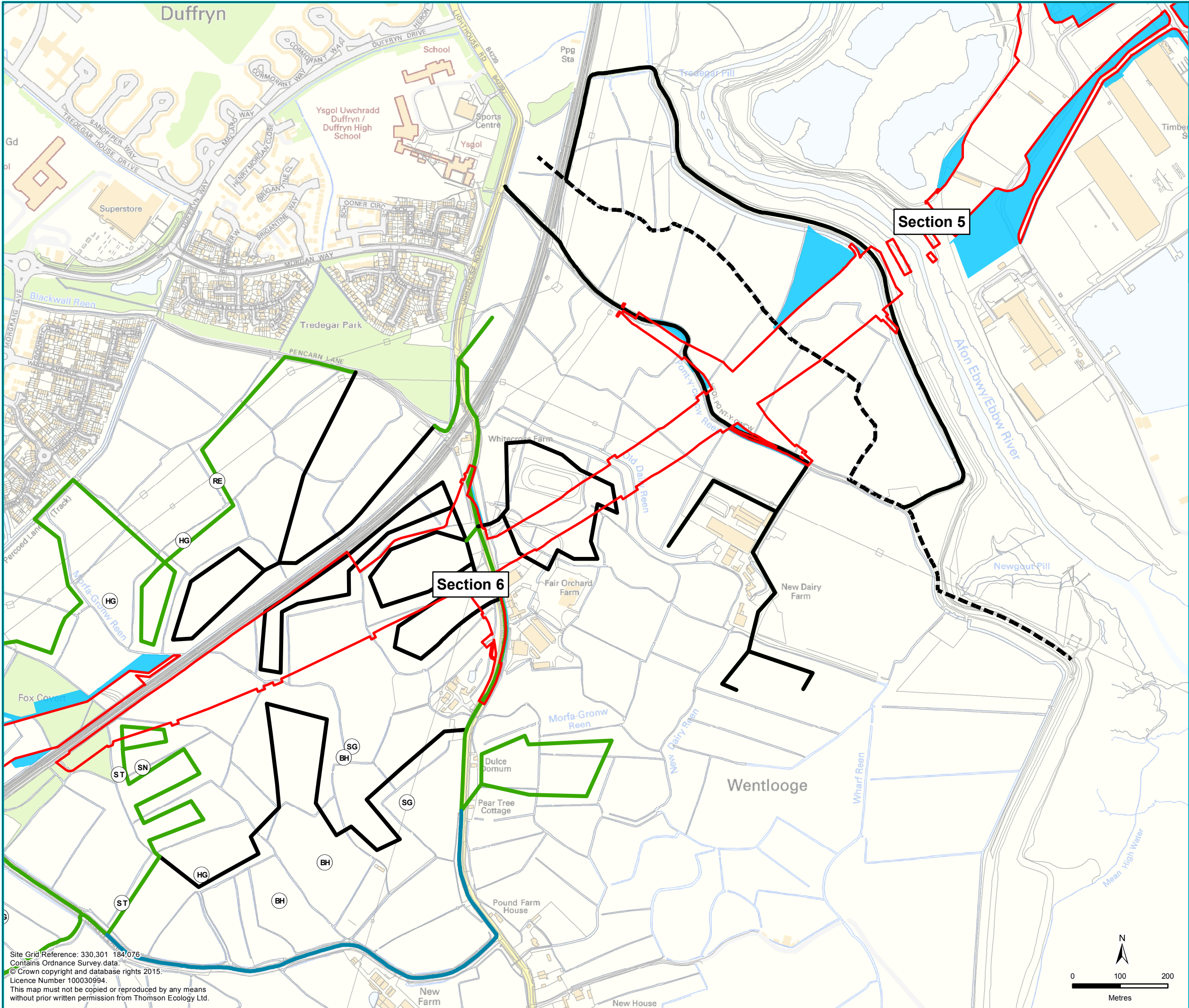
Client
RPS Group PLC

Figure Number
8a

Figure Title
Appendix S10.4 -
Wintering Bird Transect
Survey Results Visit 4

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Legend

Wintering Bird Species

BH

Black-head... Gull

HG

Herring Gull

RE

Redwing

SG

Starling

SN

Snipe

ST

Song Thrush

Transect Route

Original transect

New transect route

Access Issues

No access

Section

Temporary Construction Land

Permanent Land Take

Drawing Ref

MRPS108/20651/1

Scale at A3

1:7,500

Drawn

KM

Checked

NS

Date

September 2016

Date

September 2016

Client

RPS Group PLC

Figure Number

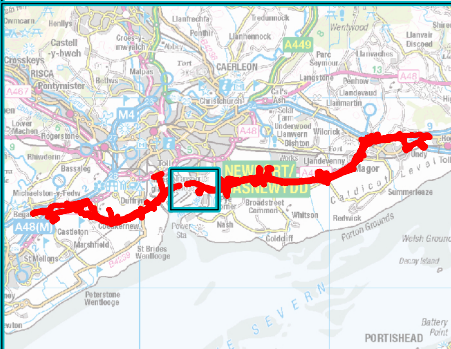
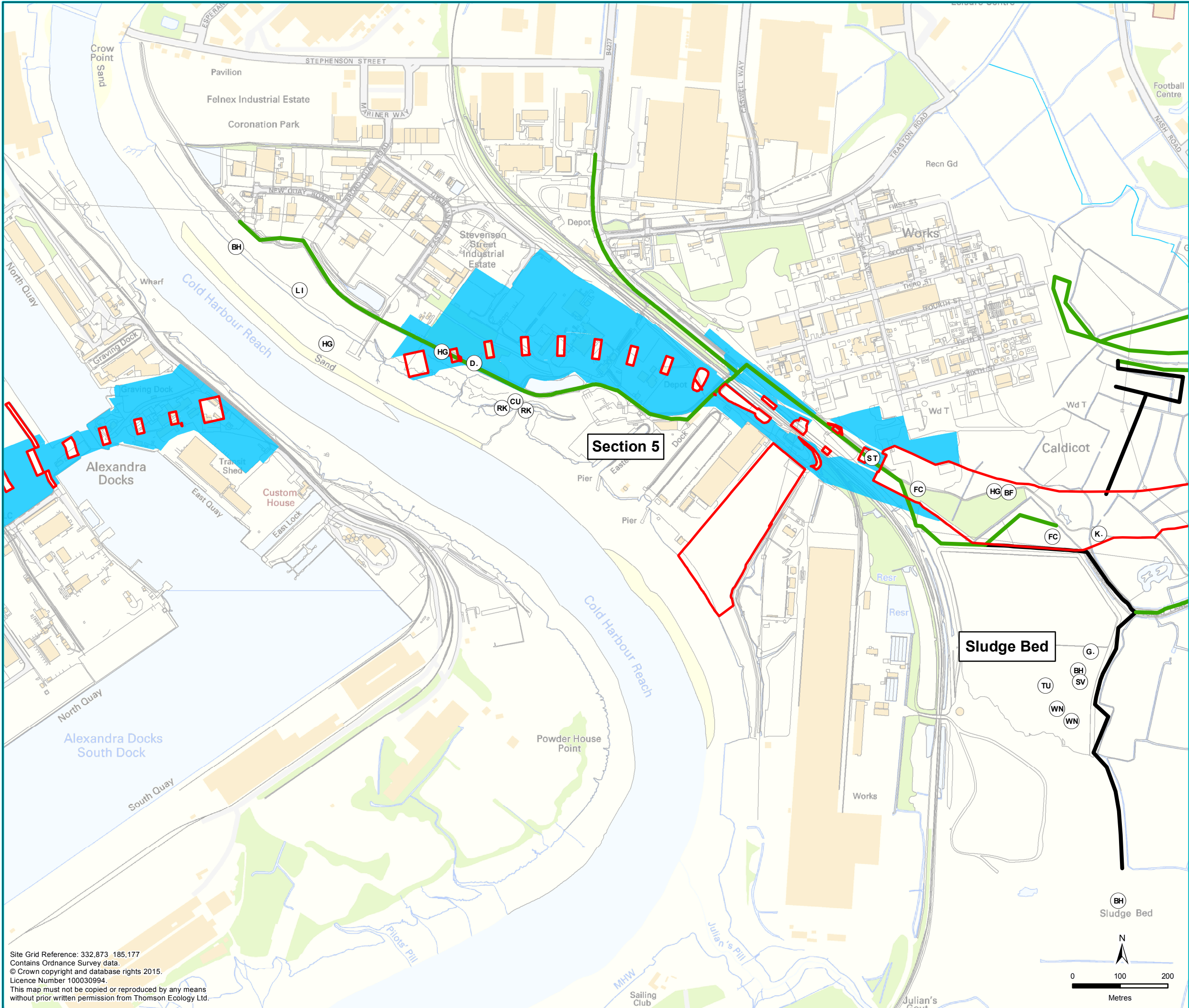
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Figure Title

Appendix S10.4 - Wintering Bird Transect Survey Results Visit 4

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Legend

Wintering Bird Species

- (BF) Bullfinch
- (BH) Black-headed Gull
- (CU) Curlew
- (D.) Dunnock
- (FC) Firecrest
- (G.) Green Woodpecker
- (HG) Herring Gull
- (K.) Kestrel
- (LI) Linnet
- (RK) Redshank
- (ST) Song Thrush
- (SV) Shoveler
- (TU) Tufted Duck
- (WN) Wigeon

Transect Route

Original transect

Access Issues

- No access
- Temporary Construction Land
- Permanent Land Take

Drawing Ref
MRPS108/20652/1

Scale at A3
1:7,500

Drawn
KM

Checked
NS

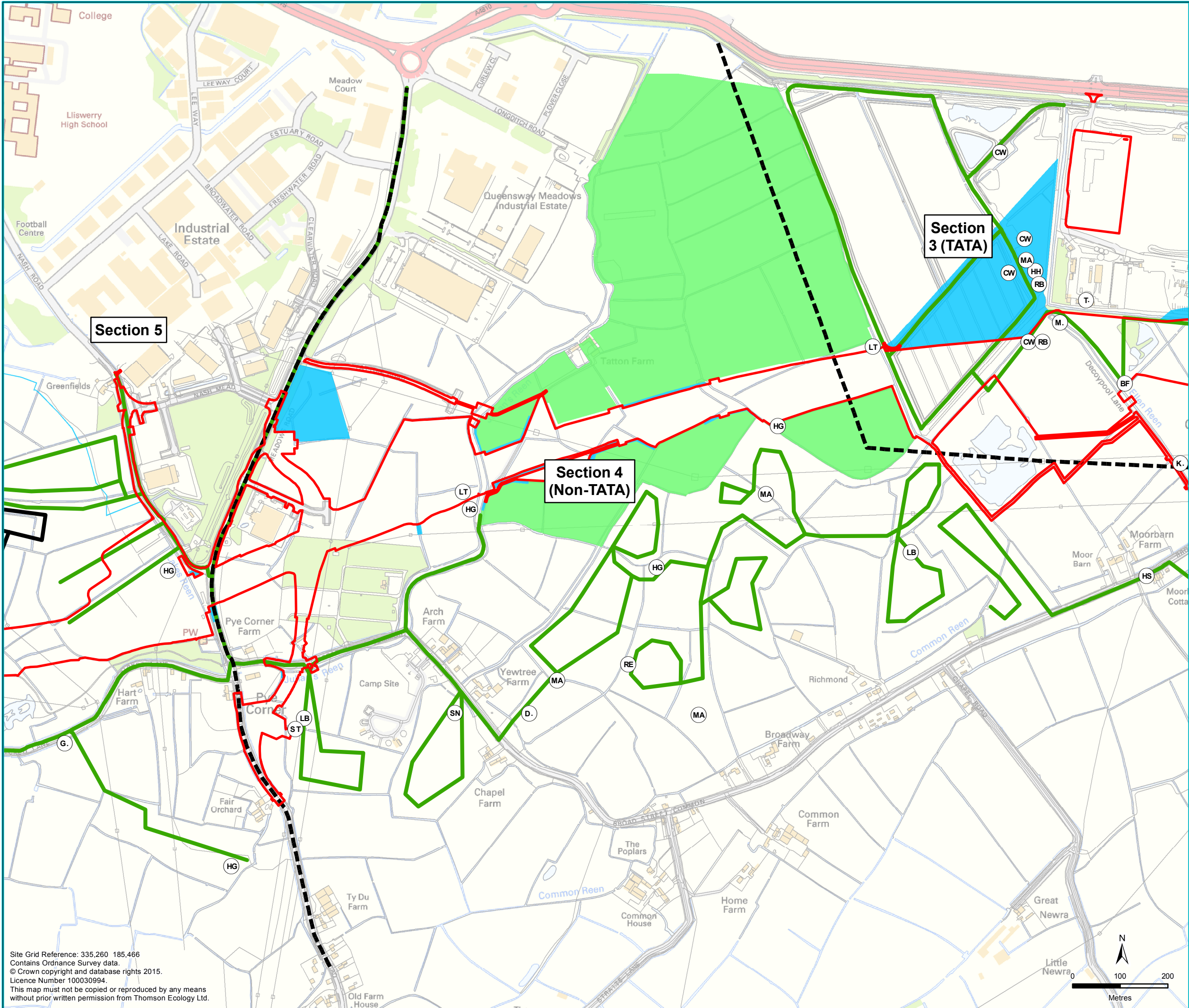
Date
September 2016

Date
September 2016

Client
RPS Group PLC

Figure Number
8c

Figure Title
Appendix S10.4 -
Wintering Bird Transect
Survey Results Visit 4



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Legend

Wintering Bird Species
(BF) Bullfinch
(CW) Cetti's Warbler
(D.) Dunnock
(G.) Green Woodpecker
(HG) Herring Gull
(HH) Hen Harrier
(HS) House Sparrow
(K.) Kestrel
(LB) Lesser Black-back... Gull
(LT) Long Tailed Tit
(M.) Mistle Thrush
(MA) Mallard
(RB) Reed Bunting
(RE) Redwing
(SN) Snipe
(ST) Song Thrush
(T.) Teal

Transect Route
Original transect
Access Issues
No access
Section
Ecological Mitigation
Temporary Construction Land
Permanent Land Take

Drawing Ref
MRPS108/20653/1

Scale at A3
1:7,500

Drawn
KM

Checked
NS

Date
September 2016

Date
September 2016

Client
RPS Group PLC

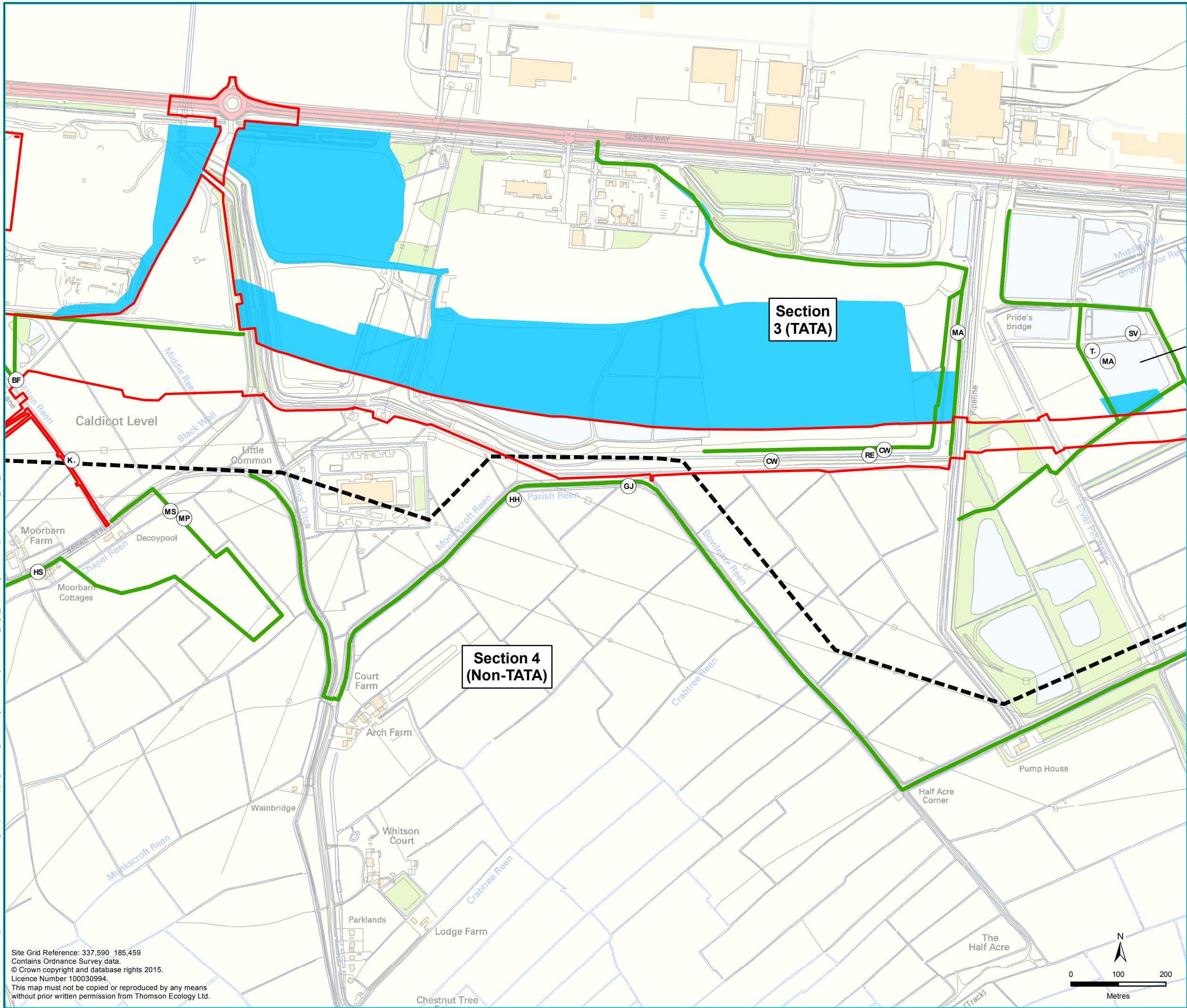
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Figure Title
Appendix S10.4 -
Wintering Bird Transect
Survey Results Visit 4

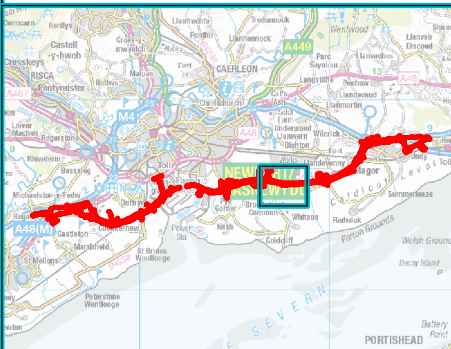
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- Legend
- Wintering Bird Species**
- (BF) Bullfinch
 - (CW) Cetti's Warbler
 - (GJ) Greylag Goose
 - (HH) Hen Harrier
 - (HS) House Sparrow
 - (K) Kestrel
 - (MA) Mallard
 - (MP) Meadow Pipit
 - (MS) Mute Swan
 - (RE) Redwing
 - (SV) Shoveler
 - (T) Teal
- Transect Route**
- Original transect
 - Section
 - Temporary Construction Land
 - Permanent Land Take

Drawing Ref
MRPS108/20654/1

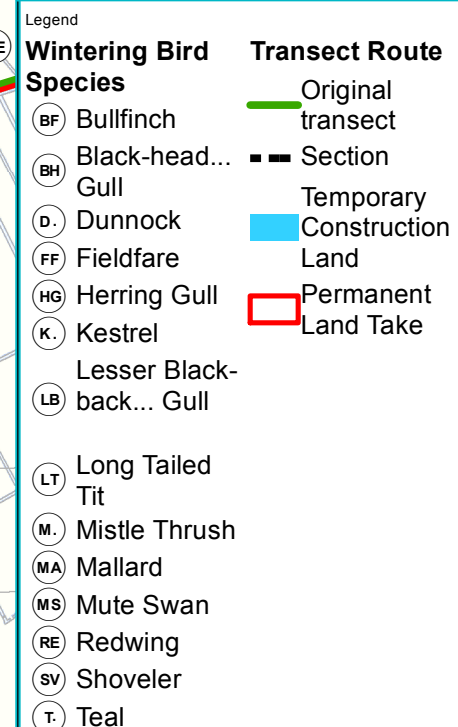
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Drawn KM	Checked NS
Date September 2016	Date September 2016

Client
RPS Group PLC

Figure Number
8e

Figure Title
Appendix S10.4 -
Wintering Bird Transect
Survey Results Visit 4



Drawing Ref		MRPS108/20655/1	
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Drawn	KM	Checked	NS
Date	September 2016	Date	September 2016
Client			
RPS Group PLC			
Figure Number		8f	

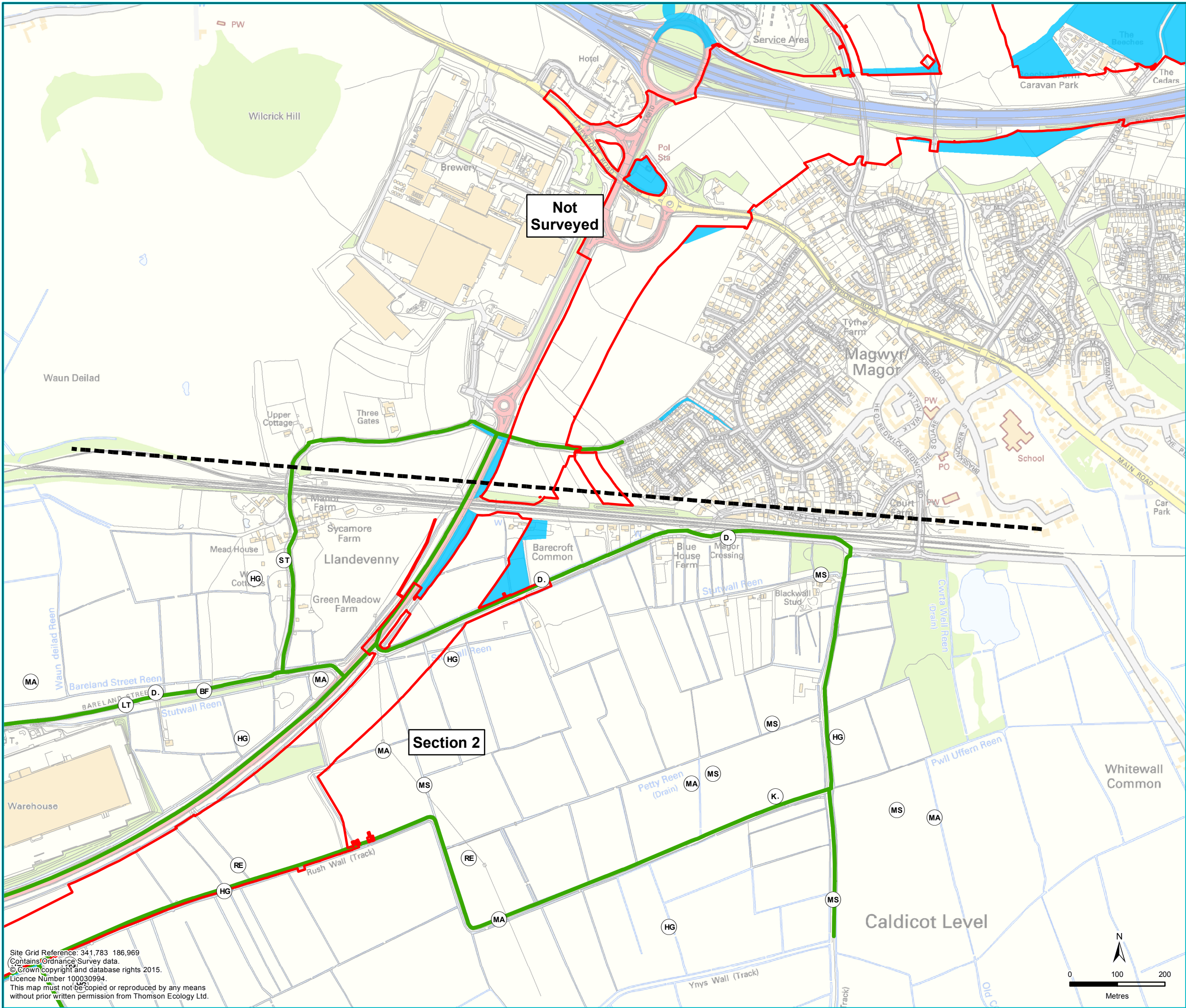
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Appendix S10.4 -
Wintering Bird Transect
Survey Results Visit 4

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Legend

Wintering Bird Species

- (BF) Bullfinch
- (D.) Dunnock
- (HG) Herring Gull
- (K.) Kestrel
- (LT) Long Tailed Tit
- (MA) Mallard
- (MS) Mute Swan
- (RE) Redwing
- (ST) Song Thrush

Transect Route

- Original transect
- Section
- Temporary
- Construction Land
- Permanent Land Take

Drawing Ref
MRPS108/20656/1

Scale at A3
1:7,500

Drawn
KM

Checked
NS

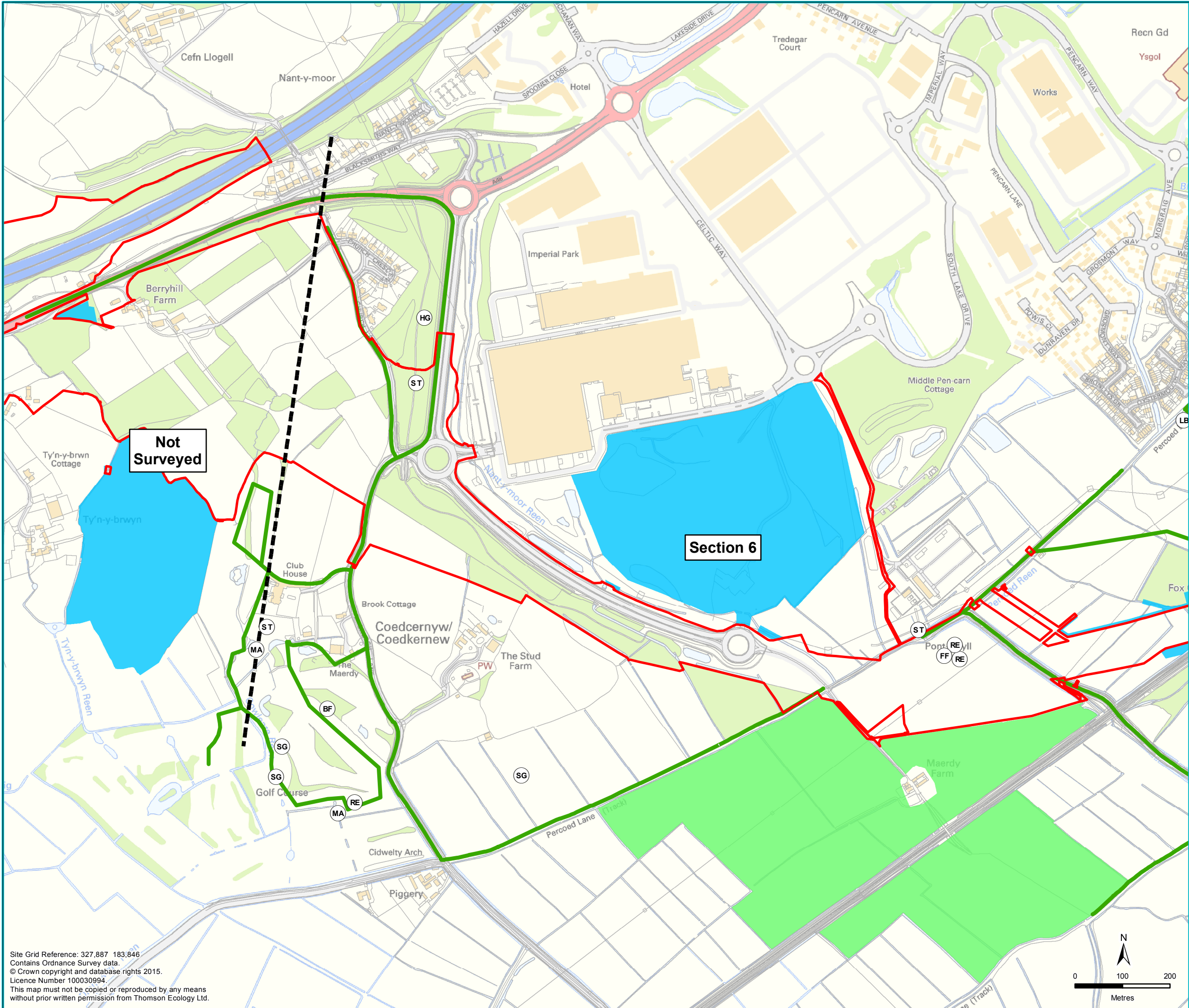
Date
September 2016

Date
September 2016

Client
RPS Group PLC

Figure Number
8g

Figure Title
Appendix S10.4 -
Wintering Bird Transect
Survey Results Visit 4



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Legend

Wintering Bird Species

(BF)

Bullfinch

(FF)

Fieldfare

(HG)

Herring Gull

(LB)

Lesser Black-backed Gull

(MA)

Mallard

(RE)

Redwing

(SG)

Starling

(ST)

Song Thrush

Transect Route

Original transect

Section

Ecological Mitigation

Temporary Construction Land

Permanent Land Take

Drawing Ref

MRPS108/20657/1

Scale at A3

1:7,500

Drawn

KM

Checked

NS

Date

September 2016

Date

September 2016

Client

RPS Group PLC

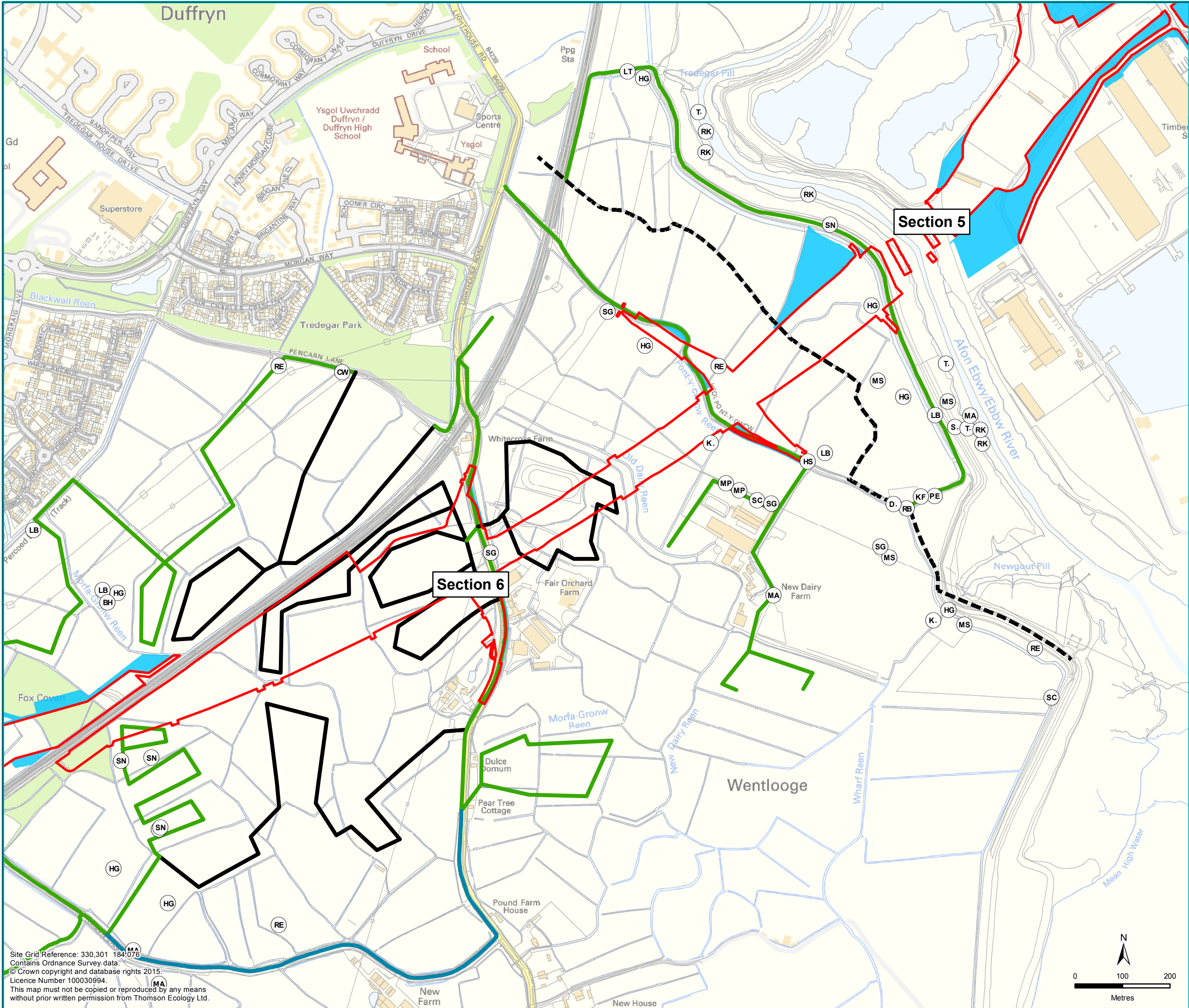
Figure Number

9a

Figure Title

Appendix S10.4 -
Wintering Bird Transect
Survey Results Visit 5

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Legend

Wintering Bird Species

(BH)

Black-headed Gull

(CW)

Cetti's Warbler

(D.)

Dunnock

(HG)

Herring Gull

(HS)

House Sparrow

(K.)

Kestrel

(KF)

Kingfisher

(LB)

Lesser Black-backed Gull

(LT)

Long Tailed

(MA)

Mallard

(MP)

Meadow Pipit

(MS)

Mute Swan

(PE)

Peregrine

(RB)

Reed Bunting

(RE)

Redwing

(RK)

Redshank

(S.)

Skylark

(SC)

Stonechat

(SG)

Starling

(SN)

Snipe

(T.)

Teal

Transect Route

Original transect

New transect route

Access Issues

No access

Section

Temporary Construction Land

Permanent Land Take

Drawing Ref

MRPS108/20658/1

Scale at A3

1:7,500

Drawn

KM

Checked

NS

Date

September 2016

Date

September 2016

Client

RPS Group PLC

Figure Number

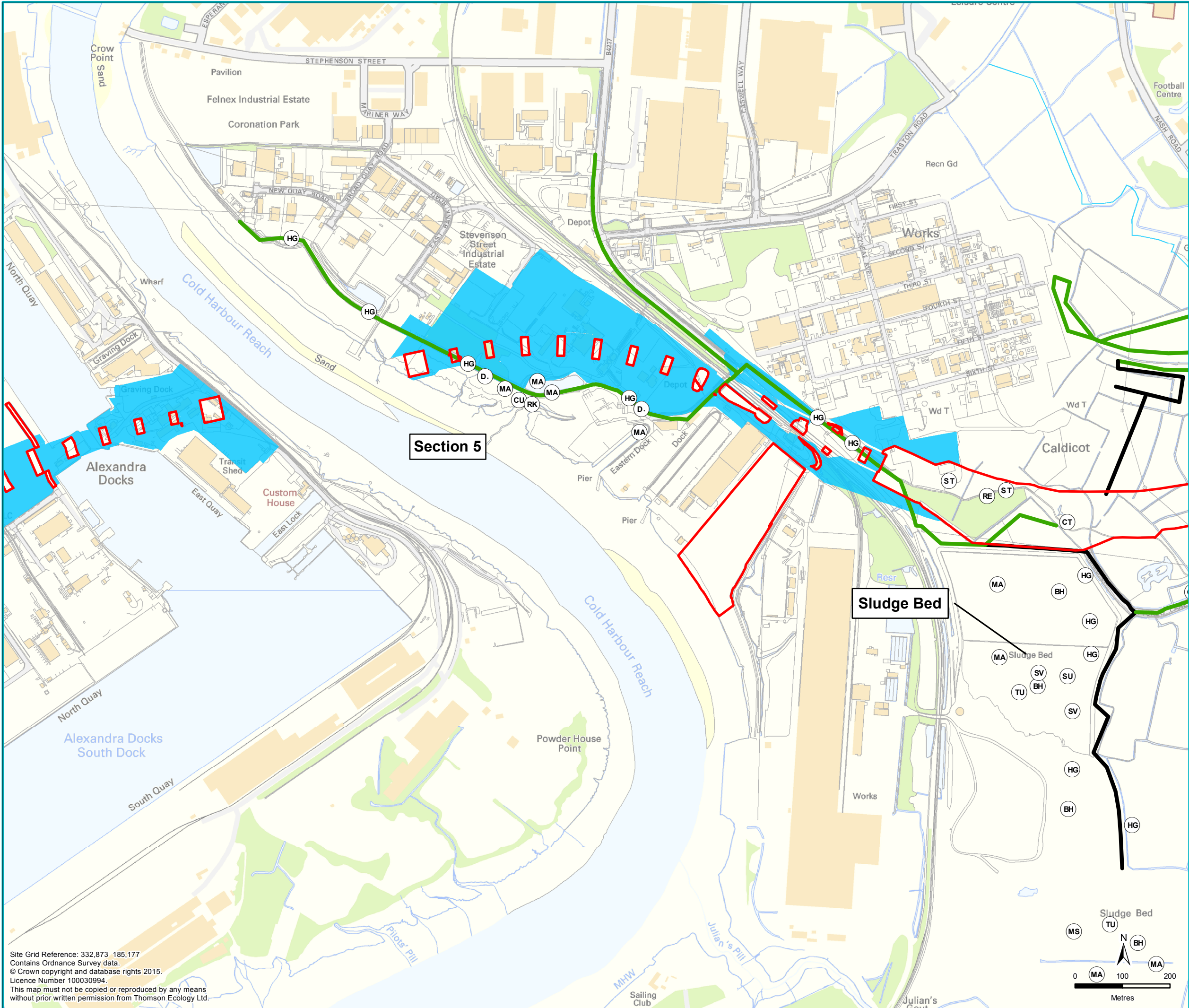
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Figure Title

Appendix S10.4 - Wintering Bird Transect Survey Results Visit 5

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Legend

Wintering Bird Species
(BH) Black-headed Gull
(CT) Cetti's Warbler
(CU) Curlew
(D.) Dunnock
(HG) Herring Gull
(MA) Mallard
(MS) Mute Swan
(RE) Redwing
(RK) Redshank
(ST) Song Thrush
(SU) Shelduck
(SV) Shoveler
(TU) Tufted Duck

Transect Route
Original transect
Access Issues
No access
Temporary Construction Land
Permanent Land Take

Drawing Ref
MRPS108/20659/1

Scale at A3
1:7,500

Drawn
KM

Checked
NS

Date
September 2016

Date
September 2016

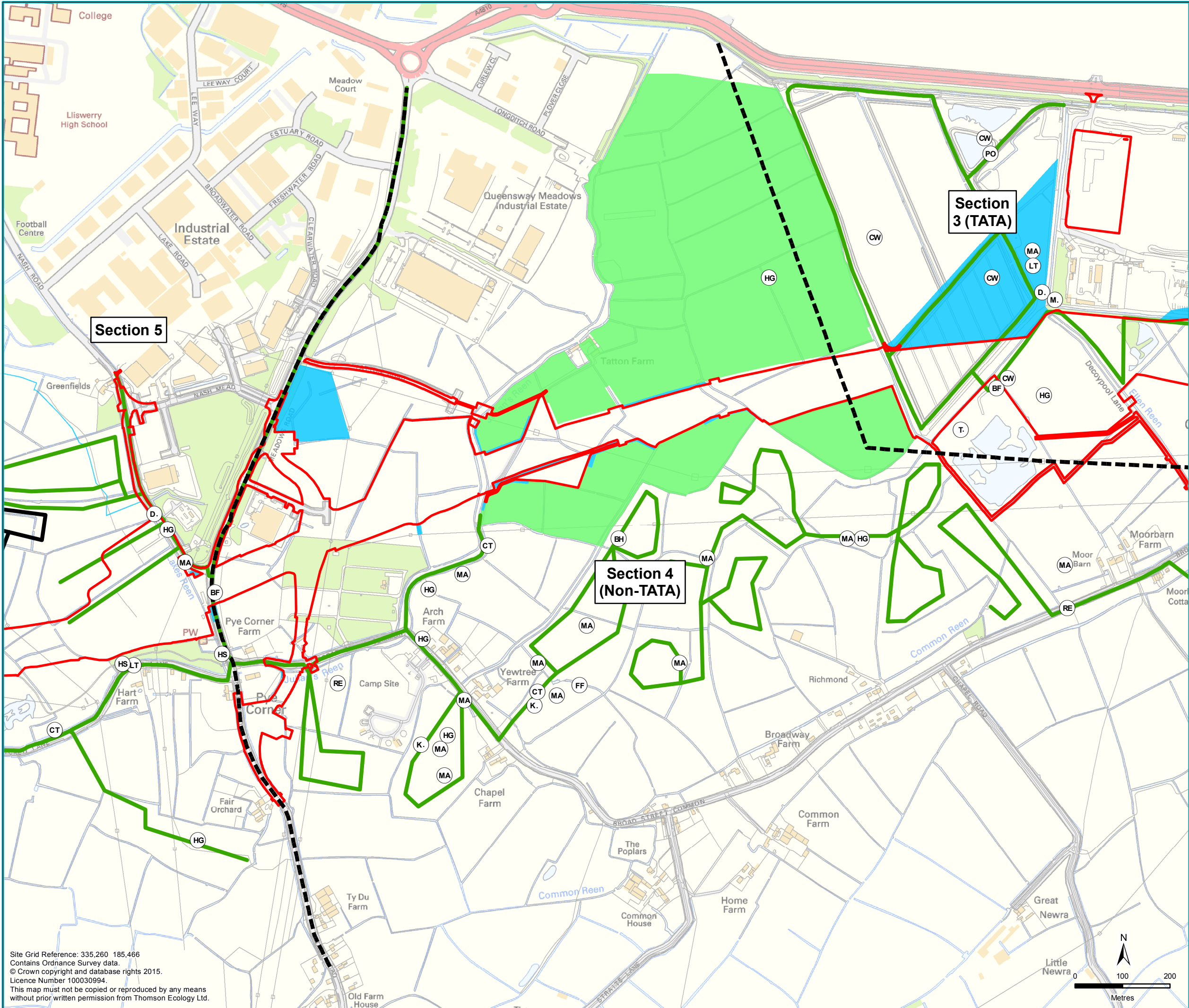
Client
RPS Group PLC

Figure Number
9c

Figure Title
Appendix S10.4 -
Wintering Bird Transect
Survey Results Visit 5

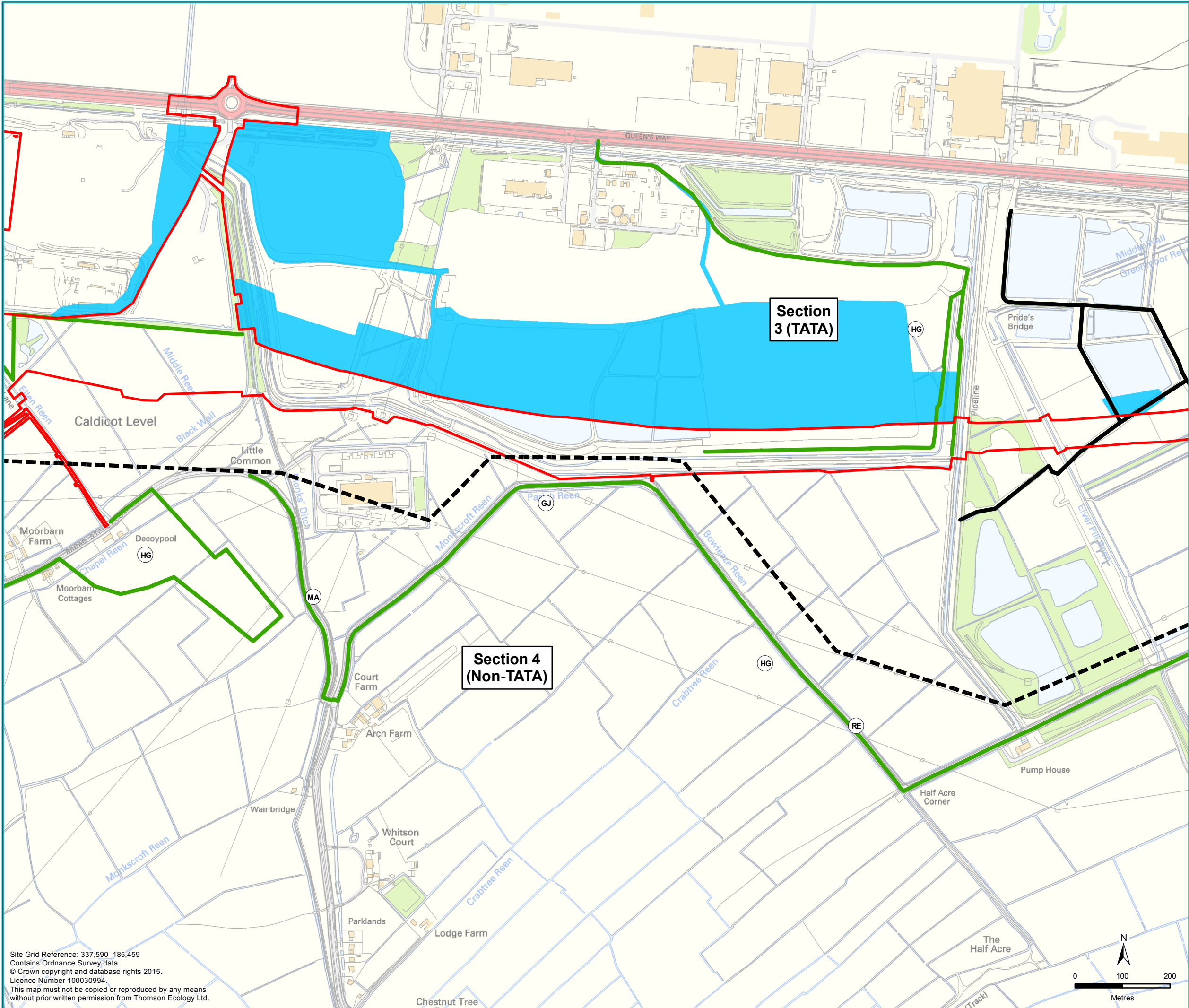
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- Legend
- Wintering Bird Species**
- (BF) Bullfinch
 - (BH) Black-headed Gull
 - (CT) Cetti's Warbler
 - (CW) Cetti's Warbler
 - (D.) Dunnock
 - (FF) Fieldfare
 - (HG) Herring Gull
 - (HS) House Sparrow
 - (K.) Kestrel
 - (LT) Long Tailed Tit
 - (M.) Mistle Thrush
 - (MA) Mallard
 - (PO) Pochard
 - (RE) Redwing
 - (T.) Teal
- Transect Route**
- Original transect
 - Access Issues
 - No access
 - Section
 - Ecological Mitigation
 - Temporary Construction Land
 - Permanent Land Take

Drawing Ref		MRPS108/20660/1	
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Drawn	KM	Checked	NS
Date	September 2016	Date	September 2016
Client		RPS Group PLC	
Figure Number		9d	
Figure Title			
Appendix S10.4 - Wintering Bird Transect Survey Results Visit 5			



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Legend

Wintering Bird Species

GJ

Greylag Goose

HG

Herring Gull

MA

Mallard

RE

Redwing

Transect Route

Original transect

No access

Section

Temporary Construction Land

Permanent Land Take

Drawing Ref

MRPS108/20661/1

Scale at A3

1:7,500

Drawn

KM

Checked

NS

Date

September 2016

Date

September 2016

Client

RPS Group PLC

Figure Number

9e

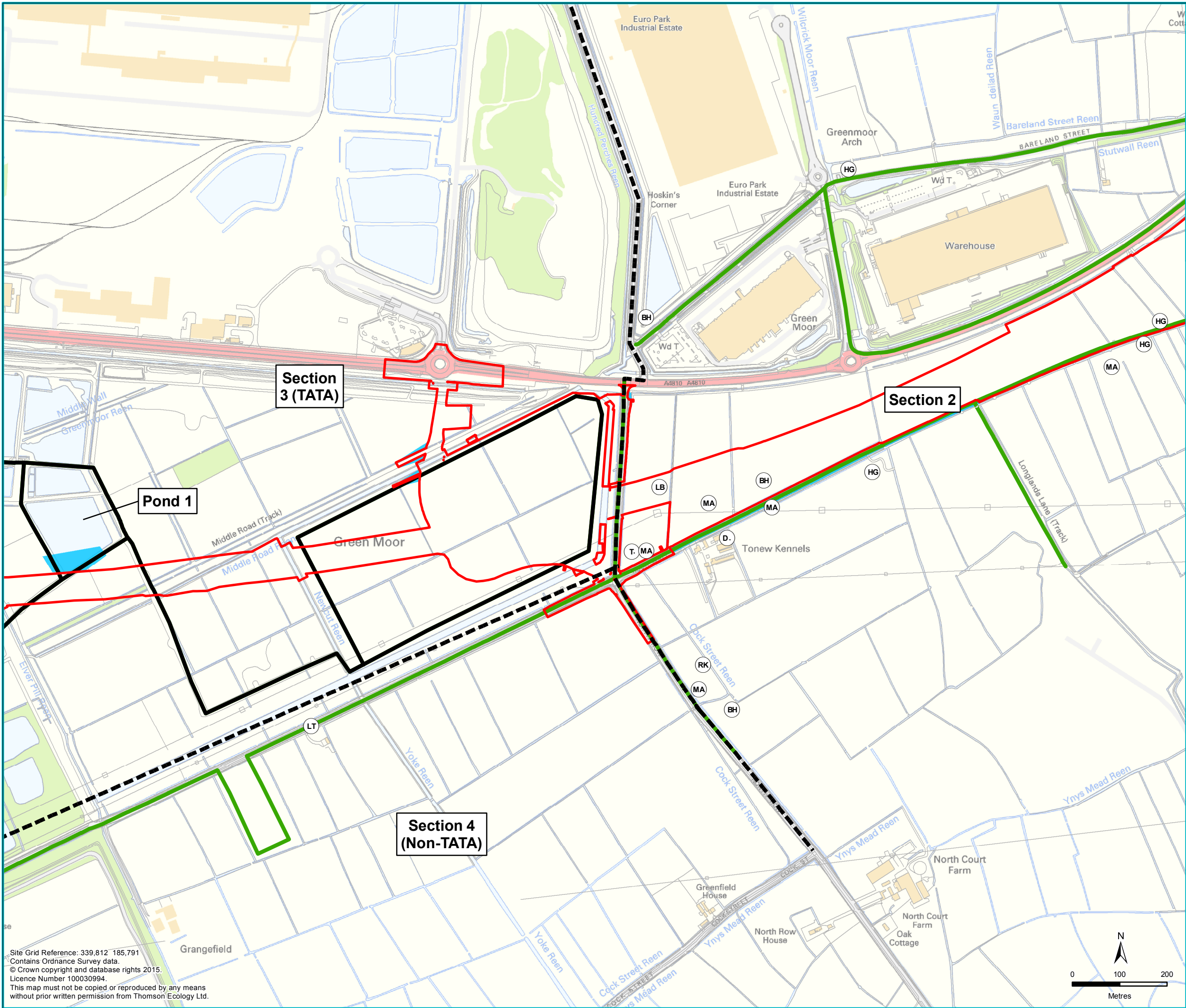
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Appendix S10.4 -
Wintering Bird Transect
Survey Results Visit 5

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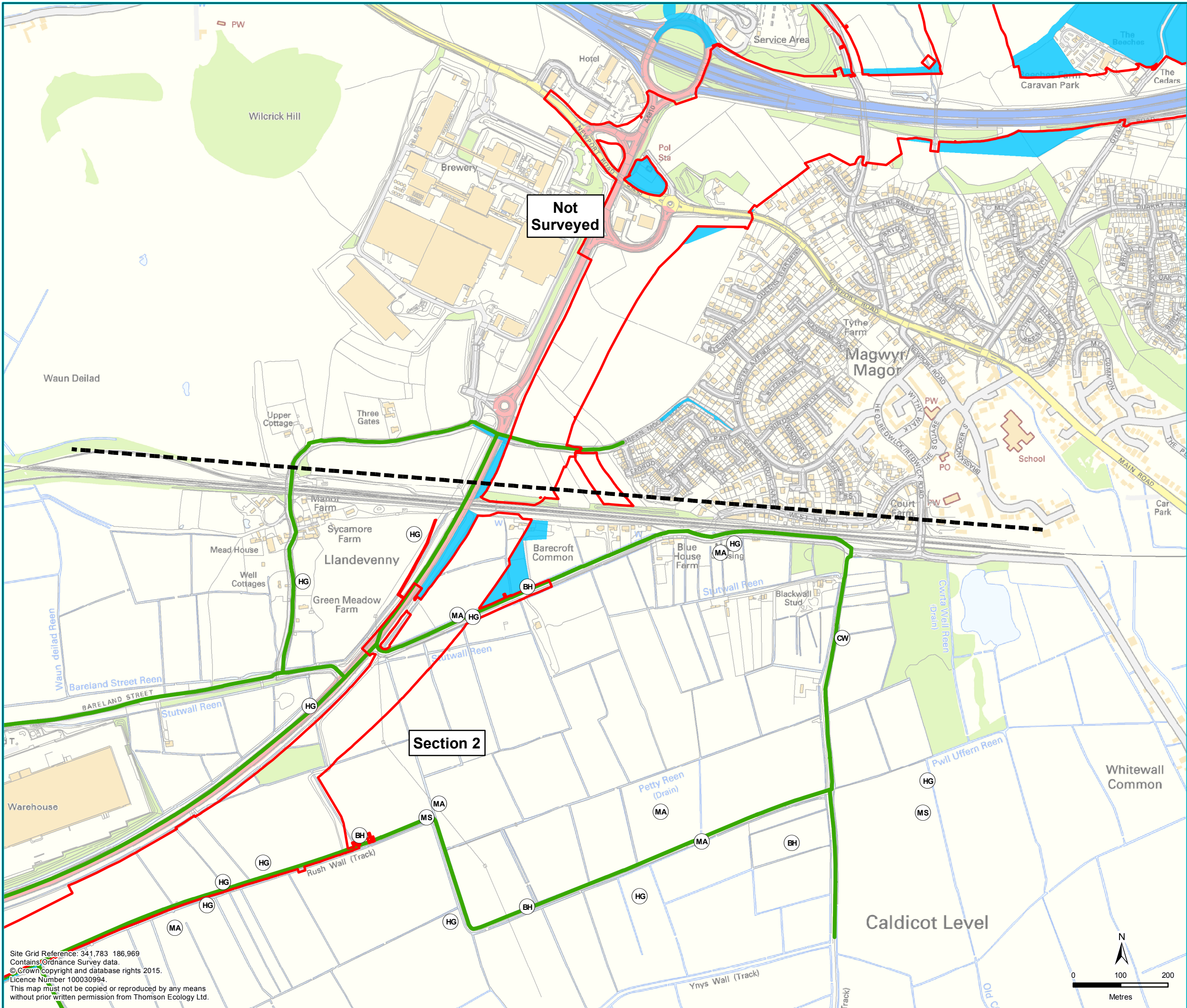
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- Legend
- Wintering Bird Species**
- (BH) Black-headed Gull
 - (D.) Dunnock
 - (HG) Herring Gull
 - (LB) Lesser Black-backed Gull
 - (LT) Long Tailed
 - (MA) Mallard
 - (RK) Redshank
 - (T.) Teal
- Transect Route**
- Original transect
 - No access
 - Section
 - Temporary Construction Land
 - Permanent Land Take

Drawing Ref		MRPS108/20662/1	
Scale at A3		1:7,500	
Drawn	KM	Checked	NS
Date	September 2016	Date	September 2016
Client		RPS Group PLC	
Figure Number		9f	
Figure Title		Appendix S10.4 - Wintering Bird Transect Survey Results Visit 5	

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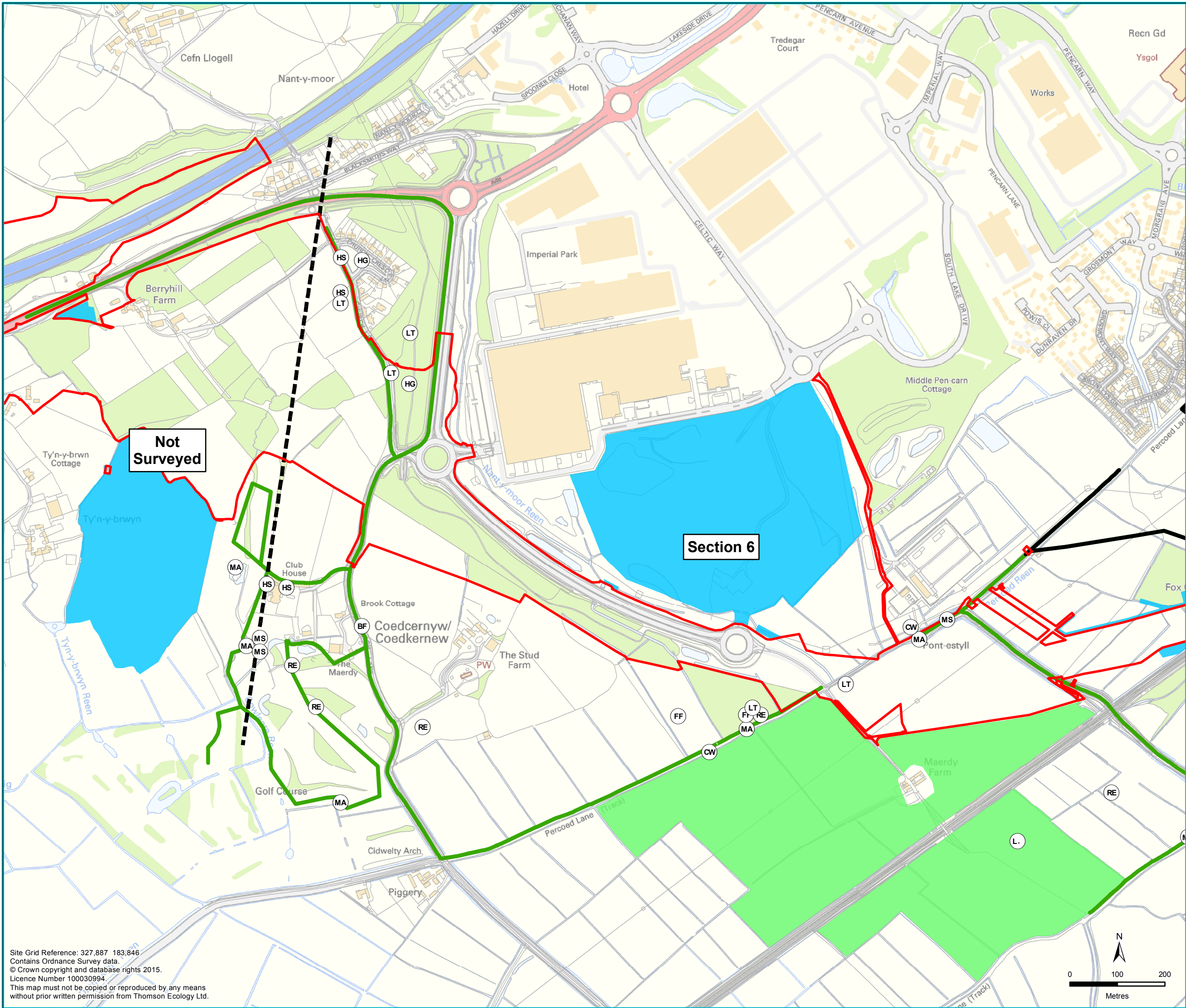
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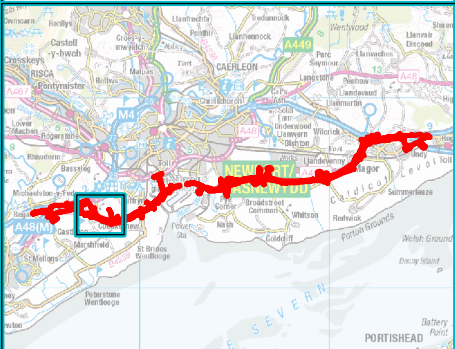
- Legend
- | Wintering Bird Species | Transect Route |
|------------------------|---------------------|
| (BH) Black-headed Gull | Original transect |
| (CW) Cetti's Warbler | Section |
| (HG) Herring Gull | Temporary |
| (MA) Mallard | Construction Land |
| (MS) Mute Swan | Permanent Land Take |

Drawing Ref		MRPS108/20663/1	
Scale at A3		1:7,500	
Drawn	KM	Checked	NS
Date	September 2016	Date	September 2016
Client			
RPS Group PLC			
Figure Number		9g	
Figure Title			
Appendix S10.4 - Wintering Bird Transect Survey Results Visit 5			

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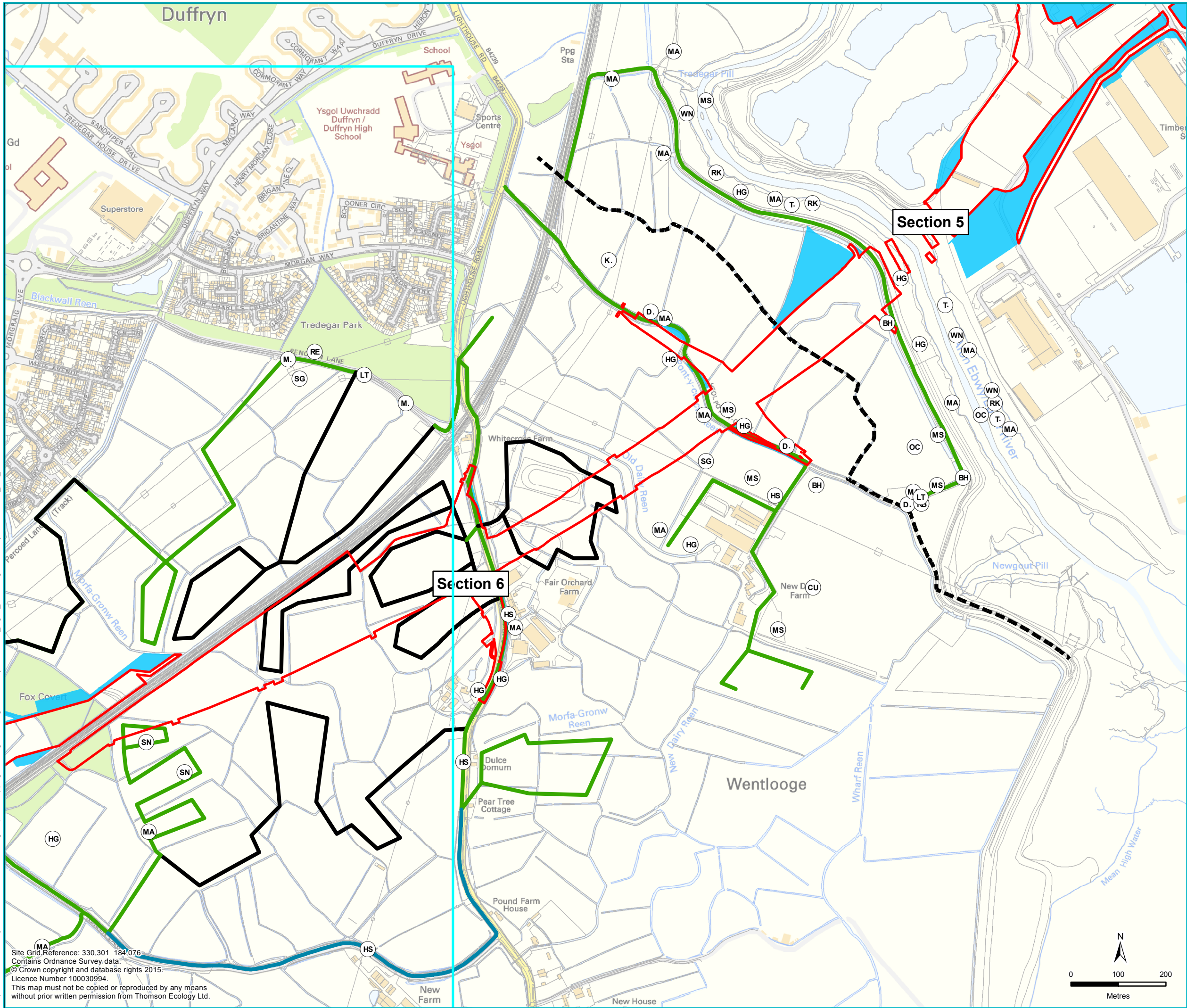
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Legend	
Wintering Bird Species	
(BF)	Bullfinch
(CW)	Cetti's Warbler
(FF)	Fieldfare
(HG)	Herring Gull
(HS)	House Sparrow
(LT)	Lapwing
(LT)	Long Tailed Tit
(MA)	Mallard
(MS)	Mute Swan
(RE)	Redwing
Transect Route	
—	Original transect
—	New transect route
Access Issues	
—	No access
- - -	Section
 	Ecological Mitigation
 	Temporary Construction Land
 	Permanent Land Take

Drawing Ref		MRPS108/20664/1	
Scale at A3		1:7,500	
Drawn	KM	Checked	NS
Date	September 2016	Date	September 2016
Client			
RPS Group PLC			
Figure Number		10a	
Figure Title			
Appendix S10.4 - Wintering Bird Transect Survey Results Visit 6			

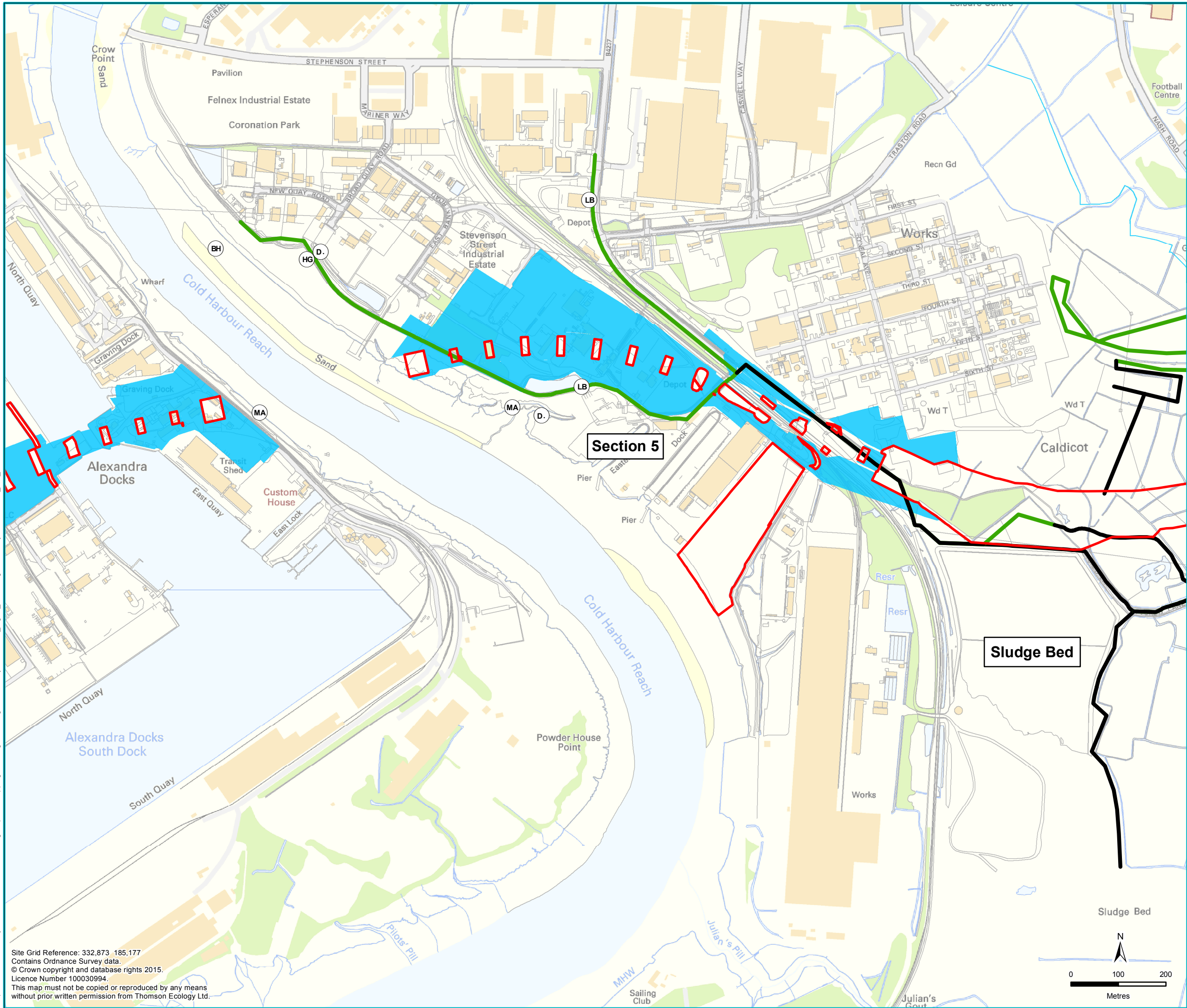
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Legend	
Wintering Bird Species	
(BH)	Black-headed Gull
(CU)	Curlew
(D.)	Dunnock
(HG)	Herring Gull
(HS)	House Sparrow
(K.)	Kestrel
(LT)	Long Tailed Tit
(M.)	Mistle Thrush
(MA)	Mallard
(MS)	Mute Swan
(OC)	Oystercatcher
(RB)	Reed Bunting
(RE)	Redwing
(RK)	Redshank
(SG)	Starling
(SN)	Snipe
(T.)	Teal
(WN)	Wigeon
Transect Route	
—	Original transect
—	New transect route
Access Issues	
—	No access
- - -	Section
■	Temporary Construction Land
■	Permanent Land Take

Drawing Ref	
MRPS108/20665/1	
Scale at A3	
1:7,500	
Drawn	Checked
KM	NS
Date	Date
September 2016	September 2016
Client	
RPS Group PLC	
Figure Number	
10b	
Figure Title	
Appendix S10.4 - Wintering Bird Transect Survey Results Visit 6	

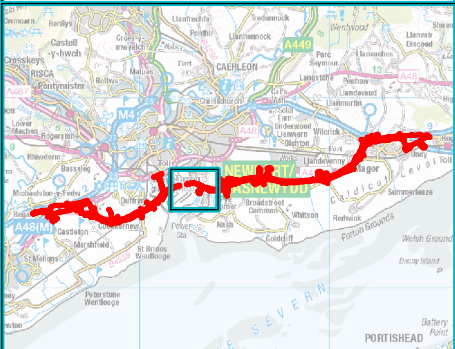
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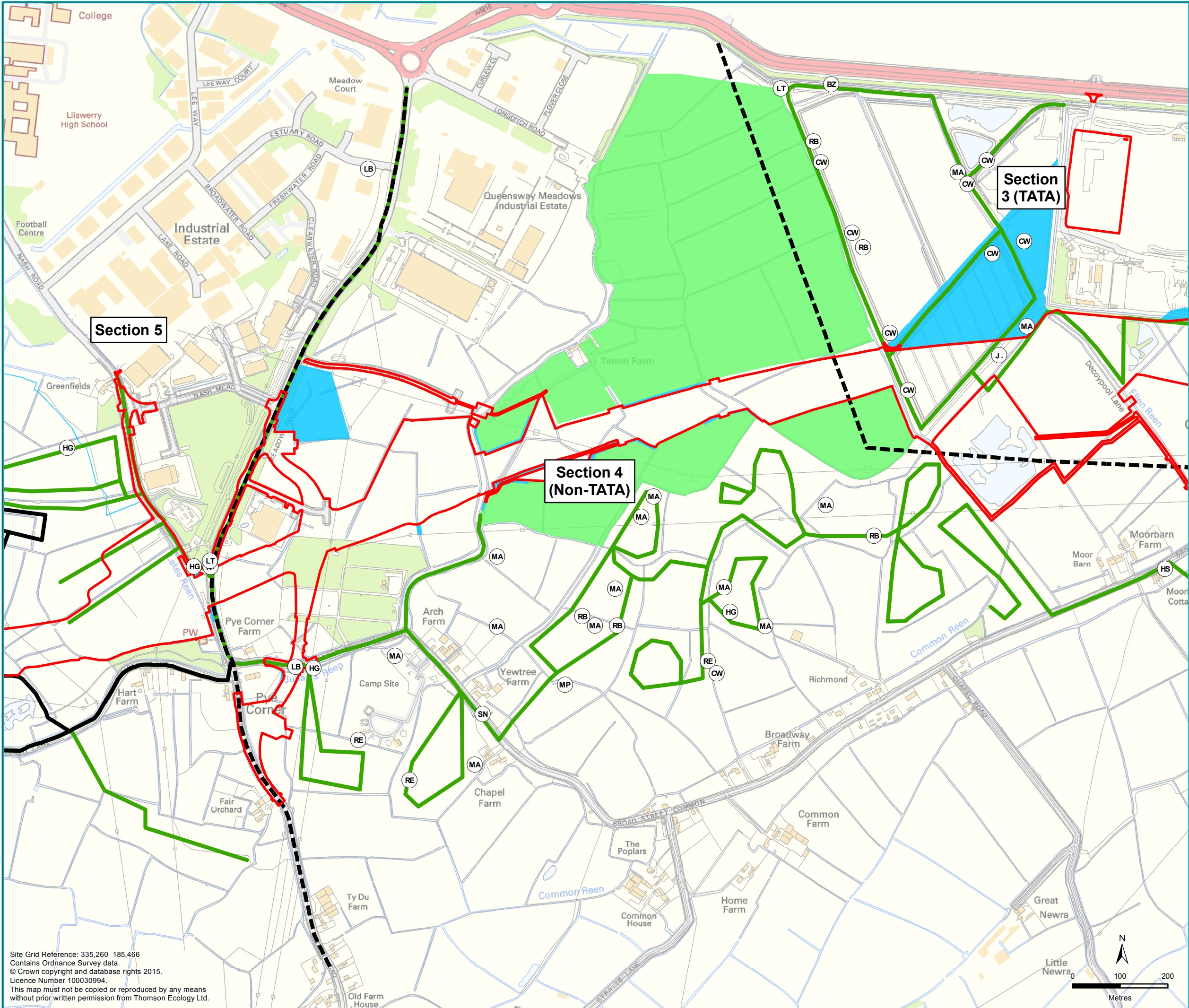
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Legend	
Wintering Bird Species	
(BH)	Black-headed Gull
(D.)	Dunnock
(HG)	Herring Gull
(LB)	Lesser Black-backed Gull
(MA)	Mallard
Transect Route	
—	Original transect
—	New transect route
Access Issues	
—	No access
—	Temporary Construction Land
—	Permanent Land Take

Drawing Ref		MRPS108/20666/1	
Scale at A3		1:7,500	
Drawn	KM	Checked	NS
Date	September 2016	Date	September 2016
Client		RPS Group PLC	
Figure Number		10c	
Figure Title		Appendix S10.4 - Wintering Bird Transect Survey Results Visit 6	



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Legend

Wintering Bird Species

- (BZ) Buzard
- (CW) Cetti's Warbler
- (HG) Herring Gull
- (HS) House Sparrow
- (J.) Jay
- (K.) Kestrel
- (LB) Lesser Black-backed Gull
- (LT) Long Tailed Tit
- (MA) Mallard
- (MP) Meadow Pipit
- (RB) Reed Bunting
- (RE) Redwing
- (SN) Snipe

Transect Route

- Original transect
- New transect route

Access Issues

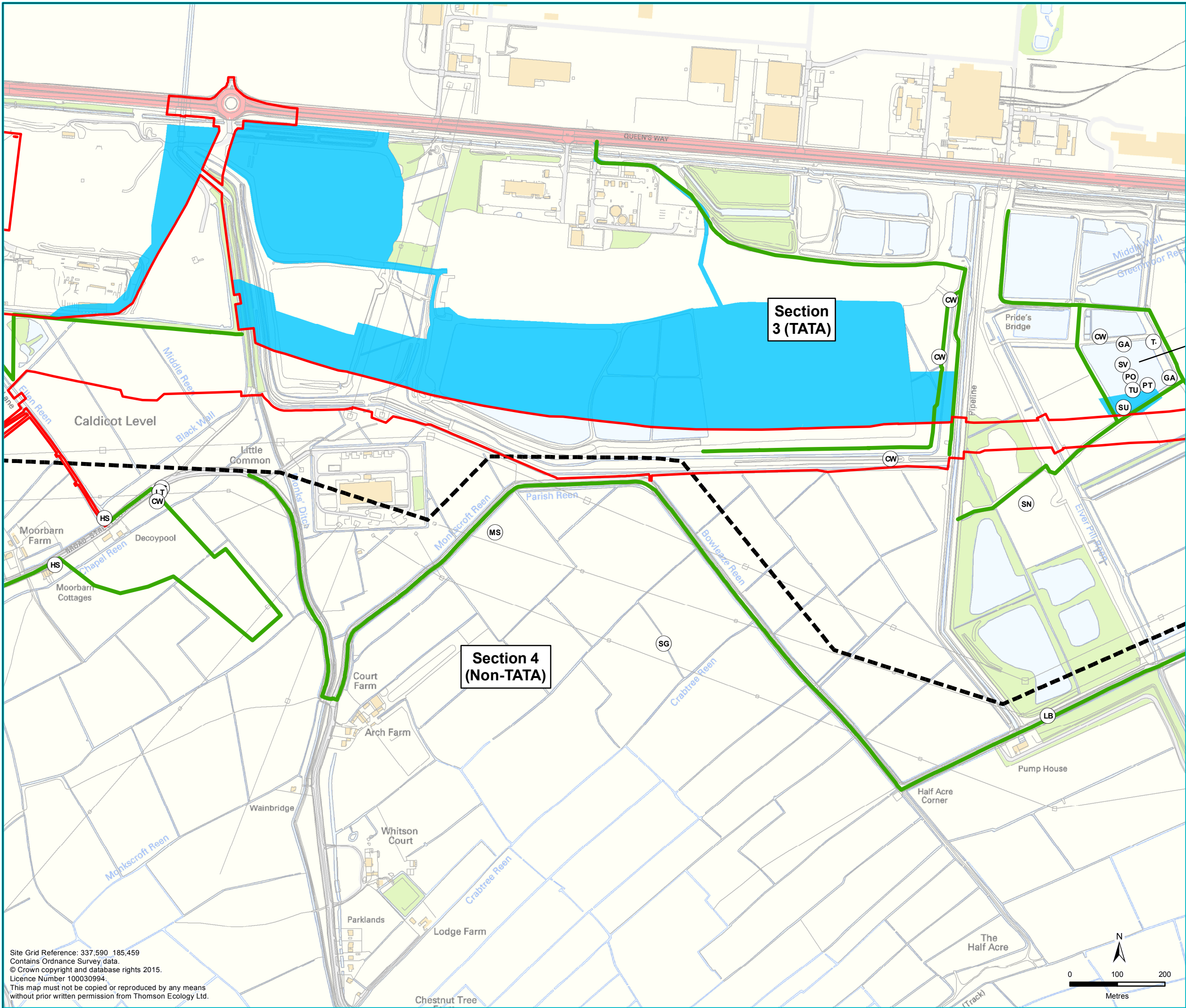
- No access
- Section
- Ecological Mitigation
- Temporary Construction Land
- Permanent Land Take

Drawing Ref		MRPS108/20667/1	
Scale at A3		1:7,500	
Drawn	KM	Checked	NS
Date	September 2016	Date	September 2016
Client		RPS Group PLC	
Figure Number		10d	
Figure Title			
Appendix S10.4 - Wintering Bird Transect Survey Results Visit 6			

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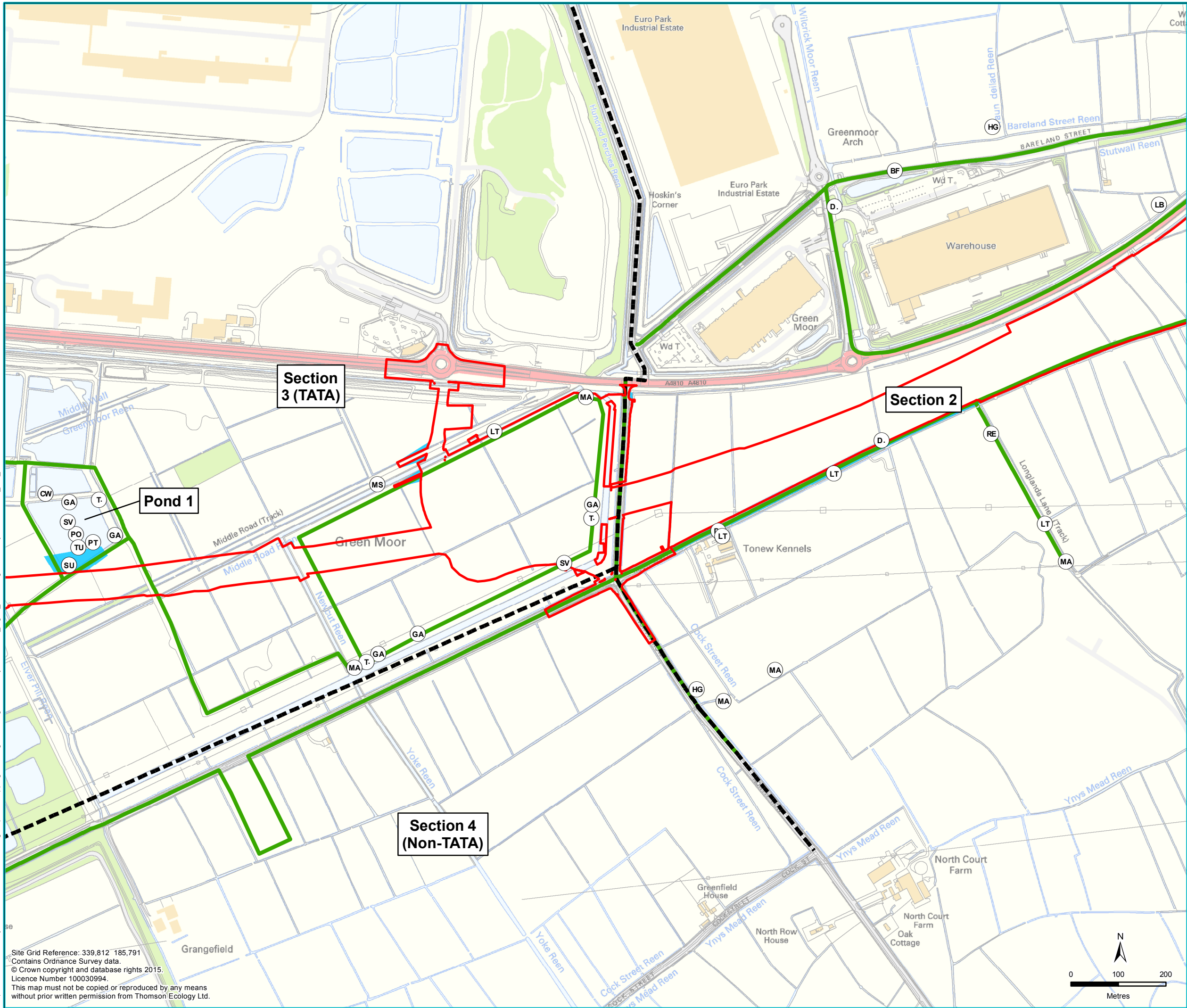
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Legend	
Wintering Bird Species	Transect Route
(CW) Cetti's Warbler	Original transect
(GA) Gadwall	New transect route
(HS) House Sparrow	
(LB) Lesser Black-backed Gull	Access Issues
(LT) Long Tailed Tit	— No access
(MS) Mute Swan	- - - Section
(PO) Pochard	Temporary Construction Land
(PT) Pintail	Permanent Land Take
(SG) Starling	
(SN) Snipe	
(SU) Shelduck	
(SV) Shoveler	
(T) Teal	
(TC) Tree Creeper	
(TU) Tufted Duck	

Drawing Ref	
MRPS108/20668/1	
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Drawn	Checked
KM	NS
Date	Date
September 2016	September 2016
Client	
RPS Group PLC	
Figure Number	
10e	
Figure Title	
Appendix S10.4 - Wintering Bird Transect Survey Results Visit 6	

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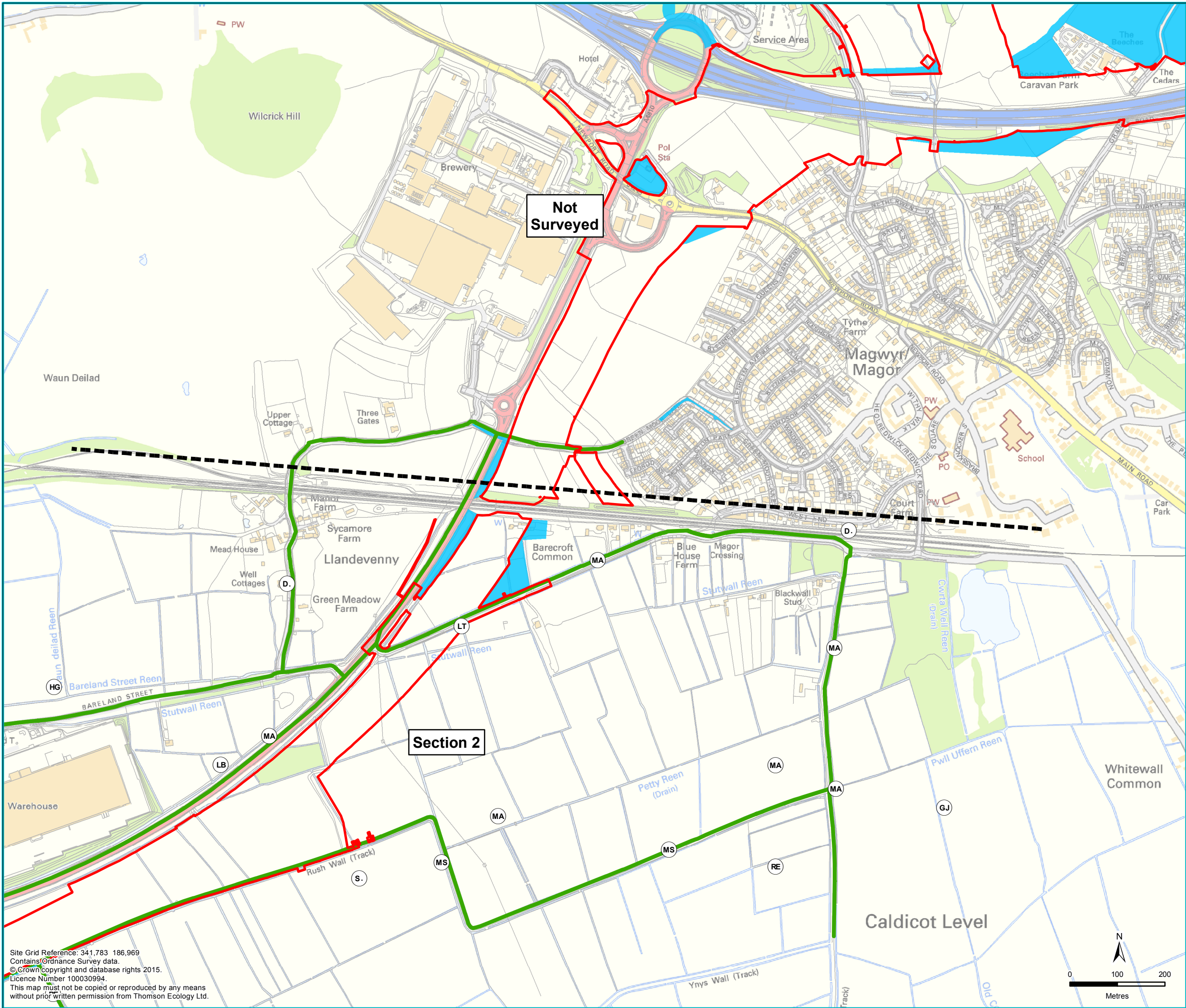
Site Grid Reference: 339,812 185,791
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- Legend
- | Wintering Bird Species | Transect Route |
|-------------------------------|--------------------|
| (BF) Bullfinch | Original transect |
| (CW) Cetti's Warbler | New transect route |
| (D.) Dunnock | |
| (GA) Gadwall | |
| (HG) Herring Gull | |
| (LB) Lesser Black-backed Gull | |
| (LT) Long Tailed Tit | |
| (MA) Mallard | |
| (MS) Mute Swan | |
| (PO) Pochard | |
| (PT) Pintail | |
| (RE) Redwing | |
| (SU) Shelduck | |
| (SV) Shoveler | |
| (T.) Teal | |
| (TU) Tufted Duck | |
- Access Issues**
- No access
 - Section
 - Temporary Construction Land
 - Permanent Land Take

Drawing Ref	MRPS108/20669/1	
Scale at A3	1:7,500	
Drawn	KM	Checked NS
Date	September 2016	Date September 2016
Client	RPS Group PLC	
Figure Number	10f	
Figure Title	Appendix S10.4 - Wintering Bird Transect Survey Results Visit 6	

Filepath: S:\Cardiff\Projects\MRPS108 M4 Widening\Reports\Mapping\Working\Wintering Bird Survey\MRPS108_Fig10_WinteringBirdSurveyResults\visf6_KM_300316.mxd



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www.thomsonecology.com
enquiries@thomsonecology.com

Legend

Wintering Bird Species

(D.) Dunnock

(GJ) Greylag Goose

(HG) Herring Gull

(LB) Lesser Black-backed Gull

(LT) Long Tailed Tit

(MA) Mallard

(MS) Mute Swan

(RE) Redwing

(S.) Skylark

Transect Route

Original transect

New transect route

Access Issues

No access

Section

Temporary Construction Land

Permanent Land Take

Drawing Ref

MRPS108/20670/1

Scale at A3

1:7,500

Drawn

KM

Checked

NS

Date

September 2016

Date

September 2016

Client

RPS Group PLC

Figure Number

10g

Figure Title

Appendix S10.4 - Wintering Bird Transect Survey Results Visit 6

Site Grid Reference: 341,783 186,969

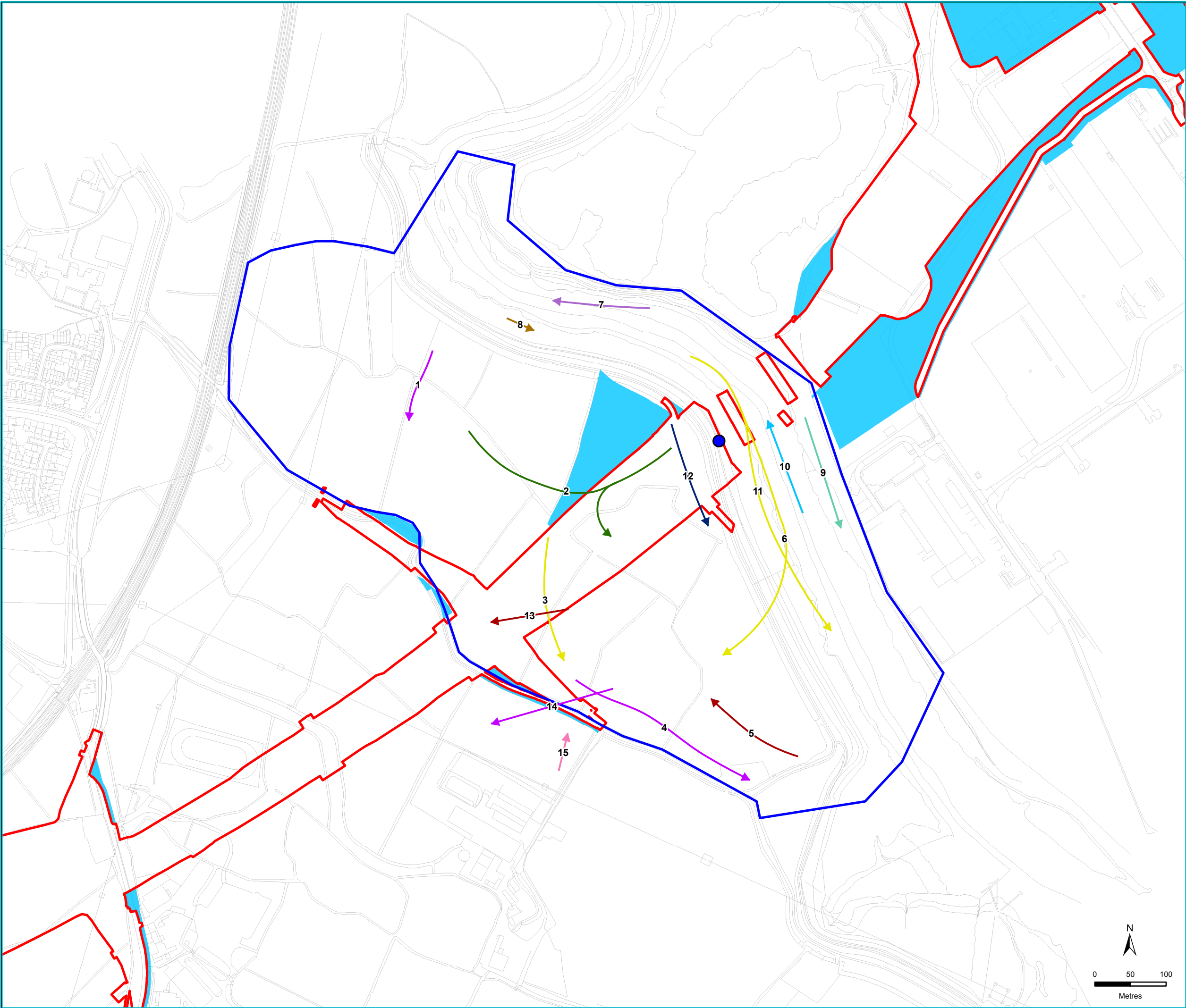
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Filepath: S:\Cardiff\Projects\MRPS 108 M4 Widening\Reports\Mapping\Wintering Bird Survey\MRPS108_Fig11_WinteringBirdVantagePointRiverEbbw_KM_310316.mxd



- Legend
- Vantage Point Location
 - Wintering Bird Species**
 - Black-headed Gull
 - Buzzard
 - Grey Heron
 - Kestrel
 - Little Egret
 - Mallard
 - Meadow Pipit
 - Peregrine
 - Snipe
 - Sparrowhawk
 - Temporary Construction Land
 - Survey Boundary
 - Permanent Land Take

Site Grid Reference: 330,737 184,476

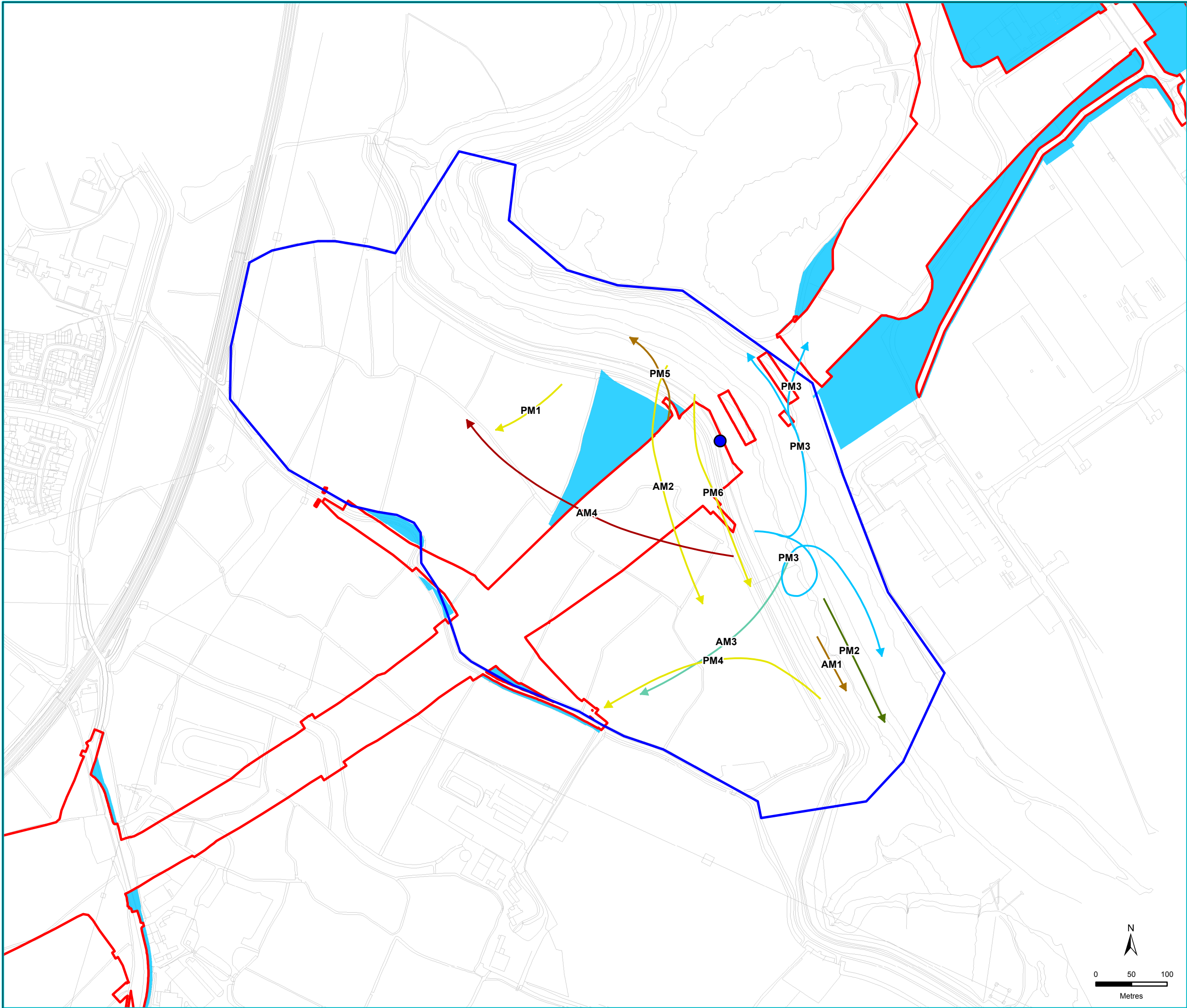
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Drawn	KM	Checked	NS
Date	September 2016	Date	September 2016
Client		RPS Group PLC	
Figure Number		11a	
Figure Title			

Appendix S10.4 -
Wintering Bird Vantage Point
Survey Results River Ebbw
Visit 1

Filepath: S:\Cardiff\Projects\MRPS 108 M4 Widening\Reports\Mapping\Working\Wintering Bird Survey\MRPS108_Fig11_WinteringBirdVantagePointRiverEbbw_KM_310316.mxd



Legend

● Vantage Point Location

Wintering Bird Species

→ Buzzard

→ Cormorant

→ Kestrel

→ Little Egret

→ Mallard

→ Sparrowhawk

Temporary Construction Land

Survey Boundary

Permanent Land Take

Site Grid Reference: 330,737 184,476

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Drawing Ref
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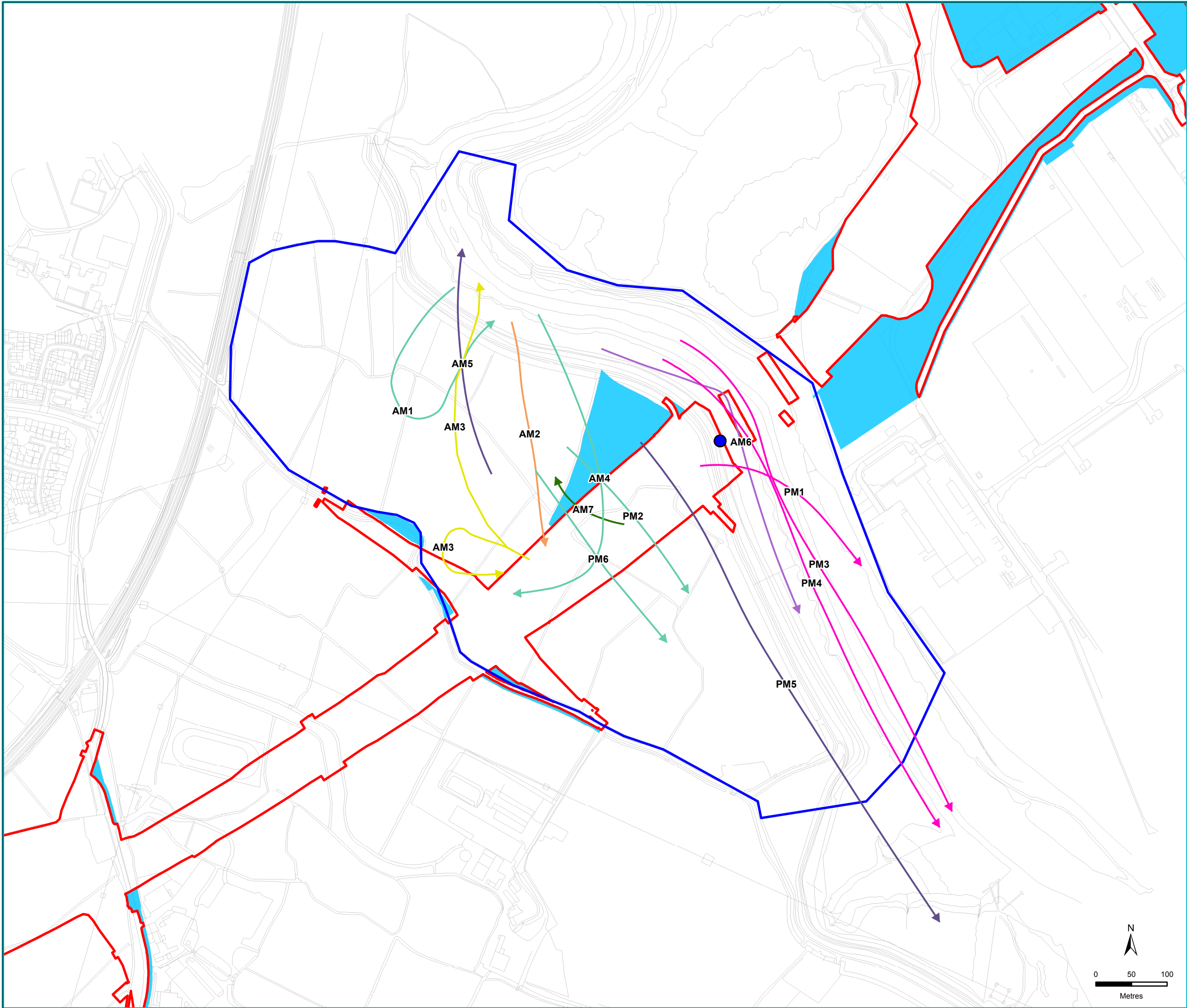
Drawn KM	Checked NS
Date September 2016	Date September 2016

Client
RPS Group PLC

Figure Number
11b

Figure Title
Appendix S10.4 -
Wintering Bird Vantage Point
Survey Results River Ebbw
Visit 2

Filepath: S:\Cardiff\Projects\MRPS 108 M4 Widening\Reports\Mapping\Wintering Bird Survey\MRPS108_Fig11_WinteringBirdVantagePointRiverEbbw_KM_310316.mxd



Legend

● Vantage Point Location

Wintering Bird Species

→ Black-headed Gull

→ Canada Goose

→ Herring Gull

→ Little Egret

→ Mallard

→ Mute Swan

→ Snipe

Temporary Construction Land

Survey Boundary

Permanent Land Take

Site Grid Reference: 330,737 184,476

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Drawing Ref
MRPS108/20678/1

Scale at A3
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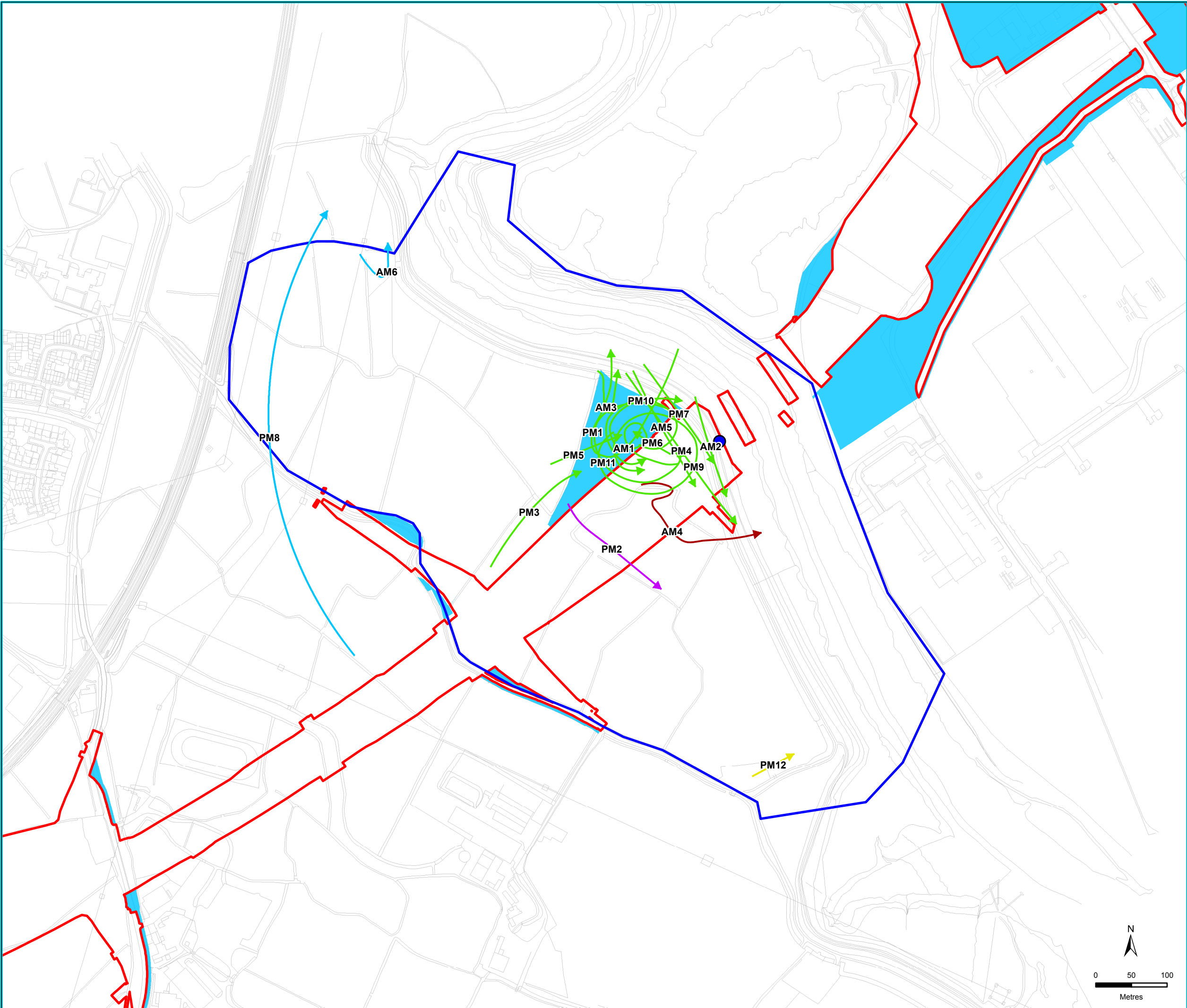
Drawn KM	Checked NS
Date September 2016	Date September 2016

Client
RPS Group PLC

Figure Number
11c

Figure Title
Appendix S10.4 -
Wintering Bird Vantage Point
Survey Results River Ebbw
Visit 3

Filepath: S:\Cardiff\Projects\MRPS 108 M4 Widening\Reports\Mapping\Wintering Bird Survey\MRPS108_Fig11_WinteringBirdVantagePointRiverEbbw_KM_310316.mxd



Legend

● Vantage Point Location

Wintering Bird Species

→ Buzzard

→ Grey Heron

→ Little Egret

→ Redshank

→ Sparrowhawk

Temporary Construction Land

Survey Boundary

Permanent Land Take

Site Grid Reference: 330,737 184,476

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Drawing Ref
MRPS108/20679/1

Scale at A3
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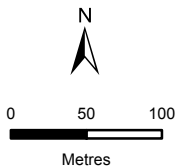
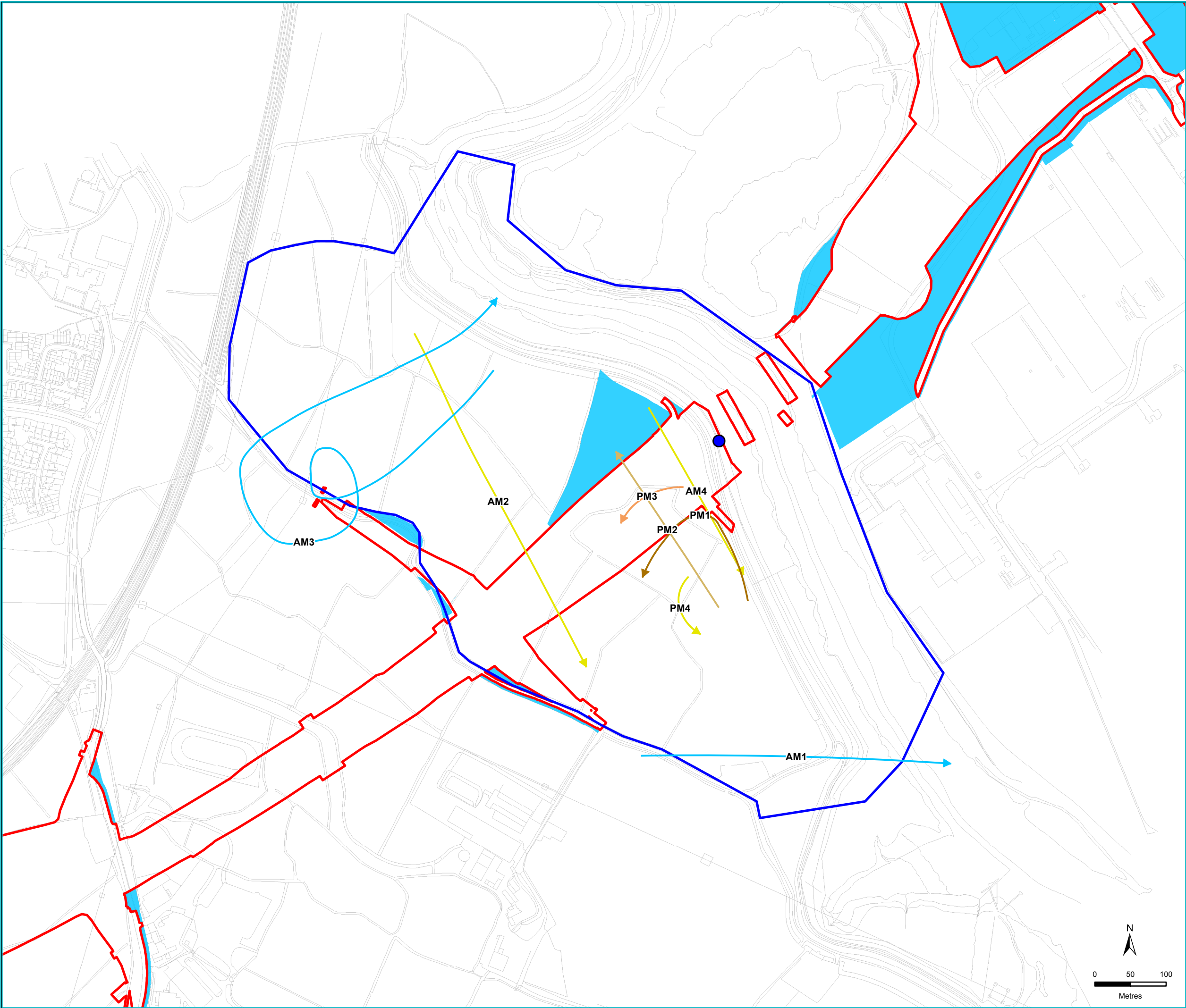
Drawn KM	Checked NS
Date September 2016	Date September 2016

Client
RPS Group PLC

Figure Number
11d

Figure Title
Appendix S10.4 -
Wintering Bird Vantage Point
Survey Results River Ebbw
Visit 4

Filepath: S:\Cardiff\Projects\MRPS 108 M4 Widening\Reports\Mapping\Wintering Bird Survey\MRPS108_Fig11_WinteringBirdVantagePointRiverEbbw_KM_310316.mxd



- Legend
- Vantage Point Location
 - Wintering Bird Species
 - Buzzard
 - Kestrel
 - Little Egret
 - Mute Swan
 - Shelduck
 - Temporary Construction Land
 - Survey Boundary
 - Permanent Land Take

Site Grid Reference: 330,737 184,476

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Drawing Ref
MRPS108/20680/1

Scale at A3
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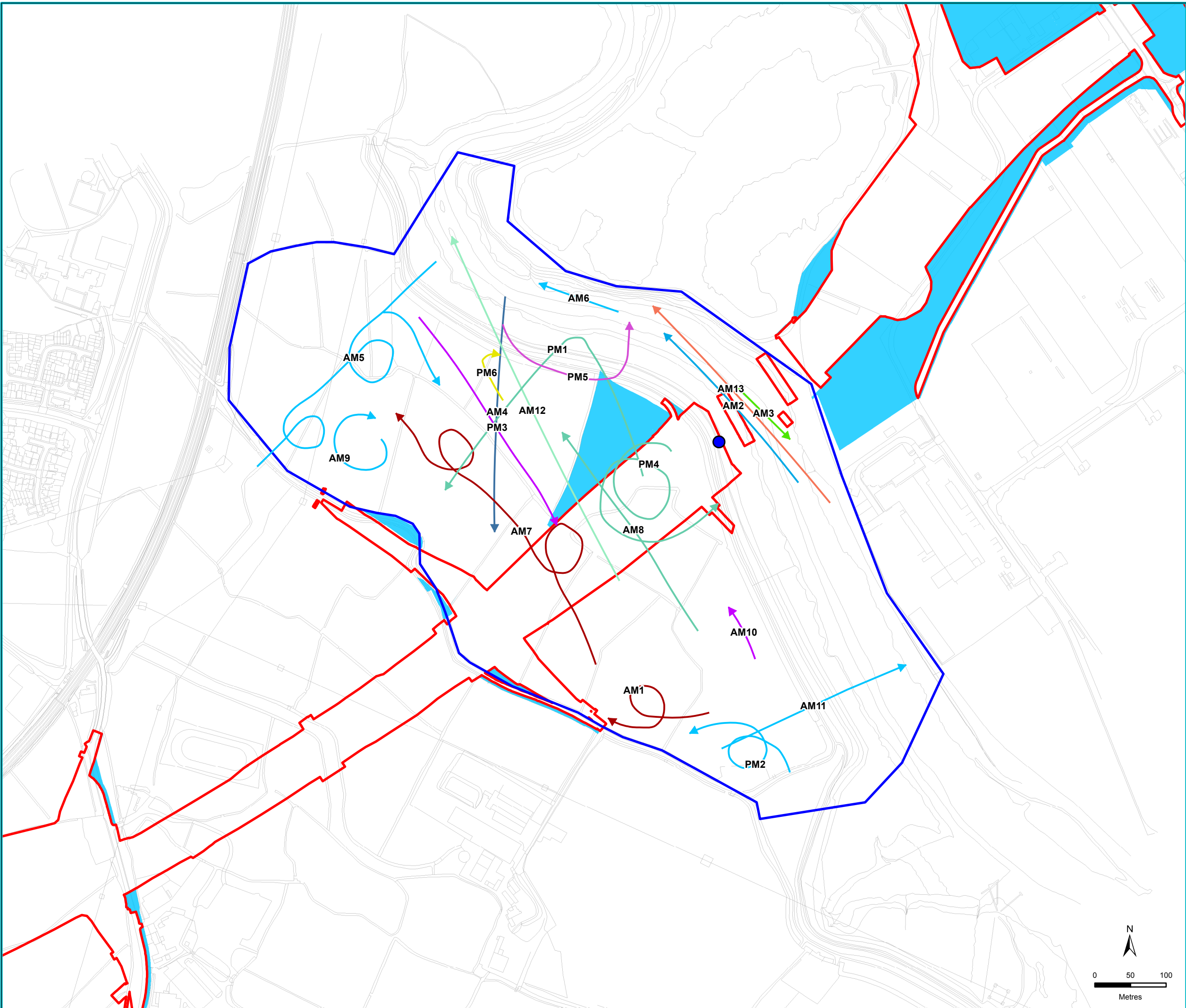
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Date September 2016	Date September 2016

Client
RPS Group PLC

Figure Number
11e

Figure Title
Appendix S10.4 -
Wintering Bird Vantage Point
Survey Results River Ebbw
Visit 5

Filepath: S:\Cardiff\Projects\MRPS 108 M4 Widening\Reports\Mapping\Wintering Bird Survey\MRPS108_Fig11_WinteringBirdVantagePointRiverEbbw_KM_310316.mxd



Legend

● Vantage Point Location

Wintering Bird Species

→ Black-tailed Godwit

→ Buzzard

→ Green Sandpiper

→ Grey Heron

→ Little Egret

→ Mallard

→ Oystercatcher

→ Raven

→ Redshank

→ Sparrowhawk

→ Teal

Temporary Construction Land

Survey Boundary

Permanent Land Take

Site Grid Reference: 330,737 184,476

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Drawing Ref
MRPS108/20681/1

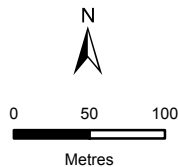
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Drawn KM	Checked NS
Date September 2016	Date September 2016

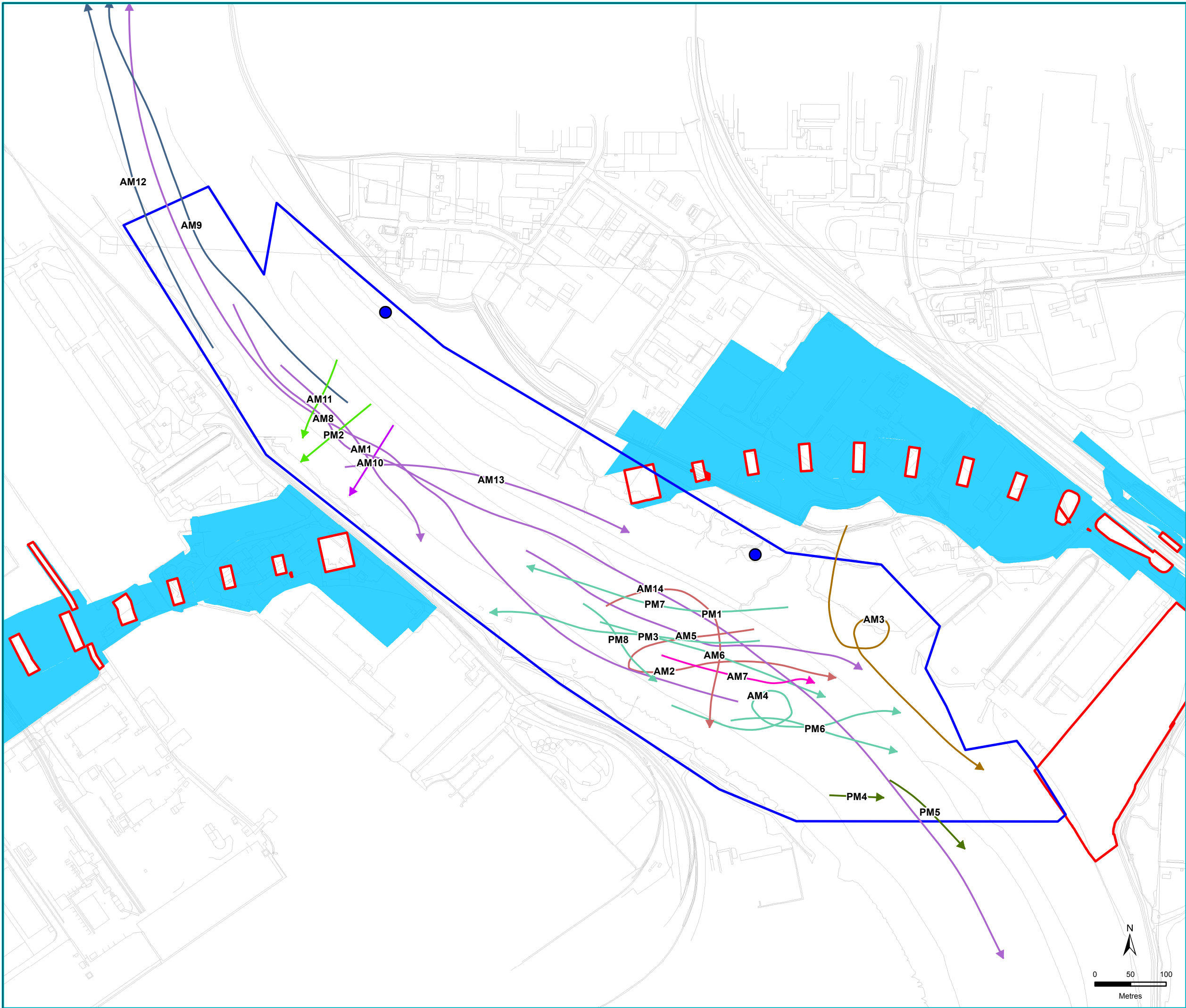
Client
RPS Group PLC

Figure Number
11f

Figure Title
Appendix S10.4 -
Wintering Bird Vantage Point
Survey Results River Ebbw
Visit 6



Filepath: S:\Cardiff\Projects\MRPS 108 M4 Widening\Reports\Mapping\Working\Wintering Bird Survey\MRPS108_Fig12_WinteringBirdVantagePointRiverUsk_KM_310316.mxd



Legend

- Vantage Point Location
- Wintering Bird Species**
 - Black-headed Gull
 - Cormorant
 - Curlew
 - Great Black-backed Gull
 - Grey Heron
 - Herring Gull
 - Kestrel
 - Mallard
 - Redshank
- Temporary Construction Land
- Survey Boundary
- Permanent Land Take

Site Grid Reference: 332,428 185,445

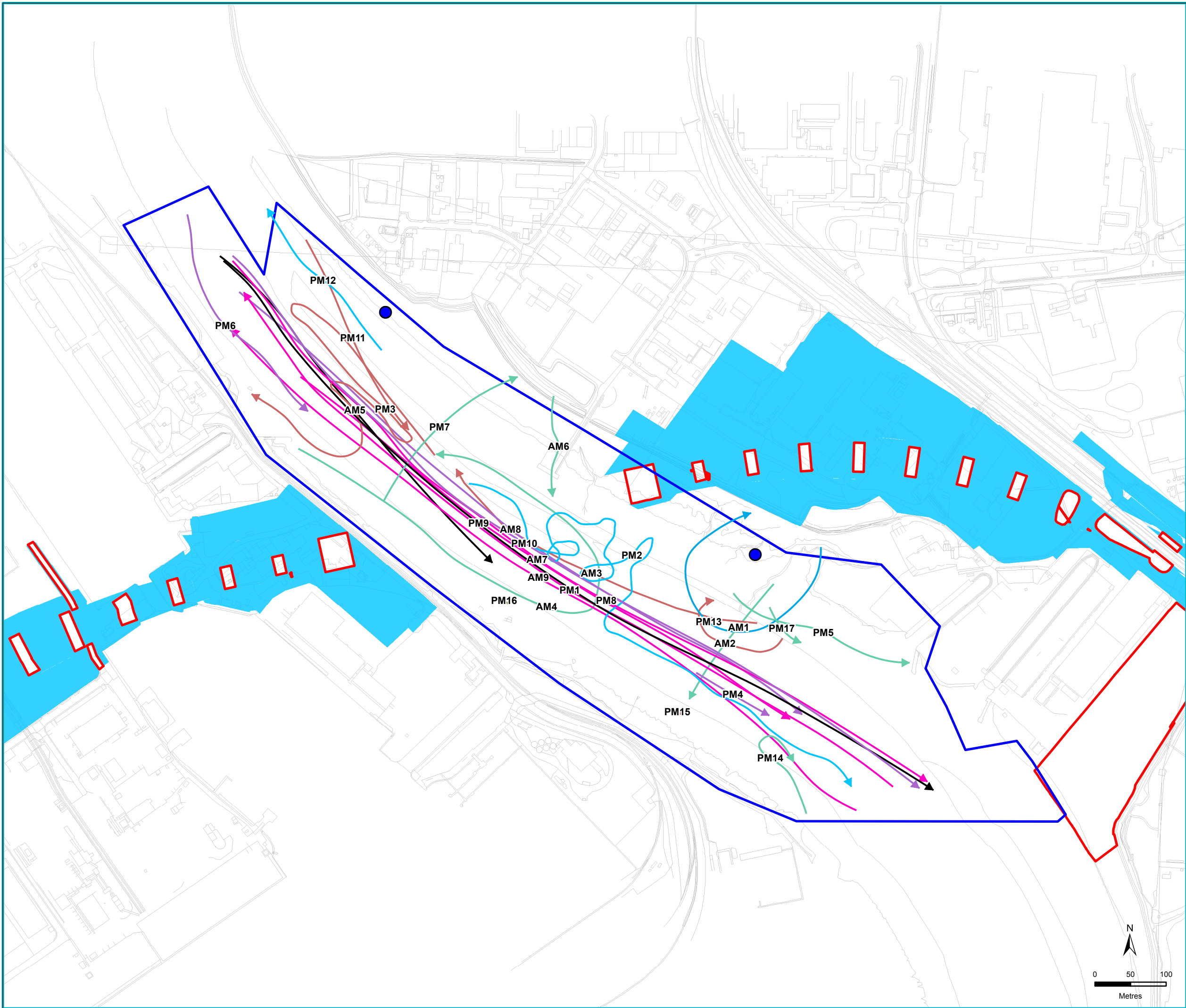
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Scale at A3		1:5,000	
Drawn	KM	Checked	NS
Date	September 2016	Date	September 2016
Client		RPS Group PLC	
Figure Number		12a	
Figure Title			

Appendix S10.4 -
Wintering Bird Vantage Point
Survey Results River Usk
Visit 1

Filepath: S:\Cardiff\Projects\MRPS 108 M4 Widening\Reports\Mapping\Wintering Bird Survey\MRPS108_Fig12_WinteringBirdVantagePointRiverUsk_KM_310316.mxd



Legend

- Vantage Point Location
- Wintering Bird Species**
 - Black-headed Gull
 - Buzzard
 - Cormorant
 - Curlew
 - Herring Gull
 - Lesser Black-backed Gull
 - Mallard
 - Teal
- Temporary Construction Land
- Survey Boundary
- Permanent Land Take

Site Grid Reference: 332,428 185,445

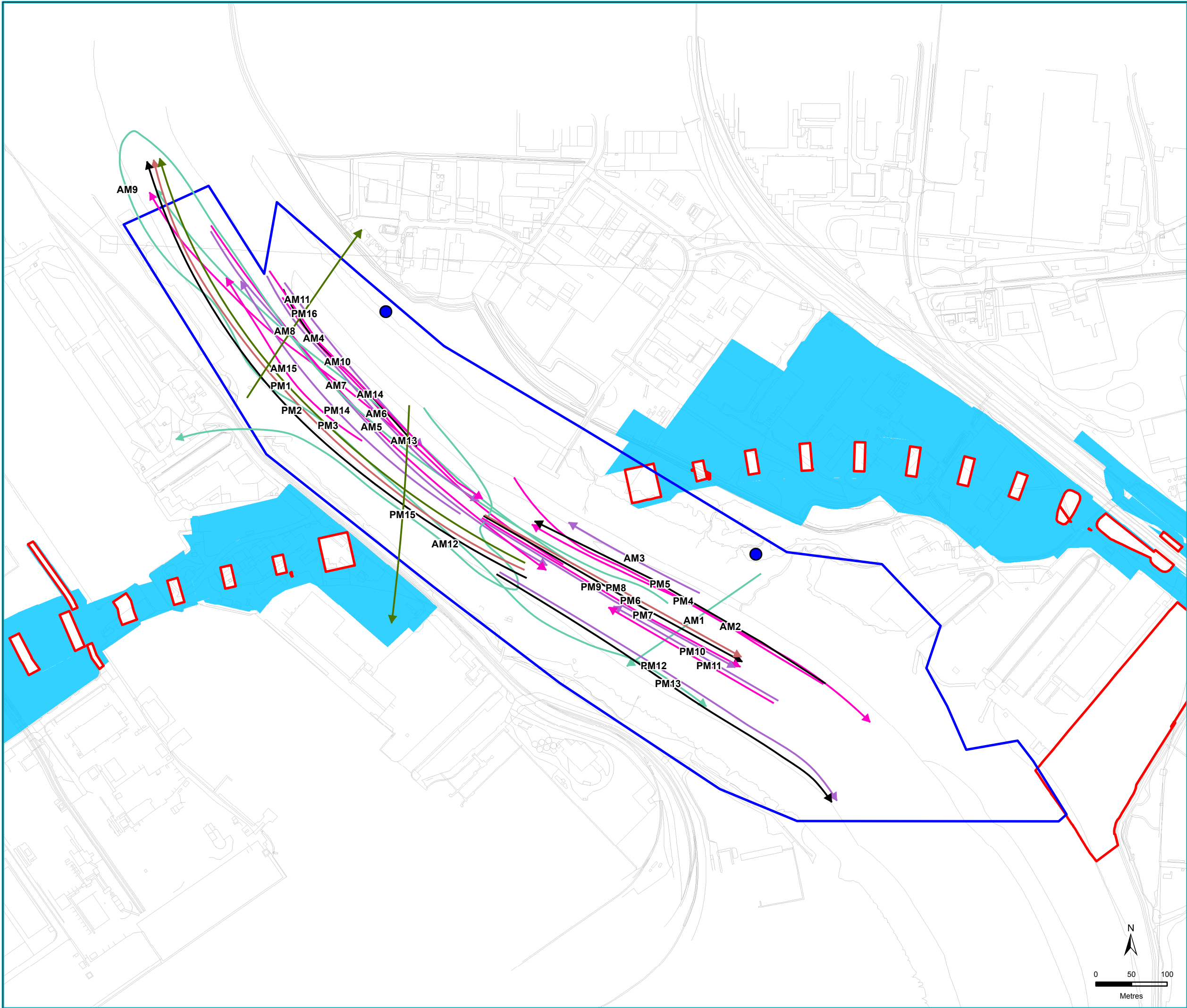
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Drawing Ref		MRPS108/20683/1	
Scale at A3		1:5,000	
Drawn	KM	Checked	NS
Date	September 2016	Date	September 2016
Client		RPS Group PLC	
Figure Number		12b	
Figure Title			

Appendix S10.4 -
Wintering Bird Vantage Point
Survey Results River Usk
Visit 2

Filepath: S:\Cardiff\Projects\MRPS 108 M4 Widening\Reports\Mapping\Working\Wintering Bird Survey\MRPS108_Fig12_WinteringBirdVantagePointRiverUsk_KM_310316.mxd



Legend

- Vantage Point Location
- Wintering Bird Species**
 - Black-headed Gull
 - Cormorant
 - Curlew
 - Herring Gull
 - Lesser Black-backed Gull
 - Mallard
- Temporary Construction Land
- Survey Boundary
- Permanent Land Take

Site Grid Reference: 332,428 185,445

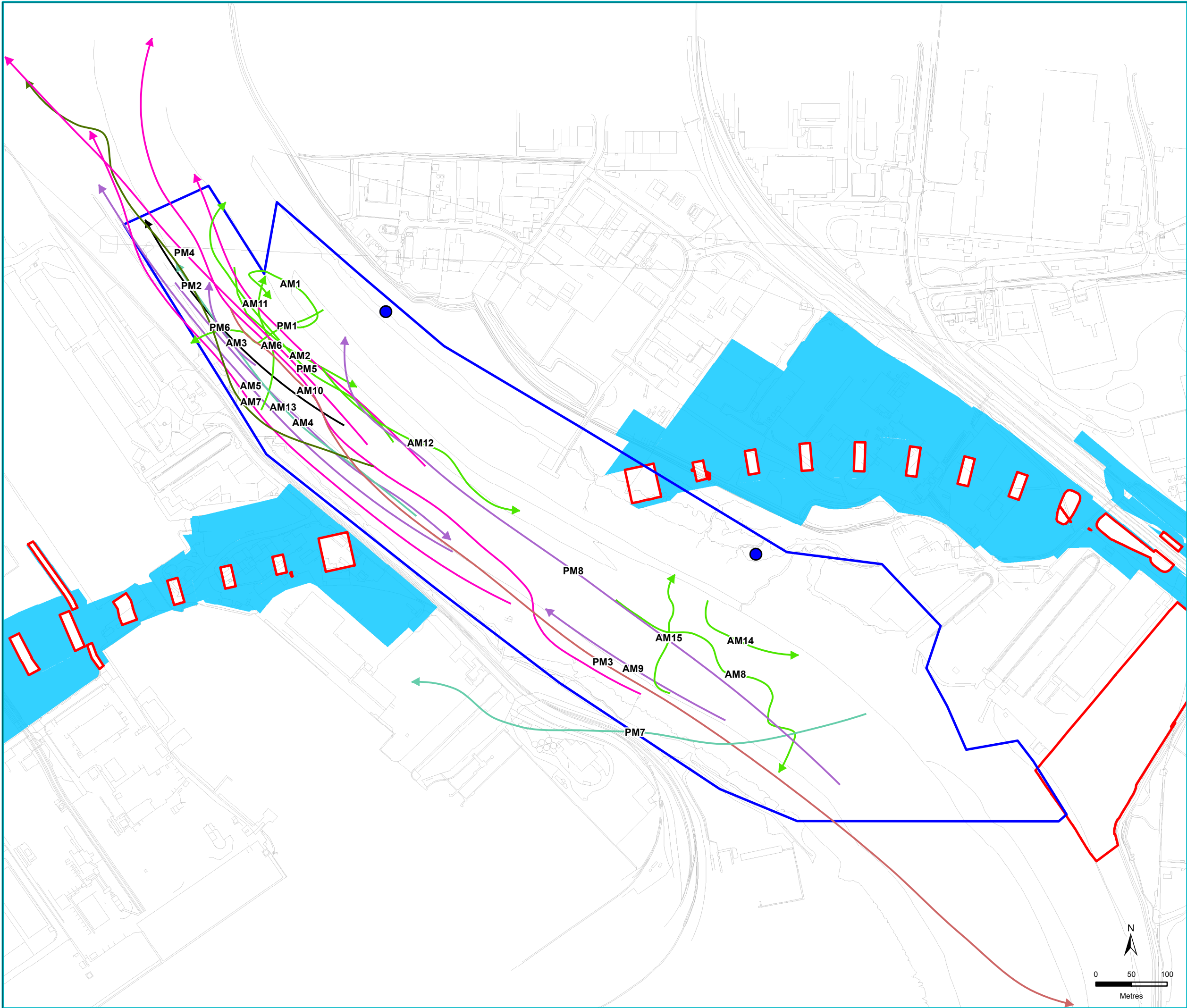
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Drawing Ref		MRPS108/20684/1	
Scale at A3		1:5,000	
Drawn	KM	Checked	NS
Date	September 2016	Date	September 2016
Client		RPS Group PLC	
Figure Number		12c	
Figure Title			

Appendix S10.4 -
Wintering Bird Vantage Point
Survey Results River Usk
Visit 3

Filepath: S:\Cardiff\Projects\MRPS108 M4 Widening\Reports\Mapping\Working\Wintering Bird Survey\MRPS108_Fig12_WinteringBirdVantagePointRiverUsk_KM_310316.mxd



Legend

- Vantage Point Location
- Wintering Bird Species**
 - Black-headed Gull
 - Cormorant
 - Curlew
 - Herring Gull
 - Lesser Black-backed Gull
 - Mallard
 - Redshank
- Temporary Construction Land
- Survey Boundary
- Permanent Land Take

Site Grid Reference: 332,428 185,445

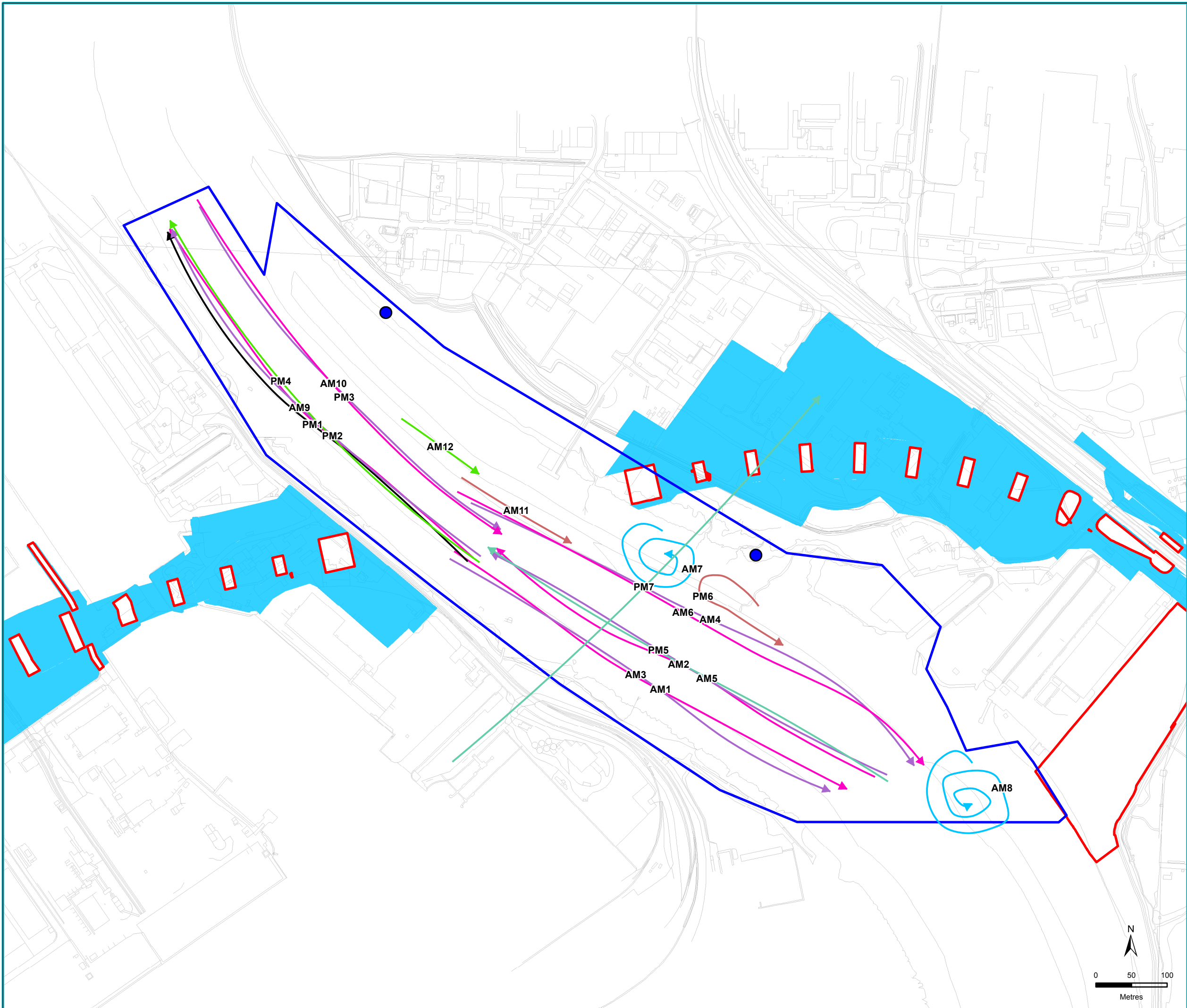
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Drawing Ref		MRPS108/20685/1	
Scale at A3		1:5,000	
Drawn	KM	Checked	NS
Date	September 2016	Date	September 2016
Client		RPS Group PLC	
Figure Number		12d	
Figure Title			

Appendix S10.4 -
Wintering Bird Vantage Point
Survey Results River Usk
Visit 4

Filepath: S:\Cardiff\Projects\MRPS 108 M4 Widening\Reports\Mapping\Working\Wintering Bird Survey\MRPS108_Fig12_Wintering Bird Vantage Point River Usk_KM_310316.mxd



Legend

- Vantage Point Location
- Wintering Bird Species**
 - Black-headed Gull
 - Buzzard
 - Curlew
 - Herring Gull
 - Lesser Black-backed Gull
 - Mallard
 - Redshank
- Temporary Construction Land
- Survey Boundary
- Permanent Land Take

Site Grid Reference: 332,428 185,445

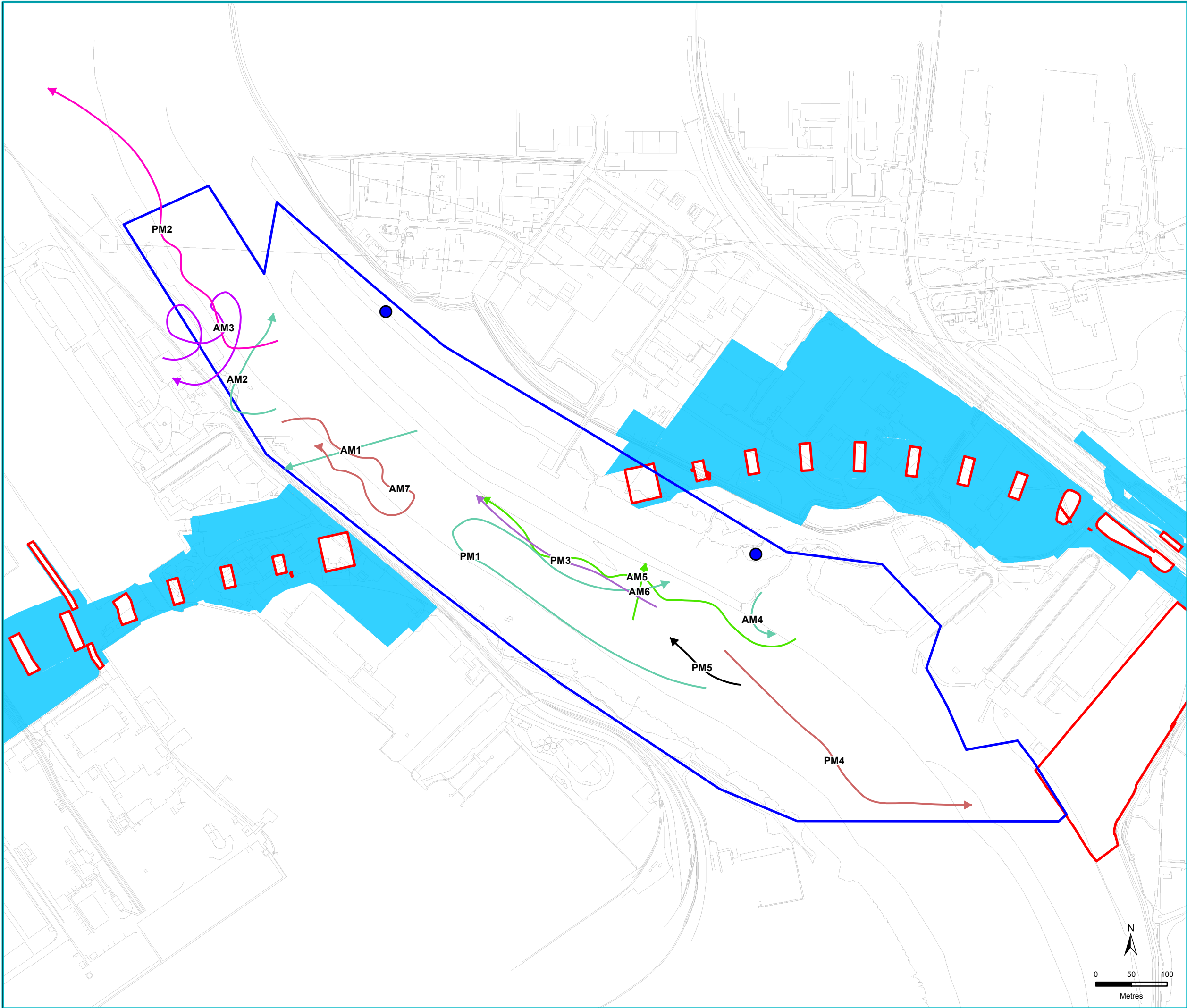
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Drawing Ref		MRPS108/20686/1	
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Date	September 2016	Date	September 2016
Client		RPS Group PLC	
Figure Number		12e	
Figure Title			

Appendix S10.4 -
Wintering Bird Vantage Point
Survey Results River Usk
Visit 5

Filepath: S:\Cardiff\Projects\MRPS108 M4 Widening\Reports\Mapping\Working\Wintering Bird Survey\MRPS108_Fig12_WinteringBirdVantagePointRiverUsk_KM_310316.mxd



Legend

- Vantage Point Location
- Wintering Bird Species**
 - Black-headed Gull
 - Curlew
 - Grey Heron
 - Herring Gull
 - Lesser Black-backed Gull
 - Mallard
 - Redshank
- Temporary Construction Land
- Survey Boundary
- Permanent Land Take

Site Grid Reference: 332,428 185,445

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Drawing Ref		MRPS108/20687/1	
Scale at A3		1:5,000	
Drawn	KM	Checked	NS
Date	September 2016	Date	September 2016
Client		RPS Group PLC	
Figure Number		12f	
Figure Title			

Appendix S10.4 -
Wintering Bird Vantage Point
Survey Results River Usk
Visit 6