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M4 Corridor around Newport

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Wintering Bird Survey Report 2015

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Wintering Bird Survey Report 2015



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Welsh Government

M4 Corridor around Newport

Wintering Bird Survey Report 2015

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SUMMARY

This report presents the methodologies and findings of wintering and passage bird surveys undertaken for the proposed M4 Corridor around Newport project. The surveys were carried out between September 2014 and April 2015 (inclusive) by Hyder Consulting (UK) Ltd on behalf of the Welsh Government. The aim of this report is to identify the bird assemblage present within the survey area in order to inform baseline conditions and supporting information for any future impact assessment of the Scheme's proposals.

The Scheme includes the construction of a new section of motorway between Magor and Castleton, South Wales. The Scheme would connect with existing M4 motorway Junction 23 to Junction 28. The Scheme layout is shown on Figure 1.

The surveys follow on from surveys undertaken by Ove Arup and Partners (Arup) during the 2013/2014 wintering bird season. Natural Resources Wales (NRW) requested that certain amendments were made to the Arup methodology going forward, and also requested that a desk study is undertaken to further inform any future assessment of the Scheme. The 2014/15 surveys undertaken by Hyder Consulting have therefore sought to broadly follow the methodology used by Arup to allow for comparisons to be made between datasets, whilst also making slight amendments to that methodology in order to address the comments made by NRW.

The Severn Estuary provides important habitats for both wintering and passage bird species. A suite of surveys was therefore undertaken to encompass the winter, spring and autumn passage periods. This included a scoping survey visit, transect surveys and vantage point surveys. The survey area for the bird surveys included the habitats within the footprint of the Scheme, and an area of up to 500m from the edge of the Scheme (where access permitted). Given the scale of the Scheme, it was not possible to access all land within the survey area. However, a survey coverage of approximately 65% of the land which was suitable for over-wintering birds (i.e. non-urban areas) was achieved (refer to Figure 4), and it is considered that this is representative of the most suitable habitats for overwintering bird species present within the survey area.

Transect surveys were undertaken on a monthly basis between September 2014 and April 2015 to ascertain the number and diversity of bird species present within the footprint of the Scheme and up to 500m of the Scheme boundary. The transect surveys comprised of a combination of walked transects and surveying from set viewing locations. The survey area was split into seven Sections, with each surveyor walking the set transect routes, or driving between the viewing locations. Where possible, surveyors walked west to east across each Section to avoid double counting of birds at the edge of adjacent Sections.

The Scheme would also include the installation of new bridges over the River Usk and the River Ebbw (Figure 3). Vantage point surveys were therefore undertaken on a monthly basis between September 2014 and April 2015 in order to identify any large aggregations of feeding/roosting waterfowl in the vicinity of the proposed Usk and Ebbw river crossings, and any well-used bird 'flyways' along

the River Usk and River Ebbw that could be disrupted by the construction of the new road bridges at these locations.

The results of the transect surveys showed that the area within and adjacent to the Scheme provided suitable habitat for a range of over-wintering bird species, including a number of those listed as qualifying species for the adjacent Severn Estuary Special Protection Area (SPA). During the transect surveys, the 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 recorded during the transect surveys, 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*).

The results of the vantage point surveys showed that the proposed river crossing locations at the River Ebbw and River Usk were used by a variety of species both flying through and using the edge of the rivers to forage and roost. During the vantage point surveys, the Severn Estuary SPA Annex 1 qualifying species recorded included ringed plover (*Charadrius hiaticula*), curlew, dunlin, redshank, and shelduck. Five of the species listed on the Severn Estuary SPA assemblage qualification were also recorded during the vantage point surveys, these included gadwall, wigeon, lapwing, teal, and mallard.

Twenty-four other waterfowl and wader species, not specifically listed as forming part of the Severn Estuary SPA assemblage on the SPA citation (but would also be considered to make up the waterfowl assemblage) were also recorded during the 2014/15 transect and vantage point surveys.

Twelve species listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) were recorded during the 2014/15 survey period, this included cetti's warbler (*Cettia cetti*), fieldfare (*Turdus pilaris*), redwing (*Turdus iliacus*), black-tailed godwit (*Limosa limosa*), greenshank (*Tringa nebularia*), ruff (*Philomachus pugnax*), green sandpiper (*Tringa ochropus*), Mediterranean gull (*Ichthyophaga melanocephalus*), marsh harrier (*Circus aeruginosus*), kingfisher (*Alcedo atthis*), merlin (*Falco columbarius*) and peregrine falcon (*Falco peregrinus*). All of these species were recorded in small numbers, with the exception of fieldfare and redwing which were observed throughout the survey period, with a peak count of 90 fieldfare and 278 redwing recorded during the transect surveys.

Finally, the surveys identified that the land within and adjacent to the Scheme supported a suite of overwintering farmland birds, and other notable bird species of nature conservation importance (including a number of species listed on the Red List and Amber List of the Birds of Conservation Concern (Eaton et al, 2009), and as priority species under Section 42 of the NERC Act 2006) throughout the winter period.

1 Introduction

- 1.1.1 This report presents the methodologies and findings of wintering and passage bird surveys undertaken for the proposed M4 Corridor around Newport project (hereafter referred to as the 'Scheme'). The surveys were carried out between September 2014 and April 2015 (inclusive) by Hyder Consulting (UK) Ltd on behalf of the Welsh Government.
- 1.1.2 The Scheme would include the construction of a new Section of motorway between Magor and Castleton, South Wales, and would connect existing M4 motorway Junction 23 to Junction 28. The Scheme layout is shown on Figure 1. The Scheme would pass through three Gwent Levels Sites of Special Scientific Interests (SSSI) (Gwent Levels-St Brides, Gwent Levels-Nash and Gold Cliff, and Gwent Levels-Redwick and Llanevenny). The Scheme ranges between 4.3km and 1.3km from the Severn Estuary SPA, Ramsar site and Special Area of Conservation (SAC). The closest point (1.3km away) is where the River Usk and Ebbw meet the Severn Estuary. The designated sites within and adjacent to the Scheme are shown on Figure 2.
- 1.1.3 The surveys follow on from surveys undertaken by Ove Arup and Partners (Arup) during the 2013/2014 wintering bird season. The findings of these initial surveys are documented in the July 2014 baseline report (Arup, July 2014). NRW requested that certain amendments were made to the Arup methodology going forward, and also requested that a desk study is undertaken to further inform any future assessment of the Scheme. The 2014/15 surveys undertaken by Hyder Consulting have therefore sought to broadly follow the methodology used by Arup to allow for comparisons to be made between datasets, whilst also making slight amendments to that methodology in order to address the comments made by NRW. The survey methodology is outlined in Section 2 of this report.
- 1.1.4 The aim of this report is to identify the bird assemblage present within the survey area in order to inform baseline conditions and supporting information for any future impact assessment of the Schemes proposals.

2 Methodology

2.1 Consultation

- 2.1.1 The scope of the bird surveys, as well as the survey methodologies used have been agreed in consultation with NRW.

2.2 Desk Study

- 2.2.1 A high level desk study exercise was undertaken in early 2015 in order to collate information pertaining to the Scheme and its surroundings.
- 2.2.2 The desk study comprised searching for any internationally important sites, such as SACs, SPAs, Ramsar sites and Important Bird Areas (IBAs) within 5km of the Scheme; and a search for nationally and regionally important designated sites, including SSSIs, National Nature Reserves (NNRs) and Local Nature Reserves (LNRs) within 2km of the Scheme. Searches for statutory designated sites were undertaken using the Multi-Agency Geographic Information for the Countryside (MAGIC) website. Information pertaining to non-statutory designated sites within 2km of the Scheme were obtained from Gwent Wildlife Trust website and Newport Council website. The locations of the designated sites in relation to the Scheme are shown in Figure 2.
- 2.2.3 Wetland Bird Survey (WeBS) data was also obtained from the British Trust for Ornithology (BTO). This included: data from one count sector, Gwent Levels SSSI (5 year peak mean data from 2008 to 2013); low tide count data for the Welsh side of the Severn Estuary adjacent to the Scheme (2008/09); and WeBS data for the Severn Estuary (specific to the SPA boundary) as a whole. Information relating to SPA bird species population status within the Severn Estuary was also obtained from the BTO WeBS Alert website.
- 2.2.4 The desk study also involved a review of documents produced previously for the Scheme (to inform the scope of the field surveys). These comprised:
- Ove Arup and Partners Ltd. (2013). M4 Corridor around Newport, WeTAG Appraisal Report Stage 1 (Strategy Level). Cardiff: Welsh Government.
 - Ove Arup and Partners Ltd. (2014). M4 Corridor around Newport, Stage 2 Environmental Report. Cardiff. Welsh Government.
 - M4 Corridor around Newport – Wintering Bird Survey Report (Arup, July 2014, report reference 117300-95).
 - NRW comments on the draft wintering bird survey report completed by Arup (September, 2014).

2.3 Field Surveys

- 2.3.1 The Severn Estuary provides important habitats for both wintering and passage bird species. A suite of surveys was therefore undertaken between September 2014 and April 2015 to encompass the winter, spring and autumn passage periods. This included the following:

- Scoping survey visit (September 2014).
- Transect surveys (September 2014 to April 2015).
- Vantage point surveys (September 2014 to April 2015).

2.3.2 For the bird surveys, the survey area was defined by the potential impact pathways associated with the Scheme, and by the distance over which impacts might be experienced by birds functionally-linked to the Severn Estuary SPA/ Ramsar site. The survey area for the bird surveys therefore included the habitats within the footprint of the Scheme, and an area of up to 500m from the edge of the Scheme (where access permitted). The transect routes walked during the bird surveys are shown on Figures 3.1 to 3.8, whilst survey coverage from the vantage points used on the River Usk and River Ebbw are shown on Figure 4.

2.3.3 Given the scale of the Scheme, it was not possible to access all land within the wider survey area. However, a survey coverage of approximately 65% of the land which was suitable for over-wintering birds (i.e. non-urban areas) was achieved, and it is considered that this is representative of the most suitable habitats for overwintering bird species present within the survey area. The areas which could not be accessed, either due to access permissions not being granted, or the area being considered unsafe to access, included heavy industry and residential/ urban land considered to be of lower potential value for waterfowl.

2.3.4 Surveys were undertaken once a month during the survey period. The surveys were timed to take place across a variety of weather conditions in an attempt to obtain a representative picture of bird numbers and activity (the survey timings and weather conditions are presented in Appendix 1). The surveys were carried out by experienced ornithologists.

2.3.5 The surveys comprised transect surveys and vantage point surveys. Details of the methodologies for each of these surveys are presented in the following sub-sections.

Scoping Survey Visit

2.3.6 A scoping visit was undertaken in September 2014 by a team of four surveyors. Initially it had been intended that the surveyors would complete a full survey but it was apparent that four surveyors would not provide sufficient coverage of the survey area. As such, the September visit was therefore used as a scoping visit to define the approach to surveys from October onwards using a larger team of seven surveyors to cover the survey area.

Transect Surveys

2.3.7 Transect surveys were undertaken to ascertain the number and diversity of bird species present within the footprint of the Scheme and up to 500m of the Scheme boundary (see Figures 3.1 to 3.8). Surveys were undertaken on the same day by utilising a high number of surveyors (minimum of seven people) to allow for consistency and to limit double counting. Where possible, each survey visit was planned to take place across a six-hour window centred around high tide (i.e. three hours either side of high water). The tide times and any other information of relevance to each survey visit (i.e. surveyor name and transect start/ end time,

weather conditions etc.) were recorded on site visit record forms, and are presented in Appendix 1.

- 2.3.8 The transect surveys comprised of a combination of walked transects and surveying from set viewing locations. The surveyors prioritised viewing as many fields/areas as possible in order to confirm whether there were any large and/or obvious aggregations of waterfowl present. In some instances this was achieved with the use of vehicles to drive between viewing locations (such as gateways, gaps in hedgerows, and bridges), which provided the best opportunities to scan larger areas.
- 2.3.9 During the initial visits in October and November 2014, the surveyors recorded the areas of land which could be seen from their walked transect, or from the set viewing locations. These were then digitised in order to provide an overview of areas which were covered, and to identify any gaps in coverage. Where access permitted, gaps were then surveyed during the subsequent survey visits. Areas visible from the transects (i.e. survey coverage) are shown with pink shading on Figures 3.1 to 3.8.
- 2.3.10 The survey area was split into seven Sections (the TATA Steel site was included within Section 3) with each surveyor walking the set transect routes (shown with blue lines on Figures 3.1 to 3.8), or driving between viewing locations. Where possible, surveyors walked west to east across each Section to avoid double counting birds at the edge of adjacent Sections.
- 2.3.11 During each survey visit, the following bird species were counted and their activity recorded and mapped:
- Species which form the qualifying features of the Severn Estuary SPA and Ramsar site;
 - Waterfowl species which form part of the qualifying features of the SSSIs within 2km of the Scheme;
 - Birds listed as priority species for Wales under Section 42 of the Natural Environment and Rural Communities (NERC) Act 2006;
 - 'Red list' and 'Amber list' bird species within the RSPB '*Birds of Conservation Concern*'; and
 - Species afforded protection under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended).

A species list was compiled of all other bird species recorded incidentally during the survey visit; however, these were not counted or mapped.

Vantage Point Surveys

- 2.3.12 The Scheme would include the installation of new bridges across the River Usk (to the west of Alexandra Docks) and the River Ebbw (to the east of Alexandra Docks). Vantage point surveys were therefore undertaken in order to identify:
- Any large aggregations of feeding/roosting waterfowl in the vicinity of the proposed Usk and Ebbw river crossings; and
 - Any well-used bird 'flyways' along the River Usk and River Ebbw that could be disrupted by the construction of the new road bridges at these locations.

- 2.3.13 Vantage point surveys were undertaken on a monthly basis between September 2014 and April 2015. One vantage point was located on the River Usk and the second on the River Ebbw. Given the lack of comprehensive visibility from any fixed location, it was necessary to spend approximately 45 minutes to one hour walking a short transect of approximately 500m upstream and downstream of the proposed crossing point locations (Figure 4).
- 2.3.14 Surveys took place simultaneously at each river location, following the methodology devised by Arup (September 2014). However, the surveys were undertaken across a full tidal cycle (i.e. six hours between high water to low water or vice versa – to be alternated between months), as opposed to Arup’s approach of targeting the four-hour period around low water exclusively.
- 2.3.15 The survey involved undertaking a count every hour between high and low tide or low and high tide, depending on the tide time that day. Two surveyors were used for each visit (one at each river crossing). Each surveyor counted once per hour; therefore, six counts were undertaken from each vantage point per visit. During each survey, bird species were counted and their activity recorded.
- 2.3.16 Flight movements along the river corridors were also recorded continuously during the survey period. However, only gull ‘commuting’ movements confined to the river corridors (i.e. could be impacted by the Scheme) were recorded (not those birds circling overhead), to avoid counting the large flocks of gulls associated with the nearby landfill site/recycling centre/docks.
- 2.3.17 The same suite of species recorded during the transect surveys were also adopted for the vantage point surveys.

Survey Limitations

- 2.3.18 Three main limitations were identified during the survey period (listed below). However, it is not envisaged that these would have any significant influence on the outcome of the survey results.
- It was not possible to survey 100% of the survey area, due to access restrictions. However, areas omitted from the survey primarily included areas of residential/ urban land which were considered to be of low potential value to waterfowl.
 - Whilst there will always be some level of under-recording on transect surveys of this scale (particularly in relation to the more cryptic species), the ‘field count’ approach that has been adopted could accentuate this. Particular species that won’t always have been visible or recorded include: snipe (*Gallinago gallinago*) and jack snipe (*Lymnocyptes minimus*) (which are generally only recorded by ‘flushing’ birds); ducks and water rail (*Rallus aquaticus*) using the reens and ditches; and passerines using fields and hedgerows.
 - Given the amount of walking required to complete the hourly VP counts, it is possible that the flight movements recorded may have been underestimated. This was particularly relevant on the River Usk where the river is wider and a lot of time was spent walking over the saltmarsh habitat, which meant that the ability to record flight movements was limited.

3 Results

3.1 Designated Sites

- 3.1.1 The desk study (undertaken in 2015) identified the presence of two SACs, and one SPA, Ramsar site and IBA within 5km of the Scheme. The bird related qualifying features of the Ramsar site, SPA and IBA are described in the following paragraphs. In addition, a number of other statutory and non-statutory designated sites of nature conservation value have also been identified within a 2km radius of the Scheme. The locations of statutory designated sites are shown on Figure 2.

Severn Estuary SPA

- 3.1.2 The Severn Estuary SPA was classified in 1995. The Severn Estuary SPA covers an area of 24,662.98 ha. The species listed on the 2007 Natura 2000 Standard Data Form (JNCC 2007) will be used when referring to the SPA bird population; these species, along with the proportion of the UK population regularly using the Severn Estuary are listed in Table 1.

Table 1: Severn Estuary SPA Qualifying Features

Bird species	Proportion of UK population (%) 5 yr. peak mean 1996/7-2000/01
Bewick's Swan (<i>Cygnus columbianus bewickii</i>) – Wintering	4.0
Ringed Plover – Wintering	1.3
Curlew – Breeding	1.1
Dunlin (<i>Calidris alpina</i>) – Wintering	3.2
Pintail – Wintering	1.0
Redshank – Wintering	1.6
Shelduck – Wintering	1.1

- 3.1.3 The site qualifies under Article 4.2 of the Birds 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: curlew, dunlin, pintail, redshank and shelduck.
- 3.1.4 In addition, the site also qualifies under article 4.2 of the bird's directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl. Over winter, the area regularly supports 93,986 individual waterfowl including: gadwall, Shelduck, pintail, dunlin, curlew, redshank, Bewick's swan, wigeon, lapwing, teal, mallard, shoveler, pochard, tufted duck, grey plover (*Pluvialis squatarola*), white-fronted goose (*Anser albifrons albifrons*) and whimbrel (*Numenius phaeopus*).

Severn Estuary Ramsar Site

- 3.1.5 With respect to the Ramsar designation, the Severn Estuary is designated as it qualifies under the following bird related criteria.

Criterion 5: Regularly supporting a bird assemblage of international importance comprising 70,919 waterfowl during the non-breeding season (5 year peak mean 1998/99-2002/03)

Criterion 6: The Severn Estuary supports internationally important populations of wintering tundra swan (*Cygnus columbianus bewickii*) (5 year peak mean 1998/9-2002/3), greater white-fronted goose (*Anser albifrons albifrons*) (5 year peak mean for 1996/7-2000/1), common shelduck (5 year peak mean 1998/9-2002/3), gadwall (5 year peak mean 1998/9-2002/3), dunlin (5 year peak mean 1998/9-2002/3) and common redshank (5 year peak mean 1998/9-2002/3).

Severn Estuary IBA

- 3.1.6 The Severn Estuary is also designated as an IBA. The site is designated on the basis that it supports internationally important numbers of the following species: pintail, dunlin, ringed plover, tundra swan, lesser black-backed gull (*Larus fuscus*), curlew, shelduck and redshank.

SSSIs

- 3.1.7 The desk study identified 12 SSSIs within 2km of the Scheme. These are detailed in Table 2 below, and are shown on Figure 2.

Table 2: SSSI's within 2km of the Scheme

Site	Distance from Scheme (Km)	Description
Gwent Levels: St Brides	0	The Gwent Levels: St Brides SSSI is approximately 1,312ha. The site forms part of six SSSIs along the edge of the River Severn, and together they form one of the most extensive areas of reclaimed wet pasture in Great Britain. The site is important for its reed and ditch habitats and the important invertebrate assemblage which these support.
Gwent Levels: Nash and Gold Cliff	0	The Gwent Levels: Nash and Gold Cliff SSSI covers 760ha. The site forms part of six SSSIs along the edge of the River Severn, and together they form one of the most extensive areas of reclaimed wet pasture in Great Britain. The site is important for rare plant and invertebrate species.
Gwent Levels: Whitson	0	The Gwent Levels: Whitson SSSI covers 891ha. The site forms part of six SSSIs along the edge of the River Severn, and together they form one of the most extensive areas of reclaimed wet pasture in Great Britain. The site is important for rare plant and aquatic invertebrate species.

Site	Distance from Scheme (Km)	Description
Gwent Levels: Rumney and Peterstone	0.3	The Gwent Levels: Rumney and Peterstone SSSI covers 969ha. The site forms part of six SSSIs along the edge of the River Severn, and together they form one of the most extensive areas of reclaimed wet pasture in Great Britain. The site is important for its reed and ditch habitats and the important invertebrate assemblage which these support.
Gwent Levels: Redwick and Llandeenny	0.8	The Gwent Levels: Redwick and Llandeenny SSSI covers 940ha. The site forms part of six SSSIs along the edge of the River Severn, and together they form one of the most extensive areas of reclaimed wet pasture in Great Britain. The site is important for rare plant and invertebrate species. It is also important for breeding birds.
Gwent Levels: Magor and Undy	1.3	The Gwent Levels: Magor and Undy SSSI covers 586ha. The site forms part of six SSSIs along the edge of the River Severn, and together they form one of the most extensive areas of reclaimed wet pasture in Great Britain. The site is important for rare plant and terrestrial and aquatic invertebrate species.
River Usk	0	The River Usk is designated as a SSSI for supporting a wide range of riverside breeding birds including sand martin (<i>Riparia riparia</i>), kingfisher, yellow wagtail (<i>Motacilla flava</i>), grey wagtail (<i>Motacilla cinerea</i>), dipper (<i>Cinclus cinclus</i>), and marsh warbler (<i>Acrocephalus palustris</i>). The SSSI is also an important area for wintering and passage migrants including teal, greenshank and green sandpiper.
Newport Wetlands	0	The Newport Wetlands SSSI is part of the Newport Wetlands National Nature Reserve, and covers 374ha. The site is designated for its breeding and over-wintering birds. In winter the SSSI supports nationally important numbers of shoveler and black-tailed godwit. During the summer the wet grassland, saline lagoons and reedbeds on the site support a variety of breeding birds, including nationally important breeding populations of avocet, redshank, lapwing, water rail, cetti's warbler and bearded tit.
Severn Estuary	1	The Severn Estuary SSSI totals and area of 15,950ha. The site is designated for its estuarine habitats, including mudflats, sand banks, rocky platforms and saltmarsh. The SSSI is also of international importance for wintering and passage waders and waterfowl.
Magor Marsh	0.4	Magor Marsh SSSI covers 22ha. The site comprises areas of wet meadow, and an extensive network of drainage ditches/reens and ponds. It is an important breeding ground for a variety of wetland bird species.
Rectory Meadow Rogiet	0.7	Rectory Meadow Rogiet SSSI covers a total of 0.2ha. The site supports the only extant and recorded native site of Meadow Clary (<i>Salvia pratensis</i>) in Wales. The site is on deep clay soil overlaying carboniferous limestone strata.
Penhow Woodlands	1.5	Penhow Woodlands SSSI comprises woodland with a diverse flora and fauna. The site is also designated as a National Nature Reserve.

Non-Statutory Designated Sites

3.1.8 The desk study identified seven non-statutory designated sites within 2km of the Scheme, these include the following:

- Craig y Wenallt Woodland Trust Reserve.
- Caerleon Comprehensive School Nature Reserve.
- Allt-yr-Yn Local Nature Reserve.
- Ringland Wood Nature Reserve.
- Oaklands Nature Reserve.
- Duffryn Pond Nature Reserve.
- Lodge Wood Nature Reserve.

3.2 Field Surveys

3.2.1 The results of the 2014/15 bird surveys are summarised in the following paragraphs. Detailed tables of the survey results are shown in Appendices 2, 3 and 4. Figures 5 to 9 show the results of the vantage point and transect surveys.

3.2.2 For the purpose of this report, the species listed on the 2007 Natura 2000 Standard Data Form will be used when referring to the SPA bird species.

Severn Estuary Annex 1 Bird Species

3.2.3 The Severn Estuary SPA qualifies under article 4.1 of the Directive (79/409/EEC) as it is used regularly by 1% or more of the Great British population of the following species listed in Annex 1 in any season:

- Bewick's swan.

3.2.4 No Bewick's swan were recorded during the 2014/15 bird surveys.

Annex 1 Internationally important regularly-occurring migratory species

3.2.5 The Severn Estuary qualifies 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).

3.2.6 All six of these species were recorded during the 2014/15 bird surveys, as outlined below.

Ringed Plover

3.2.7 The SPA citation states that the Severn Estuary supported a mean peak count of 655 individuals on passage between 1991/92 to 1995/96. More recent BTO data indicated that this number had increased to 1,335 ringed plover between 2008/09

to 2012/13. No BTO WeBS Alerts have been triggered for this species on the Severn Estuary SPA.

- 3.2.8 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of 140 birds. BTO low tide count data (2008/09) provided a winter maximum of 127 ringed plover.
- 3.2.9 During the 2014/15 vantage point surveys of the river crossing locations, ringed plover was recorded on one occasion (a single bird) roosting on the edge of the river during the December vantage point surveys of the River Ebbw (Appendix 4, Table 4.4). Ringed plover were also recorded flying through on one occasion (18 birds) during the November survey on the River Usk (Appendix 3, Table 3.3; Target Note 3A, Figure 6.3), and up to 18 birds were also recorded during the November survey foraging north of the River Usk crossing point.
- 3.2.10 No ringed plover were recorded during the transect surveys.

Curlew

- 3.2.11 The SPA citation states that the Severn Estuary supported a mean peak count of 3,903 individuals overwintering between 1991/92 to 1995/96. More recent BTO data indicated that this number had decreased to 3,768 curlew between 2008/09 to 2012/13. BTO WeBS Alerts suggest that numbers of curlew over-wintering within the Severn Estuary SPA have remained relatively stable in the long-term, therefore no Alerts have been triggered for this species. However, the increasing proportion of Regional numbers supported by the Severn Estuary SPA suggest the environmental conditions remain relatively favourable, and also indicates that this SPA is becoming increasingly important on a Regional scale for this species (BTO website).
- 3.2.12 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of 893 birds. BTO low tide count data (2008/09) provided a winter maximum of 2,612 curlew.
- 3.2.13 During the 2014/15 vantage point surveys of the river crossing locations, curlew were recorded at both river crossing locations. On the River Ebbw, curlew were recorded flying through during the September, October and December surveys, with a peak count of nine birds during the December visit (Appendix 4, Table 4.4). All the flight activity was recorded below 20m. During the vantage point hourly counts on the River Ebbw, a peak count of 125 curlew were recorded during the February survey (Appendix 4, Table 4.6); however, smaller numbers of birds were more regularly observed. The majority of the birds were recorded foraging and roosting south of the proposed crossing point.
- 3.2.14 On the River Usk, curlew were recorded flying through during the September to January surveys (inclusive), with a peak count of three birds during the December visit (Target Note 4A, Figure 6.1; Table 3.1 Appendix 3). All of the flight activity was recorded below 20m. During the vantage point hourly counts, a peak count of 16 curlew were recorded during the March survey (Appendix 4, Table 4.15). During the vantage point surveys, curlew appeared to favour the east bank of the

River Usk (with birds recorded to the north and south of the crossing point on the east bank).

- 3.2.15 Small numbers of curlew were recorded during all of the transect surveys. A peak count of 12 birds were recorded during the February visit (Table 2.1, Appendix 2). The sightings were in fields within Sections 5 and 6, favouring the fields in the vicinity of the mouth of the River Ebbw (Figure 8.6).

Dunlin

- 3.2.16 The SPA citation states that the Severn Estuary supported a mean peak count of 44,624 individuals overwintering between 1991/2-1995/6. More recent BTO data indicated that this number had decreased to 26,412 dunlin between 2008/09 to 2012/13. BTO WeBS Alerts suggest that numbers of dunlin over-wintering within the Severn Estuary SPA have been stable in the medium-term having previously declined, therefore Alerts have been triggered for the long term and the period since designation. The decline of the Severn Estuary SPA and the Regional populations, suggests that the declining numbers relate to broad-scale population trends rather than site-specific issues (BTO website).
- 3.2.17 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of 435 birds. BTO low tide count data (2008/09) provided a winter maximum of 27,144 dunlin.
- 3.2.18 During the 2014/15 vantage point surveys of the river crossing locations, dunlin were recorded at both river crossing locations. On the River Ebbw, dunlin were recorded flying through during the December, February and March surveys, with a peak count of 12 birds during the December visit. All of the flight activity was recorded below 20m. During the vantage point hourly counts, a peak count of 12 dunlin were recorded during the December survey on the River Ebbw (Appendix 4, Table 4.4).
- 3.2.19 On the River Usk, dunlin were recorded flying through during the September to December, February and March surveys, with a peak count of 77 birds during the December visit (Figure 6.2). All of the flight activity was recorded below 20m. During the vantage point hourly count survey on the River Usk, dunlin were regularly recorded roosting and foraging to the north and south of the crossing location, with a peak count of 77 dunlin observed during the December survey (Appendix 4, Table 4.12).
- 3.2.20 No dunlin were recorded during the 2014/15 transect surveys.

Pintail

- 3.2.21 The SPA citation states that the Severn Estuary supported a mean peak count of 599 individuals overwintering between 1991/2-1995/6. More recent BTO data indicated that this number had decreased to 511 pintail between 2008/09 to 2012/13. BTO WeBS Alerts suggest that numbers of pintail over-wintering within the Severn Estuary SPA have been increasing in the long-term, therefore no Alerts have been triggered for this species. The stable proportion of Regional numbers supported by the Severn Estuary SPA suggest the environmental conditions remain relatively favourable for this species (BTO website).

- 3.2.22 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak count of 142 birds. BTO low tide count data (2008/09) provided a winter maximum of 655 pintail.
- 3.2.23 During the 2014/15 vantage point surveys of the river crossings, no pintail were recorded at either of the river crossing locations.
- 3.2.24 During the 2014/15 transect surveys pintail were recorded in Section 3 during the December, February and March surveys. They favoured the water filled ditches and pond (Pond 1) to the south of the TATA Steel site (Figure 7.1).

Redshank

- 3.2.25 The SPA citation states that the Severn Estuary supported a mean peak count of 2,330 individuals overwintering between 1991/2-1995/6. More recent BTO data indicated that this number had increased to 2,536 redshank between 2008/09 to 2012/13. BTO WeBS Alerts suggest that numbers of redshank over-wintering within the Severn Estuary SPA have been increasing in the short-term having previously been relatively stable, therefore no Alerts have been triggered for this species. The increasing proportion of Regional numbers supported by the Severn Estuary SPA suggest the environmental conditions remain relatively favourable, and also indicates that this SPA is becoming increasingly important on a regional scale for this species (BTO website).
- 3.2.26 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of 411 birds. BTO low tide count data (2008/09) provided a winter maximum of 2,936 redshank.
- 3.2.27 During the 2014/15 vantage point surveys of the river crossings, redshank were recorded at both river crossing locations. On the River Ebbw, redshank were recorded flying through during the September to March surveys (inclusive), with a peak count of 690 birds during the December visit (Figure 5). Most of the flight activity was recorded below 20m, with six redshank were recorded during the December survey to be flying at 20-100m and one redshank was also recorded at this height during the January survey. During the vantage point hourly count surveys on the River Ebbw, redshank were recorded during all of the survey visits (October to April (inclusive)), with a peak count of 690 birds in December (Appendix 4, Table 4.4). The birds were recorded foraging and roosting throughout the vantage point survey area on the River Ebbw, favouring the areas just to the north and south of the crossing point.
- 3.2.28 On the River Usk, redshank were recorded flying through during the September to March surveys, with a peak count of 161 birds during the December visit (Figure 6). All of the flight activity was recorded below 20m. During the vantage point hourly count surveys on the River Usk, redshank were recorded during all of the survey visits (October to April (inclusive)), with a peak count of 161 birds in March (Appendix 4, Table 4.15). The birds were recorded foraging and roosting throughout the vantage point survey area, but appeared to favour the area just to the north of the crossing point.
- 3.2.29 Redshank were recorded throughout the October to March surveys (inclusive) transect surveys, with a peak count of 38 birds in the March survey, in Section 5 of the Scheme (Table 2.13, Appendix 2). The sightings were predominately in

Section 5, but birds were also observed in Section 6. The majority of the sightings were of birds on the banks of the River Ebbw, with a small number also foraging in the sludge beds to the east of the River Usk (Figure 7).

Shelduck

- 3.2.30 The SPA citation states that the Severn Estuary supported a mean peak count of 3,330 individuals overwintering between 1991/2-1995/6. More recent BTO data indicated that this number had increased to 3,938 shelduck between 2008/09 to 2012/13. BTO WeBS Alerts suggest that numbers of shelduck over-wintering within the Severn Estuary SPA have been increasing in the long-term, therefore no Alerts have been triggered for this species. The increasing proportion of Regional numbers supported by the Severn Estuary SPA suggest the environmental conditions remain relatively favourable, and also indicates that this SPA is becoming increasingly important on a regional scale for this species (BTO website).
- 3.2.31 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of 995 birds. BTO low tide count data (2008/09) provided a winter maximum of 2,450 shelduck.
- 3.2.32 During the 2014/15 vantage point surveys of the river crossings, shelduck were only recorded at the River Usk crossing locations, none were recorded during the vantage point surveys at the River Ebbw. On the River Usk, shelduck were recorded during the September to March surveys (inclusive), with a peak count of four birds during the March visit (Figure 6.4). All of the flight activity was recorded below 20m, or ranged between 20-100m. During the vantage point hourly count surveys on the River Usk, shelduck were recorded on one occasion. The four birds were recorded foraging on the east bank of the river during the March survey (Appendix 4, Table 4.15).
- 3.2.33 Small numbers of shelduck were recorded during the 2014/15 transect surveys (Figure 7). Shelduck sightings were recorded during the February and April surveys, with a peak count of thirteen during the April survey in Section 5. Shelduck sightings were also recorded in Section 3 of the Scheme, with the birds favouring the water filled ditches and pond (Pond 1) to the south of the TATA Steel site (Figure 7.1).

Assemblage Species

- 3.2.34 The Severn Estuary SPA also qualifies under article 4.2 of the Directive 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, white-fronted goose and whimbrel.
- 3.2.35 Eight of the species listed on the SPA assemblage were recorded during the winter surveys. These included: gadwall, wigeon, lapwing, teal, mallard, shoveler, pochard and tufted duck.

Gadwall

- 3.2.36 Gadwall are listed only as part of the wintering bird assemblage for the Severn Estuary SPA and, as such, a population estimate at the time of designation is not provided. However, the BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of 207 birds during the winter, 127 during the autumn passage period and 85 during the spring passage period within the Estuary. BTO WeBS Alerts suggest that numbers of gadwall over-wintering within the Humber Estuary SPA have been decreasing in the medium-term having previously been relatively stable, therefore no Alerts have been triggered for this species. The decreasing proportion of Regional numbers supported by the Severn Estuary SPA suggesting the site is at carrying capacity (BTO website).
- 3.2.37 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of two birds during the winter. BTO low tide count data (2008/09) provided a winter maximum of 151 gadwall.
- 3.2.38 During the 2014/15 vantage point surveys of the river crossing locations, gadwall were only recorded at the River Ebbw, none were recorded during the vantage point surveys at the River Usk. The single bird was recorded commuting over the River Ebbw at a height of 20-100m.
- 3.2.39 During the 2014/15 transect surveys, gadwall were recorded throughout September to December (inclusive). Most of the gadwall sightings were recorded within Section 3, with four gadwall also recorded in Section 4. There was a peak count of 33 birds during the October survey (Table 2.3, Appendix 2). In Section 3, the gadwall favoured the ditches to the south of the TATA Steel site (Figure 8.3).

Wigeon

- 3.2.40 Wigeon are listed only as part of the wintering bird assemblage for the Severn Estuary SPA and, as such, a population estimate at the time of designation is not provided. However the BTO WeBs data for 2008/9 to 2012/13 showed a mean peak count of 7,837 during the winter, 2,037 during the autumn passage period and 120 during the spring passage period. Numbers of Wigeon over-wintering on Severn Estuary SPA having remained relatively stable long term. Consequently no Alerts have been triggered for this species. The stable proportion of Regional numbers supported by this site suggest the environmental conditions remain relatively favourable for this species (BTO website).
- 3.2.41 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of 1137 birds. BTO low tide count data (2008/09) provided a winter maximum of 8,672 wigeon.
- 3.2.42 During the 2014/15 vantage point surveys of the river crossings, wigeon were recorded at both crossing locations. At the River Ebbw, a single bird was recorded commuting in December (Figure 5). On the River Usk, a single bird was recorded commuting during the March survey (Figure 6). All flight activity was recorded below 20m.
- 3.2.43 During the 2014/15 transect surveys, wigeon were recorded in September, December, February and March, with a peak count of 25 birds on the ditch

network to the south of the TATA Steel site during the December survey. Wigeon were also recorded in Section 5 of the Scheme (Figure 8.5).

Lapwing

- 3.2.44 Lapwing are listed only as part of the wintering bird assemblage for the Severn Estuary SPA and, as such, a population estimate at the time of designation is not provided. However, the BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of 10,471 birds during the winter, 1,422 during the autumn passage period and 190 during the spring passage period within the Estuary. BTO WeBS Alerts suggest that numbers of lapwing over-wintering within the Humber Estuary SPA have been decreasing in the short-term having previously peaked, therefore Alerts have been triggered for the short and medium-terms. The increasing proportion of Regional numbers supported by the Severn Estuary SPA suggest the environmental conditions remain relatively favourable, and also indicates that this SPA is becoming increasingly important on a regional scale for this species (BTO website).
- 3.2.45 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of 166 birds. BTO low tide count data (2008/09) provided a winter maximum of 9,081 lapwing.
- 3.2.46 During the 2014/15 vantage point surveys of the river crossings, lapwing were recorded at both crossing locations. At the River Ebbw, birds were recorded commuting in November and February (Figure 5.3), with a peak count of 50 lapwing recorded during February (Appendix 4, Table 4.6). All flight activity was recorded below 20m.
- 3.2.47 Lapwing were recorded commuting on a number of occasions throughout the survey period on the River Usk, with a peak count of 100 birds recorded foraging on the banks of the River Usk during the vantage point hourly counts in March (Appendix 4, Table 4.15).
- 3.2.48 During the 2014/15 transect surveys, lapwing were recorded in September and December to March (inclusive), with a peak count of 100 birds in Section 1 during the February survey (Table 2.11, Appendix 2). Lapwing were recorded in all of the Sections of the Scheme, with the exception of Sections 3 and 4. The birds appeared to prefer the areas in the vicinity of the River Usk and the River Ebbw (Figure 8.6).

Teal

- 3.2.49 Teal are listed only as part of the wintering bird assemblage for the Severn Estuary SPA and, as such, a population estimate at the time of designation is not provided. However, the BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of 5,302 birds during the winter, 3,190 during the autumn passage period and 469 during the spring passage period within the Estuary. BTO WeBS Alerts suggest that numbers of teal over-wintering within the Severn Estuary SPA have been stable in the medium-term having previously increased, therefore no Alerts have been triggered for this species. The stable proportion of Regional numbers supported by the Severn Estuary SPA suggest the environmental conditions remain relatively favourable for this species (BTO website).

- 3.2.50 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of 104 birds. BTO low tide count data (2008/09) provided a winter maximum of 4,401 teal.
- 3.2.51 During the 2014/15 vantage point surveys of the river crossings, teal were regularly recorded at both crossing points. At the River Ebbw, teal were recorded during October, December, January, February and March, a peak count of 79 birds were recorded flying through during the February survey (Figure 5.7). During the vantage point hourly count surveys, teal were also regularly recorded foraging and roosting to the north and south of the crossing location, with a peak count of 79 birds recorded during the February survey (Appendix 4, Table 4.6).
- 3.2.52 At the River Usk, sightings of teal were recorded in September, October, November, December, January and March, with a peak count of 34 birds during the vantage point hourly count surveys in January (Figure 6.7; Appendix 4, Table 4.5).
- 3.2.53 During the 2014/15 transect surveys, teal were recorded during the September to April surveys (inclusive). A peak count of 102 birds was recorded during the December survey in Section 3. Teal were recorded in all Sections, with the exception of Sections 1 and 7. The majority of sightings of teal were within Section 3. The birds appeared to favour the wet ditches to the south of the TATA Steel site (Figure 8). In Section 5, the teal were mostly recorded in the area around the River Ebbw (Figure 8).

Mallard

- 3.2.54 Mallard are listed only as part of the wintering bird assemblage for the Severn Estuary SPA and, as such, a population estimate at the time of designation is not provided. However, the BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of 2,713 birds during the winter, 2,918 during the autumn passage period and 1,232 during the spring passage period within the Estuary. BTO WeBS Alerts suggest that numbers of mallard over-wintering within the Humber Estuary SPA have remained relatively stable in the long-term, therefore no Alerts have been triggered for this species. The stable proportion of Regional numbers supported by the Severn Estuary SPA suggest the environmental conditions remain relatively favourable for this species (BTO website).
- 3.2.55 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of 620 birds. BTO low tide count data (2008/09) provided a winter maximum of 2,321 mallard.
- 3.2.56 During the 2014/15 vantage point surveys, mallard were recorded at both crossing locations. At the River Ebbw, mallard were recorded flying through during all of the survey visits, with a peak count of 59 birds during the vantage point hourly count surveys in December (Figure 5.8; Appendix 4, Table 4.4). All the flights ranged from below 20m to 100m.
- 3.2.57 Small numbers of mallards were recorded between September and March (inclusive) at the River Usk crossing location. A peak count of 41 birds was

recorded foraging on the edge of the river during the vantage point count survey in January (Figure 6; Appendix 4, Table 4.5).

- 3.2.58 During the 2014/15 transect surveys, mallard were recorded during the all of the survey visits. A peak count of 60 birds was recorded during the February survey in Section 6. Mallard were recorded in relatively large numbers in all Sections. The fields within Section 6 appeared to be favoured by mallard. In Section 1, mallard appeared to prefer the west of the Section, in particular, the area in the vicinity of the stream (Figure 8.1). In Section 3, mallard were recorded throughout the ditch network to the south of the TATA Steel site (Figure 8.4).

Shoveler

- 3.2.59 Shoveler are listed only as part of the wintering bird assemblage for the Severn Estuary SPA and, as such, a population estimate at the time of designation is not provided. However, the BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of 448 birds during the winter, 450 during the autumn passage period and 81 during the spring passage period within the Estuary. BTO WeBS Alerts suggest that numbers of shoveler over-wintering within the Severn Estuary SPA have been increasing in the medium-term having previously been relatively stable, therefore no Alerts have been triggered for this species. The increasing proportion of Regional numbers supported by the Severn Estuary SPA suggest the environmental conditions remain relatively favourable, and also indicates that this SPA is becoming increasingly important on a Regional scale for this species (BTO website).
- 3.2.60 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of 181 birds. BTO low tide count data (2008/09) provided a winter maximum of 416 shoveler.
- 3.2.61 During the 2014/15 vantage point surveys at the river crossings, no shoveler were recorded.
- 3.2.62 During the 2014/15 transect surveys, shoveler were recorded during the December to February surveys (inclusive). A peak count of six birds was recorded during the December survey in Section 3. Shoveler were recorded in Section 2, 3 and 5 (see Figures 8.2 to 8.6).

Pochard

- 3.2.63 Pochard are listed only as part of the wintering bird assemblage for the Severn Estuary SPA and, as such, a population estimate at the time of designation is not provided. However, the BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of 569 birds during the winter, 52 during the autumn passage period and 19 during the spring passage period within the Estuary. BTO WeBS Alerts suggest that numbers of pochard over-wintering within the Severn Estuary SPA have been decreasing in the medium-term having previously peaked. This decline has been of sufficient magnitude to trigger Alerts for the long, medium and short-term. The similarity between the declining site trend and the Regional and British trends suggests that the declining numbers underpinning these Alerts result from broad-scale population trends (BTO website).
- 3.2.64 No pochard were recorded within the BTO WeBS count sector for the Gwent

Levels SSSI. BTO low tide count data (2008/09) provided a winter maximum of 133 pochard.

- 3.2.65 During the 2014/15 vantage point surveys of the river crossing locations, no pochard were recorded.
- 3.2.66 During the 2014/15 transect surveys, pochard were only recorded in Section 3 during the January survey. A peak count of 28 birds were recorded in the ditch network to the south of the TATA Steel site (Figure 8.4; Table 2.9, Appendix 2).

Tufted Duck

- 3.2.67 Tufted duck are listed only as part of the wintering bird assemblage for the Severn Estuary SPA and, as such, a population estimate at the time of designation is not provided. However, the BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of 793 birds during the winter, 375 during the autumn passage period and 317 during the spring passage period within the Estuary. BTO WeBS Alerts suggest that numbers of tufted duck over-wintering within the Severn Estuary SPA have remained relatively stable in the long-term, therefore no Alerts have been triggered for this species. The stable proportion of Regional numbers supported by the Severn Estuary SPA suggest the environmental conditions remain relatively favourable for this species (BTO website).
- 3.2.68 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of one bird. BTO low tide count data (2008/09) provided a winter maximum of 324 tufted duck.
- 3.2.69 During the 2014/15 vantage point surveys of the river crossing locations, no tufted duck were recorded.
- 3.2.70 During the 2014/15 transect surveys, tufted duck were recorded during the September, December, January, February, March and April surveys. Tufted duck were only recorded in Sections 3 and 5. A peak count of 15 birds were recorded during the February survey in Section 5. The birds within Section 3 were recorded in the ditch network and pond (Pond 1) to the south of the TATA Steel site (figures 8.3 and 8.4). The birds within Section 5 were mostly recorded around the sludge beds to the east of the Section (Figure 8.5).

Other Waterfowl

- 3.2.71 Twenty-four other waterfowl and wader species, not specifically listed as forming part of the SPA assemblage on the SPA citation (but would also be considered to make up the waterfowl assemblage) were also recorded during the 2014/15 surveys. These are detailed below.

Mute Swan

- 3.2.72 The BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of 366 birds during the winter, 256 during the autumn passage period and 259 during the spring passage period within the Severn Estuary.
- 3.2.73 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of 22 birds. BTO low tide count data (2008/09) provided

a winter maximum of 276 mute swan (*cygnus olor*).

- 3.2.74 During the 2014/15 vantage point surveys of the river crossing locations, mute swan were recorded on the River Ebbw and River Usk. On the River Ebbw mute swans were recorded during all of the survey visits. A peak count of 83 birds were recorded flying through in January (Figure 5), with the majority of flights being under 20m. The same 83 birds were recorded during the vantage point hourly count surveys, foraging and roosting on the edge of the river during January survey (Appendix 4, Table 4.5).
- 3.2.75 At the River Usk crossing, a small number of mute swans were recorded during September, October and March surveys, with a peak count of two birds during October (Figure 6). A peak count of two mute swans were recorded foraging during the vantage point hourly counts in October (Appendix 4, Table 4.10).
- 3.2.76 During the 2014/15 transect surveys, mute swan were recorded during the September to April surveys. A peak count of 86 birds were recorded during the January survey in Section 6. Mute swans were recorded in all Sections except for Section 1.

Black swan

- 3.2.77 No black swan (*Cygnus atratus*) were recorded within the BTO WeBS data for the Estuary as whole, or the count sector for the Gwent Levels SSSI. BTO low tide count data (2008/09) provided a winter maximum of zero black swan.
- 3.2.78 No black swan were recorded during the 2014/15 vantage point surveys at the crossing locations.
- 3.2.79 During the 2014/15 transect surveys, one black swan was recorded during the January survey. The single bird was recorded in Section 6 (Figure 8.6).

Canada Goose

- 3.2.80 The BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of 779 birds during the winter, 640 during the autumn passage period and 118 during the spring passage period within the Estuary.
- 3.2.81 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of 48 birds. BTO low tide count data (2008/09) provided a winter maximum of 526 Canada goose (*Branta canadensis*).
- 3.2.82 During the 2014/15 vantage point surveys, Canada goose were recorded at both crossing locations. At the River Ebbw, two birds were recorded during the March survey commuting below 20m (Figure 5). During the vantage point hourly count surveys, a peak count of three birds was recorded during the December survey (Appendix 4, Table 4.4).
- 3.2.83 At the River Usk, six Canada geese were recorded commuting during November at a height of between 20-100m (Figure 6). No Canada geese were recorded during the vantage point hourly count surveys on the River Usk.
- 3.2.84 During the 2014/15 transect surveys, Canada geese were recorded during the October, November, February, March and April surveys. A peak count of 16 birds

were recorded during the March survey in Section 6. Canada geese were recorded in Sections 2, 3, 4, 6 and 7. The highest numbers of birds were recorded within Section 2. In Section 4, the birds appeared to favour a field to the west of the TATA Steel site. In Section 7, Canada geese favoured the ponds on the golf course around Coedcernyw/ Coedkernew (Figure 8.8).

Greylag Goose

- 3.2.85 The BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of 499 birds during the winter, 436 during the autumn passage period and 77 during the spring passage period within the Estuary.
- 3.2.86 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of 4 birds. BTO low tide count data (2008/09) provided a winter maximum of 337 greylag goose (*Anser anser*).
- 3.2.87 No greylag geese were recorded during the 2014/15 vantage point surveys of the river crossing locations.
- 3.2.88 During the 2014/15 transect surveys, greylag geese were recorded during the November and March surveys. A peak count of five birds were recorded during the March survey in Section 4. Greylag geese were recorded in Sections 4 and 5. Section 4 was favoured by greylag geese, with the majority of birds recorded in this Section. In Section 5, the greylag geese preferred the areas around the River Ebbw.

Goosander

- 3.2.89 The BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of 10 birds during the winter and zero during the autumn and spring passage period within the Estuary.
- 3.2.90 No goosander (*Mergus merganser*) were recorded within the BTO WeBS count sector for the Gwent Levels SSSI. BTO low tide count data (2008/09) provided a winter maximum of 15 goosander.
- 3.2.91 During the 2014/15 vantage point surveys, goosander were only recorded on the River Ebbw during January, with a peak count of one bird. The bird was recorded foraging and then commuting (Table 4.5, Appendix 4)). No Goosander were recorded during the 2014/15 transect surveys.

Oystercatcher

- 3.2.92 The BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of 726 birds during the winter, 959 during the autumn passage period and 403 during the spring passage period within the Estuary.
- 3.2.93 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of 294 birds. BTO low tide count data (2008/09) provided a winter maximum of 1,046 oystercatcher (*Haematopus*).
- 3.2.94 Oystercatcher were recorded during the 2014/15 vantage point surveys at both river crossing locations. On the River Ebbw, oystercatchers were recorded flying through in February and March, with a peak count of two birds during February

and March (Figure 5.10). During the vantage point hourly count surveys, a peak count of four birds were recorded foraging on the banks of the river during the March survey (Appendix 4, Table 4.7).

3.2.95 One oystercatcher was recorded on the River Usk during the 2014/15 vantage point surveys, in December (Table 4.12, Appendix 4). The single bird was observed commuting at a height below 20m.

3.2.96 During the 2014/15 transect surveys oystercatchers were recorded during the February, March and April surveys. A peak count of four birds were recorded during the March survey in Section 5. Oystercatchers were only recorded in Section 5. The birds were all recorded along the River Ebbw (Figure 8.6).

Ruff

3.2.97 The BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of 12 birds during the winter, 14 during the autumn passage period and two during the spring passage period within the Estuary.

3.2.98 No ruff were recorded within the BTO WeBS count sector for the Gwent Levels SSSI. BTO low tide count data (2008/09) provided a winter maximum of 11 ruff.

3.2.99 During the 2014/15 vantage point surveys, ruffs were recorded on the River Ebbw during September and March, with a peak count of three birds. The birds were recorded foraging and commuting under 20m.

3.2.100 On the River Usk one ruff was recorded during the December survey. The single bird was recorded commuting through at a height under 20m.

3.2.101 During the 2014/15 transect surveys no ruff were recorded.

Common Sandpiper

3.2.102 The BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of nine birds during the winter, 48 during the autumn passage period and ten during the spring passage period within the Estuary.

3.2.103 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of 12 birds. BTO low tide count data (2008/09) provided a winter maximum of three common sandpiper (*Actitis hypoleucos*).

3.2.104 During the 2014/15 vantage point surveys of the river crossing locations, common sandpipers were recorded flying through twice on the River Ebbw during the December survey. Both of the common sandpiper were commuting at a height under 20m. During the vantage point hourly count surveys, a peak count of eight birds was recorded during the January survey (Appendix 4, Table 4.5).

3.2.105 During the River Usk vantage point hourly count surveys, three birds were recorded foraging on the river bank during the November survey (Appendix 4, Table 4.11).

3.2.106 During the 2014/15 transect surveys, common sandpipers were recorded during the September survey. A peak count of one bird was recorded during the September survey in Section 7 (Figure 8.8).

Green Sandpiper

- 3.2.107 The BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of one bird during the winter, 16 during the autumn passage period and two during the spring passage period within the Estuary.
- 3.2.108 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of one bird. BTO low tide count data (2008/09) provided a winter maximum of one green sandpiper (*Tringa ochropus*).
- 3.2.109 No green sandpiper were recorded during the 2014/15 vantage point surveys of the crossing locations. During the 2014/15 transect surveys, green sandpiper were recorded during the November and December surveys. A peak count of one bird was recorded during the November and December surveys in Sections 6 and 2 (Figure 8).

Greenshank

- 3.2.110 The BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of three birds during the winter, 17 during the autumn passage period and 17 during and three during the spring passage within the Estuary.
- 3.2.111 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of 12 birds. BTO low tide count data (2008/09) provided a winter maximum of six greenshank.
- 3.2.112 No Greenshank were recorded during the 2014/15 vantage point surveys of the crossing locations. During the 2014/15 transect surveys, a single greenshank was recorded during the April survey in Section 3 (Figure 8.3).

Bar-tailed Godwit

- 3.2.113 The BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of 18 birds during the winter, 42 during the autumn passage period and 40 during the spring passage period within the Estuary.
- 3.2.114 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of ten birds. BTO low tide count data (2008/09) provided a winter maximum of 87 bar-tailed godwit (*Limosa lapponica*).
- 3.2.115 No bar-tailed godwit were recorded during the 2014/15 vantage point surveys of the river crossing locations.
- 3.2.116 During the 2014/15 transect surveys, bar-tailed godwit were recorded during the March surveys. A peak count of four birds were recorded during the March survey in Section 5 (Appendix 2, Table 2.13). The birds were recorded in the vicinity of the River Ebbw (Figure 8.6).

Black-tailed Godwit

- 3.2.117 The BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of 405 birds during the winter, 445 during the autumn passage period and 240 during the spring passage period within the Estuary.

- 3.2.118 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of 211 birds. BTO low tide count data (2008/09) provided a winter maximum of 646 black-tailed godwit.
- 3.2.119 During the 2014/15 vantage point surveys of the river crossings, one black-tailed godwit was recorded roosting during the September survey at the River Ebbw (Appendix 4, Table 4.1). No black-tailed godwit were recorded during the 2014/15 transect surveys.

Jack Snipe

- 3.2.120 The BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of eight birds during the winter, one during the autumn passage period and zero during the spring passage period within the Estuary.
- 3.2.121 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of one bird during the winter. BTO low tide count data (2008/09) provided a winter maximum of three jack snipe.
- 3.2.122 During the 2014/15 vantage point surveys of the river crossings, two jack snipe were recorded during the December survey at the River Usk (Appendix 4, Table 4.12).
- 3.2.123 During the 2014/15 transect surveys, jack snipe were recorded during the December survey. A peak count of one was recorded in Section 6 (Figure 8.7).

Snipe

- 3.2.124 The BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of 143 birds during the winter, 83 during the autumn passage period and four during the spring passage period within the Estuary.
- 3.2.125 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of six birds. BTO low tide count data (2008/09) provided a winter maximum of 140 snipe.
- 3.2.126 During the 2014/15 vantage point surveys of the river crossings, snipe were recorded at both the River Ebbw and River Usk. At the River Ebbw, three snipe were recorded flying through during December.
- 3.2.127 Three snipe were recorded flying through on the River Usk during October, December and January (Table 4.12 and 4.14, Appendix 4). During the vantage point hourly count surveys, a peak count of three birds was recorded during the December survey (Appendix 4, Table 4.12).
- 3.2.128 During the 2014/15 transect surveys snipe were recorded from September to April (inclusive). A peak count of 50 birds were recorded during the October survey in Section 4. Snipe were recorded in all Sections except for Sections 1 and 7. The majority of sights of snipe were recorded in Section 6. In Section 4, snipe favoured the areas around the fields to the north east.

Water Rail

- 3.2.129 The BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of 21 birds during the winter, eight during the autumn passage period and two during the spring passage period within the Estuary.
- 3.2.130 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of one bird during the winter. BTO low tide count data (2008/09) provided a winter maximum of nine water rail.
- 3.2.131 During the 2014/15 vantage point surveys, no water rail were recorded on the River Ebbw. Two water rail were recorded on the River Usk during the January survey.
- 3.2.132 During the 2014/15 transect surveys, water rail were recorded during the September to January surveys. A peak count of three birds was recorded during the December survey in Section 3. Water rail were recorded in Sections 2, 3, 4 and 6. The majority of sightings of water rail were within Section 3, where the birds appeared to prefer the fields to the west of the Section and south of the TATA Steel site (Figure 8.3 to 8.5).

Little Egret

- 3.2.133 The BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of 56 birds during the winter, 130 during the autumn passage period and 58 during the spring passage period within the Estuary.
- 3.2.134 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of 24 birds. BTO low tide count data (2008/09) provided a winter maximum of 46 little egret (*Egretta garzetta*).
- 3.2.135 During the 2014/15 vantage point surveys, little egrets were observed during September, October, November, December and January surveys, with a peak count of ten birds flying through on the River Ebbw (Figure 5.5). The flights were recorded at a number of heights ranging from 0m to 100m. The majority of sighting were birds commuting. During the vantage point hourly count surveys at the River Ebbw, a peak count of three little egrets was recorded during December (Appendix 4, Table 4.4).
- 3.2.136 Little egrets were recorded at the River Usk during September, November, December and March surveys, with a peak count of two birds (Figure 6.5). During the vantage point hourly count surveys, a peak count of two little egrets was recorded foraging on the banks of the river during the November and March surveys (Appendix 4, Table 4.11 & 4.15).
- 3.2.137 During the 2014/15 transect surveys, little egrets were recorded during all of the survey visits. A peak count of five birds were recorded during the January survey in Section 3. Little egrets were recorded in Sections 1, 3, 5, 6 and 7. The majority of sightings of little egret were within Section 6, with the majority of sightings being recorded within the fields to the east of the road that runs down the centre of the section (Figure 8).

Grey Heron

- 3.2.138 The BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of 50 birds during the winter, 62 during the autumn passage period and 26 during the spring passage period within the Estuary.
- 3.2.139 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of 14 birds. BTO low tide count data (2008/09) provided a winter maximum of 65 grey heron (*Ardea cinerea*).
- 3.2.140 During the 2014/15 vantage point surveys, grey herons were recorded at both river crossings. At the River Ebbw, grey heron were recorded during the September, October, December, January, February and March surveys, with a peak count of two birds (Figure 5.5). During the vantage point hourly count surveys a peak count of two birds was recorded during October and February (Appendix 4, Table 4.2 & 4.6).
- 3.2.141 At the River Usk, a peak count of two birds were recorded commuting through (Figure 6.5). The majority of the sightings of grey heron commuting were below 20m. During the vantage point hourly count surveys, a peak count of two grey heron were recorded foraging during November and December (Appendix 4, Table 4.11 & 4.12).
- 3.2.142 During the 2014/15 transect surveys, grey heron were recorded during the September to April surveys (inclusive). A peak count of ten birds were recorded during the January survey in Section 6. Grey heron were recorded in all Sections. Section 6 and 2 appeared to be favoured by grey heron. The grey heron recorded in Section 2 were mainly observed in the fields at the eastern end of the Section. Within Sections 3 and 6 grey heron were recorded throughout the Sections (Figure 8).

Moorhen

- 3.2.143 The BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of 320 birds during the winter, 287 during the autumn passage period and 146 during the spring passage period within the Estuary.
- 3.2.144 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of 21 birds. BTO low tide count data (2008/09) provided a winter maximum of 326 moorhen (*Gallinula*).
- 3.2.145 During the 2014/15 vantage point surveys of the river crossing locations, moorhen were recorded at both crossings. Moorhens were recorded in very small numbers with one bird recorded in October on the River Ebbw and two birds recorded on the River Usk during February and March. During the vantage point hourly count surveys on the River Usk, a peak count of two birds was recorded during the April survey (Appendix 4, Table 4.16) and on the River Ebbw a peak count of one was recorded during the October and April surveys (Appendix 4, Table 4.2 and 4.8).
- 3.2.146 During the 2014/15 transect surveys moorhen were recorded during the September to April surveys (inclusive). A peak count of 26 birds was recorded during the March survey in Section 2. Moorhen were recorded in all Sections. In Section 2, the moorhens appeared to favour the fields to the east of the warehouses which are to the west of the section. In Section 3, the moorhens that

were recorded throughout the ditch network and pond (Pond 1) to the south of the TATA Steel site (Figure 8.4).

Coot

- 3.2.147 The BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of 727 birds during the winter, 638 during the autumn passage period and 241 during the spring passage period within the Estuary.
- 3.2.148 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of nine birds. BTO low tide count data (2008/09) provided a winter maximum of 740 coot (*Fulica*).
- 3.2.149 During the 2014/15 vantage point surveys coot were only recorded at the River Usk. A single bird was recorded during the February and April surveys (Appendix 4, Tables 4.14 & 4.16).
- 3.2.150 During the 2014/15 transect surveys, coot were recorded during the October to December; and February, March and April surveys. A peak count of eight birds were recorded during the December survey in Section 5. Coot were recorded in Sections 3, 5, 6 and 7. The majority of birds were observed within Section 5, with most birds recorded foraging within the sludge beds. In Section 3, coot were recorded in pond (Pond 1) south of the TATA Steel site (Figure 8.4).

Cormorant

- 3.2.151 The BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of 89 birds during the winter, 95 during the autumn passage period and 73 during the spring passage period within the Estuary.
- 3.2.152 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of 12 birds. BTO low tide count data (2008/09) provided a winter maximum of 182 cormorant (*Phalacrocoracidae*).
- 3.2.153 During the 2014/15 vantage point survey cormorants were recorded on the River Usk and River Ebbw. On the River Ebbw cormorants were recorded from September to November and March surveys (Figure 5.9). Most were commuting at heights that ranged from 10 to 100m.
- 3.2.154 At the River Usk, cormorant were recorded commuting during the September, December, January and March surveys. (Figure 6.9). During the vantage point hourly count surveys on the River Usk, a peak count of two birds recorded during the March survey (Appendix 4, Table 4.15).
- 3.2.155 During the 2014/15 transect surveys cormorants were recorded during the September to January and March surveys. A peak count of six birds were recorded during the December survey in Section 3. Cormorants were recorded in Sections 2, 3, 4 and 5 (see Figure 8).

Little Grebe

- 3.2.156 The BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of 48 birds during the winter, 74 during the autumn passage period and 33 during the spring passage period within the Estuary.

- 3.2.157 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak counts of three birds. BTO low tide count data (2008/09) provided a winter maximum of 33 little grebe (*Tachybaptus ruficollis*).
- 3.2.158 No little grebe were recorded during the 2014/15 vantage point surveys of the river crossings.
- 3.2.159 During the 2014/15 transect surveys, little grebe were recorded during the October, November and February surveys. A peak count of one bird was recorded during the October, November and February survey in Sections 3, 4 and 5 (Figure 8).

Great Crested Grebe

- 3.2.160 The BTO WeBS data for 2008/9 to 2012/13 showed a mean peak count of 29 birds during the winter, 23 during the autumn passage period and 36 during the spring passage period within the Estuary.
- 3.2.161 Data obtained from the BTO for the Gwent Levels SSSI count sector provided a 5-year mean peak count of two birds during the winter. BTO low tide count data (2008/09) provided a winter maximum of 12 great crested grebe.
- 3.2.162 No great crested grebe (*Podiceps cristatus*) were recorded during the 2014/15 vantage point surveys of the river crossings.
- 3.2.163 During the 2014/15 transect surveys, great crested grebe were recorded during the March surveys. A peak count of four birds were recorded during the March survey in Section 3. Great crested grebe were recorded in Sections 2, 3 and 4. In Section 3, the great crested grebe favoured the wet ditches to the south of the TATA Steel site (Figure 8).

Gulls and Fulmar

- 3.2.164 Six gull species and a fulmar (*Fulmarus glacialis*) were recorded during the survey period. These comprised herring gull (*Larus argentatus*), black-headed gull (*Chroicocephalus ridibundus*), lesser black-backed gull, great black-backed gull (*Larus marinus*), common gull (*Larus canus*), yellow-legged gull (*Larus michahellis*), and Mediterranean gull. Herring gull, black-headed gull, and lesser black-backed gull were the mostly commonly recorded of the gull species, with large mixed flocks of these birds recorded during the vantage point surveys at the river crossings. The majority of the gull flight activity observed at the river crossings appeared to relate to birds moving to and from the nearby landfill site/recycling centre/docks area.
- 3.2.165 Herring gull were regularly recorded during the vantage point surveys at both river crossings and during the transect surveys. Flocks of up to 300 birds were observed flying along the river corridor at the River Ebbw and up to 16 birds along the River Usk. During the transect surveys, herring gull were recorded in all of the count Sections, with a peak count of 225 birds recorded in Section 7 in February.
- 3.2.166 Black-headed gull were also regularly recorded during the vantage point surveys at both river crossings and during the transect surveys. Flocks of up to 97 birds were observed flying along the river corridor at the River Ebbw and up to 128

birds along the River Usk. During the transect surveys, black-headed gull were recorded in all of the count Sections, with a peak count of 450 birds recorded in Section 3 in December and 450 birds recorded in Section 6 in January.

- 3.2.167 Lesser black-backed gull were recorded during the vantage point surveys at both river crossings and during the transect surveys. Flocks of up to 150 birds were observed flying along the river corridor at the River Ebbw and up to 13 birds along the River Usk. During the transect surveys, lesser black-backed gull were recorded in all of the count Sections, with a peak count of 50 birds recorded in Section 1 in March.
- 3.2.168 Great black-backed gull were only recorded during the vantage point surveys at the River Usk. Small groups of up to three birds were regularly recorded commuting along the river corridor.
- 3.2.169 Common gull were recorded during the vantage point surveys at the River Usk and the transect surveys. At the River Usk, single birds were recorded in November and February vantage point surveys. During the transect surveys, common gull were recorded in Sections 1, 2 and 3, with a peak count of 150 birds recorded in Section 3 in December.
- 3.2.170 Mediterranean gull were only recorded during the transect surveys. Mediterranean gull were recorded in Sections 2 and 3 during the April survey, with a peak count of 22 birds recorded in Section 2. Yellow-legged gull was recorded on one occasion during the February transect survey, the single bird was recorded in Section 2 of the Scheme.
- 3.2.171 Fulmar was recorded on one occasion during the transect surveys. The single bird was recorded flying through during the February survey in Section 7.

Schedule 1 Species

- 3.2.172 Fourteen species listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) were recorded during the 2014/15 survey period. Table 3, below provides a summary of the Schedule 1 species recorded. These are also shown on Figure 9.

Table 3: Schedule 1 species recorded during the 2014/15 bird surveys

Species	Description
Cetti's warbler	Cetti's warbler were regularly recorded throughout the survey period in all count Sections (except for Section 1) and during the vantage point surveys. A peak count of 25 birds were recorded during the April surveys transect surveys.
Fieldfare	Fieldfare were recorded throughout the survey period in all of the Sections during the transect surveys, a peak count of 90 birds was recorded in Section 4 during the March survey.
Redwing	Redwing were recorded throughout the survey period in all of the Sections during the transect surveys, a peak count of 278 birds was recorded in Section 6 during the December survey.
Black-tailed godwit	Recorded during the vantage point surveys (see Section 3.2.121 above).
Greenshank	Recorded during the transect surveys (see Section 3.2.110 above).

Species	Description
Ruff	Recorded during the vantage point surveys (see Section 3.2.97 above).
Green sandpiper	Recorded during the transect surveys (see Section 3.2.107 above).
Mediterranean gull	Recorded during the transect survey (see Section 3.2.171 above).
Marsh harrier	Marsh harrier were recorded on two occasions during the vantage point surveys of the River Ebbw. The first was in February (single bird) and the second was in April (single bird).
Kingfisher	Kingfisher were recorded in Sections 1, 3 and 7 during the transect surveys. Kingfisher were also recorded during the vantage point surveys at the River Usk and River Ebbw crossings. All sightings were of single birds, with the exception of two birds recorded in Section 1 during the December transect survey.
Merlin	A single merlin was recorded during the transect surveys in Section 4 during the March survey.
Peregrine falcon	Peregrine were recorded twice during the vantage point surveys of the river crossings. The first was in December on the River Usk, and the second was in January on the River Ebbw. Both observations were of single birds flying through.

Other Notable Bird Species

- 3.2.173 A number of other notable bird species of nature conservation importance (including a number of species listed on the Red List and Amber List of the Birds of Conservation Concern (Eaton *et al*/2009), and as priority species under Section 42 of the NERC Act 2006) were recorded during the transect surveys. Table 4, below provides a summary of the peak counts of the other notable species (including Schedule 1 species) recorded during the transect surveys. The Red Listed and Schedule 1 species are shown on Figures 9.1 to 9.7.
- 3.2.174 The results of all of the transect surveys are shown in Appendix 2. An inventory of all other species recorded during the transect surveys is also shown in Appendix 2.

Table 4: Peak count of species of nature conservation importance recorded during the 2014/15 transect surveys

Species recorded	Conservation status (see key)				Peak count per Section							
	Red List	Amber List	Sch. 1	Section 42	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	TATA Steel
Merlin			✓					1				
Kestrel (<i>Falco tinnunculus</i>)	✓				1	4	1	1	1	1	1	1
Mediterranean Gull			✓			22	2					
Black-headed Gull	✓			✓	40	11	450	80	220	450	39	
Great Black-backed Gull	✓								2			
Herring Gull	✓			✓	3	300	63	121	104	64	225	3
Common Gull		✓			142	90	150					
Lesser black-backed Gull		✓			50	33	25	40	7	7	25	
Woodcock (<i>Scolopax rusticola</i>)		✓				1						
Kingfisher			✓		2		1	1	1		1	1
Green Woodpecker (<i>Picus viridis</i>)		✓			1	2	1	2	1		1	
Goldcrest (<i>Regulus regulus</i>)		✓			12	2	1	1		1		
Marsh Tit (<i>Poecile palustris</i>)	✓			✓					1	1	6	2
Coal Tit (<i>Periparus ater</i>)		✓							1		1	
Long Tailed Tit (<i>Aegithalos caudatus</i>)		✓			1	19	13	12	1	2	15	1

Species recorded	Conservation status (see key)				Peak count per Section							
	Red List	Amber List	Sch. 1	Section 42	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	TATA Steel
Skylark (<i>Alauda arvensis</i>)		✓		✓	4	3				1	7	1
Swallow (<i>Hirundinidae</i>)		✓			5	3	4		1	250	1	
House Martin (<i>Delichon urbicum</i>)		✓					1				1	
Willow Warbler (<i>Phylloscopus trochilus</i>)	✓					1	1	7	1	2		1
Cetti's Warbler			✓			4	9	10	8	10	3	25
Garden Warbler (<i>Sylvia borin</i>)		✓					2	1				
Redstart (<i>Phoenicurus phoenicurus</i>)		✓						5				
Whitethroat (<i>Sylvia communis</i>)		✓			1	9		2	1			
Starling (<i>Sturnus vulgaris</i>)	✓			✓	225	313	1090	395	720	2650	192	
Fieldfare			✓		11	40	10	90	15	52	65	
Redwing			✓			238	141	135	29	278	56	
Song Thrush (<i>Turdus philomelos</i>)		✓		✓	4	19	5	3	4	4	12	2
Pied Flycatcher (<i>Ficedula hypoleuca</i>)	✓						2					
Wheatear (<i>Oenanthe pleschanka</i>)		✓						1		1	1	
Dunnoch (<i>Prunella modularis</i>)		✓		✓	14	20	9	6	10	11	8	6

Species recorded	Conservation status (see key)				Peak count per Section							
	Red List	Amber List	Sch. 1	Section 42	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	TATA Steel
House Sparrow (<i>Passer domesticus</i>)		✓		✓	52	31		13	16	80	26	
Meadow Pipit (<i>Anthus pratensis</i>)		✓			3	26	7	41	26	27	3	2
Bullfinch (<i>Pyrrhula pyrrhula</i>)	✓				2	5	8	7	3	5	6	2
Linnet (<i>Carduelis cannabina</i>)	✓				21	1	15	45	20	20	11	1
Lesser Redpoll (<i>Acanthis cabaret</i>)	✓			✓		5	1		1			
Yellowhammer (<i>Emberiza citrinella</i>)	✓			✓	1							1
Reed Bunting (<i>Emberiza schoeniclus</i>)		✓				8	4	2	35	6	9	7

Key

Red List: 'Red list' bird species within the RSPB '*Birds of Conservation Concern*'

Amber List: 'Amber list' bird species within the RSPB '*Birds of Conservation Concern*'

Sch. 1: Species afforded protection under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended)

NERC Act: Priority Species listed in Section 42 of The Natural Environment and Rural Communities (NERC) Act

4 Conclusion

- 4.1.1 The results of the transect and vantage point surveys showed that the area within and adjacent to the Scheme (including the two crossing locations on the River Ebbw and River Usk) provided suitable habitat for a range of over-wintering bird species.
- 4.1.2 During the transect surveys, small numbers of birds listed as qualifying species for the adjacent Severn Estuary SPA were recorded. The Severn Estuary SPA Annex 1 qualifying species recorded included curlew, pintail, redshank and shelduck. A peak count of 12 curlew were recorded during the February visit. The sightings were in fields within Sections 5 and 6, favouring the fields in the vicinity of the mouth of the River Ebbw. Pintail were only recorded in Section 3, with the birds recorded foraging and roosting in the water filled ditches and pond (Pond 1) to the south of the TATA Steel site. A peak count of 38 redshank were recorded during the transect survey. The sightings were predominately in Section 5, but birds were also observed in Section 6. The majority of the sightings were of birds on the banks of the River Ebbw, with a small number also recorded foraging in the sludge beds to the east of the River Usk. Shelduck were recorded in Sections 3 and 5, with a peak count of 13 birds in Section 5. The shelduck recorded in Section 3 appeared to favour the water filled ditches and pond (Pond 1) to the south of the TATA steel site.
- 4.1.3 Eight of the species listed on the Severn Estuary SPA assemblage qualification were also recorded in small numbers during the transect surveys; these included gadwall, wigeon, lapwing, teal, mallard, shoveler, pochard and tufted duck. These birds appeared to favour the areas adjacent to the River Ebbw and River Usk and the ditch network and pond (Pond 1) to the south of the TATA steel site.
- 4.1.4 The results of the vantage point surveys showed that the proposed river crossing locations at the River Ebbw and River Usk were used by a variety of species both flying through and using the edge of the rivers to forage and roost. The majority of the flight activity recorded throughout the survey period was below 20m. During the vantage point surveys, the Severn Estuary SPA Annex 1 qualifying species recorded included ringed plover, curlew, dunlin, redshank, and shelduck. All of these species were recorded at both river crossings, with the exception of shelduck (which were only recorded on the River Usk).
- 4.1.5 Redshank were the most frequently recorded Annex 1 species during the vantage point surveys. Redshank were recorded during all of the survey visits at both river crossings, with a peak count of 690 birds on the River Ebbw and 161 birds on the River Usk. On the River Ebbw, the birds were recorded foraging and roosting throughout the vantage point survey area, favouring the areas, just to the north and south of the crossing points. On the River Usk, the birds were also recorded foraging and roosting throughout the vantage point survey area, but appeared to favour the area just to the north of the crossing point. Curlew were the second most frequently recorded of the Annex 1 species. On the River Ebbw, a peak count of 125 curlew was recorded; however, smaller numbers of birds were more regularly observed foraging and roosting south of the proposed crossing point. On the River Usk, a peak count of 16 curlew was recorded, with the birds

appearing to favour the east bank of the River Usk (with birds recorded to the north and south of the crossing point on the east bank).

- 4.1.6 Small numbers of ringed plover, dunlin and shelduck were also recorded during the vantage point surveys. A peak count of one ringed plover was recorded on the River Ebbw and 18 ringed plover on the River Usk. A peak count of 12 dunlin were recorded flying through or foraging on the edge of the River Ebbw. On the River Usk, a peak count of 77 dunlin were recorded flying through or foraging/roosting to the north and south of the crossing location. On the River Usk, a peak count of four shelduck were recorded foraging on the east bank of the river.
- 4.1.7 Five of the species listed on the Severn Estuary SPA assemblage qualification were also recorded during the vantage point surveys, these included gadwall, wigeon, lapwing, teal, and mallard. On the River Usk, the birds were mainly recorded foraging and roosting on the area just to the north of the crossing point. On the River Ebbw, the birds appeared to favour the eastern bank of the river.
- 4.1.8 Twenty-four other waterfowl and wader species, not specifically listed as forming part of the Severn Estuary SPA assemblage on the SPA citation (but would also be considered to make up the waterfowl assemblage) were also recorded during the 2014/15 surveys.
- 4.1.9 Twelve species listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) were recorded during the 2014/15 survey period, this included cetti's warbler, fieldfare, redwing, black-tailed godwit, greenshank, ruff, green sandpiper, Mediterranean gull, marsh harrier, kingfisher, merlin and peregrine falcon. All of these species were recorded in small numbers, with the exception of fieldfare and redwing which were observed throughout the survey period, with a peak count of 90 fieldfare and 278 redwing recorded during the transect surveys.
- 4.1.10 Finally, the surveys identified that the land within and adjacent to the Scheme supported a suite of overwintering farmland and other notable bird species of nature conservation importance (including a number of species listed on the Red List and Amber List of the Birds of Conservation Concern (Eaton *et al* 2009), and as priority species under Section 42 of the NERC Act 2006) throughout the winter period.

5 References

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Ove Arup and Partners Ltd. (2013). M4 Corridor around Newport, WelTAG Appraisal Report Stage 1 (Strategy Level). Cardiff: Welsh Government.

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Appendix 1: Weather Conditions and Survey Timings

Table 1.1 – Vantage Point Weather Data

Survey Month	VP	Survey date	High tide	Low tide	Time	Weather conditions
Sep-14	Ebbw	26/09/14	08:10	14:50	08:10-15:10	Cloudy, slight breeze, dry, 18°C
	Usk	26/09/14	08:10	14:10	08:10-15:10	Cloudy, slight breeze, dry, 15°C
Oct-14	Ebbw	31/10/14	12:00	18:06	10:00-16:30	Cloudy, slight breeze, dry, 17°C
	Usk	31/10/14	12:00	18:06	10:00-16:00	Partly Cloudy, no breeze, dry, 14°C
Nov-14	Ebbw	19/11/14	16:46	10:43	10:43-17:46	Cloudy, light breeze, dry, 11°C
	Usk	19/11/14	16:40	10:40	10:40-17:40	Cloudy, gentle breeze, dry 11°C
Dec-14	Ebbw	09/12/14	08:36	15:15	08:30-14:30	Overcast, gentle breeze, dry, 5°C
	Usk	09/12/14	08:36	15:15	08:36-14:36	Overcast, light breeze , very light drizzle, 4.5°C
Jan-15	Ebbw	17/01/15	16:20	10:21	10:20-17:20	Partly cloudy, calm, dry 9°C
	Usk	17/01/15	16:20	10:21	11:35-16:45	Fine, light breeze, dry, 5°C
Feb-15	Ebbw	21/20/15	08:50	15:35	08:50-15:35	Fine, light breeze, dry, 4°C
	Usk	21/02/15	08:50	15:35	08:50-14:50	Fine, Gentle Breeze, dry, 2°C
Mar-15	Ebbw	19/03/15	18:36	12:51	12:51-18:35	Clear, light breeze, dry, 10.5°C
	Usk	19/03/15	18:36	12:51	12:51-18:36	Clear, light breeze, dry, 9°C
Apr-15	Ebbw	17/04/15	06:40	13:40	06:40-12:40	Cloudy, light breeze, dry, 9°C
	Usk	17/04/15	06:40	13:40	07:45-12:45	Cloudy, light breeze, dry, 7°C

Table 1.2 – Transect Weather Data

Survey Month	Survey date	High tide	Time	Weather conditions
Sep-14	27/09/14	09:47	07:35 – 15:00	Overcast, no wind, dry, 20°C
Oct-14	29/10/14	10:16	07:40 – 14:00	Overcast, slight breeze, intermittent drizzle, 12°C - 15°C
Nov-14	28/11/14	10:58	07:50 – 13:20	Overcast, slight breeze, dry, 11°C
Dec-14	15/12/14	12:32	09:20 – 12:30	Fine, Slight breeze, 3°C
Jan-15	26/01/15	11:17	08:15 – 14:45	Partly cloudy, Gentle Breeze, 8.5°C
Feb-15	23/02/15	10:14	07:10 – 14:00	Overcast, slight breeze, rain for 75% of survey, 2°C to 3°C
Mar-15	23/03/15	09:13	07:00 – 12:00	Cloudy, light breeze, dry, 4°C to 9°C
Apr-15	20/04/15	09:10	06:30 – 11:30	Fine, light air, dry, 3°C to 13°C

Appendix 2: Transect Survey Results

[See Figures 7, 8 and 9]

Table 2.1: Transect survey results – SPA and other notable species (September)

Species Code	Species	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7
Sever Estuary SPA Annex 1 Species (Figure 7)								
CU	Curlew						5	
Assemblage Species (Figure 8)								
MS	Mute Swan		11	6		69		
WN	Wigeon					1		
GA	Gadwall			15				
T	Teal			50				
MA	Mallard		12	5		7		1
TU	Tufted Duck					3		
CA	Cormorant			1		2		
ET	Little Egret					1		
H	Grey Heron		2			2	3	2
WA	Water Rail			2				
MH	Moorhen		17	13				3
L	Lapwing						3	
CS	Common Sandpiper							1
SN	Snipe						1	
Schedule 1 species (Figure 9)								
BH	Black-headed gull					73		20
MT	Marsh tit						1	
CW	Cetti's Warbler		4	9	1		5	1
Red list species (Figure 9)								
K	Kestrel	1	1				1	
HG	Herring Gull			35		8	2	189
WW	Willow Warbler						2	
SG	Starling	1	10			42	16	192
LI	Linnet	21					1	
BF	Bullfinch		1	2				1
Amber list species								
LB	Lesser Blacked-backed Gull	6	2	7				
G	Green Woodpecker		1					
S	Skylark		3					4
SL	Swallow	1	1				250	
LT	Long Tailed Tit		19					
ST	Song Thrush	3	1					
D	Duncock	3	3			2	1	3
HS	House Sparrow		2			2	3	2
MP	Meadow Pipit	3	26	1		1		2
RB	Reed Bunting		5					

Table 2.2: Transect survey results – other species (September)

Species Code	Species	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7
BZ	Buzzard	✓	✓					✓
WP	Wood Pigeon	✓						✓
CD	Collared Dove	✓					✓	
GS	Great Spotted Woodpecker	✓						✓
MG	Magpie	✓						✓
J	Jay	✓	✓					✓
JD	Jackdaw	✓						✓
RO	Rook		✓					
C	Carrion Crow	✓	✓				✓	✓
RN	Raven	✓					✓	✓
GC	Goldcrest		✓					
BT	Blue Tit	✓	✓					
GT	Great Tit	✓	✓					✓
HM	House Martin		✓					
CC	Chiffchaff	✓	✓				✓	
BC	Blackcap		✓					
WH	Whitethroat	✓						
TC	Treecreeper		✓					
WR	Wren	✓	✓					✓
BB	Blackbird	✓	✓					✓
M	Mistle Thrush	✓	✓					
R	Robin	✓	✓					✓
W	Wheatear					✓		
GL	Grey Wagtail	✓	✓				✓	
PW	Pied Wagtail	✓	✓					✓
MP	Meadow Pipit							✓
CH	Chaffinch	✓	✓					✓
GO	Goldfinch	✓	✓			✓		

Table 2.3: Transect survey results – SPA and other notable species (October)

Species Code	Species	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7
Severn Estuary SPA Annex 1 Species (Figure 7)								
CU	Curlew						1	
RK	Redshank					2		
Assemblage Species (Figure 8)								
MS	Mute Swan		66	5	3		2	
CG	Canada Goose		8					
GA	Gadwall			33				
T	Teal			13	20			
MA	Mallard		26	40	35	7		
CA	Cormorant			2		1		
ET	Little Egret					3	2	
H	Grey Heron		7	1	2	1	1	1
LG	Little Grebe			1	1			
WA	Water Rail				1			
MH	Moorhen	2	15	22	13			
CO	Coot			3				
SN	Snipe			1	50			
Schedule 1 Species (Figure 9)								
CW	Cetti's Warbler		3		10	2	1	1
FF	Fieldfare		10	10	17			
RE	Redwing		128	141	107	9		56
Red list species (Figure 9)								
K	Kestrel		4	1	1			
MT	Marsh Tit							1
BH	Black-headed Gull		1			21	4	
HG	Herring Gull	3	4	4	3	42	1	
SG	Starling	194	3		80	720	2650	
PW	Pied Flycatcher			2				
LI	Linnet	8			45	17		
LR	Lesser Redpoll			1				
BF	Bullfinch		5	8		3		2
Amber list species								
CM	Common Gull		30					
LB	Lesser Black-backed Gull		5			4		
KF	Kingfisher			1				1
G	Green Woodpecker		2					
GC	Goldcrest		12					
S	Skylark		1					3
SL	Swallow					1	1	
LT	Long Tailed Tit		11	1	9	1	1	
ST	Song Thrush	2	19	4		1		
D	Dunnock	8		9		3	1	
HS	House Sparrow	24			12		80	25
MP	Meadow Pipit	1	11	7	4		7	
RB	Reed Bunting			1	2		5	

Table 2.4: Transect Survey Results – other species (October)

Species Code	Species	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7
PH	Pheasant		✓	✓		✓		
SH	Sparrowhawk	✓	✓	✓			✓	
BZ	Buzzard	✓	✓	✓	✓	✓	✓	
WP	Wood Pigeon	✓	✓	✓	✓	✓	✓	
CD	Collared Dove	✓					✓	
GS	Great Spotted Woodpecker	✓		✓				
MG	Magpie	✓	✓	✓	✓	✓	✓	
J	Jay		✓			✓	✓	
JD	Jackdaw	✓	✓	✓		✓	✓	
RO	Rook	✓						
CC	Carrion Crow	✓	✓	✓	✓	✓		
RN	Raven				✓			
BT	Blue Tit	✓	✓	✓	✓	✓	✓	
GT	Great Tit	✓	✓	✓	✓	✓		
SL	Swallow					✓	✓	
CC	Chiffchaff		✓	✓				
TC	Treecreeper		✓	✓				
WR	Wren	✓	✓	✓	✓	✓	✓	
BB	Blackbird	✓	✓	✓	✓	✓	✓	
M	Mistle Thrush		✓	✓	✓	✓		
R	Robin	✓	✓	✓	✓	✓	✓	
SC	Stonechat		✓			✓		
GL	Grey Wagtail				✓		✓	
PW	Pied Wagtail	✓	✓	✓	✓		✓	
CH	Chaffinch	✓	✓	✓		✓		
GR	Greenfinch					✓	✓	
GO	Goldfinch	✓	✓	✓	✓	✓	✓	
SK	Siskin		✓					

Table 2.5: Transect survey results – SPA and other notable species (November)

Species Code	Species	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7
Severn Estuary SPA Annex 1 Species (Figure 7)								
CU	Curlew						1	
RK	Redshank					20		
Assemblage Species (Figure 8)								
MS	Mute Swan		13		2	4	30	
GJ	Greylag Goose				1			
CG	Canada Goose							6
GA	Gadwall			7	2			
T	Teal		15	30	2	26		
MA	Mallard	1	46	27	16	3	55	
CA	Cormorant			1				
ET	Little Egret						2	
H	Grey Heron	1	6	2			7	1
LG	Little Grebe					1		
WA	Water Rail			1	1			
MH	Moorhen		21	18		1		3
CO	Coot							1
SN	Snipe						6	
Schedule 1 species (Figure 9)								
GE	Green Sandpiper						1	
CW	Cetti's Warbler			1	4	2	2	3
FF	Fieldfare		40	9	41	15	1	
RE	Redwing		227	16	48	5	75	31
Red list species (Figure 9)								
K	Kestrel	1		1				
BH	Black-headed gull	40	11			220	30	22
HG	Herring Gull		15	2	10	17	28	85
MT	Marsh Tit							6
SG	Starling	225	313	1090	395	572	2560	
LI	Linnet			15				
BF	Bullfinch		2	2			2	3
Amber list species								
CM	Common Gull		25					
G	Green Woodpecker		1					
CT	Coal Tit							1
LT	Long Tailed Tit			1	1	1	1	
ST	Song Thrush	1	4	1			1	4
D	Dunnock		4	2	1			8
HS	House Sparrow	4	3		1		27	2
MP	Meadow Pipit		15	2	1	1	2	
RB	Reed Bunting		1				5	

Table 2.6: Transect survey results – other species (November)

Species Code	Species	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7
PH	Pheasant			✓				
SH	Sparrowhawk			✓			✓	
BZ	Buzzard	✓	✓	✓	✓	✓	✓	✓
WP	Wood Pigeon	✓	✓	✓		✓		
CD	Collard Dove	✓	✓				✓	
LO	Little Owl						✓	
GS	Great Spotted Woodpecker		✓					
MG	Magpie	✓	✓	✓	✓	✓		
J	Jay					✓		
JD	Jackdaw	✓	✓		✓	✓		
RO	Rook	✓		✓				
CC	Carrion Crow	✓	✓	✓	✓	✓	✓	✓
RN	Raven	✓			✓			✓
BT	Blue Tit	✓	✓	✓	✓	✓		
GT	Great Tit	✓	✓	✓		✓		
CC	Chiffchaff		✓					
BC	Blackcap							✓
TC	Treecreeper		✓	✓				
WR	Wren		✓	✓	✓	✓		✓
BB	Blackbird	✓	✓	✓	✓	✓		
M	Mistle Thrush		✓	✓				✓
R	Robin	✓	✓	✓	✓	✓	✓	✓
N	Nightingale						✓	
SC	Stonechat		✓	✓			✓	
GL	Grey Wagtail		✓	✓	✓		✓	
PW	Pied Wagtail	✓	✓	✓		✓	✓	
CH	Chaffinch	✓	✓	✓	✓	✓		
GR	Greenfinch			✓	✓			
GO	Goldfinch	✓		✓	✓	✓		

Table 2.7: Transect survey results – SPA and other notable species (December)

Species Code	Species	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	Tata Steel
Severn Estuary SPA Annex 1 Species (Figure 7)									
PT	Pintail								2
CU	Curlew				6	1	1		
RK	Redshank					34			
Assemblage Species (Figure 8)									
MS	Mute Swan		18	5	2	44	1		8
WN	Wigeon								25
GA	Gadwall			26	2				
T	Teal		10	102	4	24			25
MA	Mallard	4	4	15	19	47	22	2	2
SV	Shoveler			6					
TU	Tufted Duck					9			
CA	Cormorant			2	1				6
ET	Little Egret					1	2		
H	Grey Heron		4	1		1	4	3	1
WA	Water Rail		1	3			1		
MH	Moorhen				7	1	1	3	2
CO	Coot					8	2	1	
L	Lapwing					30			
JS	Jack Snipe						1		
SN	Snipe		32		3	1	3		
Schedule 1 species (Figures 9)									
GE	Green Sandpiper		1				1		
KF	Kingfisher	2							
CW	Cetti's Warbler			2		2			
FF	Fieldfare		2	42	58		51	21	
RE	Redwing	20	30	110	75	20	278	14	
Red list species (Figures 9)									
K	Kestrel			1	1			1	
BH	Black-headed gull	21		450		59		39	
HG	Herring Gull		1	1	3	104	1	3	
SG	Starling	177	206	323	255	261	2606	143	
LI	Linnet		1			20		11	
LR	Lesser Redpoll					1			
BF	Bullfinch		6	6	7	2	5	1	
Y	Yellowhammer	1							
Amber list species									
CM	Common Gull		1	150					
G	Green Woodpecker			1	1	1			
GC	Goldcrest		1	2	1			1	
CT	Coal Tit							1	
LT	Long Tailed Tit	1	1	7	1	1	1	1	1
ST	Song Thrush	1	2	5	3	1	1	1	

Species Code	Species	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	Tata Steel
D	Dunnock	3	15	3	2	5	1	5	
HS	House Sparrow	25	6		3		20	13	
MP	Meadow Pipit		1	5	3	1	6	1	1
RB	Reed Bunting			4		35	1		7

Table 2.8: Transect survey results – other species (December)

Species code	Species	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	Tata Steel
PH	Pheasant		✓	✓	✓	✓			
SH	Sparrowhawk	✓							
BZ	Buzzard	✓	✓	✓	✓	✓	✓	✓	
SD	Stock Dove						✓		
WP	Wood Pigeon	✓	✓	✓	✓	✓		✓	✓
CD	Collared Dove	✓	✓			✓	✓	✓	
LO	Little Owl						✓		
GS	Great Spotted Woodpecker		✓	✓	✓	✓	✓	✓	✓
MG	Magpie	✓	✓	✓	✓	✓	✓	✓	✓
J	Jay			✓		✓	✓	✓	
JD	Jackdaw		✓	✓	✓	✓	✓	✓	
RO	Rook	✓	✓					✓	
CC	Carrion Crow		✓	✓	✓	✓	✓	✓	
BT	Blue Tit	✓	✓	✓	✓	✓	✓	✓	✓
GT	Great Tit	✓	✓	✓	✓	✓	✓	✓	✓
CC	Chiffchaff		✓	✓				✓	
BC	Blackcap					✓			
NH	Nuthatch							✓	
WR	Wren	✓	✓	✓	✓	✓	✓	✓	✓
BB	Blackbird	✓	✓	✓	✓	✓	✓	✓	✓
M	Mistle Thrush		✓	✓	✓	✓	✓	✓	
R	Robin	✓	✓	✓	✓	✓	✓	✓	✓
WC	Whinchat					✓			
SC	Stonechat		✓	✓		✓	✓		
GL	Grey Wagtail					✓	✓	✓	
PW	Pied Wagtail	✓	✓	✓	✓	✓	✓	✓	
CH	Chaffinch		✓		✓	✓	✓	✓	✓
GR	Greenfinch		✓	✓				✓	✓
GO	Goldfinch	✓	✓	✓		✓		✓	✓

Table 2.9: Transect survey results – SPA and other notable species (January)

Species Code	Species	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	Tata Steel
Severn Estuary SPA Annex 1 species (Figure 7)									
CU	Curlew					1	1		

Species Code	Species	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	Tata Steel
RK	Redshank					30			
Assemblage Species (Figure 8)									
AS	Black Swan						1		
MS	Mute Swan		17	1		13	86	4	3
TU	Tufted Duck					7			
T	Teal		10			25	9		
SV	Shoveler								2
PO	Pochard								28
MA	Mallard	2	21	2	15	10	35	11	21
CA	Cormorant					1			1
ET	Little Egret						5	1	
H	Grey Heron		3	1		1	10	4	
WA	Water Rail		1						
MH	Moorhen	1	22			1	1	6	6
L	Lapwing						1		
SN	Snipe				2		19		3
Schedule 1 species (Figure 9)									
KF	Kingfisher					1			
CW	Cetti's Warbler		1				1		
FF	Fieldfare		2		4	2	52	60	
RE	Redwing		148	20	116	29	126	26	
Red list species (Figure 9)									
K	Kestrel			1		1		1	
BH	Black-headed gull		7			4	450	1	
HG	Herring Gull		43	1		26	4	144	
SG	starling	90	20		39	68	813	56	
LI	Linnet					16	10		
BF	Bullfinch	2	5	4	4	2	5	5	2
Amber list species									
CM	Common Gull	142							
LB	Lesser Black-backed Gull							1	
G	Green woodpecker		2		1			1	
GC	Goldcrest							1	
CT	Coal Tit							1	
S	Skylark		1					1	
LT	Long Tailed Tit	1	1		1	1	1	3	1
ST	Song Thrush	2	9			4	4	12	2
D	Dunnock	3	6		1	8	2	2	
HS	House Sparrow	45	11		4		32	26	
MP	Meadow Pipit		2	1	41	6	12	2	
RB	Reed Bunting		1				5	7	5

Table 2.10: Transect survey results – other species (January)

Species Code	Species	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	TATA Steel
PH	Pheasant		✓			✓			✓
SH	Sparrowhawk					✓	✓	✓	
BZ	Buzzard	✓	✓		✓	✓	✓	✓	✓
SD	Stock Dove					✓			
WP	Wood Pigeon	✓	✓			✓	✓	✓	✓
CD	Collared Dove		✓				✓	✓	
TO	Tawny Owl							✓	
GS	Great Spotted Woodpecker		✓			✓	✓	✓	
MG	Magpie	✓	✓		✓	✓	✓	✓	✓
J	Jay					✓	✓	✓	
JD	Jackdaw	✓	✓			✓		✓	
RO	Rook	✓		✓	✓				
CC	Carrion Crow	✓	✓		✓	✓		✓	✓
RN	Raven							✓	
BT	Blue Tit	✓	✓		✓	✓	✓	✓	✓
GT	Great Tit	✓	✓		✓	✓	✓	✓	✓
NH	Nuthatch							✓	
TC	Treecreeper						✓		
WR	Wren		✓		✓	✓	✓	✓	✓
BB	Blackbird	✓	✓		✓	✓	✓	✓	✓
M	Mistle Thrush	✓	✓				✓	✓	
R	Robin	✓	✓		✓	✓	✓	✓	✓
SC	Stonechat						✓		
W	Wheatear					✓			
PW	Pied Wagtail	✓	✓		✓	✓	✓	✓	✓
CH	Chaffinch	✓			✓	✓	✓	✓	✓
GR	Greenfinch							✓	
GO	Goldfinch	✓	✓		✓	✓	✓	✓	✓
SK	Siskin							✓	

Table 2.11: Transect survey results – SPA and other notable species (February)

Species Code	Species	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	Tata Steel
Severn Estuary SPA Annex 1 Species (Figure 7)									
SU	Shelduck					2			1
PN	Pintail								25
CU	Curlew					4	12		
RK	Redshank					9			
Assemblage Species (Figure 8)									
MS	Mute Swan		20	1		24	54		2
CG	Canada Goose		7		1			9	
WN	Wigeon					7			
T	Teal		42			20	4		14
MA	Mallard	5	37	6	11	36	60	24	21
SV	Shoveler		2			5			
TU	Tufted Duck					15			
F	Fulmar							1	
ET	Little Egret						4		
H	Grey Heron		5	1		1	1	3	2
LG	Little Grebe			1					
MH	Moorhen		10	1		2	1	4	4
CO	Coot					2			2
OC	Oystercatcher					3			
L	Lapwing	100	10			5	85	17	
SN	Snipe		2		7				2
Schedule 1 species (Figure 9)									
KF	Kingfisher					1			
CW	Cetti's Warbler						1		
FF	Fieldfare	11	1	1	1	7		65	
RE	Redwing	70	238	11	135	3	79	20	
Red list species (Figure 9)									
K	Kestrel		1			1			1
BH	Black-headed gull	12			80	8		4	
GB	Great Black-backed Gull					2			
HG	Herring Gull	1	300	3	121	11	13	225	
MT	Marsh tit								2
SG	starling	120	200		18	15	73	108	
LR	Lesser Redpoll		5						
BF	Bullfinch	2		4		1	3	6	
Amber list species									
CM	Common Gull	10	90						
LB	Lesser Blacked-backed Gull				40	7		14	
WK	Woodcock		1						
G	Green Woodpecker				1				
GC	Goldcrest					1		1	

Species Code	Species	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	Tata Steel
CT	Coal Tit					1		1	
LT	Long Tailed Tit		1	1		1		15	
ST	Song Thrush	3	6	3	1		1	8	
D	Dunnock	14	9	6	3	7	1	4	1
HS	House Sparrow	50	12		6	7	3	15	
MP	Meadow Pipit		5			26	27		
RB	Reed Bunting					2	2	9	3

Table 2.12: Transect survey results – other species (February)

Species Code	Species	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	TATA Steel
PH	Pheasant		✓	✓		✓			✓
SH	Sparrowhawk							✓	
BZ	Buzzard	✓	✓	✓	✓	✓	✓	✓	
YG	Yellow-legged Gull		✓						
SD	Stock Dove						✓		
WP	Wood Pigeon	✓	✓	✓	✓	✓	✓	✓	✓
CD	Collared Dove	✓					✓		
GS	Great Spotted Woodpecker				✓		✓	✓	
MG	Magpie	✓	✓	✓	✓	✓	✓	✓	✓
JD	Jackdaw	✓			✓	✓	✓	✓	✓
RO	Rook	✓				✓			
CC	Carrion Crow	✓	✓	✓	✓	✓	✓	✓	✓
RN	Raven							✓	
BT	Blue Tit	✓	✓	✓	✓	✓	✓	✓	✓
GT	Great Tit	✓	✓	✓	✓	✓	✓	✓	✓
CC	Chiffchaff						✓	✓	
NH	Nuthatch							✓	
TC	Treecreeper		✓	✓					
WR	Wren	✓	✓	✓	✓	✓	✓	✓	✓
BB	Blackbird	✓	✓	✓	✓	✓	✓	✓	✓
M	Mistle Thrush		✓					✓	
R	Robin	✓			✓	✓	✓	✓	✓
SC	Stonechat		✓	✓				✓	
GL	Grey Wagtail	✓			✓		✓		
PW	Pied Wagtail	✓	✓	✓	✓	✓	✓	✓	
CH	Chaffinch		✓	✓	✓	✓		✓	
GR	Greenfinch	✓				✓	✓	✓	
GO	Goldfinch	✓	✓	✓		✓	✓	✓	
SK	Siskin							✓	

Table 2.13: Transect survey results – SPA and other notable species (March)

Species Code	Species	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	Tata Steel
Severn Estuary SPA Annex 1 species (Figure 7)									
SU	Shelduck					2			6
PN	Pintail								2
CU	Curlew					1			
RK	Redshank					38	2		
Assemblage Species (Figure 8)									
MS	Mute Swan		5	6		6	42		4
GJ	Greylag Goose				5	3			
CG	Canada Goose		9		2		16		
WN	Wigeon					2			2
T	Teal		11			15			32
MA	Mallard	6	41	14	20	30	46	3	20
TU	Tufted Duck					11			10
CA	Cormorant		2	1					
ET	Little Egret	1							3
H	Grey Heron		5	3			1		2
CG	Great Crested Grebe		2		2				4
MH	Moorhen		26	4	2	1			4
CO	Coot			2		3			1
OC	Oystercatcher					4			
L	Lapwing	5				4	31		1
BA	Bar-tailed Godwit					4			
SN	Snipe		1		2	1	43		
Schedule 1 species (Figure 9)									
ML	Merlin				1				
CW	Cetti's Warbler		1		3	4	10		9
FF	Fieldfare			7	90				
RE	Redwing		2	20	49	10	7		
Red list species (Figure 9)									
K	Kestrel			1			1		
BH	Black Headed Gull		6			5			
HG	Herring Gull	1	14	32	66		64	102	
MT	Marsh Tit					1			
SG	starling	50	7	7	145	18	147	2	
LI	Linnet			1	1	12	2	2	1
BF	Bullfinch		3	1			1		2
YH	Yellowhammer								1
Amber list species									
CM	Common Gull	40							
LB	Lesser Blacked-backed Gull	50	33	4	20		7		
G	Green Woopecker	1		1	2				
S	Skylark	1					1	4	1
LT	Long Tailed Tit		16	10					

Species Code	Species	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	Tata Steel
ST	Song Thrush	2	2			2	1	6	2
D	Dunnock	11	20	2	6	10	2	3	3
HS	House Sparrow	29	31		2	16	20	19	
MP	Meadow Pipit		3		1		9	3	
RB	Reed Bunting		3				4		

Table 2.14: Transect survey results –other species (March)

Species code	Species	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	TATA Steel
PH	Pheasant		✓	✓		✓		✓	✓
BZ	Buzzard	✓	✓	✓		✓	✓	✓	✓
SD	Stock Dove		✓				✓		
WP	Wood Pigeon	✓	✓	✓	✓	✓	✓	✓	✓
CD	Collared Dove	✓	✓			✓	✓		✓
GS	Great Spotted Woodpecker	✓	✓			✓	✓		
MG	Magpie	✓	✓	✓	✓	✓	✓	✓	✓
J	Jay			✓		✓	✓		
JD	Jackdaw	✓		✓	✓	✓	✓		✓
RO	Rook	✓	✓	✓		✓			✓
CC	Carrion Crow	✓	✓	✓	✓	✓	✓	✓	✓
RN	Raven				✓				
GC	Goldcrest	✓							
BT	Blue Tit	✓	✓	✓	✓	✓	✓	✓	✓
GT	Great Tit	✓	✓	✓	✓	✓	✓	✓	✓
CT	Coal Tit							✓	
LT	Long Tailed Tit					✓			
CC	Chiffchaff	✓	✓	✓	✓	✓	✓	✓	✓
BC	Blackcap						✓		
NH	Nuthatch	✓							✓
TC	Treecreeper		✓				✓		
WR	Wren	✓	✓	✓	✓	✓	✓		✓
BB	Blackbird	✓	✓	✓	✓	✓		✓	✓
M	Mistle Thrush		✓			✓	✓		
R	Robin	✓	✓	✓	✓	✓	✓		✓
PW	Pied Wagtail	✓	✓	✓	✓	✓	✓	✓	
CH	Chaffinch	✓	✓	✓	✓	✓	✓		✓
GR	Greenfinch		✓	✓		✓	✓		
GO	Goldfinch	✓	✓	✓	✓	✓	✓		✓

Table 2.15: Transect survey results – SPA and other notable species (April)

Species code	Species	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	Tata Steel
Severn Estuary SPA Annex 1 species (Figure 7)									
SU	Shelduck					13	2		4

Species code	Species	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	Tata Steel
RK	Redshank					12			
Assemblage Species (Figure 8)									
MS	Mute Swan		11		6	32		4	4
CG	Canada Goose		2	2			1		2
T	Teal								7
MA	Mallard	7	15	23	7	20	34	3	29
TU	Tufted Duck					6			6
CA	Cormorant					4			
ET	Little Egret		1						
H	Grey Heron		1	2					
LG	Little Grebe					1			
MH	Moorhen	1	12	6	1	1	4		2
CO	Coot			4				1	
OC	Oystercatcher		1			3			
L	Lapwing			21		7	47		
SN	Snipe						12		
Schedule 1 species (Figure 9)									
MU	Mediterranean Gull		22	2					
GK	Greenshank			1					
KF	Kingfisher				1				1
CW	Cetti's Warbler		4		5	8	9	2	25
Red list species (Figure 9)									
K	Kestrel		1	1					
BH	Black Headed Gull					7			
HG	Herring Gull		2	63	3	4	1	61	3
WW	Willow Warbler		1	1	7	1			1
SG	starling	37		7	2	1	29	41	
LI	Linnet	6		6	3	4	20	6	
BF	Bullfinch	2	4		1	3	1		
Amber list species									
LB	Lesser Blacked-backed Gull			25	1	4	3	25	
G	Green Woodpecker		1	1					
S	Skylark	4						7	
SL	Swallow	5	3	4			13	1	
HM	House Martin			1				1	
LT	Long Tailed Tit	1	1	13	12		2	3	
GW	Garden Warbler			2	1				
WH	Whitethroat	1	9		2		2		
ST	Song Thrush	4	5	1	2	2	1	2	1
RT	Redstart				5				
W	Wheatear				1		1	1	
D	Duncock	11	12	4	6	9	11	8	6
HS	House Sparrow	52	23		13		49	13	
MP	Meadow Pipit		1			2	1		2

Species code	Species	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	Tata Steel
RB	Reed Bunting		8				6	1	2

Table 2.16: Transect survey results – other species (April)

Species code	Species	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	TATA Steel
PH	Pheasant		✓	✓	✓				
SH	Sparrowhawk			✓			✓		
BZ	Buzzard		✓	✓	✓	✓	✓		✓
SD	Stock Dove						✓		
WP	Wood Pigeon	✓	✓	✓	✓	✓	✓		✓
CD	Collared Dove	✓	✓				✓		
GS	Great Spotted Woodpecker		✓			✓			
MG	Magpie	✓	✓	✓	✓	✓	✓		✓
J	Jay		✓	✓	✓	✓	✓		✓
JD	Jackdaw	✓	✓	✓	✓	✓	✓		✓
RO	Rook			✓					
CC	Carriion Crow	✓	✓	✓	✓	✓	✓	✓	✓
GC	Goldcrest			✓	✓		✓		
BT	Blue Tit	✓	✓	✓	✓	✓	✓	✓	✓
GT	Great Tit	✓	✓	✓	✓	✓	✓	✓	✓
CT	Coal Tit			✓				✓	✓
CC	Chiffchaff	✓	✓	✓	✓	✓	✓		✓
BC	Blackcap		✓	✓	✓	✓	✓	✓	✓
LW	Lesser Whitethroat		✓	✓	✓				
SW	Sedge Warbler		✓				✓		
NH	Nuthatch						✓	✓	
TC	Treecreeper		✓			✓			
WR	Wren	✓	✓	✓	✓	✓	✓	✓	✓
BB	Blackbird	✓	✓	✓	✓	✓	✓	✓	✓
M	Mistle Thrush		✓		✓				
R	Robin	✓	✓	✓	✓	✓	✓	✓	✓
WC	Whinchat				✓				
GL	Grey Wagtail			✓					
PW	Pied Wagtail	✓			✓		✓		
CH	Chaffinch	✓	✓	✓	✓	✓	✓		✓
GR	Greenfinch	✓	✓		✓	✓	✓	✓	✓
GO	Goldfinch		✓	✓	✓	✓	✓	✓	✓

Appendix 3: Vantage Point Surveys (Flight Lines)

[See Figures 5 and 6]

Table 3.1: Flight Line Results - Curlew

Date	River	Target Note	Number of birds	Time	Observation	Average Flight Height (m)
September	Ebbw	1A	1	09:02	Calling (not seen)	
September	Ebbw	1B	2	11:55	Commuting/Landed (presumed to forage)	<20
September	Ebbw	1C	1	12:05	Commuting	<20
September	Ebbw	1D	1	12:25	Foraging	
September	Ebbw	1E	1	15:05	Commuting and Landing	<20
September	Usk	1F	1	10:30	Commuting	<20
September	Usk	1G	1	10:40	Commuting	<20
September	Usk	1H	1	11:45	Commuting	<20
September	Usk	1I	2	12:45	Feeding	<20
September	Usk	1J	2	13:25	Commuting	<20
November	Usk	3A	2	12:52	Commuting	<20
November	Usk	3B	1	12:00	Commuting	<20
November	Usk	3C	1	12:00	Commuting	<20
November	Usk	3D	1	12:20	Commuting	<20
December	Usk	4A	3	10:26	Commuting	<20
December	Usk	4B	1	11:09	Commuting	<20
February	Usk	6A	1	10:44	Commuting	<20
February	Usk	6B	2	10:45	Commuting	<20
March	Usk	7A	2	13:11	Commuting	<20
March	Usk	7B	1	14:30	Commuting	
April	Ebbw	8A	1	12:20	Commuting	<20
April	Ebbw	8B	2	11:06	Commuting	<20

Table 3.2: Flight Line Results - Dunlin

Date	River	Target Note	Number of birds	Time	Observation	Average Flight Height (m)
October	Usk	2A	2	12:42	Commuting	<20
December	Usk	4A	26	11:06	Commuting	<20
February	Ebbw	6A	1	10:58	Commuting	<20
March	Usk	7A	21	13:20	Commuting	<20
March	Usk	7B	21	14:30	Commuting	<20

Table 3.3: Flight Line Results – Lapwing

Date	River	Target Note	Species	Number of birds	Time	Observation	Average Flight Height (m)
November	Usk	3B	Lapwing	30	13:30	Commuting	<20
November	Usk	3C	Lapwing	6	12:35	Commuting	<20
November	Ebbw	3D	Lapwing	43	16:10	Commuting	<20
February	Ebbw	6A	Lapwing	1	10:10	Commuting	20-100
April	Ebbw	8A	Lapwing	6	10:52	Commuting	<20
April	Ebbw	8B	Lapwing	4	10:55	Commuting	<20

Table 3.4: Flight Line Results - Shelduck

Date	River	Target Note	Number of birds	Time	Observation	Average Flight Height (m)
October	Usk	2A	1	16:32	Commuting/Feeding	<20
March	Usk	7A	2	13:52	Commuting	20-100
April	Ebbw	8A	2	08:15	Commuting	<20
April	Ebbw	8B	2	09:24	Commuting	<20

Table 3.5 Flight Line Results – Little Egret and Grey heron

Date	River	Target Note	Species	Number of birds	Time	Observation	Average Flight Height (m)
September	Ebbw	1A	Little Egret	2	11:04	Commuting	<20
September	Ebbw	1B	Little Egret	1	11:25	Commuting	<20
September	Ebbw	1C	Little Egret	2	12:20	Commuting	<20
September	Ebbw	1D	Little Egret	1	12:44	Commuting	<20
September	Ebbw	1E	Little Egret	1	13:50	Loafing/ Commuting	
September	Ebbw	1F	Little Egret	3	14:08	Foraging	
September	Ebbw	1G	Little Egret	10	14:27	Loafing and Feeding	
September	Usk	1H	Grey Heron	1	10:45	Commuting	<20
September	Usk	1I	Grey Heron	1	10:35	Commuting	<20
September	Ebbw	1J	Grey Heron	1	11:34	Commuting and landed	<20
September	Ebbw	1K	Grey Heron	1	12:52	Loafing/ Foraging	<20
September	Ebbw	1L	Grey Heron	1	13:27	Loafing/Feeding	
September	Ebbw	1M	Grey Heron	1	14:28	Loafing and Feeding	
September	Ebbw	1N	Grey Heron	1	14:32	Loafing and Feeding	
October	Usk	2A	Grey Heron	1	13:45	Commuting	<20
October	Usk	2B	Grey Heron	1	15:17		<20
October	Ebbw	2C	Grey Heron	1	10:17	Flushed Commuting	<20
October	Ebbw	2D	Grey Heron	1	15:56	Commuting	<20
November	Usk	3A	Little Egret	1	12:35	Commuting	20-100
November	Usk	3B	Little Egret	1	12:37	Commuting	20-100
November	Ebbw	3C	Little Egret	1	13:50	Commuting	20-100
November	Usk	3D	Grey Heron	2	13:00	Commuting	<20
December	Ebbw	4A	Little Egret	1	08:30	Commuting	<20
December	Ebbw	4B	Grey Heron	1	12:20	Commuting	20-100
January	Usk	5A	Grey Heron	1	13:35	Commuting	20-100
January	Usk	5B	Grey Heron	1	16:19	Commuting	<20
January	Ebbw	5C	Grey Heron	1	14:32	Commuting	20-100
January	Ebbw	5D	Grey Heron	1	11:32	Commuting	<20/20-100
March	Usk	7A	Little Egret	2	17:14	Commuting	20-100
March	Usk	7B	Grey Heron	1	15:21	Commuting	20-100
April	Ebbw	8A	Grey Heron	1	11:14	Commuting	20-100
April	Ebbw	8B	Grey Heron	1	11:45	Commuting	<20

Table 3.6 – Flight Line Results – Mute Swan and Canada Goose

Date	River	Target Note	Species	Number of birds	Time	Observation	Average Flight Height (m)
September	Ebbw	1A	Mute Swan	2	08:53	Commuting and Landing on the water	<20
September	Ebbw	1B	Mute Swan	1	09:40	Commuting	<20
September	Ebbw	1C	Mute Swan	4	09:47	Commuting	<20
September	Ebbw	1D	Mute Swan	2	10:09	Commuting	<20
September	Ebbw	1E	Mute Swan	1	10:44	Swimming	
September	Ebbw	1F	Mute Swan	1	11:02	Commuting	<20
September	Ebbw	1G	Mute Swan	1	13:25	Commuting	<20
September	Usk	1H	Mute Swan	1	09:10	Loafing	
October	Ebbw	2A	Mute Swan	5	10:19	Commuting	<20
October	Ebbw	2B	Mute Swan	2	10:21	Commuting	20-100
October	Ebbw	2C	Mute Swan	2	11:38	Commuting	<20
November	Usk	3A	Canada Goose	6	13:50	Commuting	20-100
November	Ebbw	3B	Mute Swan	2	13:40	Took Off/C	<20
December	Ebbw	4A	Mute Swan	6	15:05	Commuting	<20 20-100
February	Ebbw	6A	Mute Swan	3	10:13	Commuting and landed with flock	<20
March	Ebbw	7A	Canada Goose	2	17:05	Commuting	<20
March	Ebbw	7B	Mute Swan	4	18:46	Commuting	<20
March	Usk	7C	Mute Swan	1	16:04	Commuting	<20
April	Ebbw	8A	Mute Swan	6	09:40	Commuting	<20
April	Ebbw	8B	Mute Swan	2	10:15	Commuting	<20

Table 3.7 – Flight Line Maps – Teal and Wigeon

Date	River	Target Note	Species	Number of birds	Time	Observation	Average Flight Height (m)
October	Usk	2A	Teal	12	15:32	Commuting	<20/20-100
October	Ebbw	2B	Teal	2	10:15	Commuting	<20
December	Ebbw	4A	Teal	1	09:20	Commuting	<20
December	Ebbw	4B	Teal	1	09:30	Commuting	<20
December	Ebbw	4C	Teal	1	09:32	Commuting	<20
December	Ebbw	4D	Teal	2	09:40	Commuting	<20
December	Ebbw	4E	Teal	1	10:40	Commuting	<20
December	Ebbw	4F	Teal	3	11:27	Commuting	<20
December	Ebbw	4G	Teal	1	11:32	Commuting	<20
December	Ebbw	4H	Teal	5	13:30	Commuting	<20
December	Ebbw	4I	Teal	6	13:36	Commuting	<20
December	Ebbw	4J	Wigeon	1	13:30	Commuting	<20
January	Ebbw	5A	Teal	1	10:35	Commuting	<20
January	Ebbw	5B	Teal	27	10:56	Commuting	<20/20-100
January	Ebbw	5C	Teal	16	11:02	Commuting	<20
February	Ebbw	6A	Teal	6	10:46	Commuting	<20
February	Ebbw	6B	Teal	10	10:58	Commuting	<20

Date	River	Target Note	Species	Number of birds	Time	Observation	Average Flight Height (m)
February	Ebbw	6C	Teal	20	11:01	Commuting	<20
February	Ebbw	6D	Teal	1	11:47	Commuting	<20
March	Usk	7A	Teal	25	14:41	Commuting	<20/20-100
March	Usk	7B	Teal	2	16:21	Commuting	<20
March	Usk	7C	Teal	6	16:25	Commuting	<20
March	Ebbw	7D	Teal	9	13:56	Commuting	<20
March	Ebbw	7E	Teal	2	15:52	Commuting	<20
March	Ebbw	7F	Teal	10	15:53	Commuting	<20
March	Ebbw	7G	Teal	2	17:17	Commuting and Landed on the Water	<20
March	Usk	7H	Wigeon	1	17:02	Commuting	<20
April	Ebbw	8A	Teal	4	13:02	Commuting	<20
April	Ebbw	8B	Teal	6	13:22	Commuting	<20
April	Ebbw	8C	Teal	2	13:40	Commuting	<20
April	Ebbw	8D	Teal	11	08:32	Commuting	20-100
April	Ebbw	8E	Teal	11	10:34	Commuting	<20
April	Ebbw	8F	Teal	6	10:40	Commuting	<20

Table 3.8 – Flight Line Results - Mallard

Date	River	Target Note	Number of birds	Time	Observation	Average Flight Height (m)
September	Usk	1A	8	09:10	Loafing/Feeding	
September	Usk	1B	2	10:50	Commuting	<20
September	Usk	1C	1	10:20	Commuting	<20
September	Usk	1D	4	12:40	Feeding	
September	Usk	1E	6	13:35	Commuting	<20
September	Usk	1F	4	14:30	Feeding	
September	Ebbw	1G	2	08:34	Commuting	20-100
September	Ebbw	1H	4	10:25	Commuting	20-100
September	Ebbw	1I	2	10:29	Commuting	20-100
September	Ebbw	1J	4	10:37	Swimming	<20
September	Ebbw	1K	3	10:46	Commuting	
September	Ebbw	1L	7	11:27	Commuting	20-100
September	Ebbw	1M	3	11:27	Commuting	
September	Ebbw	1N	6	11:30	Foraging/ Swimming	
October	Usk	2A	7	10:40	Commuting	<20
October	Usk	2B	14	13:20-13:40	Loafing	
October	Usk	2C	10	15:26	Commuting	20-100
October	Ebbw	2D	1	15:15	Commuting	20-100
October	Ebbw	2E	4	15:45	Commuting	20-100
October	Ebbw	2F	2	15:52	Commuting	<20
December	Usk	4A	6	09:50	Commuting	20-100
December	Usk	4B	2	09:51	Commuting	20-100

Date	River	Target Note	Number of birds	Time	Observation	Average Flight Height (m)
December	Ebbw	4C	7	08:50	Commuting	<20 20-100
December	Ebbw	4D	2	09:30	Commuting	20-100
December	Ebbw	4E	6	09:42	Commuting	20-100
December	Ebbw	4F	2	09:52	Commuting	20-100
December	Ebbw	4G	2	10:50	Commuting	20-100
January	Usk	5A	1	13:40	Commuting	<20
January	Ebbw	5B	2	15:00	Commuting	<20/20-100
January	Ebbw	5C	2	13:34	Commuting	20-100
February	Usk	6A	2	09:20	Commuting	<20
February	Usk	6B	2	10:38	Commuting	<20
February	Usk	6C	1	12:16	Commuting	<20
February	Usk	6D	2	12:32	Commuting	<20
February	Usk	6E	3	13:31	Commuting	20-100
February	Usk	6F	2	13:36	Commuting	20-100
March	Usk	7A	4	13:07	Commuting	<20
March	Usk	7B	2	15:07	Commuting	20-100
March	Usk	7C	2	15:07	Commuting	20-100
March	Usk	7D	2	17:36	Commuting	20-100
March	Usk	7E	2	17:40	Commuting	20-100
March	Usk	7F	2	17:44	Commuting	20-100
April	Usk	8A	1	07:15	Commuting	<20
April	Ebbw	8B	2	12:49	Commuting	<20
April	Ebbw	8C	2	07:15	Commuting	<20
April	Ebbw	8D	2	11:12	Commuting	20-100
April	Ebbw	8E	2	11:32	Commuting	<20

Table 3.9 – Flight Line Results – Cormorant

Date	River	Target Note	Number of birds	Time	Observation	Average Flight Height (m)
September	Usk	1A	1	10:50	Commuting	<20
September	Ebbw	1B	1	12:25	Foraging	
September	Ebbw	1C	1	14:25	Commuting	<20
October	Ebbw	2A	1	11:06	Commuting	<20
October	Ebbw	2B	1	11:17	Commuting	<20
October	Ebbw	2C	1	13:08	Commuting	20-100
October	Ebbw	2D	1	13:40	Commuting	20-100
October	Ebbw	2E	1	13:50	Commuting	<20
October	Ebbw	2F	1	14:36	Commuting	20-100
November	Ebbw	3A	1	14:26	Took Off/C	<20
November	Ebbw	3B	1	15:09	Commuting	<20
December	Usk	4A	1	10:32	Commuting	20-100
December	Usk	4B	1	12:02	Took Off/C	20-100
March	Ebbw	7A	1	15:22	Commuting	20-100
April	Usk	8A	1	07:42	Commuting	20-100

Table 3.10 – Flight Line Results – Ruff and Oystercatcher

Date	River	Target Note	Species	Number of birds	Time	Observation	Average Flight Height (m)
September	Ebbw	1A	Ruff	3	08:51	Foraging	
September	Ebbw	1B	Ruff	1	10:49	Foraging	
March	Ebbw	7A	Oystercatcher	2	13:44	Commuting	20-100
March	Ebbw	7B	Oystercatcher	2	15:20	Commuting	<20
March	Ebbw	7C	Oystercatcher	2	17:58	Commuting	<20

Table 3.11 – Flight Line Results – Redshank

Date	River	Target Note	Number of birds	Time	Observation	Average Flight Height (m)
September	Ebbw	1A	1	08:20	Commuting	<20
September	Ebbw	1B	2	08:37	Commuting/ Landing	<20
September	Ebbw	1C	15	08:45	Commuting	<20
September	Ebbw	1D	10+	09:08	Roosting	
September	Ebbw	1E	70+	10:05	Roosting	
September	Ebbw	1F		10:40	Denoted by TN4 has disappeared- birds not seen disappearing	
September	Ebbw	1G	2	11:25	Commuting (Landed Briefly)	<20
September	Ebbw	1H	1	11:30	Foraging	
September	Ebbw	1I	8	11:40	Commuting and landed to forage	<20
September	Ebbw	1J	1	11:43	Foraging	
September	Ebbw	1K	2	11:43	Foraging	
September	Ebbw	1L	3	12:25	Foraging/ Loafing	
September	Ebbw	1M	1	12:25	Commuting	<20
September	Ebbw	1N	1	12:36	Commuting and landed (presume to Forage)	<20
September	Ebbw	1O	1	12:54	Commuting	<20
September	Ebbw	1P	17	13:06	Commuting	<20
September	Ebbw	1Q	1	13:26	Commuting	<20
September	Ebbw	1R	7	13:27	Commuting	<20
September	Ebbw	1S	3	13:28	Commuting	<20
September	Ebbw	1T	2	13:30	Commuting	<20
September	Ebbw	1U	1	14:00	Commuting	<20
September	Ebbw	1V	1	14:05	Commuting	<20
September	Ebbw	1W	1	14:05	Commuting	<20
September	Usk	1X	20	09:10	Roosting	
September	Usk	1Y	4	12:40	Feeding	
September	Usk	1Z	2	12:45	Feeding	
September	Usk	1AA	6	13:30	Feeding	<20
September	Usk	1AB	16	14:32	Feeding	
September	Usk	1AC	18	14:35	Feeding	
October	Ebbw	2A	6	10:10	Commuting	<20
October	Ebbw	2B	35	10:12	Commuting	<20
October	Ebbw	2C	2	11:32	Commuting	<20
October	Usk	2D	25	10:45	Commuting	<20
October	Usk	2E	36	10:50	Commuting	<20

Date	River	Target Note	Number of birds	Time	Observation	Average Flight Height (m)
October	Usk	2F	15	10:56	Commuting	<20
October	Usk	2G	4	12:20	Commuting	<20
October	Usk	2H	2	12:40	Commuting	<20
October	Usk	2I	2	12:46	Commuting	
October	Usk	2J	15-20	13:40	Flushed by boat	<20
October	Usk	2K	12	14:26	Commuting	<20
November	Ebbw	3A	7	10:48	Commuting	<20
November	Ebbw	3B	1	12:07	Commuting	<20
November	Ebbw	3C	2	12:35	Commuting	<20
November	Ebbw	3D	5	16:15	Commuting	<20
November	Usk	3E	2	12:43	Commuting	<20
November	Usk	3F	20	13:30	Commuting	<20
November	Usk	3G	4	13:36	Commuting	<20
November	Usk	3H	2	14:12	Commuting	<20
November	Usk	3I	2	14:30	Commuting	<20
November	Usk	3J	2	14:50	Commuting	<20
November	Usk	3K	7	11:22	Commuting	<20
November	Usk	3L	2	11:23	Circling	<20
November	Usk	3M	6	11:40	Circling	<20
November	Usk	3N	6	12:10	Commuting	<20
November	Usk	3O	3	12:10	Commuting	<20
November	Usk	3P	6	12:12	Commuting	<20
December	Ebbw	4A	600	08:30	Disturbed	<20
December	Ebbw	4B	1	10:02	Commuting	<20
December	Ebbw	4C	2	10:32	Commuting	<20
December	Ebbw	4D	1	10:40	Commuting	<20
December	Ebbw	4E	11	10:52	Commuting	<20
December	Ebbw	4F	4	11:15	Commuting	<20
December	Ebbw	4G	2	11:45	Commuting	<20
December	Ebbw	4H	2	11:50	Commuting	<20
December	Ebbw	4I	6	12:11	Commuting	20-100
December	Ebbw	4J	6	12:20	Commuting	<20
December	Ebbw	4K	9	13:36	Commuting	<20
December	Ebbw	4L	1	14:12	Commuting	<20
December	Ebbw	4M	2	14:15	Commuting	<20
January	Ebbw	5A	4	13:55	Commuting	<20
January	Ebbw	5B	11	13:55	Commuting	<20
January	Ebbw	5C	6	13:56	Commuting	<20
January	Ebbw	5D	16	13:57	Commuting	<20
January	Ebbw	5E	4	13:59	Commuting	<20
January	Ebbw	5F	9	14:06	Commuting	<20
January	Ebbw	5G	6	14:20	Commuting	<20
January	Ebbw	5H	68	14:40	Commuting	<20
January	Ebbw	5I	29	14:42	Commuting	<20
January	Ebbw	5J	29	14:42	Commuting	<20
January	Ebbw	5K	12	15:32	Commuting	<20
January	Ebbw	5L	6	15:44	Commuting	<20
January	Ebbw	5M	11	16:02	Commuting	<20
January	Ebbw	5N	4	16:10	Commuting	<20
January	Ebbw	5O	4	16:12	Commuting	<20
January	Ebbw	5P	1	10:25	Commuting	<20

Date	River	Target Note	Number of birds	Time	Observation	Average Flight Height (m)
January	Ebbw	5Q	2	10:36	Commuting	<20
January	Ebbw	5R	1	10:42	Commuting	<20
January	Ebbw	5S	2	10:42	Commuting	<20
January	Ebbw	5T	2	10:49	Commuting	<20
January	Ebbw	5U	4	10:56	Commuting	<20
January	Ebbw	5V	4	11:02	Commuting	<20
January	Ebbw	5W	1	11:02	Commuting	<20/20-100
January	Ebbw	5X	1	11:42	Commuting	<20
January	Ebbw	5Y	2	11:52	Commuting	<20
January	Ebbw	5Z	6	11:55	Commuting	<20
January	Ebbw	5AA	2	12:22	Commuting	<20
January	Ebbw	5AB	1	12:30	Commuting	<20
January	Ebbw	5AC	2	12:42	Commuting	<20
January	Ebbw	5AD	4	12:55	Commuting	<20
January	Ebbw	5AE	9	13:11	Commuting	<20
January	Ebbw	5AF	2	13:20	Commuting	<20
January	Ebbw	5AG	2	13:23	Commuting	<20
January	Ebbw	5AH	6	13:42	Commuting	<20
January	Ebbw	5AI	13	13:42	Commuting	<20
January	Ebbw	5AJ	12	13:43	Commuting	<20
January	Ebbw	5AK	15	13:43	Commuting	<20
January	Ebbw	5AL	21	13:44	Commuting	<20
January	Ebbw	5AM	4	13:45	Commuting	<20
January	Usk	5AN	1	12:25	Commuting	<20
February	Ebbw	6A	1	10:35	Commuting	<20
February	Ebbw	6B	3	10:46	Commuting	<20
February	Ebbw	6C	1	10:47	Commuting	<20
February	Ebbw	6D	28	10:58	Commuting	<20
February	Ebbw	6E	1	11:17	Commuting	<20
February	Ebbw	6F	3	11:35	Commuting	<20
February	Ebbw	6G	1	11:52	Commuting	<20
February	Ebbw	6H	1	12:52	Commuting	<20
March	Ebbw	7A	25	13:47	Commuting	<20
March	Ebbw	7B	4	13:51	Commuting	<20
March	Ebbw	7C	113	13:56	Commuting	<20
March	Ebbw	7D	100	17:09	Commuting	<20
March	Ebbw	7E	80	17:09	Commuting	<20
March	Ebbw	7F	100	17:09	Commuting	<20
March	Ebbw	7G	80	17:10	Commuting	<20
March	Ebbw	7H	160	17:12	Commuting	<20
March	Ebbw	7I	20	17:13	Commuting	<20
March	Usk	7J	114	13:32	Commuting	<20
March	Usk	7K	4	14:26	Commuting	
March	Usk	7L	24	18:00	Commuting	<20
April	Ebbw	8A	14	12:20	Commuting	<20
April	Ebbw	8B	2	12:22	Commuting	<20
April	Ebbw	8C	6	13:15	Commuting	<20
April	Ebbw	8D	12	01:48	Commuting	<20
April	Ebbw	8E	4	08:30	Commuting	<20
April	Ebbw	8F	11	09:02	Commuting	<20
April	Ebbw	8G	14	09:16	Commuting	<20

Date	River	Target Note	Number of birds	Time	Observation	Average Flight Height (m)
April	Ebbw	8H	4	11:11	Commuting	<20
April	Ebbw	8I	16	11:32	Commuting	<20
April	Ebbw	8J	11	11:40	Commuting	<20
April	Ebbw	8K	9	11:50	Commuting	<20
April	Ebbw	8L	4	10:34	Commuting	<20
April	Ebbw	8M	2	10:40	Commuting	<20
April	Ebbw	8N	2	11:06	Commuting	<20

Appendix 4: Vantage Point Surveys (Hourly Counts)

Vantage Point Count Data Key:

S = Swimming	C = Commuting	F = Feeding	L = Loafing
FL = Flushed	CI = Circling	SI = Singing	H = Hunting
P = Preening	B = Bathing	FI = Fishing	
G = Grazing	D = Disturbed	CA = Calling	

Table 4.1 – Ebbw Vantage Point Count Data – September

Species	Count 1		Count 2		Count 3		Count 4		Count 5		Count 6	
	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds
Mute Swan				2								
Canada Goose		1	S			1	S					
Mallard		19	S	7	S/C	5	S				40	S/F
Little Egret		1	F									
Grey Heron				1	R	1	L					
Curlew											1	C
Black-tailed Godwit				1	R							
Ruff				3	F							
Redshank	40		C	10	R	85	R/C	15	C/F	25	F	29
Black-headed Gull				9	F/L/P							
Herring Gull												
Kingfisher						1	C					

Table 4.1 – Ebbw Vantage Point Count Data – September

Species	Count 7			Count 8			Count 9		
	Time		14:10	Time		15:10	Time		16:10
	No. Birds	Activity		No. Birds	Activity		No. Birds	Activity	Peak Count
Mute Swan				2	C				2
Canada Goose									1
Mallard							10	R	40
Little Egret	1	L/F							1
Grey Heron									1
Curllew									1
Black-tailed Godwit									1
Ruff									3
Redshank	1	C					2	L R	85
Black-headed Gull									9
Herring Gull	18	L/F		30	B		80	B/L	80
Kingfisher									1

Table 4.2 – Ebbw Vantage Point Count Data – October

Species	Count 1		Count 2		Count 3		Count 4		Count 5		Count 6		Count 7		Peak Count
	Time	10:00	Time	11:00	Time	12:00	Time	13:00	Time	14:00	Time	15:00	Time	16:00	
	No. Birds	Activity	No. Birds	Activity	No. Birds	Activity	No. Birds	Activity	No. Birds	Activity	No. Birds	Activity	No. Birds	Activity	
Mute Swan	20	F	27	L/F	21	F	21	F	21	F	23	R/F	23	F/R	27
Teal	20	L	3	L	1	L					1	R			20
Mallard	7	L	2	L											7
Little Egret							1	F							1
Grey Heron	2	R/Fl			1	Fl									2
Moorhen					1	F	1	R					1	Not Seen	1
Curllew									3	F			3	F	3
Redshank													1	F	1
Black-headed Gull	50	F	30	F	8	FL	7	CI	80	F			20	D	80
Lesser Black-backed Gull							2	CI			5	F			5
Herring Gull	20	F	10	F			3	CI	60	F	400	F	160	D	400
Starling	940		500	F	500	FL			300	F	500	F	600	D	940
Grey Wagtail									1	F					1
Meadow Pipit	9	FL	4	FL	21	FL	15	FL	5	FL	2	FL			21
Linnet	30	FL	35	FL	9	FL			35	F	33	F			35
Reed Bunting					1	PE									1

Table 4.3 – Ebbw Vantage Point Count Data – November

Species	Count 1			Count 2			Count 3			Count 4			Count 5			Count 6			Peak Count
	Time	No. Birds	Activity	Time	No. Birds	Activity	Time	No. Birds	Activity	Time	No. Birds	Activity	Time	No. Birds	Activity	Time	No. Birds	Activity	
Mute Swan	25	25	B/P/F	27	27	P/L/F	23	23	F/L	3	3	S/F	26	26	F/S/L	25	25	L/R/S	27
Mallard	4	4	S/F										4	4	S				4
Teal	26	26	F/L/S	2	2	L/F	1	1	L	4	4	B/S	2	2	S				26
Lapwing				1	1	L/F										1	1	CA	1
Redshank	20	20	F/L	6	6	L/F	1	1	F/L										20
Lesser Black-backed Gull	1	1	CA																1
Cetti's Warbler				1	1	SI	1	1	SI	2	2	SI							2
Starling	38	38	Landed to feed				25	25	Landed to Feed	750	750	C/F							750
Dunnoch										1	1	CA							1
Meadow Pipit	1	1	F				6	6	F/L/PE/CA	1	1	CA							6
Goldfinch				1	1	S													1
Reed Bunting							1	1	CA										1

Table 4.4 – Ebbw Vantage Point Count Data – December

Species	Count 1			Count 2			Count 3			Count 4			Count 5			Count 6			Count 7			
	Time	No. Birds	Activity	Time	No. Birds	Activity	Time	No. Birds	Activity	Time	No. Birds	Activity	Time	No. Birds	Activity	Time	No. Birds	Activity	Time	No. Birds	Activity	
Teal		49	L/R		9	L/R		8	R/L/F		21	F/R		12	R		6	R		10	R	49
Mallard		24	L		59	L/R		21	L		4	F		6	R					22	L	59
Little Egret		2	F		3	F								1	F						3	
Ringed Plover		1	R																		1	
Curlew					4	R		1	F					3	F		9	F		2	F	9
Dunlin					12	R															12	
Common Sandpiper											2	F					1	F			2	
Redshank		690	R		18	R/F		331	R/F		18	F		24	F/R		19	F		10	F	690
Snipe					3	F															3	
Black-headed Gull					1	F															1	
Herring Gull		190	F														42	Flying		14	F	190
Starling		1000	L														800	Flying		600	F	1000
Duncock											5	F								1	F	5

Table 4.5 – Ebbw Vantage Point Count Data – January

Species	Count 1		Count 2		Count 3		Count 4		Count 5		Count 6		Count 7		Peak Count
	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	
Black-headed Gull				15	L	5	L		16	L					16
Carrion Crow		250	F												250
Common Sandpiper		5	R	1	F	3	F	1			4	R	8	R	8
Curlew							F	1							1
Little Egret													1	R	1
Goosander		1	F								1	C			1
Grey Heron				1	R			1	1	R			1	R	1
Grey Wagtail							F	1							1
Herring Gull		304	F/CI												304
Kingfisher						1	F								1
Mallard											4	L			4
Mute Swan		77	F	79	F	82	F	83	81	F	80	F	80	F	83
Oystercatcher		2	R										2	R	2
Redshank		84	F/R	21	F	51	R/F	79	145	R	364	R	431	R	431
Teal		50	R	17	L/F	13	L/F	15	1	L	35	R	48	R	50

Table 4.6 – Ebbw Vantage Point Count Data – February

Species	Count 1		Count 2		Count 3		Count 4		Count 5											
	Time	08:50	Activity	No. Birds	Time	09:50	Activity	No. Birds	Time	10:50	Activity	No. Birds	Time	11:50	Activity	No. Birds	Time	12:50	Activity	No. Birds
Mute Swan	17		L	18		F		23		G		23		F/R		23		L/F		L/F
Teal	60		L/S/F	79		S/F		43		S		6		SI		1		L/F		L/F
Mallard	11		S/F	19		S/F/L		8		L/S						9		S		S
Grey Heron								1		L		2		L						
Marsh Harrier	1		H	1		F														
Oystercatcher				1		L														
Lapwing	50		L																	
Curlew	125		L																	
Redshank	11		L/F	74		F/L/R		35		L/F		24		L/F		65		L/F		L/F
Lesser Black-backed Gull								1		L										
Kingfisher	1		PE																	
Cetti's Warbler								2		SI		1		SI						
Stonechat																				
Dunnoch				1		SI						1		CA						
Meadow Pipit	1		CA	12		C/F		20		F/CA		30		F/R		23		F		F
Linnet								2		F		1		F/R						
Reed Bunting								1		C										

Table 4.6 – Ebbw Vantage Point Count Data – February (Cont.)

Species	Count 6			Count 7			Count 8		
	Time	No. Birds	Activity	Time	No. Birds	Activity	Time	No. Birds	Activity
Mute Swan	23		F/L	25		F/L			25
Teal				5		S/L			79
Mallard									19
Grey Heron									2
Marsh Harrier									1
Oystercatcher									1
Lapwing									50
Curlew									125
Redshank	15		L/F	10		L	5		L
Lesser Black-backed Gull									1
Kingfisher									1
Cetti's Warbler									2
Stonechat				2		PE			2
Duncock									1
Meadow Pipit	1		CA						30
Linnet									2
Reed Bunting									1

Table 4.7 – Ebbw Vantage Point Count Data – March

Species	Count 1		Count 2		Count 3		Count 4		Count 5		Count 6		Count 7		Peak Count
	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	
Mute Swan	22	L/R	22	R/L/G/	28	G/L/R/S	28	G/L/R	27	G/L/R	47	F/R/L/G	49	S/G	49
Teal	34	L/F/R	21	S/L	45	L/S/R	53	S/L	6	S	18	S	14	L/R/S	53
Mallard	8	L/S									2	S	2		8
Grey Heron	1	L													1
Oystercatcher					4	L/F					2	L			4
Lapwing									16	L	3	L			16
Dunlin	2	F/L			2	L/F									2
Redshank	93	L/F	62	L/F	59	L/F	8	L/S/F	86	L/R	330	L/R	117	L/R	330
Snipe									1	FL					1
Cetti's Warbler		1	1	SI			1	SI	1	SI	1	SI	1	SI	1
Long-tailed Tit							1	CA							1
Starling					600	C									600
Dunnoch			1	SI									2	SI	2
Meadow Pipit							1	CA/FL			4	C			4

Table 4.8 – Ebbw Vantage Point Count Data – April

Species	Count 1		Count 2		Count 3		Count 4		Count 5		Count 6		Count 7		Peak Count
	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	
Mute Swan		17	06:40	F	16	F/R	9	L	2	F	2				
Canada Goose		2		F											2
Shelduck															2
Teal					30	R			2	R	12	F			30
Mallard		12	R/F		5	R	13	L/F	4	F	4	R	2	L	13
Little Egret							2	F/R							2
Grey Heron		1	R				1	R	1						1
Moorhen															1
Oystercatcher		3	R		2	R									3
Lapwing		1	R												1
Curlew															4
Common Sandpiper					1	R	1	F	1	F	1	F	1	F	1
Redshank		52	R		81	R	33	R/F	40	F	37	F	20	F	81
Snipe													2	FL	2
Lesser Black-backed Gull		150	C		100	F	100	F	40	F	90	F	40	F/R	150
Herring Gull		200	C		150	F	120	F	100	F	60	F	40	F/R	200
Cetti's Warbler		2	Singing		2	SI	1	SI			2	SI	1		2
Starling					50	F							50	F/R	50

Table 4.9 – Usk Vantage Point Count Data – September

Species	Count 1		Count 2		Count 3		Count 4		Count 5	
	Time	08:10	Time	10:10	Time	11:10	Time	12:10	Time	13:10
	No. Birds	Activity	No. Birds	Activity	No. Birds	Activity	No. Birds	Activity	No. Birds	Activity
Teal	2	L								
Mallard	9	L				C and in water	2		12	L/C/R
Cormorant	1	L								
Grey Heron	1	L	1	R	1	C				
Curlew	1	F			1	C				
Dunlin	2	R								
Common Sandpiper										
Redshank	150	C	20	R/F	42	F/R	27	F	17	F
Black-headed Gull	30	L	20	R	11	L	16	L	5	R/F
Herring Gull							3	F	1	L/C/R

Table 4.9 – Usk Vantage Point Count Data – September (Cont.)

Species	Count 6			Count 7			Count 8		
	Time	14:10		Time	15:10		Time	16:10	
	No. Birds	Activity	No. Birds	No. Birds	Activity	No. Birds	Activity	Peak Count	
Teal						4	In Water	4	
Mallard	2	F	5	F		5	L	12	
Cormorant								1	
Grey Heron			1	F				1	
Curlew	4	F	3	F/C		2	F	4	
Dunlin								2	
Common Sandpiper			1	F				1	
Redshank	24	F	40	F		78	F	150	
Black-headed Gull	4	F	8	F		2	L	30	
Herring Gull	4	F	4	F		4	F	4	

Table 4.10 – Usk Vantage Point Count Data – October

Species	Count 1		Count 2		Count 3		Count 4		Count 5		Count 6		Count 7		Peak Count
	No. Birds	Activity	No. Birds	Activity	No. Birds	Activity	No. Birds	Activity	No. Birds	Activity	No. Birds	Activity	No. Birds	Activity	
Mute Swan	2	S			2	C									2
Shelduck													1	F	1
Mallard	4	L	23	R/L	19	R/L	1	R	15	R/L	14	L/F	14	F	23
Grey Heron	1	F	1	F	1	R					1	C/F			1
Curllew	3	F	3	R/C	1	F			1	R	2	C/F	2	F	3
Dunlin							6	R	6	C					6
Redshank	13	R	138	R	96	F/R	146	R/C	144	R/C/F	104	F/C	35	F/C	146
Black-headed Gull	1	L	2	R/L	6	R	14	R	14	R					14
Herring Gull	1	L			6	R	4	R			2	C/F	2	F	6
Kingfisher					1	FL									1

Table 4.11 – Usk Vantage Point Count Data – November

Species	Count 1		Count 2		Count 3		Count 4		Count 5		Count 6		Count 7		Peak Count
	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	
Teal		4	C/S												4
Mallard		36	F/L	15	R/F	10	R/F	3	L	21	R/B/F	12	F	13	F/L
Little Egret						2	R	2							2
Grey Heron		1	R	2	R	2	R	1	R					1	R
Lapwing				40	R	36	R/F					26	R	30	R
Ringed Plover		2	F			18	F			6	F/R				18
Curlew		5	F	2	F	6	F	2	F			3	R	1	R
Dunlin												20	R	20	R
Common Sandpiper				3	F	1	F								3
Redshank		29	F/B	64	F	61	F/B	15	F	27	F/R	81	R	91	R
Black-headed Gull		5	F	4	F	25	R	10	R	7	R	10	R	11	R
Common Gull								1	R	1	R				1
Herring Gull		12	F	10	R/L/F	10	R	2	R	4	R				12

Table 4.12 – Usk Vantage Point Count Data – December

	Count 1			Count 2			Count 3			Count 4			Count 5			Count 6			Count 7			
	Time	No. Birds	Activity	Time	No. Birds	Activity	Time	No. Birds	Activity	Time	No. Birds	Activity	Time	No. Birds	Activity	Time	No. Birds	Activity	Time	No. Birds	Activity	Peak Count
Mallard		35	S/L/F	9	S		7	L/S		24	S/R		39	R/L/S/B		30	L/S/F		28	F/R/S		39
Pheasant																1	B					1
Grey Heron							2	L/F														2
Peregrine																1	C					1
Oystercatcher																						1
Curlew				1	L		3	L/F		1	F		1	F		1	F		2	F/L		3
Dunlin	40		R	5	L		77	F/L		25	L/F		20	F		8	F		4	F/L		77
Redshank	15		R	6	L		21	L/F		9	L/F		13	L/F		1	L/F		12	L/F		21
Jack Snipe	1		R/F				1	R/F														1
Snipe	1		F				1	R/F		1												1
Black-headed Gull	4		S/L	2	S/L1/5		3	L					6	L/F		8	L		12	L/B		12
Herring Gull	2		S/L	2	L					1	L/F		6	L/F		8	L		4	L/B		8
Duncock										2	CA											2
Reed Bunting							1			2												2

Table 4.13 – Usk Vantage Point Count Data – January

Species	Count 1			Count 2			Count 3			Count 4			Count 5			Count 6			Count 7		
	Time	No. Birds	Activity	Time	No. Birds	Activity	Time	No. Birds	Activity	Time	No. Birds	Activity	Time	No. Birds	Activity	Time	No. Birds	Activity	Time	No. Birds	Activity
Teal		34	F/S		20	S/F		6	L/R/S/F		6	S/L		1	L						
Mallard		38	F/L/S		32	S/F		29	L/R/S/P/R		41	S/L/F		37	F/S/L/R		11	S/L		11	S/L
Water Rail																	2	CA			2
Curlew		1	C		1	F		2	F/L		1	F									2
Redshank		22	L/F		9	L/F/C		10	F/L/C		22	R/L/F		29	L		2	L		1	F
Snipe					1	C															1
Black-headed Gull		51	L/F/B/S		17	S/L/F/C		13	F/S		59	S		38	F/S		31	S/L			59
Great Black-backed Gull		2	B/L																		2
Herring Gull		3	F/B																		3
Meadow Pipit					1	FL															1
Duncock														2	CA		1	SI			2
Reed Bunting		1	CA		2	C		3	FL/CA		1	CA									3

Table 4.14 – Usk Vantage Point Count Data – February

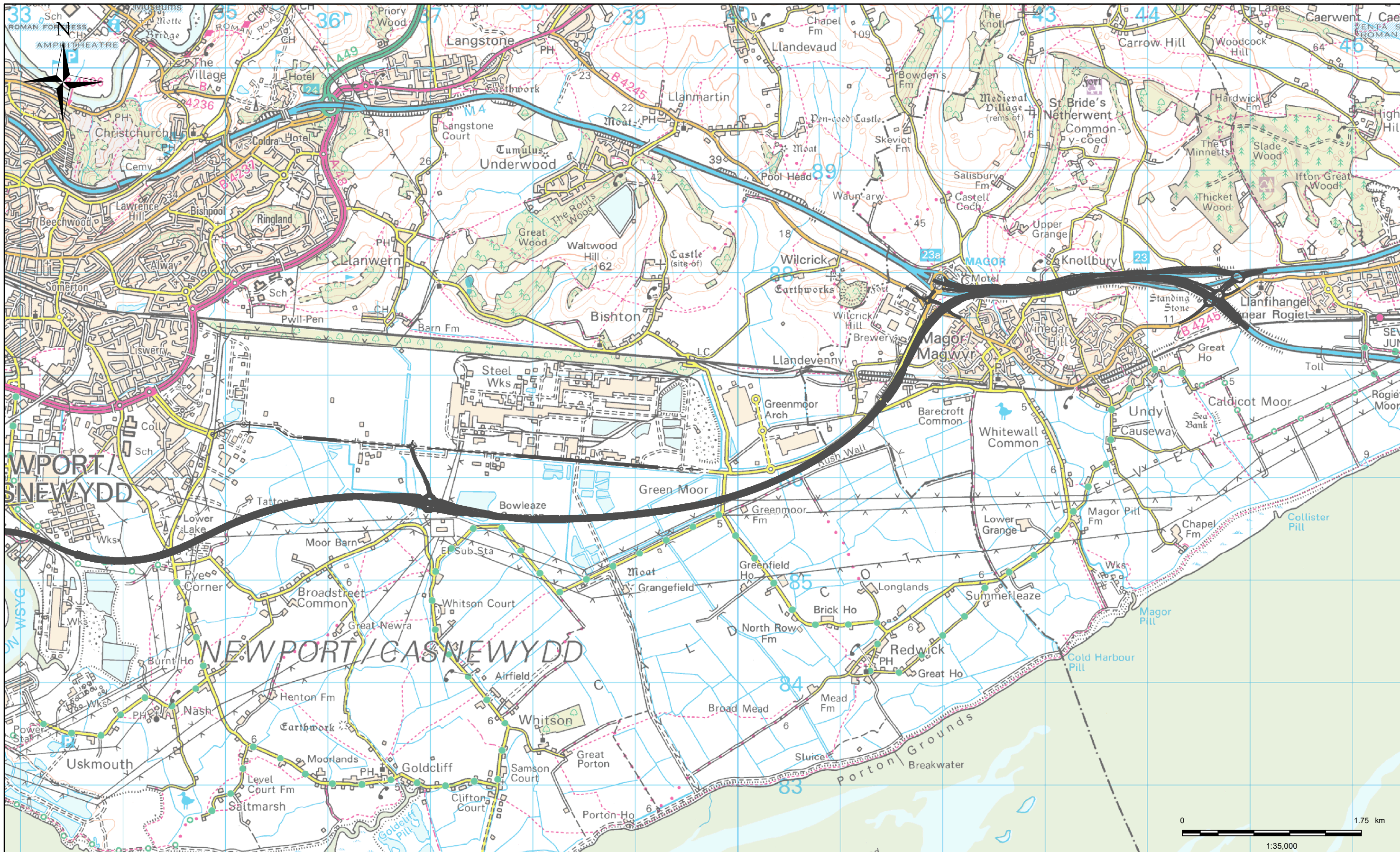
Species	Count 1		Count 2		Count 3		Count 4		Count 5		Count 6		Count 7		Peak Count
	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	
Teal															
Mallard		29													
Grey Heron															
Moorhen		1													
Coot															
Oystercatcher		2													
Curlew															
Dunlin		1													
Redshank		16													
Black-headed Gull		5													
Lesser Black-backed Gull															
Herring Gull		6													
Great Black-backed Gull															
Cetti's Warbler															
Song Thrush		2													
Duncock		2													
House Sparrow															
Grey Wagtail		1													
Meadow Pipit															
Reed Bunting															

Table 4.15 – Usk Vantage Point Count Data – March

Species	Count 1		Count 2		Count 3		Count 4		Count 5		Count 6		Count 7		Peak Count
	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	
Shelduck						1				4	R				4
Mallard		6	L	11	L/C	2	L	4	L/R	6	R	4	R	16	16
Cormorant										2	R	2	R	2	2
Little Egret				2	R										2
Buzzard						1	R	1	R						1
Moorhen												1	B		1
Lapwing				6	F					100	R/F				100
Curlew				4	F	2	F	2	F	2	R/F	4	R	16	16
Dunlin				21	F	16	F			50	R	50	R	50	50
Redshank	10	F	43	F	F	13	F	15	F	161	R/F	89	R	80	161
Black-headed Gull	61	F/R/L	16		R	24	R	12	F/L	87	R	101	R	128	128
Lesser Black-backed Gull	13	F/L/R	4		R	1	R	13	R/L	11	R	11	R	12	13
Herring Gull			3		R	8	R			15	R	14	R		15
Kingfisher			1		C										1
Magpie								1	C			1	C		1
Carrion Crow			2		R										2
Cetti's Warbler	1	SI	1		SI							1	SI		1
Long-tailed Tit	1	F													1
Robin	1	SI													1
Meadow Pipit						2	C								2
Linnet								2	SI						2

Table 4.16 – Usk Vantage Point Count Data – April

Species	Count 1		Count 2		Count 3		Count 4		Count 5		Count 6		Count 7		Peak Count
	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	Time	No. Birds	
Mallard	17	L/FL	10	L/F	22	L/F	12	L/R	16	L/R	12	L/F/R	14	L/R/F	22
Little Egret					1	L									1
Moorhen	2	CA					1	CA							2
Coot	1	CA					1	CA	1	CA			1	CA	1
Curlew									1	CA					1
Redshank	7	R	8	R		4	L								8
Black-headed Gull	1	R													1
Lesser Black-backed Gull															13
Herring Gull	2	L	2	L			2	L/R	6	L/F	13	L/F	10	L	15
Great Black-backed Gull			2	R		3	L	F/L/R	10	F/L	15	L/F	15	L/F	3
Cetti's Warbler	2	SI	2	SI			1	SI	1	SI	2	SI	1	SI	2
Willow Warbler											1	SI			1
Whitethroat			1	SI		1	SI		1	SI	1	SI	1	SI	1
Dunnock	4	FL/SI										SI	1	SI	5
Meadow Pipit			1	Not Seen		1	CA								1
Bullfinch								CA							2



02	DONE SOME AMENDMENTS	20/05/15
01	VERSION 1	15/05/15
Issue	Description	Date

Legend
— Proposed Scheme Location


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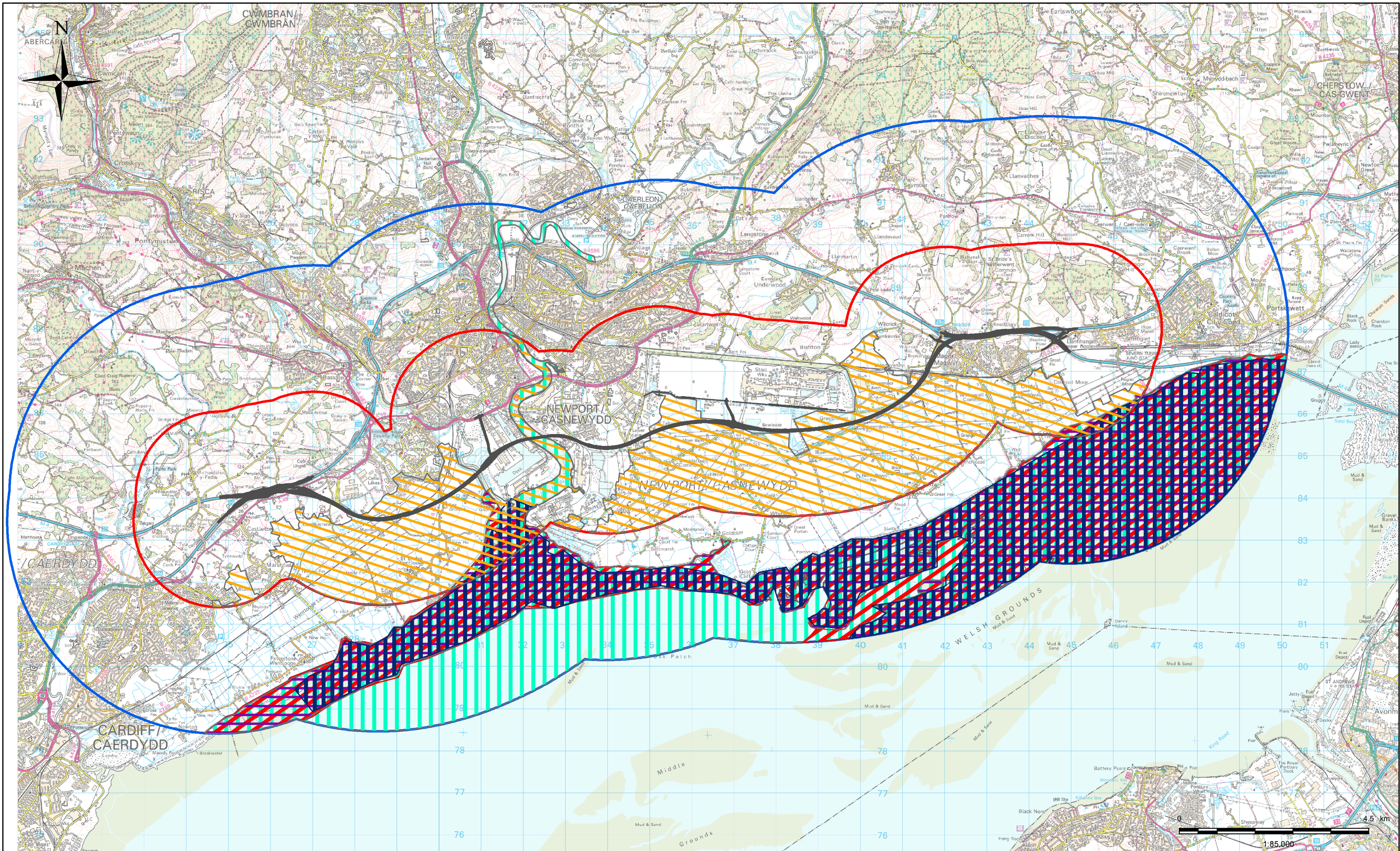
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Project	M4 Corridor around Newport Wintering Bird Survey Report 2014/15
Title	Scheme Location Figure 1 Page 1 of 2

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Issue Description Date											
02 DONE SOME AMENDMENTS 20/05/15											
01 VERSION 1 15/05/15											



02	DONE SOME AMENDMENTS	20/05/15
01	VERSION 1	13/05/15
Issue	Description	Date

Legend	
	Proposed Scheme Location
	Site of Special Scientific Intrest (Wales)
	Important Bird Areas 5km
	Ramsar Site 5km
	Special Protected Area
	Special Area of Conservation
	5km Buffer
	2km Buffer

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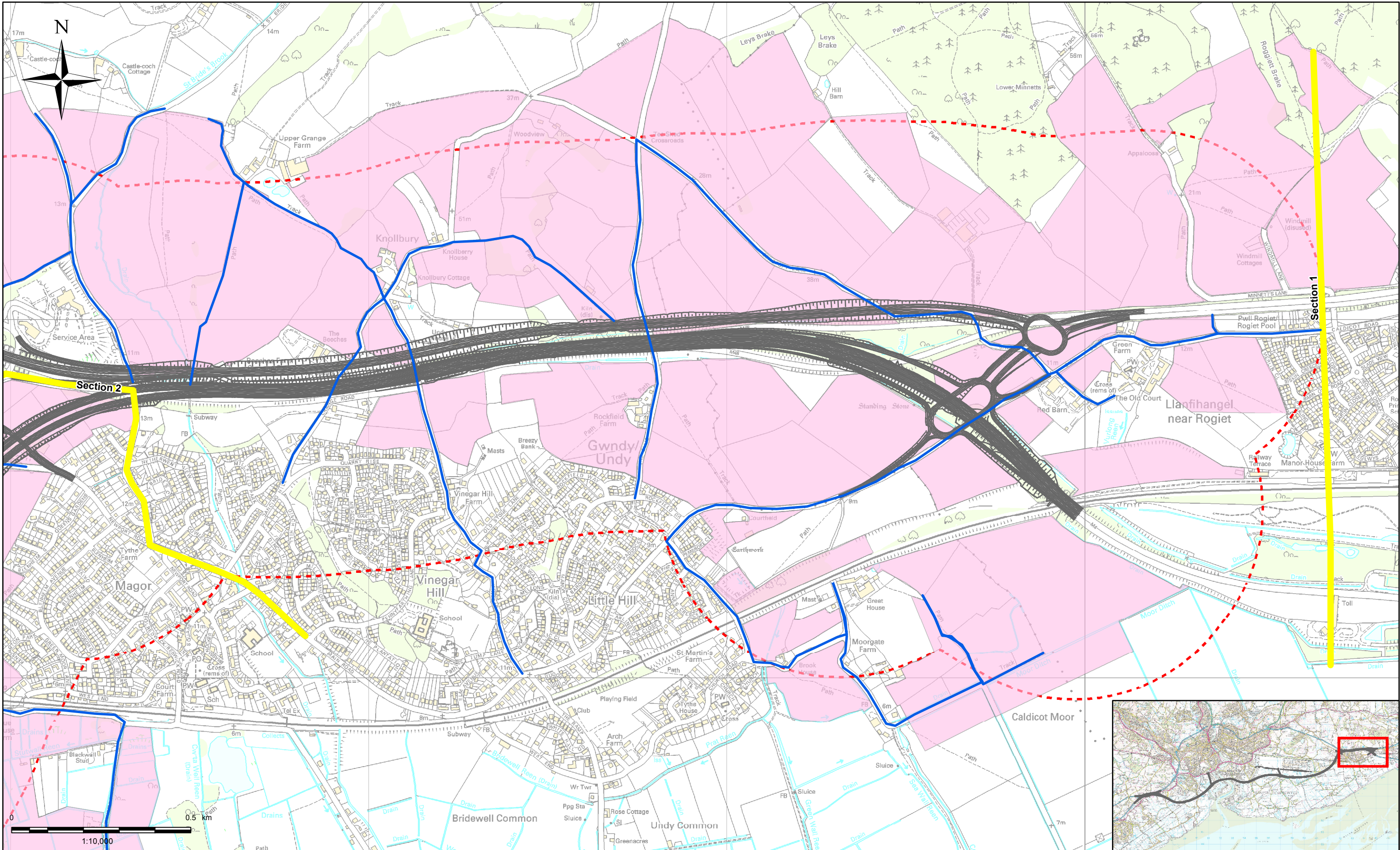
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Project	
M4 Corridor around Newport Wintering Bird Survey Report 2014/15	
Title	
Designated Sites Figure 2	

Hyder		
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03	DONE SOME AMENDMENTS	25/05/15
02	DONE SOME AMENDMENTS	20/05/15
01	VERSION 1	14/05/15
Issue	Description	Date

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	Transect Routes
	Section Boundaries
	Proposed Scheme Location
	Transect Survey Coverage
	500m Buffer

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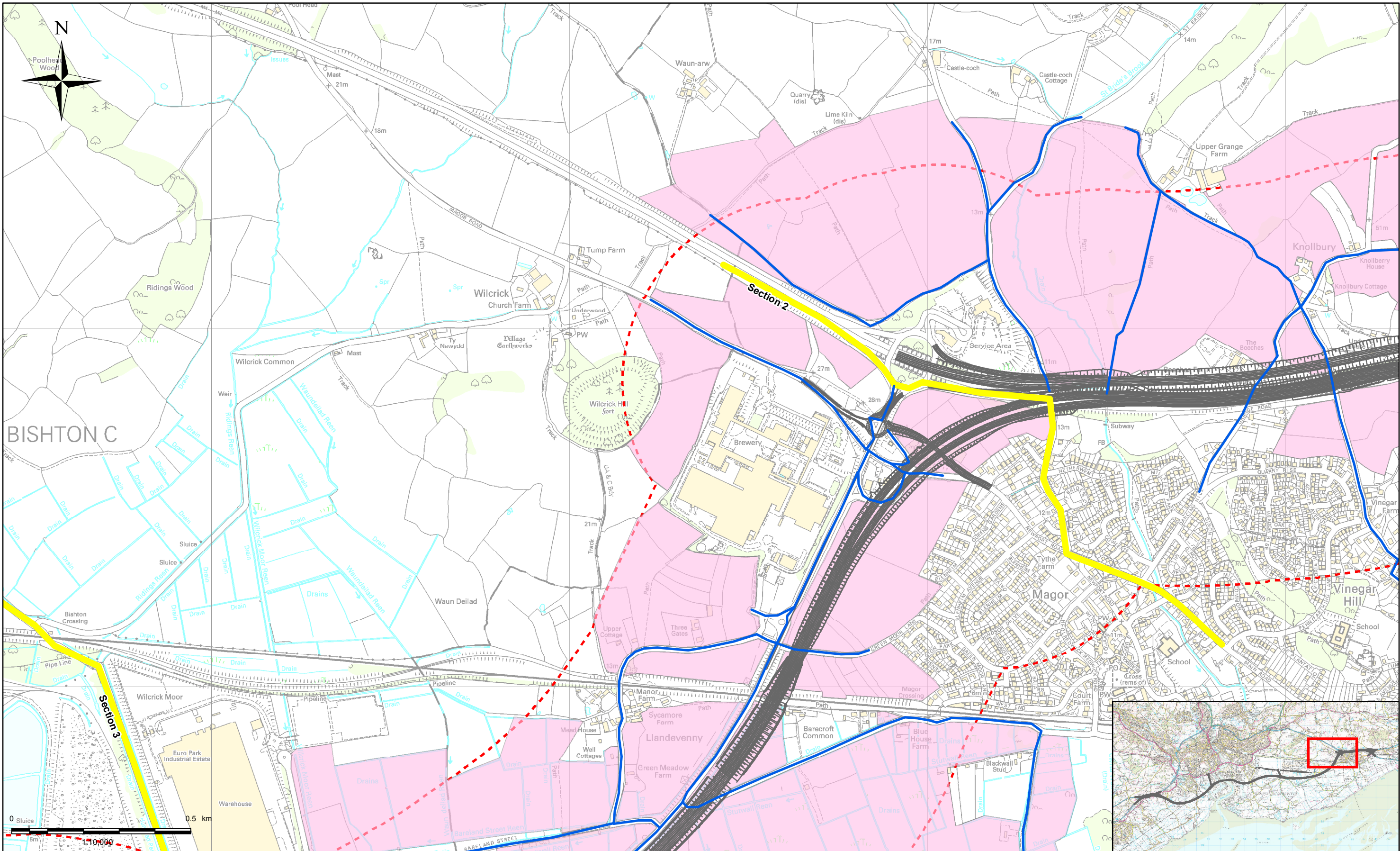
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Project M4 Corridor around Newport Wintering Bird Survey Report 2014/15	Title Transect Survey Coverage and Routes (Section 1 to 7) Figure 3.1
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Issue	Description	Date
03	DONE SOME AMENDMENTS	25/05/15
02	DONE SOME AMENDMENTS	20/05/15
01	VERSION 1	14/05/15

Legend
— Transect Routes
— Section Boundaries
— Proposed Scheme Location
 Transect Survey Coverage
 500m Buffer


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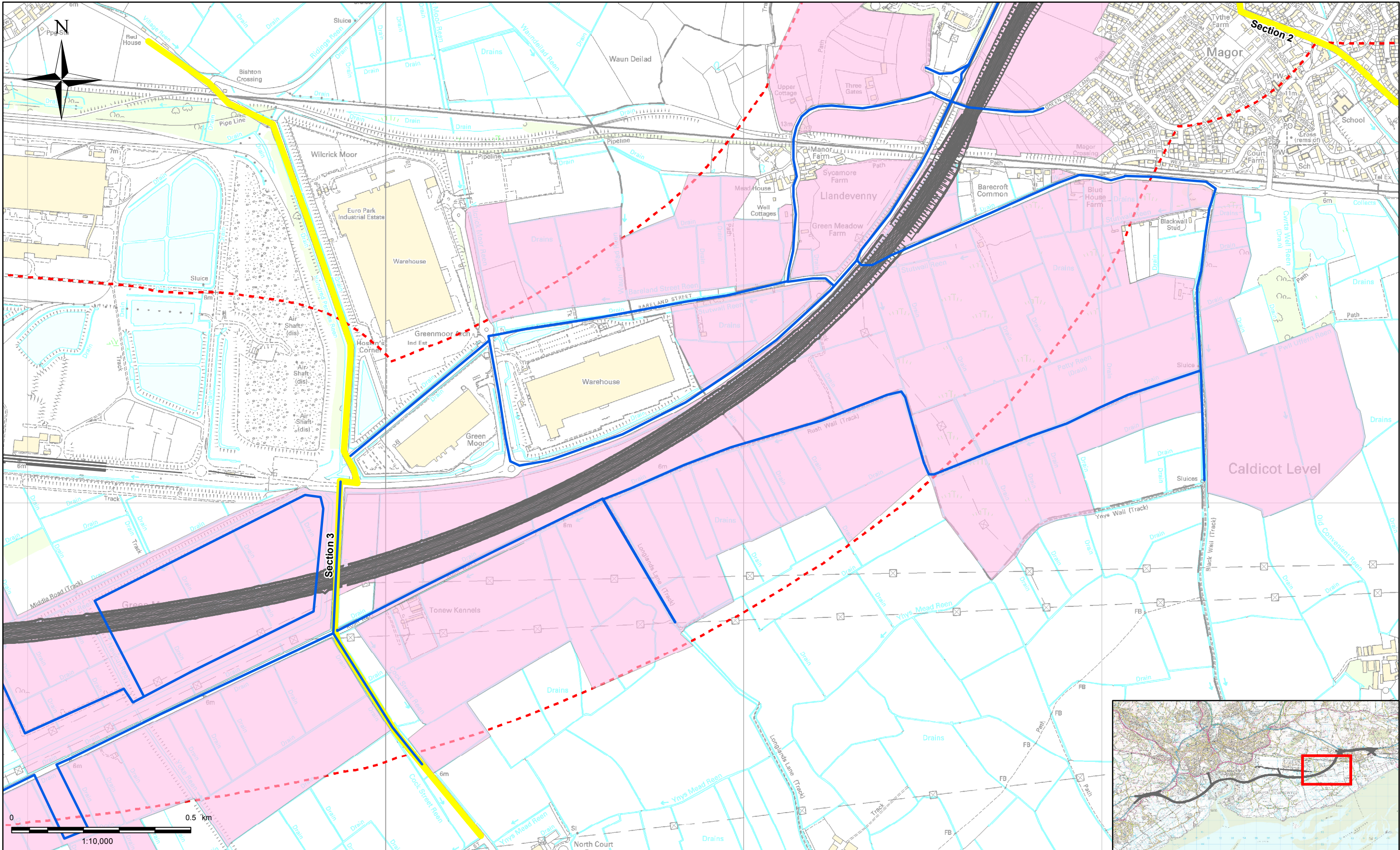
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Project	M4 Corridor around Newport Wintering Bird Survey Report 2014/15
Title	Transect Survey Coverage and Routes (Section 1 to 7) Figure 3.2

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03	DONE SOME AMENDMENTS	25/05/15
02	DONE SOME AMENDMENTS	20/05/15
01	VERSION 1	14/05/15
Issue	Description	Date

Legend	
	Transect Routes
	Section Boundaries
	Proposed Scheme Location
	Transect Survey Coverage
	500m Buffer

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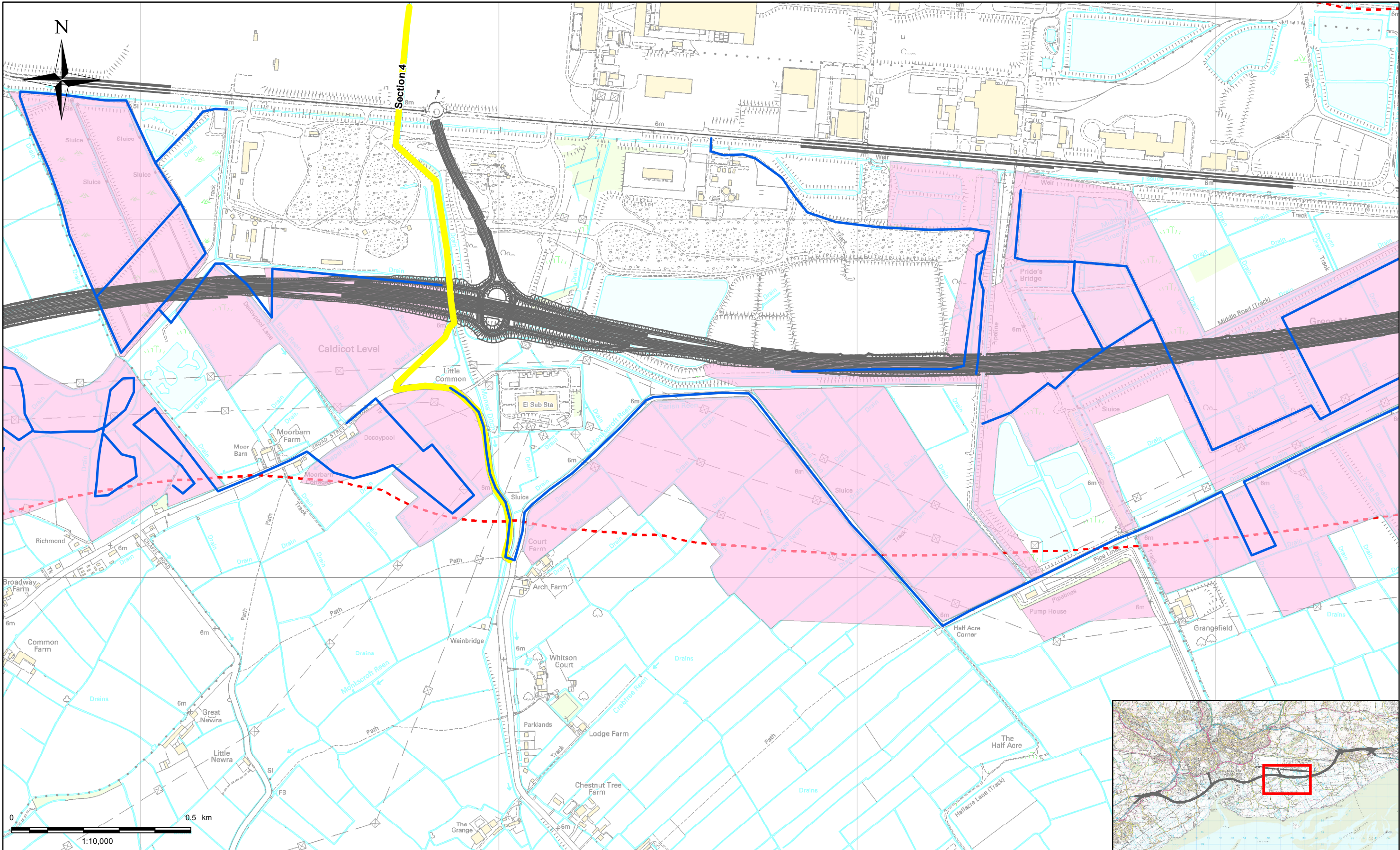
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Project M4 Corridor around Newport Wintering Bird Survey Report 2014/15
Title Transect Survey Coverage and Routes (Section 1 to 7) Figure 3.3

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Issue	Description	Date
03	DONE SOME AMENDMENTS	25/05/15
02	DONE SOME AMENDMENTS	20/05/15
01	VERSION 1	14/05/15

Legend
— Transect Routes
— Section Boundaries
— Proposed Scheme Location
 Transect Survey Coverage
- - - 500m Buffer

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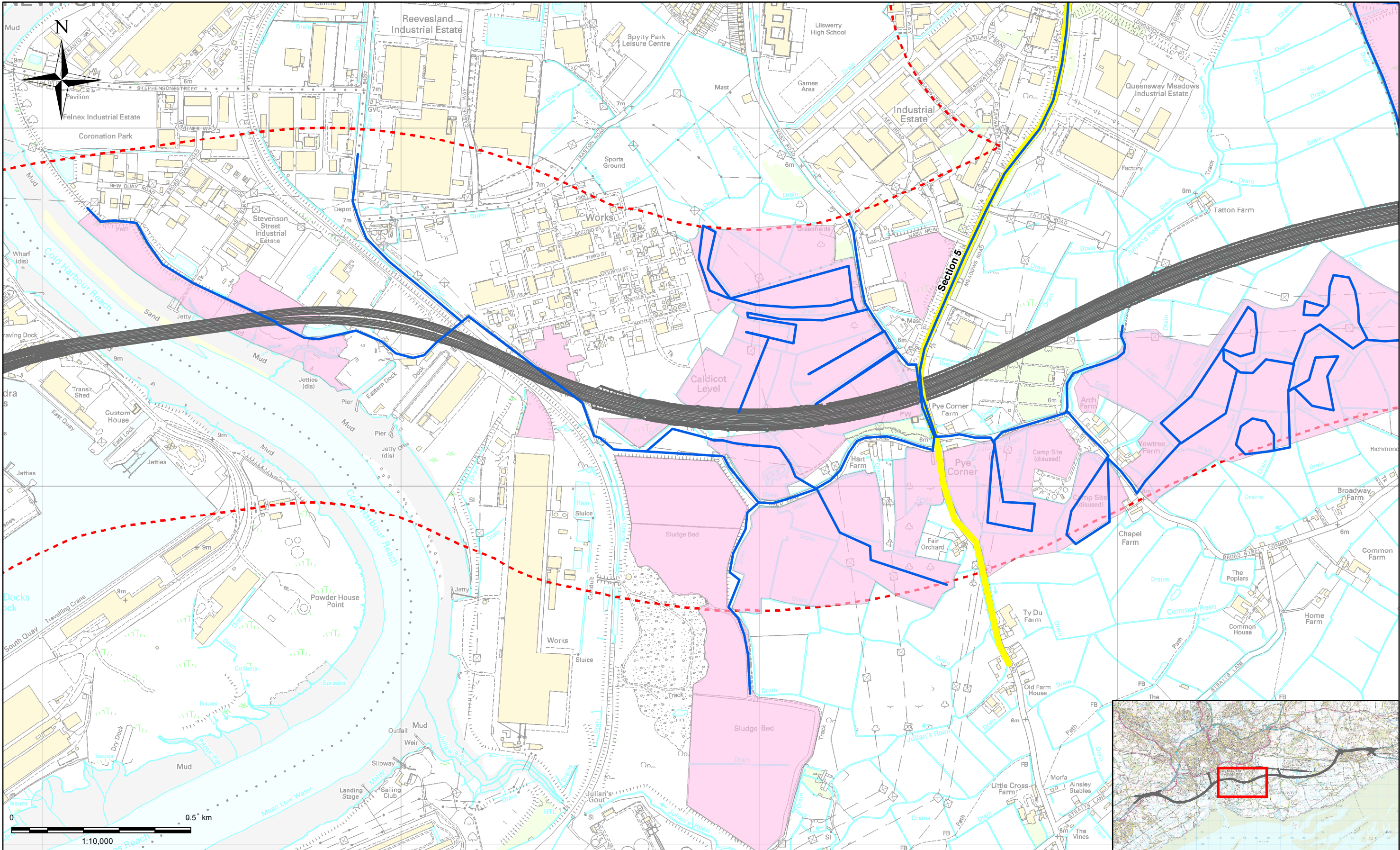
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Project	M4 Corridor around Newport Wintering Bird Survey Report 2014/15
Title	Transect Survey Coverage and Routes (Section 1 to 7) Figure 3.4

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03	DONE SOME AMENDMENTS	25/05/15
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Issue	Description	Date

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	Section Boundaries
	Proposed Scheme Location
	Transect Survey Coverage
	500m Buffer

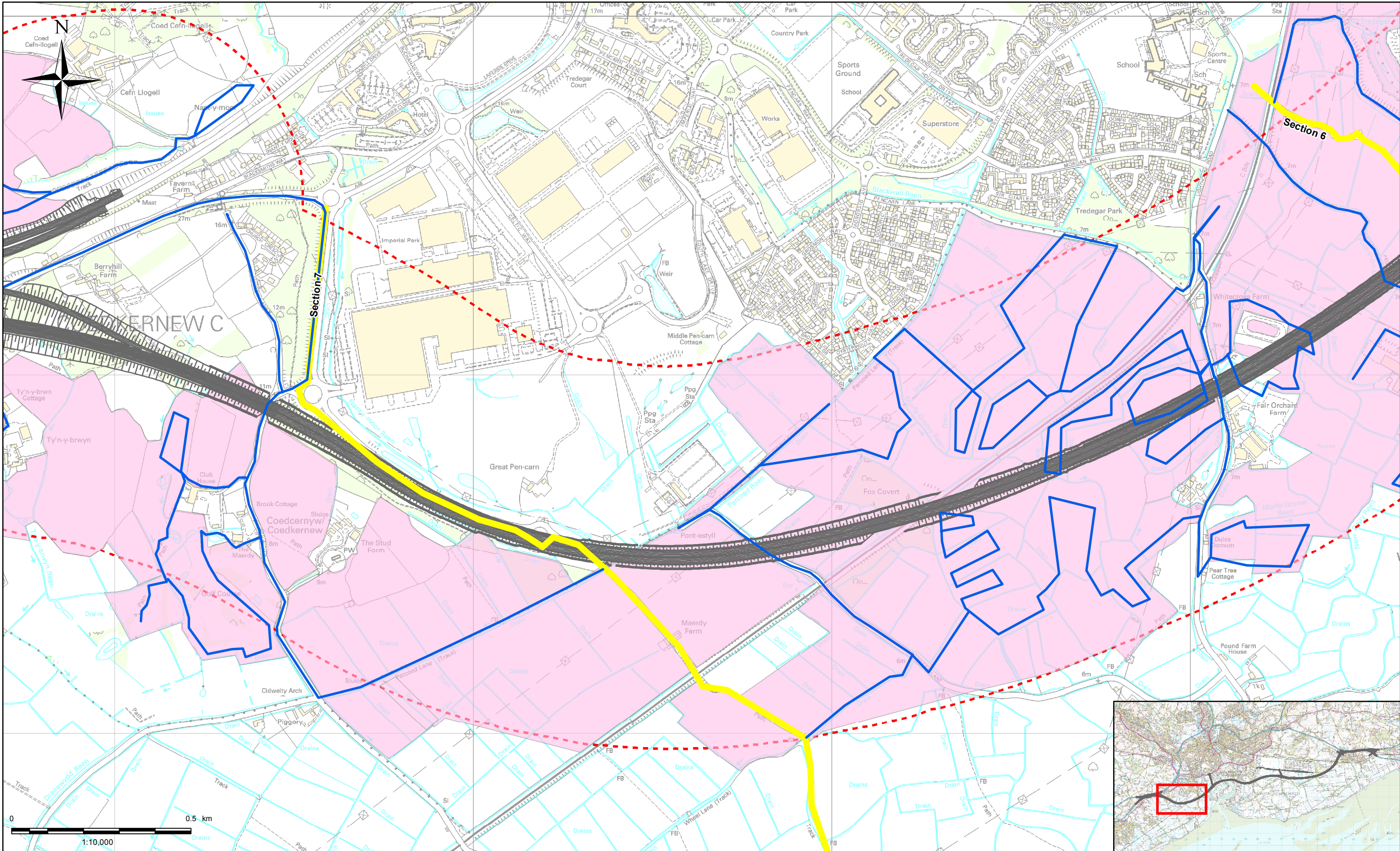
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Title Transect Survey Coverage and Routes (Section 1 to 7) Figure 3.5	

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Legend	
	Transect Routes
	Section Boundaries
	Proposed Scheme Location
	Transect Survey Coverage
	500m Buffer

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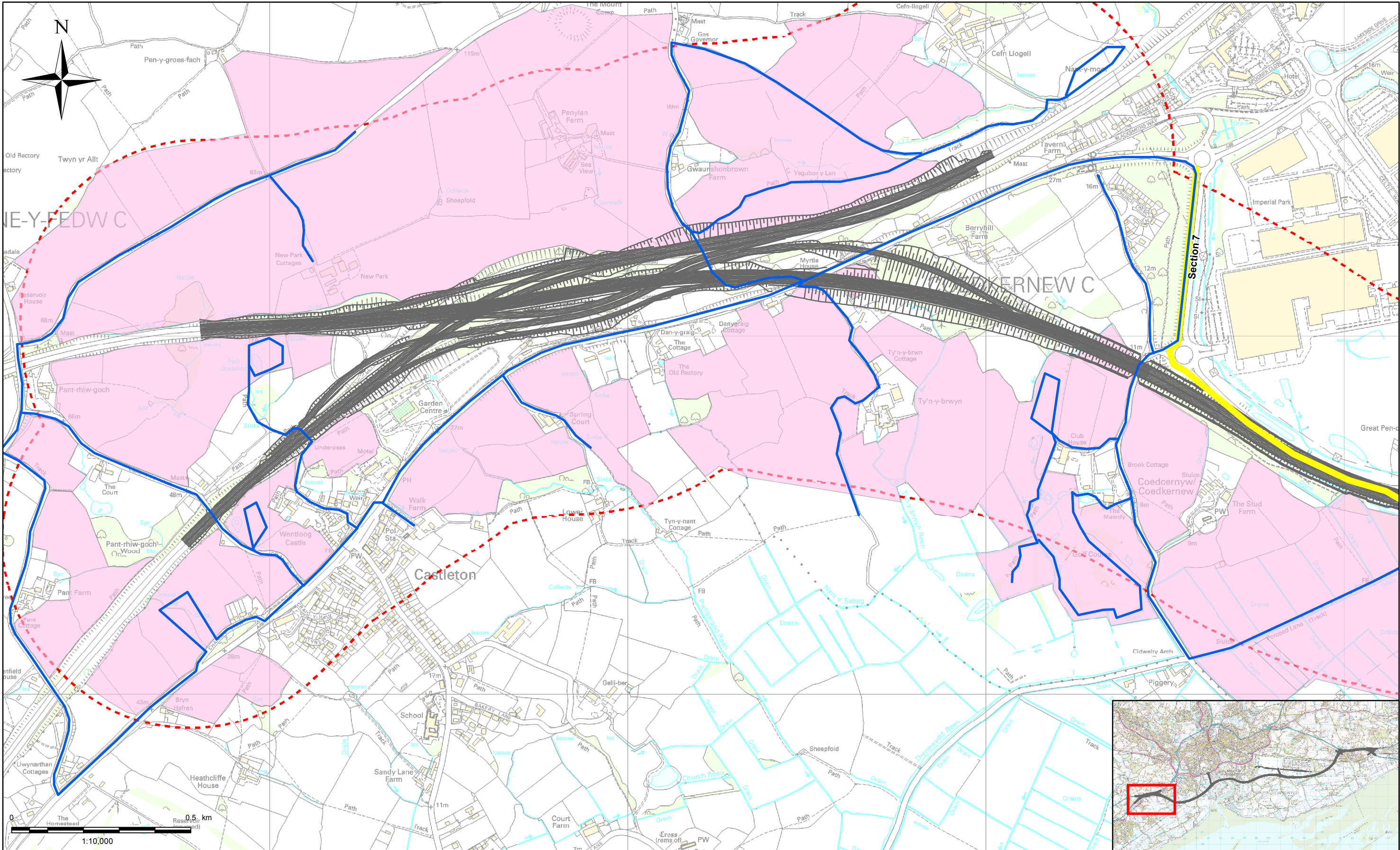
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Title Transect Survey Coverage and Routes (Section 1 to 7) Figure 3.7	

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01	VERSION 1	14/05/15
Issue	Description	Date

Legend	
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	Section Boundaries
	Proposed Scheme Location
	Transect Survey Coverage
	500m Buffer

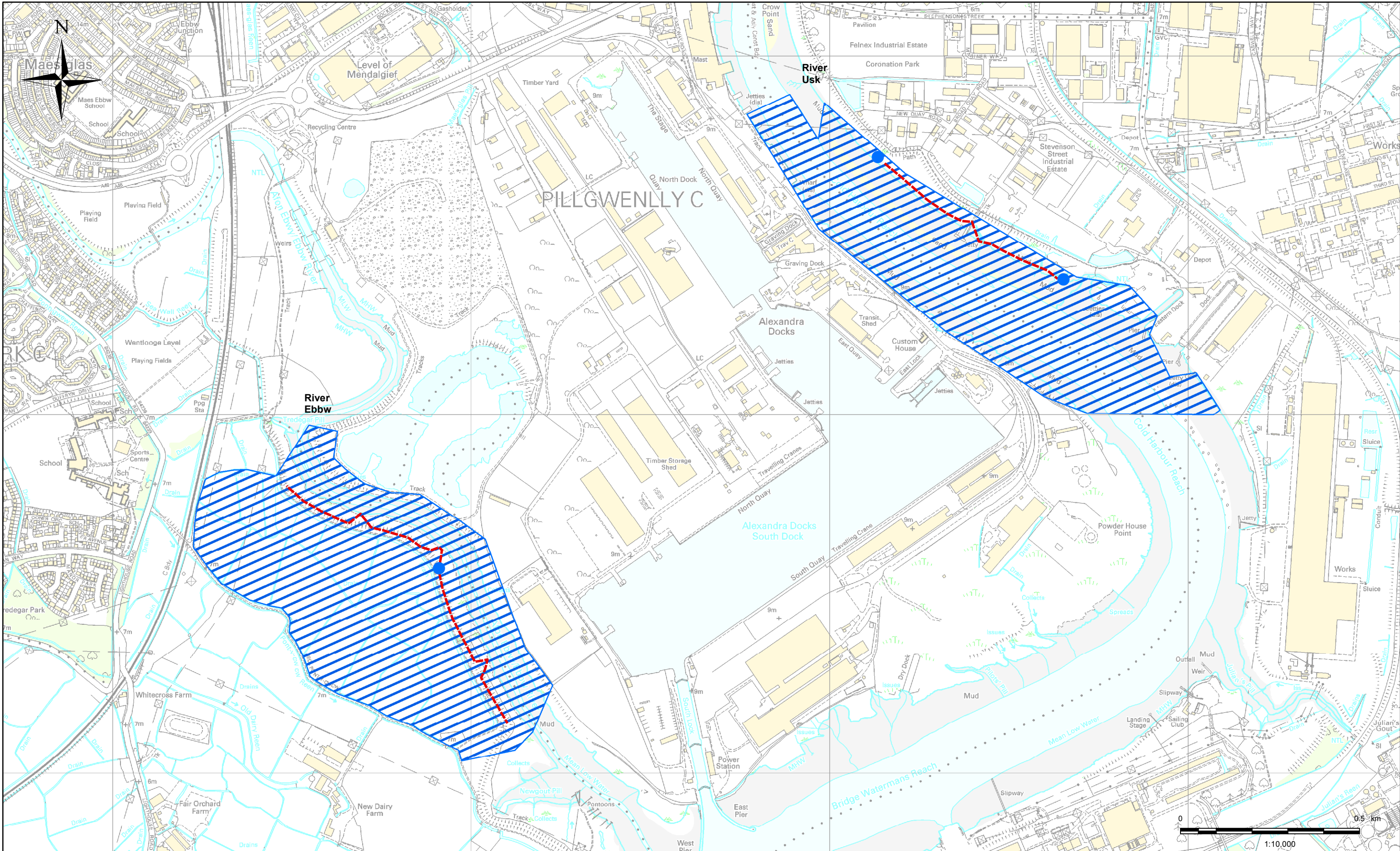
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Project M4 Corridor around Newport Wintering Bird Survey Report 2014/15	Title Transect Survey Coverage and Routes (Section 1 to 7) Figure 3.8
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Legend

- Vantage Point Locations
- Transect
- Survey Coverage

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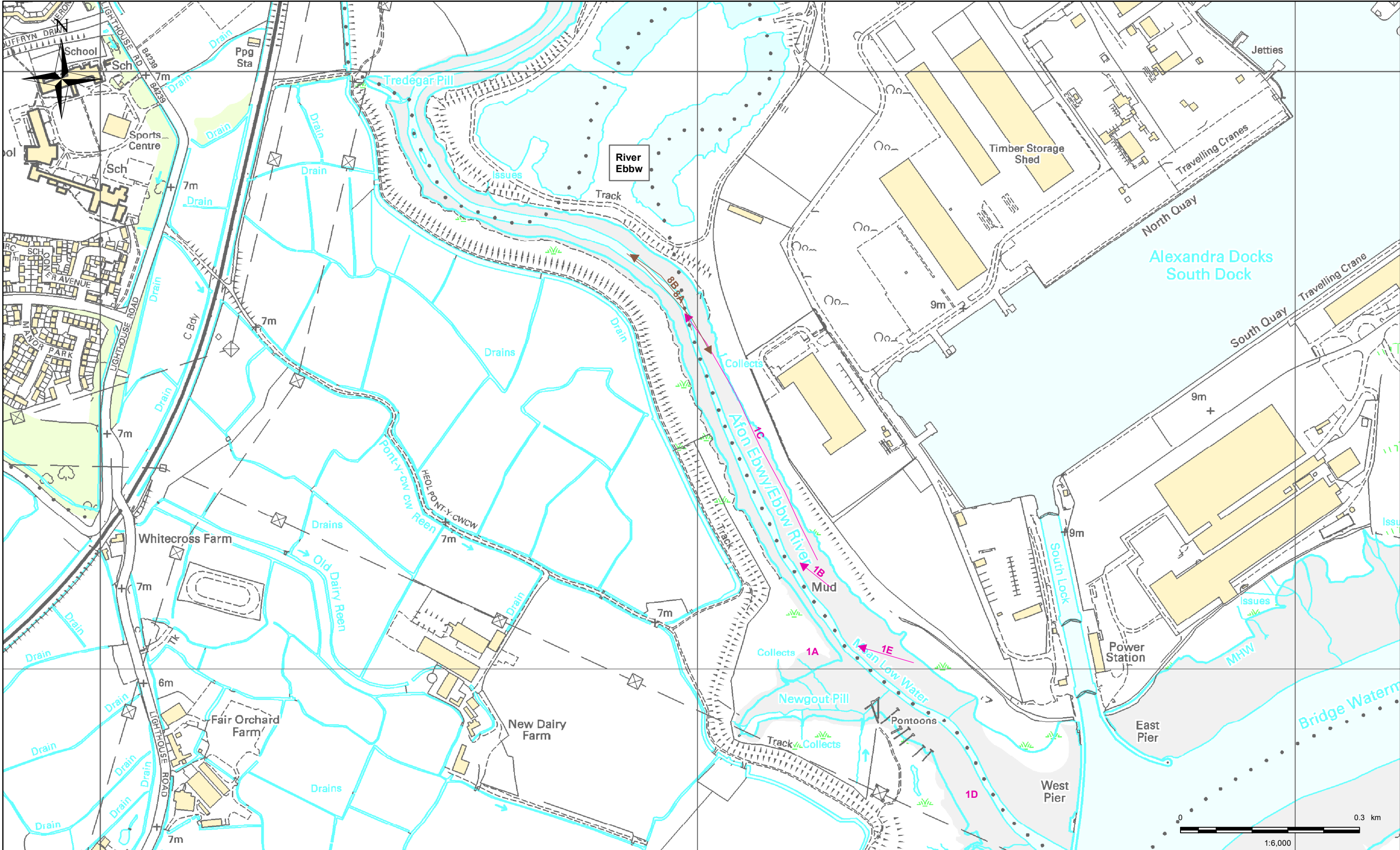
Title

Vantage Point Survey
Coverage and Locations
Figure 4



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Legend

April (Curlew)

September (Curlew)

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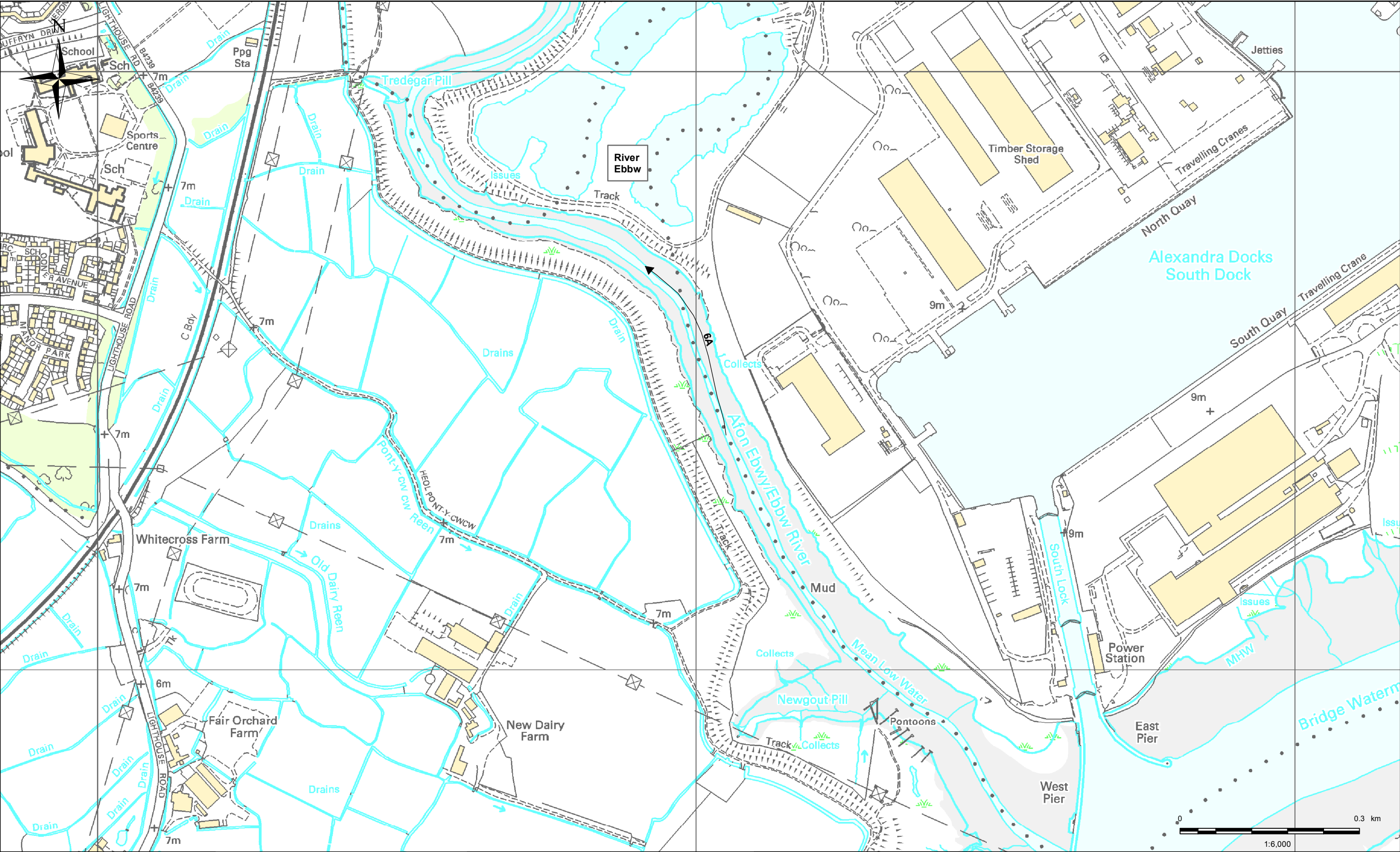
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Title

River Ebbw Vantage Point
Flight Observations
Figure 5.1

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Legend

 Febuary (Dunlin)

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Project

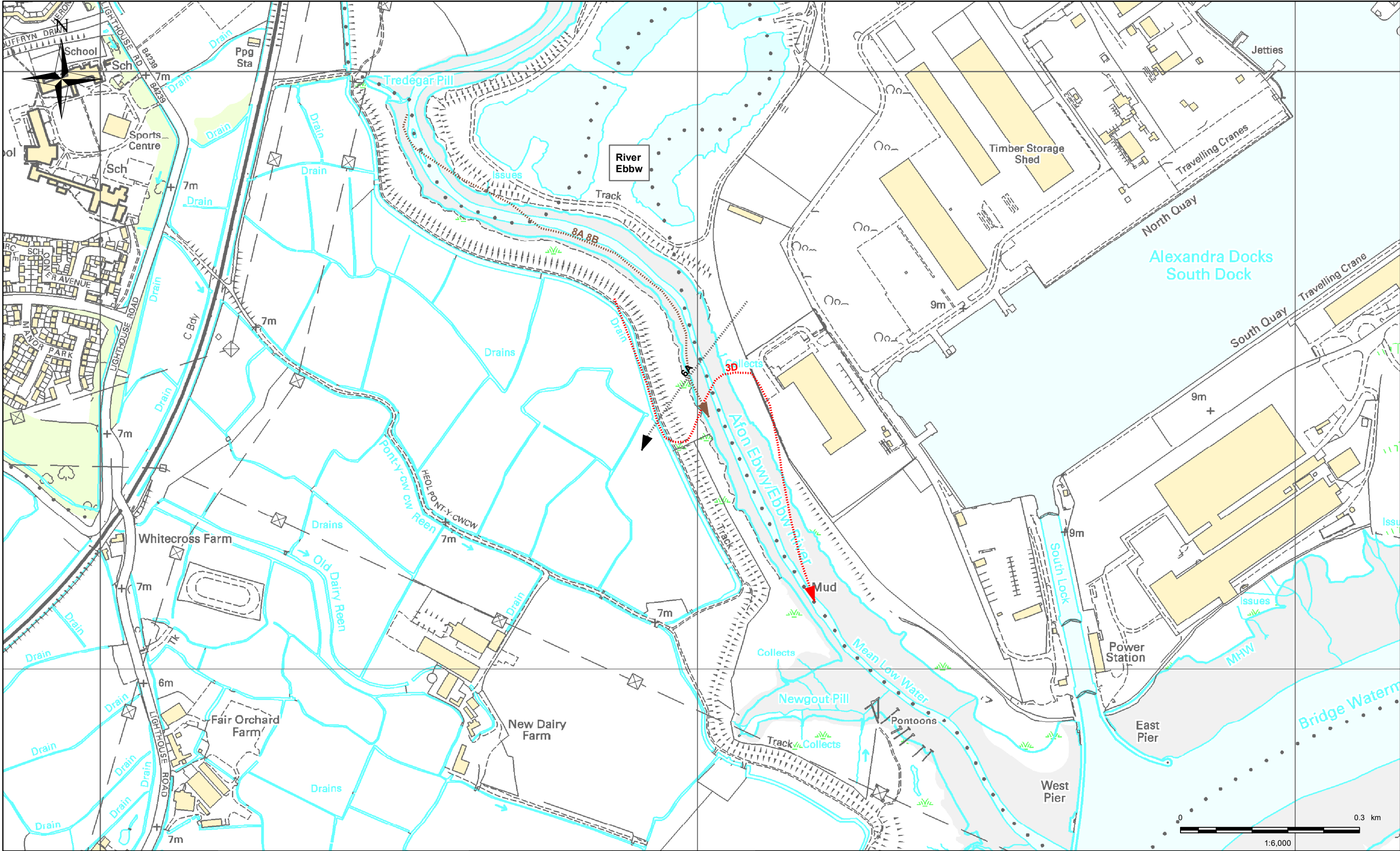
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Title

River Ebbw Vantage Point
Flight Observations
Figure 5.2


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Issue	Description	Date

Legend

Febuary (Lapwing)

April (Lapwing)

November (Lapwing)

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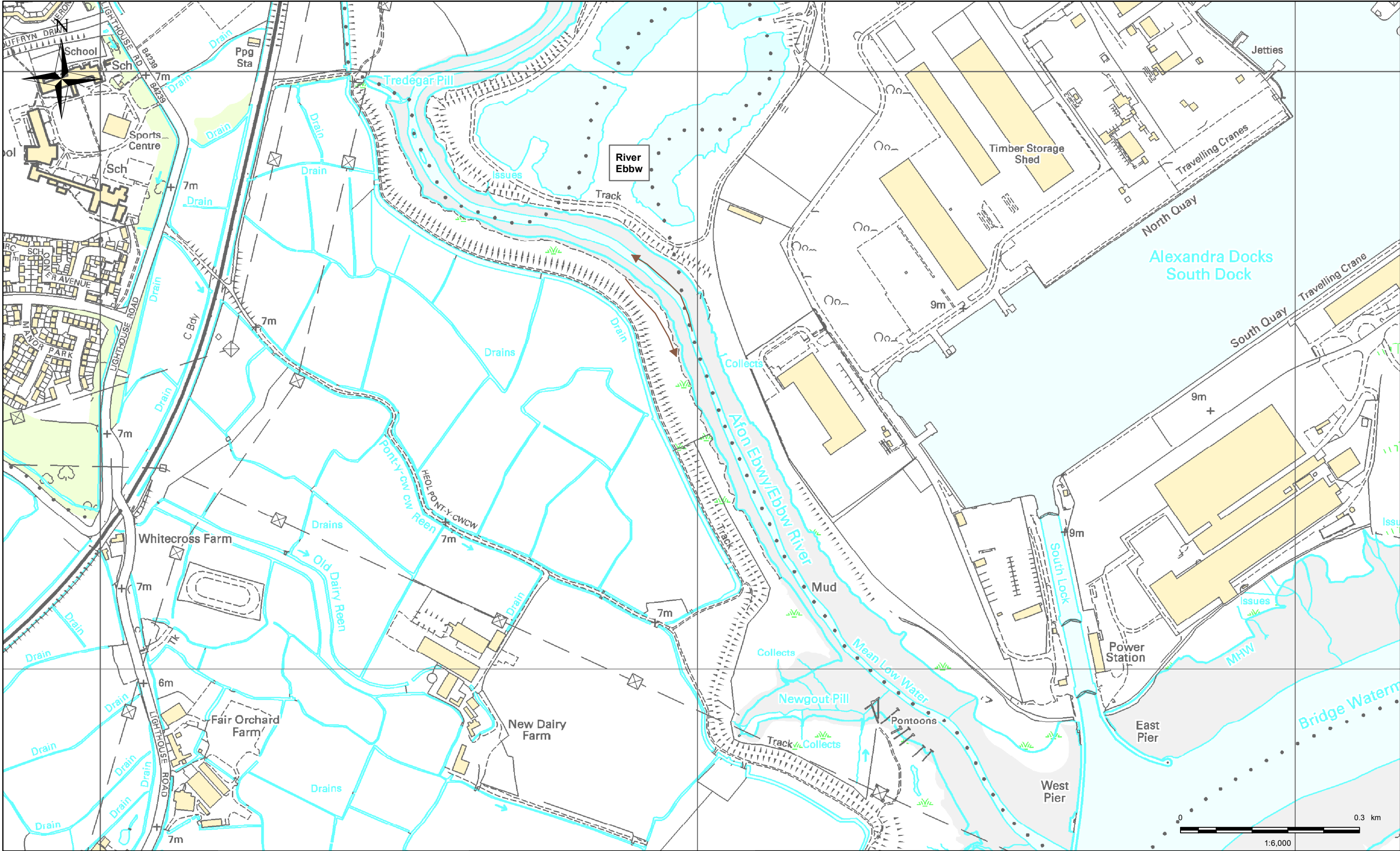
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River Ebbw Vantage Point
Flight Observations
Figure 5.3



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Issue	Description	Date

Legend
April (Shelduck)

50mm on Original

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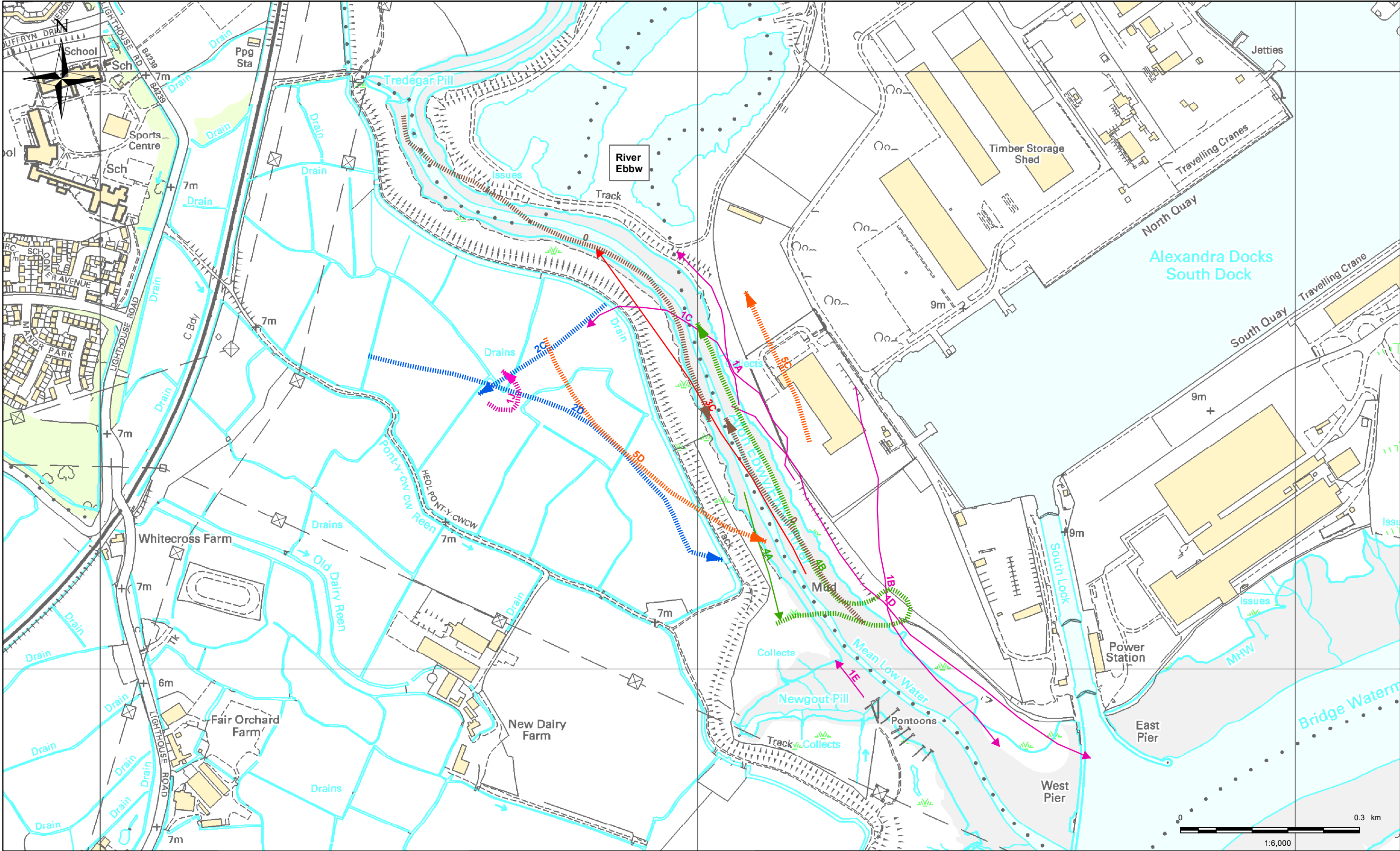
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Title
River Ebbw Vantage Point
Flight Observations
Figure 5.4

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01	VERSION 1	14/05/15
Issue	Description	Date

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	April (Grey Heron)
	September (Grey Heron)
	October (Grey Heron)
	December (Grey Heron)
	September (Little Egret)
	November (Little Egret)
	December (Little Egret)

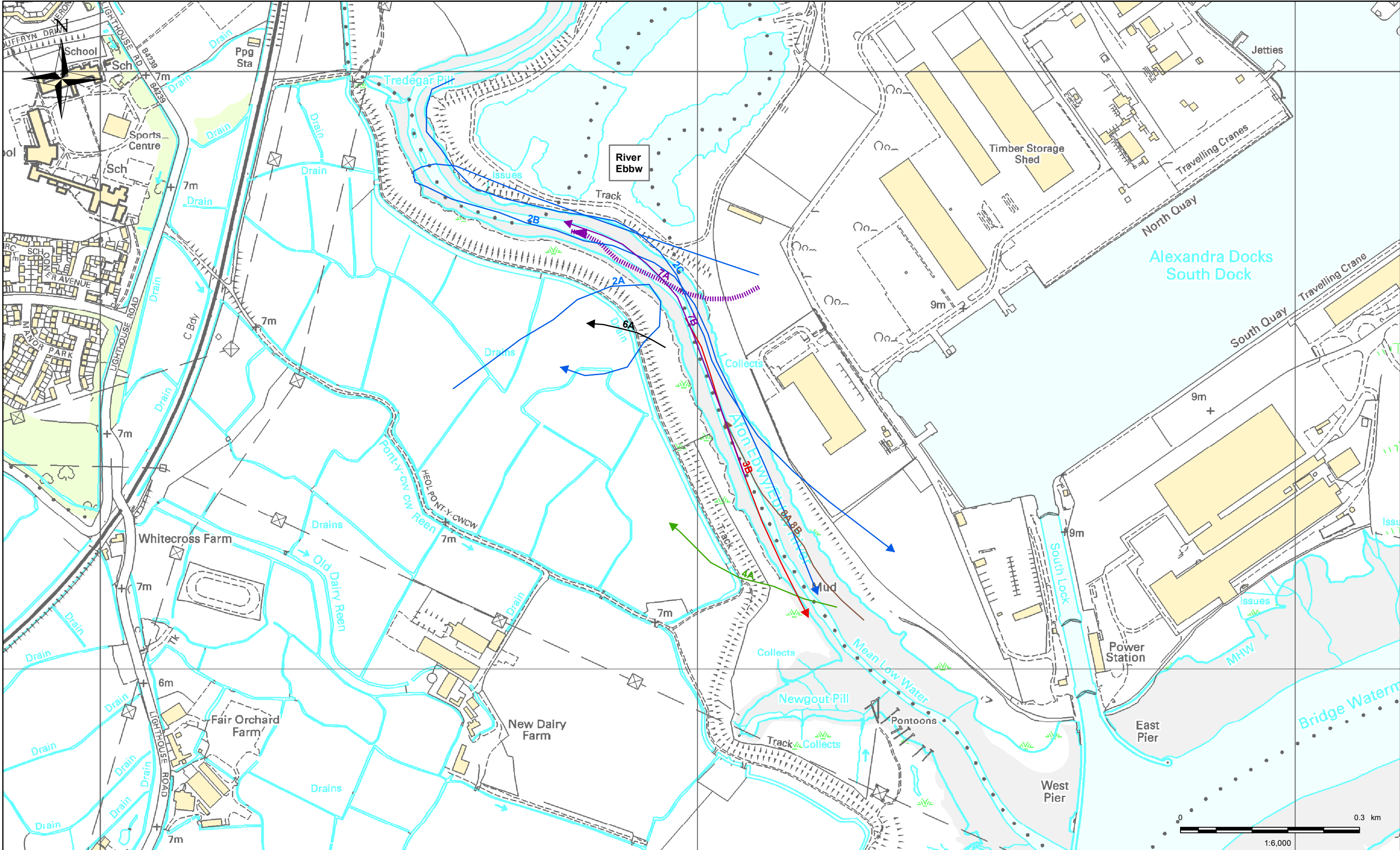
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Title	River Ebbw Vantage Point Flight Observations Figure 5.5

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03	DONE SOME AMENDMENTS	25/05/15
02	DONE SOME AMENDMENTS	20/05/15
01	VERSION 1	14/05/15
Issue	Description	Date

- Legend**
- February (Mute Swan)
 - March (Mute Swan)
 - April (Mute Swan)
 - October (Mute Swan)
 - November (Mute Swan)
 - December (Mute Swan)
 - March (Canada Goose)

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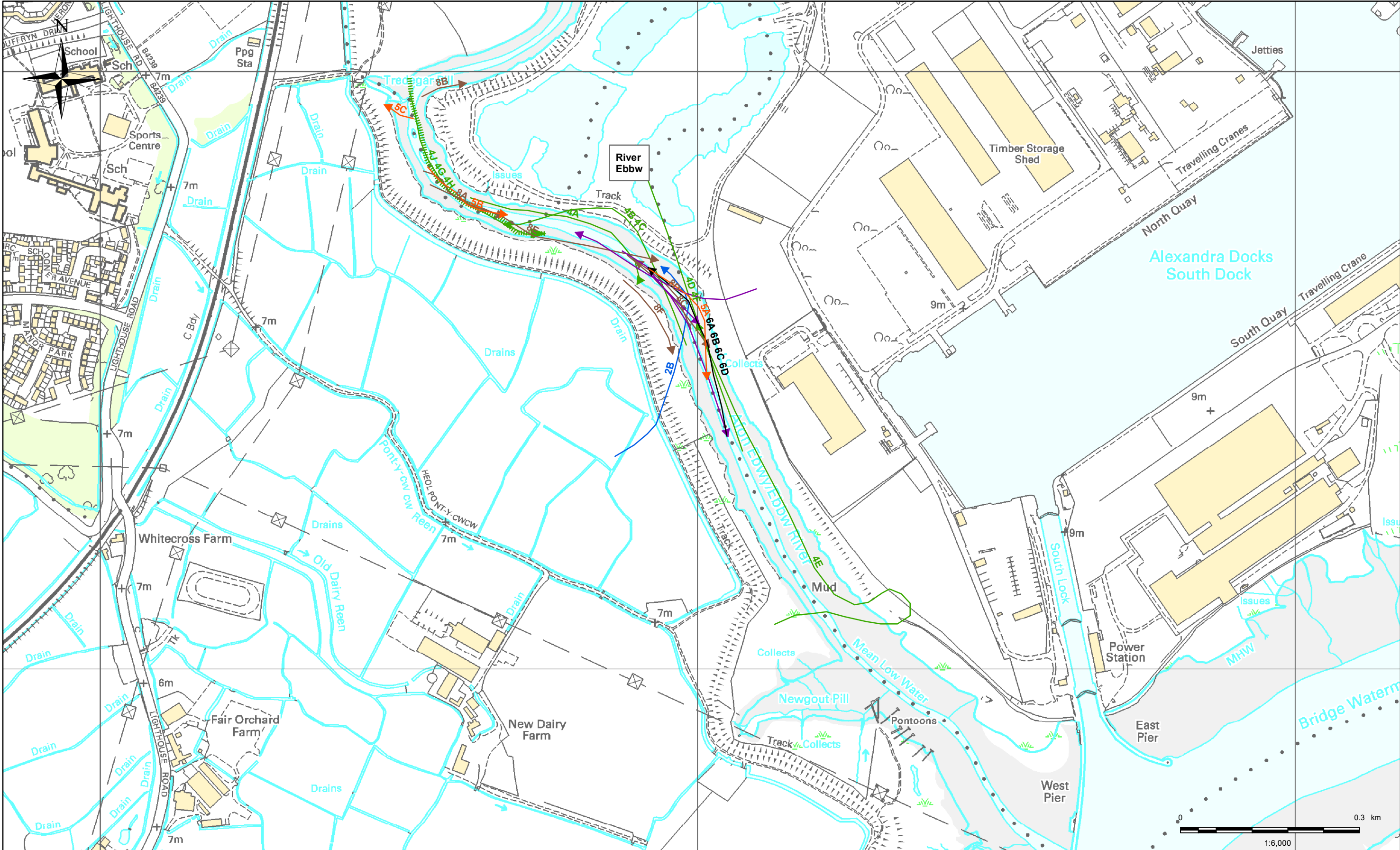


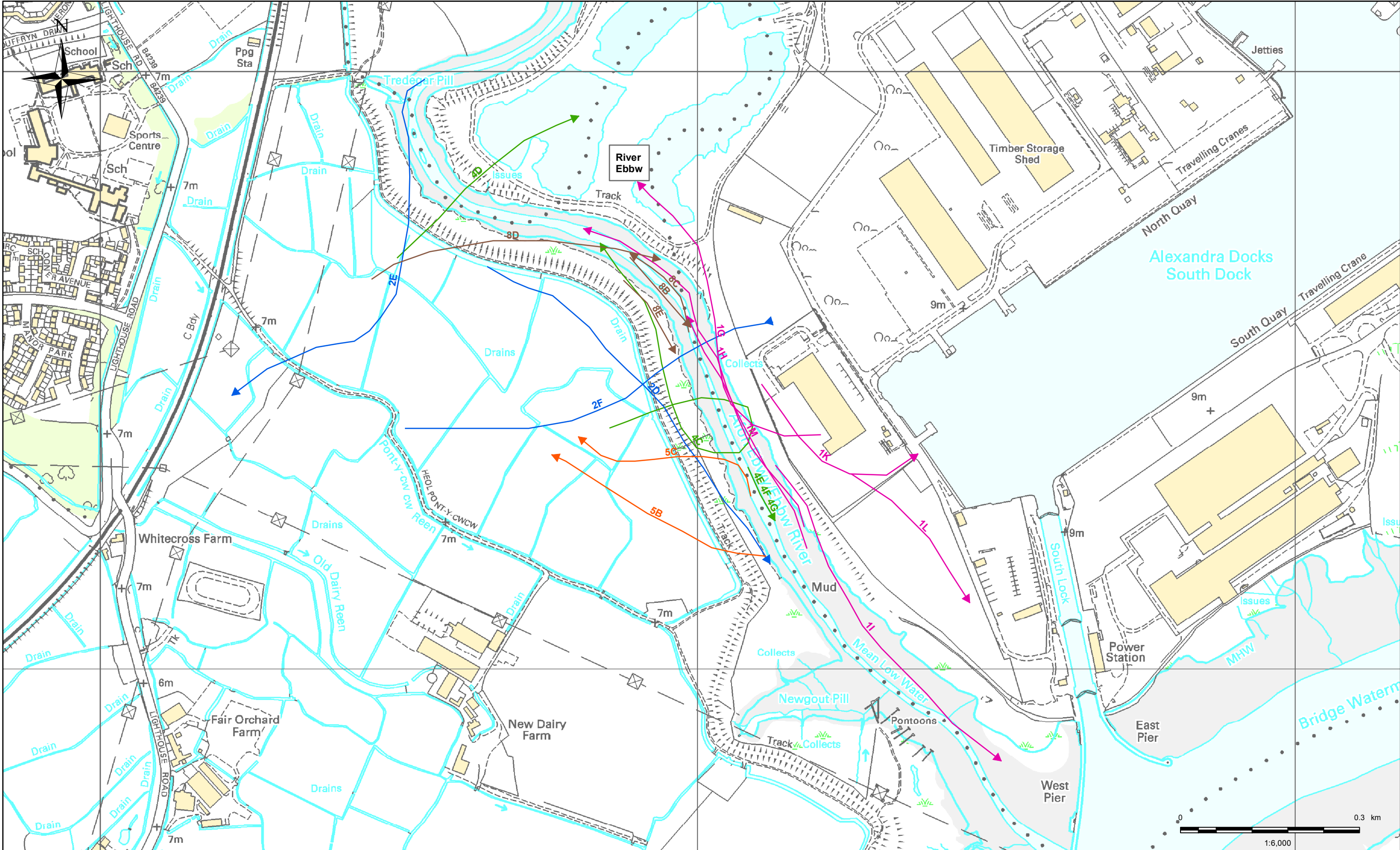
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Title	River Ebbw Vantage Point Flight Observations Figure 5.6

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Legend

- January (Mallard)
- April (Mallard)
- September (Mallard)
- October (Mallard)
- December (Mallard)

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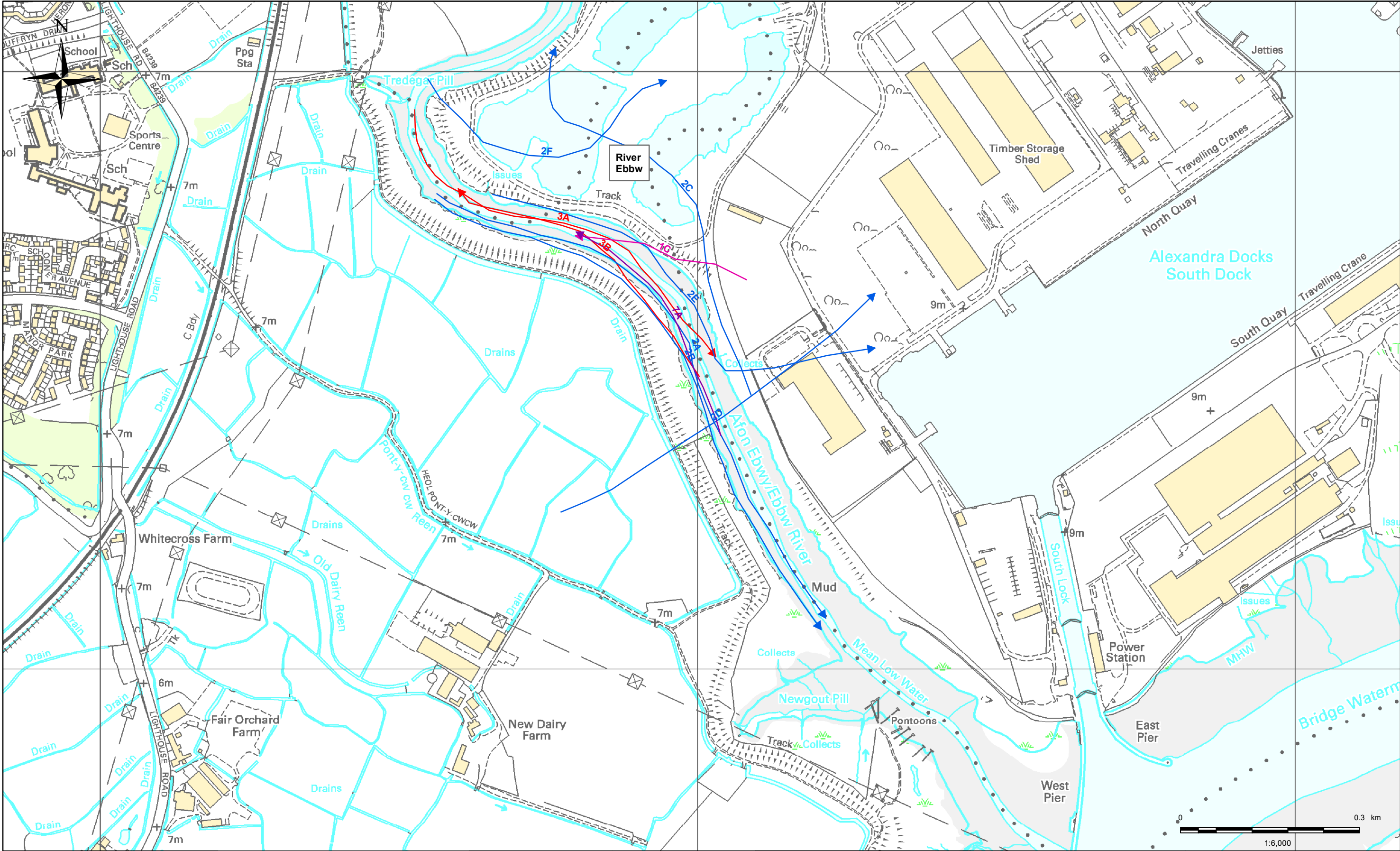
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Title	River Ebbw Vantage Point Flight Observations Figure 5.8



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Issue	Description	Date

- Legend**
- March (Cormorant)
 - September (Cormorant)
 - October (Cormorant)
 - November (Cormorant)

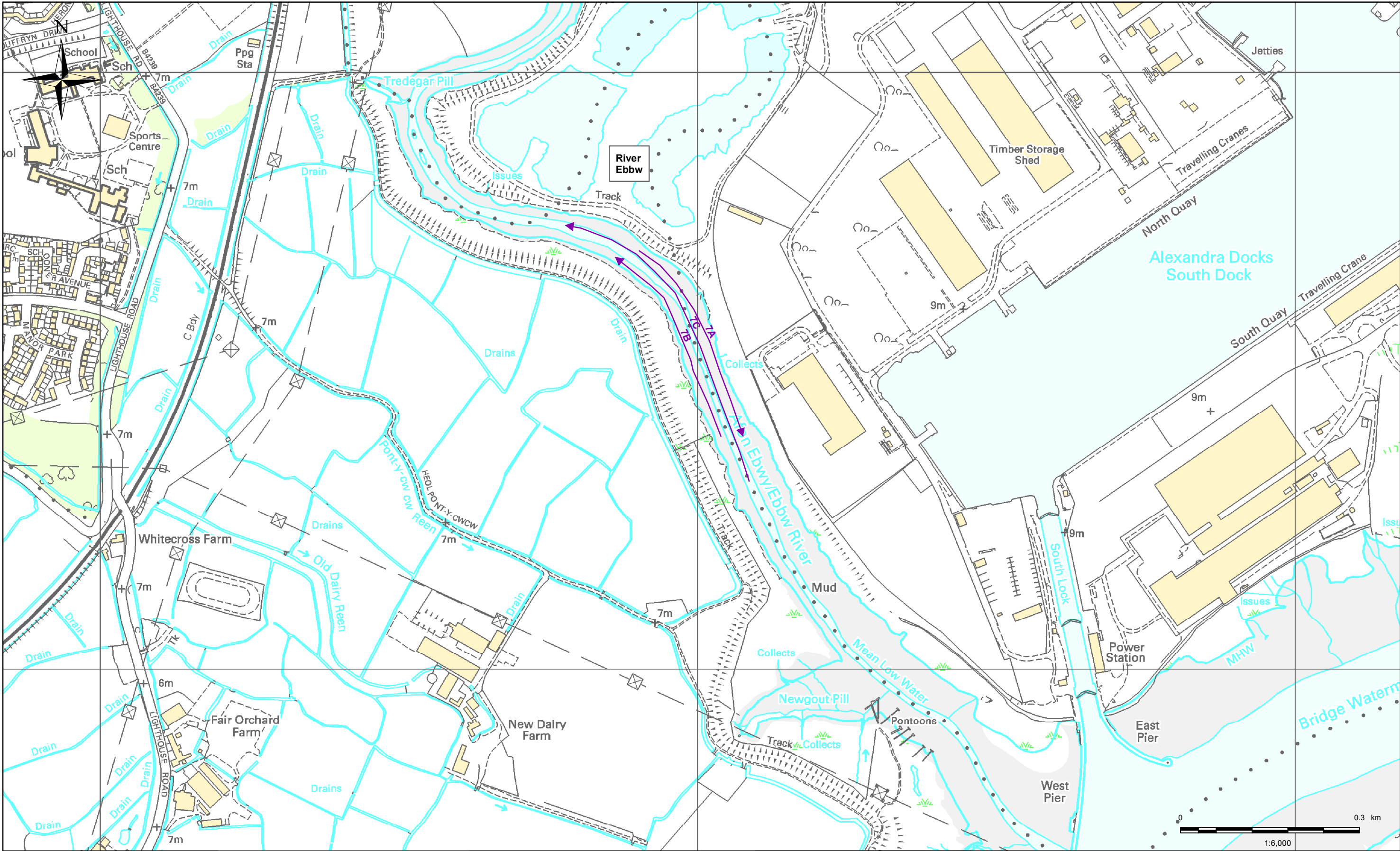
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Title	River Ebbw Vantage Point Flight Observations Figure 5.9

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Legend

→ March (Oystercatcher)

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River Ebbw Vantage Point
Flight Observations
Figure 5.10



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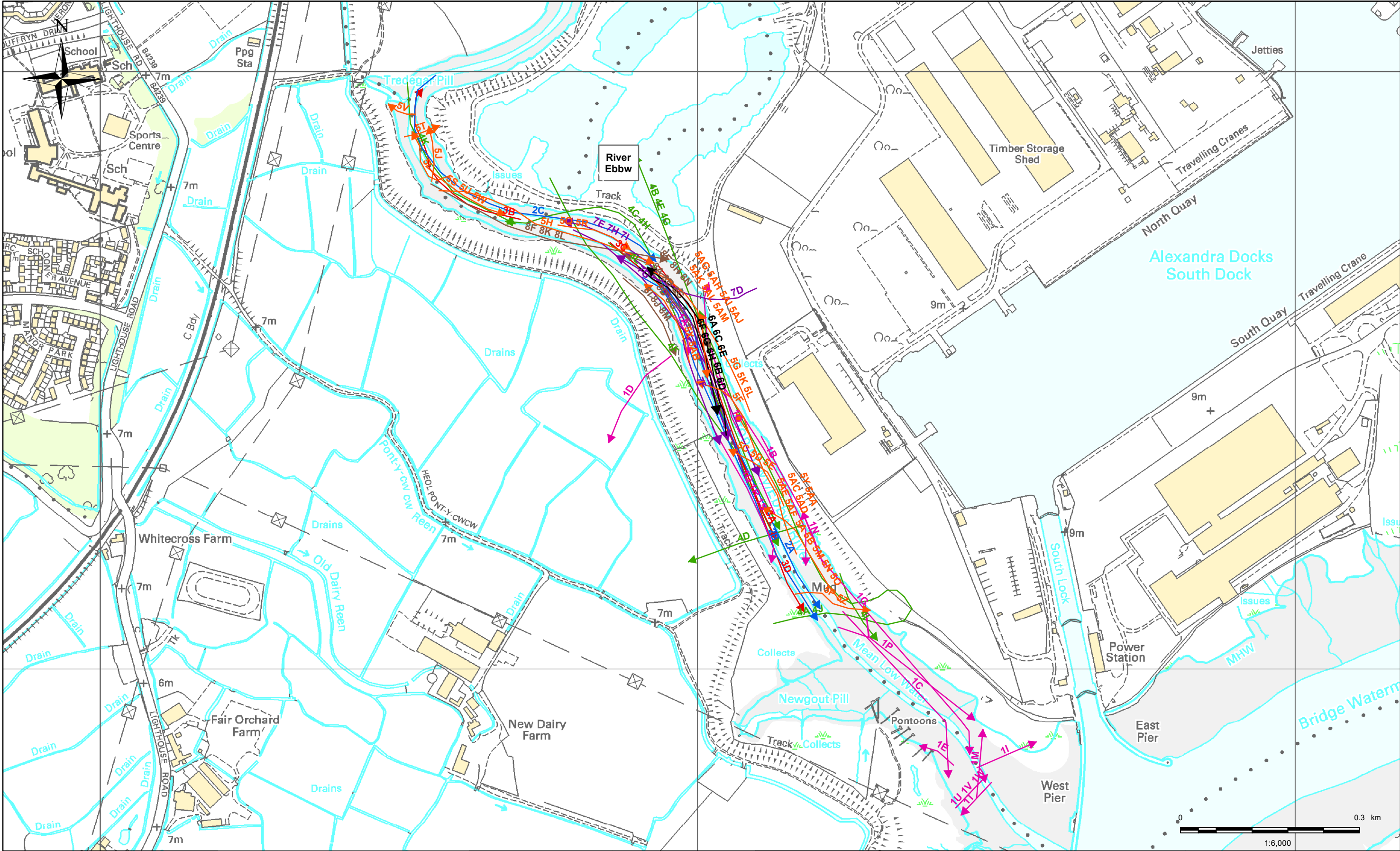
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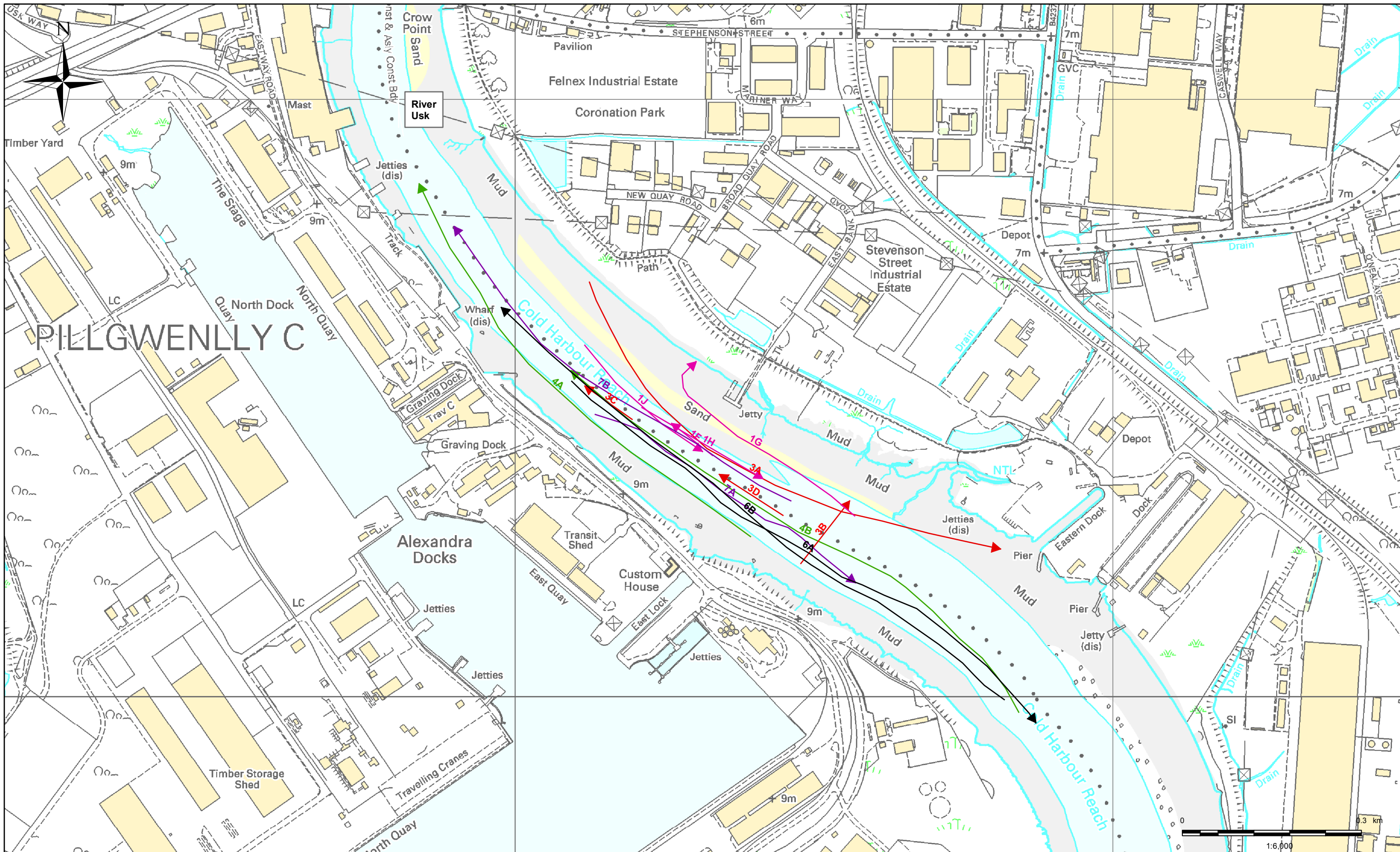
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Issue	Description	Date

Legend

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- November (Curlew)
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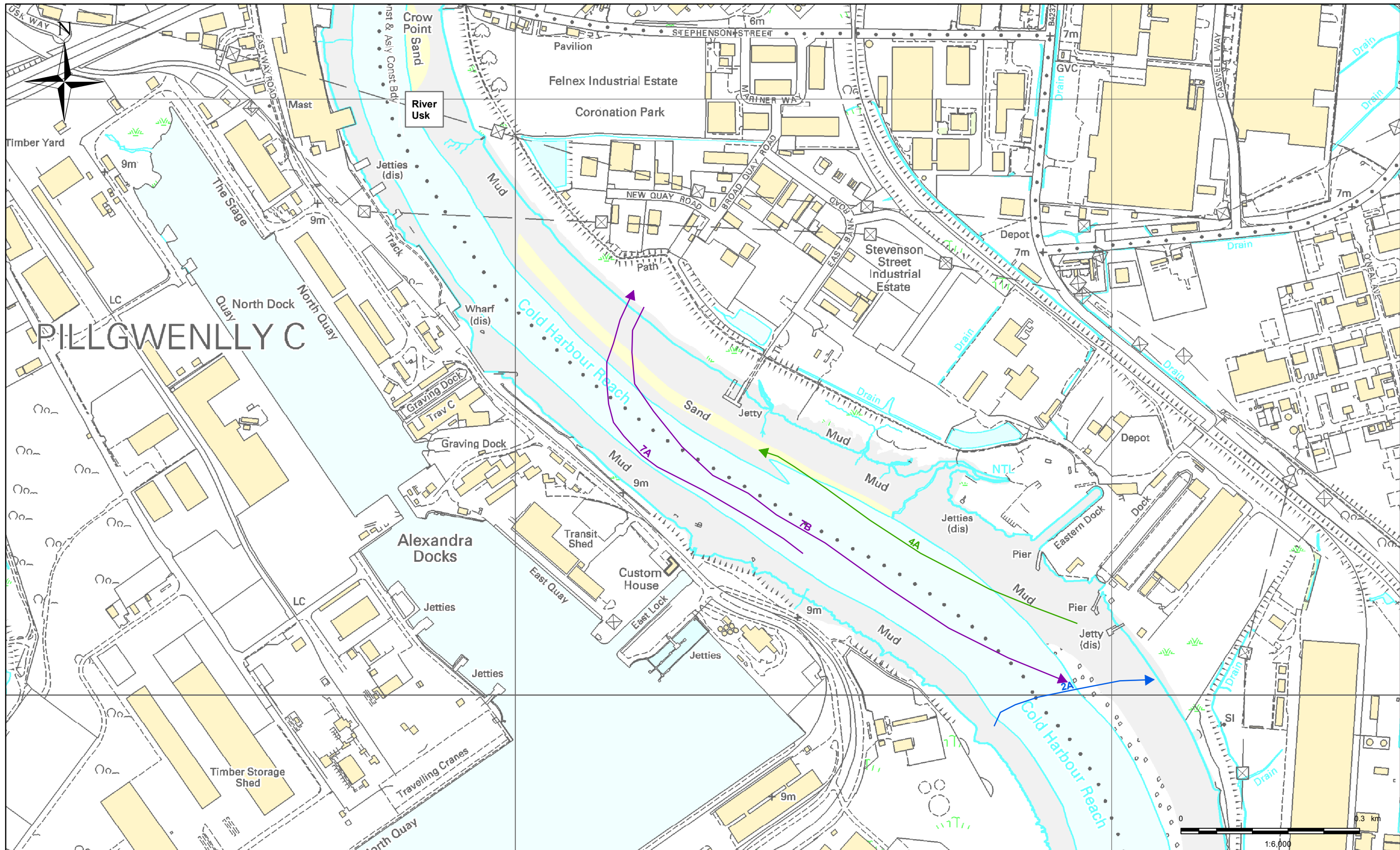
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River Usk Vantage Point
 Flight Observations
 Figure 6.1

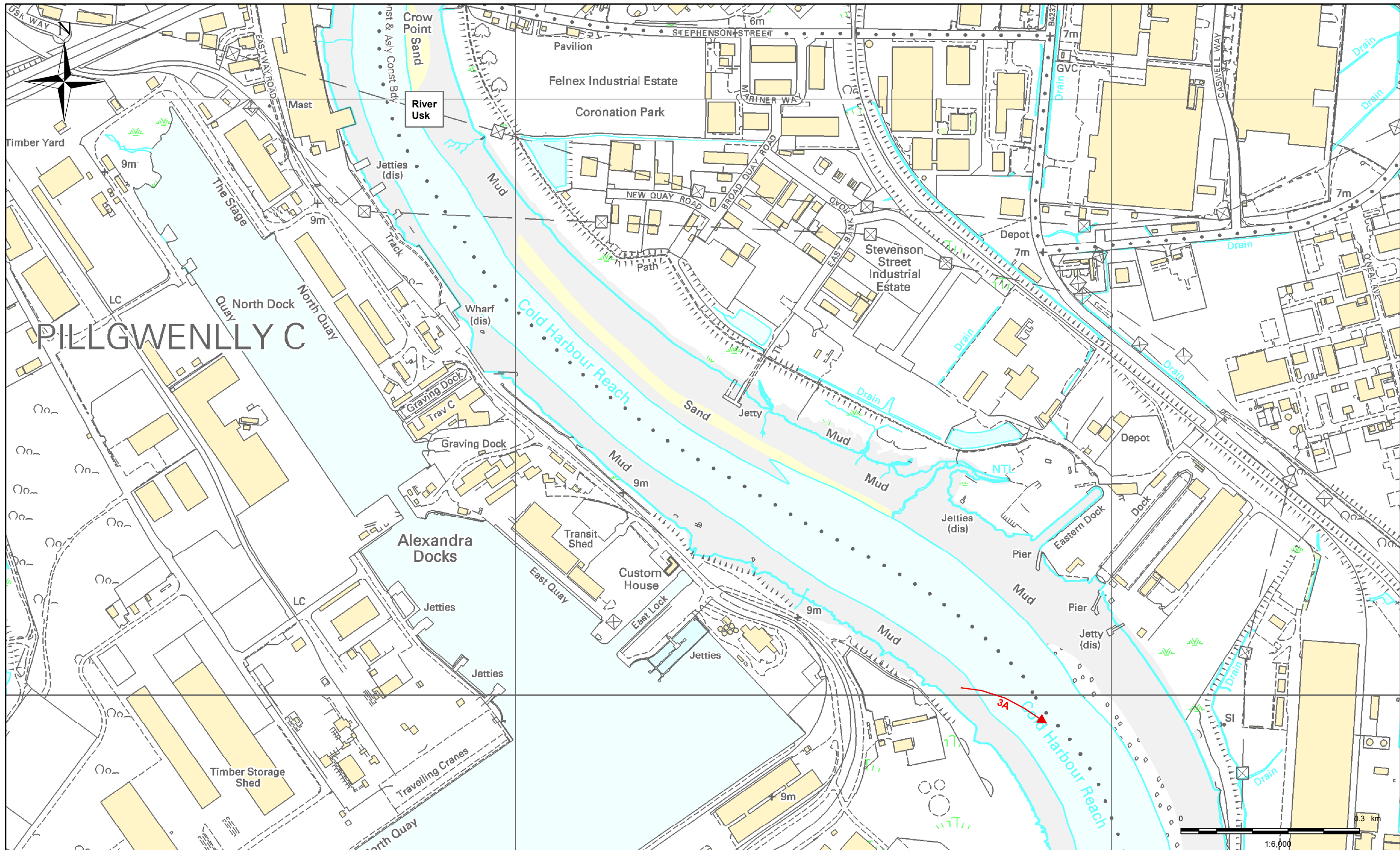
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		<div>Legend</div> <div><div><div></div><div>March (Dunlin)</div></div><div><div></div><div>October (Dunlin)</div></div><div><div></div><div>December (Dunlin)</div></div></div>		<div>Disclaimer</div> <div>© Crown Copyright and database right 2015. Ordnance Survey 100021874. Welsh Government.</div> <div>© Hawlfraint a hawliau cronfa ddata'r Goron 2015. Rhif Trwydded yr Arolwg Ordans 100021874.</div>		<div>Client</div> <div><div><div></div></div><div>Llywodraeth Cymru Welsh Government</div></div>		<div>Status</div> <div>PRELIMINARY/CONFIDENTIAL</div> <div><div>Scale</div><div>1:6,000</div><div>Current Issue Signatures</div><div><div>Drawn S.D.</div><div>Checked M.L.</div></div><div><div>Original Size</div><div>A3</div><div>Height Datum</div><div>NEWLYN</div></div><div><div>Grid</div><div>O.S</div><div>© Copyright reserved</div></div><div>Filename: E130-UA006729-UE21D-01-Figure 6 - River Usk VP flight observations</div></div>		<div>Project</div> <div>M4 Corridor around Newport Wintering Bird Survey Report 2014/15</div> <div><div>Title</div><div>River Usk Vantage Point Flight Observations Figure 6.2</div></div>		<div><div><div></div><div>Hyder</div></div><div>HYDER CONSULTING (UK) Limited 5th Floor, The Pithay All Saints Street Bristol, England BS1 2NL Tel: +44 (0)870 000 3003 Fax: +44 (0)870 000 3903</div></div>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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03	DONE SOME AMENDMENTS	25/05/15
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01	VERSION 1	15/05/15
Issue	Description	Date

Legend

→ November (Ringed Plover)

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Project

M4 Corridor around Newport
Wintering Bird Survey Report
2014/15

Title

River Usk Vantage Point
Flight Observations
Figure 6.3



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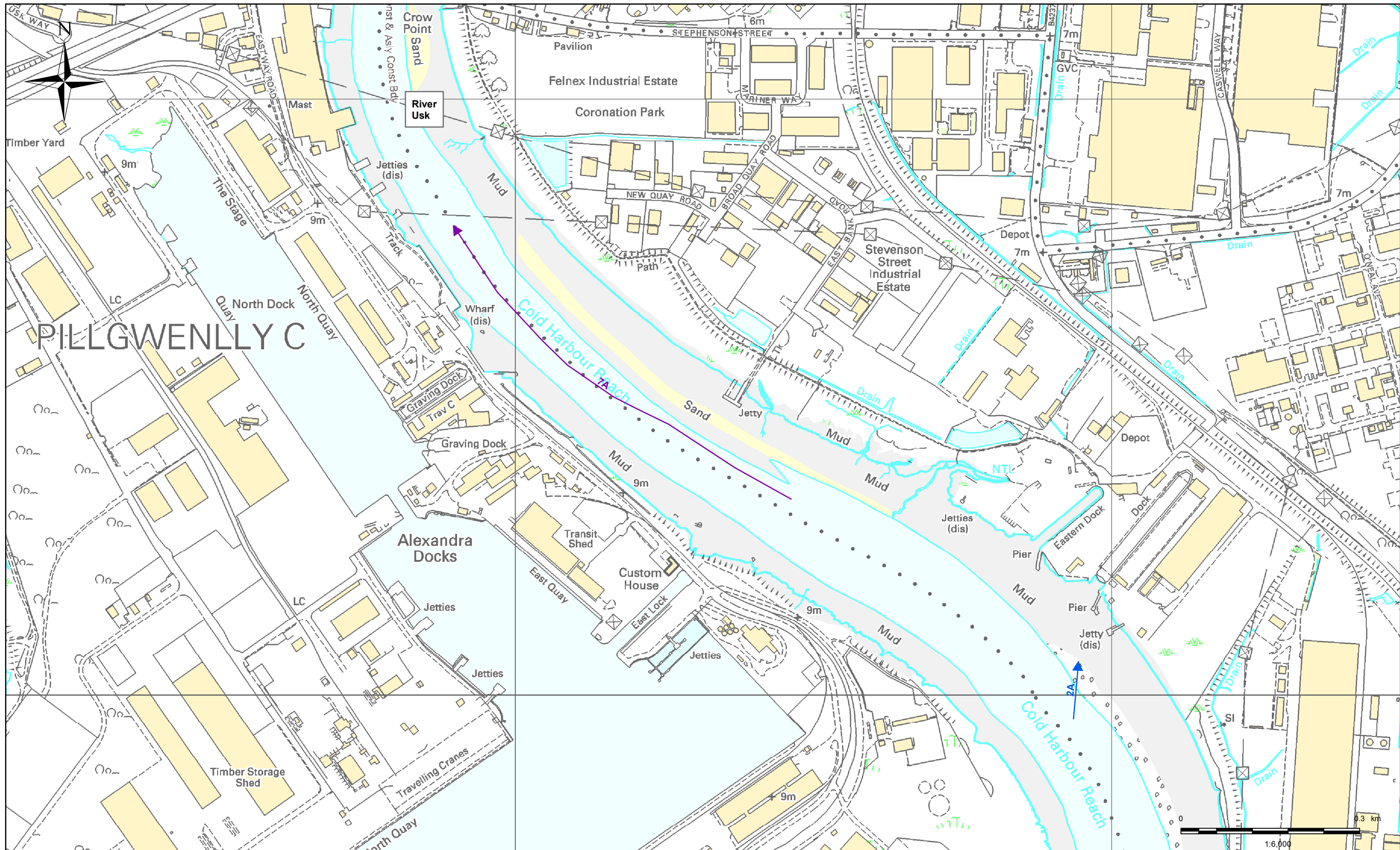
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01	VERSION 1	15/05/15
Issue	Description	Date

Legend

- March (Shelduck)
- October (Shelduck)

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Project

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Wintering Bird Survey Report
2014/15

Title

River Usk Vantage Point
Flight Observations
Figure 6.4



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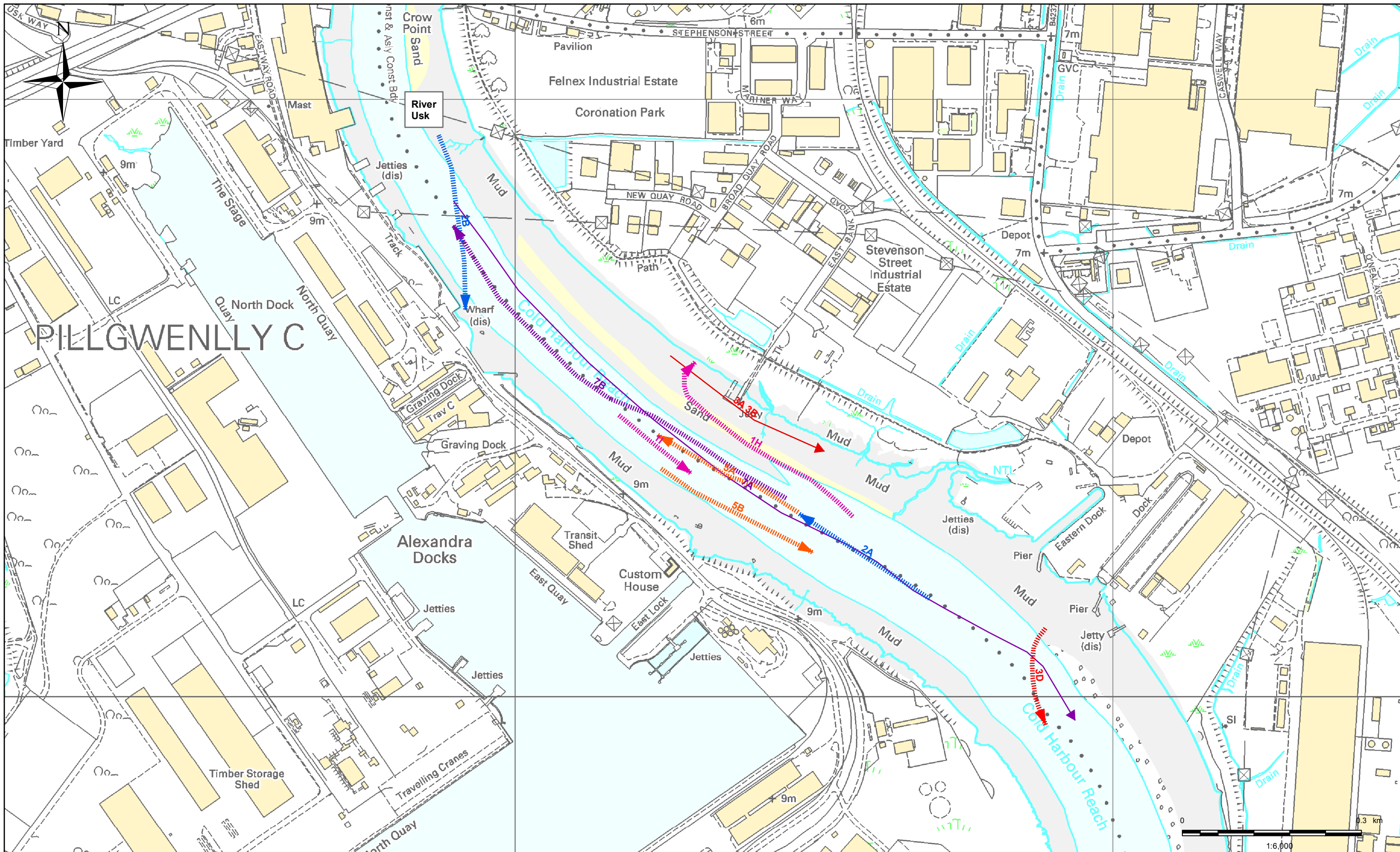
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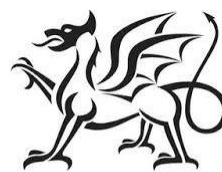
Legend

- January (Grey Heron)
- March (Grey Heron)
- September (Grey Heron)
- October (Grey Heron)
- November (Grey Heron)
- March (Little Egret)
- November (Little Egret)

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Project

M4 Corridor around Newport
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Title

River Usk Vantage Point
Flight Observations
Figure 6.5



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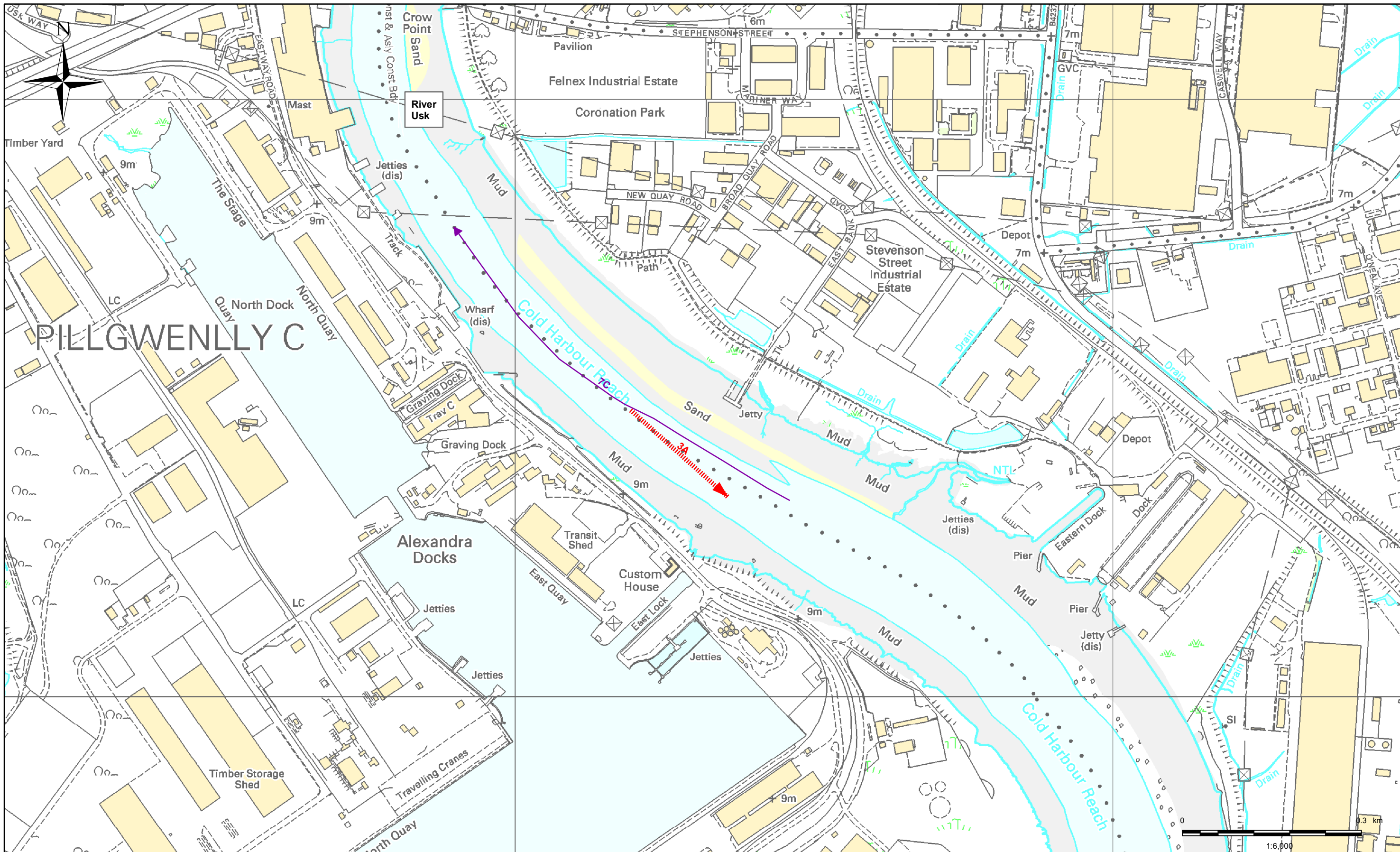
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01	VERSION 1	15/05/15
Issue	Description	Date

Legend

March (Mute Swan)
 November (Canada Goose)

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 Wintering Bird Survey Report
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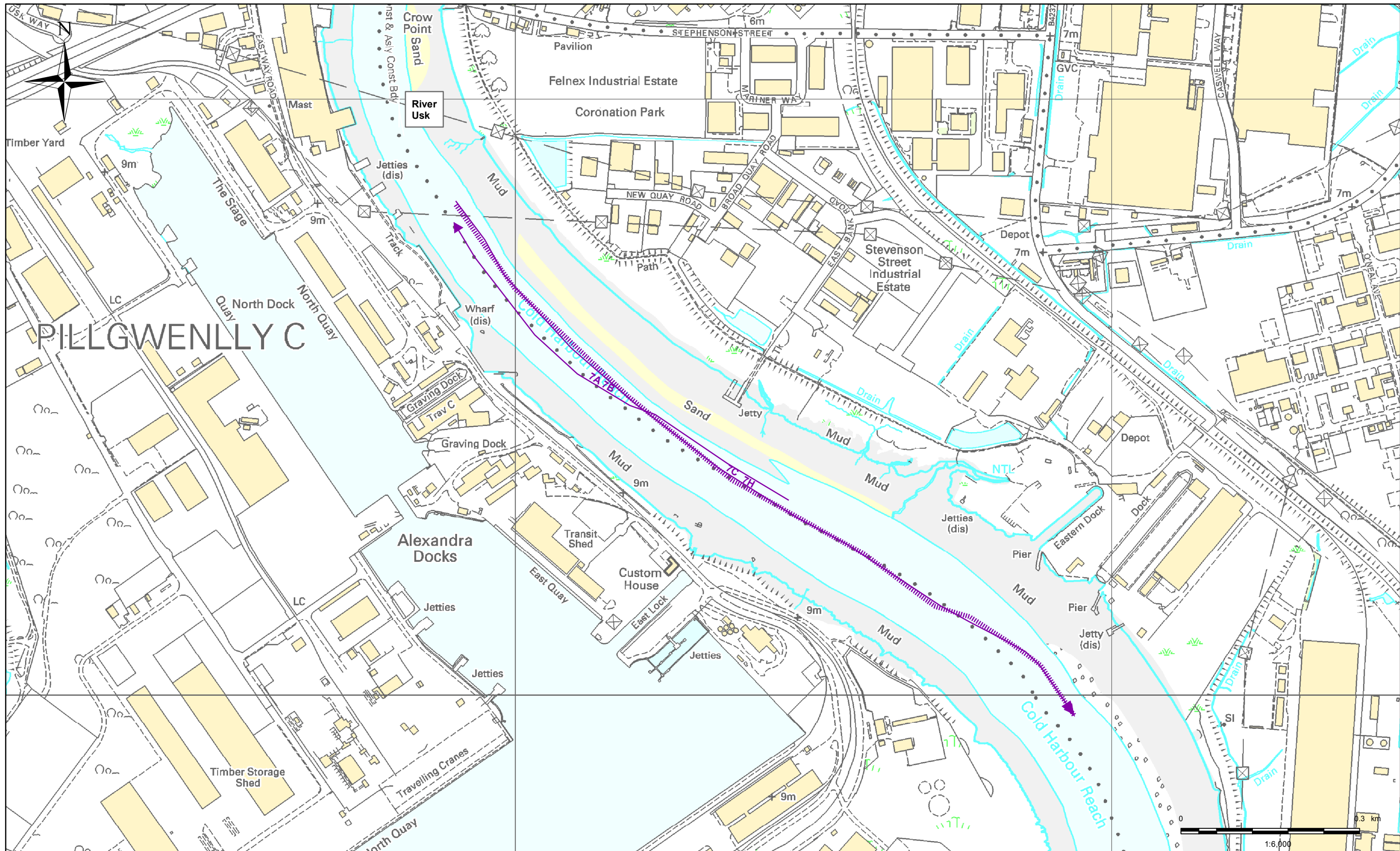
Title

River Usk Vantage Point
 Flight Observations
 Figure 6.6

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01	VERSION 1	15/05/15
Issue	Description	Date

Legend

- March (Teal)
- March (Wigeon)

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Title

River Usk Vantage Point
Flight Observations
Figure 6.7



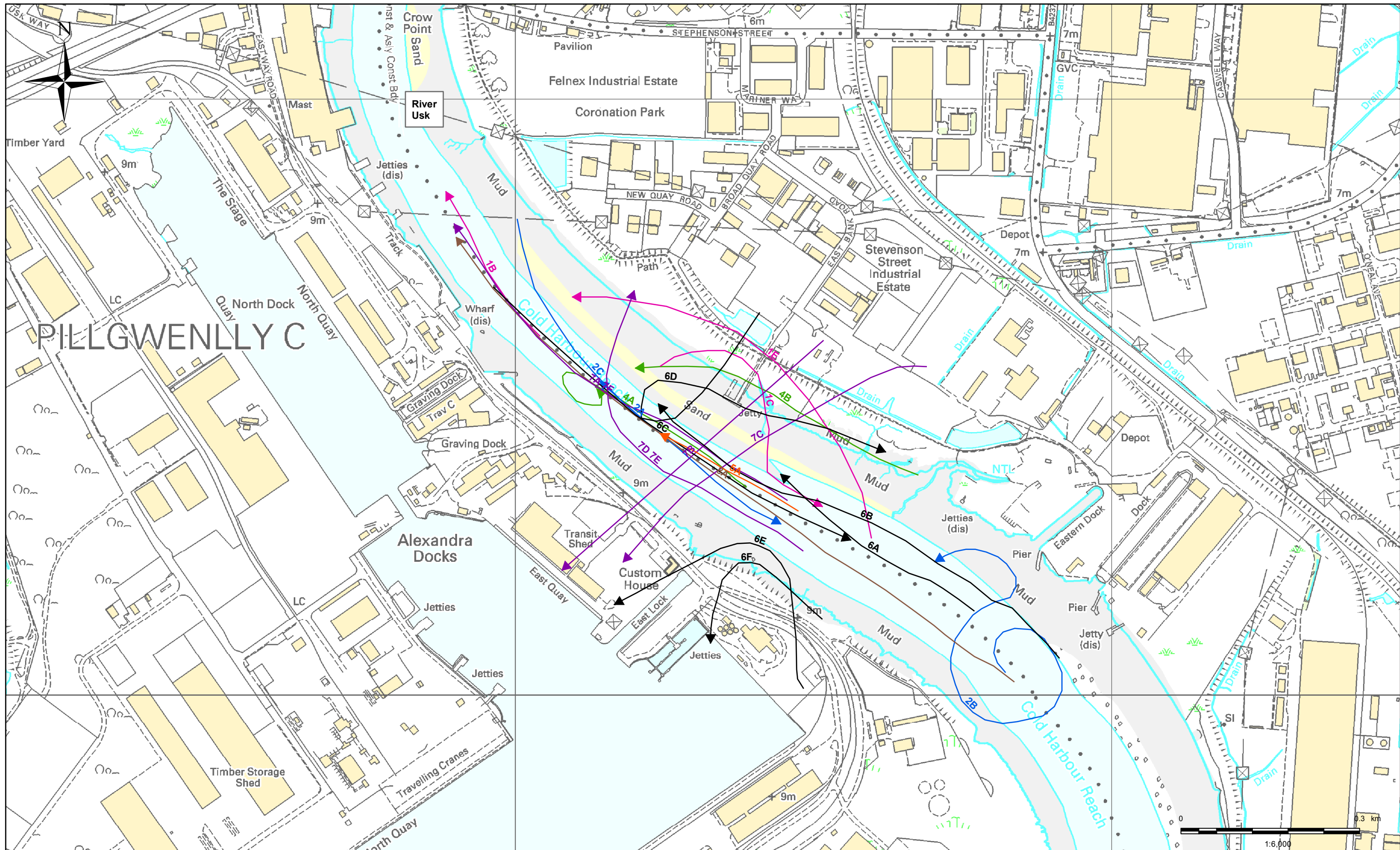
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02	DONE SOME AMENDMENTS	20/05/15
01	VERSION 1	15/05/15
Issue	Description	Date

Legend

- ▶ January (Redshank)
- ▶ February (Mallard)
- ▶ March (Mallard)
- ▶ April (Mallard)
- ▶ September (Mallard)
- ▶ October (Mallard)
- ▶ December (Mallard)

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Original Size

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Height Datum

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Title

River Usk Vantage Point
Flight Observations
Figure 6.8



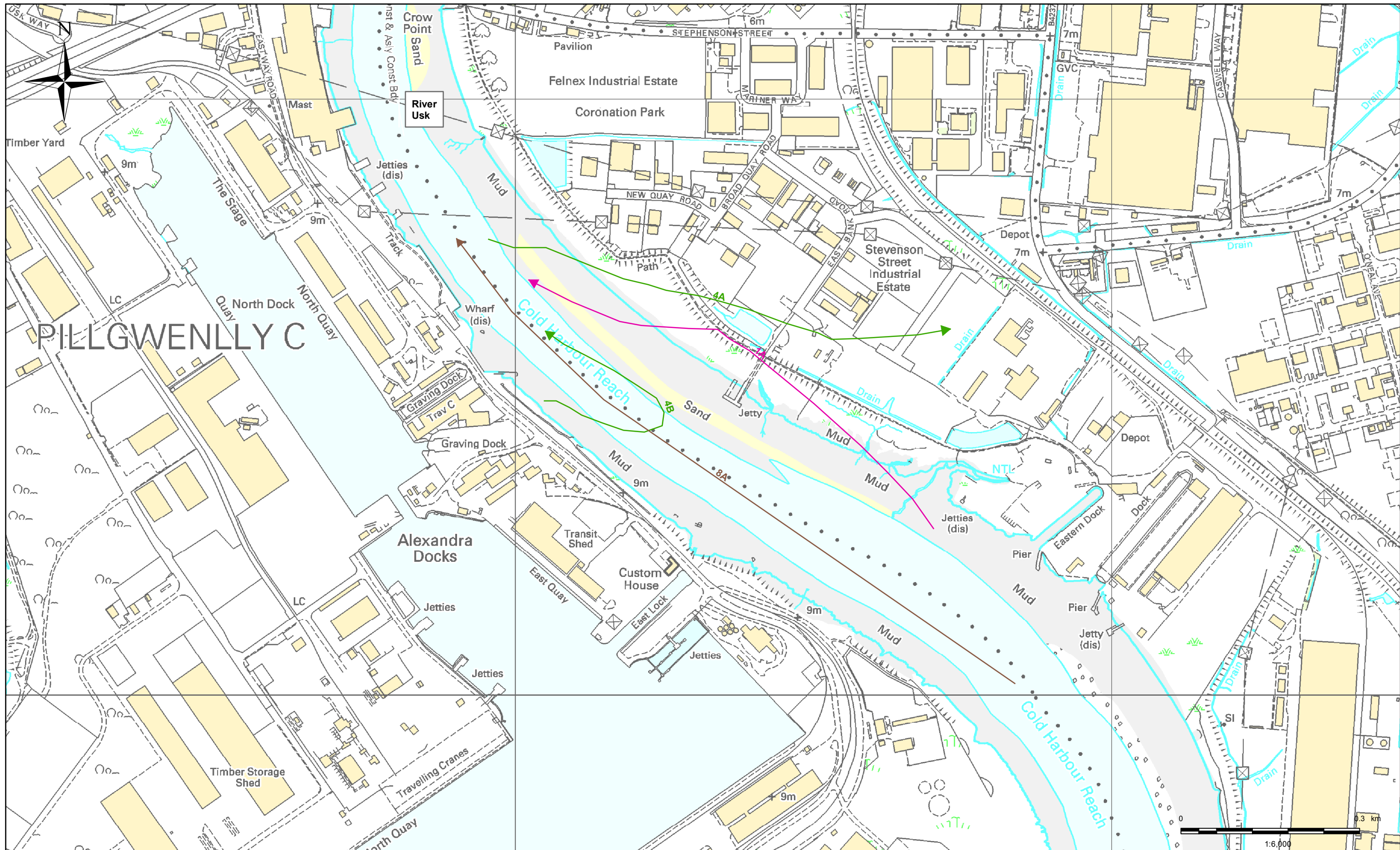
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02	DONE SOME AMENDMENTS	20/05/15
01	VERSION 1	15/05/15
Issue	Description	Date

Legend

- April (Cormorant)
- September (Cormorant)
- December (Cormorant)

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Wintering Bird Survey Report
2014/15

Title

River Usk Vantage Point
Flight Observations
Figure 6.9



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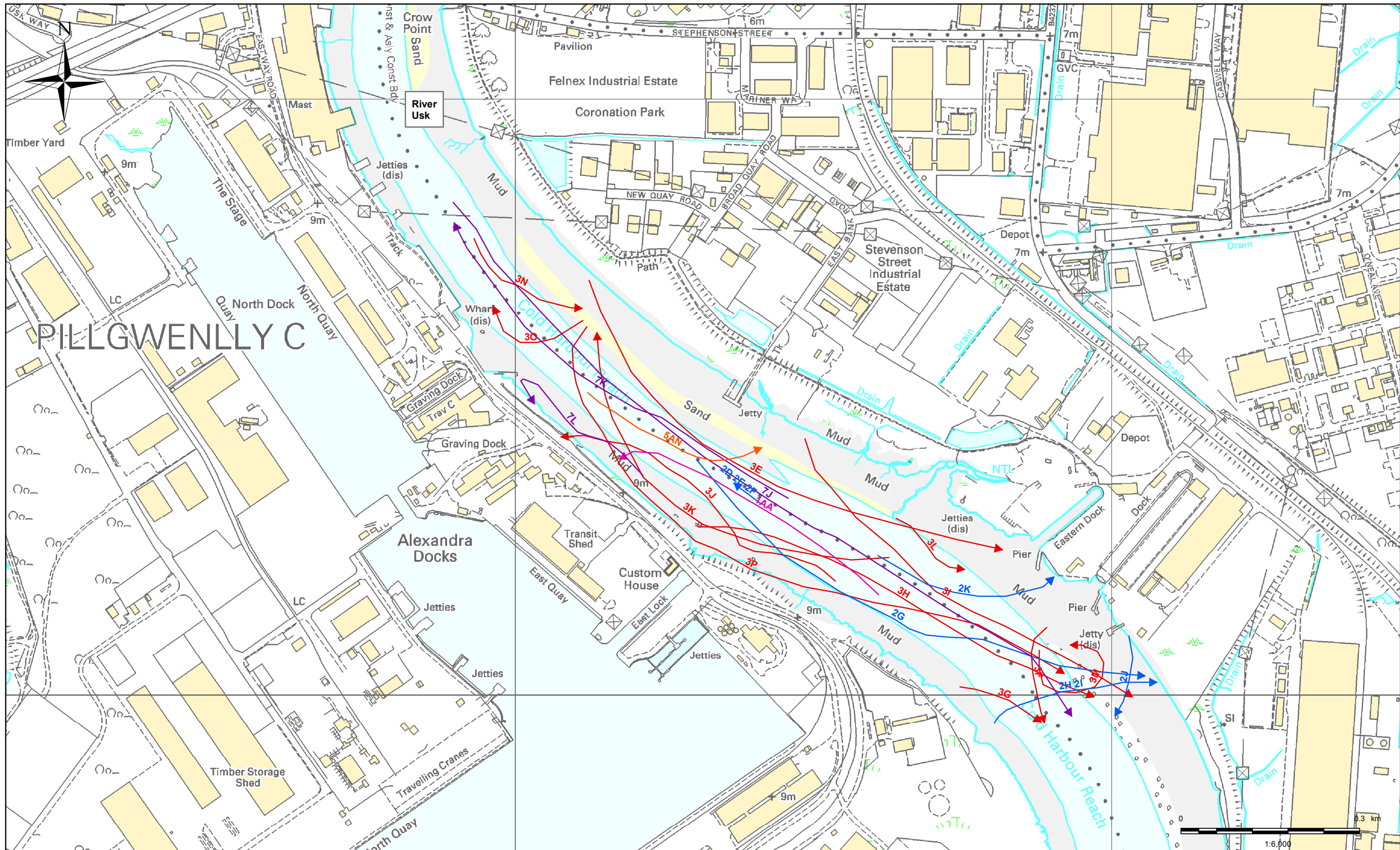
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02	DONE SOME AMENDMENTS	20/05/15
01	VERSION 1	15/05/15
Issue	Description	Date

Legend

- January (Redshank)
- March (Redshank)
- September (Redshank)
- October (Redshank)
- November (Redshank)

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2014/15

Title

River Usk Vantage Point
Flight Observations
Figure 6.10



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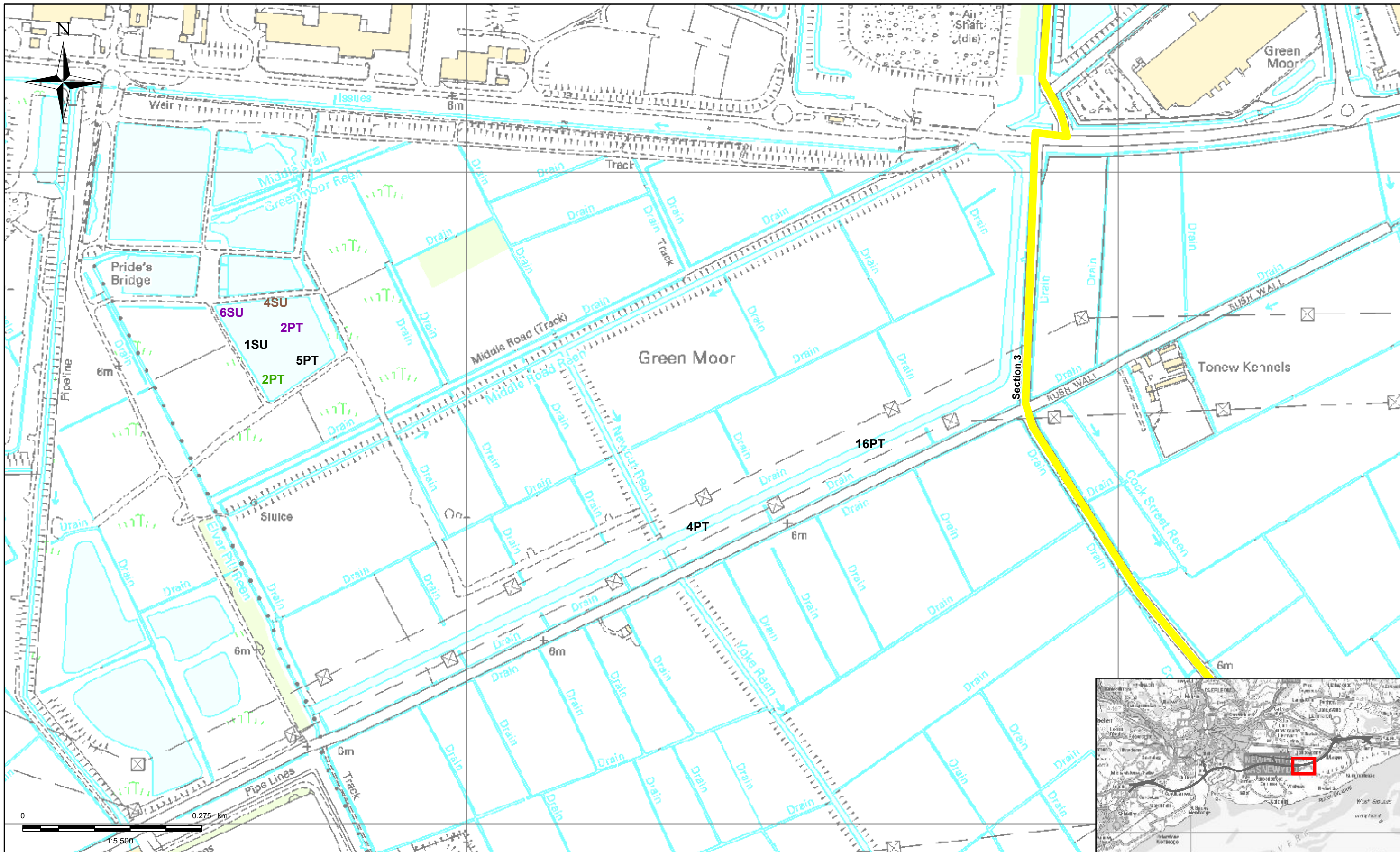
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Issue	Description	Date
04	MARCH OBSERVATIONS UPDATED	09/12/15
03	DONE SOME AMENDMENTS	25/09/15
02	DONE SOME AMENDMENTS	21/05/15
01	VERSION 1	15/05/15

Legend

April Observation	October Observation
March Observation	November Observation
February Observation	September Observation
January Observation	Section Boundaries
December Observation	


Note: for species codes see tables 2.1 to 2.16

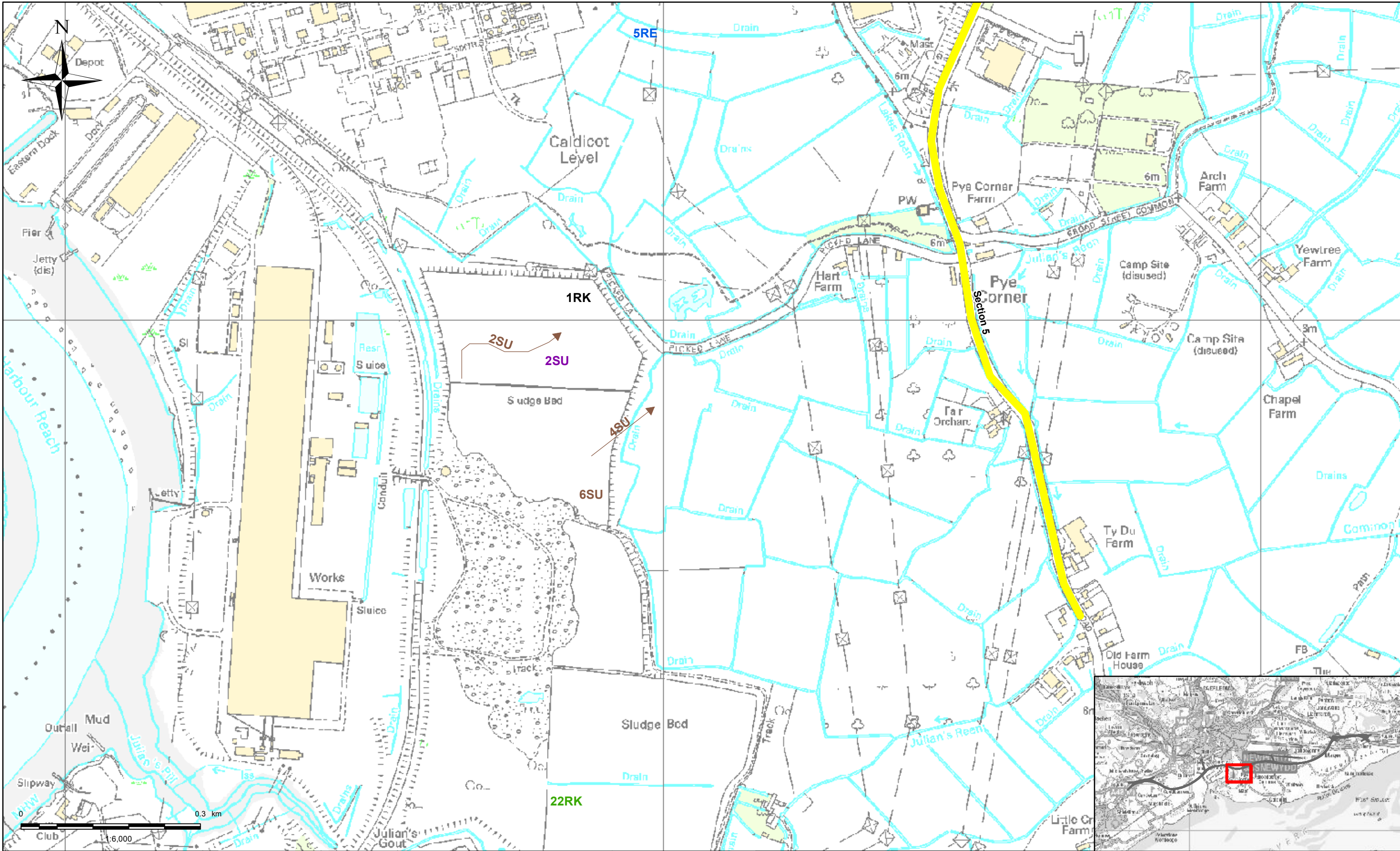
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Project	M4 Corridor (Magor to Castleton, South Wales)
Title	Transect Survey Results (Annex 1 species) Figure 7.1

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Issue	Description	Date
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03	DONE SOME AMENDMENTS	25/05/15
02	DONE SOME AMENDMENTS	21/05/15
01	VERSION 1	15/05/15

Legend	
April Observation	October Observation
March Observation	November Observation
February Observation	September Observation
January Observation	Section Boundaries
December Observation	

Note: for species codes see tables 2.1 to 2.16

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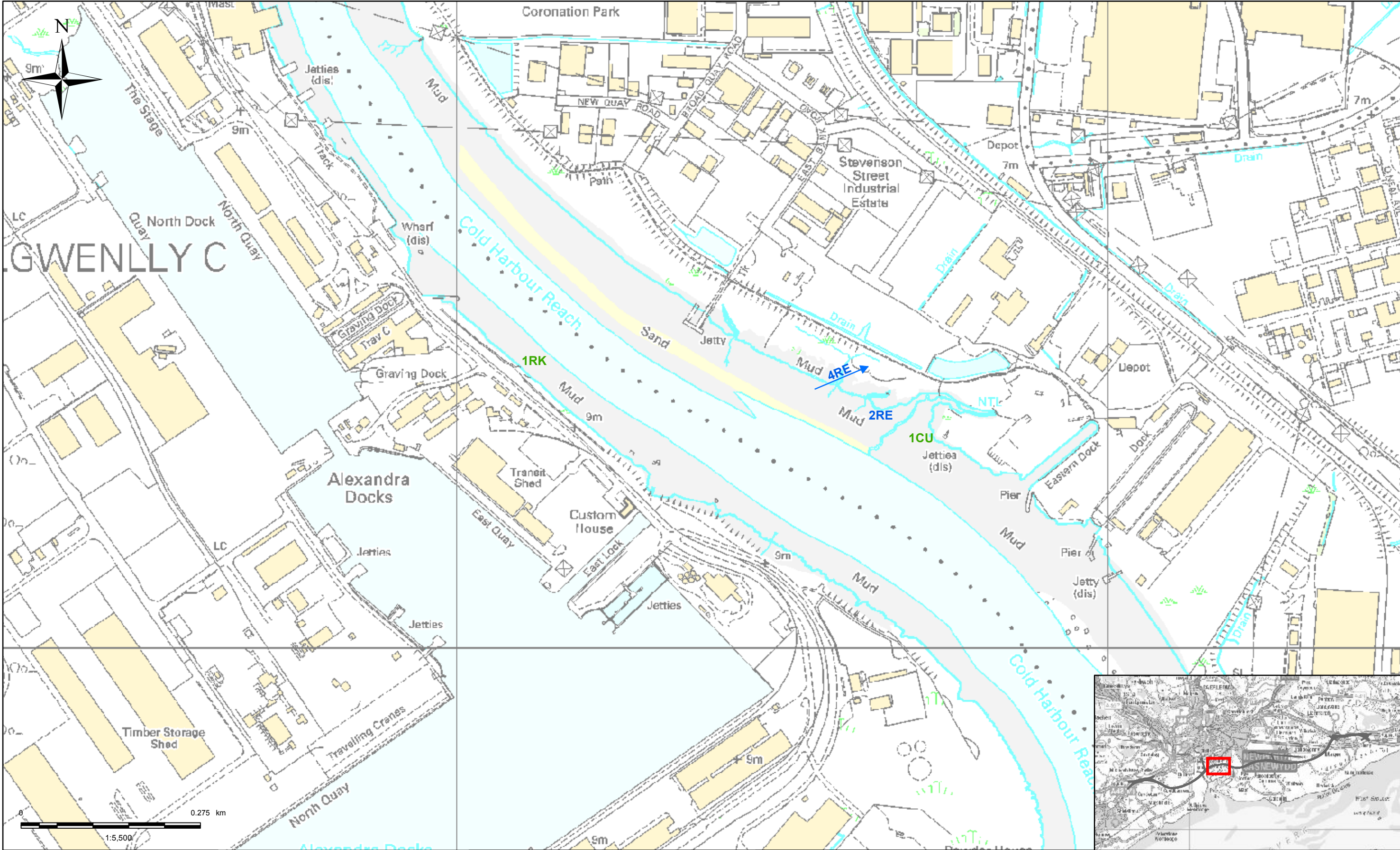


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Project	
M4 Corridor (Magor to Castleton, South Wales)	
Title	
Transect Survey Results (Annex 1 species) Figure 7.2	

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Issue	Description	Date
04	MARCH OBSERVATIONS UPDATED	09/12/15
03	DONE SOME AMENDMENTS	25/05/15
02	DONE SOME AMENDMENTS	21/05/15
01	VERSION 1	15/05/15

Legend	
April Observation	October Observation
March Observation	November Observation
February Observation	September Observation
January Observation	Section Boundaries
December Observation	


Note: for species codes see tables 2.1 to 2.16

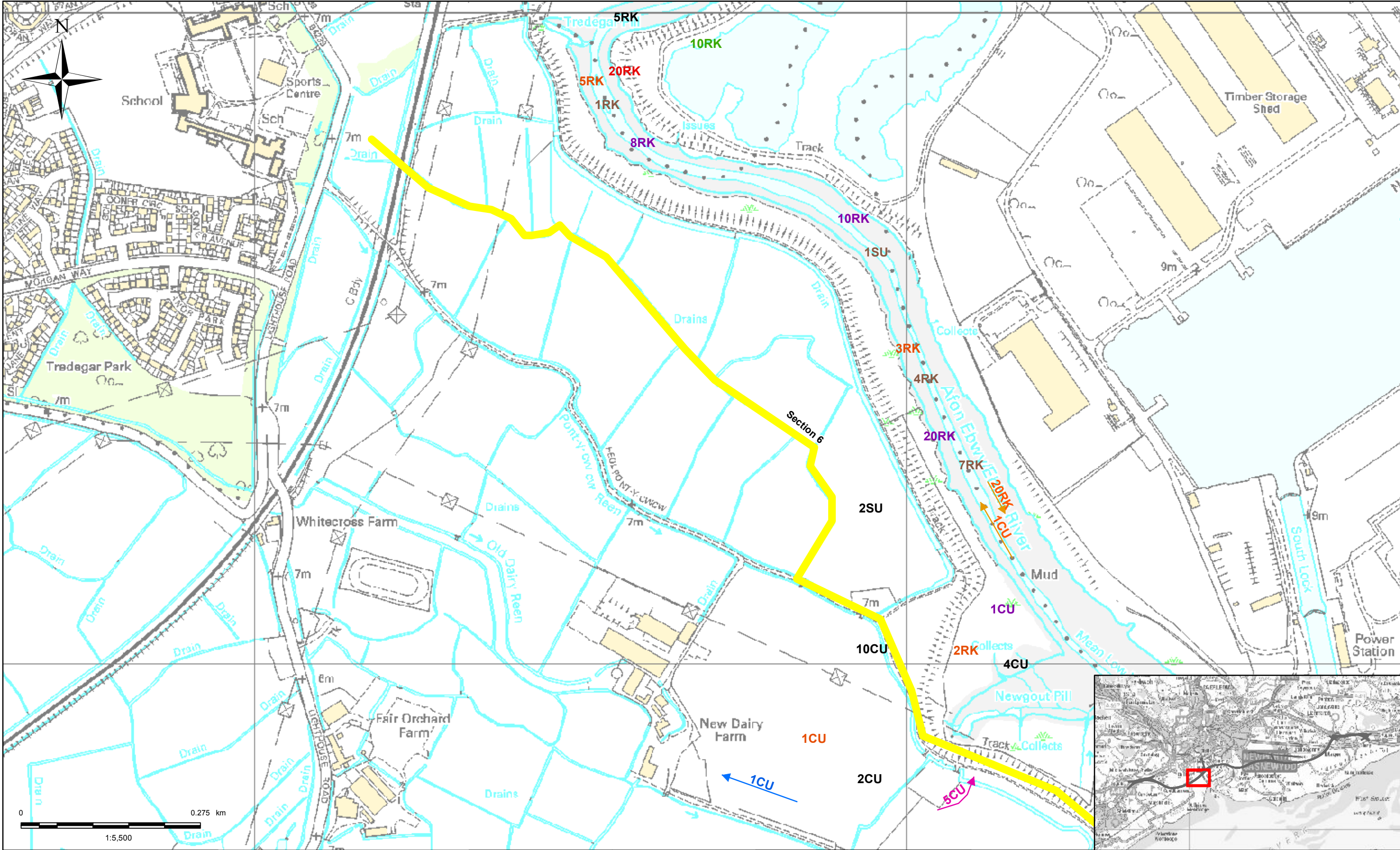
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Project	
M4 Corridor (Magor to Castleton, South Wales)	
Title	
Transect Survey Results (Annex 1 species) Figure 7.3	

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04	MARCH OBSERVATIONS UPDATED	09/12/15
03	DONE SOME AMENDMENTS	25/05/15
02	DONE SOME AMENDMENTS	21/05/15
01	VERSION 1	15/05/15
Issue	Description	Date

Legend	
	April Observation
	March Observation
	February Observation
	January Observation
	December Observation
	October Observation
	November Observation
	September Observation
	Section Boundaries

Note: for species codes see tables 2.1 to 2.16

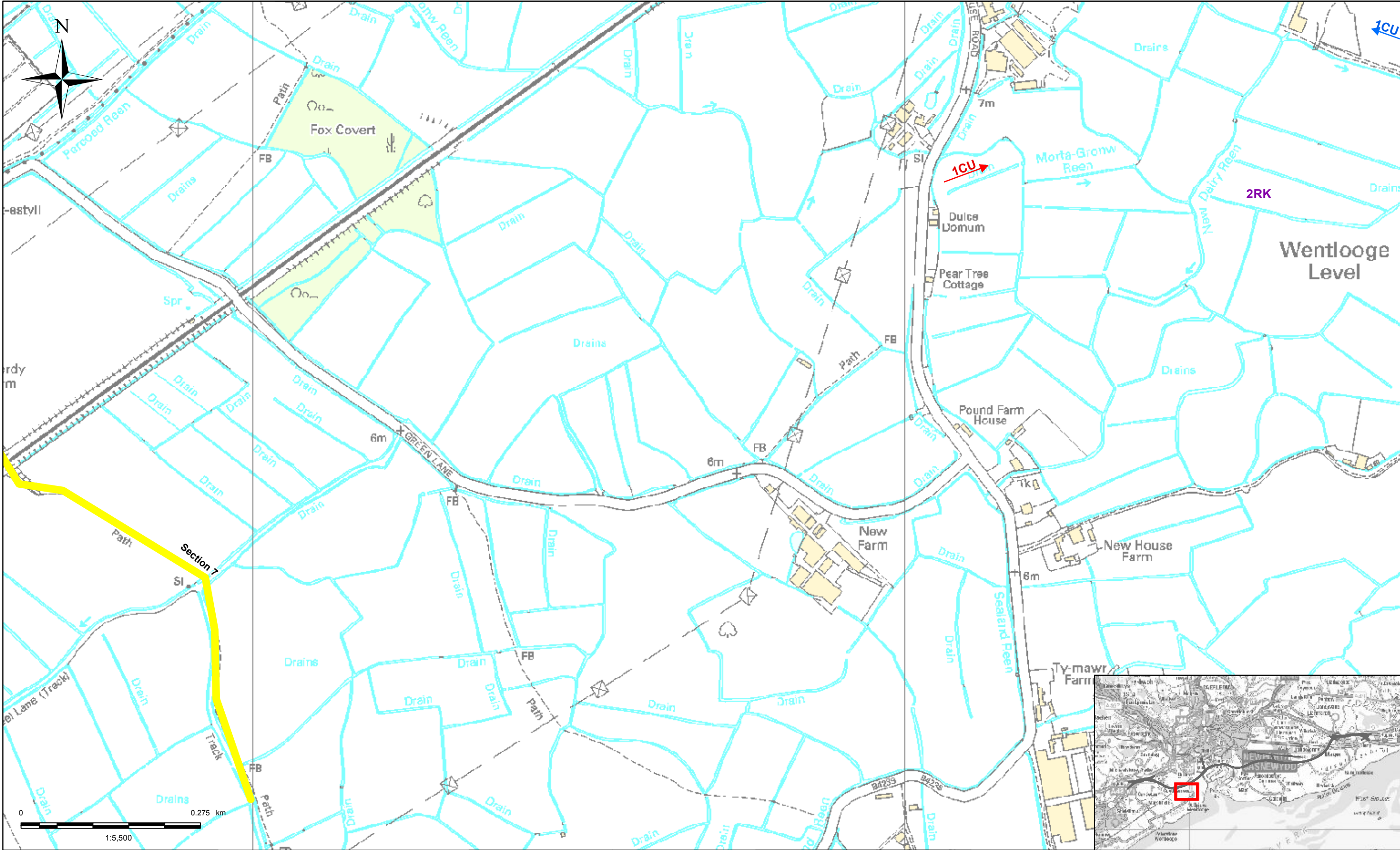
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Project	M4 Corridor (Magor to Castleton, South Wales)
Title	Transect Survey Results (Annex 1 species) Figure 7.4

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02	DONE SOME AMENDMENTS	21/05/15
01	VERSION 1	15/05/15
Issue	Description	Date


Legend		
April Observation	October Observation	
March Observation	November Observation	
February Observation	September Observation	
January Observation	Section Boundaries	
December Observation		
Note: for species codes see tables 2.1 to 2.16		

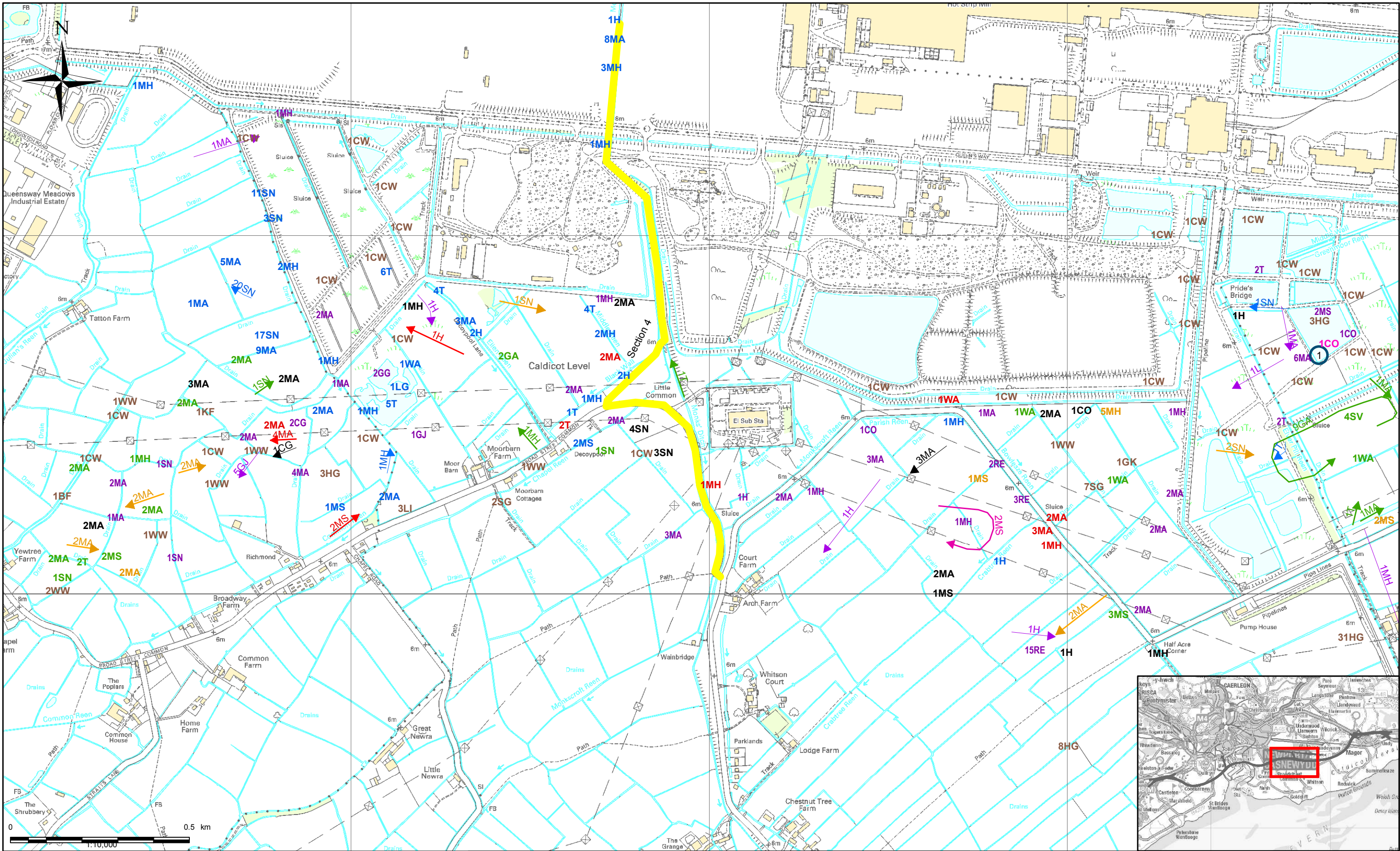
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Project	M4 Corridor (Magor to Castleton, South Wales)
Title	Transect Survey Results (Annex 1 species) Figure 7.5

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04	MARCH OBSERVATIONS UPDATED	09/12/15
03	DONE SOME AMENDMENTS	26/05/15
02	DONE SOME AMENDMENTS	21/05/15
01	VERSION 1	15/05/15
Issue	Description	Date

Legend	
	January Observation
	February Observation
	March Observation
	April Observation
	September Observation
	October Observation
	November Observation
	December Observation
	Section Boundaries
	Pond Identification

Note: for species codes see tables 2.1 to 2.16

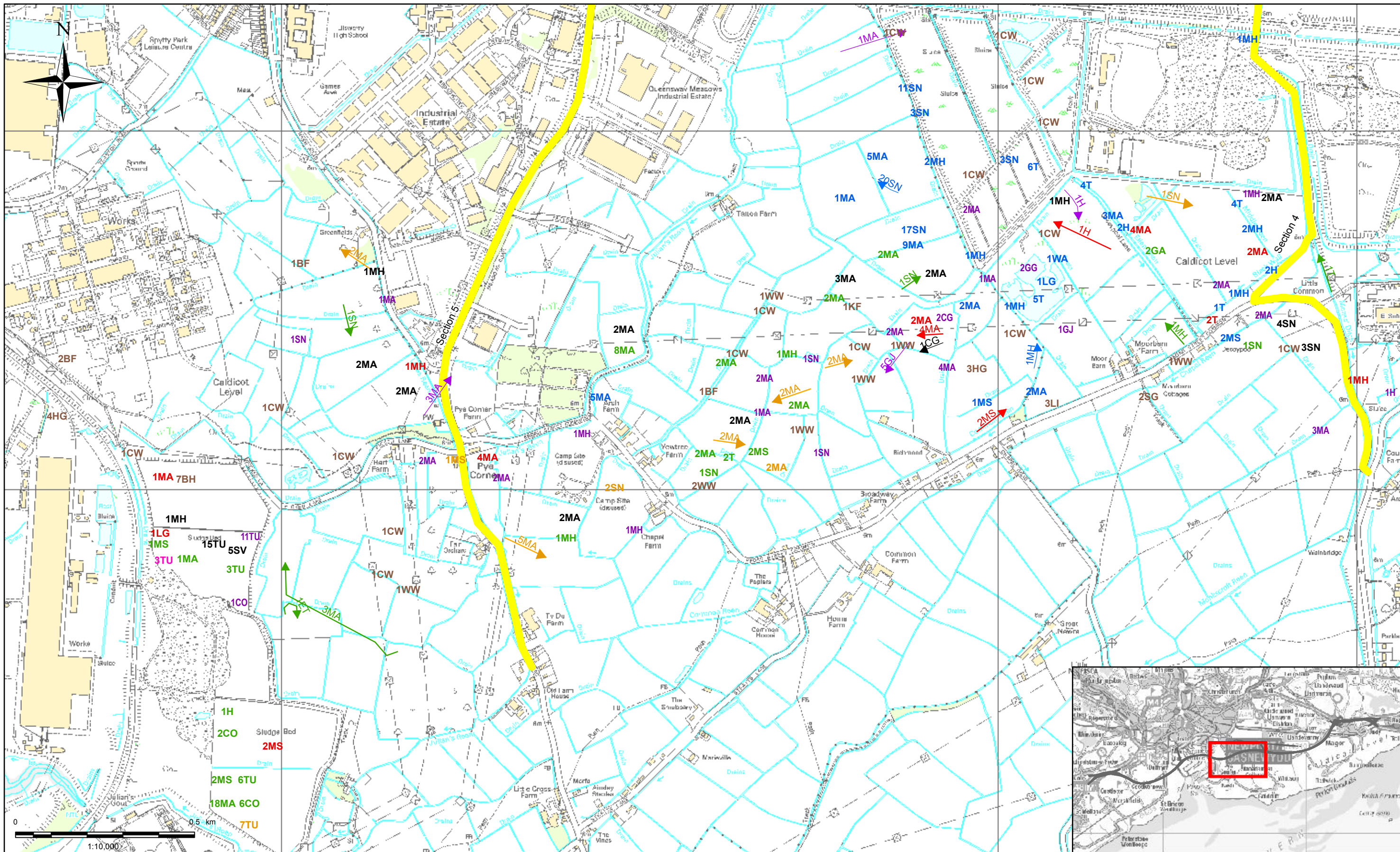
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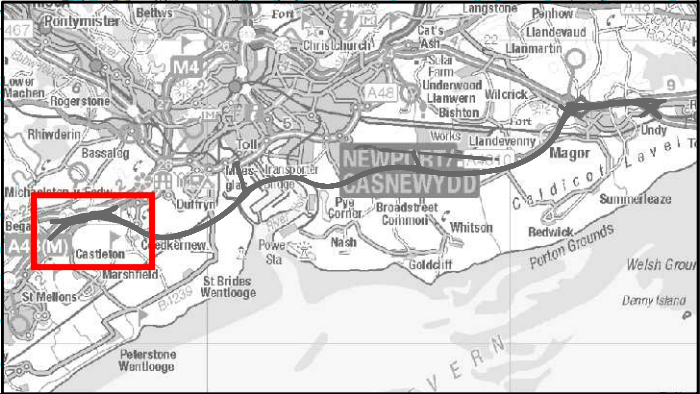
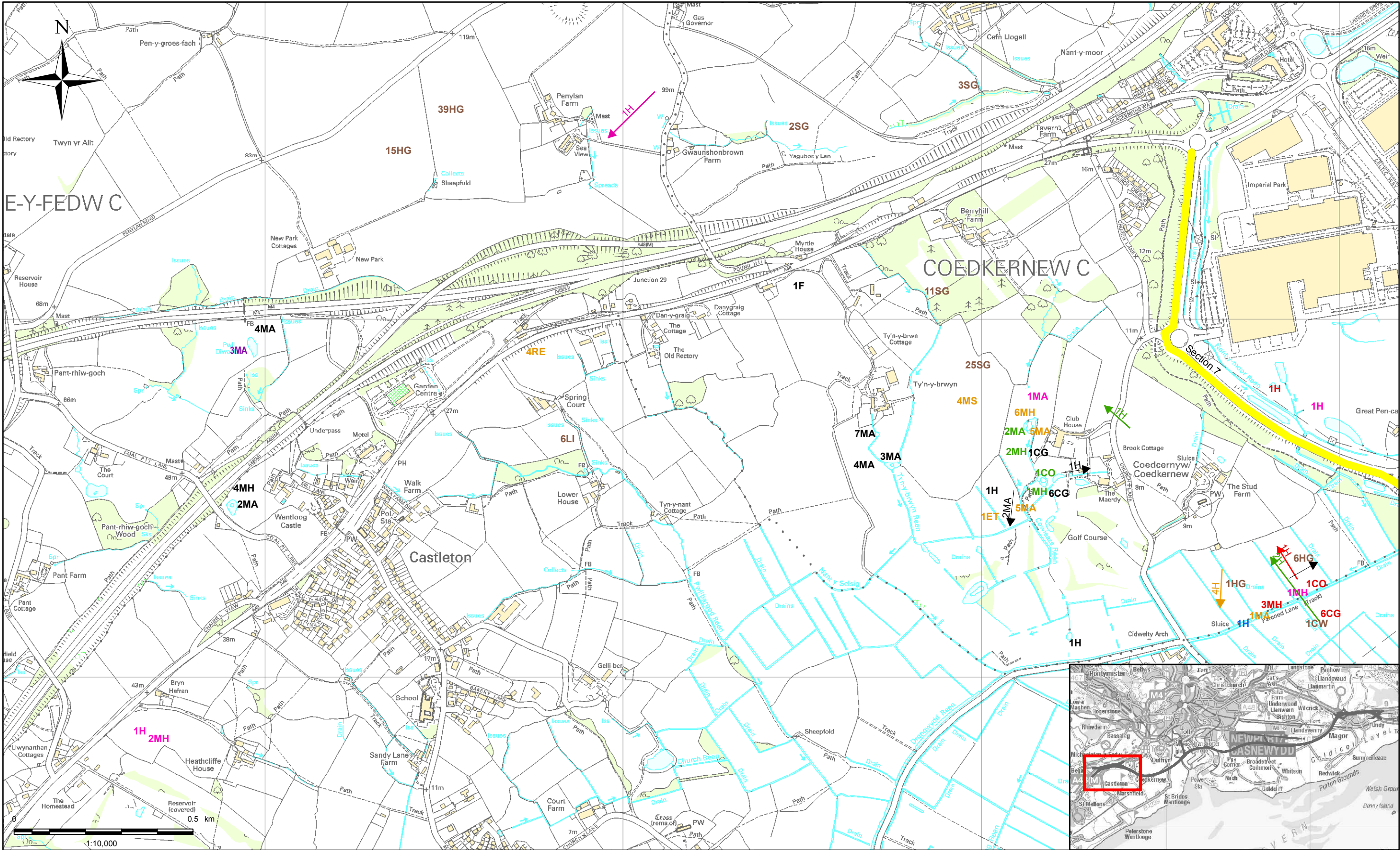
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Project	M4 Corridor (Magor to Castleton, South Wales)
Title	Transect survey results (Assemblage species and other waterfowl) Figure 8.4

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Drawing No. E132	Project No. UA006729	Issue 05



		Legend <div><div>January Observation</div><div>February Observation</div><div>March Observation</div><div>April Observation</div><div>September Observation</div><div>October Observation</div><div>November Observation</div><div>December Observation</div><div>Section Boundaries</div></div> <div>Note: for species codes see tables 2.1 to 2.16</div>		Disclaimer © Crown Copyright and database right 2015. Ordnance Survey 100021874. Welsh Government. © Hawffraint a hawliau cronfa ddata'r Goron 2015. Rhif Trwydded yr Arolwg Ordnans 100021874.		Client <div></div> <div>Llywodraeth Cymru Welsh Government</div>		Status PRELIMINARY/CONFIDENTIAL <table><tr><td rowspan="2">Scale</td><td rowspan="2">1:10,000</td><td colspan="2">Current Issue Signatures</td></tr><tr><td>Drawn S.D.</td><td></td></tr><tr><td>Original Size</td><td>A3</td><td>Checked M.L.</td><td></td></tr><tr><td>Height Datum</td><td>NEWLYN</td><td>Approved C.F.</td><td></td></tr><tr><td>Grid</td><td>O.S</td><td colspan="2">© Copyright reserved</td></tr></table> <div>Filename: 0132-0A06729-0E210-01-Figure 8.5 - Transect survey results (Assemblage species and other waterfowl) Section 1 to 7</div>		Scale	1:10,000	Current Issue Signatures		Drawn S.D.		Original Size	A3	Checked M.L.		Height Datum	NEWLYN	Approved C.F.		Grid	O.S	© Copyright reserved		Project <div>M4 Corridor (Magor to Castleton, South Wales)</div> <div>Title</div> <div>Transect survey results (Assemblage species and other waterfowl) Figure 8.5</div>		<div></div> <div>HYDER CONSULTING (UK) Limited 5th Floor, The Pithay All Saints Street Bristol, England BS1 2NL Tel: +44 (0)870 000 3003 Fax: +44 (0)870 000 3903</div>	
Scale	1:10,000	Current Issue Signatures																													
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Issue	Description	Date																													



05	RW RECORDS CORRECTED TO RE	26/02/16
04	MARCH OBSERVATIONS UPDATED	09/12/15
03	DONE SOME AMENDMENTS	26/05/15
02	DONE SOME AMENDMENTS	21/05/15
01	VERSION 1	15/05/15
Issue	Description	Date

Legend

- January Observation
- February Observation
- March Observation
- April Observation
- September Observation
- October Observation
- November Observation
- December Observation
- Section Boundaries

Note: for species codes see tables 2.1 to 2.16

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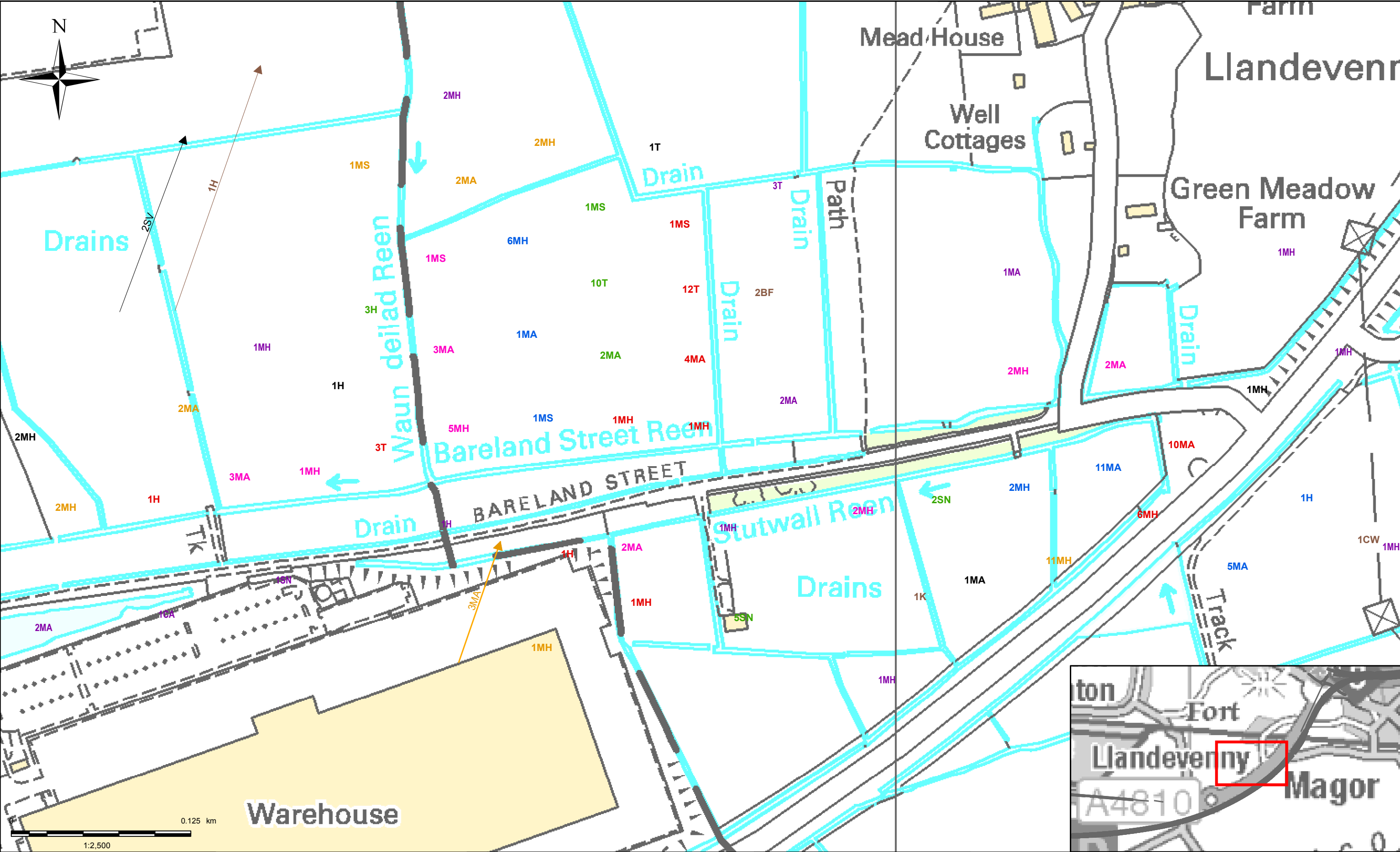
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Project
**M4 Corridor
(Magor to Castleton, South Wales)**

Title
**Transect survey results
(Assemblage species and
other waterfowl)
Figure 8.8**

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02	DONE SOME AMENDMENTS	21/05/15
01	VERSION 1	15/05/15
Issue	Description	Date

Legend

January Observation

February Observation

March Observation

April Observation

September Observation

October Observation

November Observation

December Observation

Section Boundaries

Note: for species codes see tables 2.1 to 2.16

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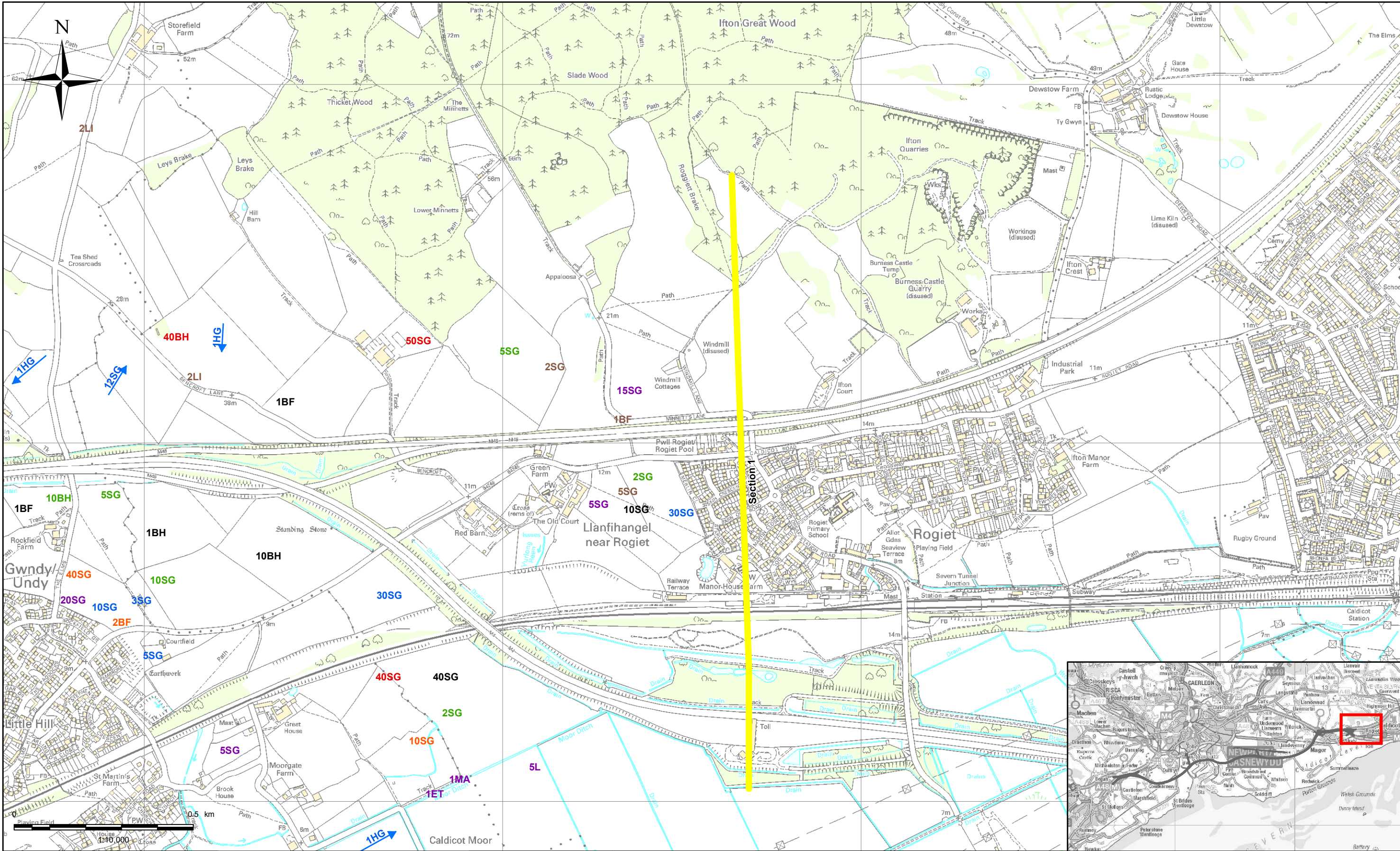
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Project	M4 Corridor (Magor to Castleton, South Wales)
Title	Transect survey results (Assemblage species and other waterfowl) Figure 8.9

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01	VERSION 1	15/05/15
Issue	Description	Date

Legend

January Observation October Observation
February Observation November Observation
March Observation December Observation
April Observation Section Boundaries

Note: for species codes see tables 2.1 to 2.16

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Filename: 0133-0A00729-0210-01 Figure 9.1 to 9.7 - Transect survey results (Schedule 1 and red listed species) Section 1 to 7		

Project

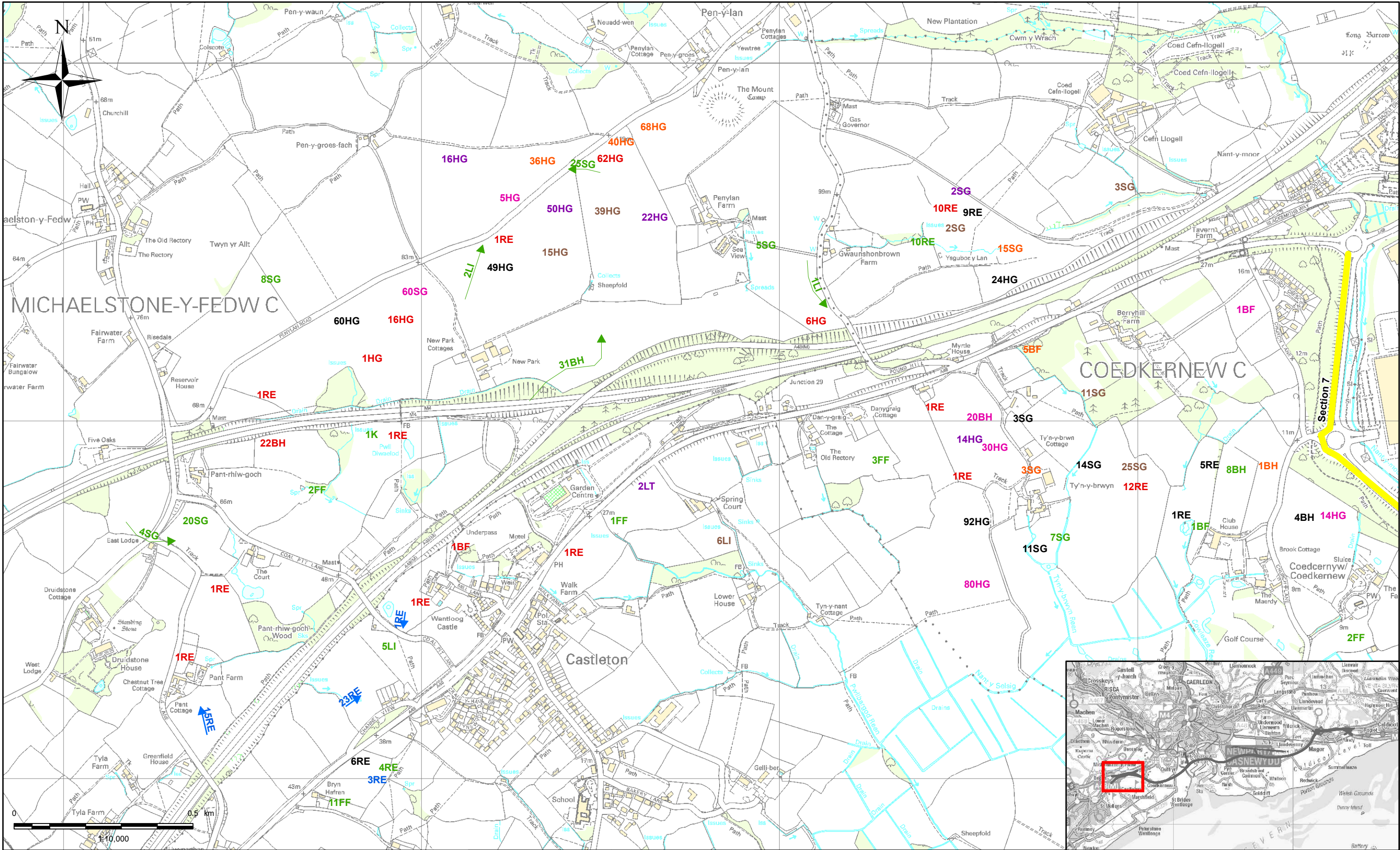
M4 Corridor
(Magor to Castleton, South Wales)



Title

Transect Survey Results
(Schedule 1 & Red Listed Species)
Figure 9.1

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E133	UA006729	03



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03 MARCH OBSERVATIONS UPDATED 09/12/15									File name: E133-0A006729-0E210-01 Figure 9.1 to 9.7 - Transect survey results (Schedule 1 and red listed species) Section 1 to 7								
02 DONE SOME AMENDMENTS 21/05/15																	
01 VERSION 1 15/05/15																	
Issue Description Date																	
			Note: for species codes see tables 2.1 to 2.16														