

Welsh Government

M4 Corridor around Newport

Environmental Statement Volume
3:
Appendix 10.3 Ecological Survey
Site Selection Report

M4CaN-DJV-EBD-ZG_GEN-AX-EN-0024

At Issue | March 2016

Welsh Government

M4 Corridor Around Newport

Ecological Survey Site Selection Report

Issue | 15 September 2014

Job number 117300-95

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 Drawing M4-OA-01-00-DR-Z-NV-0005 NVC Survey Sites

Drawing M4-OA-01-00-DR-Z-AI-0001 Aquatic and Terrestrial Invertebrate Survey Sites

Drawing M4-OA-01-00-DR-Z-AI-0002 Aquatic and Terrestrial Invertebrate Survey Sites

Drawing M4-OA-01-00-DR-Z-AI-0003 Aquatic and Terrestrial Invertebrate Survey Sites

Drawing M4-OA-01-00-DR-Z-AI-0004 Aquatic and Terrestrial Invertebrate Survey Sites

Drawing M4-OA-01-00-DR-Z-AI-0005 Aquatic and Terrestrial Invertebrate Survey Sites

Drawing M4-OA-01-00-DR-Z-AI-0006 Aquatic and Terrestrial Invertebrate Survey Sites

Drawing M4-OA-01-00-DR-Z-DM-0001 Dormouse Survey Areas

Drawing M4-OA-01-00-DR-Z-DM-0002 Dormouse Survey Areas

Drawing M4-OA-01-00-DR-Z-DM-0003 Dormouse Survey Areas

Drawing M4-OA-01-00-DR-Z-DM-0004 Dormouse Survey Areas

1 Introduction

Ove Arup & Partners Ltd has been commissioned by Welsh Government to undertake baseline ecological surveys to inform a potential future Environmental Impact Assessment of a new motorway to the south of Newport. The aim of these surveys is to identify the presence of important habitat areas and populations of legally protected or otherwise notable species that can inform the detailed design of any scheme and any mitigation or compensatory measures which may be required. Further surveys to monitor identified species populations will be undertaken in 2015.

This report sets out the rationale for the selection of survey sites for different species and species groups. These include:

- National Vegetation Classification survey locations;
- Bat activity transects and static detector locations;
- Dormice survey locations;
- Reptile survey locations;
- Invertebrate sampling locations; and
- Breeding Bird Transects.

2 Selection Rationale

It should be noted that Arup consulted Natural Resources Wales (NRW) on ecological survey methodologies and locations. NRW provided feedback on survey methodologies and locations but did not necessarily agree survey locations to the locations.

2.1 National Vegetation Classification Surveys

The sites which are proposed for inclusion within the scope of the National Vegetation Classification surveys were selected based on a review of desk study information including previous surveys in 2007/8 and on a preliminary phase 1 survey undertaken in autumn 2013 from roads and public rights of way.

The following habitats were primarily selected for inclusion within the NVC surveys:

- Semi-improved neutral grasslands;
- Significant areas of woodland;
- A representative sample of improved grasslands;
- Saltmarsh and scrub bordering the River Usk; and
- Other habitats within Sites of Importance for Nature Conservation located underneath the likely footprint of the route.

The locations of sites selected for inclusion within the NVC surveys are shown on Drawings M4-OA-01-00-DR-Z-NV-0001 to M4-OA-01-00-DR-Z-NV-0005.

It is considered that the survey includes areas of important habitats along the route including representative samples of the majority of grassland types present, and thereby provides a representative characterisation of the habitats within the study area.

2.2 Bat Activity Surveys

Bat activity transects were selected by an experienced bat specialist with regard to the results of previous surveys undertaken in 2007/8. They were selected to provide cover over the majority of the length of the scheme. A total of ten walked transects were selected with this objective. Driven transects have not been used as the absence of roads within much of the study area prevents effective survey using these techniques.

The transects were designed to cover as much of the likely route of any scheme as possible, providing representative sampling of different habitats present and identify key flight lines which may be present. The routes of the transects are shown on Drawing numbers M4-OA-00-DR-Z-BA-0001 to 0008.

Two static detector locations have been selected on each transect route. These have been positioned to record activity in habitats that may be significant foraging areas or on features which may act as important flight lines. The locations used

for the static detectors are shown on Drawings M4-OA-00-DR-Z-BA-0001 to 0008.

2.3 Dormouse Surveys

Evidence of previous dormouse presence within the vicinity of the proposed route has been identified from a desk study of records centre information (SEWBRc) and results of previously undertaken studies in the area (including the surveys undertaken by Jacobs for the M4 Widening between Junctions 29 and 32 in 2005/2006 and the Arup studies undertaken to support the proposed New M4 Project in 2007/8).

The records are all to the west of the study area, including Nant Mwlan Wood, Bogod's Field and Michaelstone-y-Fedw. Information provided by Jacobs revealed that dormice were present within 9 of the 11 woodlands surveyed adjacent to M4 Junctions 29 – 32, at a density assessed to be of international importance. The majority of dormouse activity is concentrated between central and eastern areas between Junctions 29 – 32, and mostly occurs to the north of the existing M4 corridor. The New M4 surveys revealed that dormice were also present further east within the hedgerows around Penylan Farm and Gwaunhonsbrown Farm. No records of dormice exist at the eastern end of the study area and there are no records of dormice on the Gwent Levels.

During the Phase 1 Habitat Survey undertaken in 2013, further habitats within the wider area were identified as having potential to support dormice, including hedgerows to the east of Michaelstone-y-Fedw, the verges of the A48(M), the woodland along the derelict road south of Church Lane and a small woodland to the east of Castleton.

Survey sites have therefore been selected to repeat the previous surveys undertaken and to include the additional areas of potentially suitable habitat which have been identified. Tubes were initially placed in woodlands at the western end of the scheme, however these were subsequently moved to avoid duplicating work being undertaken as part of the monitoring for the M4 Widening. These nest tubes have been redeployed to include two areas within the Gwent Levels. The locations of the dormouse nest tubes are shown on Drawings M4-OA-01-00-DR-Z-DM-0001 to 0004.

2.4 Reptile Surveys

The locations for reptile survey have been based on the results of desk study records, previous survey information and assessment of habitat quality/potential obtained from the Phase 1 Habitat surveys.

The SEWBRc data search revealed records of reptiles within the study area as follows:

- Slow worms - Marshfield
- Common lizard – Marshfield; Uskmouth Power Station; Liswerry
- Adder – Parc Golf Club; Uskmouth Power Station; Slade Wood, Rogiet; M48 verges between Rogiet and Caldicot.

- Grass snake – St Mellons; Uskmouth Power Station; Duffryn; numerous records across the Gwent Levels fields; Magor Marsh.

The areas selected for survey include a representative sample of these areas, focussing on areas where mosaics of suitable reptile habitat are present. It is not proposed to undertake extensive surveys within the Gwent Levels as it is assumed that grass snakes will be present throughout this area. The areas selected for inclusion within the surveys are shown on Drawings M4-OA-01-00-DR-Z-RP-0001 to 0005.

2.5 Invertebrate Survey Areas

Invertebrate surveys areas were chosen based on the Black route broadly following the TR111 Route of 2006. The survey areas closely follow the route. For aquatic invertebrate surveys, ditches and reens are being visited and only surveyed if they have a diversity of aquatic flora and are mainly unshaded (at least on one side) and hold enough water to carry out netting. Ponds are also being surveyed along the route. For the terrestrial invertebrate surveys, ditch vegetation is being surveyed (where the aquatic invertebrate surveys take place). In addition, brownfield land (such as the Tata Steel disused land) is being surveyed for terrestrial invertebrates, where ruderal flora exists.

Due to the number of ditches and reens within the survey route, only 50% of the ditches and reens are chosen for survey on paper. Once visited, heavily shaded ditches are excluded from the survey.

The locations of the Terrestrial and Aquatic Invertebrate surveys are shown on Drawings M4-OA-01-00-AI-Z-DM-0001 to M4-OA-01-00-AI-Z-DM-0006.

2.6 Breeding Bird Transect Surveys

Due to the size of the study area it was not considered practical to undertake a breeding bird survey of the whole area. Therefore eight breeding bird transects were designed to be representative of the predominant habitats within the route corridor, suitable for breeding bird assemblages, and aimed to be evenly distributed through the route corridor. The habitats surveyed included floodplain grazing marsh, farmland, wooded field boundaries, tracks and roads, river and estuary edges, reed beds, wet scrub, lagoons and reens, and woodland. The locations of the transects are shown on Drawings M4-OA-01-00-DR-Z-BB-0001 to 0004.

Drawings

Drawing M4-OA-01-00-DR-Z-BA-0001 Bat Activity Transects Sheet 1
Drawing M4-OA-01-00-DR-Z-BA-0002 Bat Activity Transects Sheet 2
Drawing M4-OA-01-00-DR-Z-BA-0003 Bat Activity Transects Sheet 3
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Drawing M4-OA-01-00-DR-Z-BA-0008 Bat Activity Transects Sheet 8

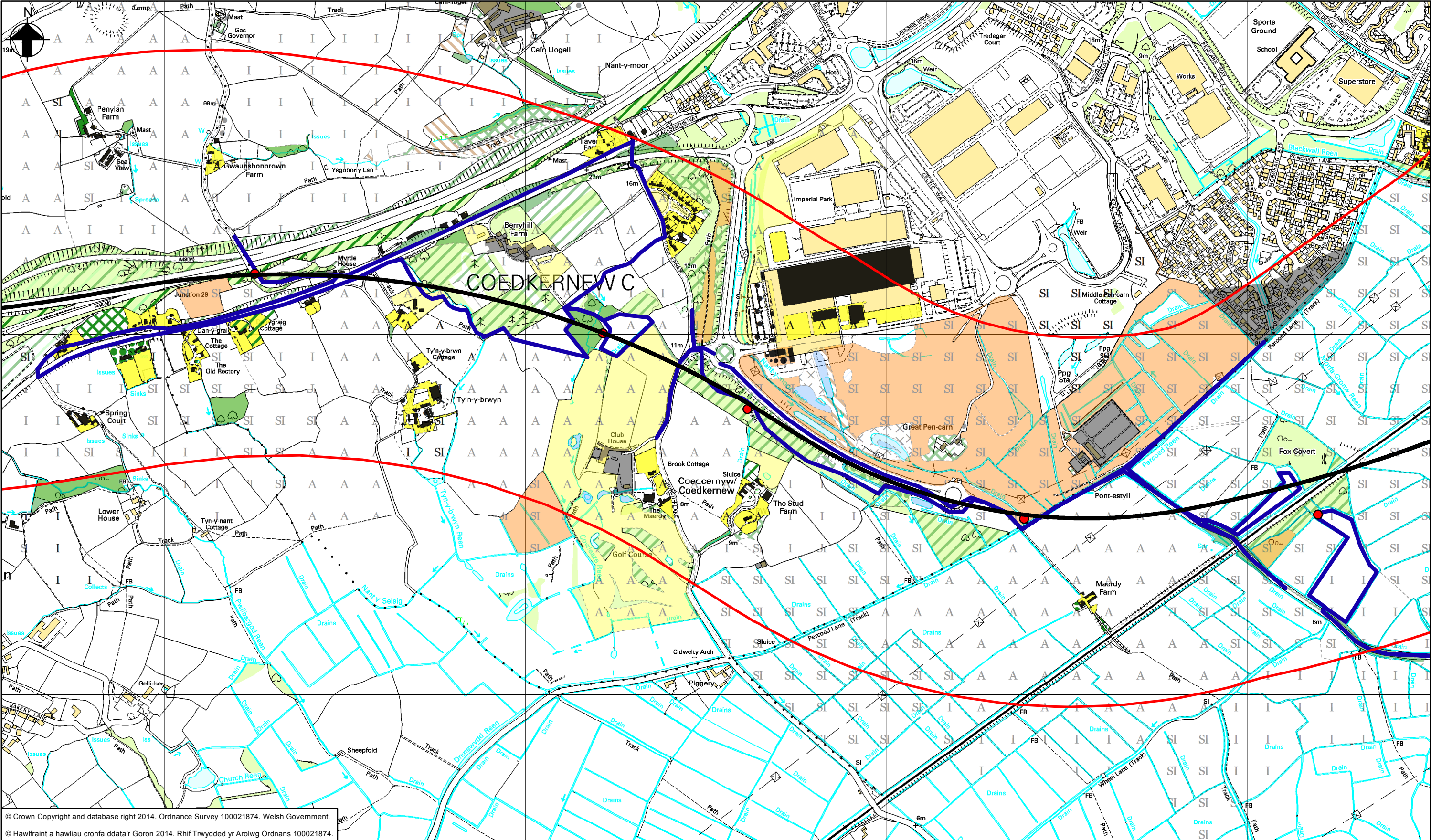
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Drawing M4-OA-01-00-DR-Z-DM-0004 Dormouse Survey Areas



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Legend

Phase 1 Habitats

- Semi-natural broadleaved woodland
- Planted broadleaved woodland
- Planted coniferous woodland
- Planted mixed woodland
- Dense scrub

- Scattered scrub
- Scattered broadleaved trees
- Scattered coniferous trees
- Semi-improved acid grassland
- Unimproved neutral grassland
- Semi-improved neutral grassland
- Unimproved calcareous grassland
- Semi-improved calcareous grassland
- Improved grassland
- Planted mixed woodland
- Dense scrub

- Bracken
- Tall ruderal herb
- Swamp
- Inundation vegetation
- Standing water
- Standing water and eutrophic
- Running water
- Intertidal mud/sand
- Salt marsh
- Coastal grassland
- Quarry

- Spill
- Refuse tip
- Arable
- Amenity grassland
- Ephemeral/ short perennial
- Introduced scrub
- Intact hedge-species poor
- Dry ditch
- Buildings
- Bare ground

P0	2014-08-08	FG	PW	PW
Preliminary				
Issue	Date	By	Chkd	Appd

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Job Title

M4 Corridor Around Newport

Coridor yr M4 o amgylch Casnewydd

Metres

0 80 160 320

Scale at A3

1:10,000

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Drawing Title

**Bat Activity Transects and Bat
Detectors Sheet 1**

Job No

117300-01

Drawing Status

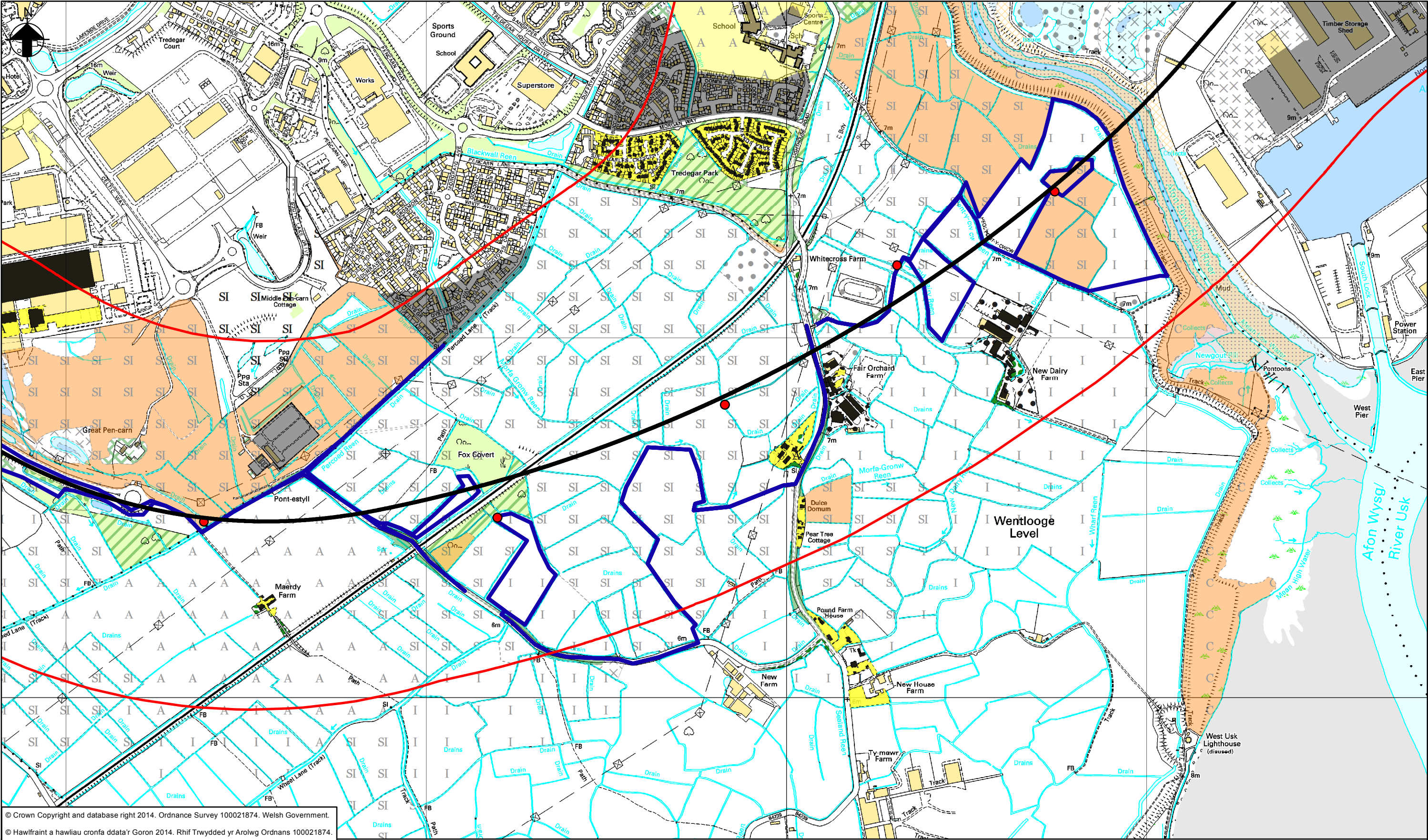
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Drawing No

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Issue

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Legend

Phase 1 Habitats

Code

- Semi-natural broadleaved woodland
- Planted broadleaved woodland
- Planted coniferous woodland
- Planted mixed woodland
- Dense scrub

- Scattered scrub
- Scattered broadleaved trees
- Scattered coniferous trees
- Semi-improved acid grassland
- Unimproved neutral grassland
- Semi-improved neutral grassland
- Unimproved calcareous grassland
- Semi-improved calcareous grassland
- Improved grassland
- Marshy grassland
- Poor semi-improved grassland

- Bracken
- Tall ruderal herb
- Swamp
- Inundation vegetation
- Standing water
- Standing water and eutrophic
- Running water
- Intertidal mud/sand
- Salt marsh
- Coastal grassland
- Quarry

- Spill
- Refuse tip
- Arable
- Amenity grassland
- Ephemeral/short perennials
- Introduced scrub
- Intact hedge-species poor
- Dry ditch
- Buildings
- Bare ground

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Issue	Date	By	Chkd	Appd

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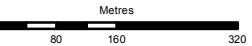
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Drawing Title

**Bat Activity Transects and Bat
Detectors Sheet 2**

Job No

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Drawing Status

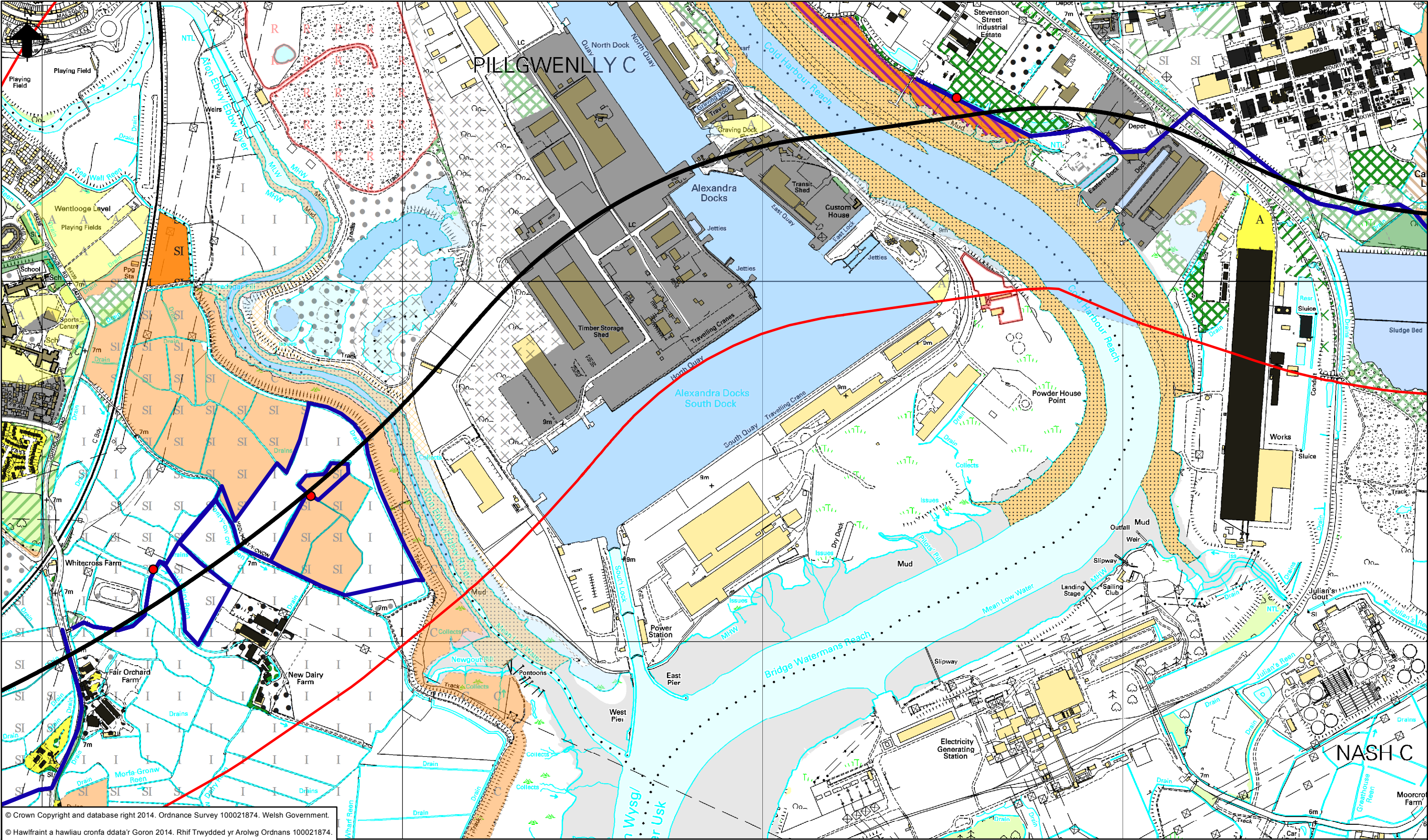
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Drawing No

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Issue

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Legend

Study Area
Preferred M4 Route
Bat Detectors
Bat Activity Transects
Phase 1 Habitats

Code

- Semi-natural broadleaved woodland
- Planted broadleaved woodland
- Planted coniferous woodland
- Planted mixed woodland
- Dense scrub
- Scattered scrub
- Scattered broadleaved trees
- Scattered coniferous trees
- Semi-improved acid grassland
- Unimproved neutral grassland
- Semi-improved neutral grassland
- Unimproved calcareous grassland
- Semi-improved calcareous grassland
- Improved grassland
- Marshy grassland
- Poor semi-improved grassland
- Bracken
- Tall ruderal herb
- Swamp
- Inundation vegetation
- Standing water
- Standing water and eutrophic
- Running water
- Intertidal mud/sand
- Salt marsh
- Coastal grassland
- Quarry
- Spill
- Refuse tip
- Arable
- Amenity grassland
- Ephemeral/ short perennial
- Introduced scrub
- Intact hedge-species poor
- Dry ditch
- Buildings
- Bare ground

P0	2014-08-08	FG	PW	PW
Preliminary				
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Job Title

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Metres

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Drawing Title

**Bat Activity Transects and Bat
Detectors Sheet 3**

Job No

117300-01

Drawing Status

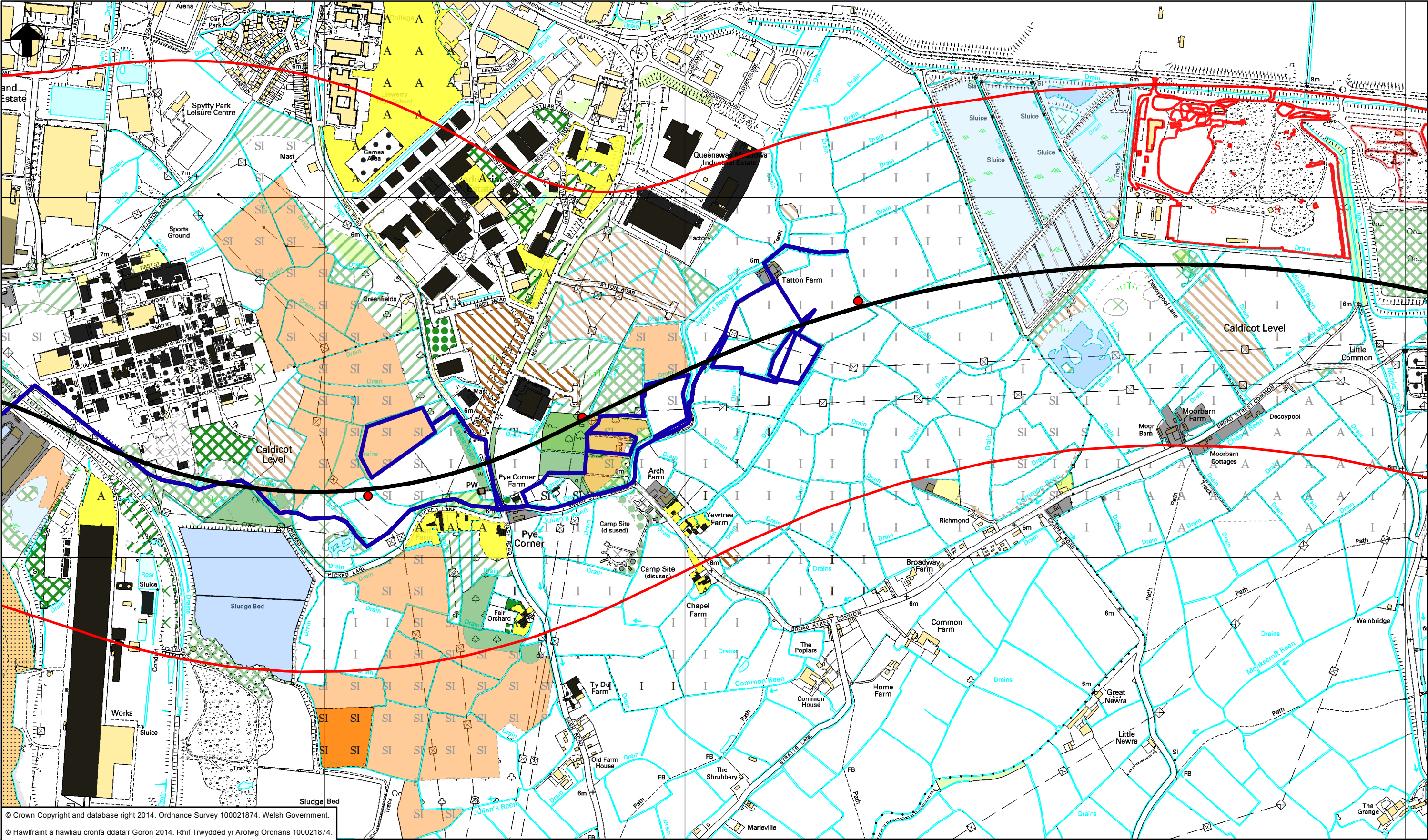
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Legend

Phase 1 Habitats

Code

- Semi-natural broadleaved woodland
- Planted broadleaved woodland
- Planted coniferous woodland
- Planted mixed woodland
- Dense scrub
- Scattered scrub
- Scattered broadleaved trees
- Scattered coniferous trees
- Semi-improved acid grassland
- Unimproved neutral grassland
- Semi-improved neutral grassland
- Unimproved calcareous grassland
- Semi-improved calcareous grassland
- Improved grassland
- Planted coniferous woodland
- Planted mixed woodland
- Dense scrub
- Bracken
- Tall ruderal herb
- Swamp
- Inundation vegetation
- Standing water
- Standing water and eutrophic
- Running water
- Intertidal mud/sand
- Salt marsh
- Coastal grassland
- Quarry
- Spill
- Refuse tip
- Arable
- Amenity grassland
- Ephemeral/short perennial
- Introduced scrub
- Intact hedge-species poor
- Dry ditch
- Buildings
- Bare ground

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Job Title

M4 Corridor Around Newport

Coridor yr M4 o amgylch Casnewydd

Metres

0 80 160 320

Scale at A3

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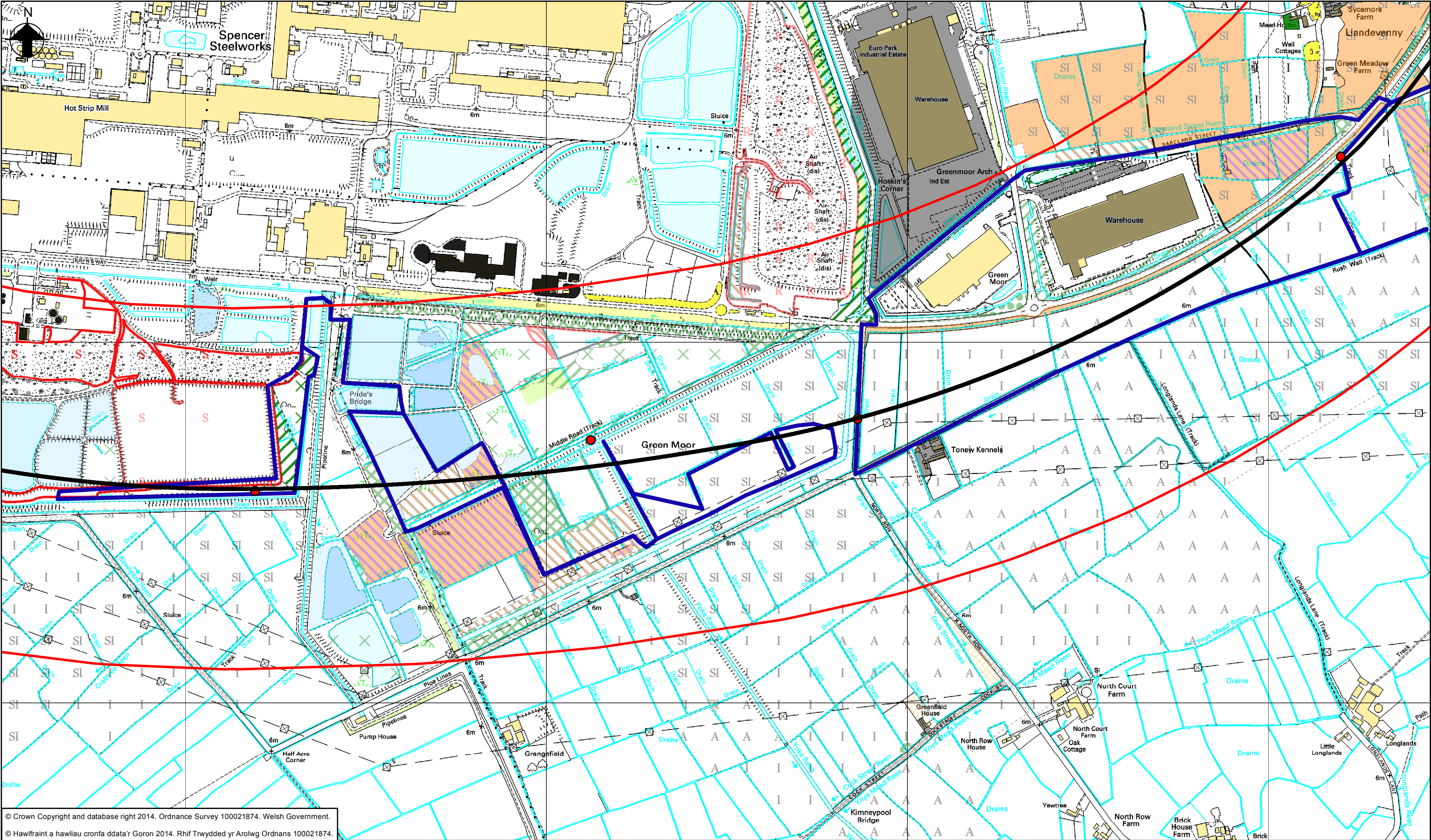
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Drawing Title

**Bat Activity Transects and Bat
Detectors Sheet 4**

Job No	Drawing Status
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Drawing No	Issue
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Legend

Phase 1 Habitats

Code

Semi-natural broadleaved woodland
Planted broadleaved woodland
Planted coniferous woodland
Planted mixed woodland
Dense scrub

Scattered scrub
Scattered broadleaved trees
Scattered coniferous trees
Semi-improved acid grassland
Unimproved neutral grassland
Semi-improved neutral grassland
Unimproved calcareous grassland
Semi-improved calcareous grassland
Improved grassland
Marshy grassland
Poor semi-improved grassland

Bracken
Tall ruderal herb
Swamp
Inundation vegetation
Standing water
Standing water and eutrophic
Running water
Intertidal mud/sand
Salt marsh
Coastal grassland
Quarry

Spill
Refuse tip
Arable
Amenity grassland
Ephemeral/ short perennial
Introduced scrub
Intact hedge-species poor
Dry ditch
Buildings
Bare ground

P0	2014-08-08	FG	PW	PW
Preliminary				
Issue	Date	By	Chkd	Appd

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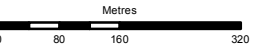
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Job Title

M4 Corridor Around Newport

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Metres
0 80 160 320

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Drawing Title

**Bat Activity Transects and Bat
Detectors Sheet 5**

Job No

117300-01

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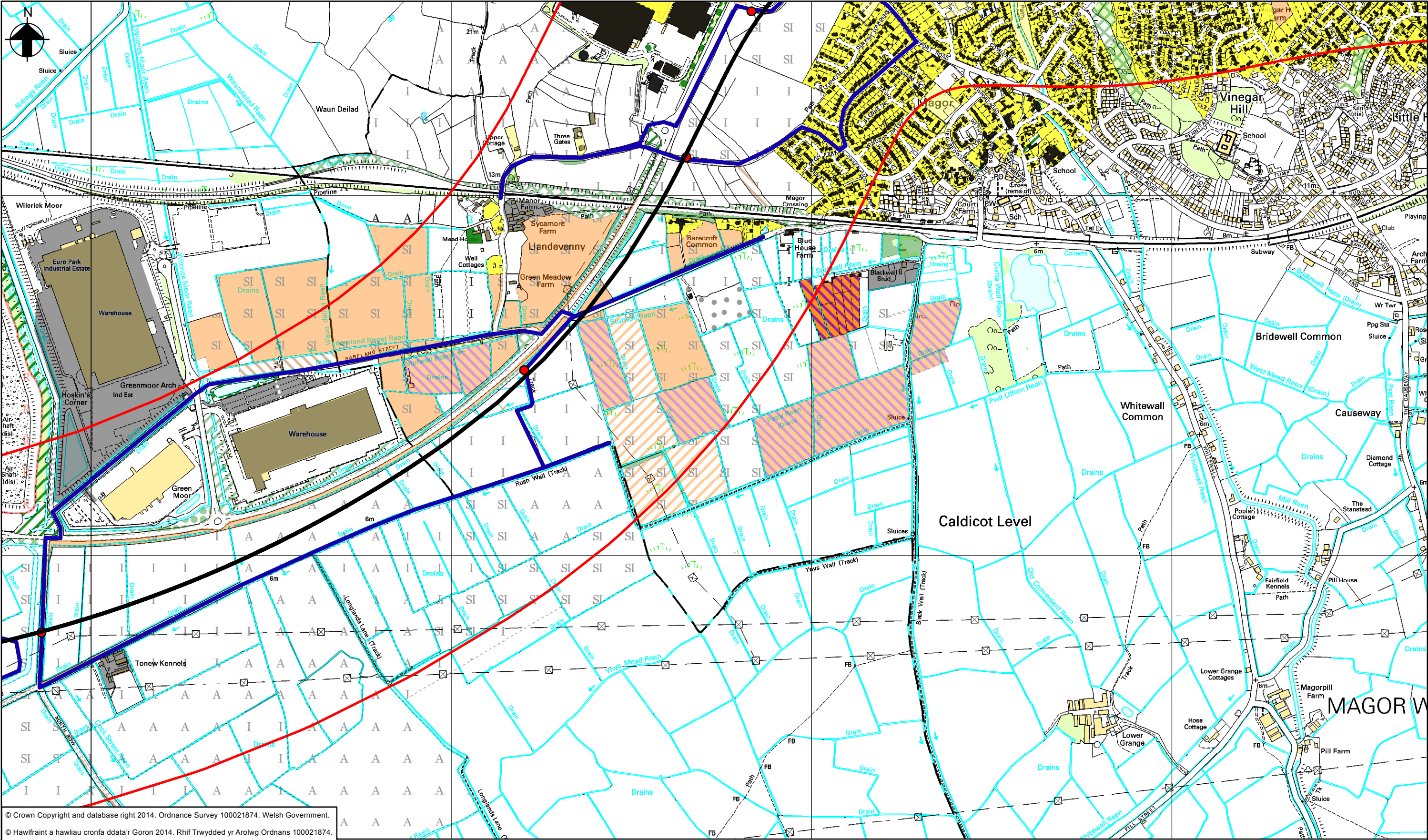
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Drawing Status

Issue

Issue

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Legend

Study Area

Preferred M4 Route

Bat Detectors

Bat Activity Transects

Phase 1 Habitats

Semi-natural broadleaved woodland

Planted broadleaved woodland

Planted coniferous woodland

Planted mixed woodland

Dense scrub

Scattered scrub

Scattered broadleaved trees

Scattered coniferous trees

Semi-improved acid grassland

Unimproved neutral grassland

Semi-improved neutral grassland

Unimproved calcareous grassland

Semi-improved calcareous grassland

Improved grassland

Marshy grassland

Poor semi-improved grassland

Bracken

Tall ruderal herb

Swamp

Inundation vegetation

Standing water

Standing water and eutrophic

Running water

Intertidal mud/sand

Salt marsh

Coastal grassland

Quarry

Spill

Refuse tip

Arable

Amenity grassland

Ephemeral/short perennials

Introduced scrub

Intact hedge-species poor

Dry ditch

Buildings

Bare ground

P0	2014-08-08	FG	PW	PW
Preliminary				
Issue	Date	By	Chkd	Appd

Client



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Job Title

M4 Corridor Around Newport

Corridor yr M4 o amgylch Casnewydd

Metres

0 80 160 320

Scale at A3

1:10,000

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Drawing Title

**Bat Activity Transects and Bat
Detectors Sheet 6**

Job No

117300-01

Drawing Status

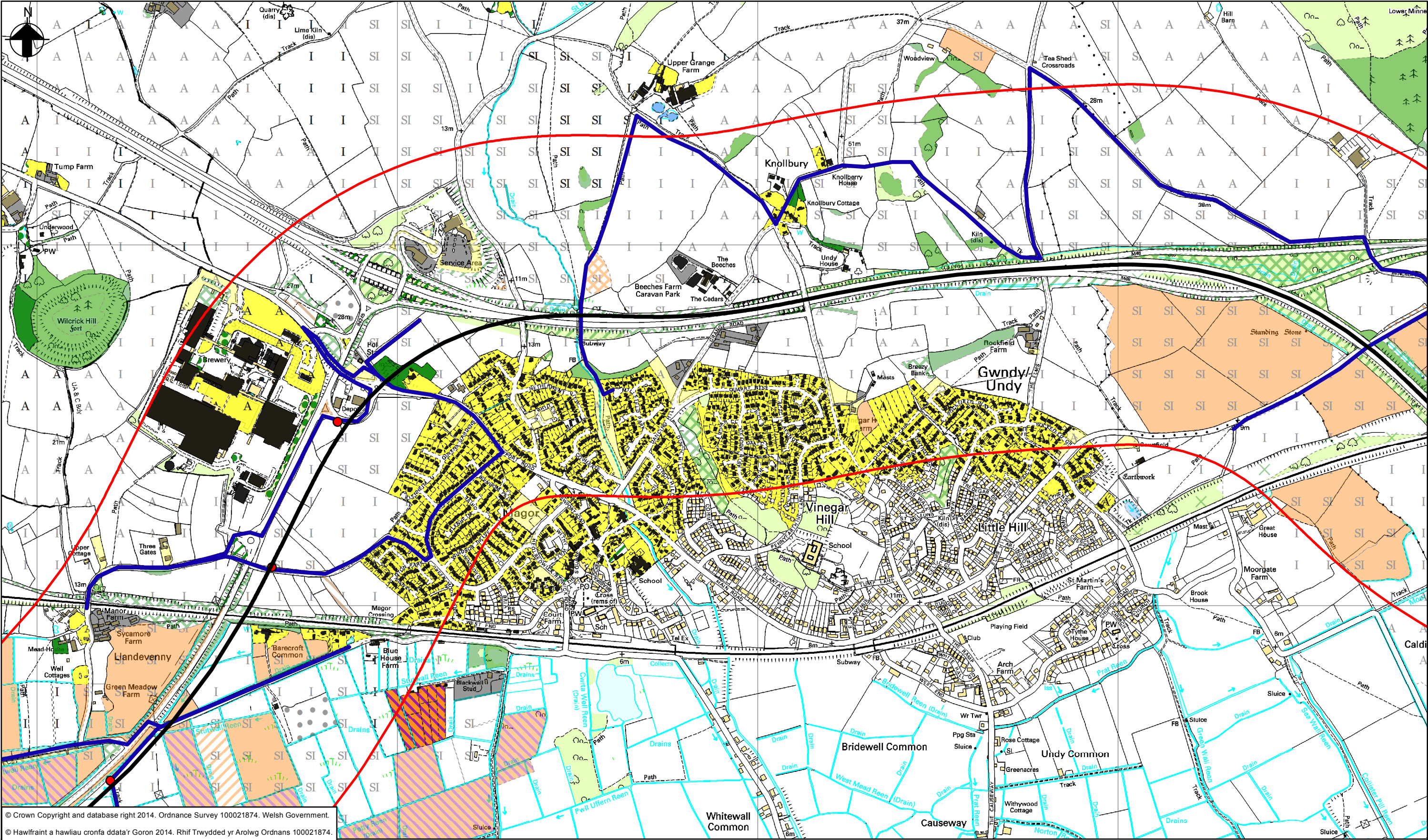
Issue

Drawing No

M4-OA-01-00-DR-Z-BA-0006

Issue

P0



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Legend

Phase 1 Habitats

- Scattered scrub
- Scattered broadleaved trees
- Scattered coniferous trees
- Semi-improved acid grassland
- Unimproved neutral grassland
- Semi-improved neutral grassland
- Unimproved calcareous grassland
- Semi-improved calcareous grassland
- Improved grassland
- Planted coniferous woodland
- Planted mixed woodland
- Dense scrub

- Bracken
- Tall ruderal herb
- Swamp
- Inundation vegetation
- Standing water
- Standing water and eutrophic
- Running water
- Intertidal mud/sand
- Salt marsh
- Coastal grassland
- Quarry

- Spill
- Refuse tip
- Arable
- Amenity grassland
- Ephemeral/ short perennial
- Introduced scrub
- Intact hedge-species poor
- Dry ditch
- Buildings
- Bare ground

P0	2014-08-08	FG	PW	PW
Preliminary				
Issue	Date	By	Chkd	Appd

Client



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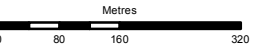
Transport
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Cardiff
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Thrafnidiaeth
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Caerdydd
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Job Title

M4 Corridor Around Newport

Coridor yr M4 o amgylch Casnewydd



0 80 160 320 Metres

Scale at A3

1:10,000

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Drawing Title

**Bat Activity Transects and Bat
Detectors Sheet 7**

Job No

117300-01

Drawing Status

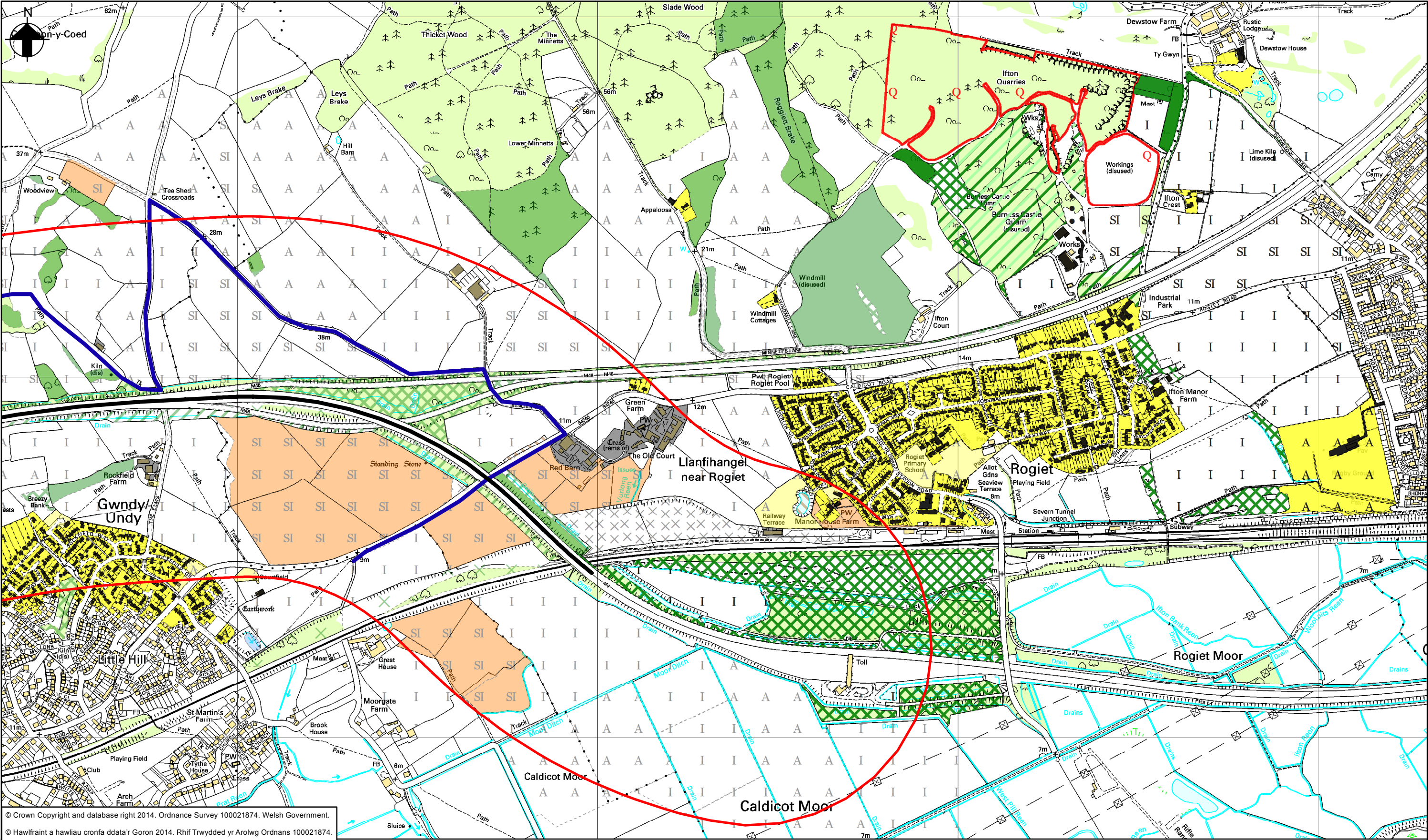
Issue

Drawing No

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Issue

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Legend

Study Area

Preferred M4 Route

Bat Detectors

Bat Activity Transects

Phase 1 Habitats

Semi-natural broadleaved woodland

Planted broadleaved woodland

Planted coniferous woodland

Planted mixed woodland

Dense scrub

Scattered scrub

Scattered broadleaved trees

Scattered coniferous trees

Semi-improved acid grassland

Unimproved neutral grassland

Semi-improved neutral grassland

Unimproved calcareous grassland

Semi-improved calcareous grassland

Improved grassland

Planted grassland

Poor semi-improved grassland

Bracken

Tall ruderal herb

Swamp

Inundation vegetation

Standing water

Standing water and eutrophic

Running water

Intertidal mud/sand

Salt marsh

Coastal grassland

Quarry

Spill

Refuse tip

Arable

Amenity grassland

Ephemeral/ short perennial

Introduced scrub

Intact hedge-species poor

Dry ditch

Buildings

Bare ground

P0	2014-08-08	FG	PW	PW
Preliminary				
Issue	Date	By	Chkd	Appd

Client



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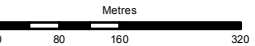
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Job Title

M4 Corridor Around Newport

Coridor yr M4 o amgylch Casnewydd



Metres
0 80 160 320

Scale at A3

1:10,000



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Drawing Title

**Bat Activity Transects and Bat
Detectors Sheet 8**

Job No

117300-01

Drawing Status

Issue

Drawing No

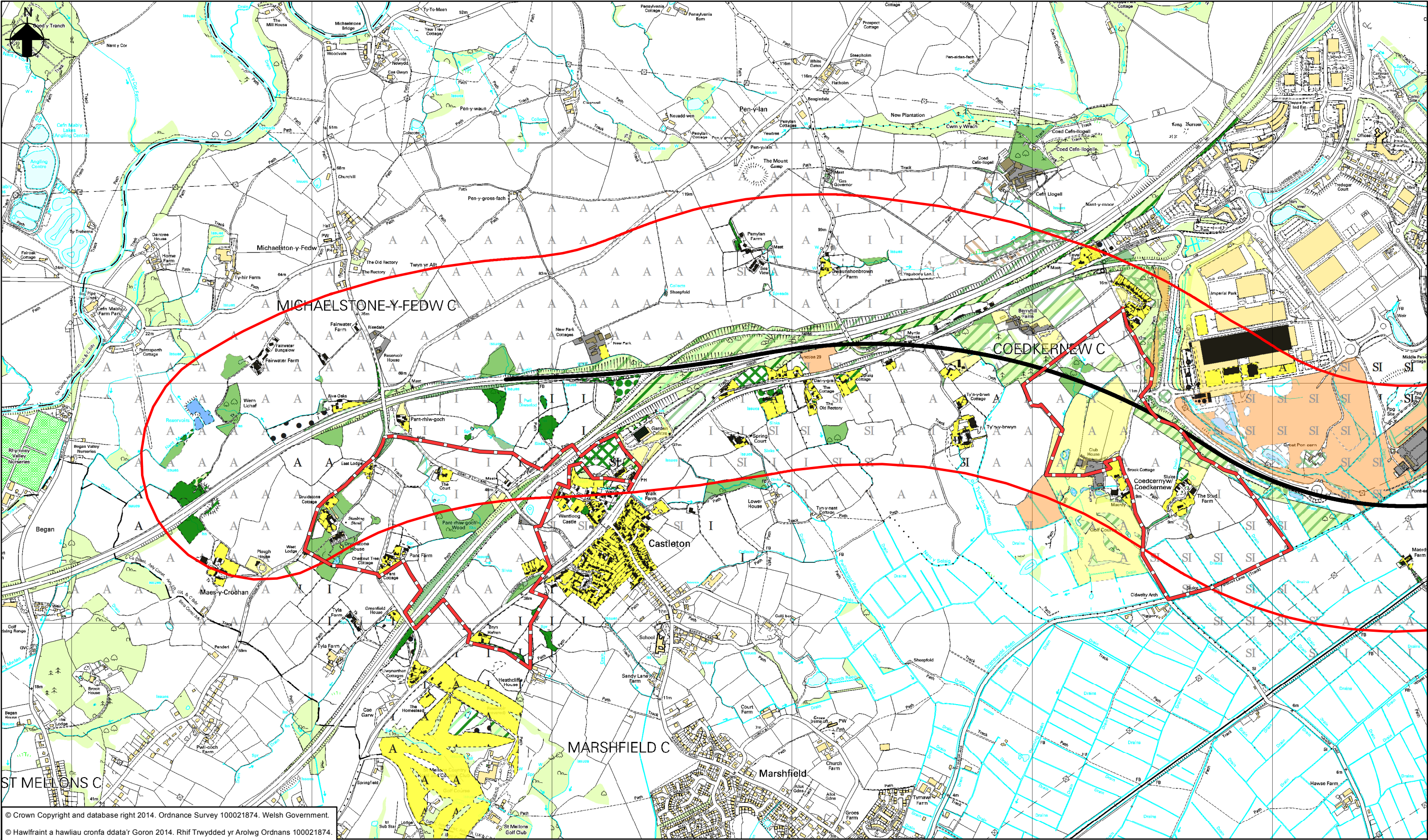
M4-OA-01-00-DR-Z-BA-0008

Issue

P0

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Legend

Breeding Bird Survey Transect

Study Area

Preferred M4 Route

Phase 1 Habitats

Code

Scattered broadleaved trees

Scattered coniferous trees

Semi-improved acid grassland

Unimproved neutral grassland

Semi-improved neutral grassland

Unimproved calcareous grassland

Semi-improved calcareous grassland

Improved grassland

Planted coniferous woodland

Planted mixed woodland

Dense scrub

Scattered scrub

Tall ruderal herb

Swamp

Inundation vegetation

Standing water

Standing water and eutrophic

Running water

Intertidal mud/sand

Salt marsh

Coastal grassland

Bracken

Refuse tip

Arable

Amenity grassland

Ephemeral/ short perennial

Introduced scrub

Intact hedge-species poor

Dry ditch

Buildings

Bare ground

Client

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Job Title

M4 Corridor Around Newport

Coridor yr M4 o amgylch Casnewydd

Metres

0 120 240 480

Scale at A3
1:15,000

Drawing Title

Breeding Bird Survey Transects 1 & 2

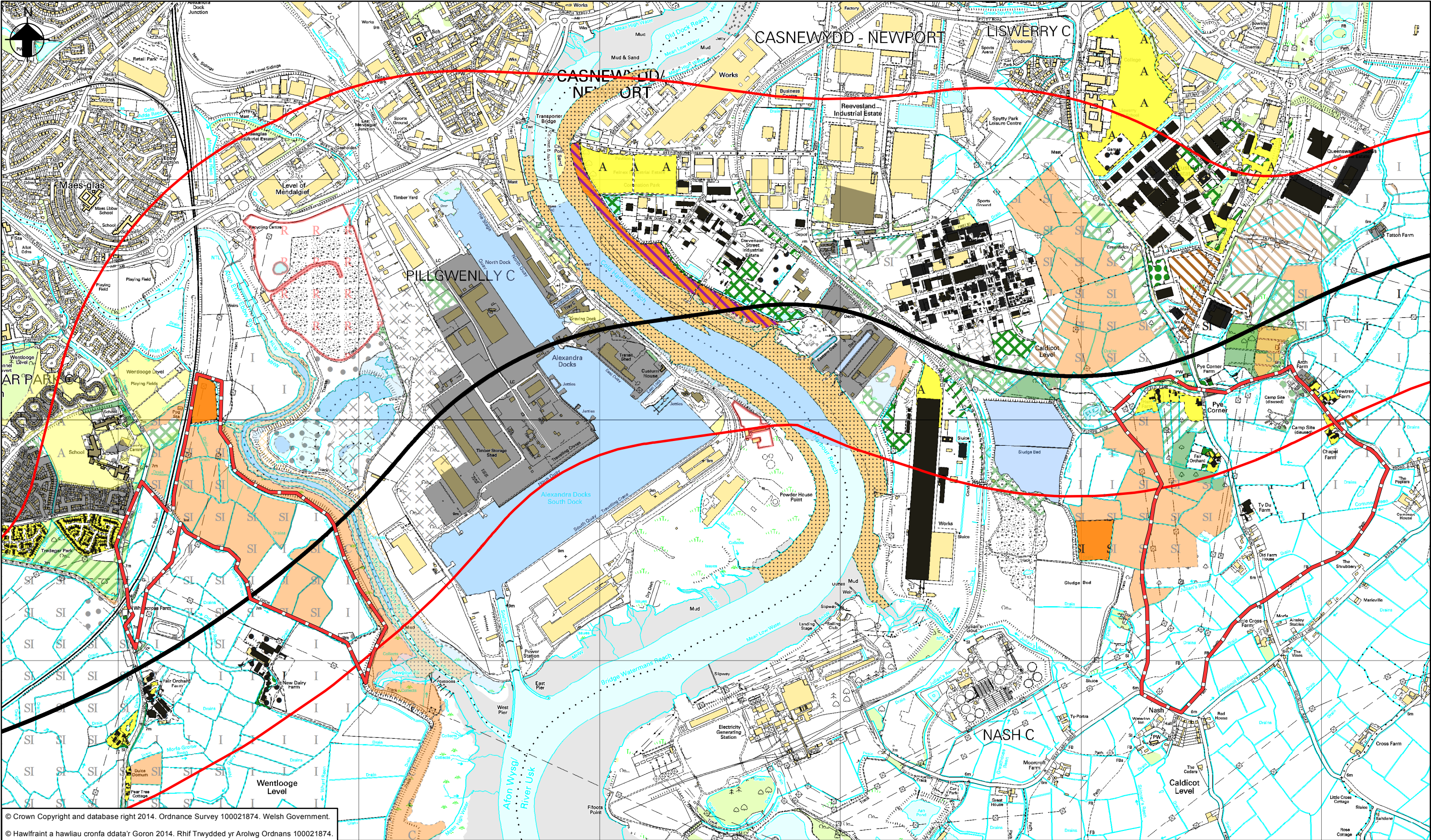
Job No
117300-01

Drawing Status
Issue

Drawing No
M4-OA-01-00-DR-Z-BB-0001

Issue
P0

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Legend

Breeding Bird Survey Transect

Study Area

Preferred M4 Route

Phase 1 Habitats

Code

Semi-natural broadleaved woodland

Planted broadleaved woodland

Planted coniferous woodland

Planted mixed woodland

Dense scrub

Scattered scrub

Scattered broadleaved trees

Scattered coniferous trees

Semi-improved acid grassland

Unimproved neutral grassland

Semi-improved neutral grassland

Unimproved calcareous grassland

Semi-improved calcareous grassland

Improved grassland

Marshy grassland

Poor semi-improved grassland

Bracken

Tall ruderal herb

Swamp

Inundation vegetation

Standing water

Standing water and eutrophic

Running water

Intertidal mud/sand

Salt marsh

Coastal grassland

Spoil

Refuse tip

Arable

Amenity grassland

Ephemeral/ short perennial

Introduced scrub

Intact hedge-species poor

Dry ditch

Buildings

Bare ground

P0	2014-08-08	FG	PW	PW
Preliminary				
Issue	Date	By	Chkd	Appd

Client



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Job Title

M4 Corridor Around Newport

Coridor yr M4 o amgylch Casnewydd



Metres

Scale at A3

1:15,000

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Drawing Title

Breeding Bird Survey Transects 3 & 4

Job No

117300-01

Drawing Status

Issue

Drawing No

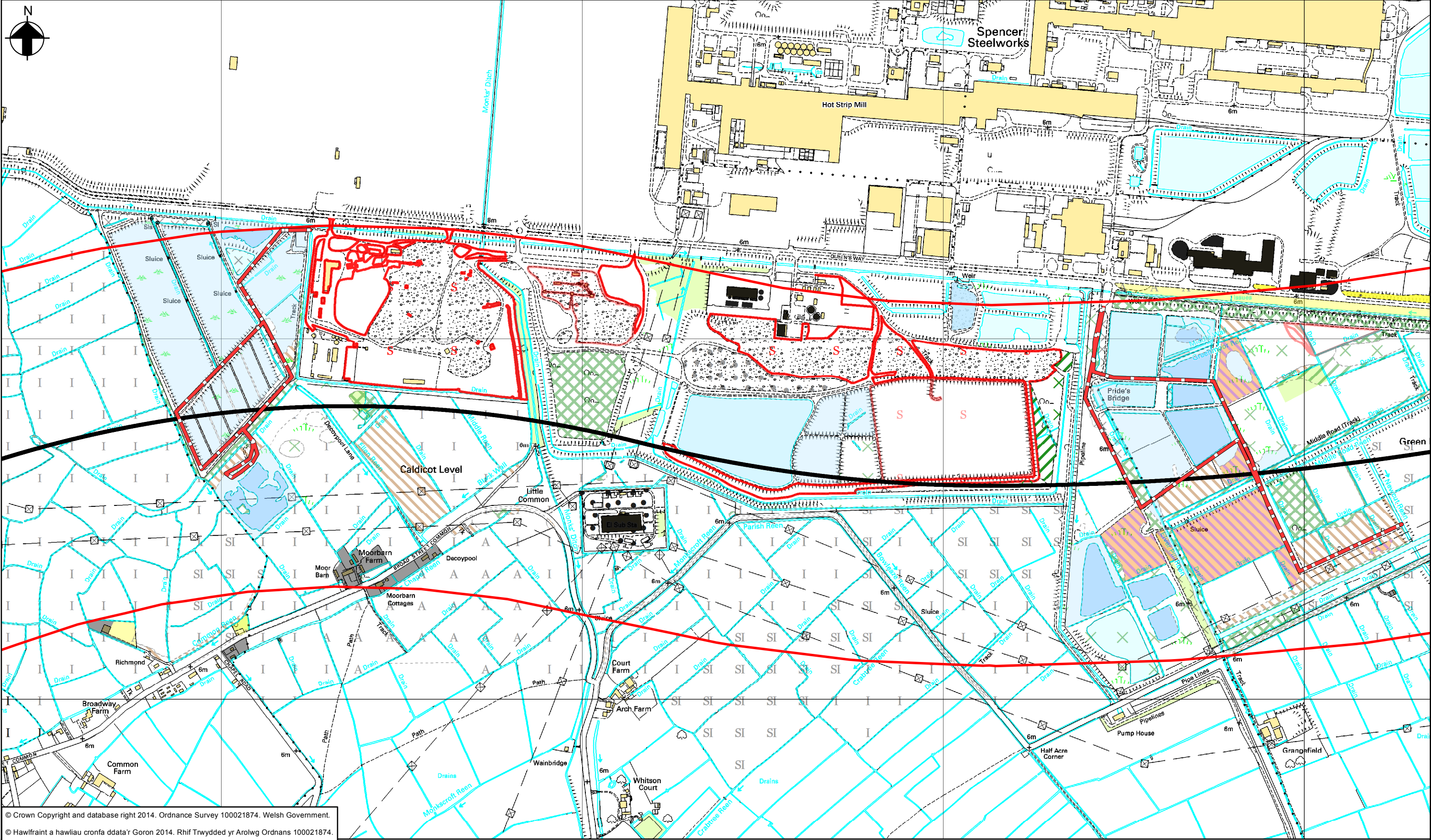
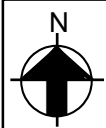
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Issue

P0

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Legend

Breeding Bird Survey Transect
 Study Area
 Preferred M4 Route

Phase 1 Habitats

Code

Semi-natural broadleaved woodland	Scattered broadleaved trees	Tall ruderal herb
Planted broadleaved woodland	Scattered coniferous trees	Swamp
Planted coniferous woodland	Semi-improved acid grassland	Inundation vegetation
Planted mixed woodland	Unimproved neutral grassland	Standing water
Dense scrub	Semi-improved neutral grassland	Standing water and eutrophic
Scattered scrub	Unimproved calcareous grassland	Running water
	Semi-improved calcareous grassland	Interfluvial mud/sand
	Improved grassland	Salt marsh
	Marshy grassland	Coastal grassland
	Poor semi-improved grassland	Quarry
	Bracken	Spoil

Refuse tip
 Arable
 Amenity grassland
 Ephemeral/ short perennial
 Introduced scrub
 Intact hedge-species poor
 Dry ditch
 Buildings
 Bare ground

P0	2014-08-08	FG	PW	PW
Preliminary				
Issue	Date	By	Chkd	Appd

Client

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Job Title

M4 Corridor Around Newport

Coridor yr M4 o amgylch Casnewydd

Metres

0 80 160 320

Scale at A3

1:10,000

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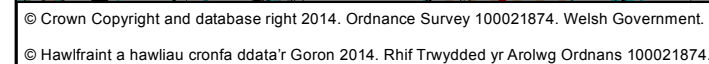
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Drawing Title

Breeding Bird Survey Transects 5 & 6

Job No	Drawing Status
117300-01	Issue

Drawing No	Issue
M4-OA-01-00-DR-Z-BB-0003	P0



Legend

 Breeding Bird Survey Transect	 Scattered broadleaved trees	 Tall ruderal herb	 Refuse tip
 Study Area	 Scattered coniferous trees	 Swamp	 Arable
 Preferred M4 Route	 Semi-improved acid grassland	 Inundation vegetation	 Amenity grassland
Phase 1 Habitats	 Unimproved neutral grassland	 Standing water	 EpheMERal/ short perennial
Code	 Semi-improved neutral grassland	 Standing water and eutrophic	 Introduced scrub
 Semi-natural broadleaved woodland	 Unimproved calcareous grassland	 Running water	 Intract hedge-species poor
 Planted broadleaved woodland	 Semi-improved calcareous grassland	 Intertidal mud/sand	 Dry ditch
 Planted coniferous woodland	 Improved grassland	 Salt marsh	 Buildings
 Planted mixed woodland	 Marshy grassland	 Coastal grassland	 Bare ground
 Dense scrub	 Poor semi-improved grassland	 Quarry	
 Scattered scrub	 Bracken	 Spoil	

P0	2014-08-08	FG	PW	PW
Preliminary				
Issue	Date	By	Chkd	Appd



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Client

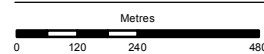
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Job Title

M4 Corridor Around Newport

Coridor yr M4 o amgylch Casnewydd



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Drawing Title

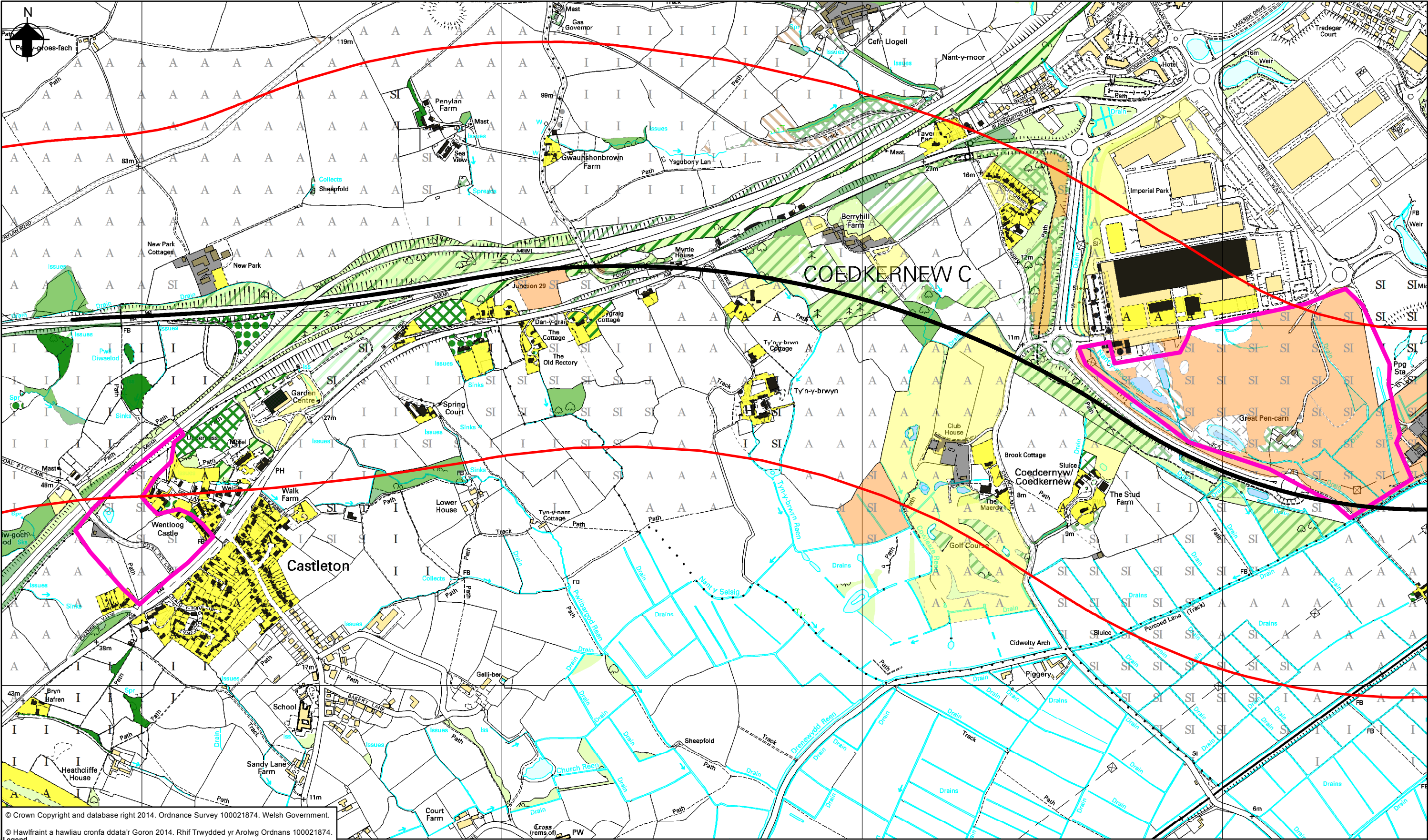
Breeding Bird Survey Transects 7 & 8

Job No
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Drawing Status	
Issue	

Drawing No
M4-OA-01-00-DR-Z-BB-0004

Issue	P0
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Legend

Phase 1 Habitats

Code

- Semi-natural broadleaved woodland
- Planted broadleaved woodland
- Planted coniferous woodland
- Planted mixed woodland
- Dense scrub
- Scattered scrub
- Scattered broadleaved trees
- Scattered coniferous trees
- Semi-improved acid grassland

- Unimproved neutral grassland
- Semi-improved neutral grassland
- Unimproved calcareous grassland
- Semi-improved calcareous grassland
- Improved grassland
- Marshy grassland
- Poor semi-improved grassland
- Bracken
- Tall ruderal herb
- Swamp
- Inundated vegetation
- Standing water
- Standing water and eutrophic
- Running water

- Intertidal mud/sand
- Salt marsh
- Coastal grassland
- Quarry
- Spoil
- Refuse tip
- Arable
- Amenity grassland
- Ephemeral/short perennial
- Introduced scrub
- Intact hedge-species poor
- Dry ditch
- Buildings
- Bare ground

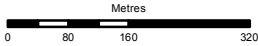
P0	2014-08-08	FG	PW	PW
Preliminary				
Issue	Date	By	Chkd	Appd



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Job Title
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Coridor yr M4 o amgylch Casnewydd



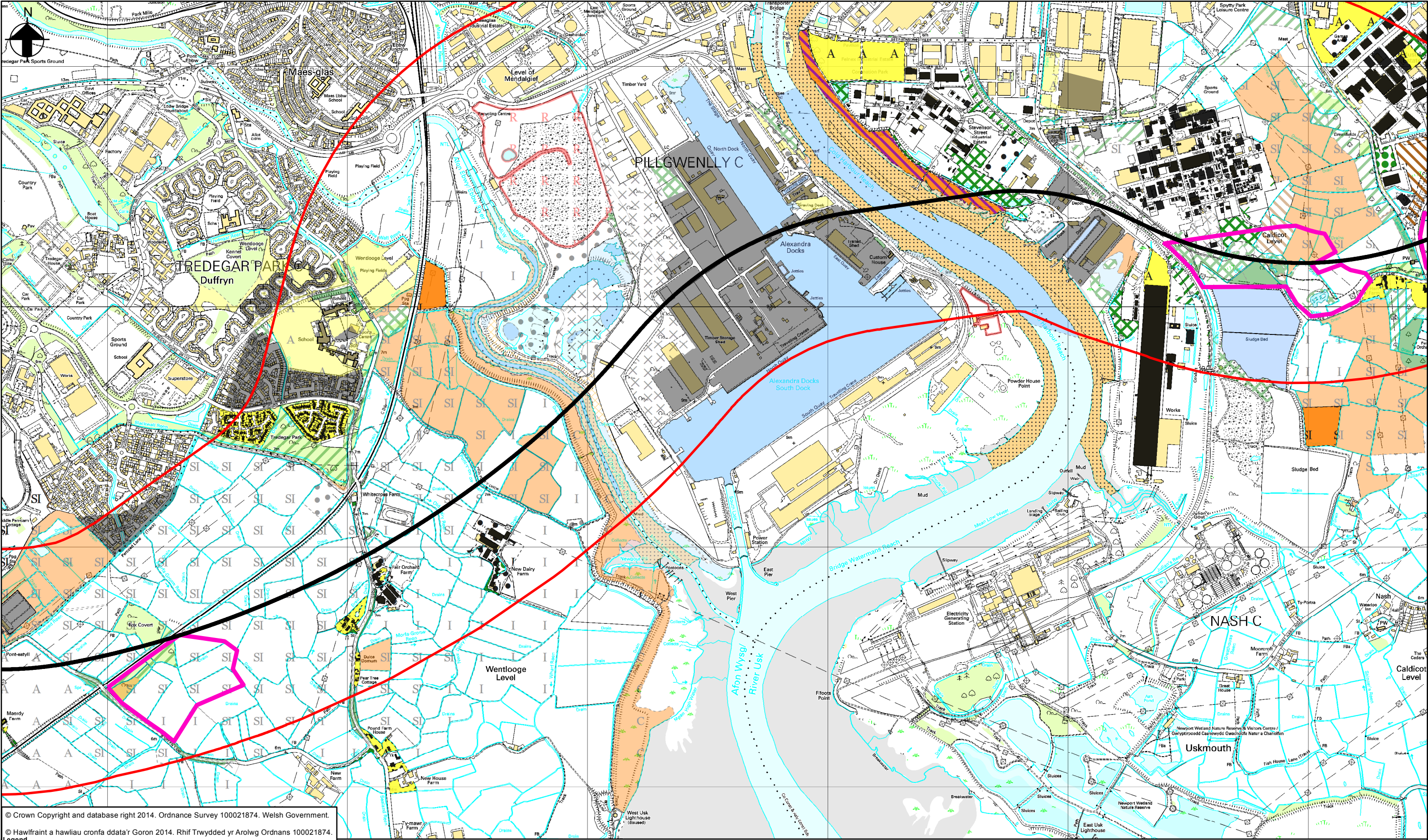
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Drawing Title
Reptile Survey Locations Sheet 1

Job No 117300-01	Drawing Status Issue
Drawing No M4-OA-01-00-DR-Z-RP-0001	Issue P0



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Legend

Phase 1 Habitats

Code

- Semi-natural broadleaved woodland
- Planted broadleaved woodland
- Planted coniferous woodland
- Planted mixed woodland
- Dense scrub
- Scattered scrub
- Scattered broadleaved trees
- Scattered coniferous trees
- Semi-improved acid grassland

- Unimproved neutral grassland
- Semi-improved neutral grassland
- Unimproved calcareous grassland
- Semi-improved calcareous grassland
- Improved grassland
- Marshy grassland
- Poor semi-improved grassland
- Bracken
- Tall ruderal herb
- Swamp
- Intact hedge-species poor
- Standing water
- Standing water and eutrophic
- Running water

- Intertidal mud/sand
- Salt marsh
- Coastal grassland
- Quarry
- Spoil
- Refuse tip
- Arable
- Amenity grassland
- Ephemeral/ short perennial
- Introduced scrub
- Dry ditch
- Buildings
- Bare ground

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Issue	Date	By	Chkd	Appd

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Job Title

M4 Corridor Around Newport

Coridor yr M4 o amgylch Casnewydd

Metres

Scale at A3

1:15,000

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Drawing Title

Reptile Survey Locations Sheet 2

Job No

117300-01

Drawing Status

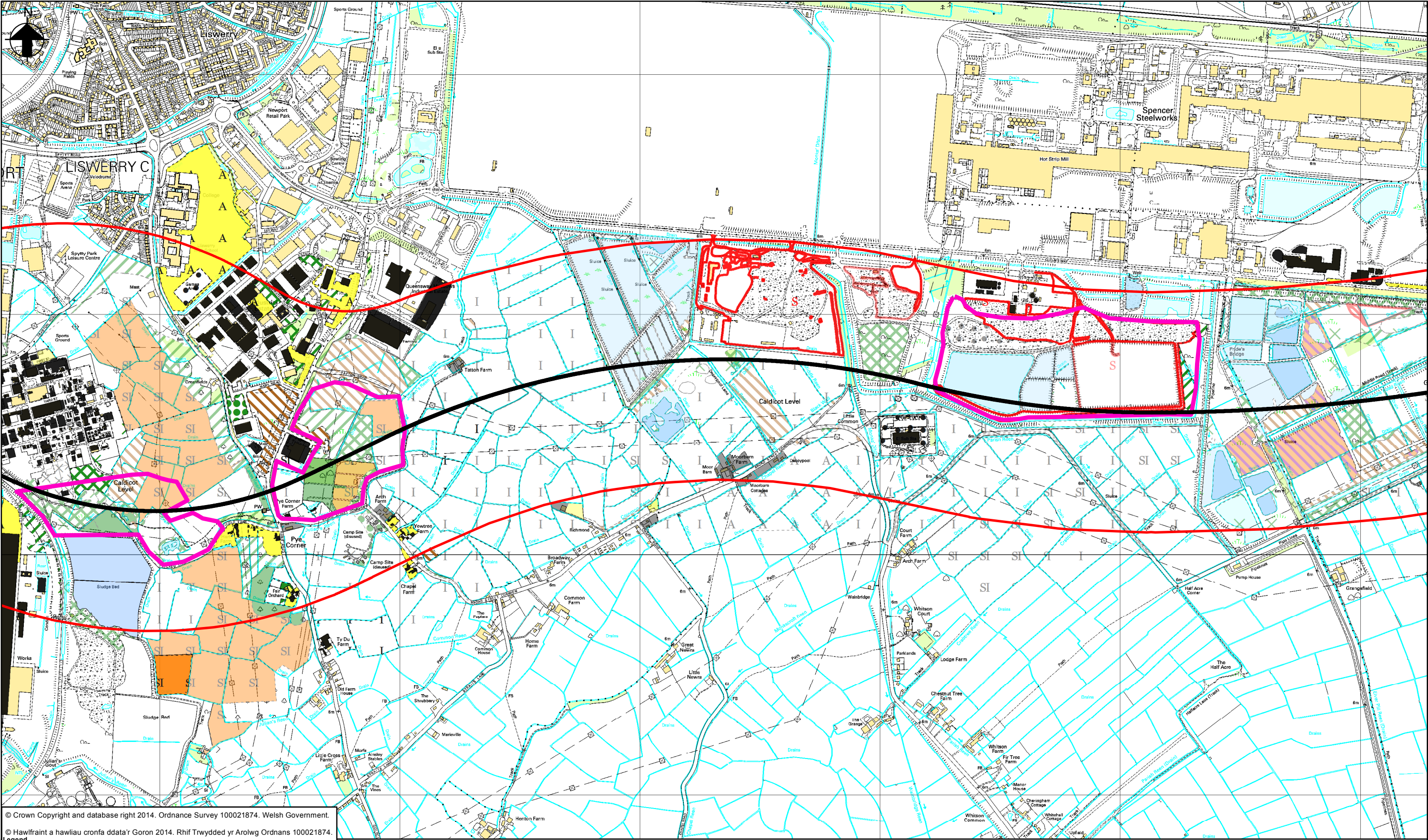
Issue

Drawing No

M4-OA-01-00-DR-Z-RP-0002

Issue

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Legend

Phase 1 Habitats

Code

- Semi-natural broadleaved woodland
- Planted broadleaved woodland
- Planted coniferous woodland
- Planted mixed woodland
- Dense scrub
- Scattered scrub
- Scattered broadleaved trees
- Scattered coniferous trees
- Semi-improved acid grassland

- Unimproved neutral grassland
- Semi-improved neutral grassland
- Unimproved calcareous grassland
- Semi-improved calcareous grassland
- Improved grassland
- Marshy grassland
- Poor semi-improved grassland
- Bracken
- Tall ruderal herb
- Swamp
- Inundation vegetation
- Standing water
- Standing water and eutrophic
- Running water

- Intertidal mud/sand
- Salt marsh
- Coastal grassland
- Quarry
- Spoil
- Refuse tip
- Arable
- Amenity grassland
- Ephemeral/ short perennial
- Introduced scrub
- Intact hedge-species poor
- Dry ditch
- Buildings
- Bare ground

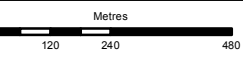
P0	2014-08-08	FG	PW	PW
Preliminary				
Issue	Date	By	Chkd	Appd



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Job Title
M4 Corridor Around Newport
Coridor yr M4 o amgylch Casnewydd



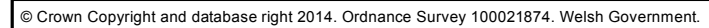
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Drawing Title
Reptile Survey Locations Sheet 3

Job No 117300-01	Drawing Status Issue
Drawing No M4-OA-01-00-DR-Z-RP-0003	Issue P0



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Legend

 Study Area

Preferred M4 Ro

Reptile Survey Log

Phase 1 Habitats

Code
 Semi natural bro...

 Semi-natural broadleaved forest

Planted coniferous

 Planted mixed w Dense scrub

Scattered scrub

 Scattered broadleaf

Scattered conifer

Legend: Semi-improved area

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	Unimproved neutral grassland
	Semi-improved neutral grassland
	Unimproved calcareous grassland
	Semi-improved calcareous grassland
	Improved grassland
	Marshy grassland
	Poor semi-improved grassland
	Bracken
	Tall ruderal herb
	Swamp
	Inundation vegetation
	Standing water
	Standing water and eutrophic
	Running water

Legend:

- Intertidal mud/sand
- Salt marsh
- Coastal grassland
- Quarry
- Spoil
- Refuse tip
- Arable
- Amenity grassland
- Ephemeral/ short perennial
- Introduced scrub
- Intact hedge-species poor
- Dry ditch
- Buildings
- Bare ground

PC

Issue

0	2014-08-08	FG	
Preliminary			
Due	Date	By	

PW	PW
Chkd	Appd

Client



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Parc Cathays
Caerdydd
CF10 3NQ

Job Title

M4 Corridor

Corridor y

0 120

Metres

240 480

A

newydd

Scale at A3

1:15,000

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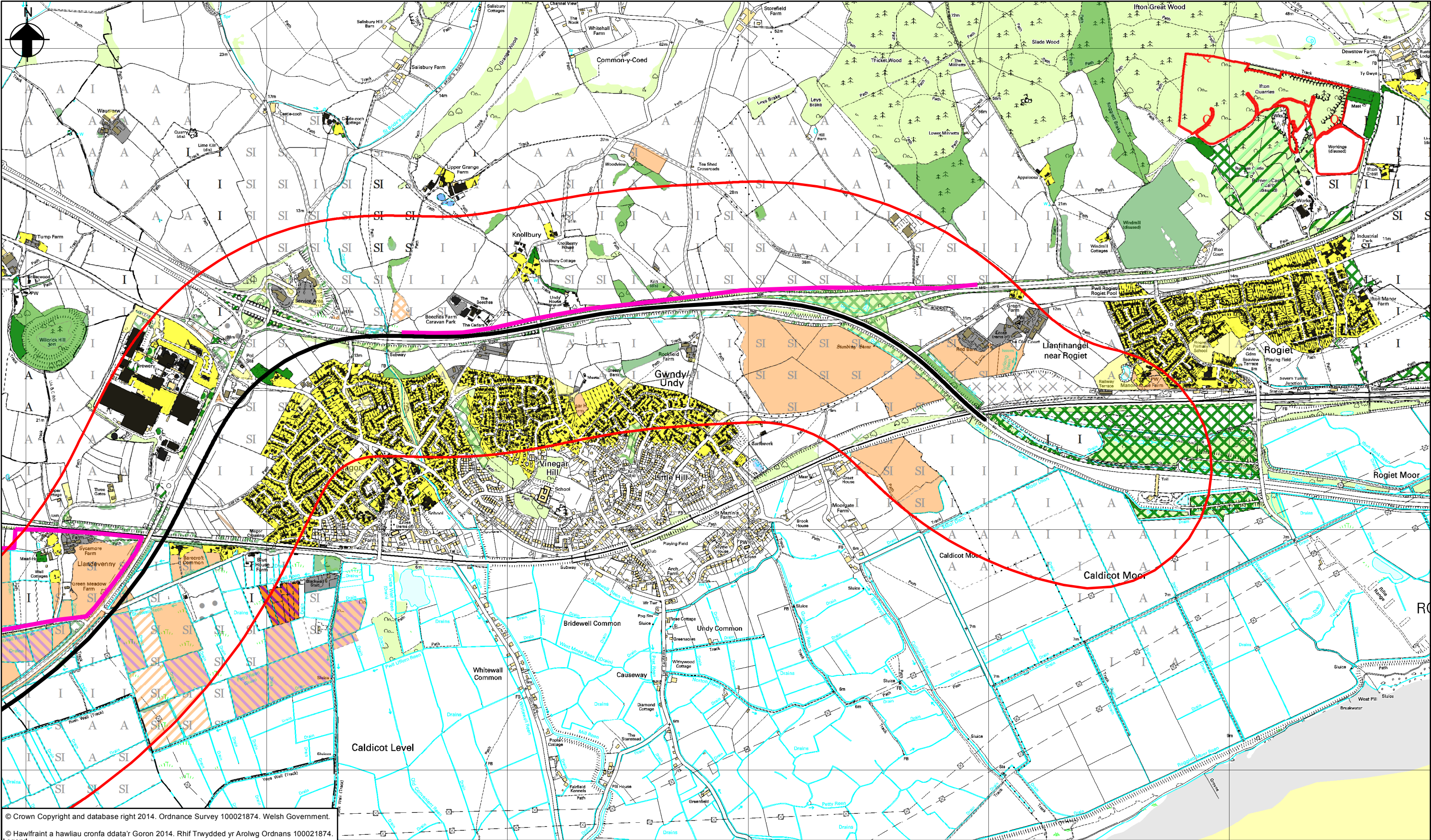
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Title	
e Survey Locations	
0-01	Drawing Status Issue
No	
A-01-00-DR-Z-RP-00	

Sheet 4

04	Issue P0
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Legend

Study Area

- Preferred M4 Route
- Reptile Survey Locations

Phase 1 Habitats

Code

Semi-natural broadleaved woodland	Unimproved neutral grassland	Intertidal mud/sand
Planted broadleaved woodland	Semi-improved neutral grassland	Salt marsh
Planted coniferous woodland	Unimproved calcareous grassland	Coastal grassland
Planted mixed woodland	Semi-improved calcareous grassland	Quarry
Dense scrub	Improved grassland	Spoil
Scattered scrub	Marshy grassland	Refuse tip
Scattered broadleaved trees	Poor semi-improved grassland	Arable
Scattered coniferous trees	Bracken	Amenity grassland
Semi-improved acid grassland	Tall ruderal herb	Ephemeral/ short perennial
	Swamp	Introduced scrub
	Inundation vegetation	Intact hedge-species poor
	Standing water	Dry ditch
	Standing water and eutrophic	Buildings
	Running water	Bare ground

P0	2014-08-08	FG	PW	PW
Preliminary				
Issue	Date	By	Chkd	Appd

Client



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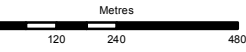
Transport
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Caerdydd
CF10 3NQ

Job Title

M4 Corridor Around Newport

Coridor yr M4 o amgylch Casnewydd



Scale at A3

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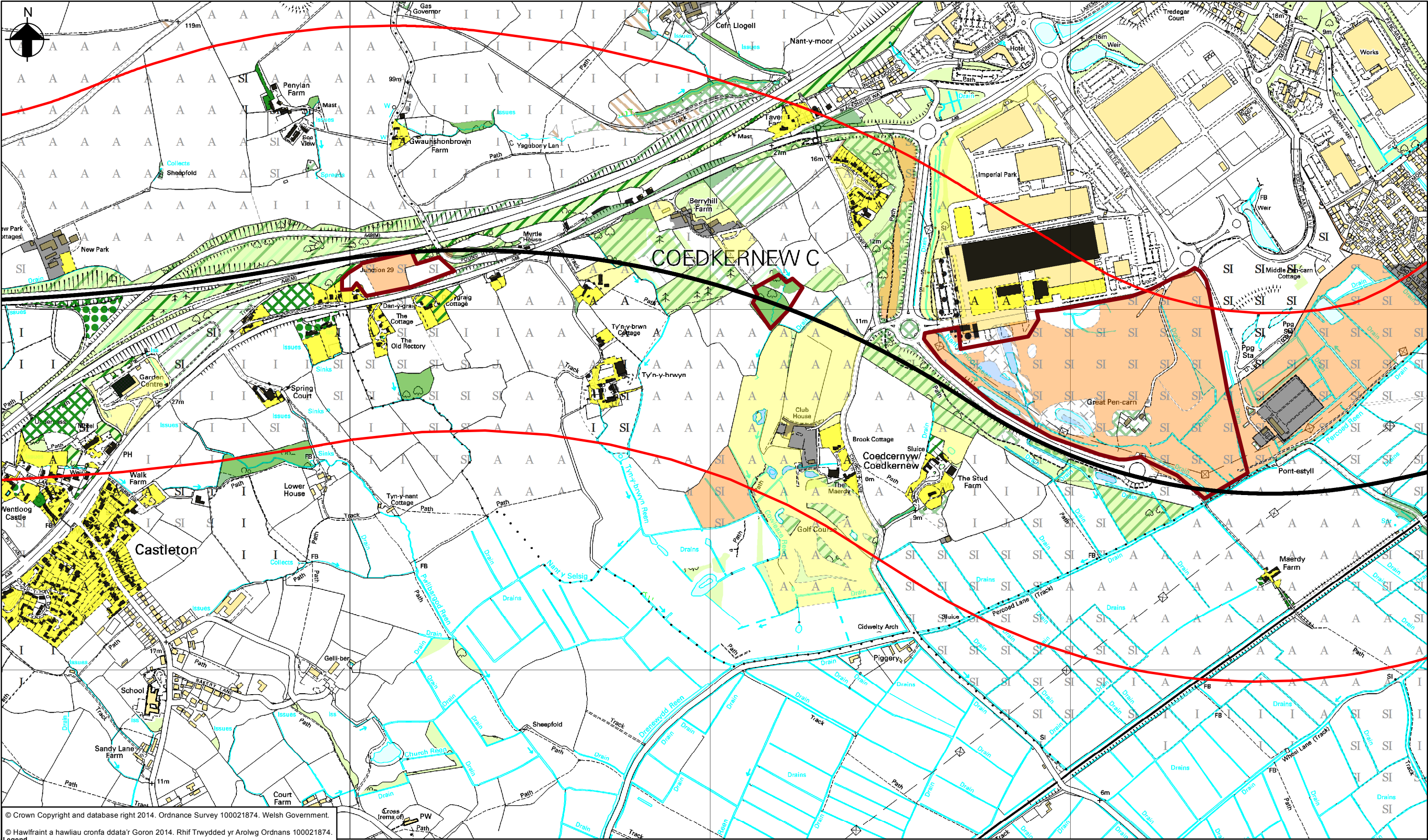
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Drawing Title

Reptile Survey Locations Sheet 5

Job No	Drawing Status
117300-01	Issue
Drawing No	Issue
M4-OA-01-00-DR-Z-RP-0005	P0



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Legend

Phase 1 Habitats

Code

- Semi-natural broadleaved woodland
- Planted broadleaved woodland
- Planted coniferous woodland
- Planted mixed woodland
- Dense scrub
- Scattered scrub
- Scattered broadleaved trees
- Scattered coniferous trees
- Semi-improved acid grassland

- Unimproved neutral grassland
- Semi-improved neutral grassland
- Unimproved calcareous grassland
- Semi-improved calcareous grassland
- Improved grassland
- Marshy grassland
- Poor semi-improved grassland
- Bracken
- Tall ruderal herb
- Swamp
- Inundation vegetation
- Standing water
- Standing water and eutrophic
- Running water

- Intertidal mud/sand
- Salt marsh
- Coastal grassland
- Quarry
- Spoil
- Refuse tip
- Arable
- Amenity grassland
- Ephemeral/ short perennial
- Introduced scrub
- Intact hedge-species poor
- Dry ditch
- Buildings
- Bare ground

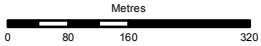
P0	2014-08-08	FG	PW	PW
Preliminary				
Issue	Date	By	Chkd	Appd



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Job Title
M4 Corridor Around Newport
Coridor yr M4 o amgylch Casnewydd



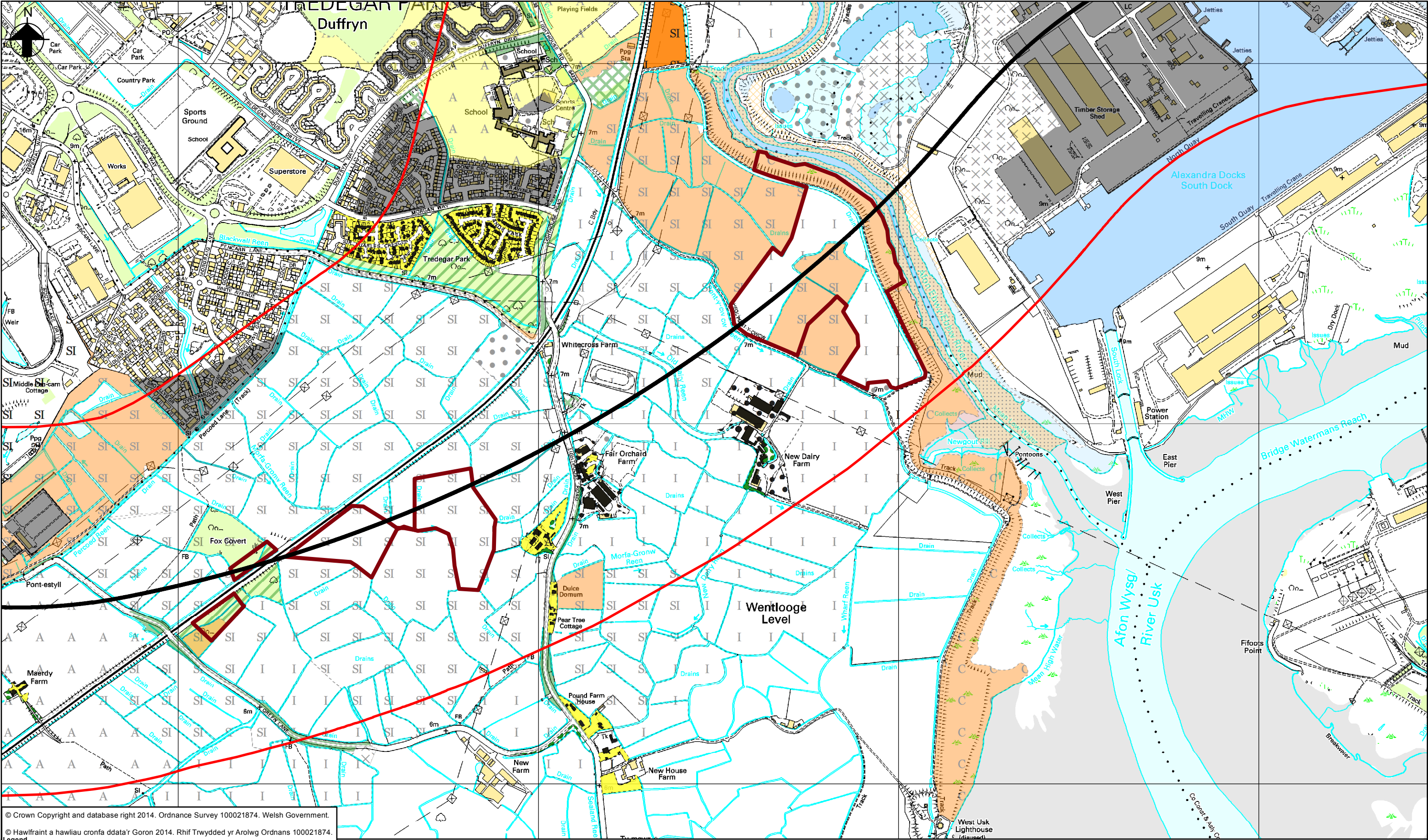
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Drawing Title
NVC Survey Location Sheet 1

Job No 117300-01	Drawing Status Issue
Drawing No M4-OA-01-00-DR-Z-NV-0001	Issue P0



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Legend

Study Area

- Study Area
- Preferred M4 Route
- NVC Survey Locations

Phase 1 Habitats

Code

- Semi-natural broadleaved woodland
- Planted broadleaved woodland
- Planted coniferous woodland
- Planted mixed woodland
- Dense scrub
- Scattered scrub
- Scattered broadleaved trees
- Scattered coniferous trees
- Semi-improved acid grassland

Unimproved neutral grassland

- Unimproved neutral grassland
- Semi-improved neutral grassland
- Unimproved calcareous grassland
- Semi-improved calcareous grassland
- Improved grassland
- Marshy grassland
- Poor semi-improved grassland
- Bracken
- Tall ruderal herb
- Swamp
- Inundation vegetation
- Standing water
- Standing water and eutrophic
- Running water

Intertidal mud/sand

- Intertidal mud/sand
- Salt marsh
- Coastal grassland
- Quarry
- Spoil
- Refuse tip
- Arable
- Amenity grassland
- Ephemeral/ short perennial
- Introduced scrub
- Intact hedge-species poor
- Dry ditch
- Buildings
- Bare ground

P0	2014-08-08	FG	PW	PW
Preliminary				
Issue	Date	By	Chkd	Appd

Client



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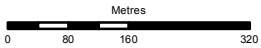
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Job Title

M4 Corridor Around Newport

Coridor yr M4 o amgylch Casnewydd



Scale at A3

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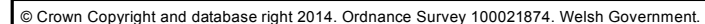
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Drawing Title

NVC Survey Location Sheet 2

Job No	Drawing Status
117300-01	Issue
Drawing No	Issue
M4-OA-01-00-DR-Z-NV-0002	P0



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Legend

Phase 1 Habitats

Code	
	Semi-natural broadleaved woodland
	Planted broadleaved woodland
	Planted coniferous woodland
	Planted mixed woodland
	Dense scrub
	Scattered scrub
	Scattered broadleaved trees
	Scattered coniferous trees
	Semi-improved acid grassland

	Unimproved neutral grassland		Intertidal mud/sand
	Semi-improved neutral grassland		Salt marsh
	Unimproved calcareous grassland		Coastal grassland
	Semi-improved calcareous grassland		Quarry
	Improved grassland		Spoil
	Marshy grassland		Refuse tip
	Poor semi-improved grassland		Arable
	Bracken		Amenity grassland
	Tall ruderal herb		Open/semi-/short peat
	Swamp		Introduced scrub
	Inundation vegetation		Intact hedge-species
	Standing water		Dry ditch
	Standing water and eutrophic		Buildings
	Running water		Base ground

P0	2014-08-08	FG	PW	PW
Preliminary				
Issue	Date	By	Chkd	Appd



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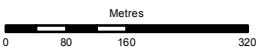
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Scale at A3
1:10,000

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Drawing Title

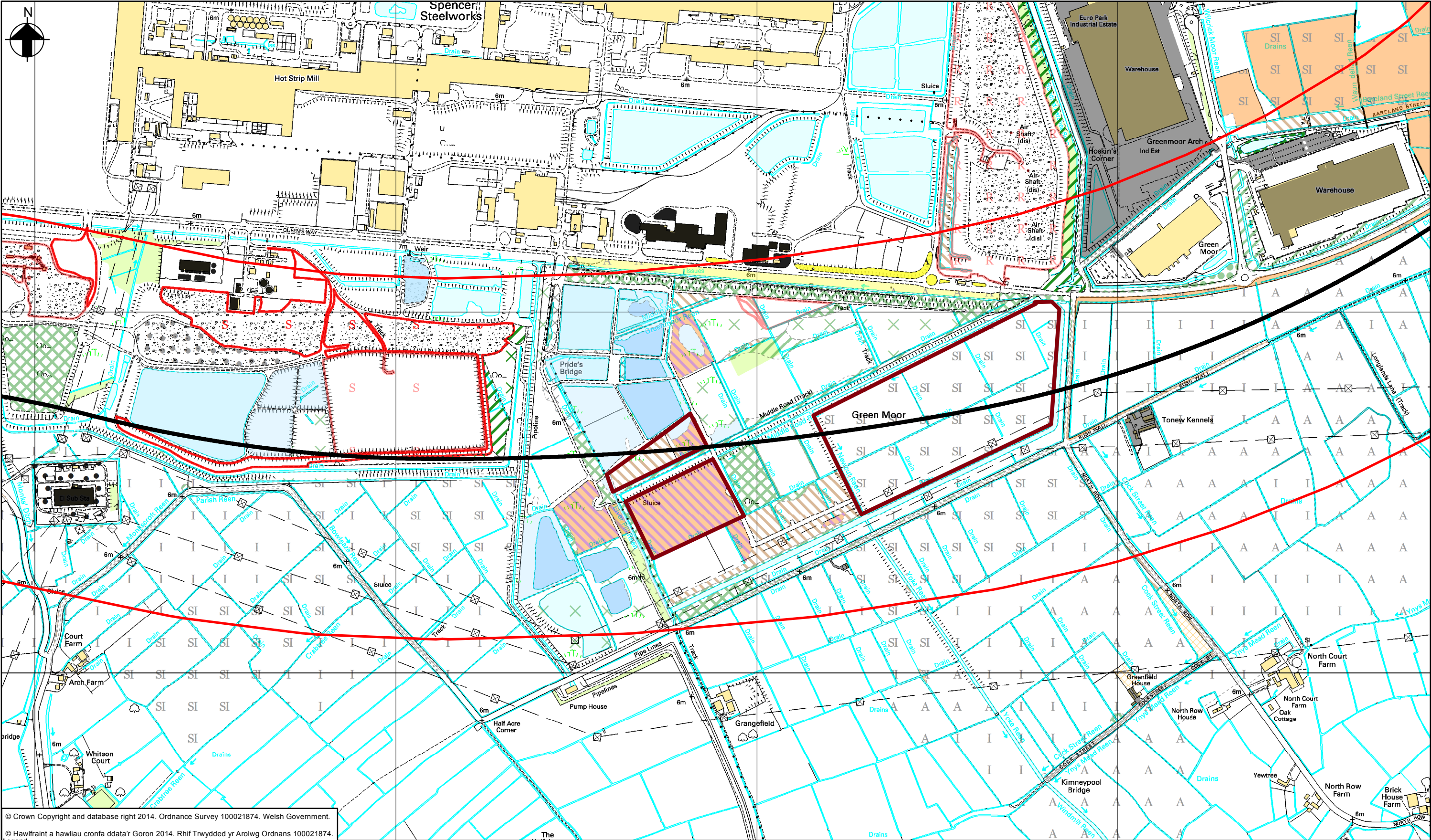
NVC Survey Location Sheet 3

Job No
117300-01

Drawing Status
Issue

Drawing No
M4-OA-01-00-DR-Z-NV-0003

Issue
20



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Legend

Phase 1 Habitats

Code

- Semi-natural broadleaved woodland
- Planted broadleaved woodland
- Planted coniferous woodland
- Planted mixed woodland
- Dense scrub
- Scattered scrub
- Scattered broadleaved trees
- Scattered coniferous trees
- Semi-improved acid grassland

- Unimproved neutral grassland
- Semi-improved neutral grassland
- Unimproved calcareous grassland
- Semi-improved calcareous grassland
- Improved grassland
- Marshy grassland
- Poor semi-improved grassland
- Bracken
- Tall ruderal herb
- Swamp
- Intact hedge-species poor
- Standing water
- Standing water and eutrophic
- Running water

- Intertidal mud/sand
- Salt marsh
- Coastal grassland
- Quarry
- Spoil
- Refuse tip
- Arable
- Amenity grassland
- Ephemeral/ short perennial
- Introduced scrub
- Dry ditch
- Buildings
- Bare ground

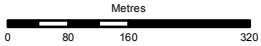
P0	2014-08-08	FG	PW	PW
Preliminary				
Issue	Date	By	Chkd	Appd



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Job Title
M4 Corridor Around Newport
Coridor yr M4 o amgylch Casnewydd



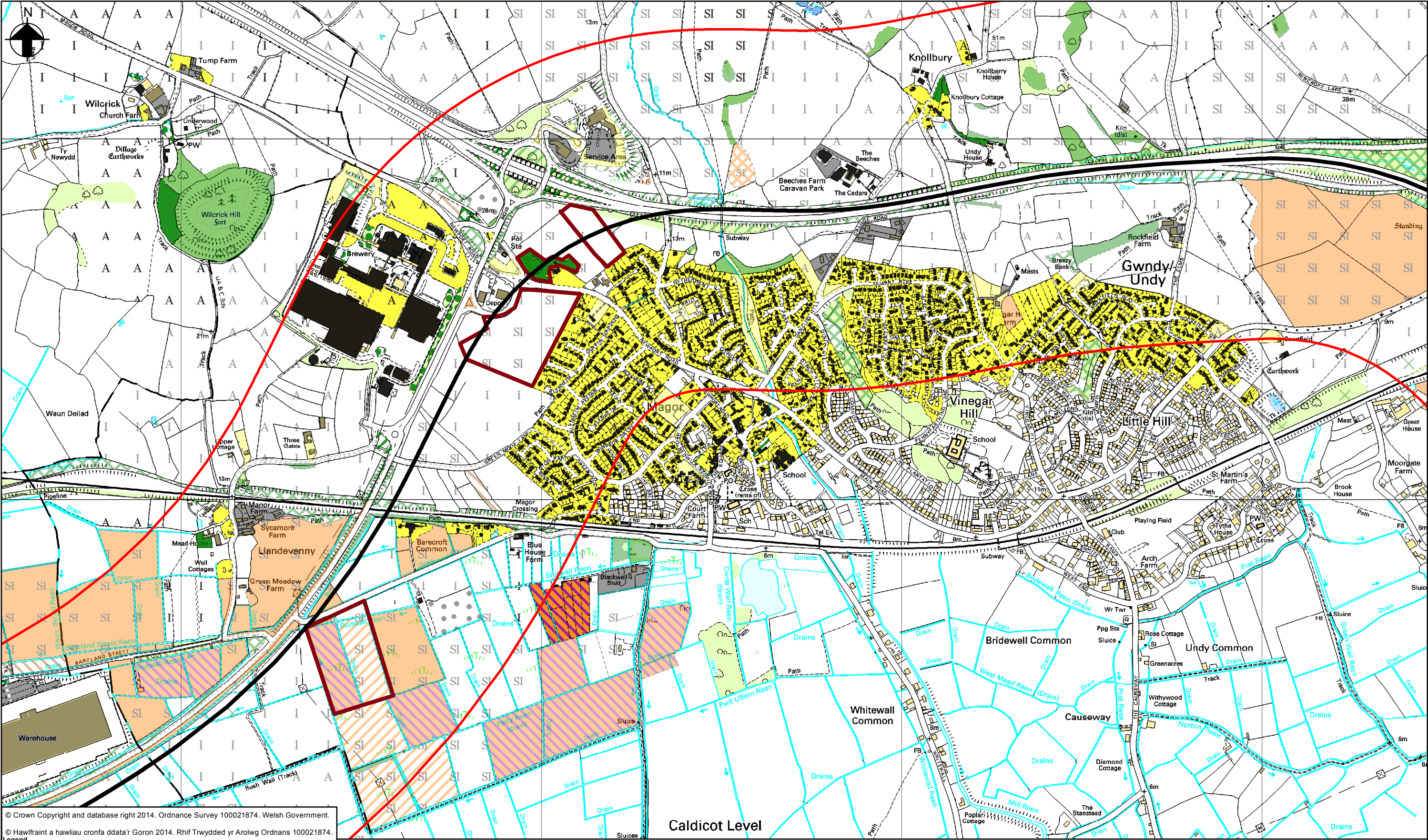
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Drawing Title
NVC Survey Location Sheet 4

Job No 117300-01	Drawing Status Issue
Drawing No M4-OA-01-00-DR-Z-NV-0004	Issue P0



Legend

Phase 1 Habitats

Code

- Semi-natural broadleaved woodland
- Planted broadleaved woodland
- Planted coniferous woodland
- Planted mixed woodland
- Dense scrub
- Scattered scrub
- Scattered broadleaved trees
- Scattered coniferous trees
- Semi-improved acid grassland
- Unimproved neutral grassland
- Semi-improved neutral grassland
- Unimproved calcareous grassland
- Semi-improved calcareous grassland
- Improved grassland
- Marshy grassland
- Poor semi-improved grassland
- Bracken
- Tall ruderal herb
- Swamp
- Inundation vegetation
- Standing water
- Standing water and eutrophic
- Running water
- Intertidal mud/sand
- Salt marsh
- Coastal grassland
- Quarry
- Spoil
- Refuse tip
- Arable
- Amenity grassland
- Ephemeral/short perennial
- Introduced scrub
- Intact hedge-species poor
- Dry ditch
- Buildings
- Bare ground

P0	2014-08-08	FG	PW	PW
Preliminary				
Issue	Date	By	Chkd	Appd

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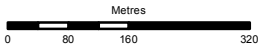
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Job Title

M4 Corridor Around Newport

Coridor yr M4 o amgylch Casnewydd



Scale at A3

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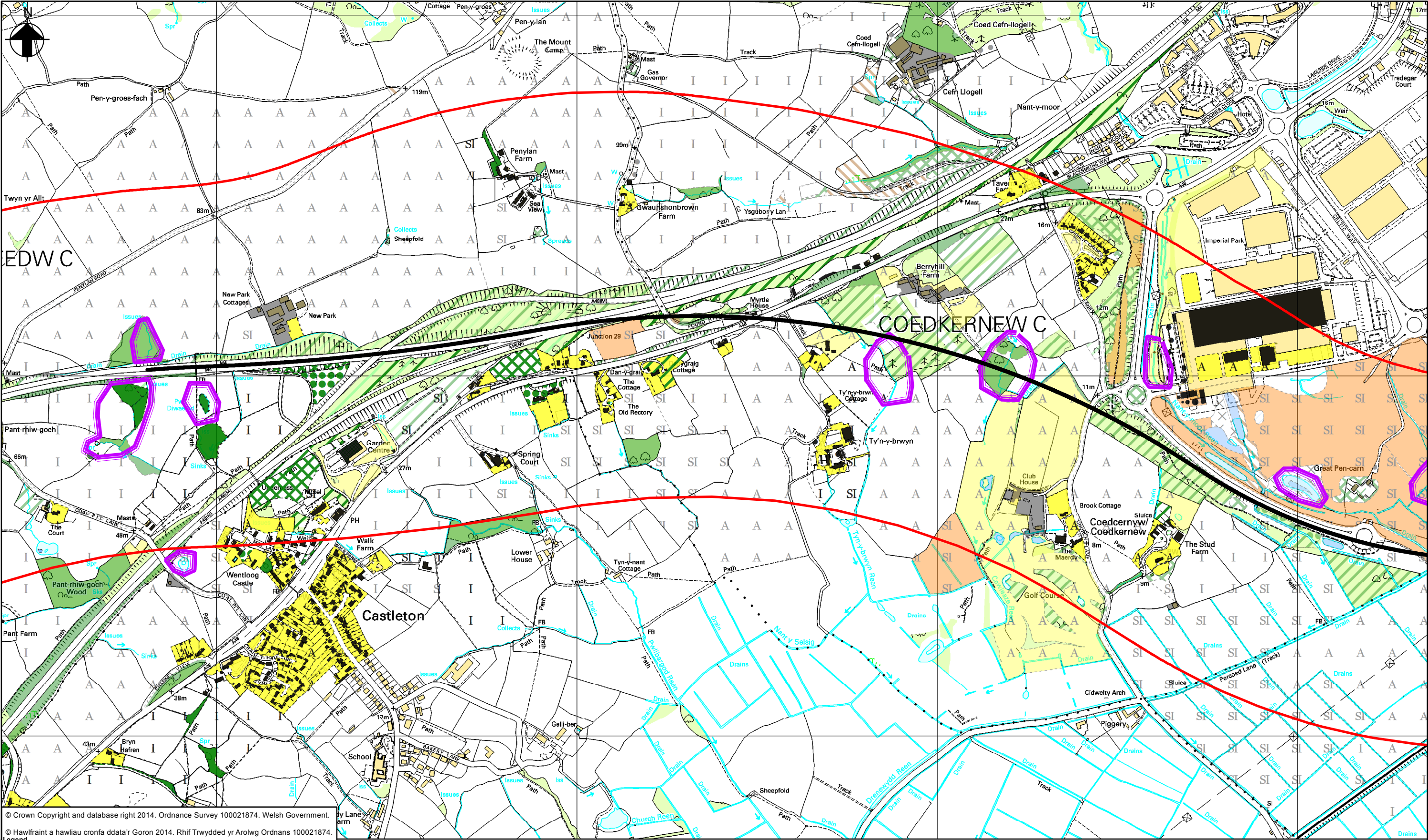
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Drawing Title

NVC Survey Location Sheet 5

Job No	Drawing Status
117300-01	Issue
Drawing No	Issue
M4-OA-01-00-DR-Z-NV-0005	P0



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Legend

Phase 1 Habitats

Code

- Semi-natural broadleaved woodland
- Planted broadleaved woodland
- Planted coniferous woodland
- Planted mixed woodland
- Dense scrub
- Scattered scrub
- Scattered broadleaved trees
- Scattered coniferous trees
- Semi-improved acid grassland

Phase 1 Habitats

- Unimproved neutral grassland
- Semi-improved neutral grassland
- Unimproved calcareous grassland
- Semi-improved calcareous grassland
- Improved grassland
- Marshy grassland
- Poor semi-improved grassland
- Bracken
- Tall ruderal herb
- Swamp
- Inundation vegetation
- Standing water
- Standing water and eutrophic
- Running water

Phase 1 Habitats

- Intertidal mud/sand
- Salt marsh
- Coastal grassland
- Quarry
- Spill
- Refuse tip
- Arable
- Amenity grassland
- Ephemeral/short perennial
- Introduced scrub
- Intact hedge-species poor
- Dry ditch
- Buildings
- Bare ground

P0	2014-08-08	FG	PW	PW
Preliminary				
Issue	Date	By	Chkd	Appd

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Job Title

M4 Corridor Around Newport

Coridor yr M4 o amgylch Casnewydd

Metres

Scale at A3

1:10,000

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Drawing Title

**Aquatic and Terrestrial Invertebrate and
Macrophyte Survey Locations Sheet 1**

Job No

117300-01

Drawing Status

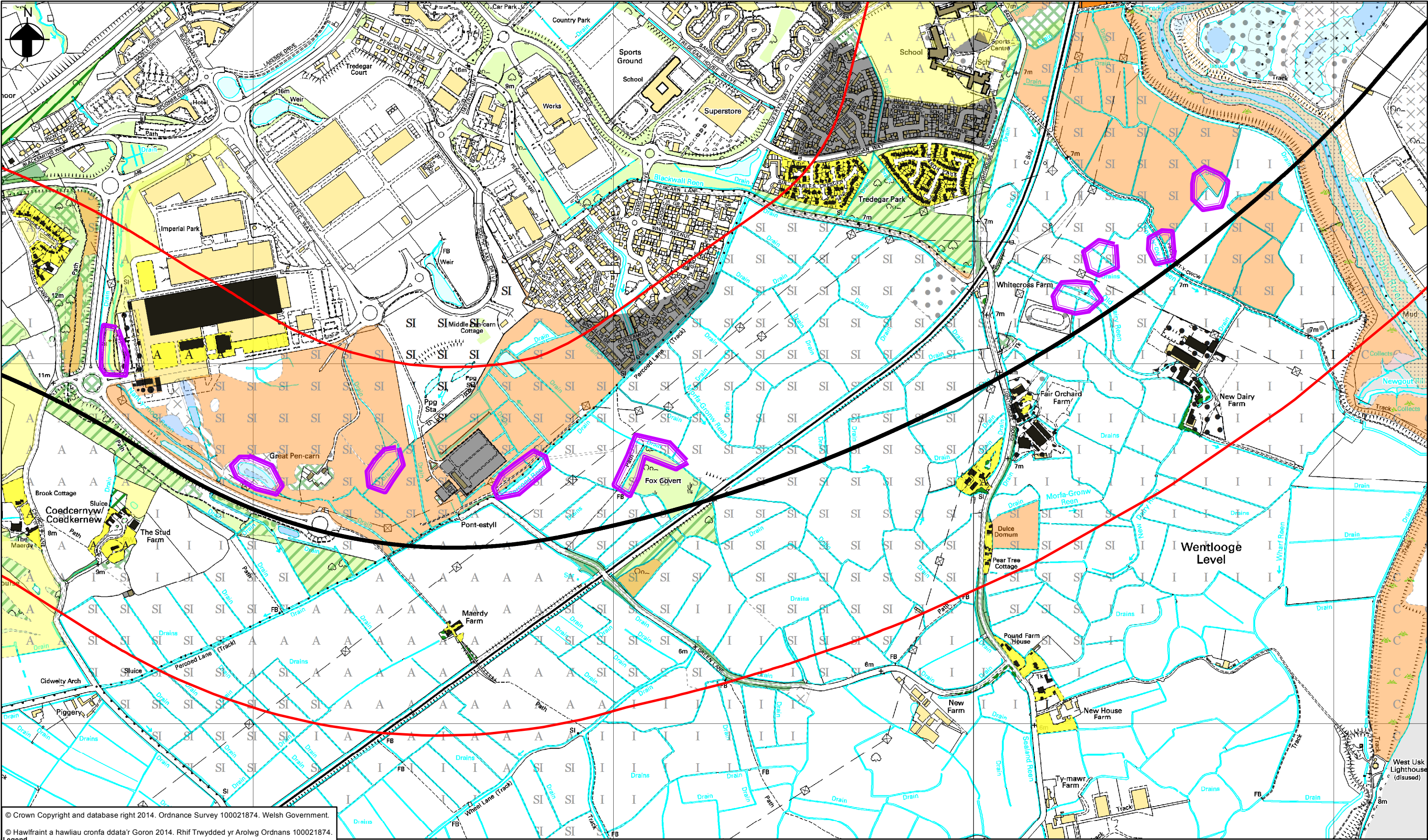
Issue

Drawing No

M4-OA-01-00-DR-Z-AI-0001

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Legend

Phase 1 Habitats

Code

- Semi-natural broadleaved woodland
- Planted broadleaved woodland
- Planted coniferous woodland
- Planted mixed woodland
- Dense scrub
- Scattered scrub
- Scattered broadleaved trees
- Scattered coniferous trees
- Semi-improved acid grassland

- Unimproved neutral grassland
- Semi-improved neutral grassland
- Unimproved calcareous grassland
- Semi-improved calcareous grassland
- Improved grassland
- Marshy grassland
- Poor semi-improved grassland
- Bracken
- Tall ruderal herb
- Swamp
- Inundated vegetation
- Standing water
- Standing water and eutrophic
- Running water

- Intertidal mud/sand
- Salt marsh
- Coastal grassland
- Quarry
- Spoil
- Refuse tip
- Arable
- Amenity grassland
- Ephemeral/short perennial
- Introduced scrub
- Intact hedge-species poor
- Dry ditch
- Buildings
- Bare ground

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Preliminary				
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Job Title

M4 Corridor Around Newport

Coridor yr M4 o amgylch Casnewydd

Metres

0 80 160 320

Scale at A3

1:10,000

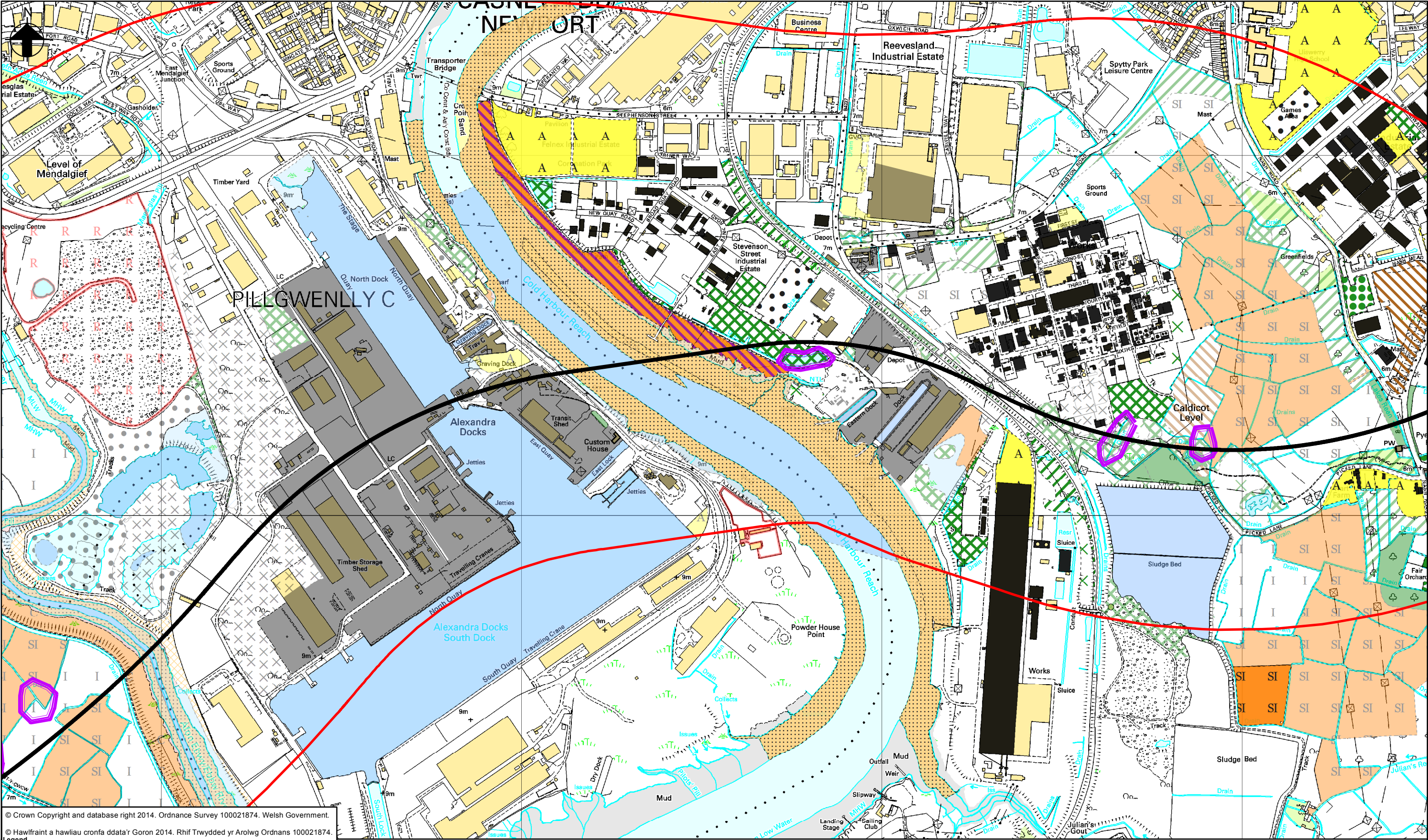
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Drawing Title

**Aquatic and Terrestrial Invertebrate and
Macrophyte Survey Locations Sheet 2**

Job No	Drawing Status
117300-01	Issue
Drawing No	Issue
M4-OA-01-00-DR-Z-AI-0002	P0



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Legend

Phase 1 Habitats

Code

- Semi-natural broadleaved woodland
- Planted broadleaved woodland
- Planted coniferous woodland
- Planted mixed woodland
- Dense scrub
- Scattered scrub
- Scattered broadleaved trees
- Scattered coniferous trees
- Semi-improved acid grassland

- Unimproved neutral grassland
- Semi-improved neutral grassland
- Unimproved calcareous grassland
- Semi-improved calcareous grassland
- Improved grassland
- Marshy grassland
- Poor semi-improved grassland
- Bracken
- Tall ruderal herb
- Swamp
- Inundation vegetation
- Standing water
- Standing water and eutrophic
- Running water

- Intertidal mud/sand
- Salt marsh
- Coastal grassland
- Quarry
- Spill
- Refuse tip
- Arable
- Amenity grassland
- Ephemeral/short perennial
- Introduced scrub
- Intact hedge-species poor
- Dry ditch
- Buildings
- Bare ground

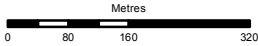
P0	2014-08-08	FG	PW	PW
Preliminary				
Issue	Date	By	Chkd	Appd



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Job Title
M4 Corridor Around Newport
Coridor yr M4 o amgylch Casnewydd



Scale at A3
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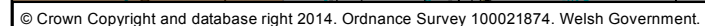
Drawing Title
**Aquatic and Terrestrial Invertebrate and
Macrophyte Survey Locations Sheet 3**

Job No
117300-01

Drawing Status
Issue

Drawing No
M4-OA-01-00-DR-Z-AI-0003

Issue
P0



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Legend

 Study Area

Preferred M4 Ro

 Aquatic Inverteb

Phase 1 Habitats

Code

 Semi-natural bro

 Planted broadleaves Planted conifer Planted mixed w Dense scrub

$\begin{bmatrix} - & - \\ - & - \end{bmatrix}$ Scattered scrub

 Scattered broad

 Scattered conifer

 Semi-improved

100

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	Unimproved neutral grassland		Intertidal mud/sand
	Semi-improved neutral grassland		Salt marsh
	Unimproved calcareous grassland		Coastal grassland
	Semi-improved calcareous grassland		Quarry
	Improved grassland		Spill
	Marshy grassland		Refuse tip
	Poor semi-improved marshy		Arable
	Bracken		Amenity grassland
	Tall ruderal herb		EpheMERAL/ short per
	Swamp		Introduced scrub
	Inundation vegetation		Intact hedge-species
	Standing water		Dry ditch
	Standing water and eutrophic		Buildings
	Running water		Bare ground

P0	2014-08-08	FG	PW	PW
Preliminary				
Issue	Date	By	Chkd	Appd

Client



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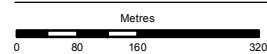
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Trafnidiaeth
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Job Title

M4 Corridor Around Newport

Coridor yr M4 o amgylch Casnewydd



Scale at A3
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Drawing Title

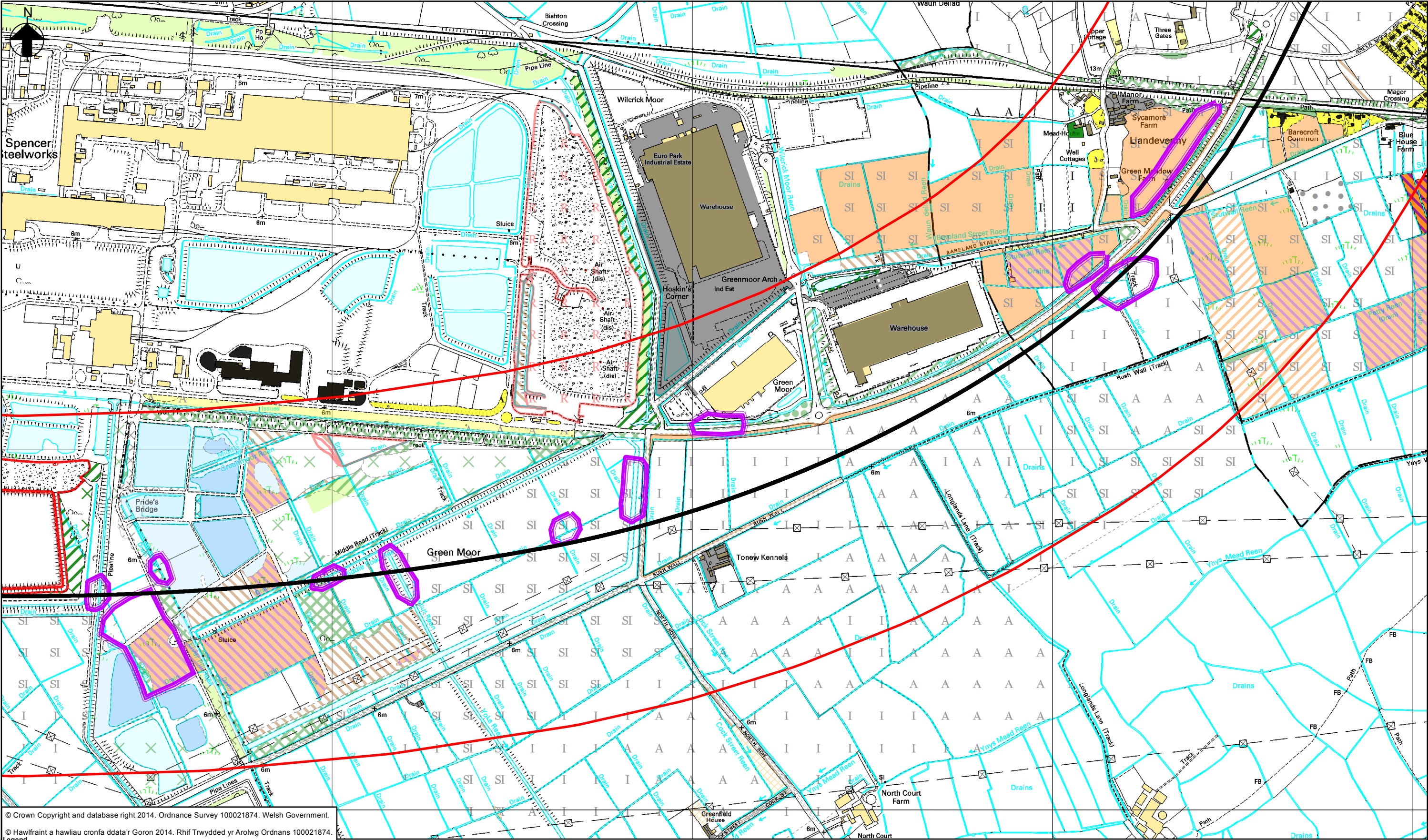
Aquatic and Terrestrial Invertebrate and Macrophyte Survey Locations Sheet 4

Job No
117300-01

Drawing Status	
Issue	

Drawing No
M4-OA-01-00-DR-Z-AI-0004

Issue	P0
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Legend

Study Area

- Preferred M4 Route
- Aquatic Invertebrate Survey Locations

Phase 1 Habitats

Code

- Semi-natural broadleaved woodland
- Planted broadleaved woodland
- Planted coniferous woodland
- Planted mixed woodland
- Dense scrub
- Scattered scrub
- Scattered broadleaved trees
- Scattered coniferous trees
- Semi-improved acid grassland

- Unimproved neutral grassland
- Semi-improved neutral grassland
- Unimproved calcareous grassland
- Semi-improved calcareous grassland
- Improved grassland
- Marshy grassland
- Poor semi-improved grassland
- Bracken
- Tall ruderal herb
- Swamp
- Inundation vegetation
- Standing water
- Standing water and eutrophic
- Running water

- Intertidal mud/sand
- Salt marsh
- Coastal grassland
- Quarry
- Spoil
- Refuse tip
- Arable
- Amenity grassland
- Ephemeral/short perennial
- Introduced scrub
- Intact hedge-species poor
- Dry ditch
- Buildings
- Bare ground

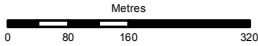
P0	2014-08-08	FG	PW	PW
Preliminary				
Issue	Date	By	Chkd	Appd



Llywodraeth Cymru
Welsh Government

Client
Transport
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Welsh Government
Cathays Park
Cardiff
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Adran Economi, Gwyddoniaeth a
Thrafnidiaeth
Llywodraeth Cymru
Parc Cathays
Caerdydd
CF10 3NQ

Job Title
M4 Corridor Around Newport
Coridor yr M4 o amgylch Casnewydd



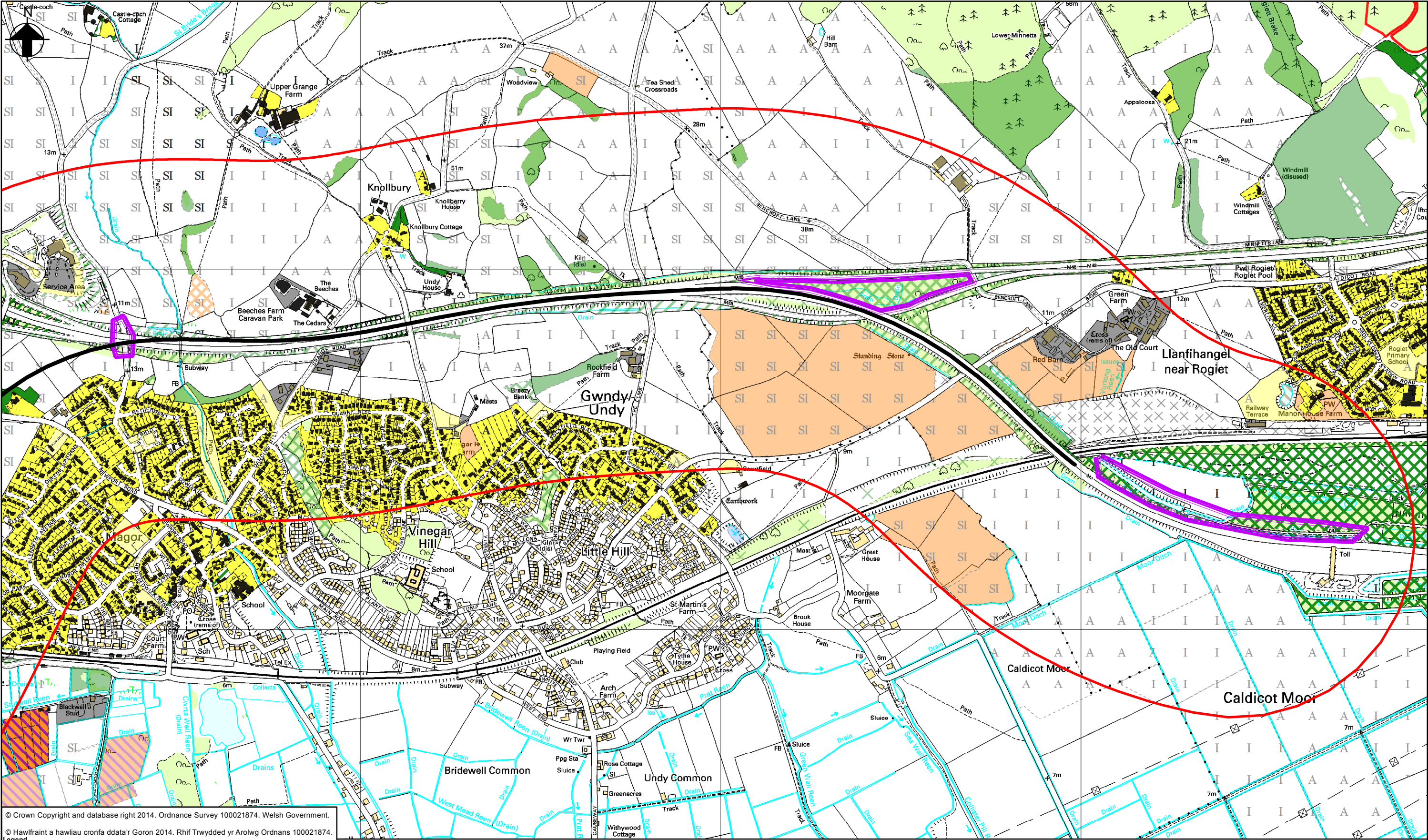
Scale at A3
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Drawing Title
**Aquatic and Terrestrial Invertebrate and
Macrophyte Survey Locations Sheet 5**

Job No 117300-01	Drawing Status Issue
Drawing No M4-OA-01-00-DR-Z-AI-0005	Issue P0



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Legend

Phase 1 Habitats

Code

- Semi-natural broadleaved woodland
- Planted broadleaved woodland
- Planted coniferous woodland
- Planted mixed woodland
- Dense scrub
- Scattered scrub
- Scattered broadleaved trees
- Scattered coniferous trees
- Semi-improved acid grassland

- Unimproved neutral grassland
- Semi-improved neutral grassland
- Unimproved calcareous grassland
- Semi-improved calcareous grassland
- Improved grassland
- Marshy grassland
- Poor semi-improved grassland
- Bracken
- Tall ruderal herb
- Swamp
- Inundated vegetation
- Standing water
- Standing water and eutrophic
- Running water

- Intertidal mud/sand
- Salt marsh
- Coastal grassland
- Quarry
- Spill
- Refuse tip
- Arable
- Amenity grassland
- Ephemeral/short perennial
- Introduced scrub
- Intact hedge-species poor
- Dry ditch
- Buildings
- Bare ground

P0	2014-08-08	FG	PW	PW
Preliminary				
Issue	Date	By	Chkd	Appd

Client



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Welsh Government

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Welsh Government
Cathays Park
Cardiff
CF10 3NQ

Trafnidiaeth
Adran Economi, Gwyddoniaeth a
Trafnidiaeth
Llywodraeth Cymru
Parc Cathays
Caerdydd
CF10 3NQ

Job Title

M4 Corridor Around Newport

Coridor yr M4 o amgylch Casnewydd

Metres

Scale at A3

1:10,000

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Drawing Title

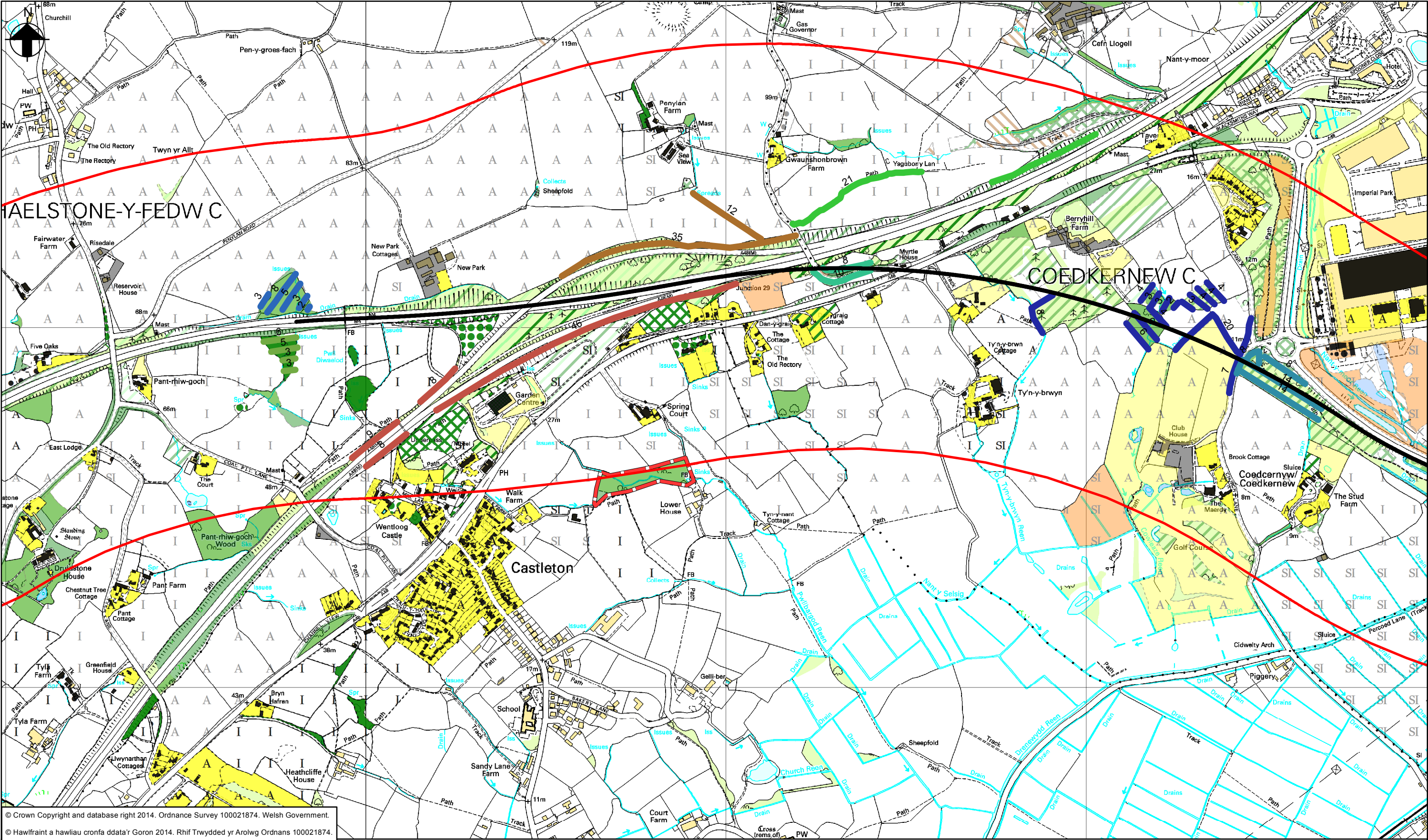
**Aquatic and Terrestrial Invertebrate and
Macrophyte Survey Locations Sheet 6**

Job No
117300-01

Drawing Status
Issue

Drawing No
M4-OA-01-00-DR-Z-AI-0006

Issue
P0



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Legend

Dormice Survey Locations

Section Re

Phase 1 Habitats

Code

Unimproved calcareous grassland

Improved calcareous grassland

Marshy grassland

Poor semi-improved grassland

Bracken

Tall ruderal herb

Swamp

Inundation vegetation

Standing water and eutrophic

Standing water

Running water

Intertidal mud/sand

Salt marsh

Coastal grassland

Quarry

Spill

Refuse tip

Arable

Amenity grassland

Ephemeral short perennial

Introduced scrub

Intact hedge-species poor

Dry ditch

Buildings

Bare ground

Extra Dormouse Locations 2014

Study Area

P0	2014-08-08	FG	PW	PW
Preliminary				
Issue	Date	By	Chkd	Appd

Client



Llywodraeth Cymru
Welsh Government

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Department for Economy, Science and
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Welsh Government
Cathays Park
Cardiff
CF10 3NQ

Trafnidiaeth
Adran Economi, Gwyddoniaeth a
Thrafnidiaeth
Llywodraeth Cymru
Parc Cathays
Caerdydd
CF10 3NQ

Job Title

M4 Corridor Around Newport

Coridor yr M4 o amgylch Casnewydd

Metres

0 80 160 320

Scale at A3

1:10,000

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Drawing Title

Dormice Survey Locations Sheet 1

Job No

117300-01

Drawing Status

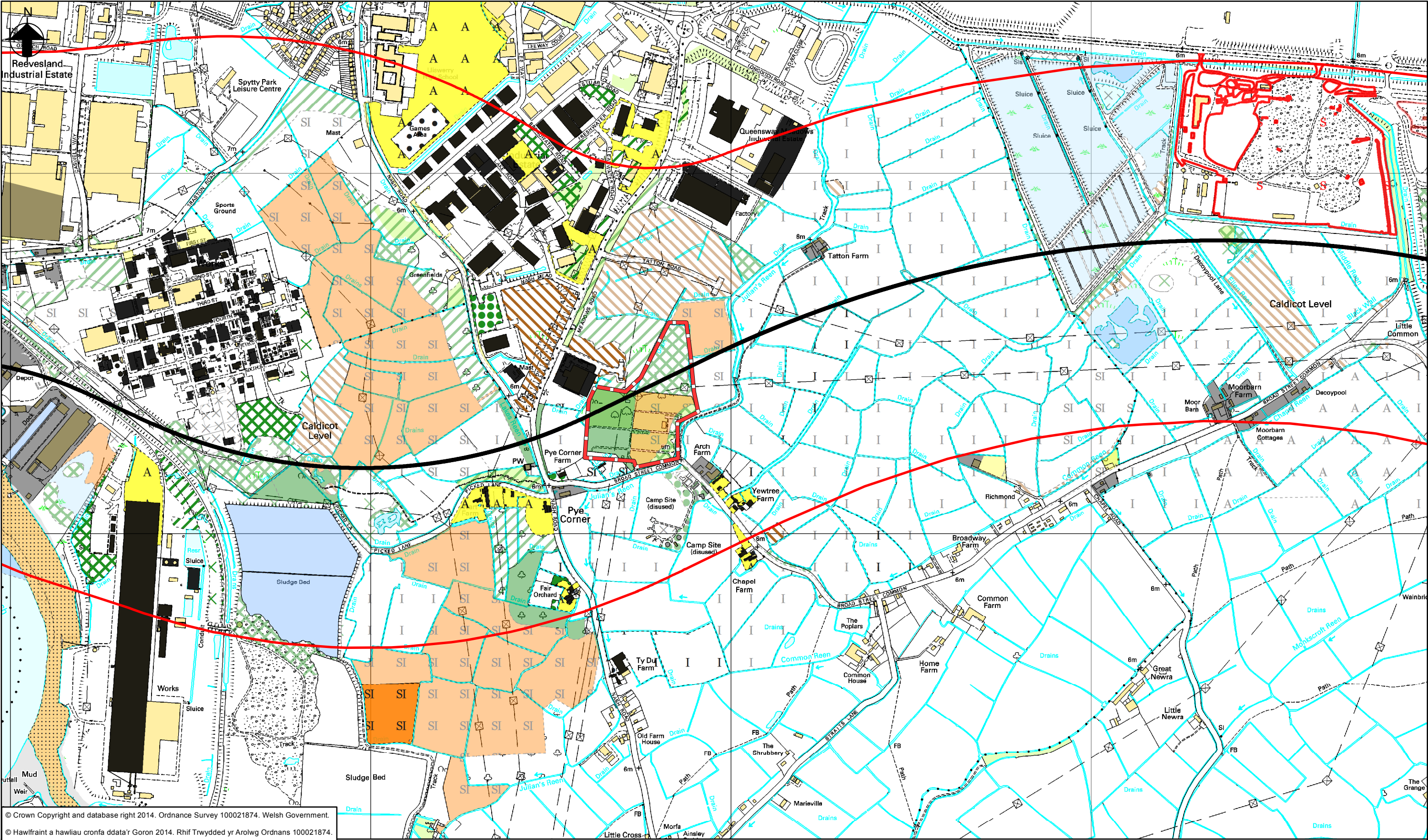
Issue

Drawing No

M4-OA-01-00-DR-Z-DM-0001

Issue

P0



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Legend

Dormice Survey Locations

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Phase 1 Habitats

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Unimproved calcareous grassland

Improved grassland

Coastal grassland

Quarry

Spill

Refuse tip

Arable

Amenity grassland

Ephemeral short perennial

Introduced scrub

Intact hedge-species poor

Dry ditch

Buildings

Bare ground

Unimproved calcareous grassland

Improved grassland

Coastal grassland

Quarry

Spill

Refuse tip

Arable

Amenity grassland

Ephemeral short perennial

Introduced scrub

Intact hedge-species poor

Dry ditch

Buildings

Bare ground

Unimproved calcareous grassland

Improved grassland

Coastal grassland

Quarry

Spill

Refuse tip

Arable

Amenity grassland

Ephemeral short perennial

Introduced scrub

Intact hedge-species poor

Dry ditch

Buildings

Bare ground

P0	2014-08-08	FG	PW	PW
Preliminary				
Issue	Date	By	Chkd	Appd

Client



Llywodraeth Cymru
Welsh Government

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Department for Economy, Science and
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Trafnidiaeth
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Parc Cathays
Caerdydd
CF10 3NQ

Job Title

M4 Corridor Around Newport

Coridor yr M4 o amgylch Casnewydd

Metres

0 80 160 320

Scale at A3

1:10,000

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Drawing Title

Dormice Survey Locations Sheet 2

Job No

117300-01

Drawing Status

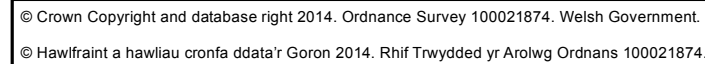
Issue

Drawing No

M4-OA-01-00-DR-Z-DM-0002

Issue

P0



P0	2014-08-08	FG	PW	PW
Preliminary				
Issue	Date	By	Chkd	Appd



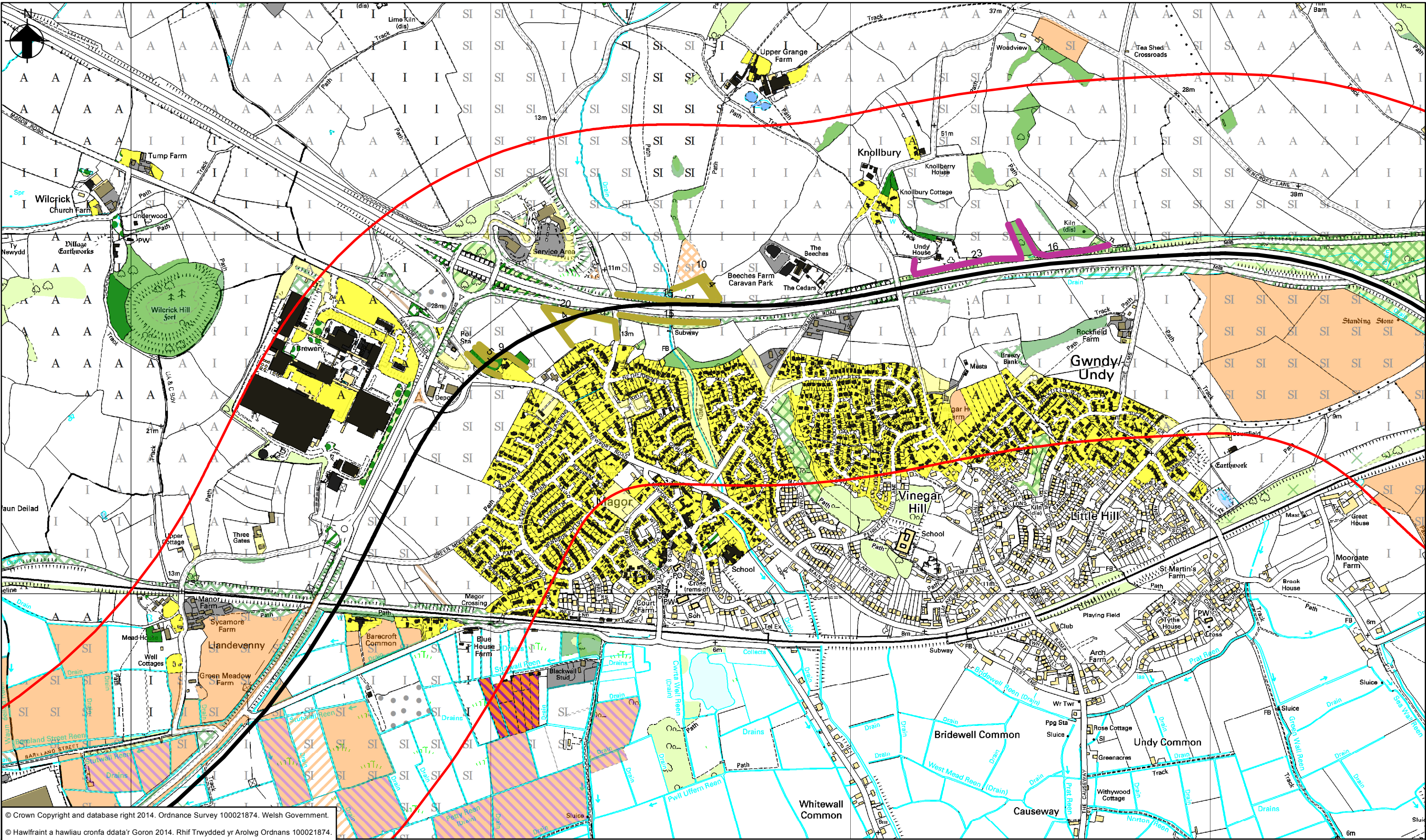
Transport
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Transport
Welsh Government
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CF10 3NQ

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Adran Economi, Gwyddoniaeth a
Trafnidiaeth
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Scale at A3
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Issue	P0
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Legend

Dormice Survey Locations

Section Re

Phase 1 Habitats

Code

Unimproved calcareous grassland

Semi-improved calcareous grassland

Improved grassland

Marshy grassland

Poor semi-improved grassland

Bracken

Tall ruderal herb

Swamp

Inundation vegetation

Standing water

Standing water and eutrophic

Running water

Intertidal mud/sand

Salt marsh

Coastal grassland

Quarry

Spill

Refuse tip

Arable

Amenity grassland

Ephemeral/short perennial

Introduced scrub

Intact hedge-species poor

Buildings

Bare ground

Extra Dormice Locations 2014

Study Area

P0	2014-08-08	FG	PW	PW
Preliminary				
Issue	Date	By	Chkd	Appd

Client



Llywodraeth Cymru
Welsh Government

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Department for Economy, Science and
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Welsh Government
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Thrafnidiaeth
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Parc Cathays
Caerdydd
CF10 3NQ

Job Title

M4 Corridor Around Newport

Coridor yr M4 o amgylch Casnewydd

Metres

0 80 160 320

Scale at A3

1:10,000

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Drawing Title

Dormice Survey Locations Sheet 4

Job No

117300-01

Drawing Status

Issue

Drawing No

M4-OA-01-00-DR-Z-DM-0004

Issue

P0