

Sure Partners Limited

ARKLOW BANK WIND PARK  
PHASE 2

**ONSHORE GRID  
INFRASTRUCTURE**

**VOLUME III**

**Chapter 12 APPENDICES**

**Appendix 12.5** RPS Breeding Bird Survey

ARUP

 **sse**  
Renewables

## Appendix 12.5

### Ecological Survey for Birds

# ECOLOGICAL SURVEY FOR BIRDS

Arklow Bank Wind Park

Onshore Grid Infrastructure



NI1998.ABWP.OGI  
**Ecological Survey for  
Birds**  
F01  
September 2019

## SURVEY REPORT

### Document Status

| Version | Purpose of document | Authored by | Reviewed by | Approved by | Review date |
|---------|---------------------|-------------|-------------|-------------|-------------|
| F01     | Client issue        | AMC         | JMC         | JMC         | 20.09.2019  |

### Approval for issue

|               |   |            |
|---------------|---|------------|
| James McCrory |  | 20.09.2019 |
|---------------|---|------------|

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## Contents

|          |  |           |
|----------|--|-----------|
| <b>1</b> | <b>INTRODUCTION.....</b>                                   | <b>1</b>  |
| 1.1      | Introduction .....   | 1         |
| 1.2      | Ecological Survey for Birds .....                          | 1         |
| 1.3      | Legislation.....   | 1         |
| <b>2</b> | <b>METHODOLOGY.....</b>                                    | <b>3</b>  |
| 2.1      | Statement of Authority.....                                | 3         |
| 2.2      | Breeding Bird Survey .....                                 | 3         |
| 2.3      | Bird Conservation Status.....                              | 3         |
| <b>3</b> | <b>RESULTS .....</b>                                       | <b>4</b>  |
| 3.1      | Breeding Bird Survey .....                                 | 4         |
| 3.2      | Other Potential Ecological Constraints.....                | 7         |
| <b>4</b> | <b>DISCUSSION &amp; ANALYSIS OF RESULTS.....</b>           | <b>8</b>  |
| <b>5</b> | <b>RECOMMENDATIONS.....</b>                                | <b>9</b>  |
| 5.1      | Mitigation for ornithological constraints .....            | 9         |
| 5.2      | Mitigation for other potential ecological constraints..... | 9         |
| 5.3      | Enhancement.....   | 9         |
|          | <b>REFERENCES.....</b>                                     | <b>10</b> |
|          | The Birds Directive .....                                  | 36        |
|          | The Wildlife Act, 1976.....                                | 36        |
|          | Birds of Conservation Concern in Ireland.....              | 37        |

## Figures

|  |    |
|--|----|
| Figure 1.0: Corridors and Sites surveyed .....   | 12 |
| Figure 2.0: Approximate breeding locations of species of conservation concern recorded in 2019 ..... | 12 |

## Appendices

|     |                             |
|-----|-----------------------------|
| I   | BTO Species Codes           |
| II  | BTO Breeding Evidence Codes |
| III | Bird Conservation Status    |

# 1 INTRODUCTION

## 1.1 Introduction

RPS was commissioned by Sure Partners Limited (SPL) to undertake ecological survey for breeding birds along potential corridors of an Onshore Grid Infrastructure (OGI) cable route and at potential sites of a substation associated with connection of onshore grid infrastructure to the electrical transmission network.

## 1.2 Ecological Survey for Birds

This report presents the results of breeding bird surveys conducted during the latter part of the 2019 breeding season. The objective of the survey was to capture a snap-shot of breeding bird activity along the potential corridors of and within the potential sites of the proposed OGI development and immediate environs.

The Ecological Survey for Birds Report has been written in accordance with the Chartered Institute of Ecological and Environmental Management (CIEEM) Guidelines for Ecological Report Writing (CIEEM 2017).

The aim of the report is to provide a description of the bird survey methods used; to provide the results of late-season breeding bird surveys; and to provide an interpretation of the results.

The report additionally describes any habitat feature that have potential to be used by protected species and which was incidentally observed by the Ornithological Surveyor during surveys.

The Ecological Survey Report is intended to inform SPL's consultant preparing an Onshore Grid Infrastructure Options Report.

## 1.3 Legislation

In Ireland, the principle pieces of domestic legislation providing for the protection of wildlife and the control of activities which may adversely affect wildlife, are the European Communities (Birds and Natural Habitats) Regulations (as amended) and the Wildlife Acts (as amended). S.I. No. 355 of 2015 provides that the following shall be construed together as one:

- Wildlife Act 1976;
- Wildlife (Amendment) Acts of 2000, 2010 and 2012;
- European Communities (Birds and Natural Habitats) (Restrictions of the Use of Poison Bait) Regulations 2010;
- European Communities (Birds and Natural Habitats) Regulations 2011;
- European Communities (Birds and Natural Habitats) (Amendment) Regulations 2013; and
- European Communities (Birds and Natural Habitats) (Amendment) Regulations 2015

The aims of the Wildlife Acts are to provide for the protection and conservation of wild fauna and flora, to conserve a representative sample of important ecosystems, to provide for the development and

protection of game resources and to regulate their exploitation, and to provide the services necessary to accomplish such aims.

Under the Acts, the Minister responsible for nature conservation may afford protection to all wild species of fauna and flora. Currently all bird species, 22 other animal species or groups of species and 86 species of flora are afforded protected status.

The Wildlife Acts (and as amended by the Heritage Act 2018) restrict the cutting, grubbing, burning or destruction by other means of vegetation growing on uncultivated land or in hedges or ditches during the nesting and breeding season for birds and wildlife, from 1 March to 31 August. These restrictions apply not only to private land-users but also to local authorities, public bodies and to contractors.

Under Article 4 of the Birds Directive Ireland has classified a number of Special Protection Areas (SPAs) for regularly occurring migratory birds and those birds listed on Annex I of the directive.

## 2 METHODOLOGY

### 2.1 Statement of Authority

The ornithological surveyor, Nick Veale BSc MSc, is an independent ecologist with over eighteen years' professional experience in consulting ecology and specialising in ornithology. Nick has extensive expertise and experience in conducting a wide range of ornithological surveys, including breeding bird surveys.

The author, Adam McClure BSc MCIEEM, is a Senior Ecologist with RPS with over nine years of experience in field of ornithology. Adam has extensive expertise in ornithology, including designing and conducting breeding bird surveys. Adam is the County Antrim Regional Representative for the British Trust for Ornithology (BTO) a full member CIEEM and committee member of the Irish Section Branch of CIEEM.

The information prepared and provided is true and accurate at the time of issue of this report and has been prepared and provided in accordance with the CIEEM Code of Professional Conduct (CIEEM 2019).

We confirm that any professional judgement expressed herein is the true and bona fide opinion of professional ecologists.

### 2.2 Breeding Bird Survey

The breeding bird survey carried out was a scaled down version of the BTO Common Bird Census (CBC) methodology (Bibby et al., 2000 & Gilbert et al., 1998) which aims to capture a snap-shot of breeding bird activity within the survey area.

Two visits were made during the breeding bird season. Due to the timing of appointment, both visits were carried out in the late breeding season, in July 2019. The ornithological surveyor slowly walked the proposed routes and sites being considered, stopping at regular intervals to scan with binoculars and to listen for bird calls or song. A map illustrating the routes followed and sites visited for the purposes of survey can be found at the end of this report.

Survey visits were made in the early morning to coincide with the peak period of bird activity and all species seen or heard in the survey area and immediate environs were recorded including those in flight. Visits were made during favourable weather conditions.

All species encountered during the survey were mapped and coded using standard BTO species codes (Appendix I) and activity recorded using the BTO codes for breeding evidence (Appendix II). In an effort to minimise potential disturbance, no attempts were made to locate nests as such behaviours are generally sufficient to determine probable or confirmed breeding.

### 2.3 Bird Conservation Status

The conservation status of bird species in Ireland can be assigned in relation to inclusion on various schedules or annexes of national or European legislation or on relevant conservation lists. A species is considered to be of "conservation concern" if it is included on one or more of the following:

- Annex 1 of the EU Birds Directive;
- Part 1 of the Fourth Schedule of the Wildlife Acts, and
- Birds of Conservation Concern in Ireland (BoCCI) red or amber list.

Full details are included in Appendix III.



### 3 RESULTS

#### 3.1 Breeding Bird Survey

Visits were carried out during the breeding season (Table 1). All species seen or heard were recorded including those in flight over the site.

**Table 1: Weather Conditions during Breeding Bird Survey**

| Date     | Start | End   | Location surveyed   | Survey conditions |       |         |            |                                    |
|----------|-------|-------|---|-------------------|-------|---------|------------|------------------------------------|
|          |       |       |   | Temp              | Cloud | Wind    | Visibility | Precipitation                      |
| 08/07/19 | 04h45 | 11h30 |   | 16-21             | 1-2   | 1-2 ESE | Good       | None                               |
| 09/07/19 | 05h45 | 13h30 | Ballymoney & Johnstown South                                | 16-22             | 2-3   | 1-2 SW  | Good       | None                               |
| 10/07/19 | 05h45 | 14h30 | Arklow town & quay, Ballyrichard, Johnstown South & Seabank | 17-23             | 0     | 1-2 SW  | Good       | None                               |
| 11/07/19 | 05h45 | 14h30 |   | 16/20             | 4-5   | 3-4 WSW | Good       | Localised light shower 10h05-20h20 |
| 12/07/19 | 05h05 | 11h05 | Avoca River, Park Industrial Estate, AF.3 & AF.1            | 14-18             | 3-4   | 3-4 WNW | Good       | None                               |
| 23/07/19 | 05h25 | 16h35 | Avoca River, Wicklow Head, Dunbur Head                      | 17-23             | 1     | 2-3 ESE | Good       | None                               |
| 25/07/19 | 05h25 | 12h35 | LI.3, LI.2; Seabank, Ennerilly beach                        | 17-21             | 3-4   | 2-3 SE  | Good       | None                               |
| 26/07/19 | 05h40 | 12h45 | Johnstown South, Johnstown North, Arklow town & harbour     | 18-23             | 3-4   | 2-3 S   | Good       | None                               |
| 29/07/19 | 05h45 | 12h45 | L2172 & Templarainey  | 14-19             | 3-5   | 1-3 W   | Good       | None                               |
| 31/07/19 | 05h45 | 12h45 | TA.1, TA.4, AF.3, AF.1 & LI.4                               | 13-17             | 5-6   | 3-4 WNS | Good       | None                               |

A total of 78 species were recorded (Table 2) along, or in flight over, the survey route. Thirty-seven of these were classified as “probable” or “confirmed” breeding, of which sixteen species are considered to be of conservation concern in Ireland.

Only species which are red or amber listed for their breeding populations in Ireland are considered as species of conservation concern and listed as such in Table 2 as part of this assessment. Greylag Goose,

## SURVEY REPORT

for example, is not listed as an amber species due to the species being classified as amber BoCCI for its overwintering population.

**Table 2: 2019 Breeding Bird Survey Results**

| Common Name             | 20/06/19 | 18/07/19 | Breeding status | Highest breeding evidence recorded | Conservation status |
|-------------------------|----------|----------|-----------------|------------------------------------|---------------------|
| Black Guillemot         | 2        | 3        | Possible        | Suitable habitat                   | Amber               |
| Blackbird               | 130      | 103      | Confirmed       | Recently fledged young             |                     |
| Blackcap                | 23       | 16       | Possible        | Singing male                       |                     |
| Black-headed Gull       | 80       | 70       | Non-breeding    | Summering                          | Red                 |
| Blue Tit                | 76       | 102      | Confirmed       | Recently fledged young             |                     |
| Bullfinch               | 22       | 16       | Confirmed       | Recently fledged young             |                     |
| Buzzard                 | 18       | 11       | Probable        | Agitated behaviour                 | WA                  |
| Chaffinch               | 124      | 72       | Confirmed       | Recently fledged young             |                     |
| Chiffchaff              | 16       | 7        | Possible        | Singing male                       |                     |
| Coal Tit                | 12       | 12       | Possible        | Singing male                       |                     |
| Collared Dove           | 17       | 14       | Possible        | Suitable habitat                   |                     |
| Common Gull             | 2        | 4        | Non-breeding    | Summering                          | Amber               |
| Common Sandpiper        | 7        | 6        | Non-breeding    | On migration                       | Amber               |
| Common Tern             | 0        | 8        | Non-breeding    | Summering                          | A1, Amber           |
| Coot                    | 1        | 1        | Possible        | Suitable habitat                   | Amber               |
| Cormorant               | 10       | 7        | Non-breeding    | Summering                          | Amber               |
| Dipper                  | 1        | 2        | Probable        | Agitated behaviour                 |                     |
| Duncock                 | 32       | 33       | Possible        | Suitable habitat                   |                     |
| Feral Pigeon            | 80       | 26       | Possible        | Suitable habitat                   |                     |
| Garden Warbler          | 1        | 0        | Non-breeding    | On migration                       |                     |
| Goldcrest               | 14       | 8        | Possible        | Suitable habitat                   | Amber               |
| Goldfinch               | 51       | 61       | Confirmed       | Recently fledged young             |                     |
| Grasshopper Warbler     | 0        | 1        | Possible        | Singing male                       |                     |
| Great Black-backed Gull | 8        | 2        | Non-breeding    | Summering                          | Amber               |
| Great Tit               | 32       | 40       | Confirmed       | Recently fledged young             |                     |
| Greenfinch              | 12       | 8        | Probable        | Pair present                       | Amber               |
| Grey Heron              | 7        | 9        | Confirmed       | Recently fledged young             |                     |
| Grey Wagtail            | 5        | 9        | Confirmed       | Recently fledged young             | Red                 |
| Greylag Goose           | 4        | 6        | Possible        | Suitable habitat                   |                     |
| Herring Gull            | 119      | 81       | Confirmed       | Recently fledged young             | Red                 |
| Hooded Crow             | 39       | 10       | Confirmed       | Recently fledged young             |                     |
| House Martin            | 152      | 105      | Probable        | Probable nest site                 | Amber               |
| House Sparrow           | 170      | 184      | Confirmed       | Recently fledged young             | Amber               |
| Jackdaw                 | 47       | 54       | Probable        | Probable nest site                 |                     |
| Jay                     | 0        | 1        | Possible        | Suitable habitat                   |                     |
| Kestrel                 | 8        | 5        | Confirmed       | Recently fledged young             | WA, Amber           |
| Kingfisher              | 0        | 1        | Possible        | Suitable habitat                   | A1, Amber           |
| Kittiwake               | 2        | 0        | Non-breeding    | Summering                          | Amber               |
| Lapwing                 | 22       | 0        | Non-breeding    | Summering                          | Red                 |

| Common Name              | 20/06/19 | 18/07/19 | Breeding status | Highest breeding evidence recorded | Conservation status |
|--------------------------|----------|----------|-----------------|------------------------------------|---------------------|
| Lesser Black-backed Gull | 11       | 29       | Confirmed       | Nest with young                    | Amber               |
| Lesser Redpoll           | 1        | 0        | Possible        | Suitable habitat                   |                     |
| Linnet                   | 66       | 44       | Probable        | Pair present                       | Amber               |
| Little Egret             | 3        | 2        | Non-breeding    | Summering                          | A1                  |
| Long-tailed Tit          | 26       | 26       | Confirmed       | Recently fledged young             |                     |
| Magpie                   | 28       | 16       | Possible        | Suitable habitat                   |                     |
| Mallard                  | 26       | 10       | Possible        | Suitable habitat                   |                     |
| Meadow Pipit             | 14       | 18       | Possible        | Suitable habitat                   | Red                 |
| Mistle Thrush            | 18       | 8        | Probable        | Agitated behaviour                 |                     |
| Mute Swan                | 0        | 3        | Non-breeding    | Summering                          | Amber               |
| Oystercatcher            | 5        | 7        | Non-breeding    | Summering                          | Amber               |
| Peregrine                | 2        | 0        | Confirmed       | Recently fledged young             | A1, WA              |
| Pheasant                 | 5        | 8        | Confirmed       | Recently fledged young             |                     |
| Pied Wagtail             | 42       | 37       | Confirmed       | Recently fledged young             | Amber               |
| Quail                    | 1        | 1        | Possible        | Singing male                       | Red                 |
| Raven                    | 6        | 1        | Possible        | Suitable habitat                   |                     |
| Red Kite                 | 7        | 3        | Possible        | Suitable habitat                   | A1, WA, Amber       |
| Redshank                 | 3        | 0        | Non-breeding    | Summering                          | Red                 |
| Reed Bunting             | 24       | 19       | Probable        | Pair present                       |                     |
| Robin                    | 84       | 61       | Confirmed       | Recently fledged young             | Amber               |
| Rock Pipit               | 4        | 6        | Confirmed       | Recently fledged young             |                     |
| Rook                     | 90       | 89       | Probable        | Probable nest                      |                     |
| Sand Martin              | 6        | 19       | Non-breeding    | Summering                          | Amber               |
| Sedge Warbler            | 2        | 1        | Possible        | Singing male                       |                     |
| Shag                     | 0        | 3        | Non-breeding    | Summering                          | Amber               |
| Song Thrush              | 23       | 17       | Probable        | Agitated behaviour                 |                     |
| Sparrowhawk              | 6        | 3        | Possible        | Suitable habitat                   | WA, Amber           |
| Spotted Flycatcher       | 12       | 2        | Confirmed       | Recently fledged young             | Amber               |
| Starling                 | 273      | 149      | Confirmed       | Recently fledged young             | Amber               |
| Swallow                  | 197      | 214      | Probable        | Probable nest site                 | Amber               |
| Swift                    | 37       | 50       | Possible        | Suitable habitat                   | Amber               |
| Treecreeper              | 10       | 5        | Probable        | Agitated behaviour                 |                     |
| Turnstone                | 0        | 14       | Non-breeding    | On migration                       |                     |
| Water Rail               | 1        | 0        | Probable        | Agitated behaviour                 |                     |
| Whitethroat              | 5        | 3        | Probable        | Agitated behaviour                 |                     |
| Willow Warbler           | 56       | 26       | Possible        | Singing male                       |                     |
| Woodpigeon               | 196      | 185      | Possible        | Suitable habitat                   |                     |
| Wren                     | 59       | 48       | Confirmed       | Recently fledged young             |                     |
| Yellowhammer             | 40       | 30       | Probable        | Pair present                       | Red                 |

**Key**

A1 – Listed on Annex 1 of the Birds Directive

Red – Listed on red list of BoCCI

WA – Listed on Fourth Schedule of the Wildlife Act 1976

Amber – Listed on amber list of BoCCI

## 3.2 Other Potential Ecological Constraints

In addition to recording avian observations during the breeding bird survey, the ornithological surveyor also noted observations of other potential ecological constraints.

Results included field signs of badger activity, ponds with smooth newt potential and observations of Marsh Fritillary butterfly.

### Badger

Signs of badger activity were widespread across the survey area. No setts were recorded, but latrines and footprints were recorded at various locations. Badgers are protected in Ireland under the Wildlife Act and are listed on Appendix III of the Berne Convention.

### Smooth Newt

A single pond with potential to hold smooth newt was recorded at Johnstown North. Smooth Newt is listed on Schedule 5 of the Wildlife Act, meaning it is an offence to capture or kill a smooth newt without a licence.

### Marsh Fritillary

Two adult Marsh Fritillary butterfly were recorded close to Shelton Abbey in a field east of the M11, on the banks of the Avoca River. Marsh Fritillary is listed on Annex II on the Habitats Directive

## 4 DISCUSSION & ANALYSIS OF RESULTS

The large assemblage of bird species recorded during surveys is reflective of the wide range and variety of habitats found within the survey areas and the wider landscape.

Whilst it is acknowledged that, due to the timing of appointment, both visits were carried out during the latter part of the breeding season it is considered the results are representative of the species found in the locality of the proposed OGI development.

Overall, much of the area where OGI development may potentially be located is intensively managed farmland, both arable and pasture. The majority of breeding birds are therefore restricted to hedgerows and treelines along field boundaries.

As noted in section 1.3 above, under domestic wildlife legislation:

- All bird species are afforded protected status; and
- The cutting, grubbing, burning or destruction by other means of vegetation growing on uncultivated land or in hedges or ditches during the nesting and breeding season for birds and wildlife, from 1 March to 31 August is restricted.

Therefore, to ensure that an offence is not committed, any clearance of vegetation which cannot be avoided should only occur outside the bird breeding season.

## 5 RECOMMENDATIONS

### 5.1 Mitigation for Ornithological Constraints

Buildings, trees, scrub and hedgerows along the surveyed corridors of the potential OGI cable route and at the sites of a potential substation provide habitat for breeding birds of conservation concern. It is recommended that the principle of avoidance is implemented in relation to timing of works to avoid disturbance of breeding birds along the preferred route and substation site. Pre-construction site clearance, removal of vegetation and demolition of buildings should be kept to a minimum and, where required, only take place outside the bird breeding season which extends between 1st March and 31st August inclusive to ensure breeding birds are protected from harm.

To comply with the Wildlife Acts, clearance of vegetation removal, trimming and / or clearance and demolition of buildings will be carried out outside of the bird breeding season. While birds can nest at any time of year, the nesting season is generally acknowledged as the period 1st March to 31st August inclusive.

Should OGI construction works, other than vegetation clearance, be required during the breeding season it is recommended that an experienced Ornithological Clerk of Works (OCoW) be appointed to liaise with the Golden Eagle Trust (GET) and Irish Raptor Study Group (IRSG) and oversee works to ensure species which are prone to disturbance during the breeding season (e.g. raptors) are not disturbed or displaced as a result of the OGI construction works.

### 5.2 Mitigation for Other Potential Ecological Constraints

Once a preferred cable route and substation site has been identified, it is recommended that an experienced ecologist undertake a survey for badger to ensure there is no potential to cause an offence under the Wildlife Act.

Should the preferred cable route or substation site have the potential to impact upon the pond identified as having newt potential or the area where Marsh Fritillary were observed, it is recommended that an experience ecologist is employed to undertake appropriate surveys.

### 5.3 Enhancement

Enhancement opportunities are most likely limited to replacing any vegetation removed to facilitate works with landscaping planting that incorporates native species rich hedgerows, and trees to provide an overall net gain and to provide links and connectivity with existing landscape features in the surrounding environment.

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**Figures**



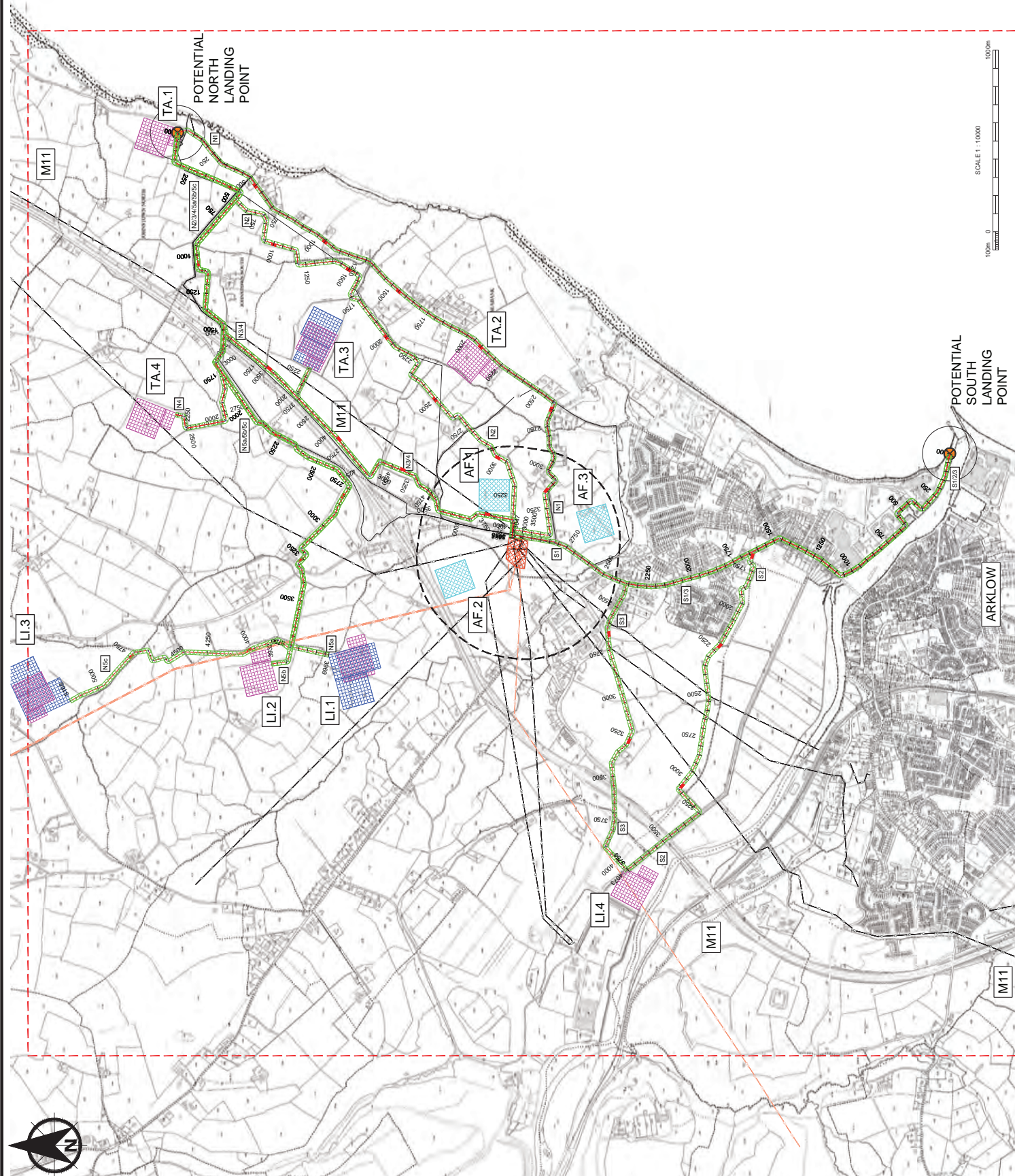
Figure 1.0: Corridors and Sites surveyed

Figure 2.0: Approximate breeding locations of species of conservation concern recorded in 2019

**NOTES**

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3. ALL DIMENSIONS IN METRES AND ALL LEVELS IN METRES. ADD UNLESS NOTED OTHERWISE.
4. FOR SITE LOCATION PLAN REFER TO SWECO DRAWING 121708-FIGURE 1.1.
5. FOR DATA SOURCES REFER TO FIGURES 2.1 TO 2.8.

- LEGEND**
- STUDY SEARCH AREA
  - POTENTIAL OFFSHORE CABLE LANDING POINT
  - POTENTIAL CABLE CORRIDOR
  - EXISTING ARKLOW SUBSTATION
  - 500M PERIMETER AROUND EXISTING ARKLOW SUBSTATION
  - 22KV OVERHEAD LINES
  - 110 KV & 38KV OVERHEAD LINES
  - ARKLOW BANK WIND PARK SUBSTATION
  - ARKLOW BANK WP & EIRGRID GIS SUBSTATION
  - ARKLOW BANK WP & EIRGRID AIS SUBSTATION
  - POTENTIAL CABLE JOINT PIT LOCATION



| Rev. | Date     | Amendment Details | Drawn | Chkd | App'd |
|------|----------|-------------------|-------|------|-------|
| 1    | 17/06/19 | CLIENT COMMENTS   | MM    | SL   | ME    |
| 0    | 20/05/19 | FEASIBILITY       | MM    | SL   | ME    |

SWECO  
 Phoenix House  
 Phoenix Road  
 Cork  
 T12 H1XY  
 Tel: 021 493 6600  
 Web: www.sweco.ie

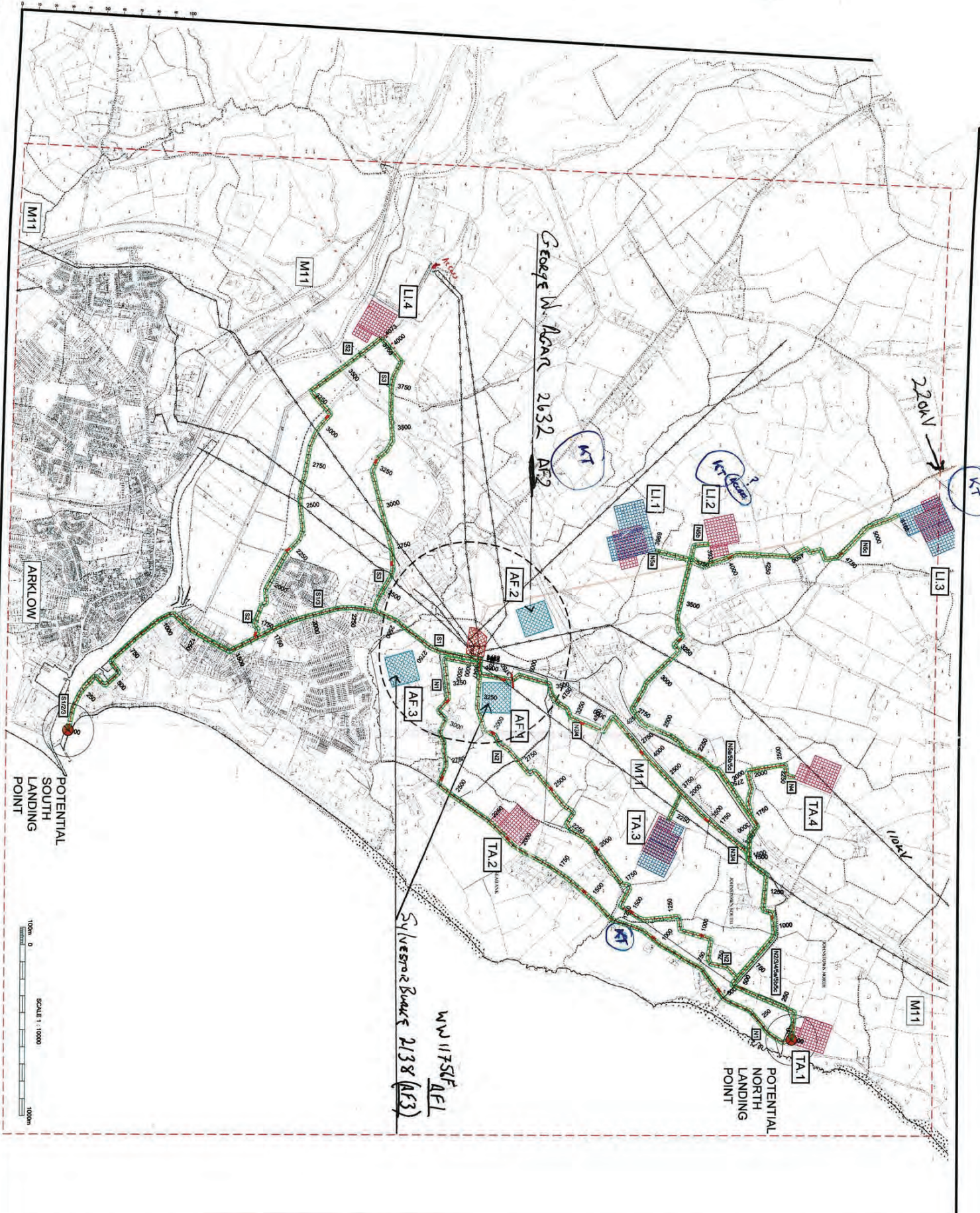


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 FEASIBILITY  
 ARKLOW BANK WIND PARK

POTENTIAL SUBSTATION  
 LAND PARCELS AND  
 CABLE CORRIDOR ROUTES

| Scale          | Drawn    | SL       | MM | ME | App'd |
|----------------|----------|----------|----|----|-------|
| 1:10,000       | AT       | SL       | MM | ME |       |
| Original Date  | 13/05/19 | 16/05/19 |    |    |       |
| Drawing Number |          |          |    |    |       |
| Revision       |          |          |    |    | 1     |

FIGURE 3.1



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4. FOR SITE LOCATION PLAN REFER TO SWECO DRAWING 121708-Figure 1.1.
5. FOR DATA SOURCES REFER TO FIGURES 2.1 TO 2.8.

- LEGEND**
- STUDY SEARCH AREA
  - POTENTIAL OFFSHORE CABLE LANDING POINT
  - POTENTIAL CABLE CORRIDOR
  - EXISTING ARLOW SUBSTATION
  - 50M PERIMETER AROUND EXISTING ARLOW SUBSTATION
  - 22kV OVERHEAD LINES
  - 110 kV & 33kV OVERHEAD LINES
  - ARLOW BANK WIND PARK SUBSTATION
  - ARLOW BANK W/P & ENRIGO GAS SUBSTATION
  - ARLOW BANK W/P & ENRIGO GAS SUBSTATION
  - POTENTIAL CABLE JOINT PIT LOCATION

|                |                      |          |    |
|----------------|----------------------|----------|----|
| Client         | SURE PARTNERS LTD    |          |    |
| Project Title  | FEASIBILITY          |          |    |
| Client Address | ARLOW BANK WIND PARK |          |    |
| Scale          | 1:10,000             |          |    |
| Drawn          | SI                   | MM       | ME |
| Checked        | SI                   | MM       | ME |
| Issue Date     | 15/05/19             | 16/05/19 |    |
| Drawn          | SI                   | MM       | ME |
| Checked        | SI                   | MM       | ME |
| Issue          | 1                    |          |    |

**POTENTIAL SUBSTATION LAND PARCELS AND CABLE CORRIDOR ROUTES**

**FIGURE 3.1**



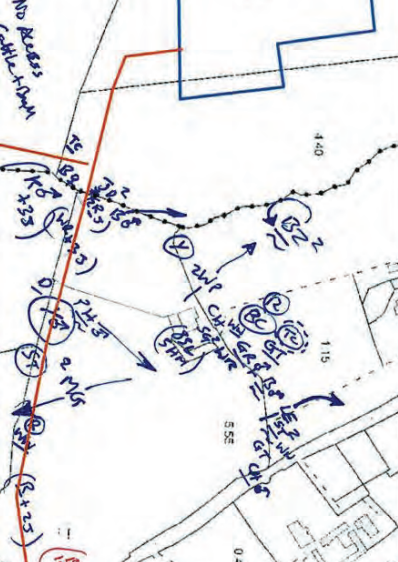
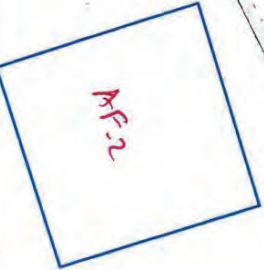
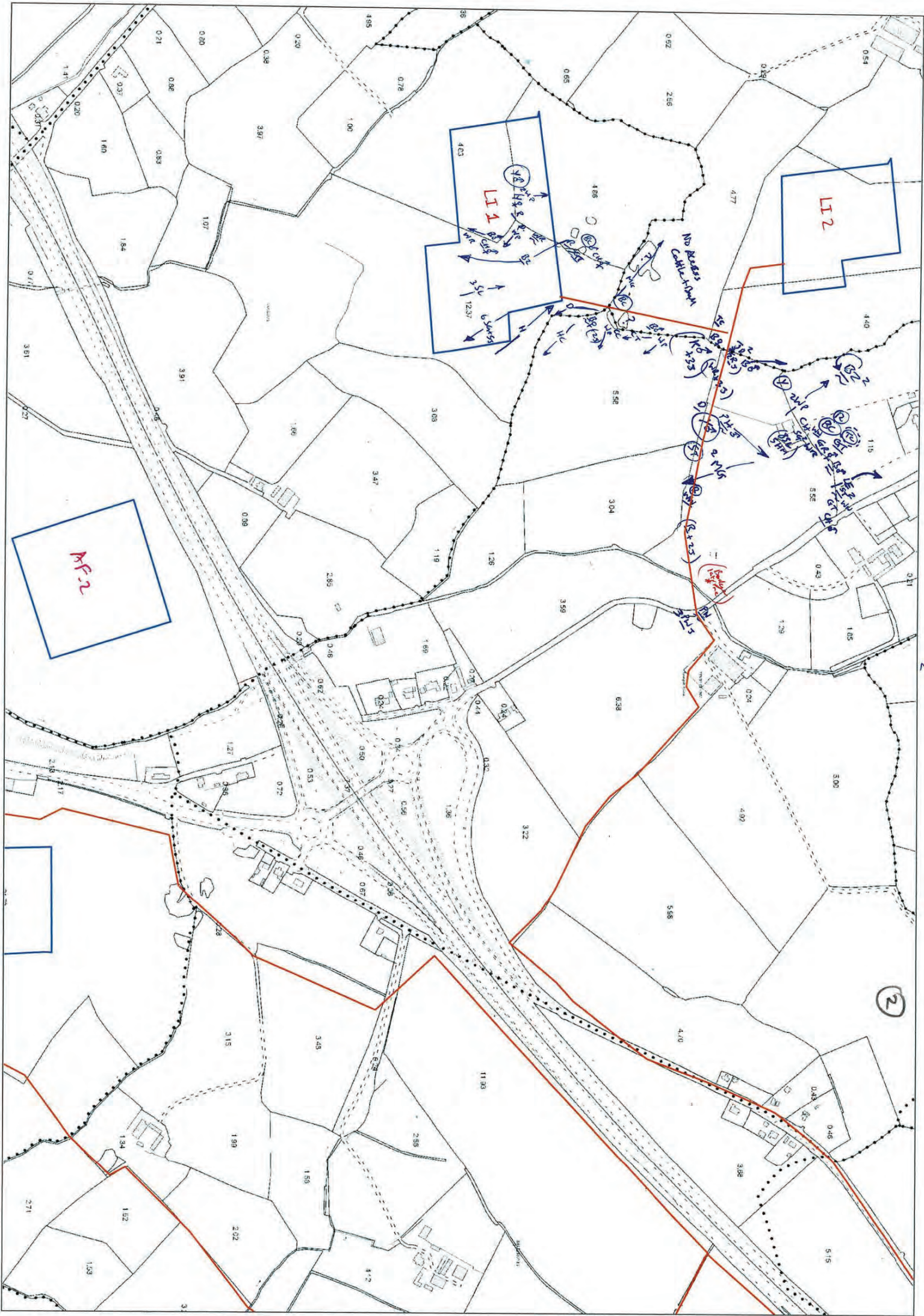
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FEASIBILITY

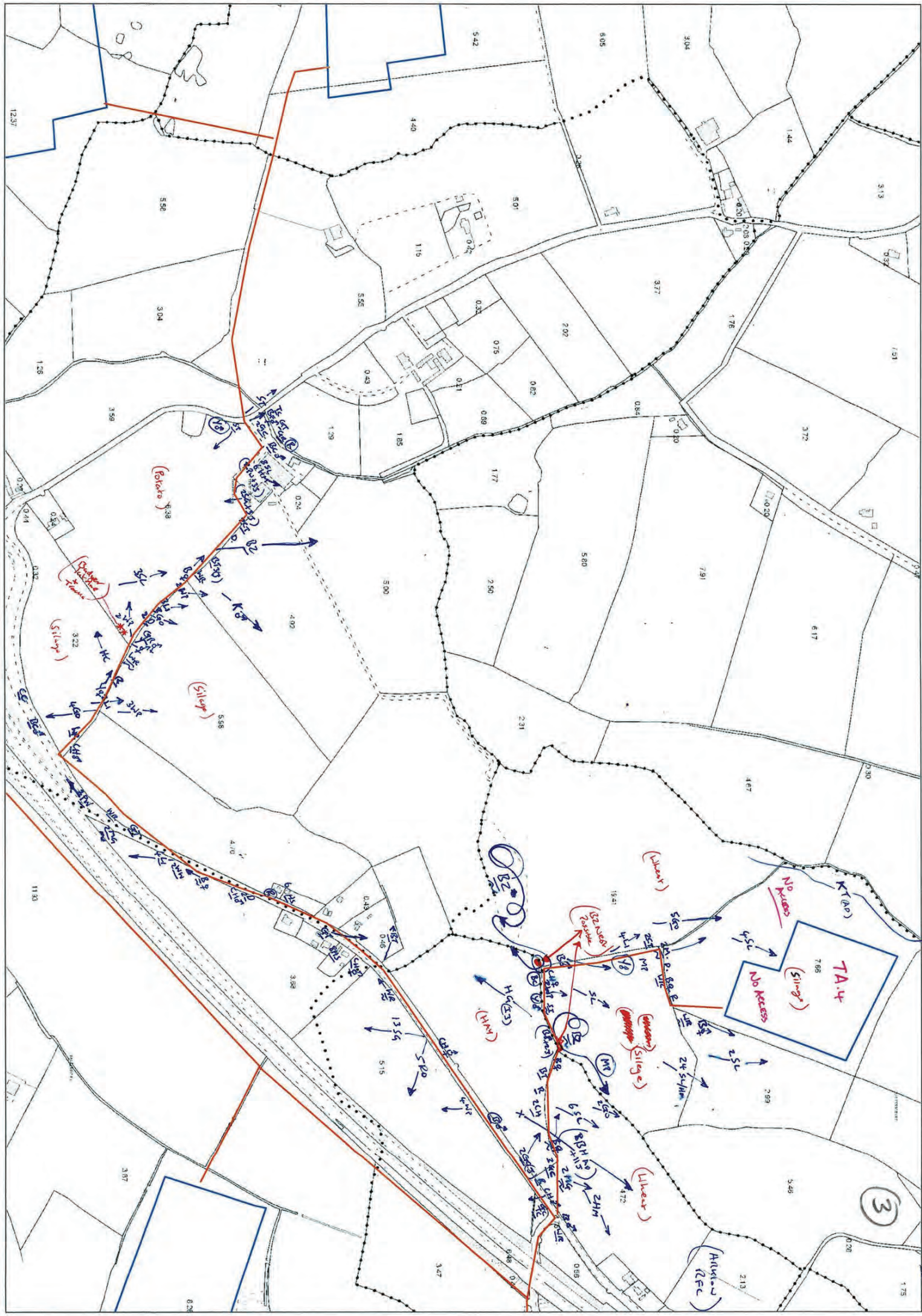
ARLOW BANK WIND PARK

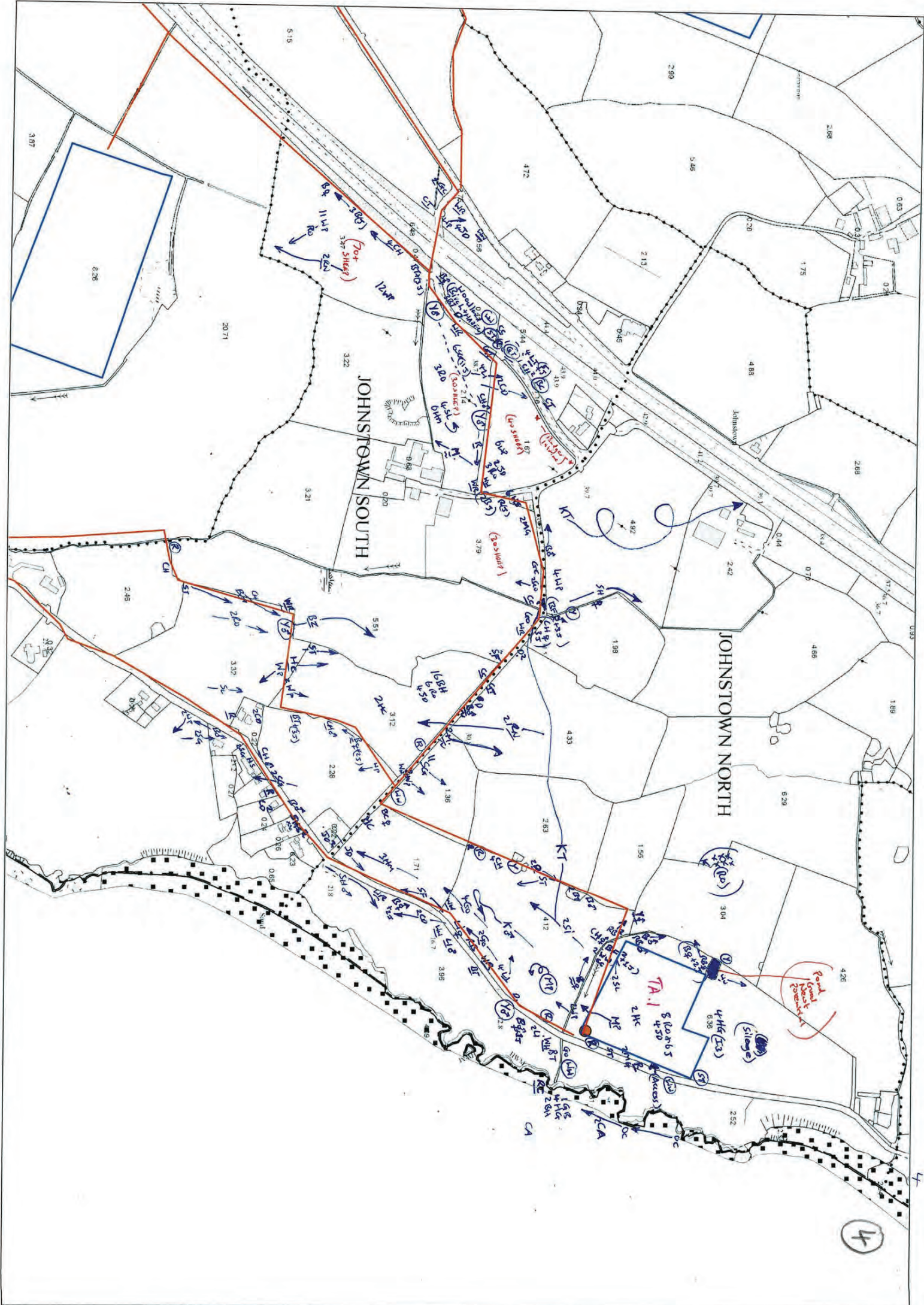
POTENTIAL SUBSTATION LAND PARCELS AND CABLE CORRIDOR ROUTES





2





JOHNSTOWN SOUTH

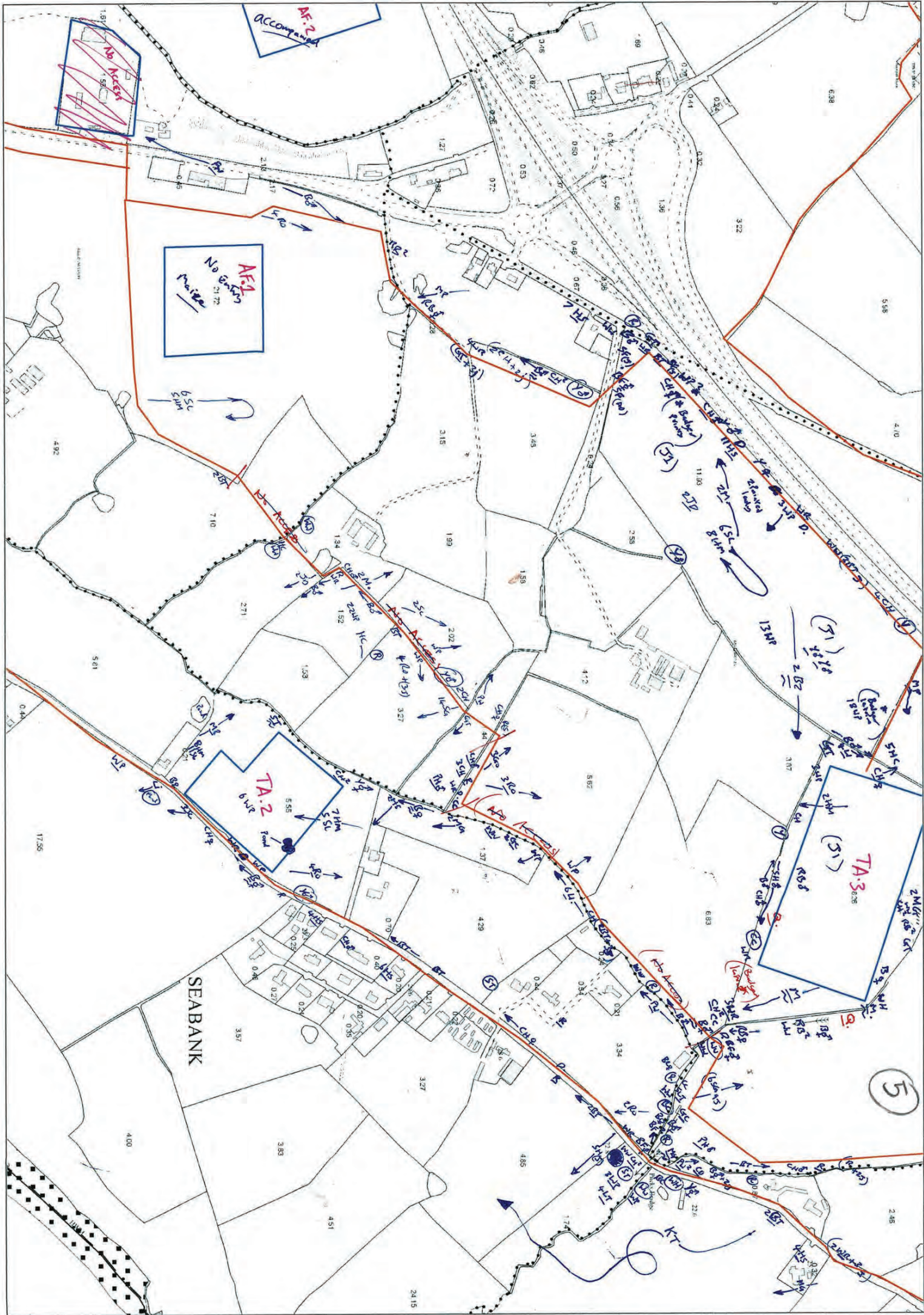
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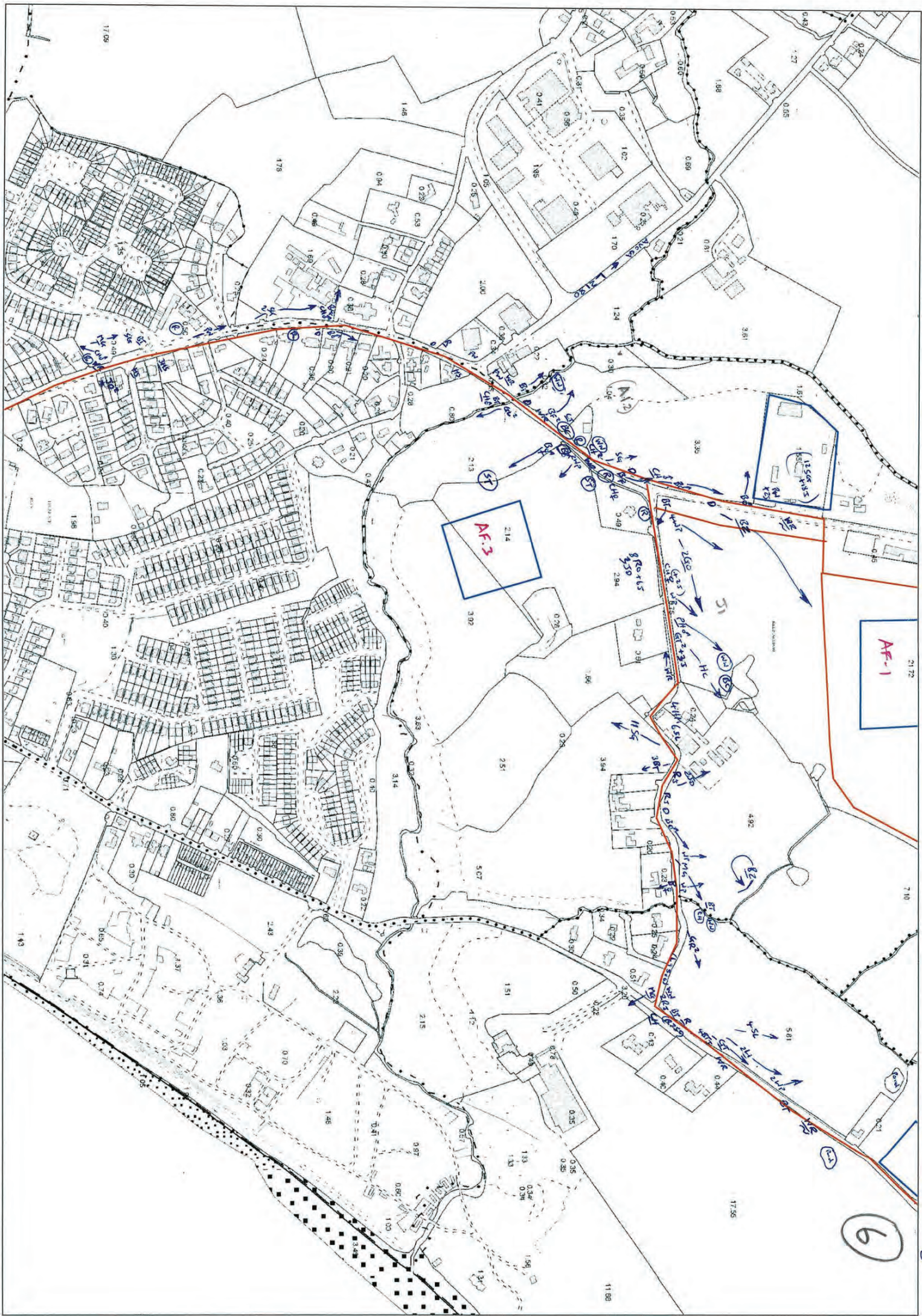
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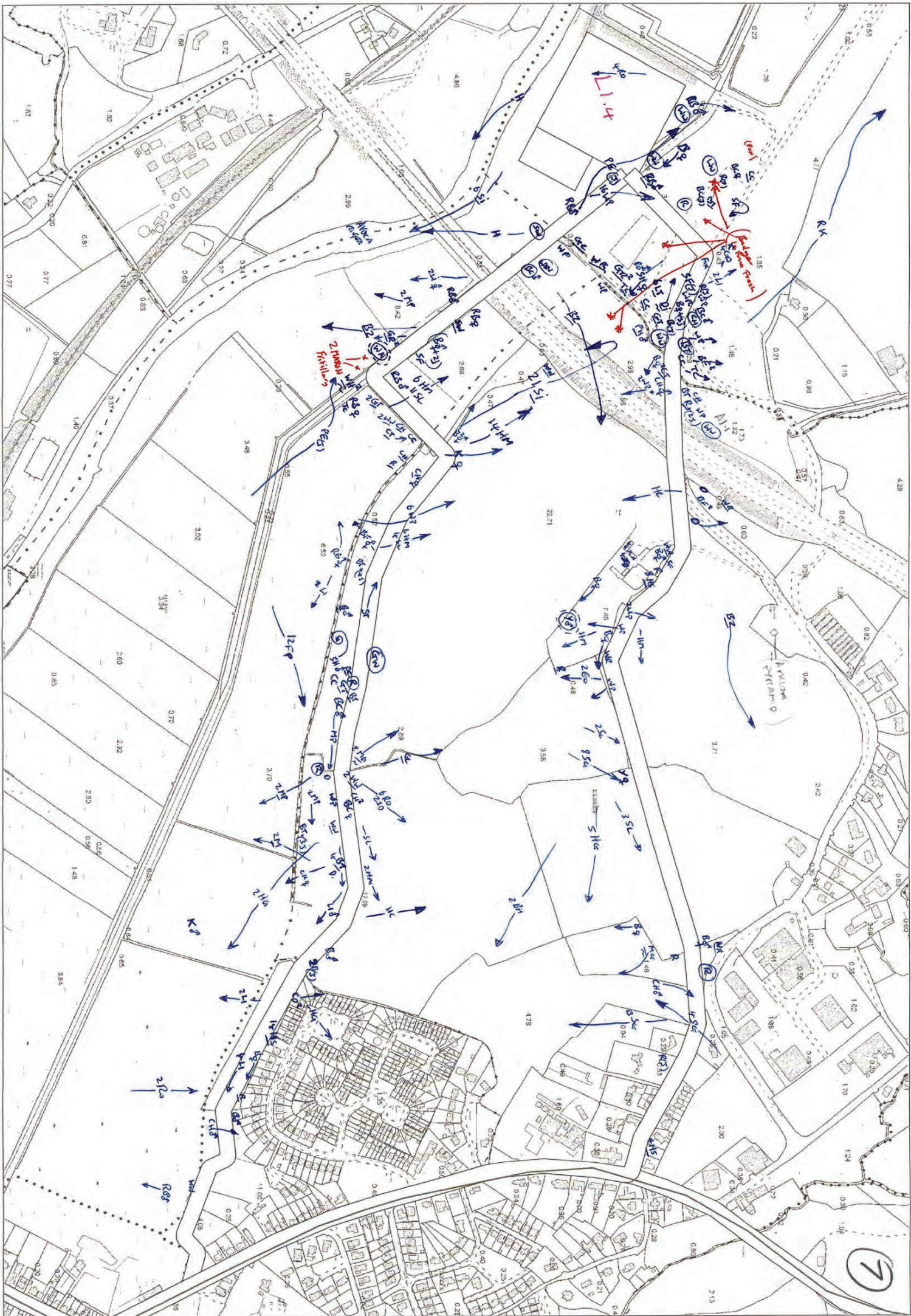
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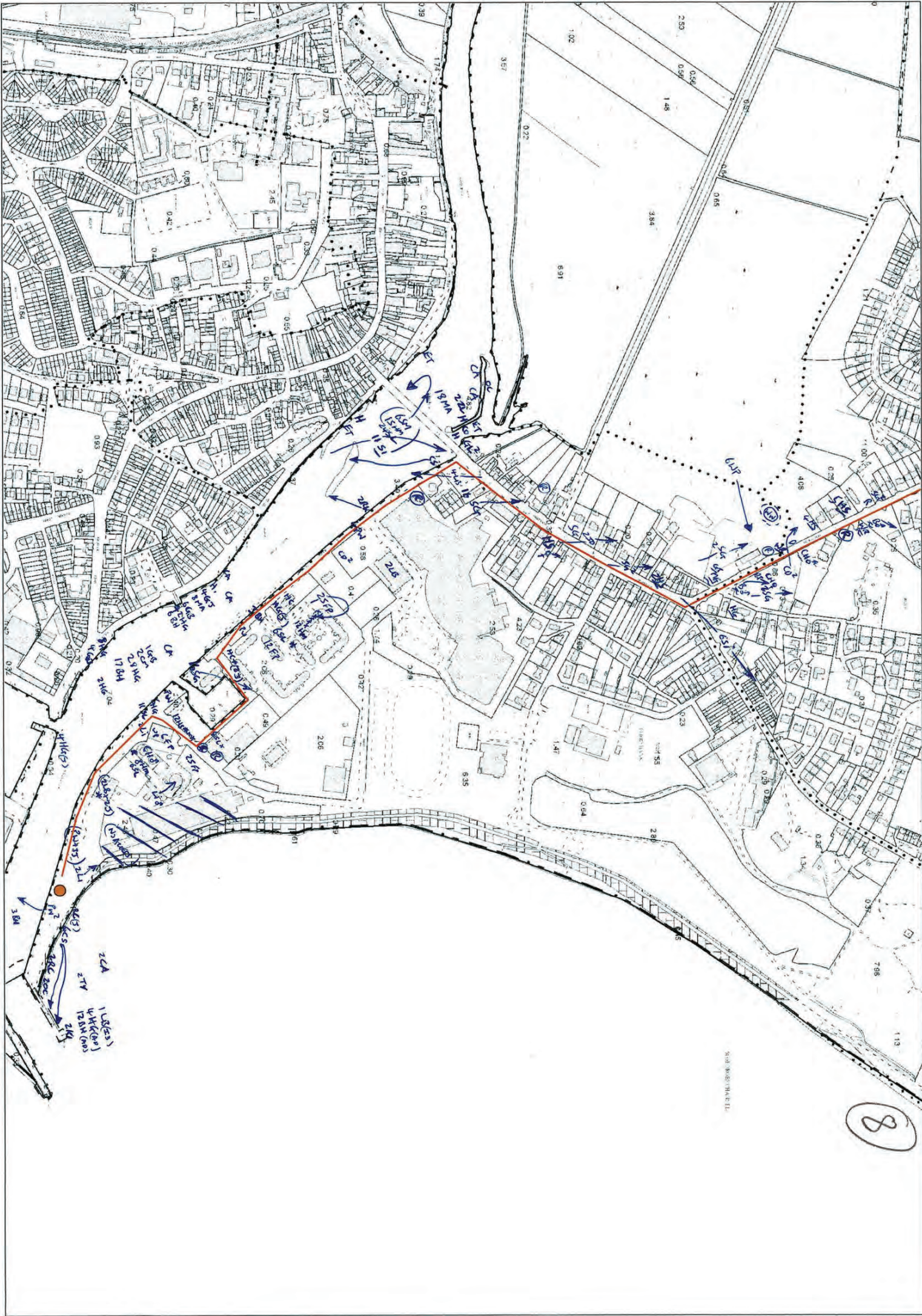
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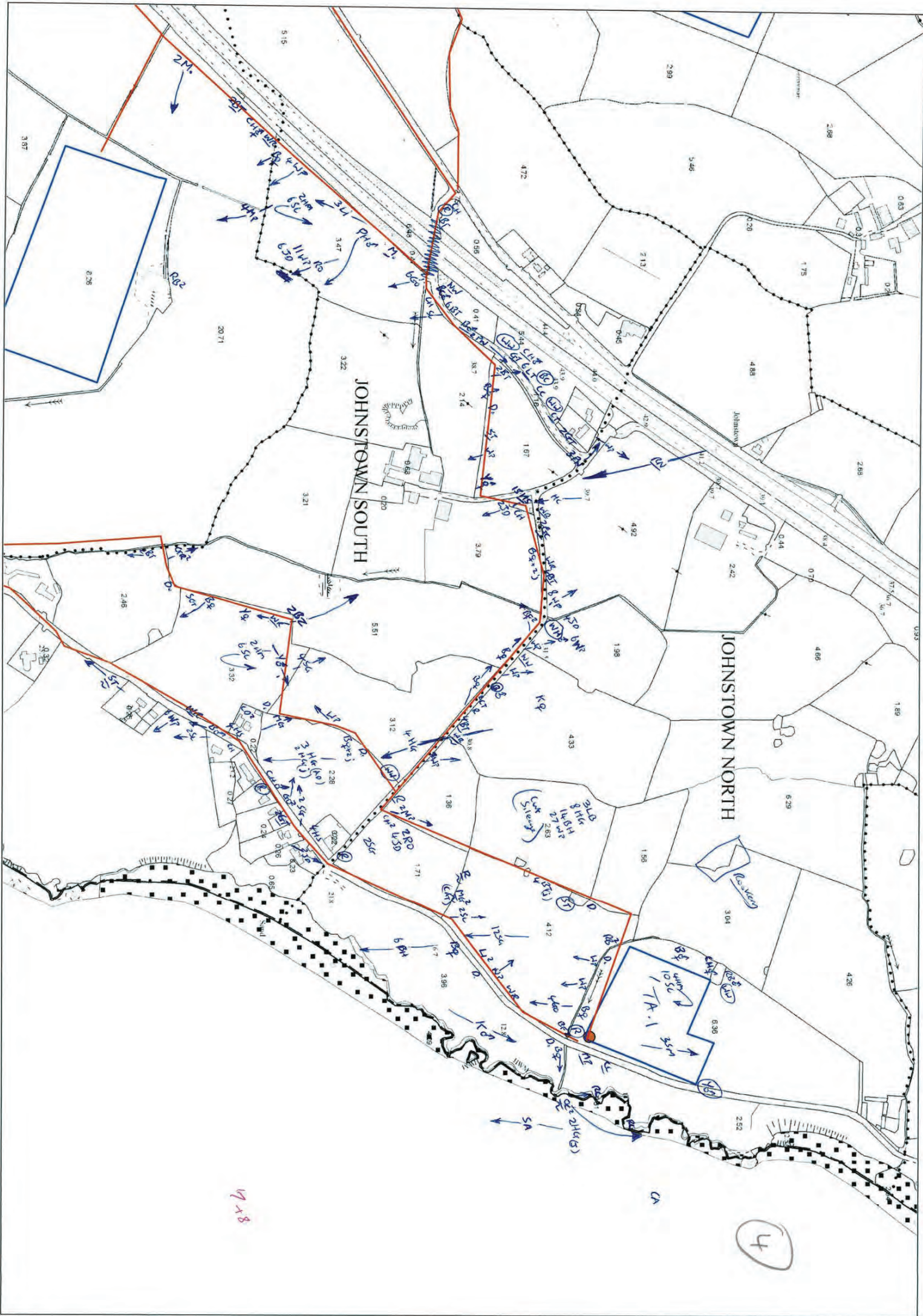


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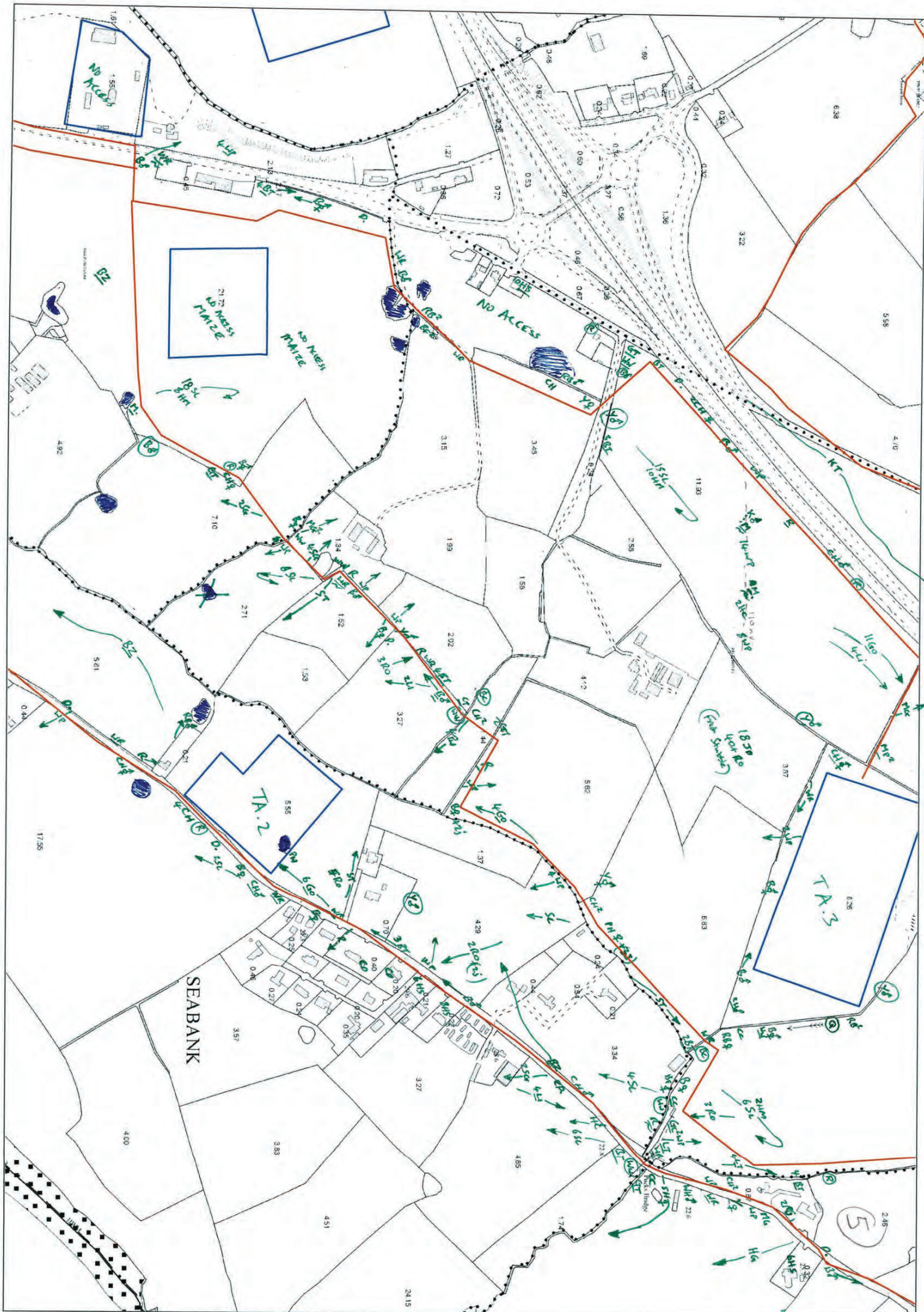


JOHNSTOWN SOUTH

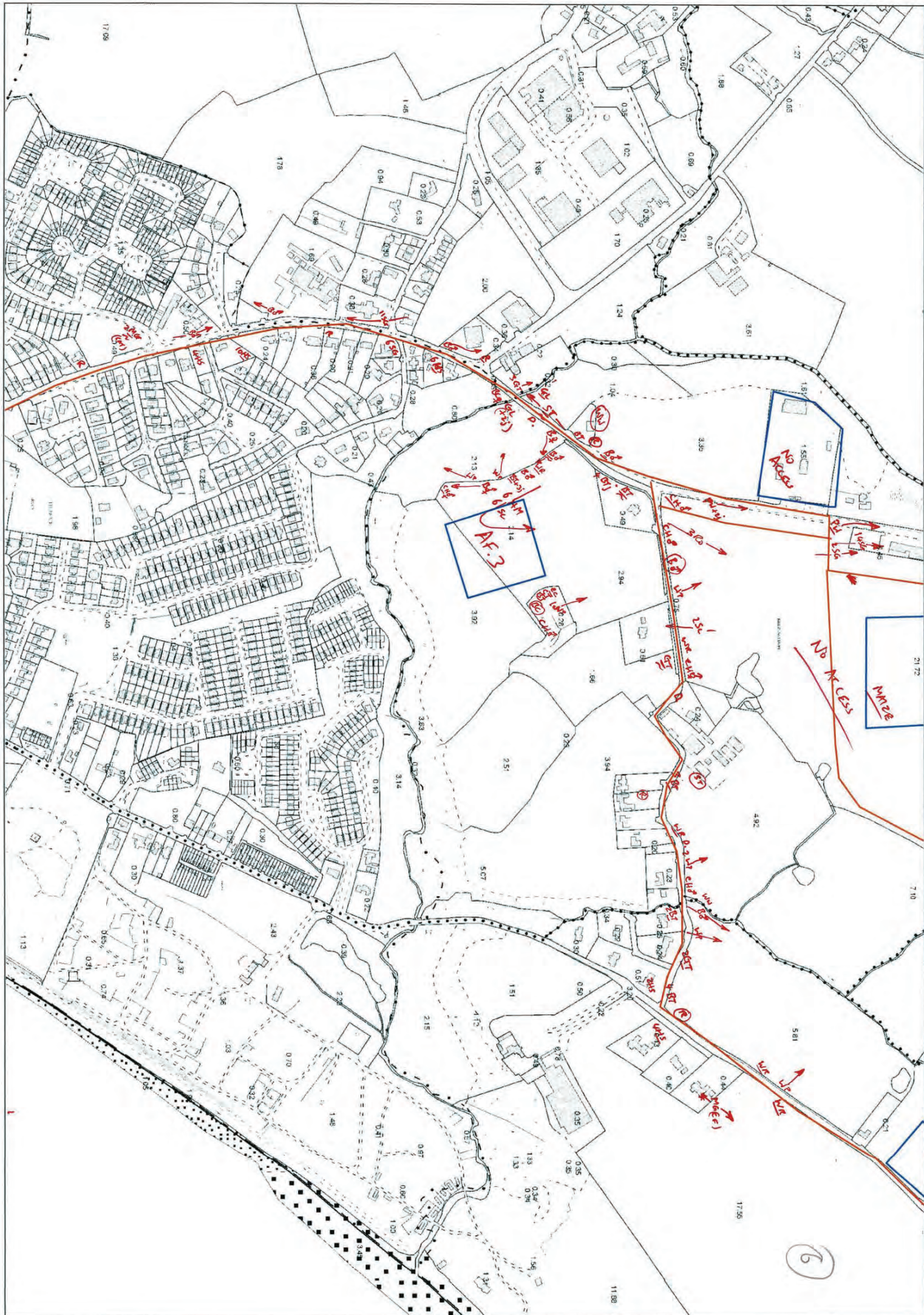
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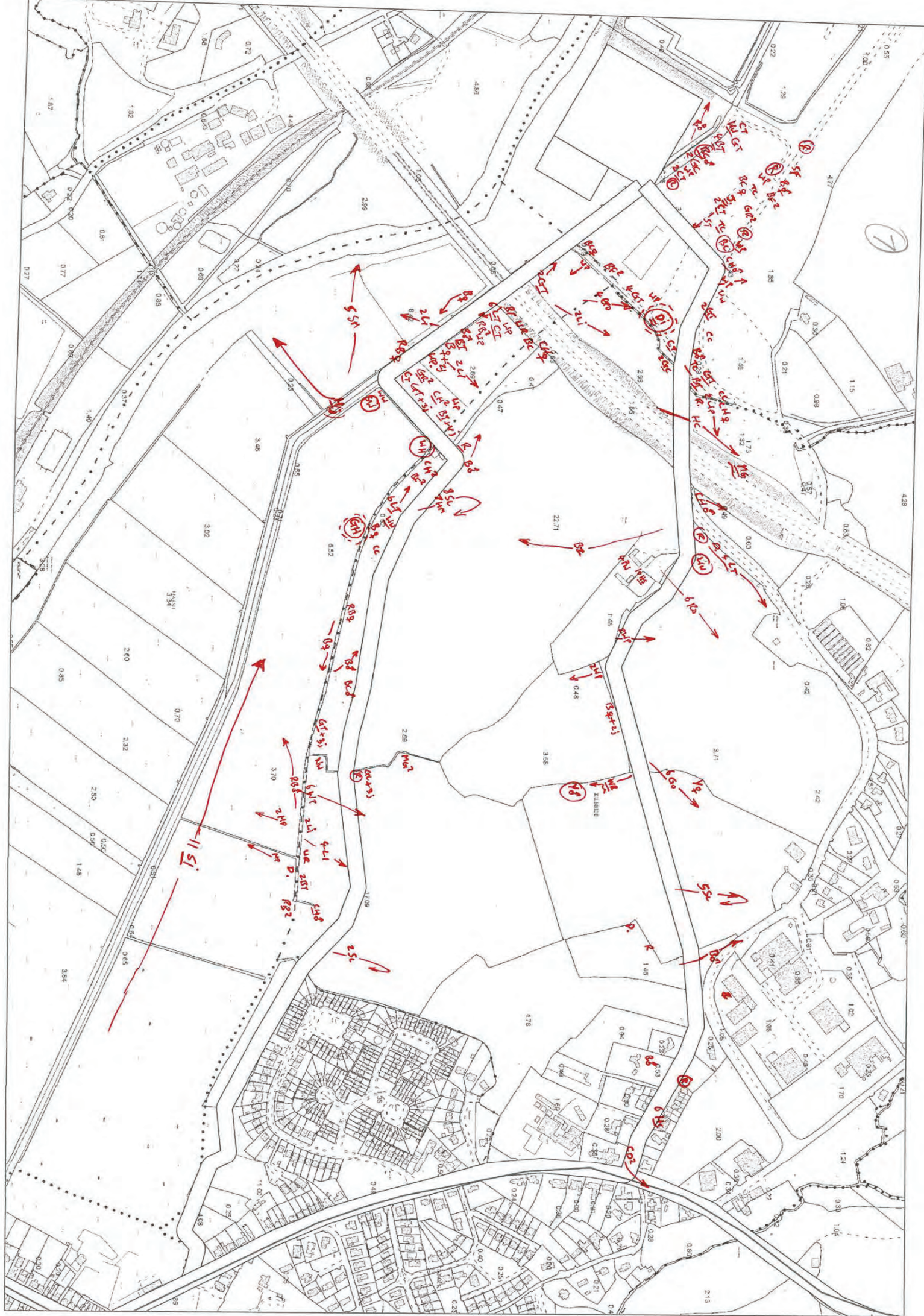
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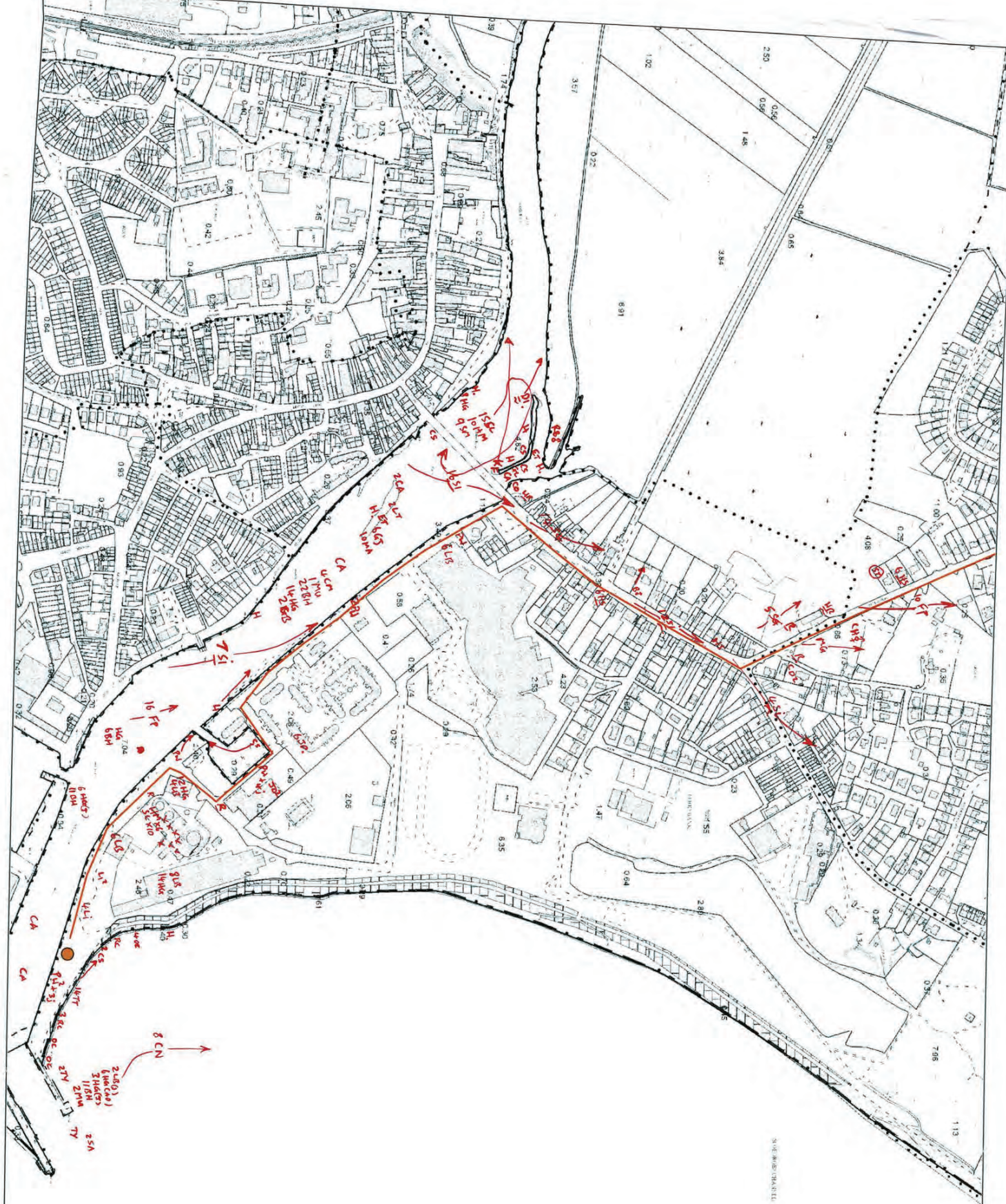
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**Appendix I**  
**BTO Species Codes**

## SURVEY REPORT

| Species                  | BTO code | Species            | BTO code |
|--------------------------|----------|--------------------|----------|
| Barn owl                 | BO       | Mallard            | MA       |
| Blackbird                | B.       | Meadow pipit       | MP       |
| Black-headed gull        | BH       | Merlin             | ML       |
| Blackcap                 | BC       | Mistle thrush      | M.       |
| Blue tit                 | BT       | Moorhen            | MH       |
| Bullfinch                | BF       | Mute swan          | MS       |
| Buzzard                  | BZ       | Oystercatcher      | OC       |
| Chaffinch                | CH       | Peregrine          | PE       |
| Chiffchaff               | CC       | Pheasant           | PH       |
| Coal tit                 | CT       | Pied wagtail       | PW       |
| Collared dove            | CD       | Raven              | RN       |
| Common gull              | CM       | Red grouse         | RG       |
| Common sandpiper         | CS       | Red kite           | KT       |
| Common tern              | CN       | Redshank           | RK       |
| Coot                     | CO       | Reed bunting       | RB       |
| Cormorant                | CA       | Ringed plover      | RP       |
| Cuckoo                   | CK       | Robin              | R.       |
| Curlew                   | CU       | Rock dove          | DV       |
| Dipper                   | DI       | Rock pipit         | RC       |
| Dunnock                  | D.       | Rook               | RO       |
| Feral pigeon             | FP       | Sand martin        | SM       |
| Garden warbler           | GW       | Sedge warbler      | SW       |
| Garganey                 | GY       | Siskin             | SK       |
| Goldcrest                | GC       | Skylark            | S.       |
| Golden plover            | GP       | Snipe              | SN       |
| Goldfinch                | GO       | Song thrush        | ST       |
| Grasshopper Warbler      | GH       | Sparrowhawk        | SH       |
| Great black-backed gull  | GB       | Spotted flycatcher | SF       |
| Great crested grebe      | GG       | Starling           | SG       |
| Great tit                | GT       | Stock dove         | SD       |
| Greenfinch               | GR       | Stonechat          | SC       |
| Greenshank               | GK       | Swallow            | SL       |
| Grey heron               | H.       | Swift              | SI       |
| Grey wagtail             | GL       | Teal               | T.       |
| Herring gull             | HG       | Treecreeper        | TC       |
| Hooded crow              | HC       | Tree sparrow       | TS       |
| House martin             | HM       | Tufted duck        | TU       |
| House sparrow            | HS       | Twite              | TW       |
| Jackdaw                  | JD       | Water rail         | WA       |
| Jay                      | J.       | Wheatear           | W.       |
| Kestrel                  | K.       | Whitethroat        | WH       |
| Kingfisher               | KF       | Wigeon             | WN       |
| Lapwing                  | L.       | Willow warbler     | WW       |
| Lesser black-backed gull | LB       | Woodpigeon         | WP       |
| Lesser redpoll           | LR       | Woodcock           | WK       |
| Linnet                   | LI       | Wren               | WR       |
| Long-tailed tit          | LT       | Yellowhammer       | Y.       |

**Appendix II**

**BTO Breeding Evidence Codes**

**Non-breeding (N)**

F Flying over

M Species observed but suspected to be still on Migration

U Species observed but suspected to be sUmmering non-breeder

**Possible breeder (Po)**

H Species observed in breeding season in suitable nesting Habitat

S Singing male present (or breeding calls heard) in breeding season in suitable breeding habitat

**Probable breeder (Po)**

P Pair observed in suitable nesting habitat in breeding season

T Permanent Territory presumed through registration of territorial behaviour (song etc) on at least two different days a week or more apart at the same place or many individuals on one day

D Courtship and Display (judged to be in or near potential breeding habitat; be cautious with wildfowl)

N Visiting probable Nest site

A Agitated behaviour or anxiety calls from adults, suggesting probable presence of nest or young nearby

I Brood patch on adult examined in the hand, suggesting Incubation

**Confirmed breeding (Br)**

B Nest Building or excavating nest-hole

DD Distraction-Display or injury feigning

UN Used Nest or eggshells found (occupied or laid within period of survey)

FL Recently FLedged young (nidicolous species) or downy young (nidifugous species). Careful consideration should be given to the likely provenance of any fledged juvenile capable of significant geographical movement. Evidence of dependency on adults (e.g. feeding) is helpful. Be cautious, even if the record comes from suitable habitat.

ON Adults entering or leaving nest-site in circumstances indicating Occupied Nest (including high nests or nest holes, the contents of which cannot be seen) or adults seen incubating

FF Adult carrying Faecal sac or Food for young

NE Nest containing Eggs

NY Nest with Young seen or heard

**Appendix III**

**Bird Conservation Status**



## The Birds Directive

The European Directive 2009/147/EC on the Conservation of Wild Birds (The Birds Directive) together with the Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna (The Habitats Directive), form the overarching nature conservation legislation governing the protection of wild flora and fauna, in Ireland.

Under these Directives the most important sites for biodiversity are protected through designation as Special Areas of Conservation (SACs) and/or Special Protection Areas (SPAs), under The Habitats Directive and The Birds Directive respectively. SACs and SPAs are known as Natura 2000 sites, which are of European-wide importance. Together they form a network of nature conservation areas throughout European Member States, known as the Natura 2000 Network.

The Birds Directive specifically provides a framework for the conservation and management of, and human interactions with wild birds in Europe including the UK and Ireland. The main provisions of the Directive include:

- The identification and classification of SPAs for rare or vulnerable species listed in Annex I of the Directive as well as for all regularly occurring migratory species, paying particular attention to the protection of wetland of international importance;
- The regulation of hunting of certain species of birds listed in Annex II of the Directive; and
- The regulation of sale, transport, keeping and advertising for sale species listed in Annex III of The Directive.

The provisions of both the Birds and Habitats Directives are transposed into domestic legislation through The Habitat Regulations. The Habitat Regulations place a statutory duty on all competent authorities to act in accordance with the Directives and require a Habitats Regulations Assessment (HRA) to be carried out on any proposed plan or project, which has the potential to impact on the integrity of a Natura 2000 Site.

## The Wildlife Act, 1976

In Ireland, the Wildlife Act (1976) is the principal national legislation providing for the protection of wildlife and the control of some activities that may adversely affect wildlife. The Wildlife Act, 1976, came into operation on 1 June 1977. It was the only major legislation concerned with wildlife that was passed in the previous 45 years. It replaced the [Game Preservation Act, 1930](#), and the [Wild Birds \(Protection\) Act, 1930](#).

The aims of the Wildlife Act, 1976, are to provide for the protection and conservation of wild fauna and flora, to conserve a representative sample of important ecosystems, to provide for the development and protection of game resources and to regulate their exploitation, and to provide the services necessary to accomplish such aims.

Under the Act, the Minister responsible for nature conservation may afford protection to all wild species of fauna and flora. However, the 1976 Act did not provide for the conservation of fish species nor of aquatic invertebrates in general, except insofar as species may be added in agreement with the Minister for Communications, Marine and Natural Resources. Currently all bird species, 22 other animal species or groups of species and 86 species of flora are afforded protected status.

The Act also enables the possession, trade and movement of wildlife to be regulated and controlled. Hunting and also falconry is controlled under the Act. Specific areas of importance for wildlife may be protected under the Act either as Nature Reserves, Refuges for Fauna, or by way of management agreements.

Under the Act, the Minister may provide assistance and advice on wildlife matters, undertake the necessary research and promote public knowledge and understanding of wildlife.

The Wildlife Act is not concerned with animal welfare per se, as its primary purpose is the conservation of wildlife. Animal welfare is the responsibility of the Department of Agriculture and Food.

## Birds of Conservation Concern in Ireland

BirdWatch Ireland and the Royal Society for the Protection of Birds (RSPB) in Northern Ireland have agreed a list of priority bird species for conservation action across the island of Ireland. These species are known as the Birds of Conservation Concern in Ireland (BoCCI). According to the BoCCI List, birds are classified into three separate lists (red, amber and green), based on the conservation status of the bird and hence conservation priority.

The most recently published list is contained within *Birds of Conservation Concern in Ireland: 2014-2019* (Colhoun and Cummins, 2013).

Species are red-listed if:

- their global conservation status is listed as critically endangered (CE), endangered (E) or vulnerable (V) by the IUCN.
- their population or range has declined dramatically in recent years;
- their breeding population has undergone large and widespread declines since 1800 and have not subsequently recovered; and/or
- they are of global conservation concern.

Species are amber-listed if:

- their population or range has declined moderately in recent years;
- they are rare breeders;
- their breeding or wintering population is localised or of internationally important numbers; and/or
- they have unfavourable conservation status in Europe.

Species are green-listed if:

- they do not meet red or amber-listing criteria.