

Environmental  
Statement  
Addendum to  
Chapter 8:

Ecology and Nature  
Conservation

# Nant Llesg Surface Mine

Incorporating Land Remediation

13/0732

Caerphilly County  
Borough Council  
09 JAN 2014  
Planning Division



---

# Nant Llesg Surface Mine

Incorporating Land Remediation

Addendum to Environmental Statement

Chapter 8 - Ecology and Nature Conservation

---

November 2013

**mill**er argent

## Table of Contents

---

- 1 **Non-technical Summary**
- 2 **Introduction**
- 3 **Odonata Survey**
- 4 **Breeding Waders Survey**
- 5 **Conclusions**

### Tables

- Table 3.1 Summary of the Significance of Impacts on Odonata
- Table 3.2 Summary of the Significance of Impacts on Terrestrial Invertebrates
- Table 4.1 Summary of the Significance of Impacts on Breeding Birds

### Appendices

- MA/NL/ES/A08/016 Odonata Survey (2013)
- MA/NL/ES/A08/017 Breeding Waders (2013)

## Ecology and Nature Conservation Addendum

### 1 Non-technical Summary

1.1 As reported in Chapter 8 Ecology and Nature Conservation of the Environmental Statement (ES) submitted with the Planning Application for the Nant Llesg Surface Mine incorporating Land Remediation, an upland breeding bird survey of the site was undertaken during the period April to June 2011 (ES Appendix MA/NL/ES/A08/006) and an Odonata (dragonflies and damselflies) survey from the beginning of June to the end of September 2011 (ES Appendix MA/NL/ES/A08/013). In view of the poor weather conditions during August 2011, an important month for Odonata, a repeat survey was carried out in summer 2013. As reported in the ES an important component of the ecology of the site is the breeding wader birds in the south west of the site. Since breeding bird populations vary from year to year a repeat survey of breeding birds in this area was carried out in spring of 2013.

1.2 Comparing the results of the 2013 Odonata survey to that carried out in 2011, three additional species were recorded in 2013 (Scarce Blue-tailed Damselfly, Four-spotted Chaser, Broad-bodied Chaser and Keeled Skimmer) and one species (Emperor Dragonfly), recorded in 2011, was not located in 2013. Scarce Blue-tailed Damselfly was recorded in a pond within the site boundary, but outside the operational area. Although Scarce Blue-tailed Damselfly was not recorded in the 2011 survey, as it had previously been recorded in the area it was included in the list of Valued Ecological Receptors, and the effects on the species considered in the ES. Similarly Four-spotted Chaser and Keeled Skimmer, whilst not recorded in the 2011 survey, had previously been recorded in the area and were included in the species considered in the ES. The only additional species identified in the 2013 survey not previously recorded was Broad-bodied Chaser. This species is widespread and common throughout southern England and Wales.

1.3 Thus the overall assessment of the significance of effects on Odonata reported in the ES would not change and would remain as:

Land take	Moderate adverse
Additional effects during operation	Negligible
Restoration	Minor adverse

1.4 The recording of Lepidoptera during the Odonata survey in 2013 identified one additional species of conservation importance not recorded in 2011, the Dingy Skipper butterfly. This, together with the Small heath and Grayling butterflies and the Broom Moth which were previously recorded, would be considered as of County Borough Importance as previously set out in the ES.

1.5 Thus the overall assessment of the significance of effects on terrestrial invertebrates reported in the ES would not change and would remain as:

Land take	Moderate adverse
Additional effects during operation	Negligible
Restoration	Minor adverse

1.6 Comparing the results of the 2013 breeding bird survey to the breeding bird survey carried out in 2011, the breeding wader species and numbers recorded were similar. In 2011 there were two pairs of Little Ringed Plover compared to one in 2013; nine pairs of Lapwing in 2011 compared with six to eight in 2013; and one/two pairs of Snipe in 2011 and two in 2013. In 2011 two pairs of Ringed Plover were recorded but in 2013 only non-breeding birds were present. A breeding pair of Curlew was recorded in 2013. Curlew was recorded in 2011, but not breeding.

- 1.7 The single pair of Curlew at Nant Llesg is of importance at the County Borough level. In ES terms loss of this pair as a result of land take would be an impact of high magnitude on the population of County Borough importance and thus of Moderate significance. This would be the same level of significance as the effects on Ringed Plover and Snipe. However, the summary of impacts in the ES considers breeding birds as a whole and assesses the impact of land take as of Major significance, principally as a result of the effects on Little Ringed Plover.
- 1.8 Thus the overall assessment of the significance of effects on breeding birds reported in the ES would not change and would remain as:

Land take	Major adverse
Additional effects during operation	Minor Adverse
Restoration	Moderate Adverse.

## 2 Introduction

- 2.1 As reported in Chapter 8 Ecology and Nature Conservation of the Environmental Statement (ES) submitted with the Planning Application for the Nant Llesg Surface Mine, an upland breeding bird survey of the site was undertaken during the period April to June 2011 (ES Appendix MA/NL/ES/A08/006) and an Odonata (dragonflies and damselflies) survey from the beginning of June to the end of September 2011 (ES Appendix MA/NL/ES/A08/013).
- 2.2 As reported in the ES, due in particular to weather constraints during August 2013 it was not possible to complete Odonata survey visits during this month. Additional visits were undertaken in September to ensure the planned amount of survey effort was completed, however, due to the fact that August is a month of high Odonata activity it is likely that the maximum and mean counts of species may have been negatively impacted due to the weather constraints. The above limitations in the survey were offset by reference to data supplied by the South East Wales Biological Record Centre (SEWBRc).
- 2.3 However, in view of the poor weather conditions during an important month for Odonata, a repeat survey was carried out in summer 2013. The report of this survey is attached as ES Appendix MA/NL/ES/A08/016.
- 2.4 As reported in the ES an important component of the ecology of the site is the breeding waders in the south west of the site. Since breeding bird populations vary from year to year a repeat survey of breeding birds in this area was carried out in spring of 2013. The report of this survey is attached as ES Appendix MA/NL/ES/A08/016.
- 2.5 The findings of these reports of the 2013 surveys are summarised below and the findings compared with the 2011 surveys. In so far as there are any changes to the data and assessments presented in the ES Chapter 8 Ecology and Nature Conservation these are also considered.

## 3 Odonata Survey

- 3.1 Thirteen species of Odonata were recorded at the site during the survey in 2013. In combination with the desk study and previous survey undertaken in 2011, 15 species have been identified as occurring, or having occurred within the last ten years, within the Nant Llesg survey area boundary.

- 3.2 Comparing the results of the 2013 survey to that carried out in 2011, three additional species were recorded in 2013 (Scarce Blue-tailed Damselfly, Four-spotted Chaser, Broad-bodied Chaser and Keeled Skimmer) and one species (Emperor Dragonfly), recorded in 2011, was not located in 2013.
- 3.3 However, although Scarce Blue-tailed Damselfly was not recorded in the 2011 survey, as it had previously been recorded in the area it was included in the list of Valued Ecological Receptors, and the effects on the species considered in the ES. Similarly Four-spotted Chaser and Keeled Skimmer, whilst not recorded in the 2011 survey, had previously been recorded in the area and were included in the species considered in the ES. The only additional species identified in the 2013 survey not previously recorded was Broad-bodied Chaser. This species is widespread and common throughout southern England and Wales.
- 3.4 The ES reports that the land take for the scheme would mean that much of the habitat of most value to Odonata, including the Scarce Blue-tailed Damselfly south of Rhaslas Pond, would be lost to the development of the site. However, in the 2013 survey the species was only recorded from the pond adjacent to the car park at the junction of the Gelligaer Common Road and the South Tunnel Road in the south west of the Nant Llesg site. This pond would not be affected by the works, and thus the ES may over-estimate the effect on this species.
- 3.5 However the overall assessment of the significance of effects on Odonata at the land take, operational and restoration stages of the project, as summarised in Table 8.8 of the ES, would not change and is summarised in Table 3.1.

**Table 3.1 Summary of the Significance of Impacts on Odonata**

Feature	Land take	Additional Effects During Operation	Restoration
Dragonflies and damselflies	Moderate adverse	Negligible	Minor adverse

- 3.6 The recording of Lepidoptera during the Odonata survey in 2013 identified one additional species of conservation importance not recorded in 2011, the Dingy Skipper butterfly, which is a Species of Principal Importance listed under Section 42 of the Natural Environment and Rural Communities Act 2006 and a UK BAP priority species (UK Biodiversity Reporting and Information Group 2007). It is also a Locally Important Species (as identified by local specialists) in the SEWBRc area. This, together with the Small heath and Grayling butterflies and the Broom Moth, would be considered as of County Borough Importance as previously set out in the ES.
- 3.7 Thus the overall assessment of the significance of effects on terrestrial invertebrates at the land take, operational and restoration stages of the project, as summarised in Table 8.8 of the ES, would not change and is summarised in Table 3.2.

**Table 3.2 Summary of the Significance of Impacts on Terrestrial Invertebrates**

Feature	Land take	Additional Effects During Operation	Restoration
Terrestrial invertebrates	Moderate adverse	Negligible	Minor adverse

## 4 Breeding Waders Survey

- 4.1 A total of nine species of wading birds and an additional ten bird species of conservation concern were recorded during the survey in 2013. Four species of wader (Little Ringed Plover, Lapwing, Snipe and Curlew) and six of the additional species of conservation concern (Mallard, Skylark, Meadow Pipit, Wheatear, Linnet and Reed Bunting) were confirmed to be breeding within the survey area.
- 4.2 Comparing the results of the 2013 survey to that carried out in 2011, the breeding wader species and numbers recorded were similar. In 2011 there were two pairs of Little Ringed Plover compared to one in 2013; nine pairs of Lapwing in 2011 compared with six to eight in 2013; and one/two pairs of Snipe in 2011 and two in 2013. In 2011 two pairs of Ringed Plover were recorded but in 2013 only non-breeding birds were present. A breeding pair of Curlew was recorded in 2013. Curlew was recorded in 2011, but not breeding.
- 4.3 All of the other six species of conservation concern recorded in 2013 were also recorded in 2011.
- 4.4 Curlew is a Species of Principal Importance under S42 of the NERC Act, is a Red list species of conservation concern, and is a UK and local BAP species. The best estimate of the current breeding population in Wales is some 800 to 1000 pairs. This means that the single pair at Nant Llesg is some 0.1% to 0.13% and so not of importance at the Welsh scale. The single pair recorded is of importance at the County Borough level. Loss of this pair as a result of land take would be an impact of high magnitude on the population of County Borough importance and thus of Moderate significance. This would be the same level of significance as the effects on Ringed Plover and Snipe. However, the summary of impacts in the ES considers breeding birds as a whole and assesses the impact of land take as of Major significance, principally as a result of the effects on Little Ringed Plover.
- 4.5 Thus the overall assessment of the significance of effects on breeding birds at the land take, operational and restoration stages of the project, as summarised in Table 8.8 of the ES, would not change and is summarised in Table 4.1.

**Table 4.1 Summary of the Significance of Impacts on Breeding Birds**

Feature	Land take	Additional Effects During Operation	Restoration
Breeding birds	Major adverse	Minor adverse	Moderate adverse

## 5 Cumulative Effects

- 5.1 Since there is no change in the assessment of effects of the Nant Llesg project on Odonata, terrestrial invertebrates and breeding birds on the basis of these additional surveys, it follows that there would be no change in the assessment of cumulative effects with other projects.

## 6 Conclusions

- 6.1 As reported in Chapter 8 Ecology and Nature Conservation of the Environmental Statement (ES) submitted with the Planning Application for the Nant Llesg Surface Mine, an upland breeding bird survey of the site was undertaken during the period April to June 2011 (ES Appendix MA/NL/ES/A08/006) and an Odonata (dragonflies and damselflies) survey from the beginning of June to the end of September 2011 (ES Appendix MA/NL/ES/A08/013).
- 6.2 In view of the poor weather conditions during August 2011, an important month for Odonata, a repeat survey was carried out in summer 2013. As reported in the ES an important component of the ecology of the site is the breeding waders in the south west of the site. Since breeding bird populations vary from year to year a repeat survey of breeding birds in this area was carried out in spring of 2013.
- 6.3 Comparing the results of the 2013 Odonata survey to that carried out in 2011, three additional species were recorded in 2013 (Scarce Blue-tailed Damselfly, Four-spotted Chaser, Broad-bodied Chaser and Keeled Skimmer) and one species (Emperor Dragonfly), recorded in 2011, was not located in 2013. Although Scarce Blue-tailed Damselfly was not recorded in the 2011 survey, as it had previously been recorded in the area it was included in the list of Valued Ecological Receptors, and the effects on the species considered in the ES. Similarly Four-spotted Chaser and Keeled Skimmer, whilst not recorded in the 2011 survey, had previously been recorded in the area and were included in the species considered in the ES. The only additional species identified in the 2013 survey not previously recorded was Broad-bodied Chaser. This species is widespread and common throughout southern England and Wales.
- 6.4 Thus the overall assessment of the significance of effects on Odonata reported in the ES would not change and would remain as:
- |                                     |                  |
|-------------------------------------|------------------|
| Land take                           | Moderate adverse |
| Additional effects during operation | Negligible       |
| Restoration                         | Minor adverse    |
- 6.5 The recording of Lepidoptera during the Odonata survey in 2013 identified one additional species of conservation importance not recorded in 2011, the Dingy Skipper butterfly, which is a Species of Principal Importance listed under Section 42 of the Natural Environment and Rural Communities Act 2006 and a UK BAP priority species (UK Biodiversity Reporting and Information Group 2007). It is also a Locally Important Species (as identified by local specialists) in the SEWBRc area. This, together with the Small heath and Grayling butterflies and the Broom Moth, would be considered as of County Borough Importance as previously set out in the ES.
- 6.6 Thus the overall assessment of the significance of effects on terrestrial invertebrates reported in the ES would not change and would remain as:
- |                                     |                  |
|-------------------------------------|------------------|
| Land take                           | Moderate adverse |
| Additional effects during operation | Negligible       |
| Restoration                         | Minor adverse    |
- 6.7 Comparing the results of the 2013 breeding wader survey to the breeding bird survey carried out in 2011, the breeding wader species and numbers recorded were similar. In 2011 there were two pairs of Little Ringed Plover compared to one in 2013; nine pairs of Lapwing in 2011 compared with six to eight in 2013; and one/two pairs of Snipe in 2011 and two in 2013. In 2011 two pairs of Ringed Plover were recorded but in 2013 only non-breeding birds were present. A breeding pair of Curlew was recorded in 2013. Curlew was recorded in 2011, but not breeding.



- 6.8 Curlew is a Species of Principal Importance under S42 of the NERC Act, is a Red list species of conservation concern, and is a UK and local BAP species. The single pair at Nant Llesg is of importance at the County Borough level. In ES terms loss of this pair as a result of land take would be an impact of high magnitude on the population of County Borough importance and thus of Moderate significance. This would be the same level of significance as the effects on Ringed Plover and Snipe. However, the summary of impacts in the ES considers breeding birds as a whole and assesses the impact of land take as of Major significance, principally as a result of the effects on Little Ringed Plover.
- 6.9 Thus the overall assessment of the significance of effects on breeding birds reported in the ES would not change and would remain as:

Land take	Major adverse
Additional effects during operation	Minor Adverse
Restoration	Moderate Adverse.

## Appendices

---

**MA/NL/ES/A08/016      Odonata Survey (2013)**

**MA/NL/ES/A08/017      Breeding Waders (2013)**

# MA/NL/ES/A08/016 Odonata Survey (2013)

RPS

**NANT LLESG  
ODONATA SURVEY 2013**

31 October 2013

**Our Ref: JPP3167-R-001a**

**RPS**

Willow Mere House  
Compass Point Business Park  
Stocks Bridge Way  
St Ives  
Cambridgeshire PE27 5JL

**Tel:** +44(0)1480 466335  
**Fax:** +44(0)1480 466911  
**Email:** [rpscm@rpsgroup.com](mailto:rpscm@rpsgroup.com)

## QUALITY MANAGEMENT

Prepared by:	<b>D. Spittle</b>
Surveyors:	<b>D. Spittle</b>
Reviewed by	<b>N. Gates</b>
Authorised by:	<b>N. Gates</b>
Date:	<b>31/10/13</b>
Project Number/Document Reference:	<b>JPP3167-R-001a</b>
Client	<b>Miller Argent (South Wales) Ltd.</b>

### **COPYRIGHT © RPS**

The material presented in this report is confidential. This report has been prepared for the exclusive use of Miller Argent (South Wales) Ltd. and shall not be distributed or made available to any other company or person without the knowledge and written consent of Miller Argent (South Wales) Ltd. or RPS.

To achieve the study objectives stated in this report, we were required to base our conclusions on the best information available during the period of the investigation and within the limits prescribed by our client in the agreement.

No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information. Thus, we cannot guarantee that the investigations completely defined the degree or extent of e.g. species abundances or habitat management efficacy described in the report.

# CONTENTS

---

<b>EXECUTIVE SUMMARY</b> .....	<b>1</b>
<b>1 INTRODUCTION</b> .....	<b>2</b>
<b>Background to the study</b> .....	<b>2</b>
<b>Aims and objectives</b> .....	<b>2</b>
<b>Study area</b> .....	<b>2</b>
<b>2 METHODS</b> .....	<b>3</b>
<b>Survey</b> .....	<b>3</b>
<b>Analysis</b> .....	<b>3</b>
<b>Potential Limitations</b> .....	<b>4</b>
<b>Supplementary Lepidoptera Survey</b> .....	<b>4</b>
<b>3 RESULTS</b> .....	<b>5</b>
<b>Odonata Survey</b> .....	<b>5</b>
<b>Supplementary Lepidoptera Survey</b> .....	<b>10</b>
<b>4 EVALUATION AND CONCLUSIONS</b> .....	<b>11</b>
<b>Odonata</b> .....	<b>11</b>
Specially Protected Species .....	<b>11</b>
Species of Conservation Importance .....	<b>11</b>
Species Abundance, Diversity and Distribution .....	<b>11</b>
<b>Lepidoptera</b> .....	<b>12</b>
Specially Protected Species .....	<b>12</b>
Species of Conservation Importance .....	<b>12</b>
<b>5 REFERENCES</b> .....	<b>13</b>
<b>FIGURES</b> .....	<b>14</b>
<b>APPENDICES</b> .....	<b>15</b>
<b>Appendix A. Odonata transect data</b> .....	<b>15</b>
<b>Appendix B. Annotated list of Lepidoptera species recorded in 2013.</b> .....	<b>17</b>

## TABLES

<b>Table 3.1a. Maximum and mean counts of Odonata along transects 1-5</b> .....	<b>7</b>
<b>Table 3.1b. Maximum and mean counts of Odonata along transects 6-10.</b> .....	<b>8</b>
<b>Table 3.2. Maximum and mean counts of Odonata over entire survey route.</b> .....	<b>9</b>
<b>Table 3.3. Number of species and species of conservation interest.</b> .....	<b>9</b>

**FIGURES**

**Figure 1.1. Nant Llesg survey area and Odonata transects..... 14**

## EXECUTIVE SUMMARY

---

- RPS was commissioned by Miller Argent (South Wales) Ltd. to carry out a survey of Odonata (dragonflies and damselflies), with additional recording of Lepidoptera (butterflies and moths), at the site of the proposed surface coal mine at Nant Llesg, Caerphilly.
- An Odonata survey was undertaken to provide additional information on the current status of the survey area in respect of Odonata.
- Thirteen species of Odonata were recorded at the site during the survey period. In combination with the desk study and previous survey undertaken in 2011, 15 species have been identified as occurring, or having occurred within the last ten years, within the Nant Llesg survey area boundary.
- None of the species recorded within the survey area are included on Schedule 5 of the Wildlife and Countryside Act; one (Scarce Blue-tailed Damselfly) is a Red Data List Species; none are Species of Principal Importance on the list prepared under Section 42 of the Natural Environment and Rural Communities Act 2006 or UK BAP priority species (UK Biodiversity Reporting and Information Group 2007); five are Locally Important Species in the South East Wales Biological Records Centre (SEWBRc) area (Emerald Damselfly, Scarce Blue-tailed Damselfly, Golden-ringed Dragonfly, Keeled Skimmer and Black Darter).
- Comparing the results of this 2013 survey to that carried out in 2011, three additional species were recorded in 2013 (Scarce Blue-tailed Damselfly, Four-spotted Chaser, Broad-bodied Chaser and Keeled Skimmer) and one species (Emperor Dragonfly), recorded in 2011, was not located in 2013. Although Scarce Blue-tailed Damselfly was not recorded in the 2011 survey, it was recorded as having been previously recorded in the area. Similarly Four-spotted Chaser and Keeled Skimmer, whilst not recorded in the 2011 survey, had previously been recorded in the area. The only additional species identified in the 2013 survey not previously recorded was Broad-bodied Chaser. This species is widespread and common throughout southern England and Wales.
- The recording of Lepidoptera identified 22 species within the Nant Llesg survey area boundary in 2013. In combination with the recording undertaken in 2011, 29 species have been identified within the Nant Llesg survey area boundary.
- None of the Lepidoptera species recorded within the survey area are included on Schedule 5 of the Wildlife and Countryside Act; three species (Dingy Skipper, Grayling and Small Heath) recorded within the survey area in 2013 are included on the list of Species of Principal Importance prepared under Section 42 of the Natural Environment and Rural Communities Act 2006 and UK BAP priority species (UK Biodiversity Reporting and Information Group, 2007). Two species (Dingy Skipper and Grayling) are also Locally Important Species in the SEWBRc area.
-



# 1 INTRODUCTION

---

## **Background to the study**

- 1.1 RPS was commissioned by Miller Argent (South Wales) Ltd. to carry out a survey of Odonata (dragonflies and damselflies), with additional recording of Lepidoptera (butterflies and moths), at the site of the proposed surface coal mine at Nant Llesg, Caerphilly.

## **Aims and objectives**

- 1.2 A previous Odonata survey was undertaken in 2011 (RPS, 2011) but in view of poor weather conditions during August 2011, an important month for Odonata, this repeat survey was carried out in summer 2013 to confirm the previous findings.

## **Study area**

- 1.3 The survey area encompassed the area of the proposed development and adjacent habitats. A map of the site is provided in Figure 1.1.

## 2 METHODS

---

### Survey

- 2.1 An Odonata survey was undertaken using a standardised transect method as outlined in Benstead et al. (1997). Transects were mapped to include the majority of standing waterbodies and a sample of ditches and streams within the site (as shown in Figure 1.1).
- 2.2 The standard survey period would normally incorporate May to September, however, due to unsuitable weather conditions early in the survey period, transects were scheduled to be carried out twice a month from June to September 2013.
- 2.3 Transect routes were scheduled to be started no earlier than 10:00 and completed no later than 16:00 and, where possible, survey visits were undertaken on warm days (temperature in the shade of no less than 17 degrees), with at least 50% sunshine and light winds. Weather conditions were recorded at the start of each transect.
- 2.4 Survey visits were completed on the following dates:
- 19th and 26th June 2013;
  - 29th July 2013;
  - 7th, 20th and 31st August 2013; and
  - 23rd and 27th September 2013.
- 2.5 Due to weather constraints on scheduled survey days in July it was not possible to complete both survey visits during this month. An additional visit was undertaken in August to ensure the planned amount of survey effort was completed.
- 2.6 Transects were walked at a slow pace. In each transect every identifiable specimen occurring in an 180 degree arc in front of the observer was recorded and where present, floating vegetation was periodically scanned with binoculars. Vegetation searches were not carried out. The start and end points of the transect route were alternated on each visit.
- 2.7 Specifically identifying the blue coenagrionids (e.g. Azure and Common Blue Damselfly) during transects was not attempted. They were recorded as 'Blue damselfly sp.' and, where possible, a sample was netted on completion of a transect to identify the species present.

### Analysis

- 2.8 An assessment of the importance of the survey area for Odonata was made by evaluating the species with reference to the following:
- Guidelines for the selection of biological SSSIs (Nature Conservancy Council 1989 [amended JNCC 1998]);
  - The Odonata Red Data List for Great Britain (Daguet et al. 2008);

- Schedule 5 of the Wildlife and Countryside Act 1981 (amended 1985);
- Species on the list of Species of Principal Importance prepared under Section 42 of the Natural Environment and Rural Communities Act 2006;
- UK Biodiversity Action Plan (UK BAP) priority species (UK Biodiversity Reporting and Information Group 2007); and
- Biodiversity Action Plan for Caerphilly County Borough (LBAP) priority species (Caerphilly Biodiversity Partnership 2002).

### **Potential Limitations**

- 2.9 The late start date for the survey and, unavoidable, reduction of counts in July produces the possibility that a small number of species may have not been detected during the period of their greatest abundance. However, due to the unseasonably cold and wet weather experienced during spring 2013 many Odonata species' emergence was delayed and it is unlikely that the lack of May survey visits significantly impacted upon the results of the survey.
- 2.10 Whilst a transect survey method is an efficient way to record the majority of Odonata species, it should be noted that this method is not ideal for accurately recording species occurring in highly localised colonies which may occur away from the transect route, e.g. Variable Damselfly.
- 2.11 Given the location of the site, perfect survey conditions for Odonata throughout the survey season are unlikely to occur. However, on the basis of desk study data and two surveys carried out in different years, the overall findings with respect to Odonata at the site are considered to be robust.

### **Lepidoptera Recording**

- 2.12 A species list of Lepidoptera recorded during each Odonata survey visit was compiled to provide additional information on the current status of this group within the survey area.

## 3 RESULTS

---

### Odonata Survey

- 3.1 Thirteen species of Odonata were recorded at the site during the survey period. Eleven species were recorded during transect surveys and two, Blue-tailed Damselfly and Scarce Blue-tailed Damselfly, outside of the transect survey route adjacent to the pond located at SO 093063 adjacent to the car park at the junction of the Fochriw Road and the Gelligaer Common Road.
- 3.2 Tables 3.1a, 3.1b and 3.2 provide a summary of the Odonata transect data. Tables 3.1a and 3.1b presents the maximum and mean number of individuals of each species recorded on each transect; Table 3.2 presents the maximum and mean number of individuals of each species recorded on the entire survey route. Transect data are provided in full in Appendix A.

Table 3.1a. Maximum and mean counts of Odonata along transects 1-5.

Species	Transect 1		Transect 2		Transect 3		Transect 4		Transect 5	
	Max	Mean	Max	Mean	Max	Mean	Max	Mean	Max	Mean
Emerald Damselfly	0	0.0	2	0.3	0	0.0	0	0.0	0	0.0
Blue damselfly sp.	0	0.0	4	0.5	11	2.8	1	0.1	8	1.4
Large Red Damselfly	0	0.0	13	1.8	0	0.0	0	0.0	3	0.6
Common Hawker	1	0.1	2	0.6	1	0.1	1	0.1	0	0.0
Golden-ringed Dragonfly	0	0.0	0	0.0	1	0.1	1	0.1	2	0.4
Four-spotted Chaser	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
Broad-bodied Chaser	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
Keeled Skimmer	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Black Darter	0	0.0	0	0.0	2	0.3	0	0.0	0	0.0
Common Darter	0	0.0	1	0.1	6	1.1	0	0.0	0	0.0

Notes on Table 3.1a. Both Azure and Common Blue Damselfly were confirmed as present during the survey.

Table 3.1b. Maximum and mean counts of Odonata along transects 6-10.

Species	Transect 6		Transect 7		Transect 8		Transect 9		Transect 10	
	Max	Mean	Max	Mean	Max	Mean	Max	Mean	Max	Mean
Emerald Damselfly	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Blue damselfly sp. <sup>1</sup>	6	1.5	2	0.5	39	14.1	2	0.5	0	0.0
Large Red Damselfly	5	1.0	0	0.0	0	0.0	0	0.0	1	0.3
Common Hawker	2	0.3	0	0.0	0	0.0	0	0.0	0	0.0
Golden-ringed Dragonfly	0	0.0	0	0.0	0	0.0	0	0.0	2	0.4
Four-spotted Chaser	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Broad-bodied Chaser	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Keeled Skimmer	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
Black Darter	0	0.0	0	0.0	1	0.1	0	0.0	1	0.3
Common Darter	1	0.4	0	0.0	1	0.1	2	0.4	3	0.4

Notes on Table 3.1b.<sup>1</sup> Both Azure and Common Blue Damselfly were confirmed as present during the survey.

**Table 3.2. Maximum and mean counts of Odonata over entire survey route.**

Species		Complete Survey Route	
		Max	Mean
Emerald Damselfly	<i>Lestes sponsa</i>	3	0.6
Blue damselfly sp. <sup>1</sup>	<i>Coenagrion sp.</i>	58	21.4
Large Red Damselfly	<i>Pyrrhosoma nymphula</i>	19	3.6
Common Hawker	<i>Aeshna juncea</i>	4	1.3
Golden-ringed Dragonfly	<i>Cordulegaster boltonii</i>	3	1.0
Four-spotted Chaser	<i>Libellula quadrimaculata</i>	1	0.1
Broad-bodied Chaser	<i>Libellula depressa</i>	1	0.1
Keeled Skimmer	<i>Orthetrum coerulescens</i>	1	0.1
Black Darter	<i>Sympetrum danae</i>	3	0.6
Common Darter	<i>Sympetrum striolatum</i>	8	2.5

Notes on Table 3.2. <sup>1</sup> Both Azure and Common Blue Damselfly were confirmed as present during the survey

3.3 One Red Data Book Species, Scarce Blue-tailed Damselfly, was recorded at the site during the survey period.

3.4 Five Locally Important Species (as identified by local specialists) in the South East Wales Biological Records Centre (SEWBRc) area were recorded (Scarce Blue-tailed Damselfly, Emerald Damselfly, Golden-ringed Dragonfly, Keeled Skimmer and Black Darter). Table 3.3 shows the number of species and the species of conservation importance recorded on each transect.

**Table 3.3. Number of species and species of conservation interest.**

Transect	Number of species	Species of conservation interest
1	1	
2	5	Emerald Damselfly
3	6	Emerald Damselfly, Golden-ringed Dragonfly and Black Darter
4	3	Golden-ringed Dragonfly
5	5	Golden-ringed Dragonfly
6	4	
7	1	
8	3	Black Darter
9	2	
10	6	Emerald Damselfly, Golden-ringed Dragonfly, Keeled Skimmer and Black Darter

- 3.5 Dragonflies and damselflies are listed as a priority assemblage of species within the Biodiversity Action Plan for Caerphilly County Borough (Caerphilly Biodiversity Partnership 2002) but no individual species are listed as priority species.

#### **Lepidoptera Records**

- 3.6 A total of 22 species of Lepidoptera were recorded at the site during the survey period. An annotated species list is provided in Appendix B.
- 3.7 Three species (Dingy Skipper, Grayling and Small Heath) are NERC Act Section 42 Species (Priority Species in Wales) and UK Biodiversity Action Plan Priority Species; two species (Dingy Skipper and Grayling) are Locally Important Species (as identified by local specialists) in the SEWBRc area.



## 4 EVALUATION AND CONCLUSIONS

---

### Odonata

- 4.1 Thirteen species of Odonata were recorded at the site during the survey period.
- 4.2 Comparing the results of the 2013 survey to that carried out in 2011, three additional species were recorded in 2013 (Scarce Blue-tailed Damselfly, Four-spotted Chaser, Broad-bodied Chaser and Keeled Skimmer) and one species (Emperor Dragonfly), recorded in 2011, was not located in 2013. Although Scarce Blue-tailed Damselfly was not recorded in the 2011 survey, it was recorded as having been previously recorded in the area. Similarly Four-spotted Chaser and Keeled Skimmer, whilst not recorded in the 2011 survey, had previously been recorded in the area. The only additional species identified in the 2013 survey not previously recorded was Broad-bodied Chaser. This species is widespread and common throughout southern England and Wales.
- 4.3 In combination with the desk study and survey undertaken in 2011, 15 species have been identified as occurring, or having occurred within the last ten years, within the Nant Llesg survey area boundary.

#### *Specially Protected Species*

- 4.4 None of the species recorded in the survey are included on Schedule 5 of the Wildlife and Countryside Act.

#### *Species of Conservation Importance*

- 4.5 The Odonata assemblage at Nant Llesg includes one Red Data List Species (Scarce Blue-tailed Damselfly). This species has recently undergone a significant decline in its distribution. However, it occurs in more than ten locations in Britain and therefore does not qualify for inclusion in any of the Red Data List threat categories but is listed as Near Threatened.
- 4.6 None of the species recorded within the survey area boundary are on the list of Species of Principal Importance prepared under Section 42 of the Natural Environment and Rural Communities Act 2006 or UK BAP priority species (UK Biodiversity Reporting and Information Group 2007).
- 4.7 Five Locally Important Species (as identified by local specialists) in the SEWBRc area (Emerald Damselfly, Scarce Blue-tailed Damselfly, Golden-ringed Dragonfly, Keeled Skimmer and Black Darter) have been recorded within the Nant Llesg survey area.
- 4.8 One species (Scarce Blue-tailed Damselfly) selected as deserving individual representation in SSSI selection (NCC 1989) has been recorded within the Nant Llesg survey area. However, the occurrence of this species does not meet the criteria within the guidelines for SSSI selection as: this is not the largest or only population of this species in the local area; the site does not support a substantial proportion of localities for the species in the local area; and, the site does not hold a strong population on the edge of the species geographical range.

#### *Species Abundance, Diversity and Distribution*

- 4.9 The abundance of species across the site was broadly similar to that recorded in 2013 with the exception of Transect 1. The pond alongside Transect 1 outside the south of the Nant Llesg boundary, has been the subject of significant change since the last survey (associated with angling activity). This has resulted in the loss of areas of Odonata habitat both in and adjacent to the pond, and the reduction of the quality of habitat that remains. Six species were regularly recorded at this pond in 2011; only one individual Common Hawker was recorded in 2013.
- 4.10 In South Wales, a site total of 15 confirmed breeding species within three years prior to a SSSI site selection, would constitute a level worthy of SSSI selection (NCC 1989). Of the 15 species that have occurred within the last ten years within the Nant Llesg survey area, 14 have been recorded within the last three years and could be considered as confirmed breeding species. The site therefore does not attain the relevant qualifying number.
- 4.11 Species diversity was greatest along Transects 2, 3, 5 and 10. Six species were recorded along Transect 3 including three Species of Local Importance (Emerald Damselfly, Golden-ringed Dragonfly, Keeled Skimmer and Black Darter); and six species were recorded along Transect 10 including four Species of Local Importance (Emerald Damselfly, Golden-ringed Dragonfly, Keeled Skimmer and Black Darter).
- 4.12 Transect 8 was that along which the greatest abundance of Odonata were recorded during the survey. These counts were the result of aggregations of blue damselfly sp. associated with Rhaslas Pond.

#### **Lepidoptera**

- 4.13 The recording of Lepidoptera identified 22 species within the Nant Llesg survey area boundary.
- 4.14 In combination with the recording undertaken in 2011, 29 species have been identified within the Nant Llesg survey area boundary.

#### *Specially Protected Species*

- 4.15 None of the species recorded within the survey area boundary are included on Schedule 5 of the Wildlife and Countryside Act.

#### *Species of Conservation Importance*

- 4.16 Three species (Dingy Skipper, Grayling and Small Heath) recorded within the survey area in 2013 are species on the list of Species of Principal Importance prepared under Section 42 of the Natural Environment and Rural Communities Act 2006 and UK BAP priority species (UK Biodiversity Reporting and Information Group 2007).
- 4.17 Two species (Dingy Skipper and Grayling) are also Locally Important Species (as identified by local specialists) in the SEWBReC area.

## 5 REFERENCES

---

Anon. (1981, amended 1985). The Wildlife & Countryside Act. HMSO, London.

Anon. (2006). The Natural Environment and Rural Communities Act 2006. HMSO, London.

Anon. (2008). UK Biodiversity Action Plan.

Benstead, P., Drake, M., Jose, P., Mountford, O., Newbold, C. & Treweek, J. (1997). The Wet Grassland Guide: Managing floodplain and coastal wet grasslands for wildlife. RSPB, Sandy.

Caerphilly Biodiversity Partnership (2002). Biodiversity Action Plan for Caerphilly County Borough. <http://www.caerphilly.gov.uk/countryside/english/biodiversity/actionplan.htm> accessed on 13 December 2011.

Colin Plant Associates (2011). Nant Llesg Invertebrate Survey Report. Unpublished report.

Daguet, C.A., French, G.C. & Taylor, P. (2008). The Odonata Red Data List for Great Britain. Species Status 11: 1-34. Joint Nature Conservation Committee, Peterborough.

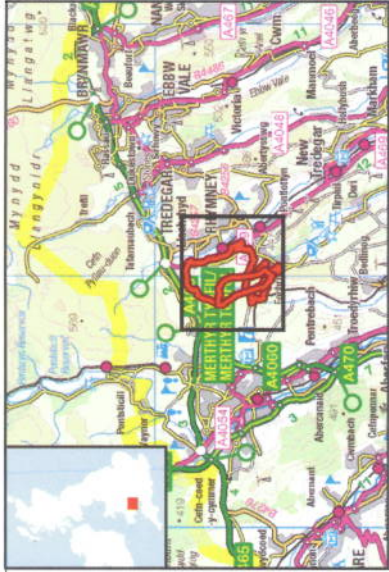
Nature Conservancy Council (1989 [amended JNCC 1998]). Guidelines for the selection of biological SSSIs: Rationale, Operational approach and criteria. Detailed guidelines for habitats and species groups. NCC & JNCC, Peterborough.

RPS (2011). Nant Llesg. Odonata Survey 2011. Unpublished report.

# FIGURES

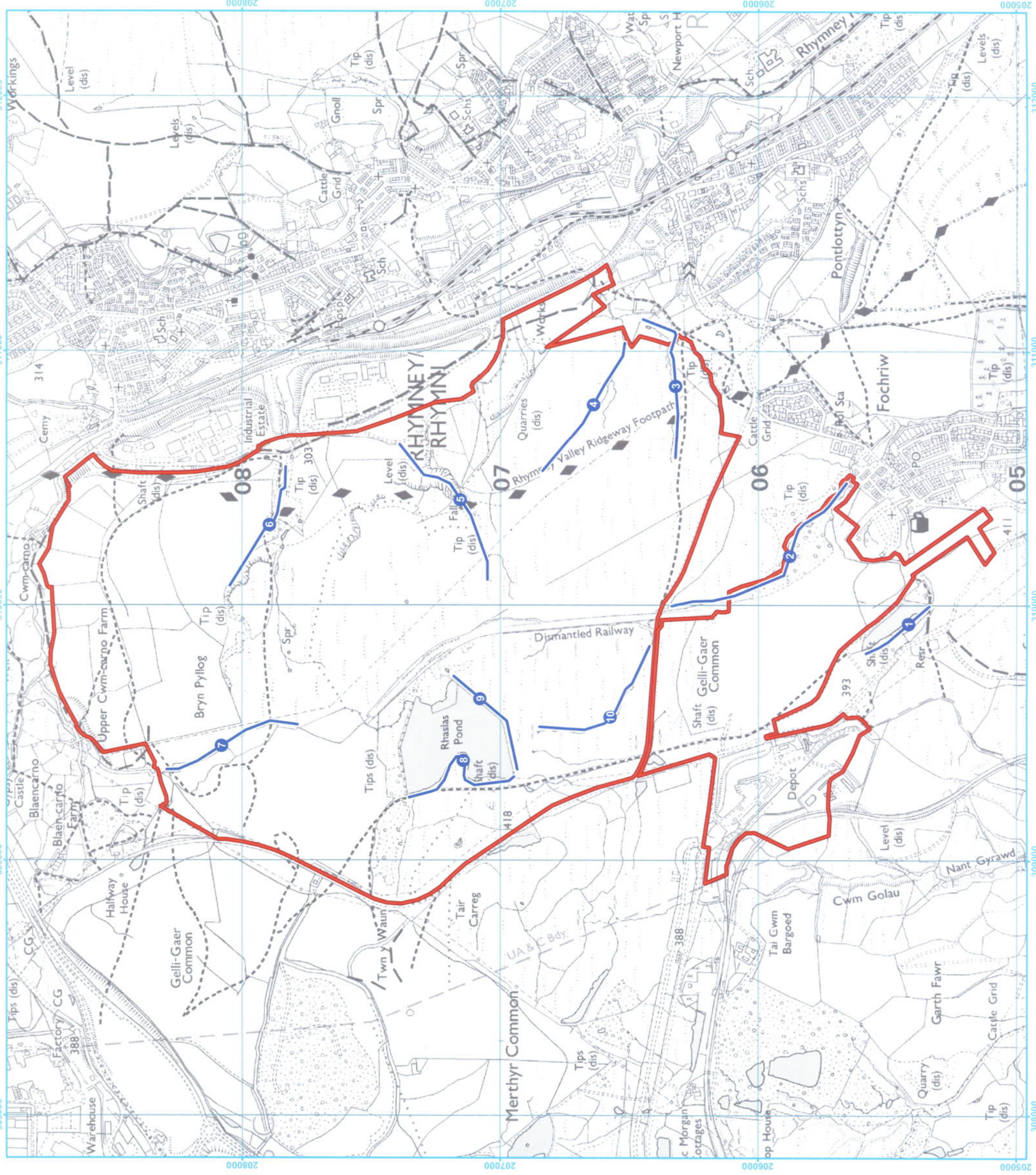
---

Figure 1.1. Nant Llesg survey area and Odonata transects



**Legend**

- Planning application boundary
- Survey transect



Rev:	Date:	Amendment:	Name:	Checked:
Data Source: RPS 2013				
Status: FINAL				
Willow Mere House    Compass Point Business Park    Stocks Bridge Way St. Ives    Cambridgeshire    PE27 5JL T 01480 302751    F 01480 468911    E rps@rpsgroup.com				
Client: Miller Argent (South Wales) Ltd				
Project: Nant Llesg				
Title: Nant Llesg Survey Area and Odonata Transects				
Scale: 1:15,000 @A3				
Projection: British National Grid    Datum: OSGB36				
Date: 04/11/2013    Drawn: BF    Checked: DS				
Job Ref: JPP3167    Figure No: 1.1    Revision: A				
www.rpsgroup.com				

## APPENDICES

### Appendix A. Odonata transect data

Date	19/06/2013									
Time	11:45-15:35									
Weather	Warm/hot, dry, sunny 3-6/8 high cloud, wind NE 1									
Transect	1	2	3	4	5	6	7	8	9	10
Blue damselfly sp.	0	4	7	1	3	6	2	30	1	0
Large Red Damselfly	0	13	0	0	3	3	0	0	0	0
Four-spotted Chaser	0	0	0	0	1	0	0	0	0	0

Note. One additional species, Blue-tailed Damselfly, was recorded beyond the transect route; the presence of Common Blue Damselfly was confirmed on Transect 3 and 8 and Azure Damselfly confirmed on Transect 2.

Date	26/06/2013									
Time	11:30-15:25									
Weather	Warm/mild, dry, 2-7/8 cloud, wind variable 0-1 to NW 1-3.									
Transect	1	2	3	4	5	6	7	8	9	10
Blue damselfly sp.	0	0	3	0	8	6	2	39	0	0
Large Red Damselfly	0	1	0	0	2	5	0	0	0	1
Broad-bodied Chaser	0	0	0	0	1	0	0	0	0	0

Note. One additional species, Golden-ringed Dragonfly, was recorded between transects 5 and 6; the presence of Common Blue Damselfly confirmed on Transect 8.

Date	29/07/2013									
Time	14:45-16:00									
Weather	Warm, dry, sunny, 2-5/8 cloud, wind SW 1-4									
Transect	1	2	3	4	5	6	7	8	9	10
Large Red Damselfly	0	0	0	0	0	0	0	0	0	1
Common Hawker	0	2	1	1	0	0	0	0	0	0
Golden-ringed Dragonfly	0	0	0	1	0	0	0	0	0	2

Note. Two additional species, Blue-tailed Damselfly and blue damselfly sp., were recorded beyond the transect route.

Date	07/08/2013									
Time	11:50-16:00									
Weather	Warm, dry, sunny, 3-6/8 cloud, wind 0 to variable (SE-W) 1-2.									
Transect	1	2	3	4	5	6	7	8	9	10
Blue damselfly sp.	0	0	11	0	0	0	0	15	1	0
Emerald Damselfly	0	0	1	0	0	0	0	0	0	1
Keeled Skimmer	0	0	0	0	0	0	0	0	0	1
Common Hawker	0	1	0	0	0	2	0	0	0	0
Golden-ringed Dragonfly	0	0	0	0	2	0	0	0	0	0
Black Darter	0	0	2	0	0	0	0	1	0	0
Common Darter	0	0	1	0	0	0	0	0	0	0

Date	20/08/2013									
Time	12:15-16:00									
Weather	Warm/mild, dry, sunny, 3-6/8 cloud, wind SW to W 1-3									
Transect	1	2	3	4	5	6	7	8	9	10
Blue damselfly sp.	0	0	1	0	0	0	0	29	2	0
Emerald Damselfly	0	2	0	0	0	0	0	0	0	1
Common Hawker	1	0	0	0	0	0	0	0	0	0
Golden-ringed Dragonfly	0	0	1	0	1	0	0	0	0	0
Black Darter	0	0	0	0	0	0	0	0	0	1
Common Darter	0	0	0	0	0	0	0	1	0	0

Note. One additional species, Scarce Blue-tailed Damselfly, was recorded beyond the transect route.

Date	31/08/2013									
Time	11:45-15:35									
Weather	Warm/mild, dry, sunny, 2-4/8 high cloud, wind NW 1-2.									
Transect	1	2	3	4	5	6	7	8	9	10
Golden-ringed Dragonfly	0	0	0	0	0	0	0	0	0	1
Black Darter	0	0	0	0	0	0	0	0	0	1
Common Darter	0	1	1	0	0	1	0	0	2	3

Date	23/09/2013									
Time	13:15-17:20									
Weather	Mild, dry, light mist then sunny, 7-8/8 high cloud, wind 0 to SE 1-2.									
Transect	1	2	3	4	5	6	7	8	9	10
Common Darter	0	0	1	0	0	1	0	0	1	0

Note. Two additional species, Emerald Damselfly and Common Hawker, were recorded beyond the transect route.

Date	27/09/2013									
Time	12:20-16:00									
Weather	Warm/mild, dry, sunny, 2-4/8 high cloud, wind ESE to ENE 1-3.									
Transect	1	2	3	4	5	6	7	8	9	10
Common Hawker	0	2	0	0	0	0	0	0	0	0
Common Darter	0	0	6	0	0	1	0	0	0	0

Note. One additional species, Black Darter, was recorded beyond the transect route.

**Appendix B. Annotated list of Lepidoptera species recorded in 2013.**

<b>Species</b>		<b>Conservation status and notes</b>
Brown China-mark	<i>Elophila nymphaeata</i>	
Small Skipper	<i>Thymelicus sylvestris</i>	
Large Skipper	<i>Ochlodes venata</i>	
Dingy Skipper	<i>Erynnis tages</i>	S42, UKBAP, LI (SEWBRcC)
Large White	<i>Pieris brassicae</i>	
Small White	<i>Pieris rapae</i>	
Green-veined White	<i>Pieris napi</i>	
Small Copper	<i>Lycaena phlaeas</i>	
Common Blue	<i>Polyommatus icarus</i>	
Holly Blue	<i>Celestrina argiolus</i>	
Red Admiral	<i>Vanessa atalanta</i>	
Small Tortoiseshell	<i>Aglais urticae</i>	
Peacock	<i>Inachis io</i>	
Speckled Wood	<i>Pararge aegeria</i>	
Marbled White	<i>Melanargia galathea</i>	
Grayling	<i>Hipparchia semele</i>	S42, UKBAP, LI (SEWBRcC)
Meadow Brown	<i>Maniola jurtina</i>	
Small Heath	<i>Coenonympha pamphilus</i>	S42, UKBAP
Drinker	<i>Euthrix potatoria</i>	Larvae only
Common Heath	<i>Ematurga atomaria</i>	
Silver Y	<i>Autographa gamma</i>	
Burnet Companion	<i>Euclidia glyphica</i>	

Notes. S42 – NERC Act Section 42 Species (Priority Species in Wales); UKBAP – UK Biodiversity Action Plan Priority Species; LI (SEWBRcC) - Locally Important Species (as identified by local specialists) in SEWBRcC area.



# MA/NL/ES/A08/017 Breeding Waders (2013)



RPS

## NANT LLESG BREEDING WADERS 2013

21<sup>st</sup> October 2013

**Our Ref:** JPP3133

**RPS**

Willow Mere House  
Compass Point Business Park  
Stocks Bridge Way  
St Ives  
Cambridgeshire PE27 5JL

**Tel:** +44(0)1480 466335  
**Fax:** +44(0)1480 466911  
**Email:** [rpscm@rpsgroup.com](mailto:rpscm@rpsgroup.com)

## QUALITY MANAGEMENT

---

Prepared by:	<b>D. Spittle</b>
Surveyors:	<b>D. Spittle</b>
Reviewed by	<b>N. Gates</b>
Authorised by:	<b>N. Gates</b>
Date:	<b>21/10/13</b>
Project Number/Document Reference:	<b>JPP3133-R-001a</b>
Client	<b>Miller Argent (South Wales) Ltd.</b>

**COPYRIGHT © RPS**

The material presented in this report is confidential. This report has been prepared for the exclusive use of Miller Argent (South Wales) Ltd. and shall not be distributed or made available to any other company or person without the knowledge and written consent of Miller Argent (South Wales) Ltd. or RPS.

To achieve the study objectives stated in this report, we were required to base our conclusions on the best information available during the period of the investigation and within the limits prescribed by our client in the agreement.

No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information. Thus, we cannot guarantee that the investigations completely defined the degree or extent of e.g. species abundances or habitat management efficacy described in the report.

# CONTENTS

---

EXECUTIVE SUMMARY .....	1
1 INTRODUCTION .....	2
Background to the study .....	2
Aims and objectives .....	2
Study area .....	2
2 METHODS.....	3
Surveys.....	3
Analysis.....	3
Limitations .....	4
3 RESULTS.....	5
4 EVALUATION .....	7
Specially Protected Species.....	7
Species of Conservation Importance .....	7
Species Abundance and Diversity.....	8
5 CONCLUSIONS .....	10
6 REFERENCES .....	11
FIGURES .....	12
APPENDIX A.....	13
Vernacular and scientific names of species mentioned in the text .....	13

## TABLES

Table 3.1. Waders and additional species of conservation interest recorded during the survey .....	Error! Bookmark not defined.
Table 3.2. Status of species of conservation interest recorded during the survey .....	6

## FIGURES

Figure 1.1 Nant Llesg Survey Area Boundary .....	12
Figure 3.1 Little Ringed Plover breeding territories/pairs .....	12
Figure 3.2 Lapwing breeding territories/pairs .....	12
Figure 3.3 Snipe breeding territories/pairs .....	12
Figure 3.4 Curlew breeding territories/pairs.....	12

# 1 INTRODUCTION

---

## **Background to the study**

1.1 RPS was commissioned by Miller Argent (South Wales) Ltd. to carry out a breeding wader survey at the site of the proposed surface coal mine at Nant Llesg, Caerphilly. A previous breeding bird survey was undertaken in 2011 (RPS, 2011) and a wintering bird survey in 2011/2012 (RPS 2012).

1.2 As reported in the ES an important component of the ecology of the site is the breeding waders in the south west of the site. Since breeding bird populations vary from year to year a repeat survey of breeding birds in this area was carried out in spring and summer of 2013. A further similar survey will be undertaken in 2014.

1.3 In addition to breeding waders, protected species and species of conservation interest were also recorded, including:

- species listed on Annex 1 of the EC Birds Directive or species listed in Schedule 1 of the Wildlife and Countryside Act 1981;
- species included in the list of Species of Principal Importance prepared under Section 42 of the Natural Environment and Rural Communities Act 2006;
- species of national or local conservation interest, for example those included in the UK or Welsh Red and Amber Lists or for which UK and Local Biodiversity Action Plans have been written; and
- those occurring at a site in nationally, regionally or locally important numbers.

## **Aims and objectives**

1.4 The aim of the survey was to record breeding waders and other birds of conservation concern in the south west of the Nant Llesg site including Rhaslas Pond.

## **Study area**

1.5 The survey area encompassed the south western section of the Nant Llesg site including Rhaslas Pond. This was the area of the site which supported breeding waders in 2011 and is the most suitable section of the site for these birds. A map of the survey area is provided in Figure 1.1.

## 2 METHODS

---

### Surveys

- 2.1 A survey was undertaken using the Brown & Shepherd (1993) upland breeding waders method. The method was adapted by undertaking three survey visits and by starting at, or within an hour of, dawn in order to survey all species of open uplands or scrubby habitats in addition to waders.
- 2.2 Survey visits were carried out on 10th April, 1st and 23rd May 2013.
- 2.3 All breeding waders and species of conservation concern were recorded. Wherever possible fieldwork was completed within six hours of sunrise and undertaken on days with light winds, little precipitation and good visibility.
- 2.4 The survey area was walked in a systematic fashion during which a constant search effort was maintained. All points within the survey area were approached to within 100m. Survey routes were varied but were aimed at maximising visibility and ensuring that particular features such as rocky outcrops and waterbodies were approached closely.
- 2.5 Special consideration was taken to minimise disturbance in the south-western part of the survey area holding the majority of Lapwing territories. Whilst the area was walked to within approximately 100m of all points, the observer was careful to minimise the time spent within the area and no effort was made to locate nests or chicks. As a result the estimate for Lapwing territories is largely based on the numbers of adults present and displaying behaviour indicative of breeding.
- 2.6 Careful attention was paid to recording behaviour indicative of breeding and establishing whether birds were different from those previously encountered. The location and activity of birds were recorded directly onto an ArcGIS base map using ESRI software on hand-held PDA devices.
- 2.7 A summary map for each target species was compiled allowing the distribution of territories or breeding pairs to be identified. Where it was not possible to determine the exact limits of breeding territories, registrations of passerines showing behaviour indicative of breeding were deemed to represent discrete breeding territories / pairs if the distance between them was greater than 200m (this arbitrary distance reflects the distance birds could move between survey dates as described in Brown & Shepherd [1993]).
- 2.8 A population estimate was derived by comparing summary maps for the three survey visits.

### Analysis

- 2.9 An assessment of the ornithological importance of the survey area was made by evaluating the species recorded as breeding against the following criteria:
- Annex 1 of the EU Birds Directive (Directive 2009/147/EC);
  - Schedule 1 of the Wildlife and Countryside Act 1981 (amended 1985);

- Species on the list of Species of Principal Importance prepared under Section 42 of the Natural Environment and Rural Communities Act 2006;
- Birds of Conservation Concern (BoCC) Red and Amber Lists for the UK (Eaton et al., 2009) and Wales (Anon. 2009);
- UK Biodiversity Action Plan (UK BAP) priority species (UK Biodiversity Reporting and Information Group 2007);
- Biodiversity Action Plan for Caerphilly County Borough (LBAP) priority species (Caerphilly Biodiversity Partnership 2002).

### **Limitations**

2.10 No significant limitations were encountered during the survey.

### 3 RESULTS

3.1 A total of nine species of waders and an additional 10 species of conservation concern were recorded during the breeding bird survey. Four species of wader and six of the additional species of conservation concern were confirmed to be breeding within the survey area. A summary of the breeding status of the species recorded, with the numbers of territories identified is provided in Table 3.1.

**Table 3.1: Waders and additional species of conservation interest recorded in 2013**

Species	Breeding status	
	Confirmed	Non-breeding
<b>Waders</b>		
Oystercatcher		■
Ringed Plover		■
Lapwing	6-8	
Dunlin		■
Snipe	2	
Whimbrel		■
Curlew	1	
Common Sandpiper		■
<b>Additional species of conservation concern</b>		
Wigeon		■
Mallard	1	
Goosander		■
Red Kite		■
Short-eared Owl		■
Skylark	Abundant	
Meadow Pipit	Abundant	
Wheatear	3	
Linnet	1	
Reed Bunting	7	

3.2 One species afforded special statutory protection under Annex 1 of the EU Birds Directive (Directive 2009/147/EC) was recorded during the survey: Red Kite. No suitable breeding habitat is present within the survey area; the bird was recorded on the second survey visit (1st May) and is likely to have been a foraging individual from the local population.

3.3 Two species afforded special statutory protection under Schedule 1 of the Wildlife and Countryside Act (1981, amended 1985) were recorded during the survey: Red Kite (as described above) and Little Ringed Plover. Single Little Ringed Plovers were recorded at Rhaslas Pond on the first (10th April) and third (23rd May) survey visits. This was taken to indicate the presence of a breeding territory.

3.4 Table 3.2 summarises the species confirmed as breeding and included on one or more of the lists of species of conservation importance together with their conservation status. Territory



maps for these species are shown in Figures 3.1-3.8 (Skylark and Meadow Pipit territories were not mapped due to their abundance and widespread distribution across the survey area).

- 3.5 Lapwing territories are shown in Figure 3.2. As a result of measures undertaken within the survey method to avoid disturbance to this area, it was not possible on each visit to accurately map the location of the pairs' nesting territories, and as a result territories are shown aggregated into two areas.

**Table 3.2. Status of species of conservation interest recorded during the survey**

Species	WCA Schedule 1 Species <sup>1</sup>	Species of Principal Importance <sup>2</sup>	Birds of Conservation Concern Red List <sup>3</sup>	Birds of Conservation Concern Amber List <sup>3</sup>	BAP Priority Species <sup>4</sup>
<b>Waders</b>					
Little Ringed Plover	■				
Lapwing		■	UK & Wales		UK & LBAP
Snipe				UK & Wales	
Curlew		■	Wales	UK	UK & LBAP
<b>Additional species of conservation concern</b>					
Mallard				UK & Wales	
Skylark		■	UK	Wales	UK & LBAP
Meadow Pipit				UK & Wales	
Wheatear				UK & Wales	
Linnet		■	UK & Wales		UK & LBAP
Reed Bunting		■		UK & Wales	UK & LBAP

Notes on Table 3.2: 1. Species on Schedule 1 of the Wildlife and Countryside Act 1981 (amended 1985); 2. Species on the list of Species of Principal Importance prepared under Section 42 of the Natural Environment and Rural Communities Act 2006; 3. Species on the Birds of Conservation Concern Red or Amber UK and Welsh lists (Eaton et al., 2009; Anon. 2009); and 4. Priority Species in the UK Biodiversity Action Plan (Anon. 2008) and Biodiversity Action Plan for Caerphilly County Borough (Caerphilly Biodiversity Partnership 2002).

## 4 EVALUATION

---

### **Specially Protected Species**

- 4.1 None of the species recorded as confirmed breeding are included on Annex 1 of the EU Birds Directive. One species (Little Ringed Plover) is included in Schedule 1 of the Wildlife and Countryside Act 1981.

### **Species of Conservation Importance**

- 4.2 Five species confirmed breeding (Lapwing, Curlew, Skylark, Linnet and Reed Bunting) are included on the list of Species of Principal Importance prepared under Section 42 of the Natural Environment and Rural Communities Act 2006.

- 4.3 Four species confirmed breeding are included on the UK and/or Welsh BoCC Red Lists. Each species and the reasons for its placement on the Red List is listed below:

- Lapwing (UK and Wales) - severe decline in the UK and Welsh breeding population, of more than 50%, in the last 25 years; categorised as a Species of European Conservation Concern (SPEC 1, 2 or 3); moderate decline in the UK breeding population, of more than 25% but less than 50%, over the entire period used for assessments since the first BoCC review in 1969; and at least 20% of the European non-breeding population found in the UK.
- Curlew (Wales only) - severe decline in the UK and Welsh breeding population, of more than 50%, in the last 25 years; categorised as a Species of European Conservation Concern (SPEC 1, 2 or 3); and moderate decline in the UK breeding population, of more than 25% but less than 50%, over the entire period used for assessments since the first BoCC review in 1969.
- Skylark (UK only) - severe decline in the UK breeding population, of more than 50%, over the entire period used for assessments since the first BoCC review in 1969; categorised as a Species of European Conservation Concern (SPEC 1, 2 or 3); and moderate decline in the UK breeding population, of more than 25% but less than 50%, in the last 25 years.
- Linnet (UK and Wales) - severe decline in the UK and Welsh breeding population, of more than 50%, over the entire period used for assessments since the first BoCC review in 1969; categorised as a Species of European Conservation Concern (SPEC 1, 2 or 3); and moderate decline in the UK breeding population, of more than 25% but less than 50%, in the last 25 years.

- 4.4 Seven species confirmed breeding are included on the UK and/or Welsh BoCC Amber Lists. Each species and the reasons for its placement on the Amber List is listed below:

- Mallard (UK and Wales) - Moderate decline in the UK and Welsh non-breeding population, of more than 25% but less than 50%, over the last 25 years and over the entire period used for assessments since the first BoCC review in 1969; and at least 50% of the Welsh non-breeding population occurs at one site.

- Snipe (UK and Wales) - categorised as a Species of European Conservation Concern (SPEC 1, 2 or 3) and red-listed at UK level.
- Curlew (UK only) - categorised as a Species of European Conservation Concern (SPEC 1, 2 or 3); moderate decline in the UK breeding population, of more than 25% but less than 50%, over both the last 25 years and the entire period used for assessments since the first BoCC review in 1969; and at least 20% of the European breeding and wintering population found in the UK.
- Skylark (Wales only) - categorised as a Species of European Conservation Concern (SPEC 1, 2 or 3) and red-listed at UK level.
- Meadow Pipit (UK and Wales) - Moderate decline in the UK breeding population, of more than 25% but less than 50%, over the last 25 years and, in the UK and Wales, over the entire period used for assessments since the first BoCC review in 1969.
- Wheatear (UK and Wales) - categorised as a Species of European Conservation Concern (SPEC 1, 2 or 3).
- Reed Bunting (UK and Wales) - Moderate decline in the UK and Welsh breeding population, of more than 25% but less than 50%, over the entire period used for assessments since the first BoCC review in 1969.

4.5 Five species confirmed breeding (Lapwing, Curlew, Skylark, Linnet and Reed Bunting) are priority species listed within the UK BAP and the Biodiversity Action Plan for Caerphilly County Borough.

4.6 Inclusion on the BoCC lists or priority list in the UK BAP does not confer any statutory protection. However, the species concerned are all of conservation importance and considered to be under varying levels of threat in a UK context.

#### **Species Abundance and Diversity**

4.7 No species was present in numbers approaching national significance (i.e. 1% of the UK population [Musgrove et al. 2013]).

4.8 Accurate Welsh or local population estimates are unavailable for many of the species of conservation importance recorded during the survey. However, whilst all these species are declining, with the exception of Little Ringed Plover, Lapwing and Curlew, all remain widespread and unlikely to be present in numbers important at a Welsh scale; and, with the exception of Snipe, present in important numbers at a local scale.

4.9 Whilst not based on species specific survey data, Holling et al., (2013) provide recent approximate local and Welsh population figures for Little Ringed Plover. The Welsh population is thought to number approximately 90 pairs, whilst the local, Breconshire and East Glamorgan areas hold 10 pairs.

4.10 The estimate of one pair present within the survey area, therefore represents 1.1% of the Welsh population and 10% of the local population, and is a significant component of the population at both these geographic scales.

- 4.11 Local and Welsh population figures are available for Lapwing. The Welsh population is thought to have declined (largely as a result of changes in farming practices) by 77% between 1987 and 1998 to approximately 600 pairs with the local, Heads of the Valleys area holding 60 pairs (RSPB 2010). At 10% of the total Welsh population, the Heads of the Valleys area as a whole supports a nationally important lapwing population.
- 4.12 The estimate of six to eight pairs present within the survey area represents a maximum of 1.3% of the Welsh population and, a locally important, 13% of the Heads of the Valleys population, and is, therefore, a significant component of the nationally important Heads of the Valley population.
- 4.13 Recent Welsh and local population figures are unavailable for Curlew. However, estimates derived from Green (2002) suggest a Welsh population not exceeding 2,000 pairs; although the species is thought to still be declining, and a Glamorgan population of approximately 10 pairs.
- 4.14 The estimate of one pair present within the survey area, therefore, represents approximately 10% of the local population, and is likely to be important at a local scale.
- 4.15 Recent Welsh and local population figures are unavailable for Snipe. However, estimates derived from Green (2002) suggest a Welsh population of approximately 300-500 pairs and a Glamorgan/Breconshire population of 30-60 pairs.
- 4.16 The estimate of two pairs present within the survey area, therefore, represents 0.6% of the Welsh population and 6.7% of the local population and is likely to be important at a local population level.
- 4.17 Oystercatcher, Ringed Plover, Dunlin and Whimbrel were recorded at Rhaslas Pond during their northward spring migration. These records, reports from local observers, and sightings of birds during other surveys, indicate that passage waders regularly use Rhaslas Pond.
- 4.18 Comparing the results of the 2013 survey to that carried out in 2011, the breeding wader species and numbers recorded were similar. In 2011 there were two pairs of Little Ringed Plover compared to one in 2013; nine pairs of Lapwing in 2011 compared with six to eight in 2013; and one/two pairs of Snipe in 2011 and two in 2013. In 2011 two pairs of Ringed Plover were recorded but in 2013 only non-breeding birds were present. A breeding pair of curlew was recorded in 2013. Curlew was recorded in 2011, but not breeding.

## 5 CONCLUSIONS

---

- 5.1 A total of nine species of wader were recorded during the survey, with an additional 10 species recorded of conservation concern. Of these, four species of wader and six of the additional species of conservation concern were confirmed as breeding within the survey area.
- 5.2 With the exception of Little Ringed Plover and Lapwing, which were present in numbers of Welsh importance; and Curlew and Snipe, which were present in numbers of local importance, all other species were found at levels of abundance below those considered locally important.
- 5.3 The Lapwing breeding population occurring on site is considered to represent a significant component of the nationally important Heads of the Valleys breeding population for this species.
- 5.4 Oystercatcher, Ringed Plover, Dunlin and Whimbrel were recorded at Rhaslas Pond during their northward spring migration. Such passage waders regularly use Rhaslas Pond.

## 6 REFERENCES

---

- Anon. (1981). The Wildlife & Countryside Act. HMSO, London.
- Anon. (2006). The Natural Environment and Rural Communities Act 2006. HMSO, London.
- Anon. (2008). UK Biodiversity Action Plan.
- Anon. (2009). The population status of birds in Wales 2. Welsh Ornithological Society, British Trust for Ornithology, Welsh Assembly Government, Wildfowl & Wetlands Trust, Countryside Council for Wales and Royal Society for the Protection of Birds, Cardiff.
- Caerphilly Biodiversity Partnership (2002). Biodiversity Action Plan for Caerphilly County Borough. <http://www.caerphilly.gov.uk/countryside/english/biodiversity/actionplan.htm> accessed on 13 December 2011.
- Eaton, M.A., Brown, A.F. Musgrove, A.J., Hearn, R., Aebischer, N.J., Evans, A. & Gregory, R. D. (2009). Birds of Conservation Concern 3: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man. *British Birds* 102: 296-341.
- EU (2009). On the Conservation of Wild Birds. Council Directive 2009/147/EC, Brussels.
- Green, J. (2002). Birds in Wales 1992-2000. Welsh Ornithological Society, Cardigan.
- Holling, M. and the Rare Breeding Birds Panel (2013). Rare breeding birds in the United Kingdom in 2011. *British Birds* 106: 496-554.
- Musgrove, A., Aebischer, N., Eaton, M., Hearn, R., Newson, S., Noble, D., Parsons, M., Risely, K. & Stroud, D. (2013). Population estimates of birds in Great Britain and the United Kingdom. *British Birds* 106: 64-100.
- RPS (2011) Nant Llesg Breeding Bird Survey 2011. RPS, St. Ives, Cambs.
- RPS (2012) Nant Llesg Wintering Birds Survey 2011/2012. RPS, St. Ives, Cambs.
- RSPB. (2010) Heads of the Valleys Lapwing Project.  
<http://www.rspb.org.uk/ourwork/projects/details/221902-heads-of-the-valleys-lapwing-project>  
accessed on 18 October 2013.

## FIGURES

---

**Figure 1.1 Nant Liesg Survey Area Boundary**

**Figure 3.1 Little Ringed Plover breeding territories/pairs**

**Figure 3.2 Lapwing breeding territories/pairs**

**Figure 3.3 Snipe breeding territories/pairs**

**Figure 3.4 Curlew breeding territories/pairs**

**Figure 3.5 Mallard breeding territories/pairs**

**Figure 3.6 Wheatear breeding territories/pairs**

**Figure 3.7 Linnet breeding territories/pairs**

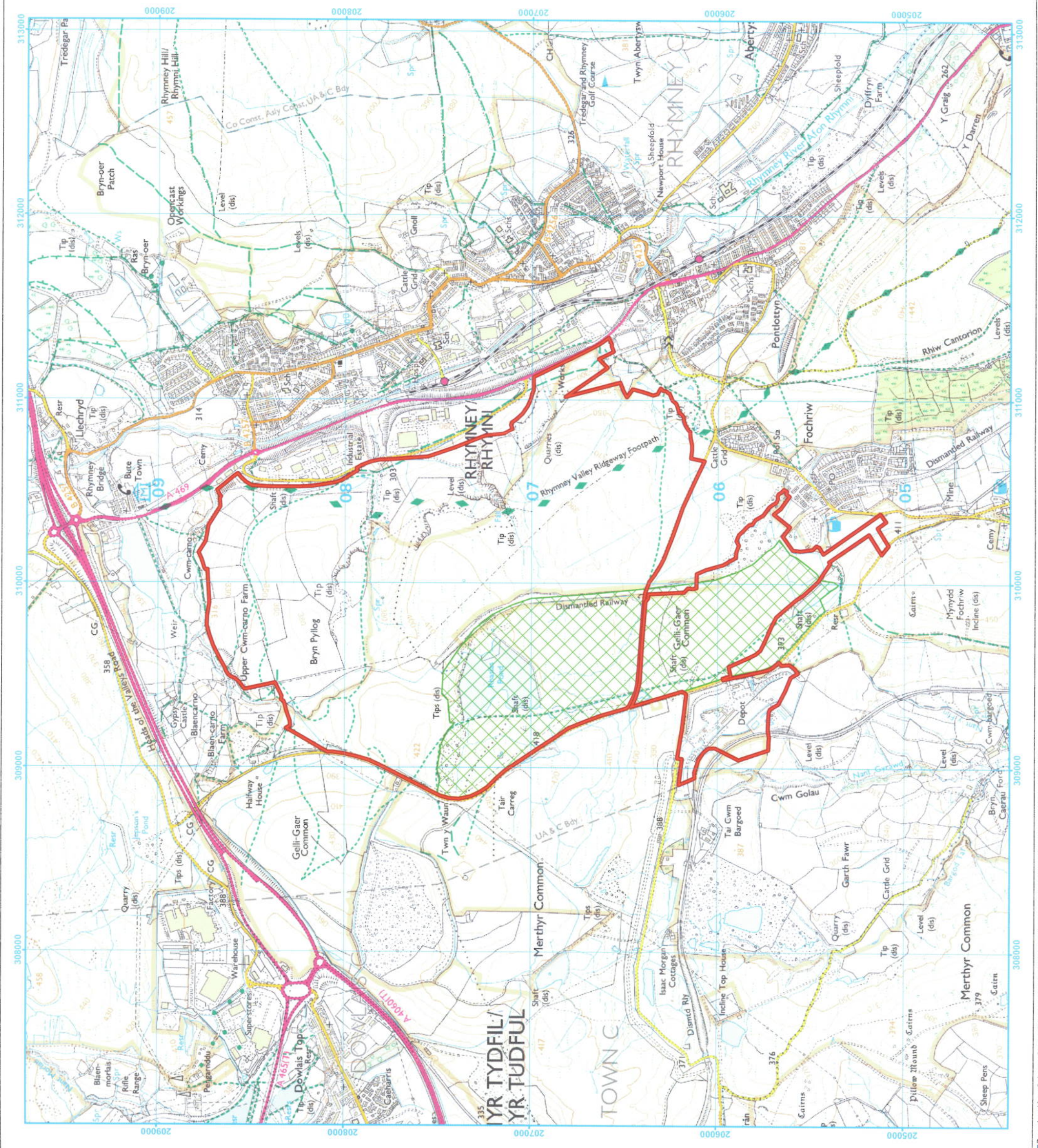
**Figure 3.8 Reed Bunting breeding territories/pairs**



**Legend**

- Planning application boundary
- Survey area

	Rev:	Date:	Amendment:	Name:	Checked:
Data Source: RPS 2013					
Status: FINAL					
<b>RPS</b>					
<small>Willow Mere House    Compass Point Business Park    Stocks Bridge Way          St. Ives    Cambridgehire    PE27 5UL          T: 01480 302751    F: 01480 466911    E: rps@rpsgroup.com</small>					
Client: Nank Llesg					
Project: Nank Llesg					
Title: Survey Area Boundary					
Scale: 1:20,000 @A3					
Projection: British National Grid    Datum: OSGB36					
Date: 18/10/2013    Drawn: BF    Checked: DS					
Job Ref: JPP3133    Figure No: 1.1    Revision: A					
<a href="http://www.rpsgroup.com">www.rpsgroup.com</a>					





**Legend**

- Planning application boundary
- Survey area
- Breeding bird territory

Rev.	Date	Amendment	Name	Checked:

Date: Data Source: RPS 2013  
Status: **FINAL**



Willow Mire House    Compass Point Business Park    Stocks Bridge Way  
St Ives    Cambridgeshire    PE27 5JL  
T 01480 302751    F 01480 460911    E rpscm@rpsgroup.com

Client: Nank Liesg

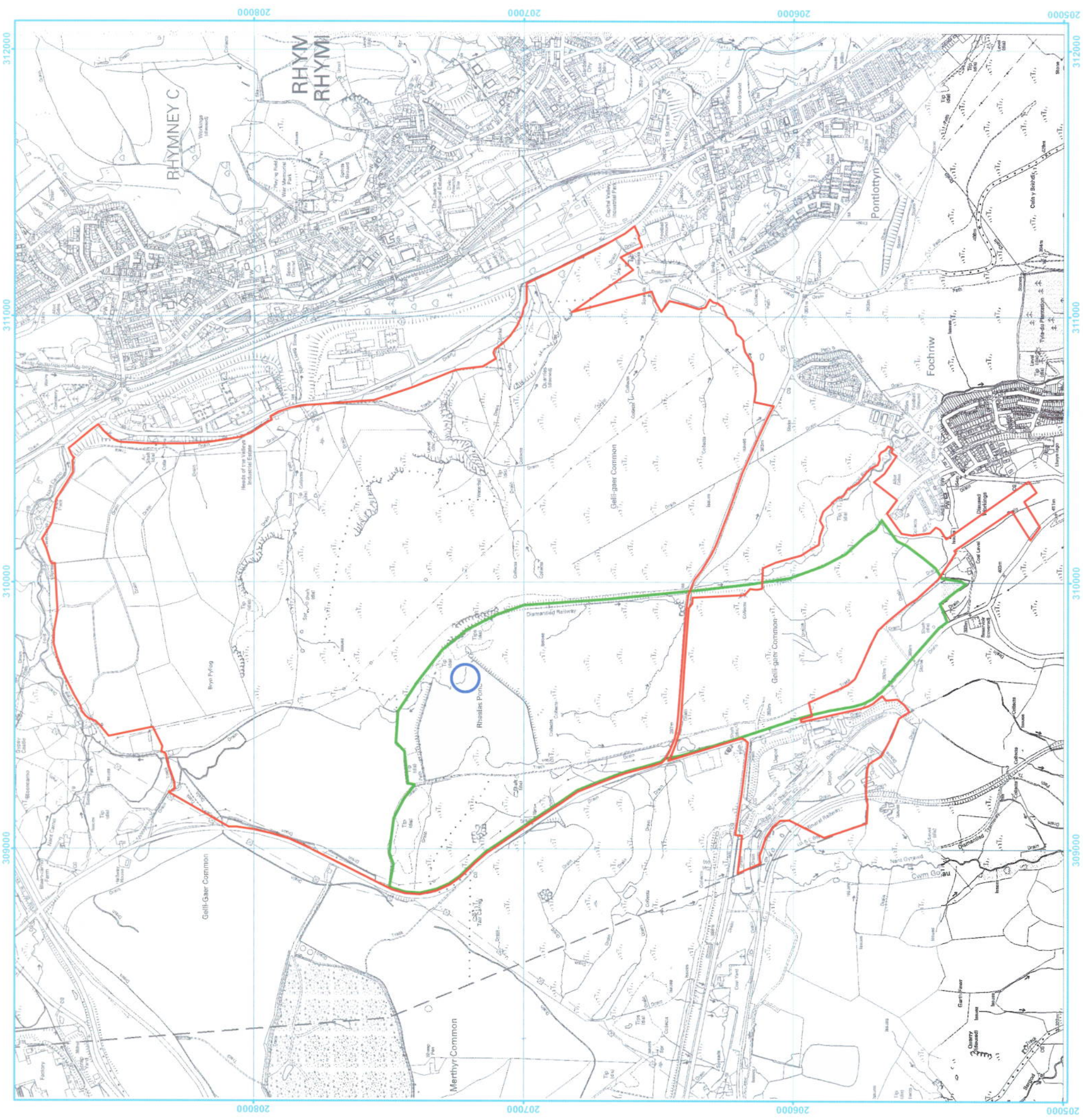
Project: Little Ringed Plover breeding territories/pairs

Scale: 1:15,000 @A3  
0 50 100 150 200 250 500m

Projection: British National Grid    Datum: OSGB36  
Date: 18/10/2013    Drawn: BF    Checked: DS

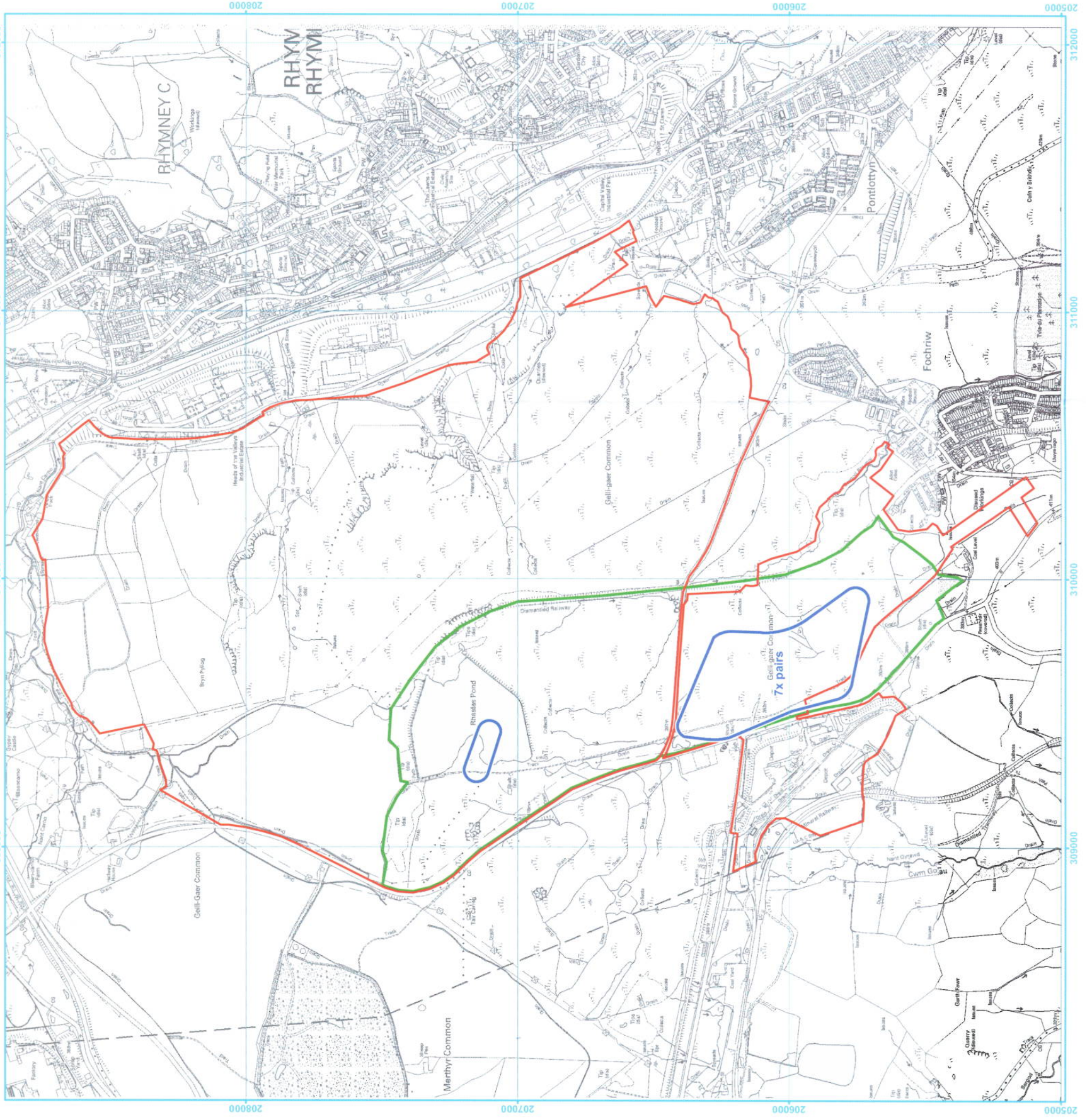
Job Ref: **JPP3133**    Figure No: **3.1**    Revision: **A**

www.rpsgroup.com



**Legend**

- Planning application boundary
- Survey area
- Breeding bird territory



Rev: Date: Amendment: Name: Checked:

Data Source: RPS 2013

Status: **FINAL**



Willow Mere House Compass Point Business Park Stocks Bridge Way  
St. Ives Cambridge PE27 5JL  
T 01480 302751 F 01480 466911 E rps@rpsgroup.com

Client:

Project: Nank Liesg

Title: **Lapwing breeding territories/pairs**

Scale: 1:15,000 @A3

Projection: British National Grid Datum: OSGB36

Date: 18/10/2013 Drawn: BF Checked: DS

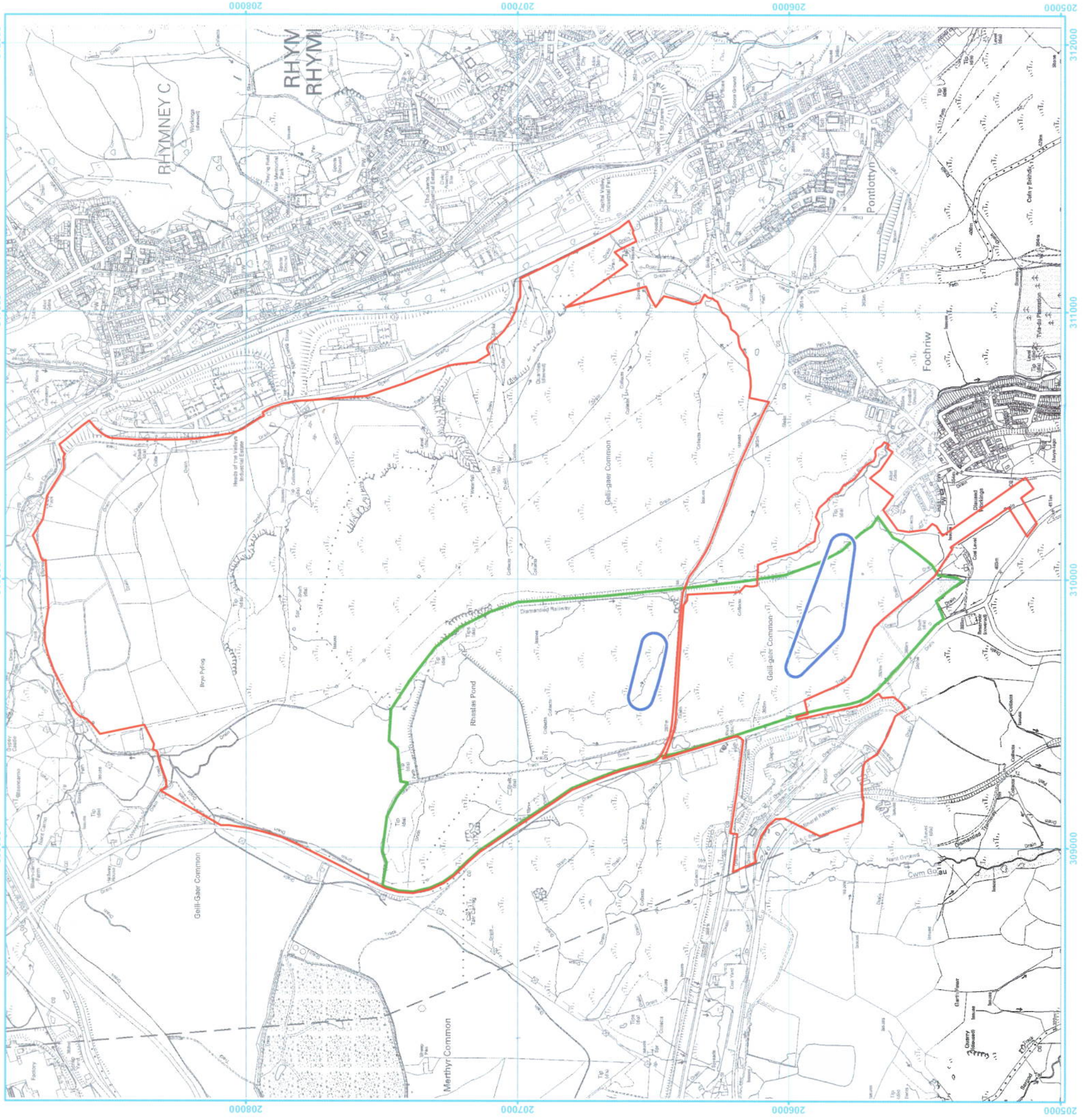


Job Ref: **JPP3133** Figure No: **3.2** Revision: **A**

www.rpsgroup.com

**Legend**

- Planning application boundary
- Survey area
- Breeding bird territory



Rev.	Date	Amendment	Name	Checked

Data Source: RPS 2013  
 Status: **FINAL**

**RPS**  
 Willow Mere House    Compass Point Business Park    Stocks Bridge Way  
 St. Ives    Cambridgeshire    PE27 5JL  
 T 01480 302751    F 01480 466911    E rps@rpsgroup.com

Client:  
 Project: Nank Liesg

Title:  
 Snipe breeding territories/pairs

Scale: 1:15,000 @A3  
 0 50 100 150 200 250 500 m

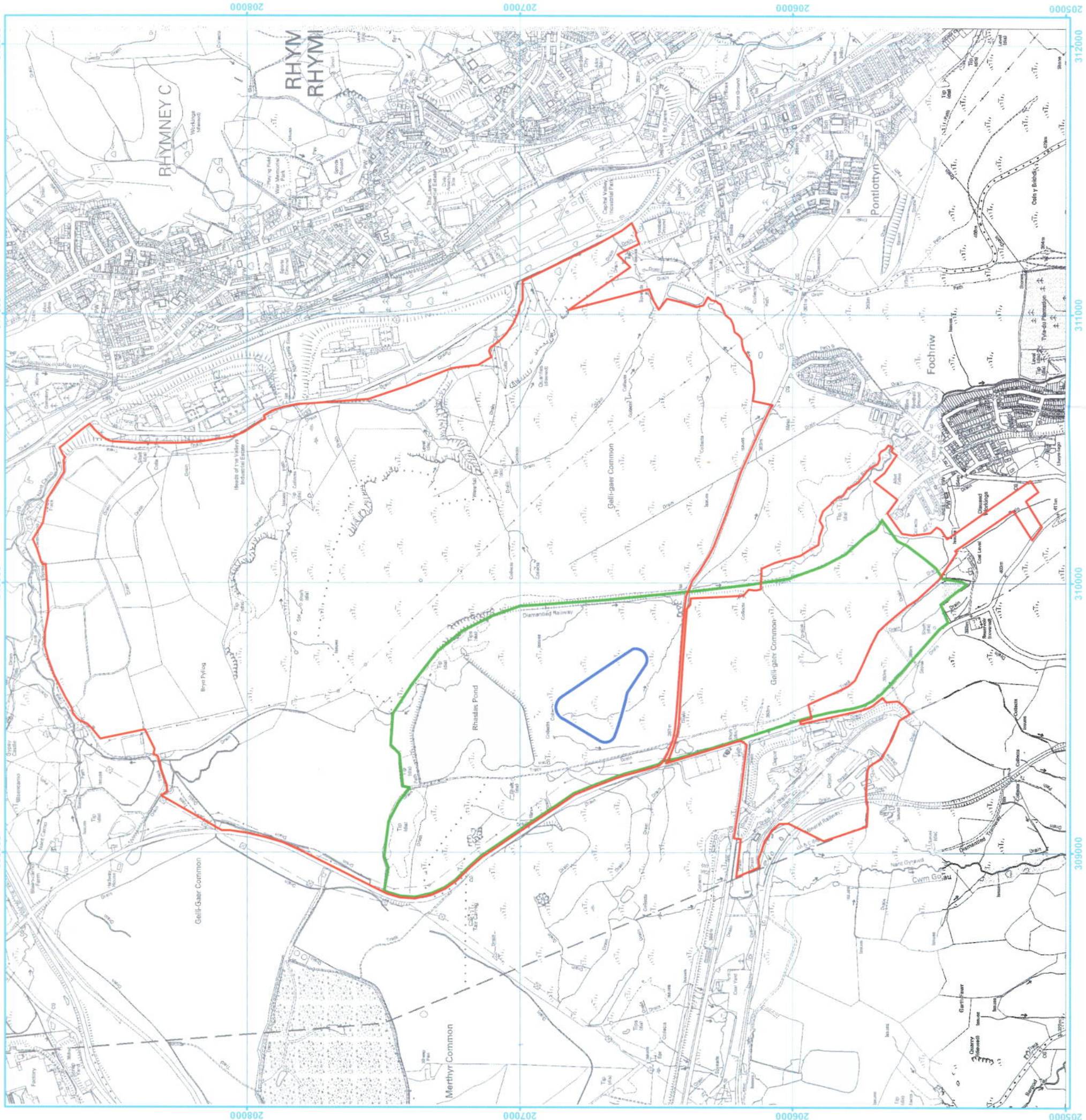
Projection: British National Grid    Datum: OSG836  
 Date: 18/10/2013    Drawn: BF    Checked: DS

Job Ref: **JPP3133**    Figure No: **3.3**    Revision: **A**

[www.rpsgroup.com](http://www.rpsgroup.com)

**Legend**

- Planning application boundary
- Survey area
- Breeding bird territory



Rev.	Date	Amendment	Name	Checked

Data Source: RPS 2013  
 Status: **FINAL**



Willow Mere House    Compass Point Business Park    Stocks Bridge Way  
 St. Ives    Cambridgeshire    PE27 5JL  
 T 01480 302751    F 01480 468911    E rps@rpsgroup.com

Client: **Nank Liesg**  
 Project: **Nank Liesg**

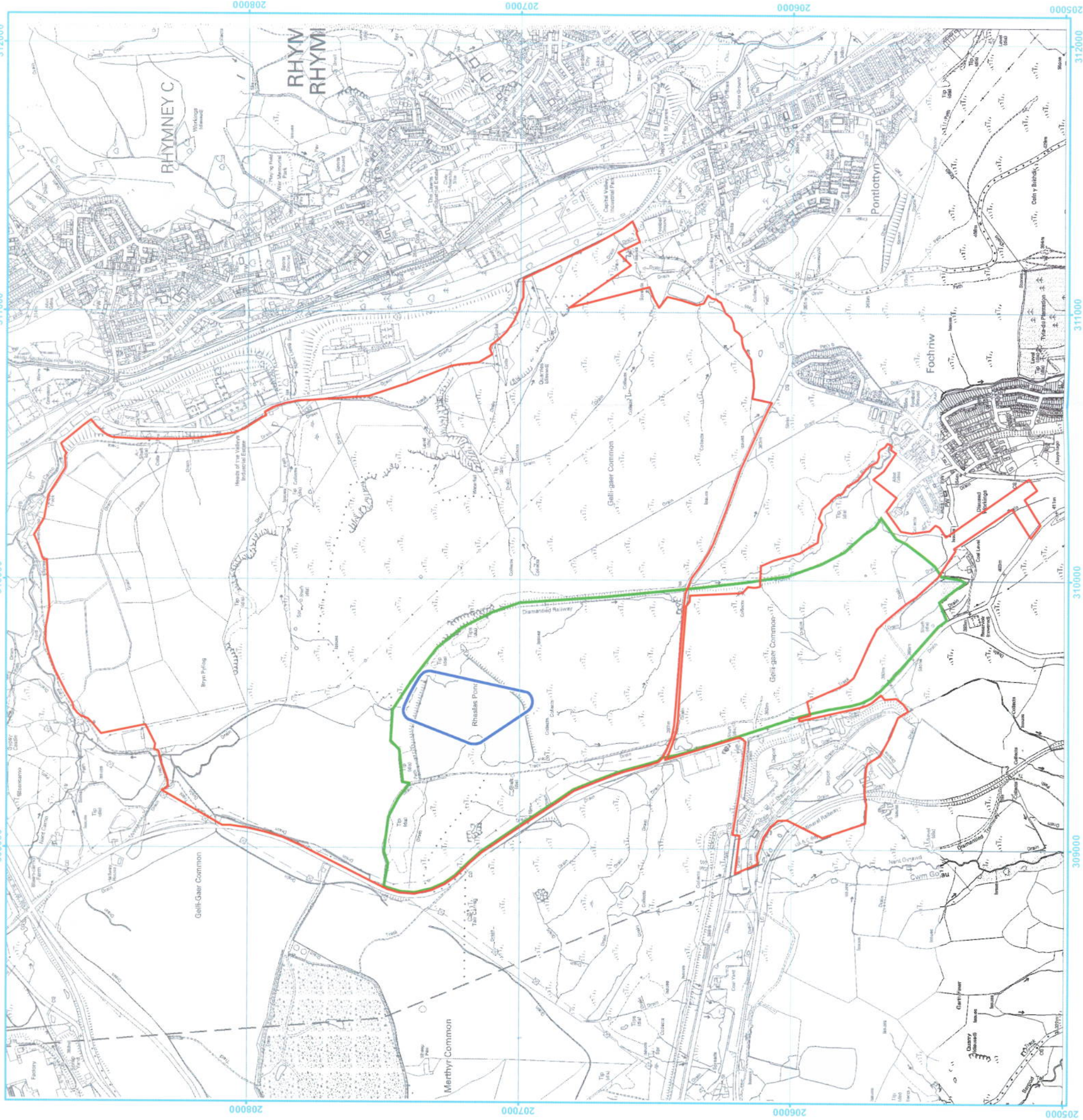
Title: **Curlew breeding territories/pairs**

Scale: 1:15,000 @A3  
 0 50 100 150 200 250 500m

Projection: British National Grid    Datum: OSG836  
 Date: 18/10/2013    Drawn: BF    Checked: DS

Job Ref: **JPP3133**    Figure No: **3.4**    Revision: **A**

[www.rpsgroup.com](http://www.rpsgroup.com)



**Legend**

- Planning application boundary
- Survey area
- Breeding bird territory

Rev: Date: Amendment: Name: Checked:

■ Data Source: RPS 2013

■ Status: FINAL



Willow Mere House Compton Point Business Park Stocks Bridge Way  
 Cardiff CF10 1AA  
 T: 01440 202751 F: 01440 466111 E: rpscm@rpsgroup.com

Client:

Project: Nank Liesg

Title: Mallard breeding territories/pairs

Scale: 1:15,000 @A3  
 0 50 100 150 200 250 300m



Projection: British National Grid Datum: OSGB36  
 Date: 18/10/2013 Drawn: BF Checked: DS

■ Job Ref: JPP3133 Figure No: 3.5 Revision: A

205000

311000

310000

309000

205000

206000

207000

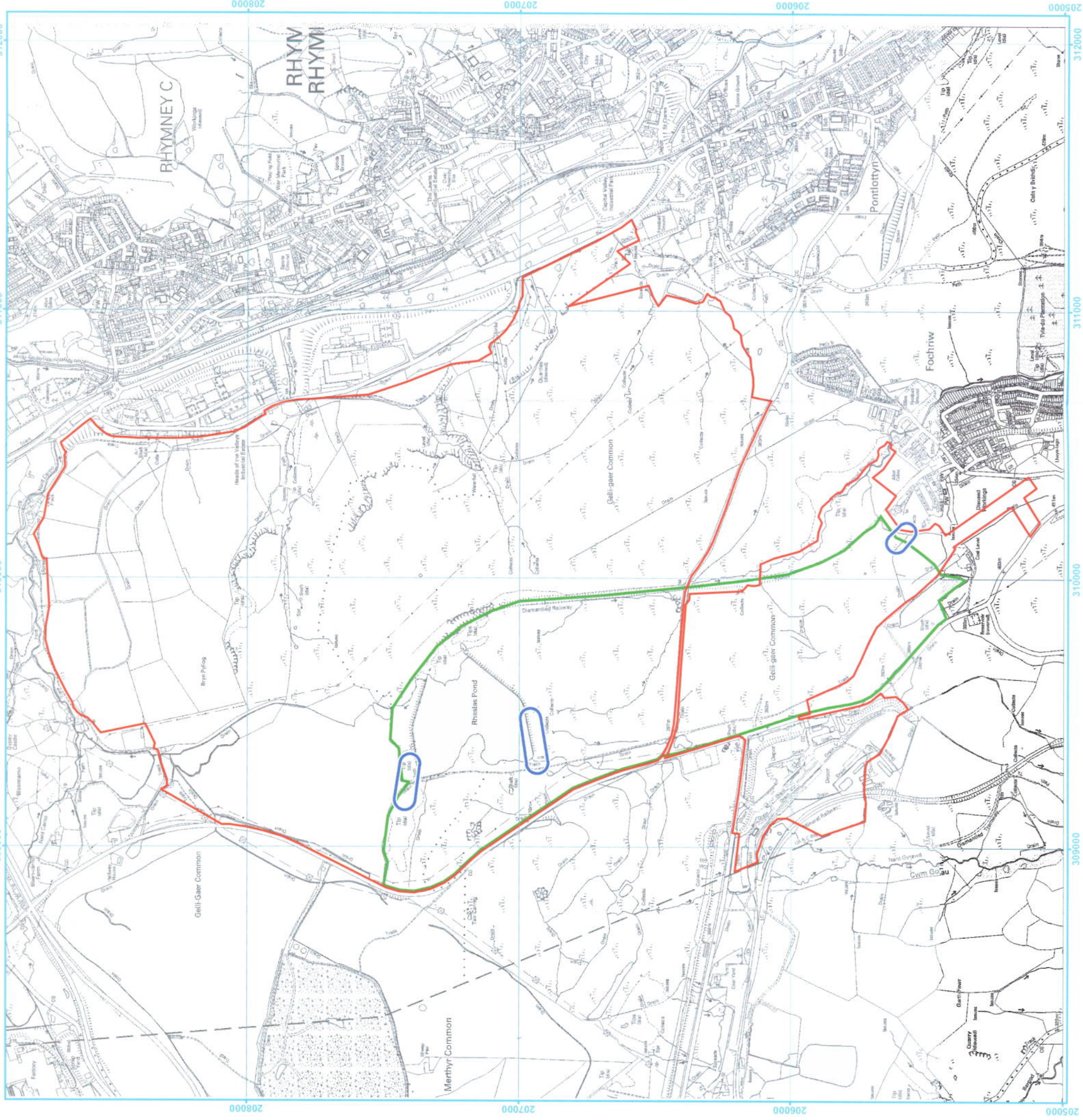
208000

309000

310000

311000

312000



**Legend**

- Planning application boundary
- Survey area
- Breeding bird territory

Rev:	Date:	Amendment:	Name:	Checked:
Data Source: RPS 2013				
Status: FINAL				

**RPS**

Willow Moss House  
Compass Point Business Park  
St. Ives, Cambridgeshire, PE27 5LJ  
T: 01480 302751 F: 01480 466911 E: rpscm@rpsgroup.com

Client: Nank Liesg

Project: Nank Liesg

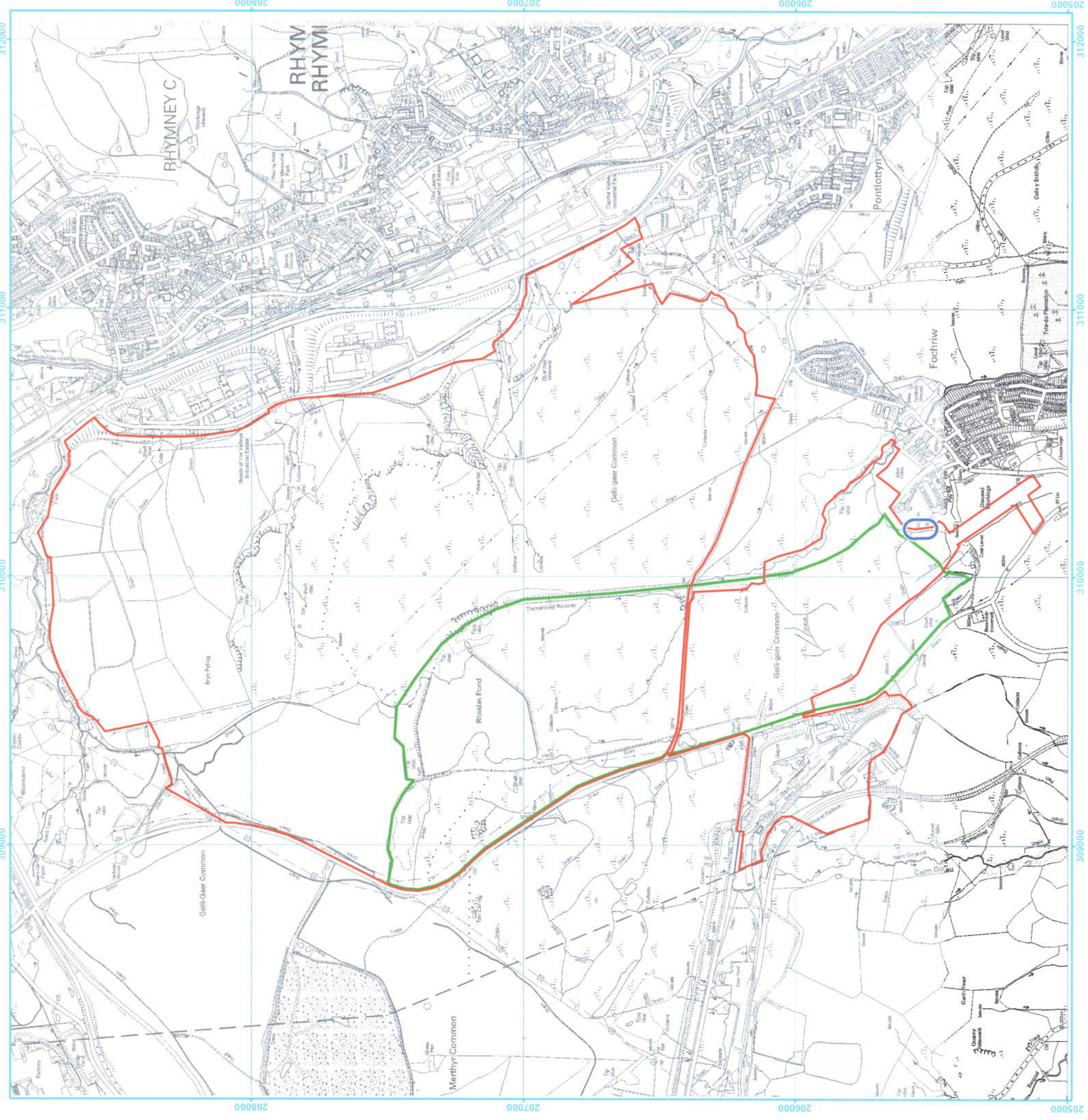
Title: **Wheatear breeding territories/pairs**

Scale: 1:15,000 @A3  
0 50 100 150 200 250 300m

Projection: British National Grid Datum: OSGB36  
Date: 18/10/2013 Drawn: BF Checked: DS

Job Ref: **JPP3133** Figure No: **3.6** Revision: **A**

www.rpsgroup.com



- Legend**
- Planning application boundary
  - Survey area
  - Breeding bird territory

Rev	Date	Amendment	Name	Checked

Data Source: RPS 2013  
 Status: **FINAL**

**RPS**  
 Willow Mere House    Compass Point Business Park    Stocks Bridge Way  
 St. Ives    Cambridgeshire    PE27 5JL  
 T 01480 302751    F 01480 466911    E rps@rpsgroup.com

Client:  
 Project: Nank Liesg

Title: Linnet breeding territories/pairs

Scale: 1:15,000 @A3  
 0 50 100 150 200 250 500 m

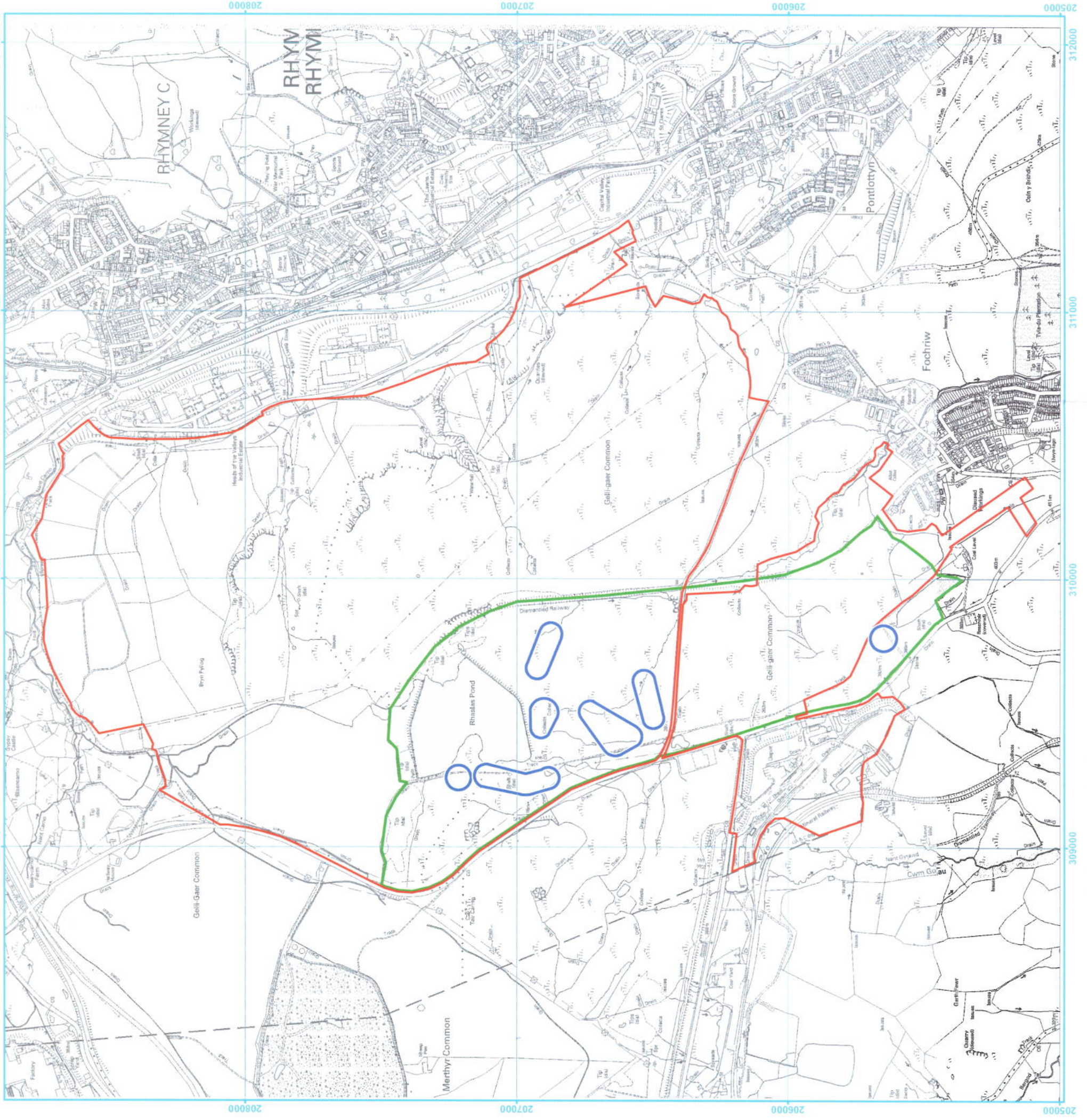
Projection: British National Grid    Datum: OSGB36  
 Date: 18/10/2013    Drawn: BF    Checked: DS

Job Ref: **JPP3133**    Figure No: **3.7**    Revision: **A**

[www.rpsgroup.com](http://www.rpsgroup.com)

**Legend**

- Planning application boundary
- Survey area
- Breeding bird territory



Rev:	Date:	Amendment:	Name:	Checked:

Data Source: RPS 2013

Status: **FINAL**



Willow Mere House    Compass Point Business Park    Stocks Bridge Way  
 St. Ives    Cambridgeshire    PE27 5JL  
 T 01480 302751    F 01480 468911    E rps@rpsgroup.com

Client:

Project: Nank Liesg

Title: **Reed Bunting breeding territories/pairs**

Scale: 1:15,000 @A3

Projection: British National Grid    Datum: OSG36

Date: 18/10/2013    Drawn: BF    Checked: DS

Job Ref: **JPP3133**    Figure No: **3.8**    Revision: **A**



## APPENDIX A

### Vernacular and scientific names of species mentioned in the text

Vernacular name	Scientific name
Wigeon	<i>Anas penelope</i>
Mallard	<i>Anas platyrhynchos</i>
Goosander	<i>Mergus merganser</i>
Red Kite	<i>Milvus milvus</i>
Oystercatcher	<i>Haematopus ostralegus</i>
Little Ringed Plover	<i>Charadrius dubius</i>
Ringed Plover	<i>Charadrius hiaticula</i>
Lapwing	<i>Vanellus vanellus</i>
Dunlin	<i>Calidris alpina</i>
Snipe	<i>Gallinago gallinago</i>
Whimbrel	<i>Numenius phaeopus</i>
Curlew	<i>Numenius arquata</i>
Common Sandpiper	<i>Actitis hypoleucos</i>
Short-eared Owl	<i>Asio flammeus</i>
Skylark	<i>Alauda arvensis</i>
Meadow Pipit	<i>Anthus pratensis</i>
Wheatear	<i>Oenanthe oenanthe</i>
Linnet	<i>Carduelis cannabina</i>
Reed Bunting	<i>Emberiza schoeniclus</i>



**Contact Us**

If you would like any further information on the proposals then please get in touch:

**Call:** Freephone 0800 169 6507

**Email:**  
[ma.enquiries@millerargent.co.uk](mailto:ma.enquiries@millerargent.co.uk)

**Visit:** [www.nantllesg.co.uk](http://www.nantllesg.co.uk)

**These details will put you in touch with PPS Group which coordinates our Nant Llesg public consultation activity.**