



global environmental solutions

Tinker Lane 1 Exploratory Well, Retford Road, between Blyth and
Barnby Moor, Nottinghamshire

Appendix 11/3 - Reptile Survey Report

406.05251.00002

November 2015

Island Gas Energy



Version: vf

CONTENTS

| | |
|---|----------|
| 1.0 INTRODUCTION..... | 1 |
| 1.1 Background..... | 1 |
| 1.2 Location and Setting | 1 |
| 1.3 Habitats | 1 |
| 1.4 Impacts on Reptiles | 2 |
| 1.5 Legislative and Planning Policy Context | 2 |
| 1.6 Study Aims and Objectives..... | 2 |
| 2.0 METHODOLOGY..... | 4 |
| 2.1 Desk-based Study..... | 4 |
| 2.2 Field Survey | 4 |
| 2.3 Evaluation Methodology..... | 4 |
| 2.4 Survey Personnel..... | 5 |
| 2.5 Limitations to Survey | 5 |
| 3.0 RESULTS | 6 |
| 3.1 Contextual Information and Historical Records | 6 |
| 3.2 Field Survey Results 2015..... | 6 |
| 4.0 SUMMARY AND CONCLUSIONS..... | 8 |
| 5.0 CLOSURE..... | 9 |

TABLES

| | |
|---|----------|
| Table 1 - Reptile Survey Results | 6 |
|---|----------|

DRAWINGS

| | |
|--|--|
| Drawing 1 Reptile Survey - Study Area | |
|--|--|

1.0 INTRODUCTION

1.1 Background

This report presents the results of a reptile survey of those parts of a proposed drill site which it has been considered had some potential to support these species. The prospective applicant intends to apply to Nottinghamshire County Council (in its role as the mineral planning authority for the prospective application site), for permission to drill a single exploration well and three sets of monitoring boreholes, which would contain up to three boreholes in each set, to sample groundwater and ground gas.

The proposals would require the following works:-

- Formation of new site access;
- Erection of gates, security fencing and CCTV;
- Stripping and storage of top and subsoils and formation of on-site bunds which would be put to grass and maintained for the life of the development;
- Creation of the wellsite platform using impermeable geotextile membrane layers covered by a layer of aggregate hardstanding and the installation of a wellhead cellar with associated steel conductors;
- Installation of bunded storage areas for chemicals and a surface water attenuation tank for surface water management; and
- staff welfare accommodation.

The survey and reporting has been undertaken by ecologists from SLR Consulting Limited (SLR) on behalf of IGas Energy Limited following the need for a survey being identified through initial habitat appraisal on the 21st August 2015.

1.2 Location and Setting

The site is currently in agricultural use and is surrounded by intensively farmed land to the north, west and south with the A634 forming the eastern boundary. It is located approximately 2.5km south-east of Blyth and 1.5km north-west of Barnby Moor.

The village of Torworth is located approximately 1.6km to the north-east of the site. For identification purposes, the proposed site is centred in National Grid Reference (NGR) 465032 (easting) 385344 (northing).

1.3 Habitats

The site comprises of an arable field bordered by species-poor hedgerows with un-cropped grass margins (c 2-3m). The roadside verges bordering the A634 are up to 20 metres wide and comprise of mown outside and un-mown inner grassland with developing bramble and also scattered broad-leaved tree planting (see Figure 1). The walkover survey undertaken by an ecologist from SLR on the 21st August 2015 considered that whilst the verges and margins comprise of a relatively small and isolated habitat in an otherwise intensively farmed environment they had the potential to support the commoner species of reptile (e.g. slow worm).



Figure 1 – Roadside Verges along the A634

1.4 Impacts on Reptiles

If present, development of the site, more specifically the creation of a new site access and perimeter bunds could result in the loss of habitats for reptiles and the potential for them to be killed or injured.

1.5 Legislative and Planning Policy Context

All terrestrial native reptiles are protected under the Wildlife and Countryside Act 1981 (as amended), making it an offence to intentionally, deliberately or recklessly kill or injure any British reptile. The most widespread reptile species comprising grass snake (*Natrix natrix*), adder (*Vipera berus*), slow worm (*Anguis fragilis*), and common lizard (*Zootoca vivipara*) are protected under Section 9 (Parts 1 and 5) against intentional killing and injury, and sale.

Only the rare smooth snake (*Coronella austriaca*) and sand lizard (*Lacerta agilis*), with restricted distribution, are afforded full protection under all parts of Section 9 of the Wildlife and Countryside Act 1981.

It is not possible to obtain a licence to legally kill or injure reptiles for the purposes of development; therefore where reptiles are present it will be necessary to take all reasonable precautions to avoid committing such an offence before commencing works within areas of suitable reptile habitat.

All species of reptiles are Species of Principal Importance and listed as Priority Species in the UK Biodiversity Action Plan (UKBAP). There is a requirement that adverse effects of development on a Species of Principal Importance should be avoided through planning conditions or obligations and that planning permission should be refused where harm to these species, or their habitats, may result, unless the need for, and benefits of, the development clearly outweigh the harm.

1.6 Study Aims and Objectives

An ecological walkover carried out at the development site in August 2015 identified areas with the potential to support reptiles. Based on this assessment, it was recommended that a reptile presence/absence survey should be carried in areas of suitable reptile habitat.

The aim of the reptile survey undertaken in autumn 2015 was to determine the presence, or all reasonable likelihood of absence, at the site of the proposed development, and if present:

- determine the distribution, species composition and the habitats associated with the reptile species in the context of the site;
- evaluate the population size classes of any reptile species in the local, regional and national context, using published guidelines where available, to inform the ecological assessment process, and
- provide a baseline from which suitable mitigation and/or compensatory measures necessary to minimise any potential impacts on reptiles species can be developed and incorporated into the sensitive design of the proposed development.

2.0 METHODOLOGY

Baseline ecological data were collated through a combination of desk-based study and field survey. The reptile survey methods employed at the proposed development area were consistent with all current standard methodologies¹ and published good practice guidelines².

2.1 Desk-based Study

A preliminary desk-based study was undertaken and involved collating data from a number of organisations and examining published data relating to reptiles at the proposed development site and within a 2 km radius of this site. Data sources used included a request for ecological records supplied by Nottinghamshire Biological and Geological Records Centre (NBGRC).

2.2 Field Survey

A preliminary survey of the study area was undertaken on 15th September 2015 using direct observational methods to detect the presence of reptiles with particular effort made to observe individuals in and around vegetation or likely basking spots.

On completion of the preliminary survey, on the 15th September 2015, a total of 50 artificial refuges, consisting of sheets of roofing felt of varying sizes were deployed within relevant areas of suitable habitat (c.1 ha in extent therefore equating to 50 refuges per ha).

The refugia were checked on a total of 7 further visits between 17th September and 1st October 2015 to determine presence or all reasonable likelihood of absence of reptile species.

During each visit, the refugia were checked, wherever practically possible, during suitable weather conditions (dry, calm, ambient temperature 9-18°C), either in the morning or afternoon (see Table 1), inspecting both on top of and below each refuge. In addition, during each visit all other parts of the survey area were subject to a walkover survey with direct observational methods employed to detect reptiles.

All refugia were removed from the site following the completion of the survey.

2.3 Evaluation Methodology

Guidelines for the selection of Sites of Special Scientific Interest (SSSI)³ provide criteria for identifying nationally important populations and assemblages of reptiles. In addition, methodology developed by Froglife for the Identification of Key Reptile Sites can be used to evaluate the importance of populations/assemblages, that do not meet the SSSI criteria, based on the maximum count of adults of each species found by observation and/or under refuges (placed at a density of 10 per hectare) in one day by one person.

¹ Froglife (1999). *Reptile Survey: An Introduction to Planning, Conducting and Interpreting Surveys for Snakes and Lizard Conservation*. Froglife Advice Sheet 10. Froglife, Halesworth.

² Gent, T. and Gibson, S. (1998). *Herpetofauna Workers' Manual*. Joint Nature Conservation Committee, Peterborough.

³ Nature Conservancy Council (1989). *Guidelines for the Selection of Biological SSSIs*. JNCC, Peterborough.

2.4 Survey Personnel

The surveys were conducted by ecologists from SLR who are experienced in undertaking reptile surveys.

2.5 Limitations to Survey

The most effective times to undertake reptile survey are April/May or September/early October. Although reptiles will be active throughout the summer months they can be more difficult to record due to the animals not requiring to bask as much as and tend to move more freely.

In respect of the refuges, a “bedding-in” period is desirable to allow reptiles to find them and for the refuges to warm-up. In the case of this survey, it would have been desirable for the reptile tins to have had a longer period to bed in, however, taking into account the small size of the survey area, high density of refuges used (50 per ha) and that autumn ground temperatures are generally higher than the spring it is considered that this is a minor issue and that reptiles would have been recorded if they were present.

3.0 RESULTS

3.1 Contextual Information and Historical Records

3.1.1 Historical Records for Reptiles

NBGRC returned a small number of historical records for grass snake and adder within 2km. All of the records are pre-1988. It is considered that adder may now be extinct in Nottinghamshire.

3.1.2 Previous Field Surveys

There have been no previous reptile surveys undertaken at the site.

3.2 Field Survey Results 2015

3.2.1 Presence/Absence

The 2015 reptile survey results are shown below in Table 1. Drawing 1 shows the study area where artificial refuges were evenly located.

**Table 1 -
Reptile Survey Results**

| Date | Personnel | Weather | Start Time | Notes |
|---------------------------------------|-------------------------------|---|------------|-------------------------------------|
| 15 th September 2015 | Heather Keiniwicz | n/a | n/a | Set-up – x 50 artificial refuges |
| 17 th September 2015 | Andrew Hill & Jim Flanagan | 15°C, light W Wind, 4/8 cloud cover | 13:01 | No reptiles |
| 18 th September 2015 | Andrew Hill & Jim Flanagan | 16°C light SW Wind, 7/8 cloud cover | 16:10 | No reptiles |
| 23 rd September 2015 | Andrew Hill | 16°C light SW Wind, 7/8 cloud cover | 12:01 | No reptiles |
| 25 th September 2015 | Andrew Hill | 15°C moderate W Wind, 6/8 cloud cover | 14:10 | No reptiles |
| 28 th September 2015 | Andrew Hill & Jim Flanagan | 16°C light W Wind, 3/8 cloud cover | 11:52 | 1 adult toad |
| 29 th September 2015 | Andrew Hill & Jim Flanagan | 15°C light W Wind, 1/8 cloud cover | 16:51 | No reptiles |

| | | | | |
|---------------------------------|-------------|---|-------|-------------|
| 1 st October 2015 | Andrew Hill | 17°C light NE Wind, 2/8 cloud cover | 14:45 | No reptiles |
|---------------------------------|-------------|---|-------|-------------|

The survey did not record the presence of any reptiles.

3.2.2 Population Size

The 2015 survey did not record the presence of any reptiles.

4.0 SUMMARY AND CONCLUSIONS

The reptile survey conducted in 2015 by SLR did not record the presence of any reptile species. The survey recorded the presence of a single toad.

The proposed development would therefore not result in the loss of habitats supporting reptiles.

5.0 CLOSURE

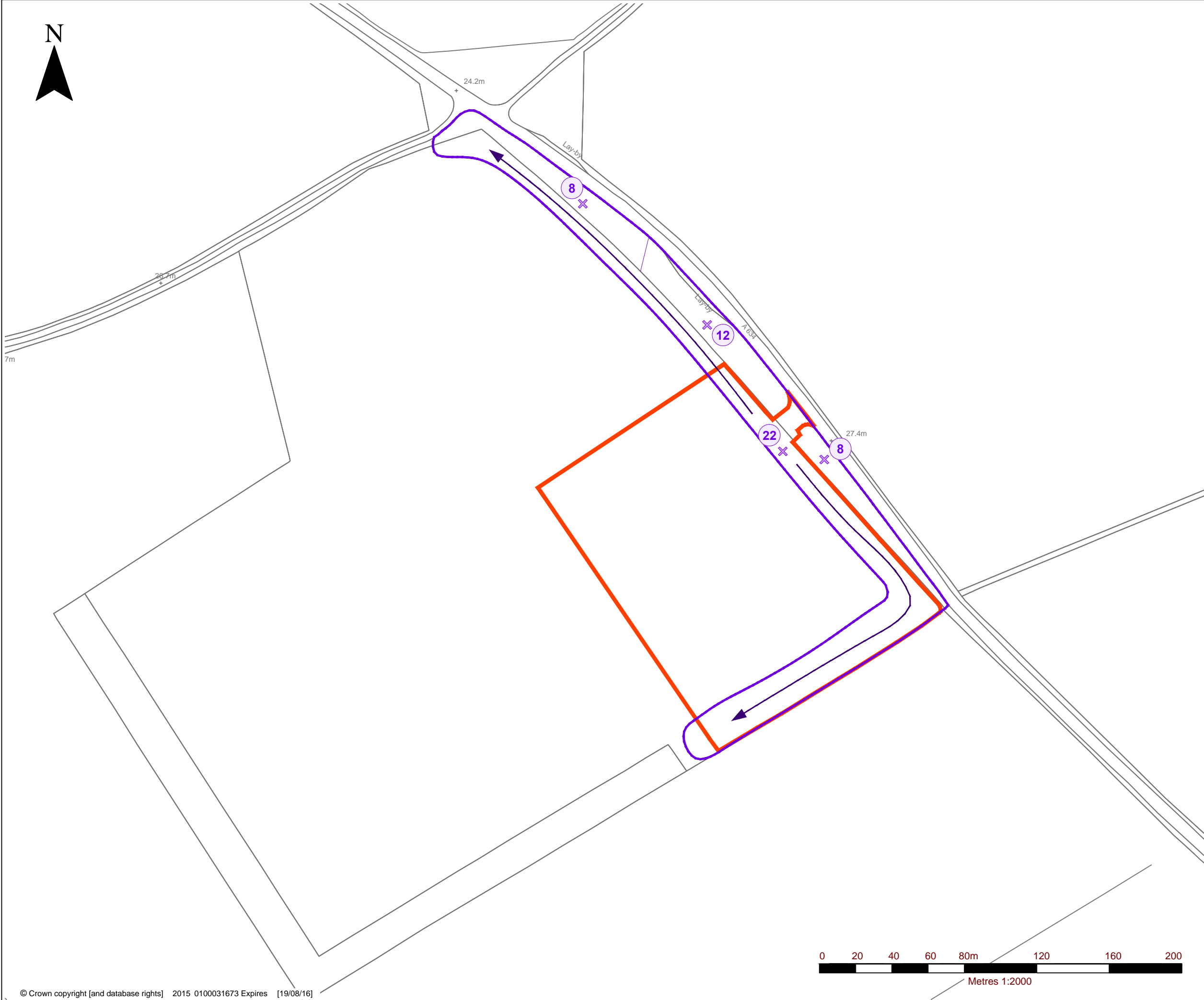
This report has been prepared by SLR Consulting Limited with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of IGas Energy; no warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

The information presented in this report provides guidance to reduce the risk of offences under UK law. However, SLR is not a legal practice and disclaims any responsibility to the client and others for actions that lead to offences being caused, whether or not the guidance contained in this report is followed. Interpretation of UK legislation is presented in good faith; however for the avoidance of doubt, we recommend that specialist legal advice is sought.

SLR disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of the work.

05891.00001.27.001.1_REPTILE_SURVEY_PLAN.dwg



LEGEND

- SITE BOUNDARY
- REPTILE SURVEY AREA
- 50 ARTIFICIAL REFUGES

2ND FLOOR
HERMES HOUSE
HOLSWORTH PARK
OXON BUSINESS PARK
SHREWSBURY, SY3 5HJ
T: 01743 239250
www.slrconsulting.com

TORWORTH

EXPLORATORY BOREHOLE

REPTILE SURVEY PLAN

DRAWING 1

Scale
1:2000 @ A3

Date
NOVEMBER 2015

ABERDEEN

214 Union Street,
Aberdeen AB10 1TL, UK
T: +44 (0)1224 517405

AYLESBURY

7 Wornal Park, Menmarsh Road,
Worminghall, Aylesbury,
Buckinghamshire HP18 9PH, UK
T: +44 (0)1844 337380

BELFAST

Suite 1 Potters Quay, 5 Ravenhill Road,
Belfast BT6 8DN, Northern Ireland
T: +44 (0)28 9073 2493

BRADFORD ON AVON

Treenwood House, Rowden Lane,
Bradford on Avon, Wiltshire BA15 2AU,
UK
T: +44 (0)1225 309400

BRISTOL

Langford Lodge, 109 Pembroke Road,
Clifton, Bristol BS8 3EU, UK
T: +44 (0)117 9064280

CAMBRIDGE

8 Stow Court, Stow-cum-Quy,
Cambridge CB25 9AS, UK
T: +44 (0)1223 813805

CARDIFF

Fulmar House, Beignon Close,
Ocean Way, Cardiff CF24 5PB, UK
T: +44 (0)29 20491010

CHELMSFORD

Unit 77, Waterhouse Business Centre,
2 Cromar Way, Chelmsford, Essex
CM1 2QE, UK
T: +44 (0)1245 392170

DUBLIN

7 Dundrum Business Park,
Windy Arbour, Dublin 14 Ireland
T: +353 (0)1 2964667

EDINBURGH

4/5 Lochside View, Edinburgh Park,
Edinburgh EH12 9DH, UK
T: +44 (0)131 3356830

EXETER

69 Polsloe Road, Exeter EX1 2NF, UK
T: +44 (0)1392 490152

GLASGOW

4 Woodside Place, Charing Cross,
Glasgow G3 7QF, UK
T: +44 (0)141 3535037

GRENOBLE

BuroClub, 157/155 Cours Berriat,
38028 Grenoble Cedex 1, France
T: +33 (0)4 76 70 93 41

GUILDFORD

65 Woodbridge Road, Guildford
Surrey GU1 4RD, UK
T: +44 (0)1483 889 800

LEEDS

Suite 1, Jason House, Kerry Hill,
Horsforth, Leeds LS18 4JR, UK
T: +44 (0)113 2580650

LONDON

83 Victoria Street,
London, SW1H 0HW, UK
T: +44 (0)203 691 5810

MAIDSTONE

19 Hollingworth Court, Turkey Mill,
Maidstone, Kent ME14 5PP, UK
T: +44 (0)1622 609242

MANCHESTER

8th Floor, Quay West, MediaCityUK,
Trafford Wharf Road,
Manchester M17 1HH, UK
T: +44 (0)161 872 7564

NEWCASTLE UPON TYNE

Sailors Bethel, Horatio Street,
Newcastle upon Tyne NE1 2PE, UK
T: +44 (0)191 2611966

NOTTINGHAM

Aspect House, Aspect Business Park,
Bennerley Road, Nottingham NG6 8WR,
UK
T: +44 (0)115 9647280

SHEFFIELD

Unit 2 Newton Business Centre,
Thorncliffe Park Estate, Newton
Chambers Road, Chapeltown,
Sheffield S35 2PW, UK
T: +44 (0)114 2455153

SHREWSBURY

2nd Floor, Hermes House,
Oxon Business Park,
Shrewsbury, SY3 5HJ, UK
T: +44 (0)1743 239250

STAFFORD

8 Parker Court, Staffordshire Technology
Park, Beaconside, Stafford ST18 0WP,
UK
T: +44 (0)1785 241755

STIRLING

No. 68 Stirling Business Centre,
Wellgreen, Stirling FK8 2DZ, UK
T: +44 (0)1786 239900

WORCESTER

Suite 5, Brindley Court, Gresley Road,
Shire Business Park, Worcester
WR4 9FD, UK
T: +44 (0)1905 751310

www.slrconsulting.com



Industry



Infrastructure



Mining & Minerals



Oil & Gas



Planning & Development



Renewable & Low Carbon



Waste Management