

Appendix 3.3

FAB Link Interconnector: HVDC Converter Station Ecology Great Crested Newt
Survey (May 2016)



FAB LINK INTERCONNECTOR

HVDC CONVERTER STATION ECOLOGY GREAT CRESTED NEWT SURVEY

QUALITY MANAGEMENT

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EXECUTIVE SUMMARY

RPS was commissioned to carry out a great crested newt survey of selected ponds for a proposed development of an HVDC converter station on land east of Exeter Airport in Devon, in association with the proposed France-Alderney-Britain (FAB) Link Interconnector.

An earlier ecological appraisal made recommendations for additional surveys, including this one, to carry out a survey of ponds within 500 m of the site which scored an index value of 0.6 or greater, using the standard Habitat Suitability Index approach (RPS, 2015a). This complies with guidance given by Devon County Council on Great Crested newt Consultation Zones within Devon.

The objectives of the survey were to:

- Establish presence or probable absence of great crested newts within the ponds identified, using methods proposed in Natural England's guidance: "Great Crested Newt Mitigation Guidelines" (2001);
- Where any populations of great crested newts are identified, the survey would be extended in scope to ensure that sufficient information was available to provide a population class assessment (per the above guidance);
- Provide a record of other amphibian species identified during the surveys;
- If such populations were identified, assess the potential for effects on them as a result of the proposed development; and
- Identify if any further survey work is necessary to fully understand those effects and provide an appropriate mitigation strategy for them.

The survey was undertaken in between 13th April 2016 and 12th May 2016 and three ponds were surveyed on each occasion. One of the ponds was slightly below the index threshold of 0.6, but was included in the survey as a precaution, as it was very close, scoring 0.58.

The surveys identified the presence of three species of amphibian over the three ponds: smooth newt (*Lissotriton vulgaris*), palmate newt (*Lissotriton helveticus*), and common frog (*Rana temporaria*). No great crested newts (*Triturus cristatus*) were identified during the surveys.

The conclusion of these surveys is that the proposed development would have no impacts on great crested newts.

1 INTRODUCTION

- 1.1 RPS was commissioned to carry out an ecology appraisal for a proposed development of an HVDC converter station on land east of Exeter Airport in Devon, which would be part of the proposed FAB Link Interconnector (RPS, 2015a).
- 1.2 The ecology appraisal comprised a desk study identifying designated sites and records of protected and notable species in search areas around the site and a Phase 1 habitat survey. The appraisal identified a number of ponds in the vicinity of the converter station site and reviewed Devon County Council's advice regarding consultation zones for great crested newts, into which the proposed development falls.
- 1.3 In accordance with the Devon County Council (DCC) guidance on great crested newt consultation zones (2012), a Habitat Suitability Index (HSI) survey was carried out and reported in 2015 (RPS, 2015b) (Oldham *et al*, 2000). This survey identified two ponds with an index above the threshold value of 0.6 and a further pond with an index value of 0.58 (i.e. very close to 0.6). Based on the DCC guidance, these ponds required further survey in 2016 to identify if great crested newts were present.
- 1.4 A further pond was previously noted but not visited during the original 2015 HSI survey due to access restrictions. This pond was also visited in 2016 and an HSI assessment was carried out to ensure this was included in any surveys, if necessary.
- 1.5 This Ecology Great Crested Newt Appraisal Report discusses the results of the 2016 visual survey.
- 1.6 The objectives of the survey were to:
- ensure all ponds within 500 m of the proposed development site were initially assessed using the HSI approach (unless separated from it by features which would present a barrier to great crested newts);
 - carry out sufficient survey effort on all ponds with a Suitability Index of 0.6 or higher to establish the presence or probable absence of great crested newts within them using methods proposed in Natural England's guidance: "Great Crested Newt Mitigation Guidelines" (2001);
 - where any populations of great crested newts are identified, extend the survey in scope to ensure that sufficient information was available to provide a population class assessment (per the above guidance);
 - provide a record of other amphibian species identified during the surveys;
 - if such populations were identified, assess the potential for effects on them as a result of the proposed development; and
 - identify if any further survey work is necessary to fully understand those effects and provide an appropriate mitigation strategy for them.
- 1.7 This report outlines the methods used (Section 2), presents the results obtained (Section 3), and sets out the conclusions reached (Section 4).

2 METHODOLOGY

Habitat Suitability Index and Devon Consultation Zones

- 2.1 The HSI survey was carried out in 2015 and reported in “FAB Link Interconnector: Habitat Suitability Index (HSI) Survey of Ponds Near Exeter Airport” (RPS, 2015b). This identified the ponds that required further survey in 2016.
- 2.2 A further pond which was not assessed during the above survey (Pond 9) was also assessed using the methods set out in Oldham *et al* (2000) during the initial site visit (13th April 2016), to ensure that all ponds with indices of 0.6 or above were included in the survey.
- 2.3 DCC’s guidance on great crested newt consultation zones (2012) states that such zones are created based on a 2 km radius around known or historic great crested newt ponds. As the converter station site is within a consultation zone, ponds within 500 m of the proposed development should be subject to HSI survey. The guidance indicated that in Devon it would be appropriate to carry out additional survey to establish the presence or probable absence of great crested newts where ponds have a suitability index value of 0.6 or greater (which represents an “average” suitability to support great crested newts).
- 2.4 This is consistent with Natural Devon’s current guidance (2016) on consultation zones, which states that within the consultation zones in Devon, it would be reasonable to expect consultants to follow national guidance relating to the need for great crested newt survey. Specific guidance relating to the need for survey in Devon is appropriate because great crested newt populations are relatively rare in Devon. The only significant difference between the two sets of guidance on Devon’s consultation zones is the distance from existing records that they recommend should be considered. The DCC 2012 guidance recommends all ponds within 2 km of existing records, while the Natural Devon 2016 guidance recommends larger consultation zones based on 5 km.

Presence/Absence Survey

- 2.5 The “Great Crested Newt Mitigation Guidelines” (Natural England, 2001) provides guidance on the level of survey effort likely to be required to provide reasonable confidence in whether a population of great crested newts is present or likely to be absent. This indicates that a minimum of four visits in suitable conditions between mid-March and mid-June would be necessary, with at least two visits between mid-April to mid-May.
- 2.6 Survey visits should include three methods, preferably torch survey, bottle trapping and egg-searches.
- 2.7 Bottle-trapping utilises converted plastic bottles forming unbaited funnel-traps. Torch-light survey was undertaken at least 1 hour after sunset and utilised a very powerful torch (1,000,000 candle-power – Cluson Clubman deluxe model).

- 2.8 In this case, as there was limited aquatic vegetation likely to support egg laying, this method was reinforced by hand-searching, where appropriate refuges near to the ponds were inspected for the presence of newts.
- 2.9 Survey dates were 13/04/2016, 21/04/2016, 05/05/2016 and 11/05/2016. A cold spell of night-time temperatures occurred between 21/04/2016 and 03/05/2016, which meant that consecutive nights were too cold to be sure of amphibian activity, so these dates were avoided.
- 2.10 Survey for great crested newts is regulated by licensing under the Wildlife and Countryside Act 1981 (as amended). Surveyors are required to be individually licenced or registered to use a class licence. The survey was carried out by Brian Chilcott CEnv. MCIEEM, who is registered to use general licence WML-CL09 (individual registration number: 2015-17007-CLS-CLS).

Survey Confidence

- 2.11 Confidence in the results of this survey are high. Timing of the survey complies with the Natural England guidelines (2001). Conditions for survey were good and the surveyor is very experienced in this type of survey. Access to the ponds was good, allowing appropriate levels of bottle-trap deployment (where there was sufficient depth) and appropriate access for torch-light survey, egg, and hand-search to the margin areas of the ponds. Visibility (clarity of water) was very good during most visits and quite good on the last occasion when heavy rain meant that the torch survey was carried out later in the night than usual.

3 RESULTS

HSI Survey – Pond 9

- 3.1 Pond 9 was not included in the previous HSI surveys carried out in 2015, due to uncertainties regarding access. Data from Pond 9 was obtained on 13th April 2016 and the HSI assessment was carried out immediately to ensure that any additional survey required was completed (i.e. if it had an index above 0.6).
- 3.2 Table 3.1 below shows the descriptions of all ponds included in the original survey and includes a description of Pond 9. Figure 1 shows the location of the ponds.
- 3.3 Table 3.2 below shows the HSI results for all ponds including Pond 9

Table 3.1 –Descriptions of Ponds Identified Within 500 m of the Proposed Development

No.	Size (m ²)	Distance From Site	Permanence	Water Quality	Shade (%)	Waterfowl Presence	Fish	Ponds In Area	Terrestrial Habitats	Macrophytes	Notes
1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No pond present (actually a small copse containing a defunct military structure)
2	400	160 m to site (<20 m from proposed A30 access)	Permanent	Moderate	60% (oak, willow, blackthorn)	1 moorhen noted	No evidence	10/km ²	Hedges, stone piles (hibernacula), wooded pond margins.	Estimate 30% bulbous rush/flag iris	Nice pond – GCN previously recorded (1991?)
3	125	200 m to site	Dries annually	N/A	50% (oak, ash)	Absent	Absent	10/km ²	Hedges within arable fields only.	none	Field pond dry at time of survey (22/10/2015)
4	100	160 m to site	Dries annually	N/A	90% (oak, ash, elm)	Absent	Absent	10/km ²	Hedges within arable fields only.	none	Dry at time of survey (22/10/15) some fallen tree debris stored in pond area
5	250	105 m to site (<20 m from proposed A30 access)	Permanent	Poor-moderate	98% (oak, ash, willow, hawthorn)	Absent	No evidence	10/km ²	Hedges, wooded pond margins, arable fields, plantation woodland.	100% duckweed cover makes it difficult to assess – no emergents noted	Shown on plans as two ponds, but actually now forms a single kidney-shaped unit
6	75	96 m to site	Permanent	Very poor	85% (willow, oak, ash)	Absent	Absent	10/km ²	Hedges, arable fields, pasture, discarded rubbish may form shelter/hibernation features	None noted	Pond has been used in the past for dumping domestic and farm rubbish. Possibly includes asbestos roofing sheeting

No.	Size (m ²)	Distance From Site	Permanence	Water Quality	Shade (%)	Waterfowl Presence	Fish	Ponds In Area	Terrestrial Habitats	Macrophytes	Notes
7	25	240 m to site (175 m from proposed A30 access)	Occasionally dries	Poor	10% (ash and bramble)	Absent	Absent	10/km ²	Plantation woodland, bramble scrub, hedges, pasture.	95% marsh buttercup, foals	Pond formed where road culvert emerges from under road.
8	60	320 m to site	Permanent	Very poor	50% (hedge one side)	Absent	Absent	10/km ²	Hedges, pasture, farm yard.	None	Oblong farm slurry pond
9	88	370 m to site	Permanent	Very poor	95%	Absent	Absent	10/km ²	Wooded pond margins, improved grassland grazing fields.	No emergents, small amount duckweed	Field pond fenced off from cattle grazing in adjacent field.

Table 3.2 –HSI Results

	Pond Reference							
	2	3	4	5	6	7	8	9
SI1 - Location	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
SI2 - Pond area	0.8	0.25	0.2	0.5	0.15	0.1	0.1	0.2
SI3 - Pond drying	0.9	0.1	0.1	0.9	0.9	0.5	0.9	0.9
SI4 - Water quality	0.67			0.5	0.3	0.33	0.01	0.33
SI4 - Shade	1	1	0.4	0.25	0.5	1	1	0.3
SI6 - Fowl	1	1	1	1	1	1	1	1
SI7 - Fish	1	1	1	1	1	1	1	1
SI8 - Ponds	1	1	1	1	1	1	1	1
SI9 - Terrestrial habitat	0.67	0.4	0.4	0.67	0.67	0.67	0.5	0.67
SI10 - Macrophytes	0.6	0.3	0.3	0.35	0.3	0.8	0.3	0.3
HSI	0.79	0.49	0.43	0.61	0.54	0.58	0.38	0.53

- 3.4 Pond 9 (P9) has a suitability index of 0.53. This falls below the threshold index value of 0.6 indicated in the DCC guidance on great crested newt consultation zones (2012). Therefore no further survey has been undertaken on Pond 9.

Presence/Absence Survey Results

- 3.5 Table 3.3 below shows details of the presence/absence survey results. Following the DCC guidance on great crested newt consultation zones, Ponds 2, 5 and 7 (as a precaution) were surveyed.

Table 3.3 – Presence/Absence Survey Results

			Pond 2					Pond 5					Pond 7				Notes
Date	Temp	Bottle traps set	B/T result	Torch result	Visibility	Other methods	Bottle traps set	B/T result	Torch result	Visibility	Other methods	Bottle traps set	B/T result	Torch result	Visibility	Other methods	Notes
13/04/16	6°C	20	0	1 x CF	Water very clear	Hand search – 0	20	0	2 x PN/SN	Water very clear	Hand search – 0	0	N/A	0	Water quite clear	Hand search – 0	Insufficient depth in Pond 7 for bottle traps – given its lower potential, torch survey and hand search considered appropriate.
21/04/16	9°C	20	1m PN, 2f SN	1x PN/SN	Water very clear	Hand search - 0	20	1m SN, 1fSN	4 x PN/SN	Water very clear	Hand-search - 0	0	N/A	0	Water quite clear	Hand search - 0	As above.
05/05/16	10°C	20	0	1 x PN/SN	Water quite clear	Egg-search – 0	20	1f SN	2 x PN/SN	Water quite clear	Egg-search – 0	0	N/A	0	Water quite clear	Hand search - 0	Note night time temps 22/04/16 – 03/05/2016 very low for time of year, so no surveys undertaken. Also note egg search viable in ponds 2 and 5 this trip (more aquatic veg visible).

			Pond 2					Pond 5					Pond 7				Notes
Date	Temp	Bottle traps set	B/T result	Torch result	Visibility	Other methods	Bottle traps set	B/T result	Torch result	Visibility	Other methods	Bottle traps set	B/T result	Torch result	Visibility	Other methods	
11/05/16	12°C	20	0	2 PN/SN CF tadpoles	Water quite clear	Egg search - 0	20	2m PN, 1f SN, CF tadpoles	4 PN/S N	Water quite clear	Egg search - 0	0	N/A	0	Water quite clear	Hand search - 0	Heavy rain at dusk meant torch survey was undertaken at 0400 the following morning.

GCN = Great crested newt (*Triturus cristatus*), PN = Palmate newt (*Lissotriton helveticus*), SN = Smooth newt (*Lissotriton vulgaris*), CF = Common frog (*Rana temporaria*), CT = Common toad (*Bufo bufo*)

4 POTENTIAL IMPACTS OF THE PROPOSED DEVELOPMENT

Converter Station Site

- 4.1 The survey found that no great crested newts appear to be present in any of the ponds surveyed. Small populations of other common amphibians were identified.
- 4.2 The proposed development of the converter station (as shown in Figure 1) will not directly affect any of the ponds surveyed, and will not have significant impacts on terrestrial habitats likely to be used by the common amphibians identified to be present in the ponds surveyed.

Additional Temporary Laydown Area and Compound

- 4.3 The additional temporary laydown area and compound comprised an arable field and shared its eastern field boundary with the western boundary of the field that will contain the converter station.
- 4.4 As with the converter station, the proposed lay-down area will not directly affect any ponds and will not have significant impacts on any terrestrial habitats likely to be used by the common amphibians identified to be present in the ponds surveyed.

Potential Access Routes

Long Lane

- 4.5 Long Lane was bordered on both sides by species-poor hedges and mature trees occurred in places. No ponds lie immediately adjacent to the road, and so none would be directly affected by the proposals.
- 4.6 The proposed use of Long lane is unlikely to have any significant effects on any terrestrial habitats likely to be used by the common amphibians identified to be present in the ponds surveyed.

5 CONCLUSIONS AND RECOMMENDATIONS

- 5.1 No great crested newts were identified during the surveys. Common amphibian species were identified using the pond, including smooth newts, palmate newts and common frog. These species are protected under the Wildlife and Countryside Act 1981 (as amended) against sale only.
- 5.2 The development proposals are unlikely to have any impacts on ponds or terrestrial habitats likely to be utilised by the amphibians present.
- 5.3 Further measures to survey for or provide mitigation to prevent impacts on amphibians are therefore considered unnecessary.
- 5.4 Should any amphibians be unexpectedly encountered during the construction of the proposed development, then the advice of a suitably qualified ecologist with experience in licensed mitigation for great crested newts should be sought immediately, particularly if they are suspected to be great crested newts,.

6 REFERENCES

Devon County Council, Devon Biodiversity Records and Devon Reptile and Amphibian Group (2012) *Devon Great Crested Newt consultation Zones Guidance for Developers, June 2012.*

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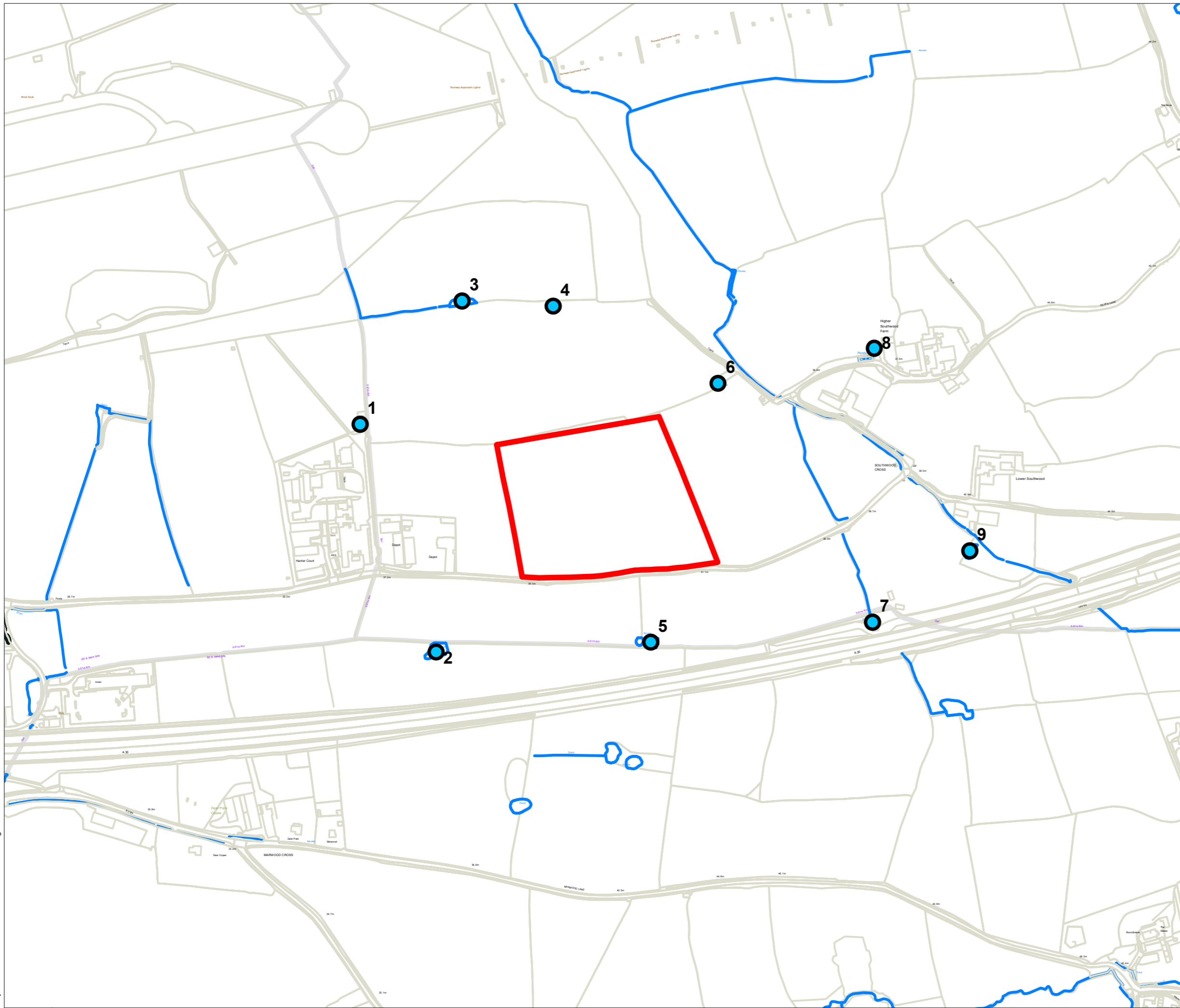
RPS (2015a) France-Alderney-Britain (FAB) Link Interconnector: HVDC Converter Station Ecology Appraisal. December 2015.

RPS (2015b) France-Alderney-Britain (FAB) Link Interconnector: Habitat Suitability Index (HSI) Survey of Ponds Near Exeter Airport. December 2015.

FIGURES

FIGURE 1

Survey Pond Locations



Legend

- Pond Location
- Converter Station site

Rev:	Date:	Amendment:	Name:	Checked:

Data Source: RPS 2015
 Status: FINAL



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Client: FAB Link Ltd.
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Title: Pond Location Plan

Scale: A3 @ 1:5,000
 0 0.1 0.2 km

Date: 20/11/2015 Datum: OSGB36 Projection: BNG
 Drawn: CR Checked: BC Job Ref: OXF7729

Figure No: 1 Revision: .

Project Ref: O:\7729 FAB Interconnector\Tech\Drawings\7729-0264-03.mxd Date Saved: 20/11/2015