



Ulster Canal Restoration

Smooth Newt Mitigation Plan

For

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FIGURE 2B HABITAT SUITABILITY ASSESSMENT RESULTS AREA B

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FIGURE 3B RECEPTOR AREA LOCATIONS AREA B

FIGURE 4 POND DESIGN

FIGURE 5A CAPTURE AND EXCLUSION MEASURES AREA A

FIGURE 5B CAPTURE AND EXCLUSION MEASURES AREA B

1. Summary and Main Recommendations

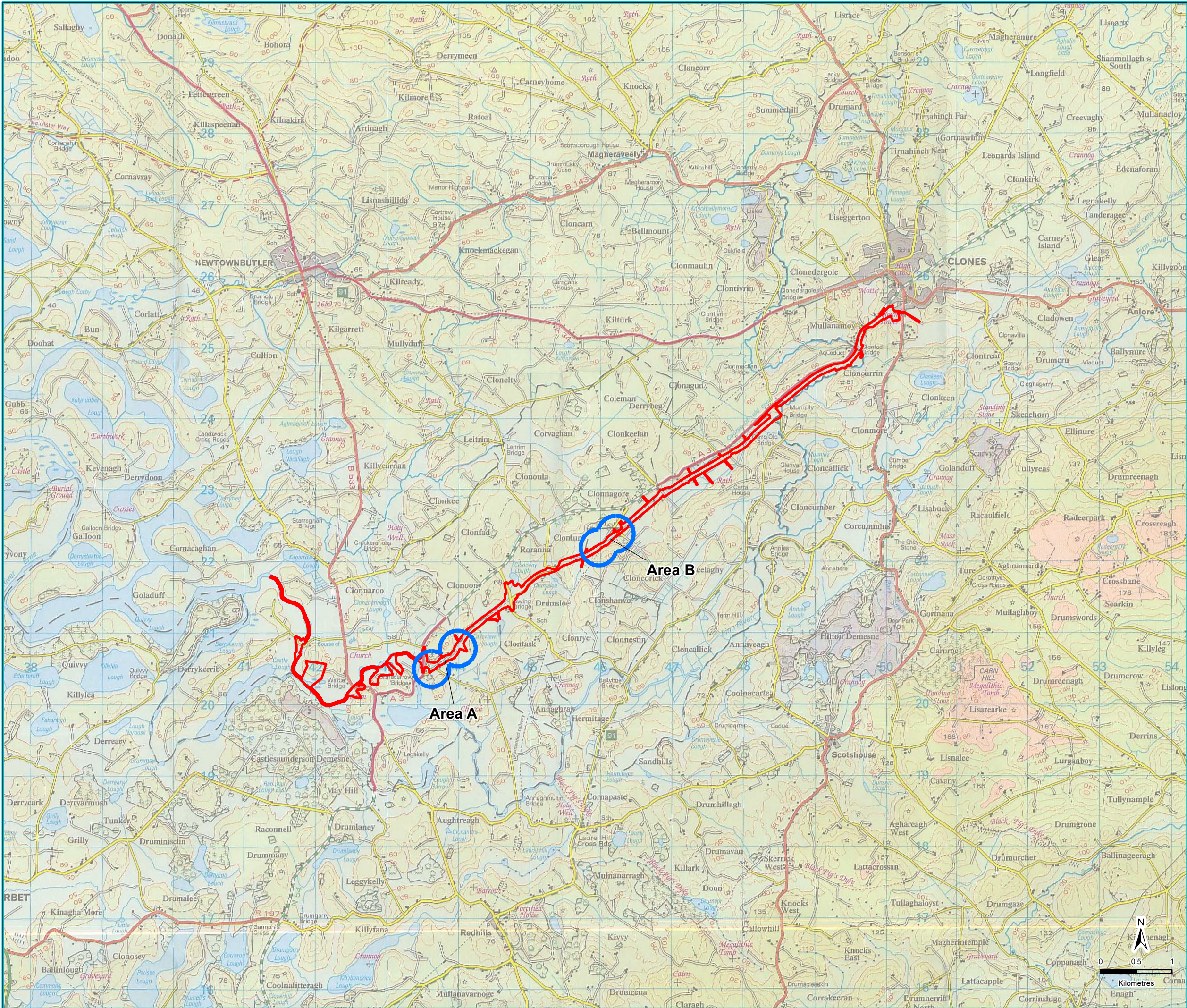
1.1 Summary

- 1.1.1** Waterways Ireland is seeking planning permission to restore the former Ulster Canal, which extended approximately 13km between Clones, Managhan and Upper Lough Erne, Fermanagh. The restoration work will convert an unmanaged former canal to a new, wider stretch of canal with associated footpaths and landscaping, predominantly for recreational use.
- 1.1.2** An extended Phase 1 habitat survey was carried out in 2009 and suitable smooth newt breeding habitat was identified in nine waterbodies along the proposed canal route. During surveys undertaken in 2011 four waterbodies were confirmed to contain smooth newts.
- 1.1.3** The brief was to produce a mitigation plan for smooth newts in order to comply with legislation during canal restoration works. This included undertaking a smooth newt habitat assessment survey on land within 250m of the four ponds with confirmed smooth newt populations, and locating suitable receptor areas for pond creation and habitat enhancement near to the existing newt populations. In addition, an update survey was carried out on the four ponds with known populations of smooth newt.
- 1.1.4** Smooth newts were recorded in ponds P1, P2 and in a section of the old canal previously labelled ponds P6 and P8. The route of the old canal contains a range of terrestrial habitats suitable for smooth newt including wet tussocky grassland, scrub and hedgerows with ponds. Log and brash piles are also present and there are areas of pasture and improved grassland within and adjacent to the site suitable for enhancement measures to enhance smooth newt habitat such as pond and hibernacula creation. Six new ponds will be created prior to construction to replace the four ponds being lost to development.
- 1.1.5** As it would be an offence to deliberately kill or injure smooth newts this will need to be avoided during the development process. Therefore implementation of the mitigation and management plan presented in Sections 4 and 5 should avoid the harming or killing of smooth newts and also ensure the long term survival of smooth newts in the area at a favourable conservation status.

1.2 Main Recommendations

- 1.2.1** The main recommendations are set out below:
- Carry out habitat enhancement works, including pond creation, on receptor areas to provide replacement habitat for that being lost due to development;
 - Installation of newt exclusion fencing around the development area, followed by the translocation of smooth newts, once the receptor sites are in suitable condition;
 - Maintenance of newt fencing until the completion of the development;
 - Monitor newt populations in receptor areas post-development; and
 - Manage receptor sites to ensure the long term survival of smooth newts.

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Legend

- Site Boundary
- Pond Containing Smooth Newts 250m Buffer

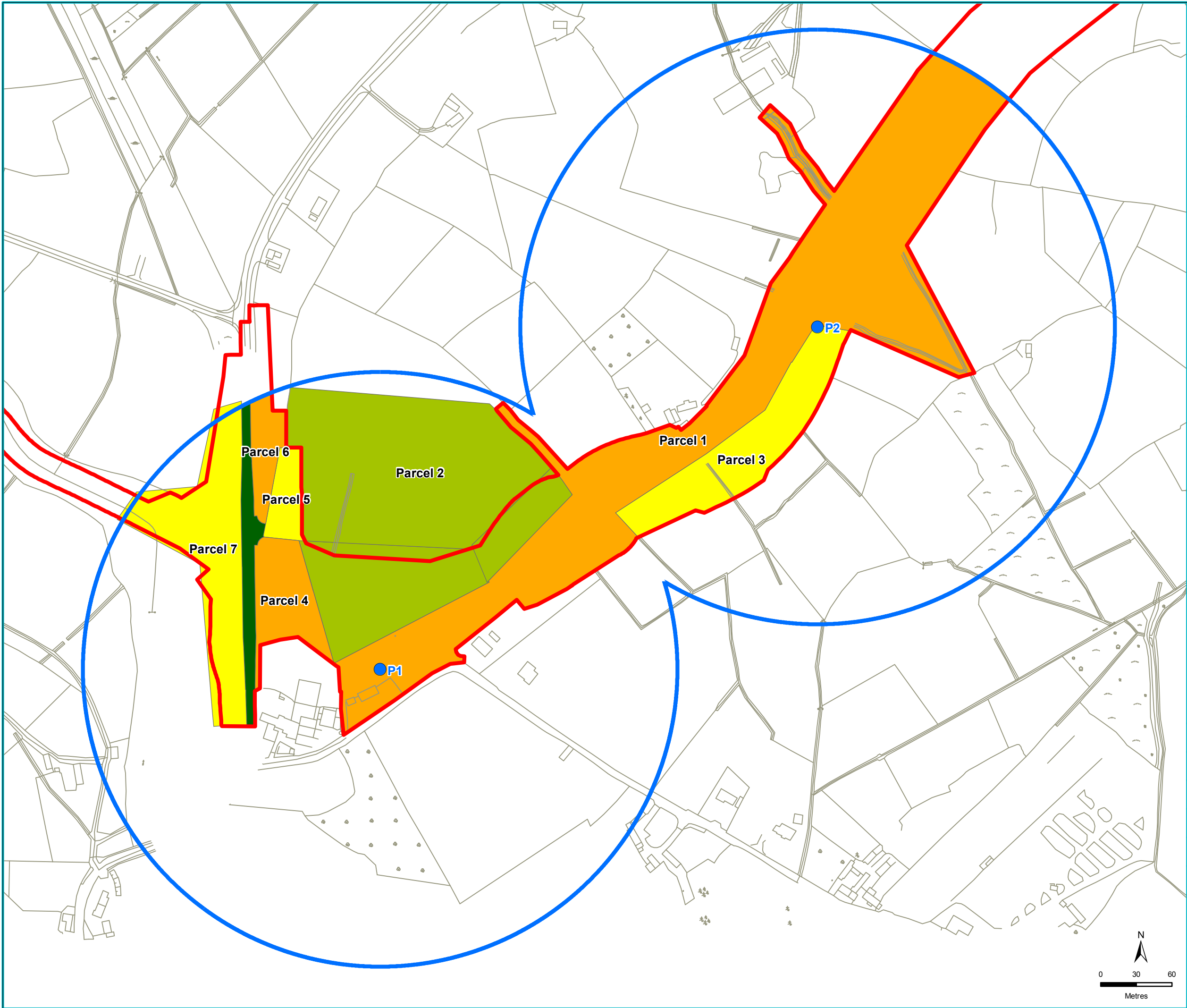
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Waterways Ireland			
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Figure Title			

Site Location

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Legend

- Pond Containing Smooth Newts
- Pond Containing Smooth Newts 250m Buffer
- Smooth Newt Habitat Suitability**
 - Good
 - Medium
 - Low
 - Negligible
- Site Boundary

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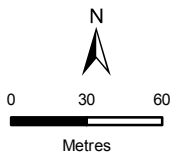
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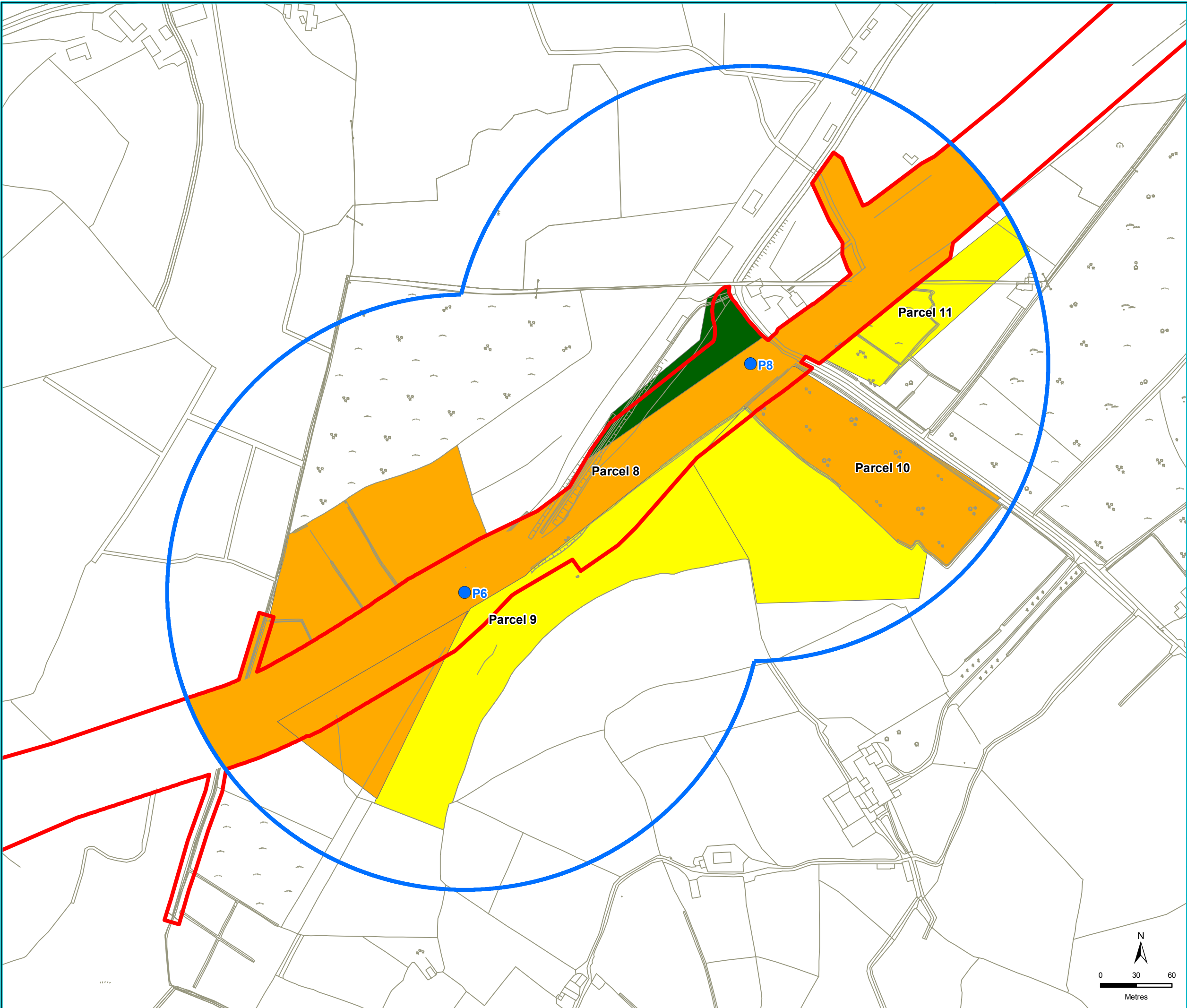
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Figure Number
2a

Figure Title
Habitat Suitability
Assessment Results
Area A



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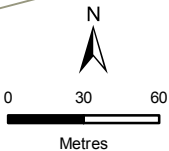
- Legend
- Pond Containing Smooth Newts
 - Pond Containing Smooth Newts 250m Buffer
 - Smooth Newt Habitat Suitability**
 - Good
 - Medium
 - Low
 - Negligible
 - Site Boundary

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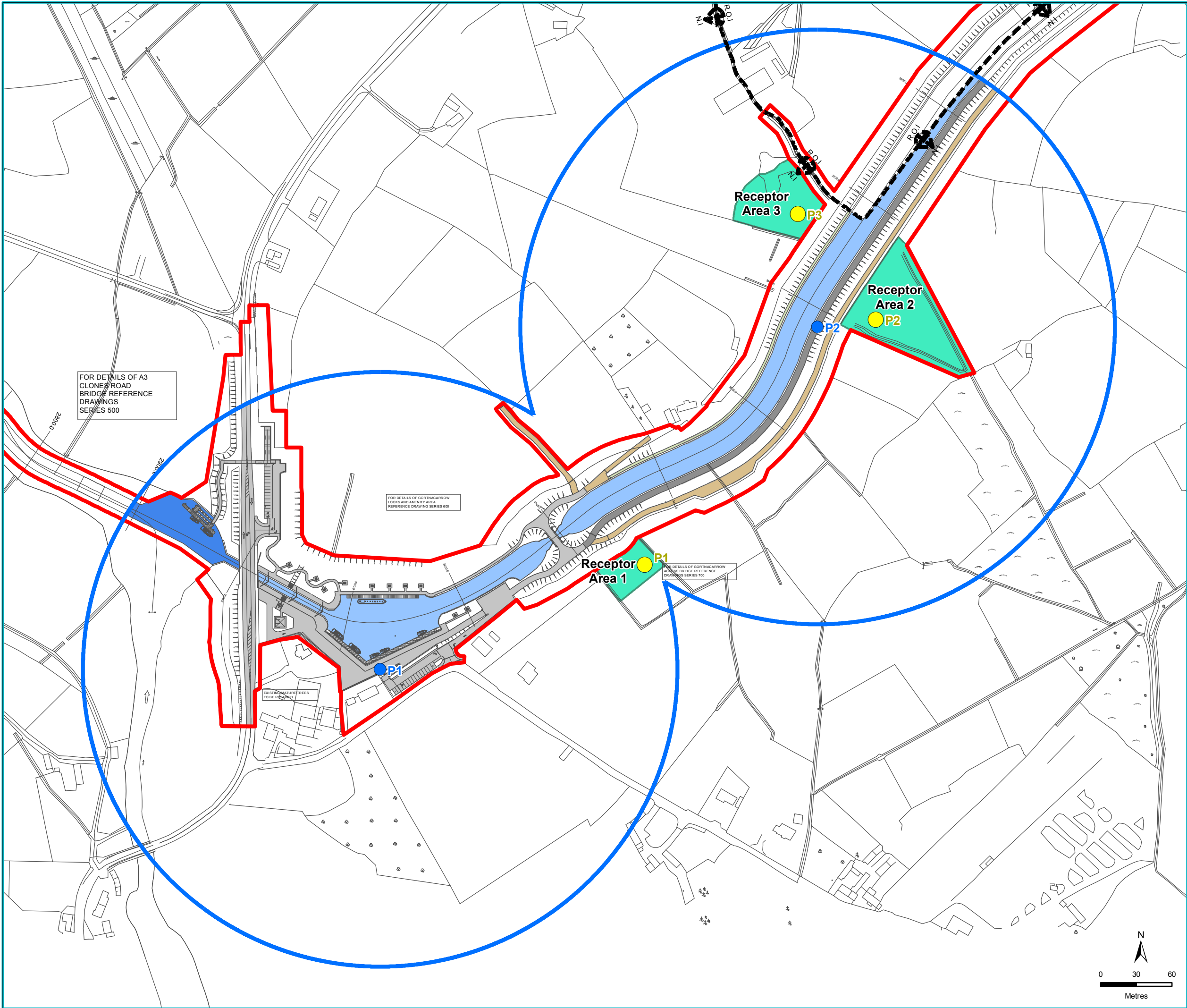
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Client		Waterways Ireland	
Figure Number		2b	
Figure Title			

Habitat Suitability
Assessment Results
Area B



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Legend

- Pond Containing Smooth Newts
- Pond Containing Smooth Newts 250m Buffer
- Site Boundary
- Location of Pond to be Created
- Receptor Area
- Proposed Layout Plan**
 - Agricultural Access Road
 - Asphalt Area
 - Canal Navigation
 - Grassed Public Footpath 2m Wide
 - Gravel Surface Tow Path 6m Wide
 - Proposed 13m River Navigation Channel
- International Border

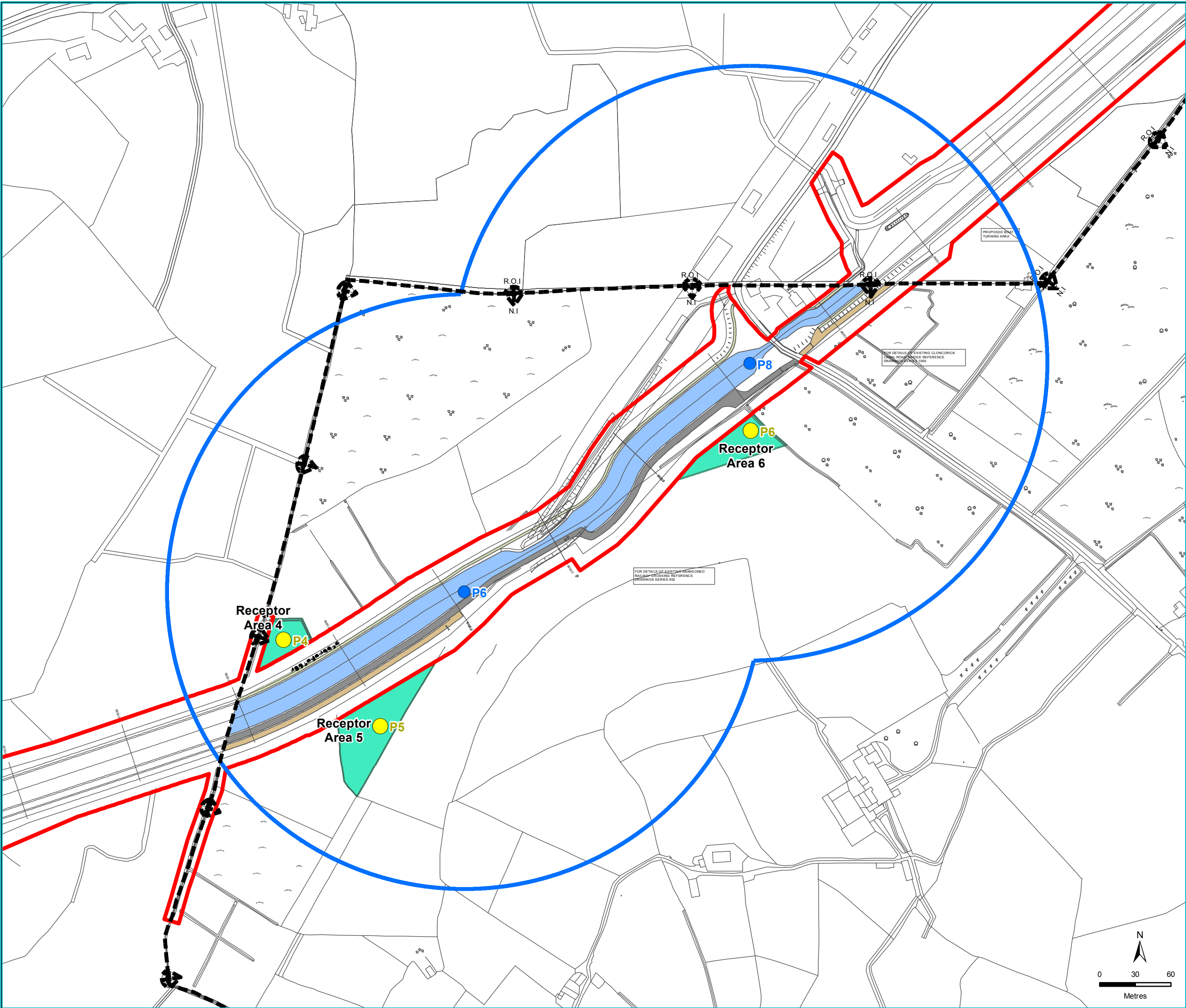
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Waterways Ireland	
Figure Number	
3a	
Figure Title	

Receptor Area Locations
Area A

Filepath: S:\Leeds\Projects\WAT101 Smooth Newt Mitigation Strategy\Reports\Mapping\Working\WAT101_Fig3_ReceptorAreaLocations_KM_230712.mxd



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Legend

- Pond Containing Smooth Newts
 - Pond Containing Smooth Newts 250m Buffer
 - Site Boundary
 - Location of Pond to be Created
 - Receptor Area
- Proposed Layout Plan**
- Agricultural Access Road
 - Canal Navigation
 - Grassed Public Footpath 2m Wide
 - Gravel Surface Tow Path 6m Wide
 - International Border

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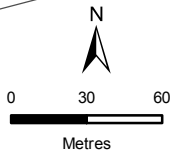
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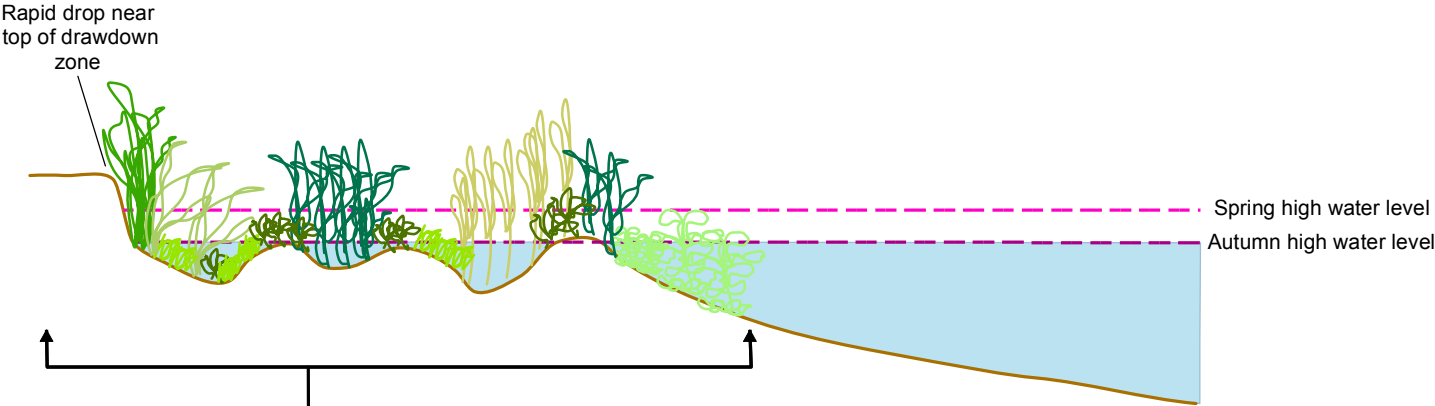
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Figure Number
3b

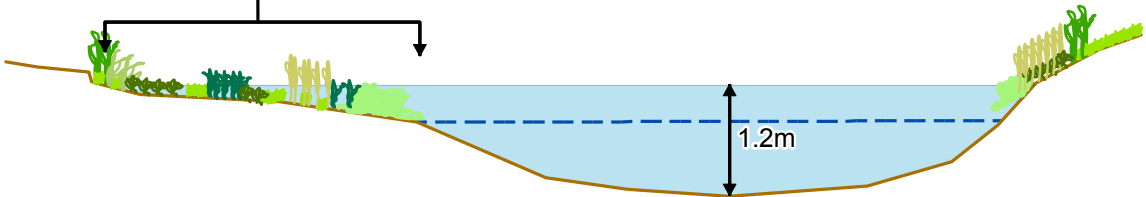
Figure Title
Receptor Area Locations
Area B



Wide Drawdown
Zone

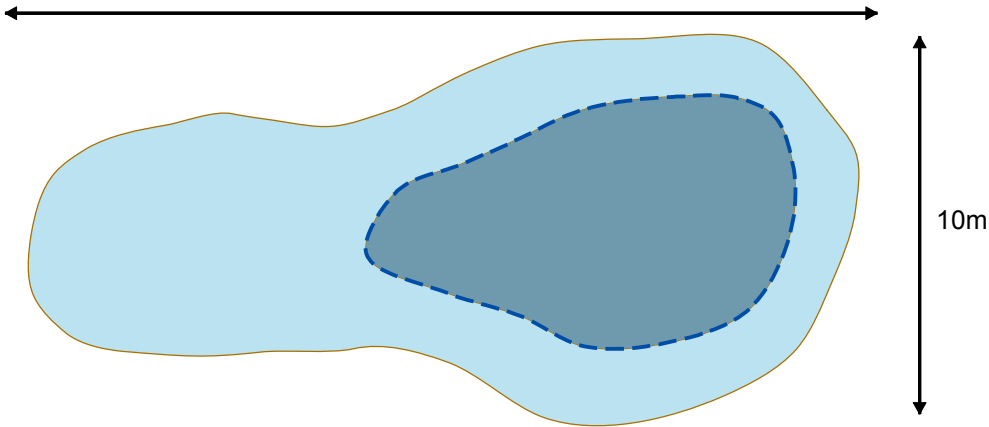


Indicative
Cross-section View



20m

Indicative Plan View



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Figure Number	4

Figure Title
Pond Design

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Legend

- Pitfall Bucket
- Refugia
- Newt Fencing
- Drift Fencing
- Pitfall Buckets and Refugia
- Pond Containing Smooth Newts
- Pond Containing Smooth Newts
250m Buffer

Smooth Newt Habitat Suitability

- Good
- Medium
- Low
- Negligible
- Site Boundary

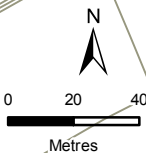
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Client		Waterways Ireland	
Figure Number		5a	

Figure Title

Capture and
Exclusion Measures
Area A



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Legend

- Pitfall Bucket
 - Refugia
 - Newt Fencing
 - Drift Fencing
 - Pitfall Buckets and Refugia
 - Pond Containing Smooth Newts
 - Pond Containing Smooth Newts 250m Buffer
- Smooth Newt Habitat Suitability**
- Good
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 - Negligible
 - Site Boundary

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Client			
Waterways Ireland			
Figure Number		5b	
Figure Title			

Capture and
Exclusion Measures
Area B

2. Introduction

2.1 Development Background

2.1.1 Waterways Ireland is seeking planning permission to restore the Ulster Canal, which extended approximately 13km between Clones, Monaghan and Upper Lough Erne, Fermanagh. The restoration work will convert an unmanaged former canal to a new, wider stretch of canal with associated footpaths and landscaping, predominantly for recreational use. The proposals described above are hereafter referred to collectively as 'the development'.

2.1.2 The development will be located on a 13km stretch of land (start point grid reference; H41363 21798 and end point grid reference: H50456 25369), between Clones, Monaghan and Upper Lough Erne, Fermanagh, see Figure 1. The area affected by the development is hereafter referred to as 'the site'.

2.2 Ecology Background

2.2.1 An extended Phase 1 habitat survey was carried out in 2009 as part of the Environmental Impact Statement (EIS) by RPS (see Report Ref IBE0332) and suitable smooth newt breeding habitat was identified in nine waterbodies along the proposed canal route. A single night-time torchlight search was undertaken at each of these sites in June 2011 and four waterbodies were confirmed to contain smooth newts (P1, P2, P6 and P8 on Figure 2). Three smooth newts were recorded in Pond P1, six smooth newts in P2, eight smooth newts in P6 and two smooth newts in P8.

2.3 The Brief and Objectives

2.3.1 Waterways Ireland commissioned Thomson Ecology on 21st June 2012 to undertake a smooth newt habitat suitability survey and produce a smooth newt mitigation plan for the development site. The brief was to:

- Produce a smooth newt mitigation plan;
- Undertake a site walkover comprising a habitat suitability survey to identify potential mitigation areas;
- Produce a licence application for smooth newt; and
- Liaise with statutory bodies and attend meetings with Waterways Ireland.

2.3.2 A torchlight survey for smooth newt was also undertaken on the four waterbodies with confirmed smooth newt presence to update the surveys undertaken in 2011 and to provide further information to inform the mitigation plan.

2.4 Limitations

2.4.1 The site walkover survey was undertaken during June, which is considered to be a suitable time of year as most plant species are present and habitat suitability for smooth newts can be addressed accurately as it is the smooth newt active season.

- 2.4.2** The torchlight surveys were undertaken between 26th June and 29th June, which is slightly outside the optimal survey season. However, this was agreed with the Northern Ireland Environment Agency prior to survey.
- 2.4.3** Ponds P6 and P8 were sections of canal rather than ponds, and large sections were completely covered with duckweed, meaning that searching most areas of the water by torchlight was not effective. The search was therefore concentrated predominantly on the ground near to the canal and any areas of water where duckweed was not completely obscuring the view of the water column.
- 2.4.4** The use of bottle-traps is not an accepted survey technique in Northern Ireland. Through extensive hours of great crested newt survey throughout England this technique has been validated as very reliable for the detection of newts and subsequent assessment of population size classes. The omission of bottle-traps as a survey technique here may have resulted in under recording the number of newts present within the four waterbodies.

3. Smooth Newt Survey

3.1 Methodology

Habitat Assessment Survey

- 3.1.1** The survey area was defined as land that is both within the proposed development site and up to 250m from the four previously identified newt ponds. Land immediately adjacent to the development site was also surveyed, as deemed appropriate, to assess potential receptor areas. The survey area was walked and habitat characteristics were mapped using a GPS-based mobile mapping device for accuracy and the habitat graded according to its level of suitability for smooth newts (good, medium, low or negligible) (see Figures 2a and 2b). Table 1, below summarises habitat features known to be suitable for smooth newts.

Table 1: Suitable Smooth Newt Habitat Features

Features	Habitat Suitability
Shelter: eg. Woodland Tall grass/tussocks Hedgerows Scrub Undisturbed Damp habitats Low intensity or no grazing Close to breeding ponds and hibernacula	Good
Medium intensity grazing Coarse but not tall grassland Access to breeding ponds and hibernacula	Medium
Closely grazed/mown grass High level disturbance Breeding ponds and hibernacula up to 500m away	Low
Hard standing Buildings Amenity grassland with high levels of disturbance/recreation No access to breeding ponds or hibernacula	Negligible

Torchlight Presence/Absence Survey

- 3.1.2** The four waterbodies with previously identified populations of smooth newt (Ponds P1, P2, P6 and P8) were subject to a presence/absence torchlight survey. The perimeter of each waterbody (where accessible) was walked at night, at least 1 hour after dark. Each waterbody was searched with a powerful torch (1 million candle power) and sightings of smooth newts were recorded. If newts are present, using this technique, and given sufficient water clarity, adult smooth newts can be seen in the shallow edges of the pond, where they may be feeding, showing courtship behaviour or laying eggs. The ground surrounding each waterbody was also searched and rocks, logs and any other features that newts may hide under were checked to search for sheltering smooth newts.

Dates of Survey

- 3.1.3** The habitat suitability survey was undertaken between 26th and 29th June 2012 and the torchlight presence/absence surveys were undertaken on 26th and 29th June 2012 under NEIA Licence Number SNP/26/12 (Mr Paul Stephen - licensee number: 1703).

3.2 Results

Habitat Assessment Survey

- 3.2.1** The survey area presently comprises a mosaic of wet, coarse and tussocky grassland, open water (ponds and sections of old canal), log and brash piles, hedgerows, scattered broadleaved trees, pasture and improved grassland. These areas provide good habitat for smooth newts - they have waterbodies in which to breed, grassland and hedgerows for shelter and foraging and log and brash piles for hibernation. There are relatively low numbers of ponds suitable for breeding across the survey area, so it is probable that the population size of smooth newts is limited by access to breeding sites rather than the extent of suitable terrestrial habitat.
- 3.2.2** Habitats on the land surrounding the development site include improved grassland, pasture, woodland and hard standing. The results of the habitat assessment survey are shown on Figures 2a and 2b. Table 2 below, summarises the types of habitats recorded on site and their suitability for smooth newts.

Table 2: Habitat Descriptions and Suitability

Parcel Number	Habitat Descriptions	Suitability for Smooth Newts
1	Mosaic of wet, tussocky grassland, scrub and hedgerows with many log/brush piles.	Good
2	Improved grassland	Low
3	Pasture	Medium
4	Wet, tussocky grassland, scrub and hedgerows	Good
5	Coarse grassland	Medium
6	Wet, tussocky grassland, scrub and hedgerows	Good
7	Pasture	Medium
8	Mosaic of wet, tussocky grassland, scrub and hedgerows with many log/brush piles	Good
9	Pasture	Medium
10	Woodland	Good
11	Pasture	Medium

Pond Descriptions

- 3.2.3** Pond P1 is a small pond approximately 5m x 2m in size and with a maximum depth of approximately 0.1m. The pond was situated among wet, tussocky grassland.
- 3.2.4** Pond P2 is approximately 8m x 4m in size, with a maximum depth of more than 1m. The pond was situated in the corner of a fairly heavily grazed pasture field, close to wet tussocky grassland on the old canal route.
- 3.2.5** Pond P6 and P8 are sections of old canal, separated only by a bridge of approximately 2m wide. The canal is approximately 10m wide, covered almost entirely with duckweed. Fish were observed in these two ponds.

Torchlight Presence/Absence Survey

- 3.2.6** Newts were confirmed as present in Ponds P1, P2 and P6 (see Figures 2a and 2b). As there is a continuous stretch of open water surrounded by good terrestrial habitat in Area B, which

includes P6 and P8, this area has been considered as a single population. Table 3, below, gives the numbers of newts recorded at each waterbody.

Table 3: Torchlight survey results

Waterbody Number	Date of Survey	Number of Smooth Newts	Fish present?
P1	26/06/2012	5	No
P2	26/06/2012	9	No
P6 & P8	28/06/2012	1	Yes

3.3 Legal Issues

3.3.1 Smooth newts are protected under Schedule 5 of The Wildlife (Northern Ireland) Order 1985, as amended; making it an offence to kill, injure, capture or disturb them.

3.3.2 Without mitigation, the development could contravene the legislation with respect to smooth newts as the restoration process could result in newts being disturbed, injured or killed. In order to comply with legislation, the mitigation measures outlined in Section 4 should be adopted.

4. Smooth Newt Mitigation Plan

4.1 Summary

4.1.1 The Mitigation Plan section outlines a strategy for the protection of smooth newts during and after construction works. In summary, this will include the following:

- Preparing receptor sites by creating ponds and enhancing terrestrial habitat;
- Fencing around areas A and B of the development site to exclude newts;
- Trapping and removal of smooth newts from areas A and B then translocation to the closest receptor areas;
- Clearing habitat from the development site under ecological supervision, prior to any construction activities commencing; and
- Maintaining the newt fencing until the completion of the development.

4.2 Smooth Newt Receptor Areas

Background

4.2.1 Two areas of the development site were found to contain smooth newts (see Figures 2a and 2b). Area A includes all land within 250m of ponds P1 and P2. Area B includes all land within 250m of ponds P6 and P8. Newts will be translocated from the construction zone within these two areas. The receptor areas, which will receive smooth newts from Areas A and B, have been chosen to replace aquatic habitat to be lost, therefore maintaining a population of smooth newts in as close proximity to the extant population as possible.

4.2.2 Receptor areas have been chosen based them being pre-existing areas of suitable newt habitat that could benefit from simple measures such as pond creation to ensure there is no net loss of aquatic breeding habitat, which is thought to be the limiting factor for smooth newt in this area. This should ensure that the overall local population is subject to the minimum possible impact. Pond creation and habitat enhancement works in the receptor areas will be completed prior to the commencement of trapping, to ensure they are in a favourable condition to receive smooth newts before trapping commences.

4.2.3 The main objective of the receptor areas is to increase the total number of ponds within good terrestrial habitat as at present it is likely that the number of available breeding ponds is the main limiting factor for population size, rather than a lack of terrestrial habitat, given that there are large areas of suitable habitat both on and adjacent to the site. Figures 2a and 2b show the current habitat value to newts within Areas A and B and Figures 3a and 3b show the proposed receptor areas, including ponds to be created.

4.2.4 The small size of the proposed receptor areas is reflected in the need for aquatic habitat replacement, with areas of terrestrial habitat to be created surrounding the ponds where necessary. The adjacent habitat to each receptor area is of good quality for smooth newt and as such, the overall principle of pond replacement on a 1:1.5 ponds basis (six ponds to be created

to replace the four to be lost), together with some terrestrial habitat creation and enhancement will ensure the long term conservation status of smooth newts is maintained.

Habitat Creation and Enhancement

- 4.2.5** Receptor sites will be created either on land outside the development footprint (Receptor Areas 1, 3, 4, 5 and 6 - see Figures 3a and 3b) or in the case of Receptor Area 2, within the development footprint in an area subject to minor works on the drains. The minor works within Receptor Area 2 will be undertaken in advance of the main construction, ensuring the area can be prepared for smooth newts prior to development and no further construction will take place in this area once trapping and translocation has begun.
- 4.2.6** A total of four ponds will be lost to the development and six ponds will be created prior to development as replacement habitat, ensuring habitat replacement on a 1:1.5 pond basis. The six ponds will be situated in the six receptor areas labelled Receptor Areas 1-6 on Figures 3a and 3b. In addition, further ponds and terrestrial habitat enhancement for smooth newt will be incorporated into the development footprint during construction, which will be made available for smooth newt when the amphibian fencing surrounding the development is removed post-construction.
- 4.2.7** Table 4 shows habitat enhancement measures that will benefit smooth newts for each receptor area. As a minimum each receptor area will have a pond created, alongside extra habitat enhancements for some receptor areas.

Table 4: Habitat Enhancement Plan

Receptor Area Number	Enhancement Proposals
1	Pond creation, creation of tussocky grassland surrounding pond and installation of hibernacula.
2	Pond creation and installation of hibernacula.
3	Pond creation and installation of hibernacula
4	Pond creation, installation of hibernacula.
5	Pond creation.
6	Pond creation, installation of hibernacula and creation of tussocky grassland surrounding pond.

Ponds

4.2.8 A total of six ponds will be created across areas A and B. This will encourage the successful establishment of smooth newts on both the northern and southern sides of the canal, once development is completed. Pond will be designed to incorporate a range of different microhabitats. To achieve this, ponds will have gently sloping sides, a range of depths and an irregular shape. A pond edge slope with gradient of between 1 in 10 and 1 in 20 will be incorporated (see Figure 4). This should encourage a diversity of marginal vegetation structure which will benefit smooth newts and invertebrates, on which smooth newts feed. Ponds will be approximately 10 x 20m, with a maximum depth of 1.2m, as illustrated in Figure 4.

4.2.9 Ponds at each receptor area will be planted with aquatic species such as water mint (*Mentha aquatica*), yellow flag (*Iris pseudacorus*) and brooklime (*Veronica beccabunga*). Ponds will be designed to maximise their potential as amphibian habitat. The aim will be to create a mosaic of densely vegetated areas with intervening open water and bog. Ponds will not be stocked with fish.

Grassland

4.2.10 Dense, tussocky grassland provides excellent terrestrial habitat for newts, as is present within the development area at present. The aim is to recreate a similar type of grassland in Receptor Areas 1 and 6. Receptor Areas 2-5 already comprise good terrestrial habitat at present and as such, no grassland enhancement will be required. Grassland enhancement in Receptor Areas 1 and 6 will be achieved by reducing grazing intensity on the land and by sowing a wet grassland seed mix if required.

Log/brush piles

4.2.11 Log/brush piles and rubble piles are present throughout the site at present. These are likely to provide hibernation sites for newts. New hibernacula of a similar nature will be created within each of the receptor areas. In order to provide good hibernation opportunities for smooth newts they need to be quite densely packed and partially filled with soil to produce areas that remain frost free and at a fairly constant temperature throughout winter.

4.2.12 At least six log/brush piles will be created across the receptor areas. Wood from felled trees, rubble and soil could be used. They will measure between 2 and 3m in diameter and will be approximately 1m tall. Logs and rubble will be partially buried and then piled up to the desired height. Smaller substrate will then be deposited on top and allowed to fill gaps in the larger material. Soil will then be deposited over the top in order to secure the material in place and provide insulation, to ensure that the centre of the piles will be frost proof.

4.3 Preparation of Exclusion Areas

4.3.1 All smooth newts will need to be excluded from Areas A and B in advance of construction, once receptor sites are in favourable condition. This will be done through the use of exclusion fencing to form an impassable barrier to newts, with pitfall traps and artificial refugia placed alongside the fence to aid capture of newts. When moving around on land smooth newts will encounter the fence and will be forced to alter their path along the fence line, which can result in them

encountering either a pitfall trap and falling in, or an artificial refugia mat, under which they may take shelter. Pitfall traps and refugia will be checked daily, as described in Section 4.4.1.

- 4.3.2** Newt exclusion fencing should be installed under an ecological watching brief in the locations shown in Figures 5a and 5b. Pitfall traps (buckets) will be sunk into the ground at 15m intervals on the inside (construction zone side) of the fence and artificial refugia (eg. carpet tiles) will be placed every 15m inside the fencing, half-way between each pitfall trap (see Figures 5a and 5b).

4.4 Smooth Newt Translocation

- 4.4.1** A minimum of 15 consecutive days of trapping will take place in the months March to September, when minimum night time temperatures remain above 5°C. All refugia and pitfall traps will be checked daily, in the early morning. Smooth newts will be handled for as short a time as possible and will be transported in a bucket with a closable, breathable lid to the closest receptor area as soon as feasibly possible. When released, newts will be placed in areas of shelter, for example under rocks or logs or in long grass. This will reduce the likelihood of predation immediately following release.

- 4.4.2** During the capture period the number of newts caught will be plotted against time in order to calculate the rate of capture. Once fifteen days of capture have passed and provided three consecutive days of zero captures have passed, capturing can cease and pitfall traps can be closed. However, if after fifteen days newts are still being captured, or newts have been captured within the last three days, then capturing must continue until three consecutive clear days have passed. Days of unsuitable weather conditions (e.g. night time temperatures dropping below 5°C) will not be counted as a valid trapping day (although pitfall traps will always be checked daily).

- 4.4.3** At the same time as pitfall trapping (though preferably within the months of March to June), the ponds will also need to be cleared of newts. It is proposed to use bottle traps for the same 15 day period to ensure the maximum number of newts are removed from the pond. Bottle trapping would follow the guidelines for great crested newt in England (English Nature - now Natural England, 2001). At least one bottle trap per 2m of pond edge will be set each evening. Traps will be set each evening and checked and removed the following morning. Any smooth newts caught will be moved to the receptor sites, as detailed above for trapping. Once 15 consecutive trapping days have passed, with at least the last three days clear, the pond can be drained under a watching brief, with any remaining smooth newts being removed and translocated.

4.5 Fencing Removal and Site Clearance

- 4.5.1** Fencing will be maintained on site and checked weekly for breaches until all construction works are completed. This will stop newts translocated to the receptor areas and those already present in adjacent land from entering the construction zone.
- 4.5.2** Following completion of the trapping period, areas of suitable newt habitat on site will be strimmed down to ground level under an ecological watching brief and then a soil scrape will be undertaken under an ecological watching brief. If any additional newts are found they will be moved to the closest receptor area, as detailed above.

4.5.3 Following the completion of all construction activities the newt exclusion fencing will be removed under watching brief, during the newt active season, between March and October inclusive.

4.6 Construction Period

4.6.1 Fencing should be checked weekly to ensure that no breaches have occurred. Any damaged sections should be repaired or replaced immediately.

4.7 Diary of Works

4.7.1 A diary should be kept throughout the smooth newt mitigation works. The diary should contain a record of the number of smooth newts translocated, approximate age and sex of each translocated newt and the location of capture and release of each newt.

5. Management and Monitoring Plan

5.1 Receptor Site Management

Background

- 5.1.1** Habitat management on the receptor sites should be prepared in the form of a management plan to ensure that the receptor sites remain suitable for smooth newts in the long term. In practice, this will require annual management of ponds and the maintenance of surrounding coarse grassland, alongside log/brush piles for hibernation.

Pond Management

- 5.1.2** Aquatic vegetation should be removed from the centre of the ponds every other year to prevent the pond from drying out and becoming unsuitable for smooth newts. Vegetation growing from the banks should not be allowed to become too thick and encroach on open water. Plants such as common reed or bulrush should be cut back every other year for the same reason. This should be carried out in the months of November to February, when smooth newts should be inactive.

Grassland Management

- 5.1.3** Grassland areas should be mowed on a three yearly rotational basis, with some areas cut one year, other areas the next and so on, so that each area is cut every three years. This will ensure that there are areas that flower every year while preventing succession of the grassland into scrub. Cutting should be done in the months of November to February, when smooth newts should be inactive.

Log/Brush and Rubble Pile Management

- 5.1.4** Log/brush piles or rubble piles will only require management if they start to break up, in which case they should be replenished with similar materials. This should be carried out from March to October, when smooth newts are likely to be active and not occupying these habitat piles.

5.2 Receptor Area Monitoring

- 5.2.1** Following completion of the mitigation works, the receptor areas should be monitored to ensure that the population of smooth newts persists and to ensure that the habitat remains favourable for smooth newts.
- 5.2.2** Monitoring surveys will be undertaken in all receptor ponds in spring for the first three years following translocation. This will entail torchlight presence/absence surveys in the months of March to mid-June. A habitat assessment of each receptor area should be carried out in conjunction with this, to ensure that the habitat management plan is meeting its goals of maintaining optimum terrestrial habitat for smooth newts.

6. References

- 6.1.1 English Nature (2001). *Great Crested Newt Mitigation Guidelines*. English Nature, Peterborough.
- 6.1.2 RPS (2011). *Ulster Canal - Upper Lough Erne to Clones EIS*. RPS, Belfast.
- 6.1.3 NIEA (2011). *Newt Surveys NIEA Specific Requirements*. NIEA, Belfast.