HORIZON NUCLEAR POWER

WYLFA NEWYDD

ENERGY WORKING FOR BRITAIN

Wylfa Newydd Project

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HORIZON NUCLEAR POWER

ENERGY WORKING FOR BRITAIN

EUROPEAN PROTECTED SPECIES MITIGATION LICENCE METHOD STATEMENT BACKGROUND AND SUPPORTING INFORMATION: GREAT CRESTED NEWT

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Additional Requirements or Controls			
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Contents

A. Executive summary

Horizon Nuclear Power Wylfa Limited (Horizon) is planning to develop a new Nuclear Power Station on Anglesey as identified in the National Policy Statement for Nuclear Power Generation (EN-6) (Department of Energy and Climate Change, 2011). The Wylfa Newydd Project will require a number of applications to be made under different legislation to different regulators. Jacobs U.K. Limited (Jacobs) was commissioned to collect baseline data to inform the various applications, assessments and permits that will be submitted for approval to construct and operate the Power Station.

In order to determine likely environmental effects as a result of the construction, operation and decommissioning of the Power Station, Horizon has undertaken a suite of surveys between 2009 and 2017. This included surveys within a study area comprising the Wylfa Newydd Development Area and a buffer of 500m around its boundary.

The surveys recorded great crested newts (*Triturus cristatus*) (GCN) in three ponds within 250m of each other. Within these ponds there was one breeding pond with a peak count of seven GCN where eggs were recorded (Pond 11a), one pond with a peak count of one GCN where breeding was not confirmed (within the Cae Gwyn Site of Special Scientific Interest (SSSI)), and one pond where GCN presence was only established after GCN environmental (e)DNA was detected (Pond 11b). The combined metapopulation supported by these ponds was low (eight GCN in total).

The effect of the Wylfa Newydd Project on this population will comprise the loss of 0.3ha of terrestrial habitat within 250m of these ponds, and 7.6ha of terrestrial habitats between 250m and 500m, the majority of which is sub-optimal grazed improved grassland. Furthermore, in the absence of mitigation, there is the potential for mortality, injury and disturbance effects to individual GCN. These effects will primarily happen as habitats are cleared.

A European Protected Species Mitigation Licence (EPSML) is required to legalise the proposed works.

A translocation will be undertaken to prevent GCN being harmed during habitat clearance. The details of the proposed translocation are not within the scope of this document, and are detailed in full in the delivery statement sections. There is no requirement to deviate from standard best practice methods. The translocation will therefore include the trapping and translocation of GCN within 250 of the ponds supporting the metapopulation, and their release into suitable areas of retained habitat owned by Horizon adjacent to where they are caught. The land in which the GCN will be released will remain in the ownership of Horizon in perpetuity under suitable management to support GCN in their terrestrial phase.

Habitats between 250m and 500m would be hand searched by an ecologist during their clearance as it is considered that the distance from the supporting ponds, and the suboptimal habitat present, means the risk of GCN being present is sufficiently low to not require trapping.

The loss of 0.3ha of terrestrial habitat, which is also on the outer boundary of the 250m buffer around ponds that support GCN, and 7.6ha of terrestrial habitats between 250m and 500m, it is not considered likely to materially affect the low population of GCN present. Approximately 7ha of this areas of habitat loss will be replanted with coarse sward species-rich grassland in line with the provision of the Landscape and Habitat Management Strategy (Application Reference Number: 8.16). This habitat will provide foraging, commuting and refuge habitat for GCN. The

permanent loss of 1ha of land as a result of Main Construction will be offset by the provision of higher quality habitat than currently exists. The area GCN will be released into as part of the trapping and translocation proposals will not be grazed, allowing its development from a short-turf sward into rank grassland and scrub of greater value to GCN than the existing habitat.

Monitoring of the population in the three ponds will be undertaken to assess the efficacy of the proposed mitigation, and to inform the need for any remedial action.

B. Introduction

B.1 Background to activity/development

Horizon is planning to develop a new nuclear power station on Anglesey as identified in the National Policy Statement for Nuclear Power Generation (EN-6). National Policy Statements (NPSs) EN-1 and EN-6 set out and justify the need for new nuclear power, and particularly a new station at Wylfa. NPS EN-1 identifies the urgent need for new (and particularly low carbon) electricity generating capacity in the UK within 10 to 15 years, and NPS EN-6 asserts the urgent need for nuclear power stations and their role in contributing towards a secure and diverse energy mix.

Horizon is developing a new generation of nuclear power stations to help meet the United Kingdom's (UK's) need for stable and sustainable low carbon energy. Nuclear power can play a vital role in meeting the challenge of maintaining secure energy supplies for the UK, whilst also tackling the global threat of climate change by contributing to emissions reduction targets.

The Wylfa Newydd Project comprises the proposed Wylfa Newydd Generating Station, including the reactors, associated plant and ancillary structures and features, together with all of the development needed to support its delivery, such as highway improvements, worker accommodation and specialist training facilities.

This draft licence application covers the enabling works phase of the Wylfa Newydd Project in which habitats will be removed to facilitate construction works.

Currently, the terrestrial habitats within the Wylfa Newydd Development Area are dominated by agricultural land comprising improved grassland and poor semi-improved grassland. Other habitats present include isolated areas of gorse (*Ulex europaeus*) scrub, and pockets of marshy grassland associated with hollows and drainage features, including ponds. Additionally, the areas immediately surrounding the Existing Power Station to the south and east are predominantly conifer plantations dominated by pine species (*Pinus* spp.).

The approximate centre of the Wylfa Newydd Development Area is located at Ordnance Survey grid reference SH 3517 9258.

B.2 Full details of proposed works on site that are to be covered by the licence

This licence will cover habitat clearance as part of the habitat clearance. The actions required to achieve habitat clearance include:

- Vegetation clearance
  - targeted removal of vegetation, mostly above ground or to ground;
- Clearance of other features
  - targeted removal of above ground features e.g. gates, poles, etc.; and
  - clearance of walls and buildings to ground level.
- Remediation and management
  - management of vegetation after grazing ceases;

  - eradication/removal of invasive non-native species of plant (INNS) and soils with INNS contamination; and
  - species translocation from within the perimeter fence.
- Site establishment
  - security buildings (modular buildings) including a control room and gatehouse;
  - installation of perimeter fencing;
  - installation of security fencing for site compound area;
  - haul roads;
  - water course diversion; and,
  - construction of bat barns.

It is anticipated that habitat clearance will take approximately 24 months to complete.

B.3 Actions requiring licensing

The actions to clear habitats described in B.2 have the potential to affect GCN when in their terrestrial phase only. Translocation will therefore need to be completed to protect GCN from being killed or injured and to avoid any detriment to the maintenance of the GCN population at favourable conservation status in its natural range. The following actions will be licensable during translocation works:

- disturbance to animals in terrestrial habitats when exclusion fencing required for the translocation of GCN is installed;
- obstruction of access to a structure or place used for shelter or protection by a GCN in terrestrial habitats as they are excluded from the Wylfa Newydd Development Area;
- capturing, taking and transporting GCN during translocation to where they are released; and
- damaging and destruction of resting places (terrestrial habitats) used by GCN.

It is not predicted that any GCN will be killed or injured during the works completed under the translocation works covered by the licence.

C. Survey and site assessment

C.1 Existing information on great crested newts

Background data searches were requested in 2013 and in 2015 by Jacobs (on behalf of Horizon). This information was requested from Cofnod (the North Wales Environmental Information Service) and included all legally protected and notable species records, including GCN, within 2.5km of the centre of the Wylfa Newydd Development Area. The background data searches did not return any records of GCN.

A Phase 1 habitat survey was completed in 2013 (Jacobs, 2013a), and identified suitable habitat for breeding, foraging and hibernating GCN in the Wylfa Newydd Development Area and 500m buffer zone. A botanical survey was also completed within the Cae Gwyn SSSI (Jacobs, 2013b), during which a single GCN was recorded in terrestrial habitats. This was therefore not during GCN surveys but did influence the scope of future surveys.

C.2 Statutory sites notified for the species (SSSIs or SACs) within 10km

A search using freely available online sources found that there are no SSSIs or Special Areas of Conservation which include GCN as a qualifying feature within 10km of the Wylfa Newydd Development Area. There are therefore no pathways for interaction between the metapopulation affected by the works covered under this licence and statutory designated sites for conservation notified for GCN.

C.3 Objectives of the survey

The objective of the surveys was to determine presence/absence of all populations of GCN likely to be affected by works within the Wylfa Newydd Development Area, an estimate of population size and their usage of site (e.g. breeding, hibernation, and foraging).

C.4 Scaled plan/map of survey area

See overleaf.

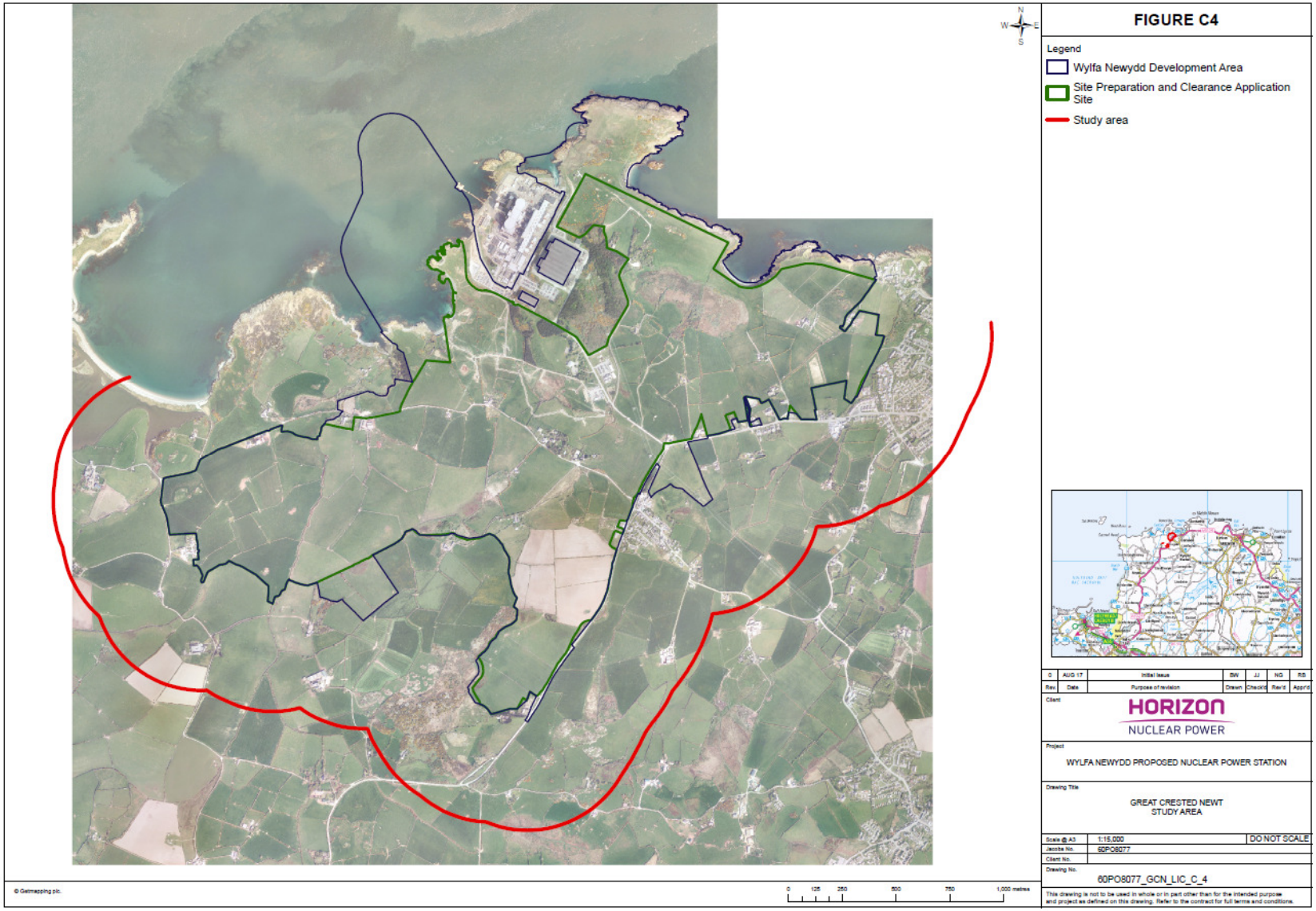

Figure C4: Site plan

C.5 Site/habitat description

The Wylfa Newydd Development Area comprises the indicative areas of land and sea, including the Power Station Site, the Wylfa National Policy Statement Site and the surrounding areas that would be used for the construction and operation of the Wylfa Newydd Generating Station as shown in figure C4. It is bounded to the north by coast and the existing Magnox power station (the Existing Power Station). To the east, it is separated from Cemaes by a narrow corridor of agricultural land. The A5025 and residential properties define part of the south-east boundary, with a small parcel of land spanning the road to the north-east of Tregele. To the south and west, the Wylfa Newydd Development Area abuts agricultural land, and to the west it adjoins the coastal hinterland. This area is approximately 299ha. Within the Wylfa Newydd Development Area, approximately 276ha would be cleared.

The Wylfa Newydd Development Area and a 500m buffer around its boundary have been surveyed extensively to determine the ecological baseline, as described by Jacobs (2013a and 2013b), using Phase 1 habitat survey and national vegetation classification methodologies.

As described in B.1, the Wylfa Newydd Development Area is dominated by low-quality agricultural land comprising improved grassland and poor semi-improved grassland. Other habitats present include isolated areas of scrub, marshy grassland, ponds and conifer plantations. The field boundaries within the Wylfa Newydd Development Area and surrounding area are generally traditional clawdd walls: earth banks faced with stone, often colonised with gorse and hawthorn (*Crataegus monogyna*) scrub. Where the banks have collapsed, the vegetation more closely resembles hedges. Management of the Wylfa Newydd Development Area has historically been for the purposes of agriculture, mainly cow and sheep grazing, with some fields used to grow grass which is cut for silage. In general, the quality of terrestrial habitats for GCN is poor, with the most suitable habitats being rank grassland and riparian vegetation mainly limited to within 50m of ponds.

C.6 Field survey(s)

C.6.1 **Methods**

Initial assessments of the ponds' suitability to support GCN were undertaken using the Habitat Suitability Index (HSI) methodology developed by Oldham *et al.* (2000). In addition to this method, factors such as the presence of pollution e.g. oil or eutrophication, and excessive poaching and disturbance by livestock was used to determine whether a pond may support breeding GCN. Those ponds found to be suitable were then surveyed using standard presence or likely absence methods described below.

Presence or likely absence surveys were undertaken according to standard methods (English Nature, 2001; Froglife, 2001; and Langton *et al.*, 2001). Methods included the deployment of bottle traps, egg searching, netting, and torching using torches with a minimum of 1,000,000 candle power. Where possible, a minimum of three survey methods were applied at each pond or ditch. Reasons for not using three techniques included:

- Ponds that were too shallow to bottle trap or net;
- Night-time temperatures were predicted to drop below 5°C during the night, thereby preventing bottle trapping;

- Ponds that had no vegetation to search for the presence of GCN eggs; and
- Rain during surveys preventing effective torching.

In all instances where three techniques were not used in any given year, the pond was resurveyed in subsequent surveys to provide robust survey results.

The four visits required to determine likely absence were completed in all ponds where possible[1], with an additional two surveys for ponds where GCN were confirmed, in order to provide a population estimate. Population estimates were based on the maximum count of adult GCN on a single survey visit, using a single survey method.

The collection of water for testing for the presence of GCN environmental DNA (eDNA) was also used as a method for detecting GCN in 2016 and 2017. This survey method was completed using methods described by Biggs *et al.* (2014).

The surveys were completed at the correct time of year for GCN surveys i.e. between mid-March and June, with at least two surveys of each pond, or three where GCN were detected, being completed between mid-April and mid-May to coincide with the peak of newt breeding activity. The eDNA surveys were completed in the survey window for this approach, between 15 April and 30 June.

C.6.2 **Surveyors**

All surveys of ponds were conducted by experienced surveyors and led by surveyors who hold licences granted by Natural Resources Wales (NRW) to survey for the species (see Appendix 1). The eDNA sampling was undertaken by surveyors trained in using the technique.

C.6.3 **Surveys completed each year**

Great crested newt pond HSI scoping and presence or likely absence surveys took place within the Wylfa Newydd Development Area each year between 2010 and 2013 (Arup, 2012a, 2012b, 2013a and 2013b).

Great crested newt pond HSI scoping and presence or likely absence surveys took place within the Wylfa Newydd Development Area and a 500m buffer zone around its boundary in 2014 (Jacobs, 2014).

In 2015, HSI scoping of ponds took place for ponds to the south of the Wylfa Newydd Development Area where, in previous years, access had been denied. The ponds identified as having potential to support breeding GCN were then surveyed in 2016 using presence or likely absence techniques and population estimates (Appendix D9-9 Great Crested Newt Technical Summary Report. Application Reference Number: 6.4.42). In addition to this, water from each suitable pond in this area was tested for the presence of GCN eDNA. A water sample from Pond 7 (within the Wylfa Newydd Development Area) was also taken as it had not been possible to complete a robust survey using four methods in previous years.

In June 2016 there were also water samples taken for eDNA testing of three ponds within the Wylfa Newydd Development Area as part of the proposed A5025 highways improvement works (Pond 30, 37 and 38) (Appendix D9-9. Application Reference Number: 6.4.42).

[1] A number of ponds did not have four surveys as they dried out during the survey period.

In 2017 surveys of all ponds within the Wylfa Newydd Development Area and surrounding 500m (access permitting) were repeated (Appendix D9-22. Great Crested Newt Technical Summary Report 2017. Application Reference Number: 6.4.55), using HSI surveys followed by eDNA testing of water samples from ponds found to be suitable to potentially support breeding GCN. Surveying using bottle trapping, torching and egg searching were also completed at Pond 18, 28 and 37.

C.7 Survey results

All survey information pertinent to this licence application is shown in table 3 within Appendix 1 of this document, and figure C7. Due to the volume of data gathered, table 3 does not contain meta-data e.g. weather, presence of non-native plant species information or full HSI scores. These data are available in referenced documents for each years' survey.

Surveys of ponds completed in 2010, 2011, 2012, 2013, and 2014 recorded no GCN. There were two ponds that could not be accessed during the surveys. These were Pond 15 and 16. The effect that this limitation may have is discussed in Section C.8.

Surveys in 2016 recorded evidence of GCN in four ponds 11a, 11b, 12 (Cae Gwyn SSSI) and Pond 37, as summarised in table 1.

Surveys in 2017 did not record GCN in any ponds, including Pond 37 within the Wylfa Newydd Development Area.

Pond	Max count via population estimate surveys	eDNA result
11a	7	Positive
11b	0	Positive
12 (Cae Gwyn SSSI)	1	Negative
37	Not surveyed for presence or likely absence	Positive

Table 1: Summary of ponds where GCN were detected.

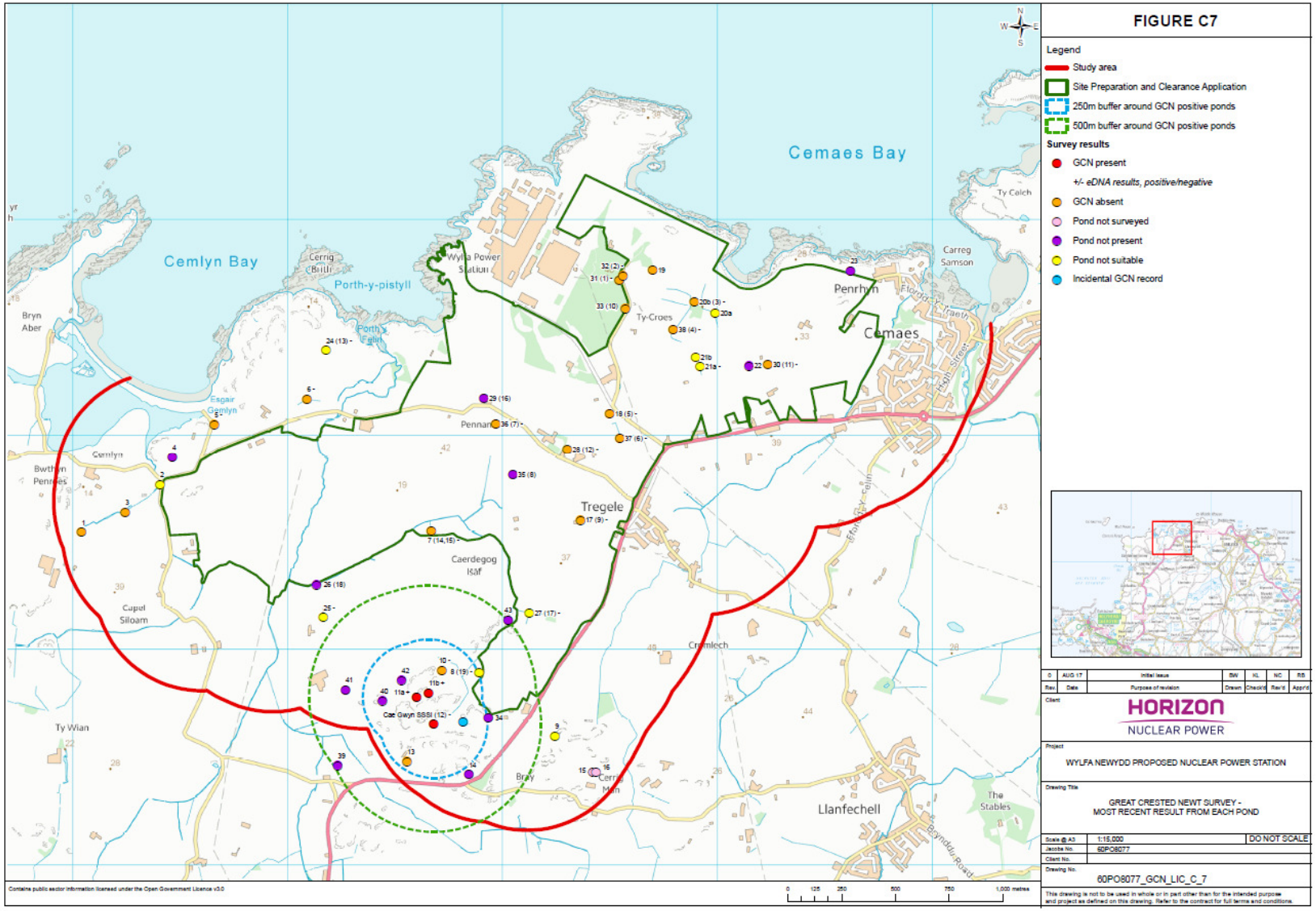

Figure C7: Survey Results

C.8 Interpretation/evaluation of survey results

Pond 15 and 16 could not be accessed for the purposes of survey. However, this is not considered to be a limitation to the assessment of effects that works within the Wylfa Newydd Development Area may have on GCN. This assessment is based on the presence of the A5025 which separates areas within the Wylfa Newydd Development Area, from populations of GCN that may be present in habitats around Pond 15 or 16. This is due to the A5025 being a busy, wide road with curbs, drains and dry-stone walls that combine to act as a significant barrier to dispersal of GCN. It is therefore highly unlikely that any GCN present in the areas of habitat surrounding Pond 15 or 16 would cross the A5025 and be present within the Wylfa Newydd Development Area. Similarly, the barrier formed by the A5025 would prevent populations of GCN within the Wylfa Newydd Development Area from using habitats around Pond 15 or 16. On this basis, not having data on potential GCN populations south of the A5025 is not considered to be a limitation.

Surveys in 2017 did not record GCN in Pond 37 despite eDNA sampling and six visits using standard techniques (torching, bottle trapping and egg searching). It is therefore considered that the 2016 eDNA result indicating GCN presence was erroneous and GCN are absent from this pond.

The 2017 surveys omitted Ponds 11a, 11b and 12 (Cae Gwyn SSSI) where, for the purposes of this document, it is assumed that the population recorded in 2016 has not changed.

The survey results from 2016 showed that there were three ponds in which GCN had been present in during the 2016 breeding season. This is referred to as the Cae Gwyn SSSI metapopulation in the remainder of this draft licence application.

The Cae Gwyn SSSI metapopulation includes Pond 11a where a maximum count of seven individuals was recorded, together with eggs, and standing water areas of Cae Gwyn SSSI where there was a maximum count of one. Environmental DNA was also detected in Pond 11a and 11b, but not in Cae Gwyn SSSI itself. These data suggest that the Cae Gwyn SSSI metapopulation comprises a small population of GCN that move between at least three different waterbodies. The apparent discrepancy between eDNA results and presence or likely absence survey results is considered to be a product of the small populations present, and is not a limitation for assessing likely impacts on the Cae Gwyn SSSI metapopulation.

It is assessed that GCN could be present in all suitable habitats within 500m of ponds where they were detected, although based on the numbers present, this is likely to reduce rapidly with increasing distances from ponds. It is therefore likely that only habitats in the Wylfa Newydd Development Area that are within 250m of ponds will support sheltering or hibernating GCN in their terrestrial phase.

D. Impact assessment

D.1 Short-term impacts: disturbance

In the absence of any mitigation measures there is the potential for disturbance impacts on GCN as 0.3ha of habitat within 250m of ponds is cleared during habitat clearance. The disturbance risk within the 7.6ha of principally grazed improved grassland between 250m and

500m from the ponds is considered to be significantly lower given the sub-optimal quality of the habitat for foraging and sheltering GCN. These effects will occur as habitats are cleared by plant machinery as features that support sheltering or potentially hibernating GCN are dismantled and removed, exposing them to the risk of predation and killing or injury.

No disturbance effects on GCN in their breeding habitat are predicted.

D.2 Long-term impacts: site modification

There will be no modification of habitats within 250m of the Cae Gwyn SSSI metapopulation breeding ponds, with the exception of that described in section D.3.

D.3 Long-term impacts: site loss

There would be the loss of 0.3ha of terrestrial habitat within 250m of ponds that support GCN from the Cae Gwyn SSSI metapopulation, and 7.6ha of terrestrial habitats lost within the 250m to 500m zone from breeding ponds. This loss would be an adverse impact on the population, caused by the installation of fencing and subsequent removal of all features with the potential to support GCN during their terrestrial phase from this area.

The impact would last for the duration of Main Construction of the Wylfa Newydd Development Area (WNDA) Development but, in line with the provision of the Landscape and Habitat Management Strategy (Application Reference Number: 8.16), approximately 7ha of planting would be reinstated that would be suitable for GCN, once exclusion fencing was removed. The remaining 1ha would be buildings and hardstanding associated with the Visitors Centre.

The Cae Gwyn SSSI metapopulation is isolated from other populations by sub-optimal habitats to the north (as evidenced by lack of records) and the A5025 to the south. The loss of this area of terrestrial habitat will therefore only affect the conservation status of the Cae Gwyn SSSI metapopulation and GCN at a 2km scale, as it is extremely unlikely the metapopulation feeds into a wider population.

D.4 Long-term impacts: fragmentation and isolation

Fragmentation and isolation impacts are not predicted for the Cae Gwyn SSSI metapopulation. This is due to only a small area being affected on the eastern periphery of the core foraging habitats within 250m of breeding ponds, and only sub-optimal habitats being affected between 250m and 500m.

D.5 Post-development interference impacts

There are not predicted to be any significant post-development mortality interference impacts on the Cae Gwyn SSSI metapopulation. This is due to effects being limited to 1ha on the eastern periphery of habitat between a 250m to 500m radius of the Cae Gwyn SSSI metapopulation breeding ponds. In this area, habitats will be changed in part from agricultural uses to a built environment within the curtilage of the Visitors Centre and, whilst it is recognised that this may contain hazards such as gulley pots, the likelihood of GCN reaching them is remote.

It is also assessed that interference from disturbance will be unchanged from that currently experienced by GCN in the Cae Gwyn SSSI metapopulation. There are currently no plans for

additional management of the SSSI and land ownership of areas used by the Cae Gwyn SSSI metapopulation will remain unchanged.

D.6 Predicted scale of impact

In the absence of any mitigation measures, the scale of predicted impacts is provided in Table 2, and based on guidance from English Nature (2001), whereby the most significant impact (development effect) for each habitat feature is provided.

Table 2 Summary of predicted scale of impact in the absence of mitigation

Habitat feature	Development effect	Low scale of impacts	Medium scale of impact	High scale of impact
Intermediate terrestrial habitat (approximately 50-250m from breeding pond)	Destruction		X	
Distant terrestrial habitat (>250m from breeding pond)	Destruction	X		

Table 2 shows that there are development effects which will have a medium scale of impact. However, in-line with English Nature Guidance (2001), determining the combined effect should primarily be based on professional judgement.

The medium scale impact caused by the destruction of habitats within 250m of breeding ponds indicated in Table 2 is not assessed as being appropriate. This is due to the size of the habitats that will be lost being small (0.3ha) compared to the habitats present in the wider environment. Secondly, the habitats present comprise mostly of short-grazed improved grassland. This habitat type is of extremely limited value to GCN for foraging, and it offers very little shelter; more suitable habitat would be taller more rank grassland sward or scrub. The habitats would therefore only generally be used by commuting GCN, which is also unlikely as evidenced by the lack of GCN ponds within likely commuting range. Whilst there is a wall present which could provide shelter, in the context of the other available habitats within the rest of the 250m radius, this would comprise a very small proportion of the overall resource available.

Given the sub-optimal quality of habitat within 250m to 500m of the Cae Gwyn metapopulation ponds, a low scale of impact is predicted following the loss of 7.6ha of terrestrial habitat.

Based on the highest scale impact likely, and in the absence of mitigation, a low scale negative impact is predicted at the site. Due to the isolation of the metapopulation present (discussed above), is it also assessed as being highly unlikely that effects on GCN conservation status will be possible beyond a site level, with a 2km radius being the maximum at which the conservation status of the species will be affected. As the number of ponds within the metapopulation is low, the size of the metapopulation is small and the adjacent habitat is of low suitability, it is considered unlikely that this metapopulation makes a significant contribution to favourable conservation station at a county level (Russell *et al*., 2017).

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F. Appendix 1

Table 3 Summary of GCN presence or likely absence surveys from all years (alternative pond names provided in brackets)

Pond No.	2010	2011	2012	2013	2014	2015/2016	2017
1	Not surveyed	Not surveyed	Not surveyed	Not surveyed	HSI 0.55 Jonathan Jackson and Barney Scott Torch/net/trap/egg search 15/05/14, 27/05/14, 29/05/14 (dried out) Zero GCN	Not surveyed	Not surveyed
2	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Jonathan Jackson 25/03/14 Flowing ditch – scoped out	Not surveyed	Not surveyed
3	Not surveyed	Not surveyed	Not surveyed	Not surveyed	HSI 0.28 Barney Scott Torch/net/trap/egg search 27/05/14, 29/05/14 (dried	Not surveyed	Not surveyed

					out) Zero GCN		
4	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Jonathan Jackson 25/03/14 Not holding water – scoped out	Not surveyed	Not surveyed
5	Not surveyed	Not surveyed	Not surveyed	Not surveyed	HSI 0.66 Jonathan Jackson and Barney Scott Torch/net/trap/egg search 07/04/14, 28/04/14, 13/05/14, 27/05/14 Zero GCN	Not surveyed	Jamie Glossop eDNA 18/04/17 Negative
6	Not surveyed	Not surveyed	Not surveyed	Not surveyed	HSI 0.9 Jonathan Jackson and Barney Scott Torch/net/trap/egg search 07/04/14, 28/04/14, 13/05/14, 28/05/14 Zero GCN	Not surveyed	Jamie Glossop eDNA 18/04/17 Negative

7	Not surveyed	Not surveyed	(Pond 14 and 15) Sam Dyer and Kate Williamson Torch/egg search 24/04/12, 03/05/12, 15/05/12, 22/05/12 Zero GCN	(Pond 14 HSI 0.45 and 15 HSI 0.47) Sam Dyer and Kate Williamson Torch/egg search 24/04/13, 08/05/13, 16/05/13, 21/05/13 Zero GCN	Not surveyed	Barney Scott eDNA 09/05/16 Negative – GCN absent	Jamie Glossop eDNA 18/04/17 Negative
8	Not surveyed	Not surveyed	Not surveyed	(Pond 19) Sam Dyer and Kate Williamson Torch/egg search 24/04/13, 08/05/13, 16/05/13, 21/05/13 Zero GCN	Jonathan Jackson 26/03/14 Flowing ditch – scoped out	Not surveyed	Jamie Glossop eDNA 18/04/17 Negative
9	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Jonathan Jackson 26/03/14 Unsuitable poached depression in field – scoped out	Not surveyed	Not surveyed
10	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Barney Scott	Not surveyed

						eDNA 09/05 Negative – GCN absent Torch/net/trap/egg search 09/05/16, 11/05/16 (dried out) Zero GCN	
11a	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Barney Scott eDNA 09/05 Positive – GCN present Torch/net/trap/egg search 09/05/16, 11/05/16, 16/05/16, 18/05/16, 06/06/16, 08/06/16 Max count seven GCN	Not surveyed
11b	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Barney Scott	Not surveyed

						eDNA 09/05 Positive – GCN present Torch/net/trap/egg search 09/05/16, 11/05/16, 16/05/16, 18/05/16 Zero GCN	
12	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Cae Gwyn SSSI Not surveyed	Cae Gwyn SSSI Barney Scott eDNA 09/05 Negative – GCN absent Torch/net/trap/egg search 10/05/16, 12/05/16, 16/05/16, 18/05/16, 06/06/16, 08/06/16 Max count one GCN	Not surveyed

13	Not surveyed	Not surveyed	Not surveyed	Not surveyed	HSI 0.55 Jonathan Jackson and Barney Scott Torch/net/trap/egg search 14/04/14, 27/04/14, 29/05/14 (dried out) Zero GCN	Not surveyed	Not surveyed
14	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Barney Scott 10/05/16 No evidence of a pond – scoped out	Not surveyed
15	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Not surveyed – could not be accessed	Not surveyed	Not surveyed
16	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Not surveyed – could not be accessed	Not surveyed	Not surveyed
17	(Pond 9) Sam Dyer and Kate Walsh Torch 26/04/10,	(Pond 9) Sam Dyer and Kate Walsh Trap 24/04/11,	(Pond 9) Sam Dyer and Kate Williamson Trap/egg search 24/04/12,	(Pond 9) Sam Dyer and Kate Williamson Trap/egg search 23/04/13,	HSI 0.67 Jonathan Jackson and Barney Scott Torch/trap/egg search	Not surveyed	Jamie Glossop eDNA 18/04/17 Negative

	29/04/10, 06/05/10, 11/05/10 Zero GCN	01/06/11 Zero GCN	03/05/12, 15/05/12, 22/05/12 Zero GCN	07/05/13, 16/05/13, 21/05/13 Zero GCN	08/04/14, 30/04/14, 12/05/14, 15/05/14 Zero GCN		
18	(Pond 5) Sam Dyer and Kate Walsh No open water 26/04/10, 29/04/10, 06/05/10, 11/05/10 Zero GCN	(Pond 5) No open water, not surveyed Zero GCN	(Pond 5) Sam Dyer and Kate Williamson Torch 24/04/12, 03/05/12, 15/05/12, 22/05/12 Zero GCN	(Pond 5) Sam Dyer and Kate Williamson Trap/torch 23/04/13, 07/05/13, 16/05/13, 21/05/13 Zero GCN	HSI 0.74 Jonathan Jackson and Barney Scott Torch/trap/egg search 08/04/14, 29/04/14, 12/05/14, 15/05/14 Zero GCN	Not surveyed	Jamie Glossop eDNA 18/04/17 Negative Jamie Glossop, Lizzie Slingsby, Alex Hatton and Becky Clews-Roberts Torch/trap/egg search 24/04/17 02/05/17 08/05/17 22/05/17 08/06/17 14/06/17 Zero GCN
19	Not surveyed	Not surveyed	Not surveyed	Not surveyed	HSI 0.63 Jonathan Jackson and Barney Scott Torch/net/trap/egg	Not surveyed	Not surveyed

					search 09/04/14, 30/04/14, 13/05/14, 28/05/14 Zero GCN		
20a	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Jonathan Jackson 26/03/14 Flowing ditch – scoped out	Not surveyed	(Ditch 2) Jamie Glossop eDNA 18/04/17 Negative
20b	(Pond 3) Sam Dyer and Kate Walsh Torch 26/04/10, 29/04/10, 06/05/10, 11/05/10 Zero GCN	(Pond 3) Sam Dyer and Kate Walsh Torch 05/04/11, 19/04/11, 24/04/11, 01/06/11 Zero GCN	(Pond 3 Sam Dyer and Kate Williamson Trap/torch/egg search 24/04/12, 03/05/12, 15/05/12, 22/05/12 Zero GCN	(Pond 3) Sam Dyer and Kate Williamson Trap/torch/egg search 23/04/13, 07/05/13, 16/05/13, 21/05/13 Zero GCN	HSI 0.54 Jonathan Jackson and Barney Scott Torch/trap/egg search 10/04/14, 01/05/14, 14/05/14, 28/05/14 Zero GCN	Not surveyed	Jamie Glossop eDNA 18/04/17 Negative
21a	Not surveyed	Not surveyed	Not surveyed	Not surveyed	HSI 0.21 Jonathan Jackson 26/03/14 Unsuitable polluted, poached	Not surveyed	Not surveyed

					depression in field – scoped out		
21b	Not surveyed	Not surveyed	Not surveyed	Not surveyed	HSI 0.3 Jonathan Jackson 26/03/14 Unsuitable polluted, poached depression in field – scoped out	Not surveyed	Not surveyed
22	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Jonathan Jackson 26/03/14 No evidence of a pond – scoped out	Not surveyed	Not surveyed
23	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Jonathan Jackson 26/03/14 Flowing pool below outfall pipe – scoped out	Not surveyed	Not surveyed
24	Not surveyed	Not surveyed	(Pond 13) Sam Dyer and Kate Williamson Torch/egg search 24/04/12, 03/05/12, 15/05/12,	(Pond 13) Sam Dyer and Kate Williamson Torch/egg search 24/04/13, 08/05/13, 16/05/13,	HSI 0.3 Jonathan Jackson 25/03/14 Shallow polluted and poached depression in field – scoped out	Not surveyed	Jamie Glossop eDNA 18/04/17 Negative

			22/05/12 Zero GCN	21/05/13 Zero GCN			
25	Not surveyed	Not surveyed	Not surveyed	Not surveyed	HSI 0.44 Jonathan Jackson 25/03/14 Small polluted and polluted with 100% turbidity – scoped out	Not surveyed	Jamie Glossop eDNA 18/04/17 Negative
26	Not surveyed	Not surveyed	Not surveyed	(Pond 18) Sam Dyer and Kate Williamson Torch 24/04/13, 08/05/13, 16/05/13, 21/05/13 Zero GCN	Jonathan Jackson 25/03/14 Flowing ditch – scoped out	Not surveyed	Not surveyed
27	Not surveyed	Not surveyed	Not surveyed	(Pond 17) Sam Dyer and Kate Williamson Torch/egg search 24/04/13, 08/05/13, 16/05/13, 21/05/13	Jonathan Jackson 26/03/14 Flowing ditch – scoped out	Not surveyed	Jamie Glossop eDNA 18/04/17 Negative

				Zero GCN			
28	Not surveyed	(Pond 12) Sam Dyer and Kate Walsh 05/04/11 No open water – scoped out	Not surveyed	(Pond 12) Sam Dyer and Kate Williamson Torch/egg search 23/04/13, 07/05/13, 16/05/13, 21/05/13 Zero GCN	HSI 0.47 Jonathan Jackson and Barney Scott Torch/trap/egg search 09/04/14, 29/04/14, 12/05/14, 15/05/14 Zero GCN	Not surveyed	Jamie Glossop eDNA 18/04/17 Negative Jamie Glossop, Lizzie Slingsby, Alex Hatton and Becky Clews-Roberts Torch/trap/egg search 24/04/17 02/05/17 08/05/17 22/05/17 08/06/17 14/06/17 Zero GCN
29	Not surveyed	Not surveyed	Not surveyed	(Pond 16) Sam Dyer and Kate Williamson Torch/egg search 24/04/13, 08/05/13, 16/05/13, 21/05/13	Jonathan Jackson 25/03/14 No evidence of a pond – scoped out	Not surveyed	Not surveyed

				Zero GCN			
30	Not surveyed	(Pond 11) Sam Dyer and Kate Walsh Torch 05/04/11, 19/04/11, 24/04/11, 01/06/11 Zero GCN	(Pond 11) Sam Dyer and Kate Williamson Torch/egg search 24/04/12, 03/05/12, 15/05/12, 22/05/12 Zero GCN	(Pond 11) Sam Dyer and Kate Williamson Torch/egg search 24/04/13, 08/05/13, 16/05/13, 21/05/13 Zero GCN	HSI 0.62 Jonathan Jackson and Barney Scott Torch/trap/egg search 09/04/14, 29/04/14, 12/05/14, 15/05/14 Zero GCN	Barney Scott eDNA 21/06/16 Negative – GCN absent	Jamie Glossop eDNA 18/04/17 Negative
31	(Pond 1) Sam Dyer and Kate Walsh Torch 26/04/10, 29/04/10, 06/05/10, 11/05/10 Zero GCN	(Pond 1) Sam Dyer and Kate Walsh Torch 05/04/11, 19/04/11, 24/04/11, 01/06/11 Zero GCN	(Pond 1) Sam Dyer and Kate Williamson Torch/egg search 24/04/12, 03/05/12, 15/05/12, 22/05/12 Zero GCN	(Pond 1) Sam Dyer and Kate Williamson Trap/torch/egg search 23/04/13, 07/05/13, 16/05/13, 21/05/13 Zero GCN	Not surveyed	Not surveyed	Jamie Glossop eDNA 18/04/17 Negative
32	(Pond 2) Sam Dyer and Kate Walsh Torch 26/04/10,	(Pond 2) Sam Dyer and Kate Walsh Torch 05/04/11,	(Pond 2) Sam Dyer and Kate Williamson Torch/egg search 24/04/12,	(Pond 2) Sam Dyer and Kate Williamson Trap/torch/egg search	Not surveyed	Not surveyed	Jamie Glossop Pond dry – Not surveyed 18/04/17

	29/04/10, 06/05/10, 11/05/10 Zero GCN	19/04/11, 24/04/11, 01/06/11 Zero GCN	03/05/12, 15/05/12, 22/05/12 Zero GCN	23/04/13, 07/05/13, 16/05/13, 21/05/13 Zero GCN			
33	(Pond 10) Sam Dyer and Kate Walsh Torch 26/04/10, 29/04/10, 06/05/10, 11/05/10 Zero GCN	(Pond 10) Sam Dyer and Kate Walsh Torch 05/04/11, 19/04/11, 24/04/11, 01/06/11 Zero GCN	(Pond 10) Sam Dyer and Kate Williamson Torch/egg search 24/04/12, 03/05/12, 15/05/12, 22/05/12 Zero GCN	(Pond 10) Sam Dyer and Kate Williamson Trap/torch/egg search 23/04/13, 07/05/13, 16/05/13, 21/05/13 Zero GCN	Not surveyed	Not surveyed	Not surveyed
34	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Jonathan Jackson 02/09/15 No evidence of a pond – scoped out	Not surveyed
35	(Pond 8) Sam Dyer and Kate Walsh Trap 26/04/10, 29/04/10, 06/05/10,	(Pond 8) Sam Dyer and Kate Walsh Torch 05/04/11, 19/04/11, 24/04/11,	(Pond 8) Not surveyed	(Pond 8) Not surveyed	Jonathan Jackson 25/03/14 No evidence of a pond – scoped out	Not surveyed	Not surveyed

	11/05/10 Zero GCN	01/06/11 Zero GCN					
36	(Pond 7) Sam Dyer and Kate Walsh Bottle trap 26/04/10, 29/04/10, 06/05/10, 11/05/10 Zero GCN	(Pond 7) Sam Dyer and Kate Walsh Bottle trap 24/04/11, 01/06/11 Zero GCN	(Pond 7) Sam Dyer and Kate Williamson Trap/egg search 24/04/12, 03/05/12, 15/05/12, 22/05/12 Zero GCN	(Pond 7) Sam Dyer and Kate Williamson Trap/torch/egg search 24/04/13, 08/05/13, 16/05/13, 21/05/13 Zero GCN	Not surveyed	Not surveyed	Jamie Glossop eDNA 18/04/17 Negative
37	(Pond 6) Sam Dyer and Kate Walsh No open water – scoped out 26/04/10, 29/04/10, 06/05/10, 11/05/10 Zero GCN	(Pond 6) No open water – scoped out Zero GCN	(Pond 6) No open water – scoped out Zero GCN	(Pond 6) No open water – scoped out Zero GCN	Not surveyed	Barney Scott eDNA 21/06/16 Positive – GCN present	Jamie Glossop eDNA 18/04/17 Negative Jamie Glossop, Lizzie Slingsby, Alex Hatton and Becky Clews-Roberts Torch/trap/egg search 24/04/17 02/05/17 08/05/17 22/05/17

							08/06/17 14/06/17 Zero GCN
38	(Pond 4) Sam Dyer and Kate Walsh Torch/trap 26/04/10, 29/04/10, 06/05/10, 11/05/10 Zero GCN	(Pond 4) Sam Dyer and Kate Walsh Trap 24/04/11, 01/06/11 Zero GCN	(Pond 4) Sam Dyer and Kate Williamson Torch/trap/egg search 24/04/12, 03/05/12, 15/05/12, 22/05/12 Zero GCN	(Pond 4) Sam Dyer and Kate Williamson Trap/torch/egg search 23/04/13, 07/05/13, 16/05/13, 21/05/13 Zero GCN	Not surveyed	Barney Scott eDNA 20/06/16 Negative – GCN absent	Jamie Glossop eDNA 18/04/17 Negative
39	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Jonathan Jackson 02/09/15 No evidence of a pond – scoped out	Not surveyed
40	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Barney Scott 10/05/16 No evidence of a pond – scoped out	Not surveyed
41	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Jonathan Jackson 02/09/15 No evidence of a	Not surveyed

						pond – scoped out	
42	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Barney Scott 10/05/16 No evidence of a pond – scoped out	Not surveyed
43	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Not surveyed	Barney Scott 10/05/16 No evidence of a pond – scoped out	Not surveyed

HORIZON NUCLEAR POWER

ENERGY WORKING FOR BRITAIN

EUROPEAN PROTECTED SPECIES MITIGATION LICENCE METHOD STATEMENT DELIVERY INFORMATION: GREAT CRESTED NEWT

Mitigation, Compensation and Monitoring

DCRM Ref Number: WN034-JAC-PAC-REP-00146

Additional Requirements or Controls			
LISTED READERS ONLY		LEGALLY PRIVILEGED	

Comments:

Contents

E. Works to be undertaken

E.1 Great Crested Newt capture and exclusion

Great crested newts (GCN) in impacted suitable habitat within 250m of ponds 11a, 11b and 12 (Cae Gwyn SSSI metapopulation) will be trapped and translocated using standard techniques as specified in the *Great Crested Newt Mitigation Guidelines* (*GCNMG*) (English Nature, 2001). There are no GCN ponds or any other aquatic habitat within the area of suitable habitat impacted.

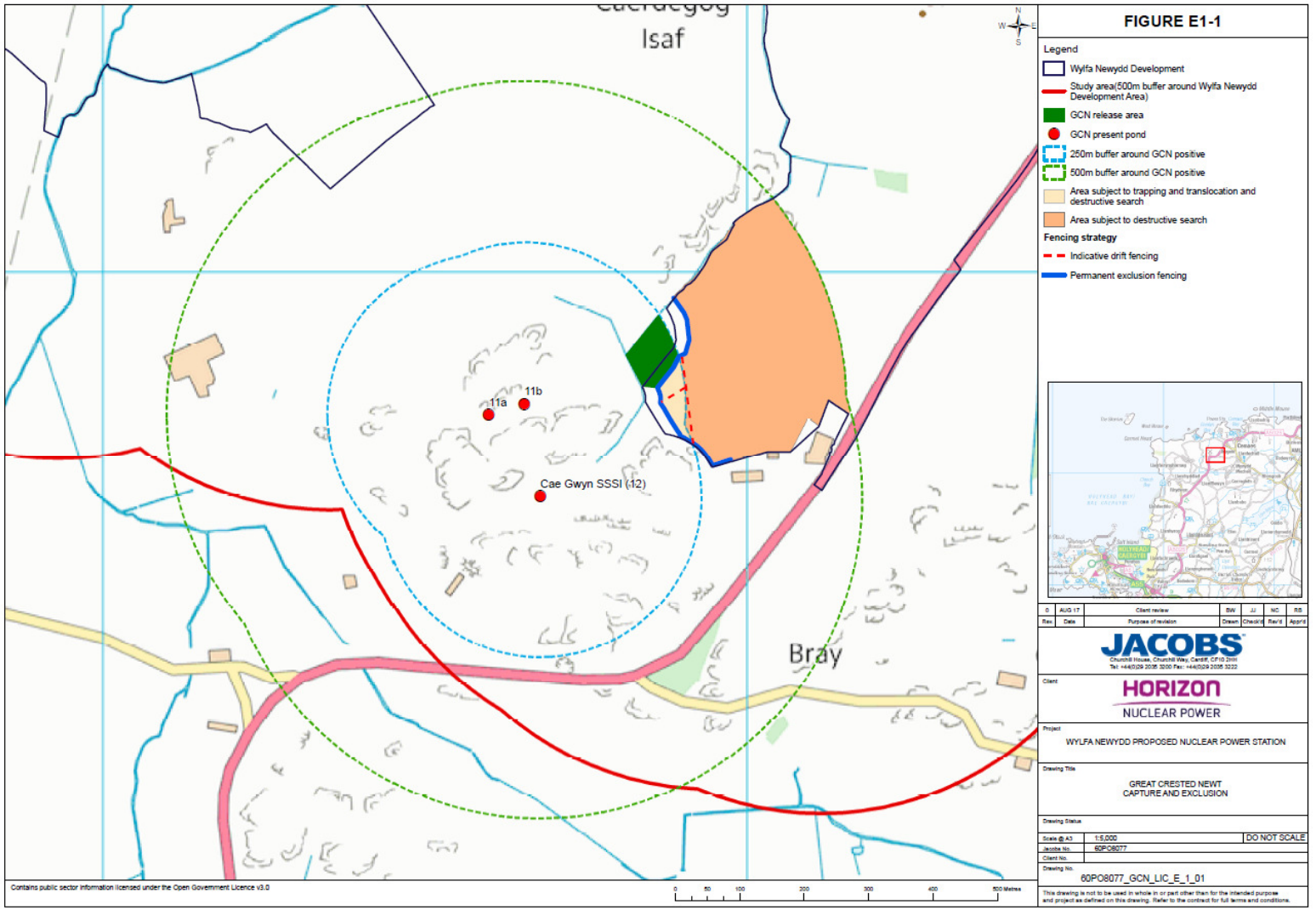
The layout of the trapping area is shown in Figure E1-1. The trapping area measures 0.3ha, and comprises of approximately 350m of exclusion fencing and 45m of drift fencing. Within the trapping area there will be approximately 50 traps installed.

Trapping of terrestrial habitats will comprise the following: the installation of fencing will be preceded by a fingertip search of the proposed fence lines by licensed GCN ecologists, concentrating on discrete habitat features, e.g. hedge crossings, rather than areas of homogenous sub-optimal habitat such as improved grassland. Exclusion fencing will be erected within the development area up to 250m from GCN ponds 11a, 11b and 12 to prevent GCN from entering the construction area.

A line of drift fencing will be installed within the trapping area to divide it, increasing trapping efficiency. Pitfall traps and artificial refuges will be placed at regular intervals (every 10m for each type and alternating) along the inside of the perimeter exclusion fencing and on both sides of the drift fencing. The required trapping density is specified within the *GCNMG* (English Nature, 2001) at 50 traps/ha for a small population size class.

Diagram 1 (below) shows the standard specification for amphibian exclusion fencing, pitfall trap design and layout as reproduced from the *GCNMG* (English Nature, 2001). Note that one-way fencing is not proposed on this site.

Trapping beyond 250m is not considered appropriate due to the small populations recorded at ponds 11a, 11b and 12, and the generally low habitat quality within 250m of these ponds (predominantly grazed improved grassland) which is expected to limit dispersal of GCN from these ponds.


Isaf
11a
11b
Cae Gwyn SSSI (12)
Bray
FIGURE E1-1
Legend
Wylfa Newydd Development
Study area(500m buffer around Wylfa Newydd Development Area)
GCN release area
GCN present pond
250m buffer around GCN positive
500m buffer around GCN positive
Area subject to trapping and translocation and destructive search
Area subject to destructive search
Fencing strategy
Indicative drift fencing
Permanent exclusion fencing
JACOBS
HORIZON NUCLEAR POWER
WYLFA NEWYDD PROPOSED NUCLEAR POWER STATION
GREAT CRESTED NEWT CAPTURE AND EXCLUSION
DO NOT SCALE
60PO8077_GCN_LIC_E_1_01
Contains public sector information licensed under the Open Government Licence v3.0

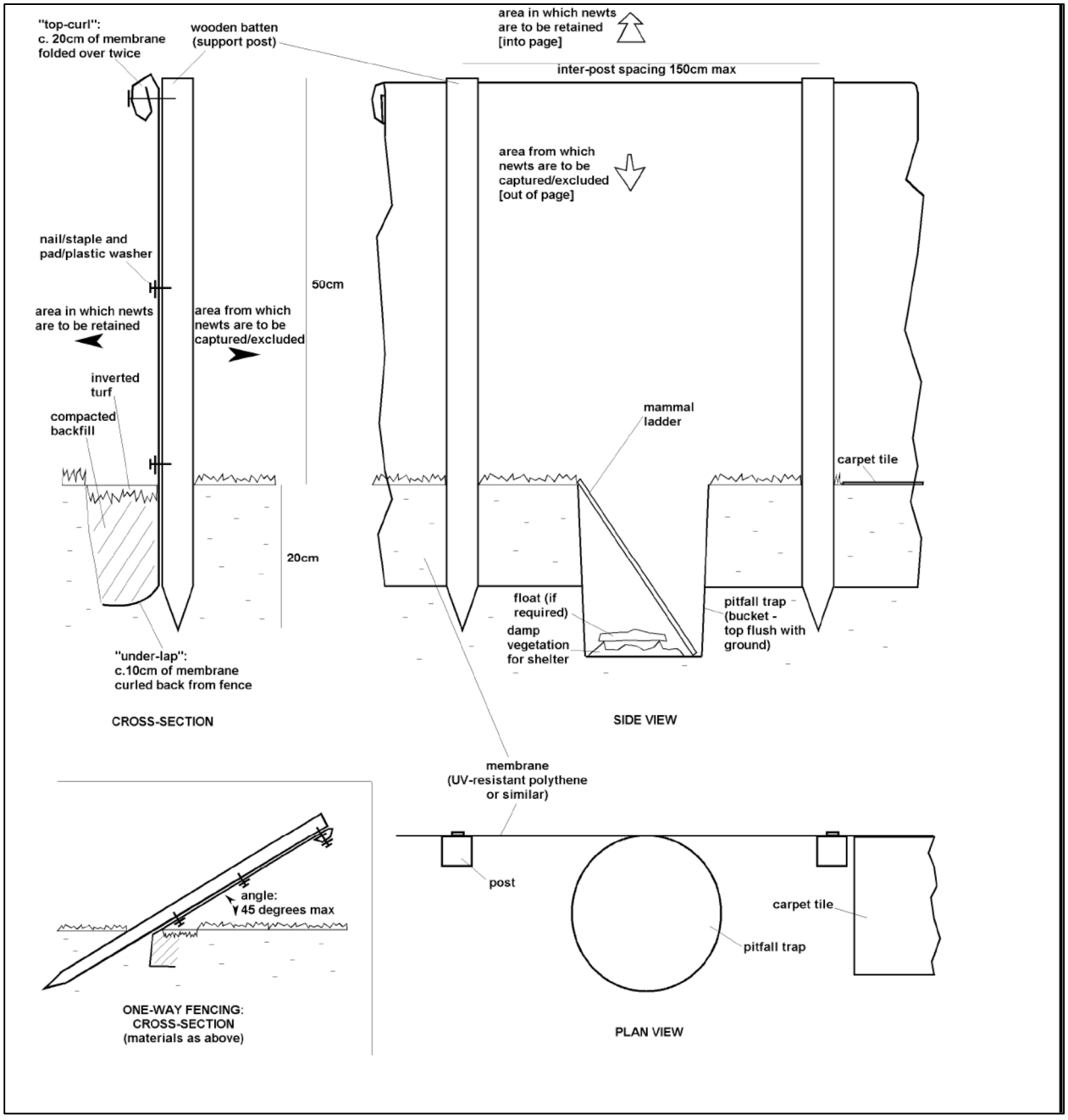


Diagram 1 shows the standard specification for amphibian exclusion fencing, pitfall trap design and layout as reproduced from the *GCNMG* (English Nature, 2001) (note that one-way fencing is not proposed on this site)

Trapping will be suspended and pitfall traps will be closed when the overnight temperature is expected to fall below 5°C or there are prolonged periods of hot and dry weather during which GCN activity would be limited. Daily records of weather conditions will be kept throughout the trapping period using a maximum/minimum thermometer and rain gauge set up within the trapping area (according to the manufacturer's instructions e.g. in a shady position).

All fencing will be subject to daily checks during the active trapping period and a log of these daily checks will be kept as part of the trapping protocol. Any repairs required will be reported

to the licence holder for urgent remedial action by an experienced GCN fencing contractor. Repairs to perimeter fencing will be prioritised over repairs to internal drift/ring fencing so as to minimise the risk of any additional GCN accessing the trapping area. Any fence removal required as part of repair work, e.g. removal and replacement of a damaged section, will be supervised by a licensed GCN ecologist and will be preceded by a careful finger-tip search for any GCN that may be using the base of the fence as a refuge. Any GCN found during repair works will be released in the area of habitat to the west of the fencing, where trapped GCN would also be released. GCN released would be placed under suitable refuges to protect them from predation.

Outside of the active trapping period, the fencing will be checked on at least a fortnightly basis to ensure the perimeter exclusion fencing maintains an effective barrier to GCN. Any required repairs will be communicated and actioned as above.

Upon completion of 30 suitable nights trapping followed by five clear days of no captures (small population size class), the internal drift fencing will be removed under ecological supervision and a destructive search of all suitable habitats and high-risk complex habitat features (e.g. mounds of rubble, vegetated soil mounds, logs, the lower courses of stone walls, bases of hedgerows, tree roots etc.) within the trapping area will then be conducted under ecological supervision. Before commencing the destructive search phase of the licence, the contractors undertaking the work will be inducted by a licensed GCN ecologist to make them aware of the possible presence of GCN, their legal protection and of working practices to avoid harming GCN. As well as taking place within the 250m trapping area, the destructive search phase will also take place in the area 250-500m from the ponds as a precaution. To ensure a pragmatic and risk based approach, the level of effort employed in this area will decrease the further from the ponds the destructive search progresses, to be instructed by a licensed GCN ecologist.

All GCN (and other amphibians) from the trapping area (and additional 250m-500m destructive search area) will be released at suitable natural refuges within the Cae Gwyn SSSI at the end of each day's trapping session. It is legitimate to release GCN on the ‘other side of the fence’ in this manner (*in situ* translocation) as the majority of habitat of this metapopulation of GCN will remain unaffected by the Wylfa Newydd Development.

The area in which the destructive search only would take place is shown in Figure E1-1. The destructive search area measures 7.6ha and comprises predominantly improved grassland (7.3ha), 0.2ha of ephemeral/short perennial vegetation, and 0.1ha of natural rock exposure.

Records will be kept of where GCN (and other amphibians) were found and where they were released so they can be evenly distributed to minimise the risk of predation/competition if they were too aggregated. These data would be retained for use in the licence return to Natural Resources Wales (NRW) (see E.3.1), and as part of Ecological Compliance Auditting as a requirement of the Main Power Station Site sub-Code of Construction Practise (Application Reference Number: 8.7).

The area in which GCN would be released in is shown in Figure E1-1. The GCN release area measures 0.5ha.

Once the destructive search phase is completed within the trapping areas the temporary exclusion fencing that crosses the development footprint will be removed (under ecological supervision and during suitably mild conditions) to allow vegetation clearance to commence. Perimeter exclusion fencing will remain in place throughout the construction period of the Wylfa Newydd Development.

A copy of the method statement and licence documentation will remain available on site at all times. A summary sheet of guidance will be given to each contractor undertaking the destructive search phase.

If a GCN is discovered at any other, unsupervised times, the contractor will be instructed to cease all works immediately and for the named ecologist or accredited agent to be contacted promptly for advice.

E.2 Great crested newt habitat

E.2.1 **Receptor site modification, enhancement or creation**

No habitat modification, enhancement or creation will take place in the short-term to mitigate impacts to the Cae Gwyn SSSI metapopulation as the anticipated impacts to this metapopulation are minimal.

In the medium-term, the area in which GCN will be released will improve as a foraging resource as there will be a cessation of grazing, and therefore a taller rank grassland habitat will develop.

E.2.2 **Temporary loss of breeding sites, resting places**

No temporary loss of breeding sites or resting places is anticipated. Any losses of resting places will be regarded as permanent due to the timescales and extent of the project, therefore no temporary avoidance measures are advocated.

E.2.3 **Destruction of existing breeding sites, resting places**

The trapping and translocation exercise is expected to commence in March of Year 1 of the Wylfa Newydd Project . The first stage is the installation of exclusion and drift fencing, traps and artificial refuges. The layout of the fencing, traps and artificial refuges is shown in Figure E1-1. It is anticipated that setting up the trapping area on a site of this size will take up to two weeks. As this is regarded as a small population, a minimum of 30 suitable trapping nights (plus five consecutive nights of no captures) is required before destructive searches can commence in terrestrial habitat. The destructive search phase will take place between April and July of Year 1, and will involve hand/hand-tool dismantling (where safe and practical to do so) discrete habitat features such as log piles, small rubble and soil mounds, the bottom courses of stone walls, small exposed rootstocks etc. looking for any GCN that may be present. Where it is unsafe or impractical to tackle certain habitat features by hand, this will be done by an excavator (size depending on the specific task), with an ecologist supervising the operation. If a GCN, or other small animal, is spotted, the ecologist will signal to the driver to stop immediately and will remove the animal from the works area. Once the animal is removed and no others are visible, the destructive search by machine will continue. All GCN and other animals captured during the destructive search phase will be released that day into suitable refuge habitat adjacent to the west of the trapped area as shown in Figure E1-1.

Table 1 below shows a project programme covering all GCN mitigation works required for the Wylfa Newydd Project.

Activity	Date and Duration of Activity	Notes
Installation of trapping layout within development footprint	March of Year 1 – approximately two weeks	Within 250m of GCN ponds. To include a fingertip search of proposed fence line and installation of perimeter exclusion, temporary exclusion and drift fence, pitfall traps and refuges in compliance with the *GCNMG* (English Nature, 2001)
Terrestrial trapping of GCN	March-May of Year 1 – minimum of 35 trapping nights	Within 250m of GCN ponds. A minimum of 35 suitable trapping nights. A suitable trapping night is where the temperature is at least 5℃ and there has been recent rainfall such that the ground is damp. Obtaining five clear days with no GCN captures is required following the end of this 30 night trapping period.
Destructive search phase away from ponds	April-August of Year 1	Within 500m of GCN ponds. Hand and machine dismantling of discrete habitat features to search for GCN under supervision and direction of licensed GCN ecologists.
Release of GCN	March-July of Year 1 – 3 month period where GCN may be encountered.	Captured GCN will be released in to retained natural refuge in the adjacent Cae Gwyn SSSI.
Land declared cleared	August of Year 1	Once all GCN capture measures have been exhausted (trapping and translocation followed by destructive search phase).

Table 1 Shows the project programme for GCN mitigation for the Wylfa Newydd Project.

E.2.4 **Scaled maps/plans**

Figure E1-1 shows the proposed area of habitat loss; the trapping layout; the extent of the destructive search; and the area in which GCN will be released after capture.

E.2.5 **Maintenance and/or modification of new and existing habitat**

The core principle for the landscape design of relevance to ecology comprises integrating mounding of excavated material to achieve an appropriate solution to balance potential environmental effects, and incorporate mitigation and enhancement measures and features of biodiversity value as described in the Design and Access Statement – Volume 2 – Power Station Site (Application Reference Number 8.2.2). These habitat will then be managed

according to the Landscape and Habitat Management Strategy (Application Reference Number 8.16), which will be secured for the full operational lifetime of the new power station.

The calculations for the areas of GCN habitat affected by the Wylfa Newydd Project, including where habitats are lost or modified, are provided in sections E.3.2, E.3.3 and E.3.4.

E.3 Mechanisms for ensuring delivery of mitigation and compensation measures

E.3.1 **Measures to ensure compliance with this method statement**

Horizon is committed to the delivery of the mitigation and compensation measures outlined in this document as they are a pre-requisite to successful completion of the Site Preparation and Clearance Works, and demonstrate their full compliance with protected species legislation and licensing.

Horizon fully recognises the legally-binding nature of the commitments and conditions of this method statement upon the granting of any licence.

Contractual obligations between Horizon and its sub-contractors will ensure that all personnel are informed of the legal obligations to fulfil this licence.

Key performance indicators which can be measured by a nominated third party for audit will include:

- Exclusion fencing is maintained for the duration of the construction period.
- The area of habitat in which GCN will be released is not affected by works, and develops into a habitat of increased value to GCN from its existing close grazed sward.
- The provisions of the Landscape and Habitat Management Strategy (Application Reference Number: 8.16), lead to the development of high quality terrestrial habitat which provides foraging and shelter within 500m of the Cae Gwyn metapopulation ponds, and offers strong links into habitats created within the Wylfa Newydd Development Area.

Although presence / absence monitoring is proposed (see table 2 below), it is not proposed to include this measure as a Key Performance Indicator as the current population is small and the success of high quality habitat creation is considered more appropriate as it is directly under Horizon's control. determine.

A European Protected Species licence return will be sent to NRW.

E.3.2 **Ensure that sufficient land has been acquired for compensation purposes**

There would be 0.3ha of habitat lost from within 250m of the Cae Gwyn metapopulation ponds, which comprises improved grazed grassland, a suboptimal habitat for GCN.

A further 7.6ha of habitat would be lost within 500m of the Cae Gwyn SSSI ponds, of which 7.3ha is suboptimal improved grassland, 0.2ha ephemeral/short perennial vegetation and 0.1ha natural rock exposure.

Given that the Cae Gwyn SSSI metapopulation is currently understood to support a small population of GCN, the habitat loss is not expected to adversely effect the conservation status of this population. This is particularly the case as much of the losses to be incurred at this population will be of habitat regarded as suboptimal. It is therefore assessed that the that provision of compensatory habitat would not be required.

The habitat loss impacts described above would last for the duration of the construction phase of the Wylfa Newydd Project. After completion of the construction phase, the 0.3ha within 250m would be planted with coarse sward species-rich grassland in line with the provision of the Landscape and Habitat Management Strategy (Application Reference Number: 8.16). This habitat would support commuting, foraging and sheltering GCN.

An area of 6.6ha, between 250m and 500m from the Cae Gwyn metapopulation ponds, would also be replanted with course sward species-rich grassland, in line with the provision of the Landscape and Habitat Management Strategy (Application Reference Number: 8.16). Approximately 1ha within this zone would be permanently lost to buildings and hard standing associated with the Visitor Centre.

The 0.3ha of habitat within 250m of the Cae Gwyn metapopulation ponds would only be affected during the Main Construction period, becoming available for GCN at the end of this period, once exclusion fencing is removed. There would beno permanent loss of habitat within this zone. Between 250m and 500m from the Cae Gwyn metapopulation ponds, the installation of the Visitor Centre buildings and associated hard standing would represent a permanent loss of approximately 1ha of suboptimal improved grassland. It is not considered that this would be detrimental to the maintenance of the favourable conservation status of GCN within their natural range.

The location of the habitat loss to be incurred and area of land in which GCN will be released are shown in Figure E1-1.

E.3.3 **Ensure that designs of subsequent development are newt friendly**

Horizon is committed to ensuring that the designs for the Wylfa Newydd Development are sympathetic to the needs of wildlife and will actively avoid any design features known to have an adverse impact on GCN and other amphibians e.g. gully-pot drainage systems.

E.3.4 **Provide sufficient resources**

Horizon is committed to providing qualified and competent personnel to ensure the proper instatement and long-term sympathetic management of all habitat features and landscaping for the benefit of GCN. This approach is detailed within the Landscape and Habitat Management Strategy (Application Reference Number: 8.16). Similarly, all GCN monitoring will be compliant with the requirements of the *GCNMG* (English Nature, 2001) as set out in this licence application. This will include contracting sufficiently experienced and licensed GCN ecologists to conduct the required monitoring.

E.4 Mitigation contingencies

In the event that any of the mitigation proposals contained in this application are considered to be undeliverable/unsuitable prior to their implementation (e.g. due to a change of conditions on site or the discovery of additional animals, GCN ponds, populations, etc.), a full review of the mitigation proposals will be undertaken by experienced ecologists to determine what measures will adequately address the changes. These changes will be discussed and agreed with NRW and, if required, a formal licence resubmission/modification request will be made.

Similarly, if problems are identified with any mitigation measures following their implementation, Horizon will seek prompt ecological advice on appropriate remedial measures and, if required, seek agreement and licence approval from NRW prior to taking action to address the problem. Horizon is committed to ensuring there is no detriment to the maintenance of the GCN population at favourable conservation status in its natural range, and to taking the necessary measures to ensure the maximum benefit is derived from this mitigation strategy within the Wylfa Newydd Development Area.

E.5 Biosecurity Risk Assessment and Method Statement

Horizon will adhere to a Biosecurity Risk Assessment and Method Statement as contained within the Wylfa Newydd Code of Contruction Practice and Main Power Station Site sub-CoCP (Application Reference Number: 8.6 and 8.7). This will detail how the spread of pathogens and invasive non-native species will be controlled throughout Main Constructionof the Wylfa Newydd Project, including where works are planned to take place under the conditions of this protected species licence. The potential pathways pertinent to the GCN transloction include the GCN fungal pathogen Chytridiomycosis, invasive non-native plant species and ash dieback (Chalara), as discussed below.

To prevent the possible spread of the GCN fungal pathogen Chytridiomycosis, amongst other harmful species, best practice biosecurity measures for working within the translocation area and area in which GCN will be released will be followed e.g. disinfecting boots. NRW have stated there is no requirement to undertake Chytridiomycosis testing for the Project as GCN will only be translocated within areas they could access naturally i.e. within less than one kilometre of their source ponds.

Horizon will mitigate the spread of invasive non-native species such as the known invasive aquatic plants on site and Japanese knotweed (*Fallopia japonica*). Horizon will be advised throughout the Project by ecologists experienced in the preparation of invasive species management plans and will employ the services of specialist contractors, as required, to undertake any control measures. Similarly, landscape planting will not include the planting of any ash (*Fraxinus excelsior*) trees so as to prevent the further spread of ash dieback (Chalara).

Given these control measures it is considered that the residual risk of spreading non-native species, or disease, as a result of the Wylfa Newydd Project is negligible.

F. Post-development site safeguard

F.1 Habitat/site management and maintenance

Horizon will have sole responsibility for future maintenance of the GCN release area and will incorporate sympathetic management of this area for GCN within the Landscape and Habitat Management Strategy (Application Reference Number 8.16).

F.2 Population monitoring

Future monitoring of the three ponds supporting the Cae Gwyn SSSI metapopulation and the success of the mitigation/compensation measures (in accordance with the key performance indicators) will be carried out by GCN licensed ecologists.

The *GCNMG* (English Nature, 2001) sets out the requirements for monitoring of small populations of GCN like those found at the Cae Gwyn SSSI metapopulation. Although the impact assessment made in the background and supporting information document concludes a low scale impact for the Cae Gwyn SSSI metopopulation, the monitoring proposals are based on guidance for a medium scale impact. This is designed to provide additional assurance over the efficacy of the mitigagion strategy. For a medium scale impact, presence/absence surveys are required for two years. As such, the following monitoring programme is required as shown in Table 2.

Year post translocation	Ponds	Type of monitoring
Year 2	Cae Gwyn SSSI metapopulation ponds	HSI scores. Presence/absence established by either conventional or eDNA methods, followed by population estimate surveys where GCN are recorded.
Year 3	Cae Gwyn SSSI metapopulation ponds	HSI scores. Presence/absence established by either conventional or eDNA methods, followed by population estimate surveys where GCN are recorded.

Table 2: GCN population monitoring requirements – in accordance with the *GCNMG* (English Nature, 2001)

An annual report will be submitted to NRW during the monitoring period and a licence report will be completed and submitted to NRW once all licensable activities have been completed.

F.3 Post-development mitigation contingencies

If the monitoring works demonstrate that mitigation measures have proven to be unsuccessful when compared to the key performance indicator criteria, appropriate remedial action will take place. This would take the form of the following types of measure but will be decided on a case-by-case basis as determined by an experienced and licensed GCN ecologist (including consultation with NRW as necessary):

- Review monitoring data (in particular from site visits) to assess whether any on site conditions are/have become unsuitable e.g. water levels, water quality, vegetation cover, presence of invasive species, rubbish dumping, pollution etc.
- Take corrective actions, if appropriate. This could include planting of additional vegetation in the GCN release area.

F.4 Mechanism for ensuring delivery of post-development works

Horizon fully recognises the legally binding nature of the commitments and conditions of this method statement upon the granting of any licence. Furthermore, as stated in section E3, Horizon is committed to the delivery of the mitigation and compensation measures outlined in this document as they are a pre-requisite to successful completion of the Site Preparation and Clearance Works, and demonstrate their full compliance with protected species legislation and licensing.

G. Timetable of works

Action	Dates	Comments
Installation of trapping layout within development footprint	March Year 1 – approximately two weeks	Within 250m of GCN ponds. To include a fingertip search of proposed fence line and installation of perimeter exclusion, temporary exclusion and drift fence, pitfall traps and refuges in compliance with the *GCNMG* (English Nature, 2001).
Terrestrial trapping of GCN within 250m of GCN ponds	March-May Year 1 – minimum of 30 trapping nights	Small population present so a minimum of 30 suitable trapping nights is required. Obtaining five clear days with no GCN captures is required following this 30 night trapping period. Captured GCN from the will be released in retained natural refuges in the adjacent Cae Gwyn SSSI.
Destructive search phase away from ponds	April-August Year 1	Within 500m of GCN ponds. Hand and machine dismantling of discrete habitat features to search for GCN under supervision and direction of licensed GCN ecologists.
Land handed over to construction	August Year 1	Once all GCN capture measures have been exhausted (trapping and translocation followed by destructive search phase).
Monitoring	Year 2 and 3	HSI scores of the three Cae Gwyn SSSI metapopulation ponds will be measured. Presence/absence surveys of the three Cae Gwyn SSSI metapopulation ponds will be completed using conventional or eDNA survey methods, followed by population estimate surveys where GCN are recorded.
Removal of permaent exclusion fencing	Year 10	GCN exclusion fencing will be removed on completion of landscaping works within 500m of the

Action	Dates	Comments
		Cae Gwyn SSSI metapopulation ponds so that GCN can colonise additional new habitat areas.

Table 3: Timetable of works

H. Land ownership – mitigation site/compensation site

H.1 Mitigation site/compensation site ownership

The GCN release area will be in the ownership of Horizon who will have the responsibility for its future maintenance and monitoring. There is no third party involved in this licence application.

H.2 Mitigation site/compensation ownership post construction

The GCN release area will be in the ownership of Horizon who will have the responsibility for its future maintenance and monitoring. There is no third party involved in this licence application.

I. References

English Nature. 2001. *Great crested newt mitigation guidelines*. English Nature: Peterborough.

J. Annexes

J.1 Pre-existing survey reports

To be appended to any formal licence application.

J.2 Raw survey data

N/A – all available data is contained within the pre-existing survey reports contained in annex J.1.

J.3 Landscape plans

Please refer to the Landscape and Habitat Management Strategy (Application Reference Number: 8.16).