

Reptiles and Amphibians of Dubwath Silver Meadows Wetlands Nature Reserve

Introduction

This brief report has been prepared to assess the likelihood of reptile and amphibian species occurring at Dubwath Silver Meadows Wetland Nature Reserve. The report is based on a site visit by Cumbria Amphibian and Reptile Group (CARG) during June 2011 and on historic records of reptiles and amphibians in the vicinity of the site obtained from the Virtual Fauna of Lakeland website (<http://www.lakelandwildlife.co.uk>). Furthermore this report explains the level of protection and conservation status of the species likely to occur on site and makes recommendations as to further survey work required to ascertain presence / likely absence and population size class assessment where appropriate.

Assessment of potential for presence / likely absence

Dubwath Silver Meadows offers generally exceptional habitat for amphibian species and is considered to offer at least good habitat for a number of reptile species. The site contains a number of water bodies (ponds, ditches and wet grassland / reed beds) and some high quality terrestrial habitat. It is directly adjacent to further high quality habitat which includes potential hibernation sites. The fact that the site has historically been subject to very low level agricultural management / improvement further increases the potential for amphibians and reptiles which can be highly sensitive to disturbance caused by agricultural practice.

Historically 5 species of amphibian and 2 species of reptile have been recorded within a 2km radius of the approximate centre of the site (GB Grid Ref. NY 195 307). These are common toad (*Bufo bufo*), common frog (*Rana temporaria*), smooth newt (*Lissotriton vulgaris*), palmate newt (*Lissotriton helvetica*), great crested newt (*Triturus cristatus*), slow worm (*Anguise fragilis*) and common lizard (*Zootoca vivipara*). All of these species have been recorded since 1991 with the most recent record available from Virtual Fauna (great crested newt) being made in 2000. The fact that these species have not been recorded in the vicinity in recent years should in no way suggest likely absence. Reptile and amphibian recording in Cumbria is primarily undertaken by volunteers and seldom offers an accurate picture of current species range or occurrence at any one site. Historic records are however invaluable in that they tell us what has previously occurred in an area and as such give us a base line from which to design further survey work / site investigations in order to ascertain presence / likely absence.

The habitat on site is suitable for all previously recorded species. The wetland areas offer potential breeding sites for all five previously recorded amphibians and these potential breeding sites are close to suitable terrestrial habitat which offers foraging and hibernation potential. No major barriers exist between suitable aquatic and terrestrial habitat and therefore it is considered highly likely that a number of these species will occur. During the site visit in June 2011, common toad and common frog were observed and confirmed as breeding on site. Due to the fact it was relatively late in the season no attempt was made to ascertain population size class, but it is likely that common toads occur in high numbers. Common frog is likely to occur in lower numbers. It is also considered highly likely that palmate newt occurs on site. Palmate newt are widespread in Cumbria and are more tolerant of acidic waters (as is typical in pools forming on peat) and therefore are considered almost certain to occur in good numbers on site. Great crested newt *may* occur. No great crested

newt survey has been conducted but considering that they have been recorded within 2km of the site in the last 15 years and that the habitat is suitable, it is at least possible that a population exists on site.

The hay meadows and hedge banks bounding the site offer good quality reptile habitat. This conclusion is based on an assessment of the following features which influence reptile habitat suitability; location in relation to species range, vegetation structure, isolation, aspect, topography, surface geology, connectivity to nearby good quality habitat, prey abundance, refuge opportunity, hibernation habitat potential and disturbance regime. Clearly all of these features / characters are not present across the entire site, but the southern end of the site particularly scores highly in all areas and is therefore likely to represent good reptile habitat which may or may not be occupied by reptiles. As slow worms and common lizard have both been previously recorded in the area it is possible that both of these species will occur on site. It is considered unlikely (although not impossible) that further reptile species may occur. Adders are known to occur within 5km of the site and although grass snakes are not known to naturally occur in the area, the habitat is highly suitable and un-known illicit introductions are not unheard of.

Legislation

All native species of reptile and amphibian in the UK are offered some form of protection. Common frogs, common toads and the Lissotriton newts are amongst the species with the lowest level of protection being protected via part of S 9(5) of the Wildlife & Countryside Act 1981 (as amended) against *'selling, offering or exposing for sale, or having in possession or transporting for the purpose of sale, any live or dead wild animal or any part of, or anything derived from, such an animal'*.

Common lizard, slow-worm, grass snake and adder are protected under part of sub-section 9(1) and all of sub-section 9(5) which makes it an offence to intentionally or recklessly kill or injure these species or to trade (i.e. sell, barter, exchange, transport for sale and advertising to sell or to buy). As with common frogs, common toads and the Lissotriton newts, it is not an offence under the Wildlife and Countryside Act 1981 (as amended) to possess these animals.

Great crested newts (along with natterjack toads, sand lizards and smooth snake – none of which could possibly occur at Dubwath Silver Meadows) are afforded the highest level of protection. All of Section 9 of the Wildlife and Countryside Act 1981 (as amended) applies to these species. This prohibits the intentional reckless killing, injuring or taking (capture etc.): possession; intentional disturbance whilst occupying a 'place used for shelter or protection' and destruction of these places; sale, barter, exchange, transport for sale and advertising to sell or to buy.

Common toads and great crested newts are also Biodiversity Action Plan (BAP) Species due to a perceived decline over recent years. As a BAP species no additional legislative protection is afforded to the species but 'Species Action Plans' have been developed by the Herpetological Conservation Trust (now Amphibian and Reptile Conservation Trust). In England and Wales, the Natural Environment and Rural Communities (NERC) Act, 2006 imposes a duty on all public bodies, including local authorities and statutory bodies, in exercising their functions, *"to have due regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity"* [Section 40 (1)]. It notes that *"conserving biodiversity includes restoring or enhancing a population or habitat"* [Section 40 (3)].

Recommendations

Considering that it is deemed likely that 5 species (common frog, common toad, palmate newt, slow worm and common lizard) and possible that a further 2 species (smooth newt and great crested newt) occur on site, it is recommended that focussed survey work is conducted to ascertain presence / likely absence for all of these species. This survey work should, if appropriate (i.e. if species are found to occur) incorporate an estimate of population size class assessment. The survey work conducted should follow published best practice guidelines for each species so as to be quantifiable and repeatable and the results of these surveys should be written up and kept. All records of amphibians and reptiles collected should be submitted to Cumbria Biodiversity Data Centre (CBDC).

Should amphibians and reptiles be found to occur on site, a site specific 'Action Plan' should be produced which should outline the measures which should be taken to maintain the population and (where appropriate) increase its range and / or population size class.

The following is a summary of the survey effort, methodology and timing which is recommended;

Amphibians;

- To ascertain presence / likely absence 4 survey visits between 1 April and 30 May should be conducted which must incorporate a minimum of 3 survey methods (bottle trapping, netting and torching). All amphibian species seen should be recorded and a count or estimate of abundance should be made.
- To ascertain population size class (if presence is proven) a further 2 survey visits between 1 April and 30 May should be conducted using the same 3 survey methods.

Reptiles;

- To ascertain presence / likely absence an array of artificial refugia should be placed over the site at an approximate density of 10 per ha in good habitat. These should be checked a minimum of 7 times during good weather during April, May, June or September.
- To ascertain population size class (if presence is proven) a further 3 survey visits should be made during the same time period.

Summary

Dubwath Silver Meadows Wetland Nature Reserve is highly likely to be occupied by a number of species of reptile and amphibian. The first step to protecting these species and contributing to wider conservation effort is to identify which species occur and in what numbers. To this ends it is recommended that surveys are conducted during 2012 to ascertain presence / likely absence and population size class. Cumbria Amphibian and Reptile Group (CARG) are willing and able to undertake these surveys and produce a report.

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