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**SITE NEAR DRIVEWAY ENTRANCE AT BRONYDD
QUARRY ROAD
GLYN CEIRIOG
LLANGOLLEN
LL20 7DA**

Reptile Survey Results

- The Cofnod (Local Ecological Records Centre) website was accessed (www.cofnod.org.uk) and a Cofnod Data Request [E09130] was made for a data search for Priority Species and designated wildlife sites within a 1km radius of the site. There are records of reptiles (adder, common lizard, grass snake, slow worm) within 1km radius of the survey site, according to the data search [nearest record >300m from the site].
- The site has potential for foraging and migrating reptiles in the verges and the tall ruderal herb and fern area and adjacent scattered tree/woodland area. The stumps/brush piles on the site and the adjacent woodland area provide potential for hibernating reptiles. The compost heap provides potential for egg incubation for reptiles.
- Further reptile surveys, utilising refuge sheets/tins discovered up to 3 adult female Slow worms on the site.
- The tall ruderal herb and fern and habitat features (fallen trunks/stumps/brush piles) will need to be removed to facilitate the proposed development. New hedges, trees and shrubs will be planted as compensation around the boundaries, to provide wildlife corridors to maintain connectivity on the site and to improve connectivity with the surrounding landscape. Artificial hibernacula and basking areas (piles of logs/rocks) will be provided as compensation for the loss of the habitat features..
- If mitigation is provided and Reasonable Avoidance Methods implemented, the proposed scheme should have no detrimental effect on the favourable conservation status of locally recorded reptiles.
- As reptiles will be disturbed by the proposed development, a NRW derogation licence will be required.



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Reasonable Avoidance Methods

- As part of the site induction process, all staff working on site will be made aware of the potential presence of reptiles within the immediate landscape, and their status as a UK and European Protected Species. Reptiles (Common Lizard, Grass Snake, Adder and Slow Worm) are protected in the UK under Schedule 5 of the Wildlife and Countryside Act 1981. This protection was extended by The Countryside and Rights of Way Act 2000. They are also protected under Regulation 40 of the Habitats Regulations 2010. Under the Natural Environment and Rural Communities Act 2006, these species are also considered Species of Principle Importance for (Biodiversity) Conservation in Wales. It is an offence to handle these animals without either a survey licence or a development licence obtained from Natural Resources Wales.

Site Induction

- The toolbox talk will set out what measures are being implemented to avoid affecting reptiles and will also give details of how to recognise reptiles and a photographic reference summary of how to recognise reptiles will be displayed in the site compound cabin at all times.
- Contractors will be instructed to cease work in the unlikely event that they discover a reptile within the site, and to contact a licenced ecologist and NRW (Buckley Office). Contact details will be displayed alongside the reptile photographic identification sheets.
- A site log should be kept to ensure that all these precautionary measures are implemented, with dates and names of who implemented them.

Drift fencing

Working under a NRW licence, 'one-way' drift fencing and use of refuge sheets/tins will need to be installed as mitigation, as part of a capture and translocation operation.

Vegetation clearance

- The objective is to deter reptiles from the grasslands/tree/scrub habitats within the site by making habitats unsuitable for use.
- For the initial stages of the development, vegetation clearance should be undertaken in a phased manner under the supervision of an ecologist. The optimum time for vegetation clearance is October-February, when reptiles are hibernating and not dispersing across the site.
- A 1m wide margin strip of vegetation should be retained around the boundaries of the site, to provide a wildlife corridor for foraging and emigration.
- Areas of tall, rough grassland and scrub on site which need to be cleared should be strimmed to a height of 150mm under supervision of the ecologist and checked for reptiles. All arisings should be immediately removed or stacked in a habitat pile outside the area to be developed, (to prevent risk of reptiles using these as hibernacula or refugia). These cut areas must then be left undisturbed for at least 48 hours. Thereafter, areas which have been strimmed must be hand searched by the ecologist.
- Following any required tree felling, all rootballs should be removed by machine under the supervision of an ecologist, who will check the stump for crevices beforehand and inspect the rootball once removed. Large bucket machinery will reduce potential for injury of any reptiles present.



Vegetation clearance

- In order to ensure the development area remains unfavourable to reptiles it is essential that the grassland and scrub areas are maintained as a short sward during the growing season. This will only be relevant if the development work is delayed.
- All potential natural refugia such as piles of rubble, piles of logs, brash and metal debris will be dismantled by hand by an ecologist prior to or following the winter hibernation period (November – March) in a careful and controlled manner, with constant vigilance for any sheltering GCN and/or any other potential species. Where possible and practical, the piles of rubble/logs etc. should be transferred to a suitable location adjacent the area to be developed, to provide alternative natural refugia for GCN and other species.

Soil stripping

- Light machinery with a gross weight of less than 1.5 tonnes will be used to clear the topsoil, under ecological supervision. First the top few centimetres of ground will be removed. Following this, larger and deeper excavations can be made.
- Appropriate method of working – all other vehicles to remain on existing surfaced tracks/hardstanding.
- As the work will be carried out under a NRW licence, any individual reptiles encountered will be transferred in a bucket or cloth sack by the licenced ecologist and placed in a suitable adjacent receptor area.

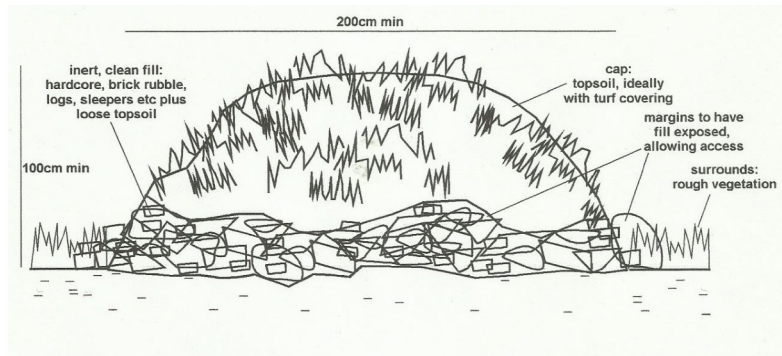
Construction work

- If any trenches are to be excavated in grassed areas, a strip either side of the proposed site should be cut first, to create a short swathe, so there is no cover for foraging or resting reptiles. The short swathe should be checked each morning for reptiles, before commencing any works.
- Trenches should have a leading slope, so that any animal that enters the trench may escape.
- Where possible, any trenches that need to be excavated should be backfilled on the same day. The trench should be checked for reptiles before backfilling.
- If a trench is to remain open overnight, ensure that it is covered with sheet material and the edges sealed. The edges can be sealed with soil, which must be compressed down to prevent reptiles and other species from entering the trench.
- If any pipework (drainage etc.) are to be installed in the trench, the ends of the pipes must have baffles fitted, to prevent reptiles and other species from entering the pipe.
- No piles of rubble, soil or other debris should be left on site after the completion of works, unless they are left deliberate for mitigation (e.g. creation of artificial shelter/hibernacula).



Biodiversity improvements

- Biodiversity enhancement for reptiles can be made by creating an artificial shelter/hibernacula on site, by forming an uncompacted mound/bank of loose topsoil mixed with clean brick rubble, hardcore, logs etc., capped with topsoil. The mound/bank should be have minimum dimensions 2m length x 1m width x 1m height and ideally be covered with turf. The lower margins should have the fill exposed to allow access. The immediate area surrounding the hibernacula should be rough vegetation, to provide cover for reptiles to disperse to the new hedgerow, which will provide a valuable wildlife corridor.



- Log piles for refugia and basking sites can be created by burying logs a few centimetres into the soil (use a mixture of diameters with the bark retained). Heap the logs into a small pile about 30cm off the ground.

