# **Report for Ali Glaisher; Principal Ecologist, Staffordshire County Council**

Greg Masters PhD, DIC, FRES, FRGS Ecologist

### **On behalf of Huntley Wood Quarry**

28<sup>th</sup> September 2010

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#### Overview

Huntley Wood Quarry has been abandoned for several years but has recently (April 2010) been purchased by Argoncroft Ltd. Argoncroft is currently examining potential recreational uses for the site which are intended to be sympathetic and beneficial to the ecology of the abandoned quarry. Indeed, the new owners are keen to encourage wildlife where possible.

Argoncroft contracted my services to oversee, develop and enforce the ecological considerations needed for this reclamation for recreational use. I have over 20 years experience as a field ecologist. All work to date has been conducted by myself and an assistant for field support.

I report here on activity to date, and append a report previously given to Argoncroft regarding grass and wildflower establishment in order to reclaim the central gravel area (Appendix 2) and the advisory note given to groundworks contractors prior to the commencement of these works (Appendix 3).

I have advised, supervised and approved all work on site that has implications for the ecology of the Quarry. I am satisfied that all instructions and advice has been followed, that contractors are implementing the precautionary principle and acting sympathetically. Additionally, I believe and am satisfied that there will be no material negative physical impact on the natural environment and ecology of the Quarry if the work is completed in a timely fashion. The work will have a significant beneficial physical impact to the ecology of the area in the near future.

#### Activity to Date

Annotated photographs have been included where appropriate for illustration.

1. Conducted a site overview survey and discussed plans for the site in terms of recreational use and ecological concerns. The site overview confirmed the records, anecdotes, sightings and physical evidence of dog walkers, large open fires (perhaps barbecues), parties

(discarded tins/ bottles of alcohol), horses and trail bikes and quad bikes. This is considerable physical disturbance to the site that the owners are keen to stop, which will be beneficial to the wildlife/ ecology in the future.



Examples of fire, litter, hiker and dog foot prints.

2. Researched relevant seed mixes to give a hard wearing stress tolerant grass cover with a mix of grasses and wildflowers around the edges of the area (marked on Map 1, Appendix 1). To confirm the seed mix choice, I completed a survey of the area to be seeded with the stress tolerant grass mix (marked on Map 1, Appendix 1). This area has an aggregate/sand substrate, in keeping with previous use and contained less than 5% vegetation cover dominated by stress tolerant grass species (e.g. *Lolium perenne*, *Agrostis sp.*, *Festuca sp.*) which are consistent with the EG22c mix (Appendix 2), but also consisting of a few common ruderal and early successional species (e.g. *Rumex*, *Senecio*) and pioneer birch.

On the basis of the survey and the research into seed mixes, I recommended the seed mixes and sowing rates listed in Appendix 2.

3. A Phase 1 Habitat Survey, was completed in the marked areas on Map 2 and Map 3, Appendix 1. Currently the report is being prepared.

4. Completed a survey looking for the presence of Great Crested Newts in appropriate habitat (vegetated areas, wet areas, possible resting places) as marked on Maps 2 and 3, Appendix 2. Appropriate areas/ habitat was systematically searched by hand. As marked on Map 2 (Appendix 2), the systematic search included all relevant areas of any size consisting of:

- Temporary standing water
- Permanent water courses (ponds, ditches)
- Water edges especially grass and vegetation bases growing in the water
- Individual trees, and any natural or mammal holes at tree bases
- Gorse stands and any natural or mammal holes under the gorse stand
- Grass areas, particularly around the bases of bunch grasses
- Any rubbish or discarded material was carefully examined in case it was providing shelter for newts
- Likewise, dead wood, rocks, natural and artificial holes.

This survey was completed twice, five days apart; the second survey was immediately prior to groundworks in the area commencing. No newts were found during either survey.

5. As marked on Map 2 (Appendix 1), there are three banks of aggregates and top soil.

- The smallest bank (A, Map 2) had an aggregate/ sand substrate surface and sporadic vegetation cover (less than 5% vegetation cover) consistent with that recorded above.
- The medium sized bank (B, Map 2), was consistent with bank A, with less than 5% vegetation cover. However, there was also a large dense stand of gorse on one side which was examined at ground level for the presence of wildlife including newts as much as possible before it was cut carefully with a small chainsaw to a height of 15cm. Work then ceased and the remaining gorse stumps, any small mammal holes, rabbit holes/ diggings, litter or natural holes to a distance of 1.5m away from the outer edge of the gorse was examined. No newts/wildlife were found during the search and authority was given to cut the gorse to ground level when a final search was conducted.
- The largest bank (C, Map 2) was heavily vegetated (more than 85% vegetation cover, dominated by gorse) and is more than 500m from the small pond (A, Map 3) where newts were found over two years ago. This bank was surveyed, a section (5mx5m) had the gorse removed and examined as above. No newts were found, and authority was given to carefully remove the rest of the vegetation, being considerate and observant. I supervised the vegetation removal.

The banks were surveyed and gorse/ vegetation carefully removed as described. The banks were then surveyed again, post vegetation removal, five days later and prior to ground works commencing. No newts were found.

Hand searching for wildlife prior to cutting of gorse



Hand cutting and clearing of gorse, as supervised by me



6. On the basis of the above, I was confident to authorise the groundworks to commence in the area marked on Map 2 (Appendix 1) on Monday 13<sup>th</sup> Sept 2010. Prior to groundworks proceeding, I briefed the contractors about being careful, observant and considerate of wildlife. An advisory note (Appendix 3) was handed out, which is kept in each machine.

## Appendix 1: Maps of seeding and survey locations.





Map 2: Location of aggregate banks, boundary of phase 1 habitat survey and newt survey (hand searching)



Map 3: Location of phase 1 habitat survey (greater area), and newt survey (hand search) along edges of tracks, around the small pond and in area B (locations where contractors may have access)



### Appendix 2: Report to Argoncroft Ltd on grass and wildflower establishment

# **Huntley Wood Quarry**

# **Restoration and Reclamation of Natural Habitats**

#### Background

Huntley Wood Quarry was purchased in 2010 with the intention of restoring habitats to enable recreational use and provide an enhanced wildlife benefit.

In particular, grassland, meadows including wildflowers and ponds are being restored in addition to the existing habitat that includes small lakes, ponds, heathland, woodland plantations and ancient woodland.

As the ecologist contracted to oversee the ecological operations at Huntley Wood, I will produce a series of reports, addressing specific issues.

The current pressing issue is the establishment of a grass sward and is addressed in this report.

Additionally, Great Crested Newts are suspected on the site from records from 2008 when a medium sized population (approximately 20 individuals) was recorded. The restoration of the quarry will follow ecological/ conservation and environmental best practice, especially with regard to the suspected presence of newts.

Greg Masters

### **Report 1: Grass and Wildflower Establishment**

3<sup>rd</sup> September 2010

Greg Masters

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#### Objective

To establish a grass and wildflower sward.

#### Overview

A combination of stress tolerant/ resistant grass species and wildflowers are to be sown and established over areas of the site. Within these areas there are a number of aims, particularly the binding of the current aggregate surface to prevent further erosion, reclaiming the areas for increased ecological benefit and to provide a surface suitable for occasional recreational use such as camping.

#### Recommendation

To establish a grass and wildflower sward, best practice needs to be applied to source appropriate seed, to prepare the ground and to be considerate of existing wildlife and habitats.

#### 1. Seed

I suggest sourcing seed from Emorsgate (wildseed.co.uk/). These are very reliable and reputable and I have dealt with them for about 20 years on and off. However, there are a number of other seed companies (e.g. Boston, the grass seed company) and I recommend at least three quotes for equivalent seed mixes assuming that the seed is native and has not been stored for no greater than 6 months.

For the majority of the area to be seeded (16 acres), I recommend the EG22c – Wear tolerant turfgrass mix with clover or direct equivalent (e.g. the campsite, car, caravan park mix from the grass seed store; <u>www.thegrassseedstore.co.uk</u>). I recommend a high sowing rate of 100kg/acre for rapid establishment and maximising the probability of germination and establishment success.

For areas under less stress and wear (6 acres), but where stabilisation and prevention of erosion is important, I recommend EG22c equally mixed with EL1(flowering lawn mixture of grasses and wildflowers) or the direct equivalent from alternative seed companies. As the sowing rates for the two mixtures are different, I recommend mixing the two mixtures equally with a sowing rate of 16kg/acre for both mixtures (32kg/acre in total).

For increased conservation and wildlife benefit, I recommend sowing the EM7 meadow mixture for sandy soils, or the direct equivalent from alternative seed companies, at 16kg/acre. This mix is to be sown in a 3m wide strip around the edge of the main grass areas.

### 2. Ground Preparation and Sowing (including newt advice)

Given the existing ecology, best practice has to be followed at all times. It is vitally important that disruption to existing habitats is minimal if it cannot be avoided. No Newts, if found, should be handled or killed. You must contact me immediately on finding newts and I will advise on how to proceed.

Prior to ground works, a hand search of all vegetation designated for clearance has to be conducted to ensure no newts or other threatened species are present. This search has to be conducted while I am on site. I recommend that the precautionary principle is followed at all times, namely be careful, diligent and if in doubt then consult before acting. No work is to be conducted on site after dusk.

If newts are found, then a certified newt handling expert (e.g. Andy King) must be contacted to translocate the newts to safe habitats.

Before extensive ground works begin, a Phase 1 habitat survey needs to be conducted. I will complete this on Friday 11<sup>th</sup> Sept and Monday 13<sup>th</sup> Sept. Work can be phased so surveyed areas can be prepared for sowing.

If the above is followed, then a newt fence is not required unless more than 5 newts are found within the area to be prepared. This is practical advice, it allows work to continue if an individual is found and treated as above. If five or more are discovered, then it indicates a significant newt presence. Work must cease, a newt fence erected and all newts within the fence removed before work can commence again.

I do not expect a significant number of newts to be found, if any, within the area to be prepared. The surrounding habitats, which consist of existing corridors for dispersal, are more appropriate habitat for newts. If the above is followed and as Huntley Wood proposals for mitigating for possible newt presence are in accordance with current best practice and the law (pond restoration, relocation, sensitive habitat management) then I see no issues regarding the progress of the grass establishment.

#### Pre-sowing:

Ensure the ground has been drained if there are any areas of standing water. Remove stands of existing vegetation, taking care to follow the above advice. Sclarify the ground surface.

Apply "well rotted" farmyard manure over the area to be sown. This will add texture, structure and nutrients to maximise seed germination and establishment. Apply by tractor. The quarry is not within a nitrate vulnerability zone.

Seeds can be mechanically broadcast sown from a tractor. If only a seed drill is available, then the drill components need to be removed so that the seed is evenly spread over the soil surface.

#### Post-sowing:

The sown ground is to be rolled (tractor drawn roller) to ensure good contact between seed and soil.

## Appendix 3: Advisory note to groundworks contractors

# Huntley Wood Quarry Reclamation

# Wildlife Considerations for Contractors

The precautionary principle is applied at all times to keep disturbance to wildlife minimal and due to a suspected presence of Newts

We accept contractors have to complete their jobs, but:

- Do be as considerate to the environment as possible
- Hand clear litter (oil drums, tyres....) carefully
- Ensure the **all clear** has been given before clearing vegetation (it has to be checked for the presence of animals)
- Do keep vehicle speed down
- Be extra careful around the edges of the site and near large patches of vegetation
- Do not work after dusk
- Do not set open fires unless authorised to do so by the landowners (Jon / Emma) or the ecologist (Greg)
- Do not drop litter

## If in doubt, ask

If a Newt is found (pictured; up to 10cm long) then stop work and call Greg or Jon / Emma

Greg: 07588 395720 / 01453 519161

