

R I C H A R D S

M O O R E H E A D & L A I N G L T D

ENGINEERING, ENVIRONMENTAL and LANDSCAPE SPECIALISTS

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2909/5 - management

1st July 2011

If telephoning please ask for: Stephen Blunt

North Wales Minerals and Waste Planning Service
c/o Flintshire County Council
County Hall
Mold
CH7 6NF

FAO Hannah Parish, Senior Minerals and Waste Officer

Dear Sirs,

RESTORATION OF FORMER SAND AND GRAVEL QUARRY AT CEFN Y BEDD P/2011/0272

Further to the comments of consultees, and our site meeting on 27th June, we write with further information and explanation about the proposals which we trust will address the points raised.

A Extracts from Supporting Statement relating to long term management

2.3.3 The objective of restoration is to bring the land back to the standard required for agricultural (hay) management and nature conservation after-uses. To do this, fill and soil-making materials will be imported and placed in the correct sequence, to give suitable landforms and levels. Restoration will ensure that some areas develop appropriate moderately-fertile topsoil which can be cropped as permanent pasture (cut for hay and then grazed), whilst areas intended for nature conservation after-use will be prepared with nutrient-poor substrates so that they become botanically diverse. Controlled grazing will be used as a management tool for the nature conservation areas of the site.

2.11 Establishment aftercare and management of the site

- 2.11.1 A 5 year aftercare and management programme will be implemented by Moorbridge Construction Limited, after which the site will be transferred back to the owner.
- 2.11.2 The ecological aftercare and management programme is described in section 6.



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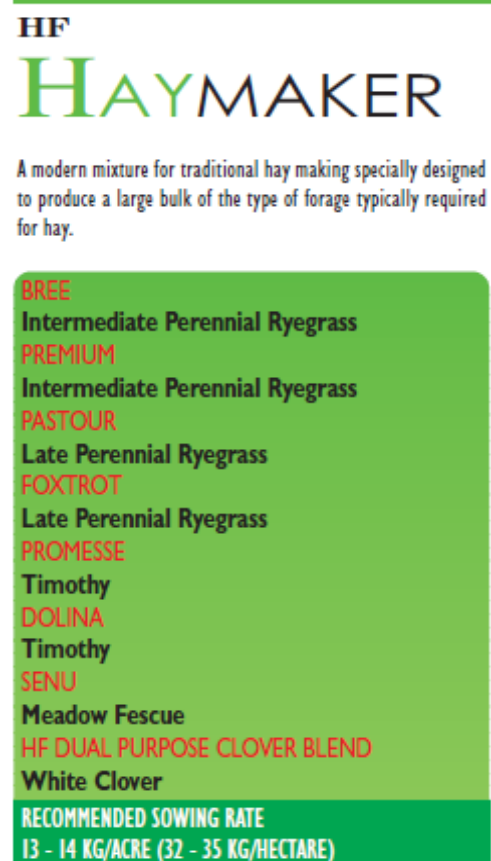
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- 6.4.10 As each part of the landforming and soil placement is completed, the land will be restored by sowing a diverse agricultural meadow, which is of value to Great Crested Newts as both foraging and dispersal habitat. The amphibian exclusion fencing will be removed at the completion of the restoration phase.
- 6.4.11 The meadow will be managed by a single late-summer cut to produce hay which would be baled and removed from site. Livestock (most likely cattle or sheep) will then be introduced to the meadow and the meadow grazed at a low density for a short period in the autumn. Management of the nature conservation area will be through low-density grazing at the same period, primarily to prevent succession of the wetland and to control scrub invasion. A separate gate will be installed to provide access from the meadow to this area, so that grazing intensity and duration can be independently managed.

B Additional details

Indicative soil profiles for restoration See Figure 2909-07 attached.

Hay meadow seeds mixture



This is an example mixture for hay and late grazing, but RML would consult NWWT for possible local sources of suitable hay meadow seed. It is good land restoration practice to use a semi-vigorous mixture which will promote rapid soil structure development, but will still allow colonisation by other meadow species as the initial vigour declines.

Management Plan

No less than 6 months before the seeding of the first available restoration area, RML will produce a restoration and 5-year outline management plan which:

- Confirms the seeds mixture, sowing rate, fertilisers to be used and their application rates;
- Confirms the programme for final cultivations and sowing;
- Sets out the programme for inspection and weed control as necessary, with particular reference to invasive species;
- Sets out the planned cutting and grazing regime, based on sward development;
- Sets out a programme of monitoring for the pond and surrounding conservation area, to include inspection for invasive aquatic species;
- Confirms a programme of fence inspections, so that any necessary repairs are carried out promptly.

Management reports will be produced at the end of each 12-month period following the agreement of the management plan. Each report will describe the work carried out in the 12 month period, present the results of any monitoring work, and set out the detail of work planned for the coming 12 month period.

We trust that these comments provide sufficient explanation of the proposals as they relate to the queries and concerns raised, but please contact us if you have any further queries.

Yours faithfully,

Stephen Blunt

pp.

Ivor G Richards OBE, Managing Director
RICHARDS, MOOREHEAD & LAING LTD

c. Mr John Williams

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Damp meadow restoration		Wildlife corridor		Hay meadow restoration	
Depth		Depth		Depth	
200mm	Subsoil*, maximum 15% stone > 2mm, max stone size 100mm. pH range 5.0 - 7.5	50mm	Site-won seed rich soil	200mm	Subsoil**, maximum 30% stone > 2mm, max stone size 100mm. pH range 5.0 - 7.5
600mm	Subsoil (all texture groups), maximum 30% stone > 2mm, max stone size 100mm. pH range 4.0 - 7.5	300mm	Subsoil, maximum 30% stone > 2mm, max stone size 100mm. pH range 5.0 - 7.5	600mm	Subsoil (all texture groups), maximum 30% stone > 2mm, max stone size 100mm. pH range 4.0 - 7.5
min 1000mm	Subsoil as above, or free-draining rubble / demolition material maximum 75% stone >2mm, maximum 25% stone > 100mm, no upper size limit. pH range 4.0 - 8.0	min 1000mm	Subsoil as above, or free-draining rubble / demolition material maximum 75% stone >2mm, maximum 25% stone > 100mm, no upper size limit. pH range 4.0 - 8.0	min 1000mm	Subsoil as above, or free-draining rubble / demolition material maximum 75% stone >2mm, maximum 25% stone > 100mm, no upper size limit. pH range 4.0 - 8.0
Underlying former quarry surface, existing or imported tipped material					

NOTES: * Subsoil for damp meadow shall be from the following texture groups: clay, silty clay, sandy clay loam, sandy clay, clay loam, silty clay loam. The following groups are excluded: sand, loamy sand, sandy loam, loam, silt, silt loam.

** Subsoil for hay meadow shall be from the following texture groups: loamy sand, sandy loam, sandy clay loam, sandy clay, clay loam, loam. Silt loam. Silty clay loam. The following groups are excluded: sand, silt, clay, silty clay.

Subsoil shall be naturally occurring soils taken from minimum depth of 150mm in profile, with minimal nutrient content

Overburden may include shales, soft rocks such as sandstone and mudstone, and colliery spoil within the pH range shown

Subsoils not to be moved or disturbed when wetness creates risk of smearing or compaction

Subsoils to be loose-tipped to ensure drainage