

LAND AT MULSFORD FARM

**GREAT CRESTED NEWT
ECOLOGICAL MANAGEMENT AND MONITORING
PLAN**

**PLANNING REF P/2017/0799
APP/H6955/A/18/3208119**

**DISCHARGE OF CONDITION 7
Revision 1**

Report by:
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LAND AT MULSFORD

GREAT CRESTED NEWTS

ECOLOGICAL MANAGEMENT AND MONITORING PLAN

Condition 7 of the planning consent specifies:

No part of the development shall commence until a long-term Ecological Management and Monitoring Plan in respect of the habitat compensation area required by Condition No.06 has been submitted to and approved in writing by the Local Planning Authority. The land shall thereafter be managed and monitored in strict accordance with Ecological Management and Monitoring Plan as approved

1 OVERALL OBJECTIVES AND TARGETS

The long-term conservation status of the great crested newts depends on the long-term management of their breeding ponds and terrestrial habitat, much of which will be represented by the new compensation area.

The overall objectives and targets are as follows:

- Avoid accidental harm to individual GCN by adherence to specifications set out in NRW development licence and adherence to Reasonable Avoidance Measure (see Condition 5).
- Loss of terrestrial habitat (arable field) will be compensated for by creation and long-term management of compensation area (as set out in Condition 6 and NRW development licence).
- All works to be carried out under NRW development licence.

Overall target is to maintain conservation and status of population of GCN and enhance available habitat, including breeding habitat and terrestrial habitat.

2 OUTLINE OF ECOLOGICAL MANAGEMENT PLAN

The correct management of these areas is essential in maintaining optimal conditions for GCN. Management of the four main habitats utilised by the GCN at this site is outlined below and summarised in terms of scheduling in Table 1. Details of timing of management and monitoring are shown in Table 2.

Breeding ponds

1. A 15m margin of grassland will be maintained between pond edge and neighbouring crop.
2. Scrub around pond margins to be maintained at or below 30% cover. Excess scrub to be reduced by coppicing outside nesting season.
3. Cover of reed mace to be assessed and maintained at no more than 25% cover. Excess reed mace to be removed by hand-pulling outside nesting and GCN breeding season.
4. Ponds will be monitored to ensure that fish species do not become established. In the event of fish being present, discussions will be held with NRW to determine control methods.

Rough grassland

1. Correct area to be marked out with stakes and checked for accuracy.
2. Area to be cut by topping annually in September.
3. Invasive weeds such as thistle to be spot-treated as necessary.
4. Monitoring will be carried out to ensure that any invasion by non-native species such as Japanese knotweed or Himalayan balsam will be noted and control measures will be implemented.
5. Grass areas to be cut additionally in March/April if woody species become established.

Scrub

1. A 5 metre zone of scrub is to be allowed to develop by natural regeneration on border of rough grassland adjacent to woodland area.
2. No topping of grass in this area is to be undertaken until low scrub develops and thereafter this will be kept low by cutting every 3 years.

Woodland

1. Correct area to be marked out with stakes and checked for accuracy
2. Trees to be checked annually for 3 years for losses and any losses replaced in first available season.
3. Trees to be maintained weed-free by biennial control for 3 years or until established.
4. Grass growth between trees is to be retained and allowed to develop naturally,

5. Any fallen deadwood arising from new planting or existing hedgerow trees will be retained on site and collected in piles to create refugia for GCN.

3 TIME TABLE

Overall Timetable (Table 1)

EPS LICENCE	Expected approval June 2019	
GCN TRAPPING AND EXCLUSION	June/July 2019	
CONSTRUCTION	July 2019 onwards	
GRASSLAND ESTABLISHMENT	September 2019	
WOODLAND ESTABLISHMENT	November 2019	
GRASSLAND MAINTENANCE	Annual topping in late summer	In perpetuity
WOODLAND MAINTENANCE	Biennial weed control	3 years
GCN MONITORING	Twice annually, incl HSI assessment	20 years
COMPENSATION AREA MONITORING	Twice annually	20 years
POND VEGETATION MONITORING	Twice annually	20 years
COMPLIANCE MONITORING	Annually	20 years

4 SUMMARY TIMETABLE (Table 2)

This table provides details of timing for long-term management, surveillance, wardening and compliance audit for 20 years.

Yrs 1-10

Activity	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
Check presence of all areas of woodland and rough grassland in compensation area	*		*		*		*		*	
Check vigour of new trees in first three years, and replace loss	*	*	*							
Cut rough grassland areas annually in September, spot treat nuisance weeds (Dock, Nettle, Thistle) - <i>landowner</i>	*	*	*	*	*	*	*	*	*	*
Leave a 5m wide area between woodland and rough grassland in south field to become low scrub, by infrequent cutting – <i>landowner liaising with ecologist</i>			(*)			(*)			(*)	
Leave a 5m wide area between woodland and rough grassland in north field to become low scrub, by infrequent cutting – <i>landowner liaising with ecologist</i>				(*)			(*)			(*)
Cut rough grassland areas annually in March/April, if woody species start to take hold - <i>landowner liaising with ecologist</i>		(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Check both pools for GCN eggs, and torch both pools on twice annual basis to monitor the population. N.B. trapping is likely to be required instead if the torching method fails to confirm continued presence of a medium population* Results to be fed into Cofnod, as part of the compliance audit	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Assess percentage of Pool 1 margin covered by scrub (30% in 2017), take fixed point photograph		*		*		*		*		*
Assess percentage of Pool 2 margin covered by scrub (nil in 2017), take fixed point photograph		*		*		*		*		*
Assess percentage cover of Pool 1 by <i>Typha</i>	*	*		*		*		*		*
Assess percentage cover of Pool 2 by <i>Typha</i>	*	*		*		*		*		*

Yrs 1-10

[illegible]

Yrs 11-
20

Activity	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16	Yr 17	Yr 18	Yr 19	Yr 20
Check presence of all areas of woodland and rough grassland in compensation area	*		*		*		*		*	
Cut rough grassland areas annually in September, spot treat nuisance weeds (Dock, Nettle, Thistle) - <i>landowner</i>	*	*	*	*	*	*	*	*	*	*
Leave a 5m wide area between woodland and rough grassland in south field to become low scrub, by infrequent cutting – <i>landowner liaising with ecologist</i>			(*)			(*)			(*)	
Leave a 5m wide area between woodland and rough grassland in north field to become low scrub, by infrequent cutting – <i>landowner liaising with ecologist</i>				(*)			(*)			(*)
Cut rough grassland areas annually in March/April, if woody species start to take hold - <i>landowner liaising with ecologist</i>		(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Check both pools for GCN eggs, and torch both pools on 2-3 occasions in alternate years to monitor the population. N.B. trapping is likely to be required instead if the torching method fails to confirm continued presence of a medium population* Results to be fed into Cofnod, as part of the compliance audit		*		*		*		*		*
Assess percentage of Pool 1 margin covered by scrub (30% in 2017), take fixed point photograph		*		*		*		*		*
Assess percentage of Pool 2 margin covered by scrub (nil in 2017), take fixed point photograph		*		*		*		*		*
Assess percentage cover of Pool 1 by <i>Typha</i>		*		*		*		*		*
Assess percentage cover of Pool 2 by <i>Typha</i>		*		*		*		*		*

Yrs 11-20

Assess presence of plant species of interest and/or which provide good egg laying material in Pool 1: <i>Carex pseudocyperus</i> (present in 2016) <i>Myosotis scorpioides</i> (present in 2016) <i>Alisma plantago-aquaticum</i> (present in 2016)		*		*		*		*		*
Assess presence of plant species of interest and/or which provide good egg laying material in Pool 2: <i>Cicuta virosa</i> (present in 2016) <i>Carex pseudocyperus</i> (present in 2016) <i>Alisma plantago-aquaticum</i> (present in 2016)		*		*		*		*		*
Instigate pool management in Pool 1 if scrub and/or <i>Typha</i> increase significantly or important plants are disappearing. Carry out necessary management under a separate Conservation Licence where necessary.	(*)			(*)			(*)			(*)
Instigate pool management in Pool 2 if scrub and/or <i>Typha</i> increase significantly or important plants are disappearing. Carry out necessary management under a separate Conservation Licence where necessary.		(*)			(*)			(*)		
Keep this table, and log book with details, results and photographs, updated as part of the compliance audit	*	*	*	*	*	*	*	*	*	*

Responsible persons:

Monitoring, pond management and detailed habitat works, compliance audit: approved Ecologist

Grassland management: landowner

Surveillance of Balancing Pond

Clean, uncontaminated rainwater from the roofs of the poultry houses, and biomass building will drain to a balancing pond. The pond will discharge to the Wych Brook at the northern boundary of the site. All wash waters will be contained in a sealed underground tank (20,000L).

The site is located near to ponds that are known to support populations of Great Crested Newts. A monitoring requirement has been included in the permit, for the attenuation ponds that are to be constructed at the site.

Monitoring shall comprise the following:

- (i) Date and time of survey, and time taken to complete survey;
- (ii) Presence and number of individual Great Crested Newts;
- (iii) Assessment of condition of each monitoring point against Habitat Suitability Index criteria;
- (iv) Record of environmental conditions (air and water, temperature, rain, wind, clarity and turbidity of water, vegetation and topography); and
- (v) Presence of any adverse factors (fish, ducks and other fowl, invasive non-native species).

Monitoring will take place once every five years.

Appendix 1C – Site Drainage Plan: Lower Mulsford

Lower Mulsford

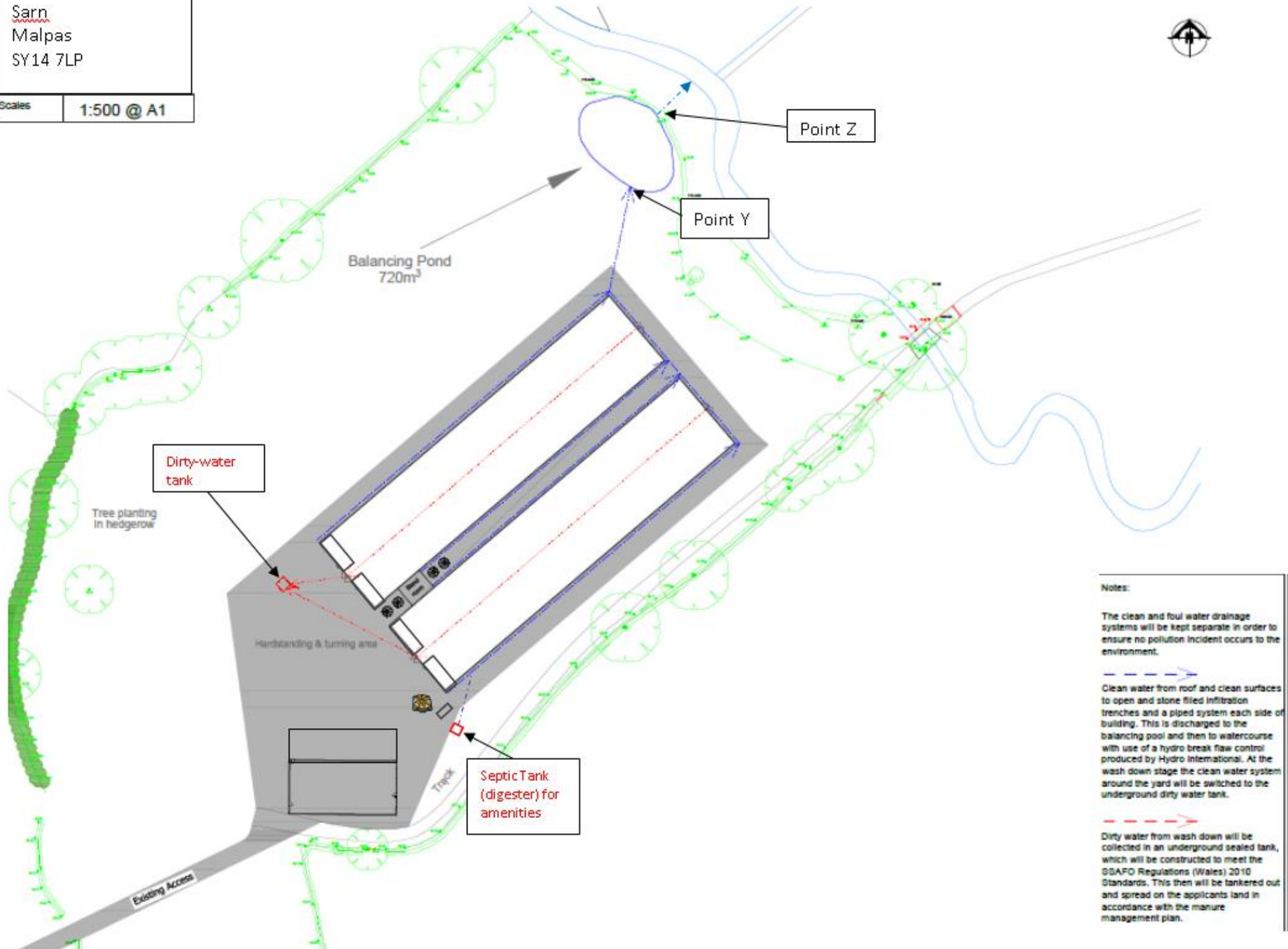
Sarn

Malpas

SY14 7LP

Scales

1:500 @ A1



Notes:

The clean and foul water drainage systems will be kept separate in order to ensure no pollution incident occurs to the environment.

--- Clean water from roof and clean surfaces to open and stone filled infiltration trenches and a piped system each side of building. This is discharged to the balancing pool and then to watercourse with use of a hydro break flow control produced by Hydro International. At the wash down stage the clean water system around the yard will be switched to the underground dirty water tank.

--- Dirty water from wash down will be collected in an underground sealed tank, which will be constructed to meet the SGAFO Regulations (Wales) 2010 Standards. This then will be tankered out and spread on the applicants land in accordance with the manure management plan.