

PLANT SCHEDULES

W1 PIONEER WOODLAND MIX				@3750 Plants Per Ha			
% SPECIES	COMMON	SIZE	GROWN	HEIGHT/TRANSPLANT	DENSITY		
Pi 30	Pinus sylvestris	60-90cm	BR / Call	1 + 1 Branched	3750 Plants		
Sp 5	Salix cinerea	60-90cm	BR / Call	1 + 1 Branched	Per Hectare		
Bt 10	Betula pubescens	60-90cm	BR / Call	1 + 1 Branched	Per Hectare		
Bt 10	Betula pendula	60-90cm	BR / Call	1 + 1 Branched	Per Hectare		
Ap 20	Acer pseudoplatanus	60-90cm	BR / Call	1 + 1 Branched	Per Hectare		
Pi 20	Alnus glutinosa	60-90cm	BR / Call	1 + 1 Branched	Per Hectare		
Sp 5	Pinus spissa	60-90cm	BR / Call	1 + 1 Branched	Per Hectare		

W3 WIET WOODLAND MIX				@3750 Plants Per Ha			
% SPECIES	COMMON	SIZE	GROWN	HEIGHT/TRANSPLANT	DENSITY		
20	Salix cinerea	40-60cm	BR / Call	1 + 1 Branched	3750 Plants		
20	Betula pubescens	40-60cm	BR / Call	1 + 1 Branched	Per Hectare		
20	Alnus glutinosa	40-60cm	BR / Call	1 + 1 Branched	Per Hectare		
20	Salix fragilis	40-60cm	BR / Call	1 + 1 Branched	Per Hectare		

H1 LIVESTOCK HEDGEROW MIX				5 plants m ² / m			
% SPECIES	COMMON	SIZE	GROWN	HEIGHT/TRANSPLANT	DENSITY		
Ua 70	Ulex europaeus	40-60cm	BR	1 + 1 Branched	1725 Transplants		
Pi 30	Pinus spissa	40-60cm	BR	1 + 1 Branched	1725 Transplants		

S1 SCRUB THORN MIX				100% Natural Regeneration			
% SPECIES	COMMON	SIZE	GROWN	HEIGHT/TRANSPLANT	DENSITY		
Ca 2	Cornus monogyna	40-60cm	BR	1 + 1 Branched	100 plants/m ²		
Ca 3	Cornus suecica	40-60cm	BR	1 + 1 Branched	100 plants/m ²		
Pr 2	Prunus spinosa	40-60cm	BR	1 + 1 Branched	100 plants/m ²		
Pr 3	Prunus spinosa	40-60cm	BR	1 + 1 Branched	100 plants/m ²		
Sc 5	Salix caprea	40-60cm	BR	1 + 1 Branched	100 plants/m ²		
Va 5	Vernonia opulus	40-60cm	BR	1 + 1 Branched	100 plants/m ²		

LIGHT STANDARD TREES				100% Natural Regeneration			
% SPECIES	COMMON	SIZE	GROWN	HEIGHT/TRANSPLANT	DENSITY		
Ox 34	Quercus robur	6-8m	BR	1.5 - 1.8m	As Shown		
Pi 33	Pinus Sylvestris	6-8m	BR	1.5 - 1.8m	As Shown		
Al 33	Alnus glutinosa	6-8m	BR	1.5 - 1.8m	As Shown		

G1 NURSE SPECIES RICH GRASSLAND

This mix is a simple combination of low growing grasses that produce a short, open, 'hive-friendly' sward. The species and the low density of sward make it ideal as an open nurse sward which will allow natural regeneration and colonisation of species rich grassland whilst suppressing perennial weeds.

Sowing Rate 12.5kg/ha @ 1.34g/m²

50%	Festuca ovina	Sheep 5's Fescue
25%	Festuca rubra florida	Slender Creeping Red Fescue
7.5%	Dactyloctenium aegyptium	Tufted Hair Grass
7.5%	Dactyloctenium flexuosum	Wavy Hair-Grass
5%	Agrostis capillaris	Brometop Bent
5%	Anthoxanthum odoratum	Sweet Vernal

Rehabilitation Concept

The intention of this proposed electrocive operation is focused on habitat creation. The site is currently dominated by a dense woodland with a high canopy. Connectivity of part of a wider regional green infrastructure strategy should be explored with woodland and hedgerow a planting offering valuable green corridor connectivity.

Post extraction groundwater rebound will gradually fill over a number of years until it reaches a controlled official level of 160m AOD. From this level water will discharge northward or set out within the hydrological report. While the majority of rock face will be submerged, those that remain could offer site accommodation for nesting rapids. Steeper sided slopes would accommodate species rich grassland and native woodland. While the majority of the site will become a waterbody, all peripheral will be prepared, seeded and planted to create a mix of species rich grassland and native woodland.

The contained nature of this site offers potential to create a diverse habitat and potential nature reserve - subject to future planning permissions and agreements the site could offer a variety of objectives including nature hubs and passive recreation such as walking.

Soil Management

Soil Management: The site has been overburdened by the peat being stripped and detected with some rock of the site and overburden. The soil is currently in poor condition. The soil should be protected prior to stripping operations and appropriately stored in an assigned location or where areas available for progressive restoration, should be carefully transported and spread.

Soil Storage: Storage should apply best practice guidance. Storage should be clearly signed & protected. Storage berm height (maximum): 5m, temporarily seeded with rescue mix to suppress perennial weeds and prevent erosion.

Planting: Select and use vehicles to minimize disturbance, hitchhiking and compaction. Contamination: Do not mix topsoil with subsoil. Stone, hardcore, rubble or material from demolition work. Multiple handling: Keep to a minimum. Use or stockpile topsoil as soon as possible after stripping. Wet conditions: Handle topsoil in the driest condition possible. Do not handle during or after heavy rainfall or when it is wetter than the plastic limit less 5% to BS 1377-2.

Spreading Soils: Spread soils in layers of 150mm and remove before spreading topsoil. Use a minimum (maximum): 150mm. Gently from each layer before spreading the next. Depths: Offer firming and settlement (minimum): 150mm.

- Grass seeds - Min 100 to 150mm
- Tree Planted seeds - Min 200 to 350mm. Crown structure. Do not compact topsoil. Preserve a niche feature of separate visible curbs wherever possible

Proposed Woodland Planting

Vegetation 1.3 (Establishment)

Moisture stress & woodland areas in a free condition (No herbicide application on site). Prune minor damage back to healthy wood and check for and treat disease. Cap up to replace damaged or failed plant material in accordance with the original planting specification, which shall form part of the management documentation. Check protective fencing, where used, and maintain in good condition.

Year 4, 10
As conifers merge, remove guards and stakes and cease weed control. Thin out weakest specimens if planting becomes overcrowded and start to restrict growth. 1 no. basic-level inspection bi-annually by qualified professional (in autumn) to coincide with fungal felling to check physiological and biological condition.

At the end of this period determine if thinned to 5 m to maintain continued grassland cover beneath. Felled trees to be used to create herbaceous

Preparation
Ground preparation should follow the supplier's instructions with the removal of weeds, rubbish and stones of over 3 firm diameter. The seed will be sown following extraction activities during times of sufficient warmth and moisture ideally in the spring or early autumn.

Most of the sown meadow species are perennial and will be slow to germinate and will not usually flower in the first growing season, there will often be a flush of annual weeds from the soil in the first growing season. This weed growth is easily controlled by topping or mowing (No herbicide applied on site)

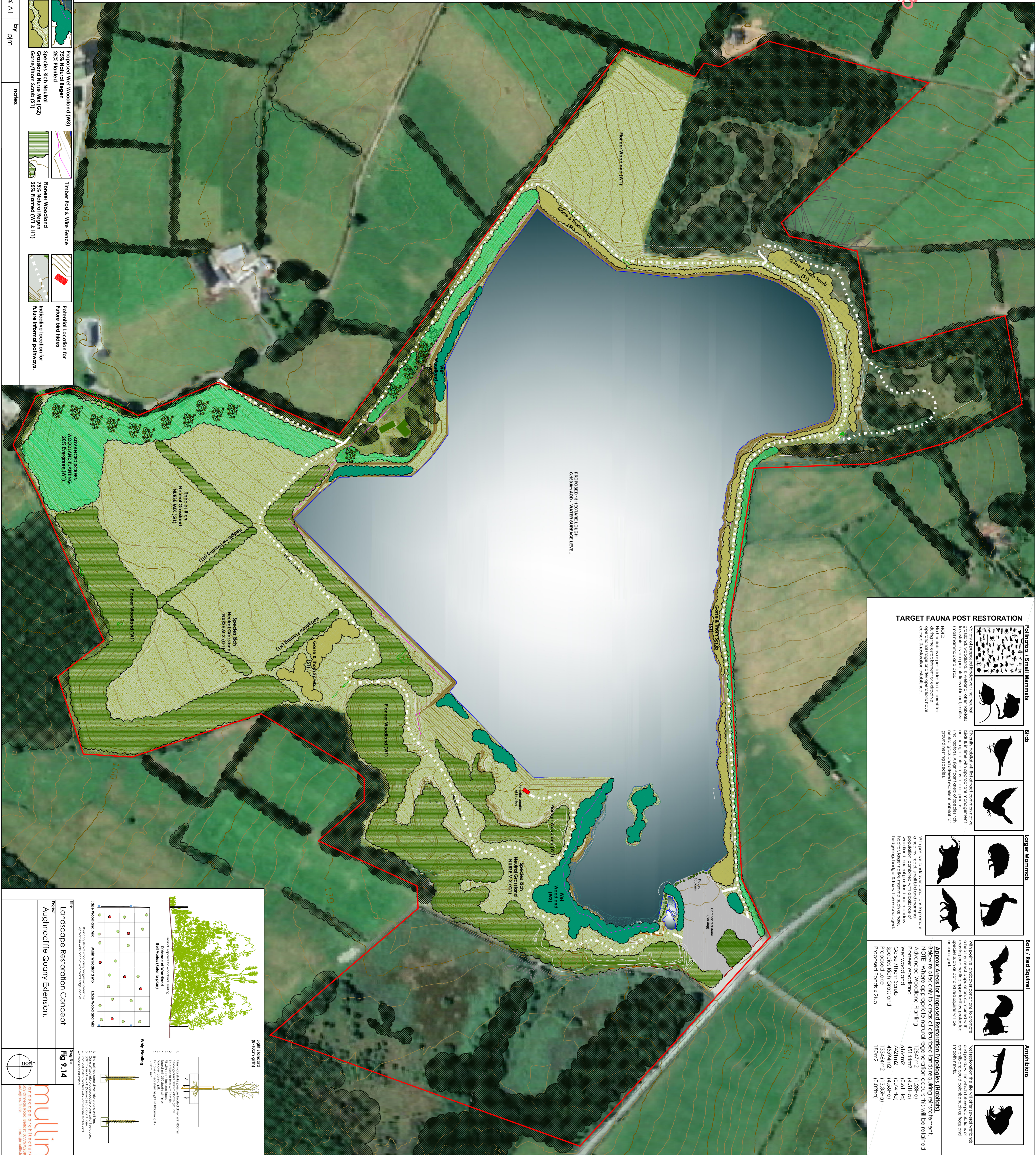
Avoid cutting in the spring and early summer if the mixture is autumn sown and contains Yellow Rattle, or if the mixture has been sown with a nurse of confined ornamentals. These sown ornamentals should be allowed to flower, then in mid-summer cut and remove the vegetation. It is important to cut back the ornamentals before they die back, set seed and cut back; this cut will reveal the developing meadow mixture and give it the space it needs to develop.

Management
Management of sown areas can be managed in a number of ways which in association with soil fertility, will determine the character of the grassland. On poor stony soils one or two cuts at the end of the summer, or occasional light grazing, may be all that is required to maintain diversity and interest.

Legend

- Application Boundary
- Existing Hedgerow/Scrub & Woodland
- Proposed ADVANCED SCREEN PLANTING (W1 & H1) (100% Planted)
- Wetland/Aquatic (100% Natural Colonization)
- Proposed Wet Woodland (W3) 75% Planted
- Species Rich Neutral Grassland/Nurse Mix (G2)
- Timber Road & Wire Fence
- Pioneer Woodland 75% Natural Regen
- Pioneer Woodland 25% Planted (W1 & H1)
- Potential location for future blind holes
- Indicative location for future informal pathways.

client: Breedon
date: Jan 23
scale: 1:1,500 @ A1
by: pim
notes:



TARGET FAUNA POST RESTORATION

Small Mammals	Birds	Large Mammals	Bats / Red Squirrel	Amphibians
<p>Planting of pioneer and nurse species will create a diverse habitat structure to support a wide range of species. The presence of a waterbody will also provide a valuable habitat for aquatic species.</p>	<p>Diverse habitat will attract a wide range of bird species. The presence of a waterbody will also provide a valuable habitat for aquatic species.</p>	<p>With positive biodiversity conditions to promote a healthy local population, combined with a diverse woodland, natural grassland and meadow habitats, a wide range of species will be encouraged.</p>	<p>With positive biodiversity conditions to promote a healthy local population, combined with a diverse woodland, natural grassland and meadow habitats, a wide range of species will be encouraged.</p>	<p>With positive biodiversity conditions to promote a healthy local population, combined with a diverse woodland, natural grassland and meadow habitats, a wide range of species will be encouraged.</p>

Habitat Type	Area (m ²)	Planting Rate
Advanced Woodland Planting	12847m ²	1.28/ha
Pioneer Woodland	6144m ²	0.61/ha
Wet Woodland	7421m ²	0.74/ha
Species Rich Grassland	4539m ²	0.45/ha
Proposed Late	13544m ²	1.35/ha
Proposed Total x 2%	1859m ²	0.18/ha

Landscape Restoration Concept

Fig 9.14

Augnaccliff Quarry Extension.

Whip Planting

1. Drive the tree into the ground using the whip.
2. Secure the tree to the whip using the wire.
3. Remove the whip and wire.
4. The tree is now upright and supported by the wire.

Light Standard

1. Drive the tree into the ground using the whip.

2. Secure the tree to the whip using the wire.

3. Remove the whip and wire.

4. The tree is now upright and supported by the wire.