



Landscape and Biodiversity Enhancement Plan

DATE:	28 May 2024	CONFIDENTIALITY:	Public
SUBJECT:	Landscape and Biodiversity Enhancement Plan		
PROJECT:	Tytherington Quarry 6mt Additional Reserves	AUTHOR:	Drew Wilson
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INTRODUCTION

Heidelberg Materials¹ plan to secure the continued extraction of all consented limestone reserves, and extraction of further unconsented reserves, within the existing footprint of Tytherington Quarry, near Thornbury, Bristol (hereafter referred to as the 'Proposed Scheme'). To achieve this, Heidelberg Materials is seeking planning permission to change the existing working method at Tytherington Quarry to allow for the deepening of the Woodleaze area of the quarry to release an additional 3 million tonnes as well as enable the extraction of a further 3 million tonnes from the southern part of the quarry, beneath the existing soil store area.

The phasing plans for the Proposed Scheme includes a restoration strategy (**Figures 1 and 2**) which will provide habitats of landscape and biodiversity value once mineral extraction is completed. The restoration strategy has been developed in collaboration between landscape specialists within Heidelberg Materials, and landscape and ecological consultants from WSP to provide an enhancement in both landscape/visual and biodiversity value.

SCOPE OF PLAN

This Landscape and Biodiversity Enhancement Plan (LBEP) aims to achieve the following objectives:

- 1 Describe the pre-development landscape and biodiversity value of the habitats present within the soil store area² based on the phase 1 habitat types recorded present during the Preliminary Ecological Appraisal (PEA) (**Figure 3**).
- 2 Describe the post-development habitats within the soil store area which are detailed under the restoration strategy (**Figure 2**). This will include an assessment of the relative change in landscape and biodiversity value as result of the habitat enhancements attributed to the Proposed Scheme.
- 3 Provide a summary of the habitat management actions which are required to achieve the proposed landscape and biodiversity enhancements for the project.

¹ Formally known as Hanson UK.

² Areas outside of the soil store area which are associated with the deepening of the Woodleaze area of the quarry have not been included because there is little to no pre-development landscape and biodiversity value because they are an active quarry face. A small amount of grassland reseeded and scrub regeneration on upper benches may occur but these are considered to be minimal in comparison to the post-development habitats detailed for the soil store area. It is therefore considered that there will be no loss of biodiversity and landscape value for habitats outside the soil store area.

PRE-DEVELOPMENT HABITATS

The PEA (WSP, 2023) identified three main habitat types within the soil store area. These comprised plantation broadleaved deciduous woodland, native species rich hedgerow with trees, and semi-improved grassland with scattered scrub. These habitats do not represent the approved final design for the soil store and have been created as temporary habitats prior to the soils and overburden being used for restoration within Woodleaze and Grovesend.

Plantation broadleaved deciduous woodland

Plantation broadleaved deciduous woodland was identified in the southeast of the soil store area on a bund that extends eastward towards the M5. The woodland has ash *Fraxinus excelsior*, wild cherry *Prunus avium*, and pedunculate oak *Quercus robur* which are of a similar age and height without a complex canopy and with evidence of planting lines and tree guards, having been planted in 2008 following construction of the perimeter screen bank. The shrub layer was relatively sparse and consisted of planted hawthorn *Crataegus monogyna*, hazel *Corylus avellana* and blackthorn *Prunus spinosa*; and the ground flora was underdeveloped due to the nature of the screen bank's substrate of agricultural topsoil. Furthermore, there was a limited availability of deadwood and there were no veteran or ancient trees. The plantation woodland was planted in 2008 and the canopy has successfully established meaning the remnant hedgerow that once bordered the plantation has become part of the shrub layer and woodland edge.

It is expected that these woodlands represent invertebrate or fruit foraging habitat and nesting opportunities for common bird and small mammal species, and potential foraging and commuting habitat for badgers. There are currently no signs of woodland management practices which would enhance the quality of the woodland such as removal of tree guards and litter or the thinning of trees to promote a higher canopy. The woodland is therefore considered to be an unmanaged example of plantation woodland.

In terms of landscape value, woodland is cited as a key characteristic of Landscape Character Area (LCA) LCA 17: Rudgeway and Tytherington Ridge as defined in the South Gloucestershire Landscape Character Assessment. This describes "*small regular shaped copses of deciduous woodland occur frequently scattered throughout the area.*" The woodland plays an important role in screening Tytherington Quarry in views from the surrounding landscape and contributing to visual amenity, with the published Assessment describing how "*the edge of the site (Tytherington Quarry) is largely contained by hedgerows and hedgerow trees, supplemented in places with earth mounds, and a developing woodland structure.*"

Native species rich hedgerows with tree

The northeast and northwest boundaries of the soil store area had hedgerows with hawthorn, hazel and blackthorn with mature pedunculate oak and ash trees. The hedgerows were more than 1.5m in height and width with no vertical or horizontal gaps in the canopy. The hedgerows appear to be unmanaged on both faces giving rise to a tall hedgerow that is progressively expanding into a scrub habitat. The hedgerow in the northwest had perennial vegetation growing along the base of the hedgerow which had evidence of nutrient enrichment (e.g. presence of common nettle *Urtica dioica*, spear thistle *Cirsium vulgare* and broad-leaved dock *Rumex obtusifolius*). All other hedgerows had very little vegetation growing at the base of the hedgerow due to damage from the movement of quarry machinery and their historic use as the Itchington Road arable field boundaries. Collectively, the hedgerows appear to be unmanaged with evidence of reduced quality due to nutrient enrichment from the rich agricultural topsoil present and damage from machinery.

It is expected that the hedgerows represent invertebrate or fruit foraging habitat and nesting opportunities for common bird and small mammal species.

The trees within the hedgerow were predominantly one age class and they were in a healthy condition. The exception to this was one decaying ash tree in the northeast of the soil store area which has the potential to be used by roosting bats and/or nesting birds.

“A mix of thick, clipped and intermittent hedges” is cited as a key landscape characteristic of LCA 17: Rudgeway and Tytherington Ridge and those along the boundaries of the soil store area once formed part of the wider agricultural field pattern as shown on 1844-1880 OS 25” 1st Edition mapping. However, they no longer perform this role and instead are isolated from the rural hedgerow pattern by the realigned Itchington Road and their presence within the quarry, resulting in a localised (site-level) landscape role/value only.

Semi-improved grassland with scattered scrub

The soil store area is dominated by a 5m high overburden mound surrounded by a 3m high agricultural topsoil border that was constructed between 2006-2008. The overburden mound was seeded with a commercial wildflower mix and the topsoil border has naturally revegetated from the existing seedbank within the soil. This has developed into semi-improved grassland on raised topography. There were two sward types present within the grassland that appeared to be dependent on the depth of soil.

On the thinner soils which have formed on the central overburden mound the species included common centaury *Centaurea erythraea*, annual meadow grass *Poa annua*, perennial rye-grass *Lolium perenne*, common bird's-foot trefoil *Lotus corniculatus*, pyramidal orchid *Anacamptis pyramidalis*, lady's bedstraw *Galium verum*, and oxeye daisy *Leucanthemum vulgare*. Additionally, scattered scrub featuring buddleia *Buddleja davidii* and hawthorn is present within these grasslands. In these areas there were large areas of bare ground where soils had not accumulated to allow plant growth, and the sward height was consistent across the area.

In contrast, the grasslands on the agricultural topsoil border were characterised by taller grasses like false oat-grass *Arrhenatherum elatius*, Yorkshire fog *Holcus lanatus*, meadow buttercup *Ranunculus acris*, and selfheal *Prunella vulgaris*, alongside oxeye daisy. This habitat has a consistent sward height with no bare ground and is dominated by tall, rough grasses indicative of an accumulation of nutrients in historic agricultural soil associated with a lack of grazing and/or mowing.

It is expected that the grasslands represent invertebrate or fruit foraging habitat and nesting opportunities for common bird and small mammal species. For both grasslands it is assumed that there are no current management regimes as the short sward grassland had evidence of scrub encroachment, and the tall sward grassland had evidence of an annual accumulation of nutrient from the die back of seasonal vegetative growth.

In terms of landscape value, the grassland has a local role in reducing the contrast of the soil/overburden store with the colours and textures of the surrounding landscape in localised and elevated views from the north close to The Abbey.

POST-DEVELOPMENT HABITATS

The restoration strategy described in Chapter 3 – Development Description details the creation of woodland, hedgerow and grassland habitats in the locations shown in **Figure 2**. This section describes

these habitats and gives an assessment of the relative change in landscape and biodiversity value as result of the habitat enhancements.

Woodland

Native woodland is proposed to the south of the former soil store across a reinstated landform which is comparable to that of the baseline. The woodland species mix set out in **Table 1** is derived from those species that occur locally with additional native species to ensure that a robust, diverse and climate resilient woodland is created. It has also been informed by recent data from Forest Research^{3,4} with regard to tree species suitability resulting from climate change within South-West England. Whilst ash would have typically been a tree species of the woodland, it has been omitted at this time due to the spread of ash (Chalara) dieback in recent years, although its inclusion will be kept under future review.

Table 1 – Proposed woodland and scrub species mix

Tree component	Shrub component
Field maple (<i>Acer campestre</i>)	Dogwood (<i>Cornus sanguinea</i>)
Norway maple (<i>Acer platanoides</i>)	Hazel (<i>Corylus avellana</i>)
Birch (<i>Betula pendula</i>)	Hawthorn (<i>Crataegus monogyna</i>)
Hornbeam (<i>Carpinus betulus</i>)	Spindle (<i>Euonymus europaeus</i>)
Beech (<i>Fagus sylvatica</i>)	Holly (<i>Ilex aquifolium</i>)
Crab apple (<i>Malus sylvestris</i>)	Wild privet (<i>Ligustrum vulgare</i>)
Wild cherry (<i>Prunus avium</i>)	Honeysuckle (<i>Lonicera periclymenum</i>)
Pedunculate oak (<i>Quercus robur</i>)	Blackthorn (<i>Prunus spinosa</i>)
Whitebeam (<i>Sorbus aria</i>)	Goat willow (<i>Salix caprea</i>)
Small-leaved lime (<i>Tilia cordata</i>)	Wayfaring tree (<i>Viburnum lantana</i>)
	Guelder rose (<i>Viburnum opulus</i>)

The reinstatement of this woodland will represent an increase in botanical diversity and will attempt to emulate woodland with a semi-natural structure through planting approach and subsequent management. It is expected that this woodland would soon be populated by a community of species similar to those present prior to development. Furthermore, additional botanical and structural diversity can enhance the biodiversity value of this habitat by creating more available habitat for protected species such as dormice, badgers,

³ Forest Research (undated). Regional changes in England in tree species suitability resulting from climate change. (online). Available at: <https://www.forestresearch.gov.uk/research/climate-change-impacts/climate-change-impacts-and-adaptation-in-englands-woodlands/regional-changes-in-england-in-tree-species-suitability-resulting-from-climate-change/>

⁴ Forest Research (2024). Ecological Site Classification Decision Support System (ESC). (online). Available at: <http://www.forestdss.org.uk/geoforestdss/#>

reptiles, and bats. It is important that the short and long-term management of the woodland is adhered to so that a woodland habitat that is more important for biodiversity can be created.

The enhancement of the plantation woodland should result in a woodland that has a semi-natural structure dominated by native species. The beneficial management of the plantation woodland over the next 3-5 years is expected to include:

- Silvicultural thinning to favour well-formed long-lived native stems of oak, beech, field maple, cherry whitebeam and the occasional small leaved lime. The extent of natural regeneration will then be monitored to allow consideration of underplanting with hazel and scrub species.
- Removal of trees with ash die back. In the event of almost complete loss of the ash component due to ash die back we would then consider underplanting, where space and light allow, with shade-tolerant native and near-native species such as hornbeam, beech and Norway maple.
- Retention of standing and felled deadwood which will be beneficial to invertebrates and fungi.
- Creation of woodpiles and woodchip compost piles to act as hibernacula for amphibians and reptiles.
- Retention of shrub layer species to provide a thick understorey for birds and potentially dormice.
- Tube and spiral guard removal for cosmetic reasons and to reduce plastic waste.
- Local staff will undertake *ad hoc* local seed collection of wildflower seed from hedges and established woodland parcels surrounding the woodland. These seeds of local provenance will then be hand-seeded into areas of predominantly bare ground within the woodland.

With regard to the landscape, the reinstatement, enhancement and gradual maturation of woodland will see a return to conditions which are comparable to that of the baseline, with the greater species diversity giving rise to additional seasonal interest. The diverse mix of native species also seeks to maximise the prospect that at least some species will adapt or potentially thrive under future climate change conditions, and therefore maintain visual screening and long-term role of the woodland within the landscape.

PLANTING

Planting stock will be a combination of 40-60cm transplants and 100-125cm whips and planted at an average of 2m centres to allow for a diversity of pattern and spacing, in a random mix of shrub and tree species in accordance with the permitted scheme. All stock will be protected by individual guards.

OUTLINE SHORT AND LONG-TERM MANAGEMENT OF WOODLAND

- 1 Weed control will be carried out within all newly planted woodland areas for the first 3 years after planting. A weed-free area of a minimum 1m diameter will be maintained around each plant through applications of a suitable herbicide. Tall grass and weeds will be strimmed as necessary in early summer prior to noxious weeds setting seed.
- 2 Trees and shrubs will be inspected twice a year (March and September) and re-firmed if necessary. Tree stakes, ties and guards will be checked and adjusted / replaced if necessary. Stakes, ties and guards will be removed at the end of 5 years.
- 3 During the first 3 years plants may need to be watered in periods of dry weather to ensure their successful establishment.
- 4 All losses (dead, damaged or diseased plants) will be replaced like for like for the first two seasons with replacement planting taking place within the next available planting season (November to March). Thereafter, any further losses are to be replaced with only those species that appear to be thriving on site, sufficient to achieve min. 90% overall stocking after 5 years.
- 5 Trees and shrubs in woodland blocks will be thinned once between years 10 and 15 by removing weaker specimens. This will allow space for the remaining trees to grow to full capacity and will ensure

a diverse structure of size, species and age of trees. Any diseased wood should be removed from site. Further thinning will be carried out after year 15 if necessary.

- 6 Following pruning or thinning works, wood will be retained and placed within the site to create log/brush piles and potential hibernation sites for wildlife.
- 7 All tree works will be carried out with consideration of the potential presence of legally protected and priority species. Prior to the commencement of any arboricultural or thinning works, any trees with the potential to support roosting bats will be inspected by a qualified ecologist. Works will be scheduled to avoid the bird nesting season (March to August).

Hedgerow with trees

An approximately 45m length of mature double hedgerow containing the decaying ash tree with bat roosting potential is being retained as it lies beyond the economic mineral boundary. This habitat retention acts as a means to safeguard the value of the soil store area for protected species.

A native hedgerow with at least twelve standard hedgerow trees is proposed along the northern edge of the former soil store area to connect the retained hedgerow and the hedgerow along Itchington Road. This hedgerow will have a similar length as the removed hedgerow at approximately 182m. The hedgerow species mix set out in **Table 2** is derived from those species that occur locally. Whilst ash trees are typically a tree species that can be planted in hedgerows, it has been omitted at this time due to the spread of ash (Chalara) dieback in recent years, although its inclusion will be kept under future review.

Table 2 – Proposed hedgerow species mix

Hedgerow component	Hedgerow trees
Field maple (<i>Acer campestre</i>)	Holly (<i>Ilex aquifolium</i>)
Hazel (<i>Corylus avellana</i>)	Pedunculate oak (<i>Quercus robur</i>)
Hawthorn (<i>Crataegus monogyna</i>)	
Spindle (<i>Euonymus europaeus</i>)	
Holly (<i>Ilex aquifolium</i>)	
Privet (<i>Ligustrum vulgare</i>)	
Honeysuckle (<i>Lonicera periclymenum</i>)	
Blackthorn (<i>Prunus spinosa</i>)	
Dog rose (<i>Rosa canina</i>)	
Guelder rose (<i>Viburnum opulus</i>)	

The reinstatement of this hedgerow represents a reinstatement of connectivity along the new northern boundary of the retained soil store area and an increase in botanical diversity through planting approach and management. It is expected that this hedgerow would soon be populated by a community of species similar to those seen prior to development. Furthermore, additional botanical diversity can enhance the biodiversity value of this habitat by creating more available habitat for protected species such as dormice.

Hazel would form a dominant species within the mix to provide suitable habitat for dormice and other mammal species which depend on nuts as foraging resource. Other native species include flowering and fruiting plants to provide berries for birds and small mammals, and foraging opportunities for pollinating insects⁵. It is important that the short and long-term management of the hedgerow is adhered to so that a habitat which is more important for biodiversity can be created.

With regard to landscape value, the hedgerow represents a boundary type which is recognised as a key characteristic of LCA 17: Rudgeway and Tytherington Ridge and is therefore an appropriate introduction within the site.

PLANTING

Plant stock will be 60-80cm whips (3L container grown holly) planted in a double staggered row with 4 plants per metre.

OUTLINE SHORT AND LONG-TERM MANAGEMENT OF HEDGEROWS

- 1 Weed control will be carried out along the newly planted hedgerow for the first 3 years after planting. Weeding will be carried out by spot-treating / spraying with a suitable herbicide.
- 2 During the first 3 years hedgerow plants will be inspected twice a year (March and September) and re-firmed if necessary. Rabbit spirals and guards will be checked and adjusted / replaced if necessary and removed at the end of 5 years.
- 3 During the first 5 years any dead, damaged or diseased plants will be removed and replaced during the next suitable planting season (November to March). Any diseased wood should be removed from site.
- 4 The hedgerow will be trimmed on rotation with different halves of the hedgerow targeted at each cut to ensure that there are always flowers for pollinators in spring and berries for birds in autumn. The hedgerow will be trimmed to a tapered A-shaped profile whilst hedgerow trees will be left to grow to maturity.
- 5 Hedgerow trimming will be carried out in January / February to avoid the bird nesting season and to maximise the opportunity for birds to eat any berries.

Grassland

The seed mix for the grassland will be determined following the testing of the soil beneath the soil store and will comprise either a neutral or calcareous grassland. All grassland areas will be hand-seeded with grass/wildflower mix of UK provenance suitable for National Vegetation Classification (NVC) MG6 or CG5 grassland respectively, applied at 5g/m².

Likely species within a MG6 grassland mix will include those set out in **Table 3**.

Table 3 – Proposed MG6 grassland mix

Grasses (90%)	Wildflowers (10%)
Browntop bent (<i>Agrostis capillaris</i>)	Yarrow (<i>Achillea millefolium</i>)
Crested dog's-tail (<i>Cynosurus cristatus</i>)	Common knapweed (<i>Centaurea nigra</i>)
Red fescue (<i>Festuca rubra</i>)	Wild carrot (<i>Daucus carota</i>)

⁵ Hawthorn, blackthorn, honeysuckle and dog rose are listed on the RHS Plants for Pollinators

Grasses (90%)	Wildflowers (10%)
Smaller cat's tail (<i>Phleum bertolonii</i>)	Oxeye daisy (<i>Leucanthemum vulgare</i>)
Smooth meadow grass (<i>Poa pratensis</i>)	Ribwort plantain (<i>Plantago lanceolata</i>)
	Meadow buttercup (<i>Ranunculus acris</i>)
	Yellow rattle (<i>Rhinanthus minor</i>)
	Salad burnet (<i>Sanguisorba minor</i>)

Likely species within a CG5 grassland mix will include those set out in **Table 4**.

Table 4 – Proposed CG5 grassland mix

Grasses (80%)	Wildflowers (20%)
Sweet vernal-grass (<i>Anthoxanthum odoratum</i>)	Yarrow (<i>Achillea millefolium</i>)
Quaking grass (<i>Briza media</i>)	Kidney vetch (<i>Anthyllis vulneraria</i>)
Upright brome (<i>Bromopsis erecta</i>)	Wild carrot (<i>Daucus carota</i>)
Crested dog's-tail (<i>Cynosurus cristatus</i>)	Lady's bedstraw (<i>Gallium verum</i>)
Sheep's-fescue (<i>Festuca ovina</i>)	Oxeye daisy (<i>Leucanthemum vulgare</i>)
Red fescue (<i>Festuca rubra</i>)	Flax (<i>Linum usitatissimum</i>)
Yellow oat-grass (<i>Trisetum flavescens</i>)	Common bird's-foot trefoil (<i>Lotus corniculatus</i>)
	Sainfoin (<i>Onobrychis vicifolia</i>)
	Ribwort plantain (<i>Plantago lanceolata</i>)
	Hoary plantain (<i>Plantago media</i>)
	Yellow rattle (<i>Rhinanthus minor</i>)
	Salad burnet (<i>Sanguisorba minor</i>)
	Small scabious (<i>Scabiosa columbaria</i>)
	Goat's-beard (<i>Trapapogon pratensis</i>)
	Red clover (<i>Trifolium pratense</i>)

The reinstatement of the grassland with a seed mix that is appropriate for the soil pH should create a diverse plant community that is similar or more diverse than the pre-development grassland. The grassland area will also include occasional scrapes, small ponds and bare ground for the benefit of invertebrates, reptiles, amphibians, and small mammals. This structural diversity will enhance the biodiversity value on site by providing a mosaic of habitat types within the grassland. This mosaic will be more valuable than the current grassland with scattered scrub mosaic. The grassland will need periodic mowing and maintenance

to maintain the scrapes, bare ground and small ponds. The detailed mowing regime will be agreed with South Gloucestershire Council as part of the annual aftercare meetings.

In landscape terms, the reinstatement of the grassland provides a local value in providing diversity within the landscape.

OUTLINE SHORT AND LONG-TERM MANAGEMENT OF GRASSLAND

- 1** Year 1: The grassland should be sown in Spring and cut in late Summer to approximately 50mm with the arisings removed.
- 2** Year 2+: The aftercare scheme will be developed with South Gloucestershire Council but should include the following: a single cut in September with arisings removed from site to reduce nutrient enrichment; and areas of longer sward near scrapes/pools and scarified areas to provide habitat for invertebrates
- 3** Year 5: In addition, it may be necessary to create more scrapes, bare ground and small pools if the soil topography has become flattened over time. The need for this management action will be reviewed every five years.

Wet grassland – Bench Restoration

Lower benches adjacent to the edge of the water body would be seeded with a wet grassland mix to reflect their damper position. Likely species will include those set out in **Table 5**.

Table 5 – Proposed wet grassland mix

Grasses (80%)	Wildflowers (20%)
Browntop bent (<i>Agrostis capillaris</i>)	Yarrow (<i>Achillea millefolium</i>)
Sweet Vernal-grass (<i>Anthoxanthum odoratum</i>)	Agrimony (<i>Agrimonia eupatoria</i>)
Grey Sedge (<i>Carex divulsa</i> subsp. <i>divulsa</i>)	Common Knapweed (<i>Centaurea nigra</i>)
Crested Dogstail (<i>Cynosurus cristatus</i>)	Meadowsweet (<i>Filipendula ularia</i>)
Tufted Hair-grass (<i>Deschampsia cespitosa</i>)	Lady's Bedstraw (<i>Galium verum</i>)
Red Fescue (<i>Festuca rubra</i>)	Water Avens (<i>Geum rivale</i>)
Meadow Barley (<i>Hordeum secalinum</i>)	Meadow Vetchling (<i>Lathyrus pratensis</i>)
Rough-stalked Meadow-grass (<i>Poa trivialis</i>)	Rough Hawkbit (<i>Leontodon hispidus</i>)
Tall Fescue (<i>Schedonorus arundinaceus</i>)	Oxeye Daisy (<i>Leucanthemum vulgare</i>)
	Birdsfoot Trefoil (<i>Lotus corniculatus</i>)
	Greater Birdsfoot Trefoil (<i>Lotus pedunculatus</i>)
	Ribwort Plantain (<i>Plantago lanceolata</i>)
	Cowslip (<i>Primula veris</i>)
	Selfheal (<i>Prunella vulgaris</i>)
	Meadow Buttercup (<i>Ranunculus acris</i>)
	Yellow Rattle (<i>Rhinanthus minor</i>)

Grasses (80%)	Wildflowers (20%)
	Common Sorrel (<i>Rumex acetosa</i>)
	Great Burnet (<i>Sanguisorba officinalis</i>)
	Ragged Robin (<i>Silene flos-cuculi</i>)
	Devil's-bit Scabious (<i>Succisa pratensis</i>)
	Tufted Vetch (<i>Vicia cracca</i>)

The creation of wet grassland with a seed mix that is tolerant of occasional inundation from ground water should create a plant community which is different from those in the wider grassland and will be more diverse than the pre-development grassland. This type of grassland will complement the other grassland as different species will be able to establish given the wet conditions. It is expected that this habitat would create beneficial habitats for invertebrates, reptiles, amphibians, and birds.

In landscape terms, the wet grassland provides a local value in providing diversity within the landscape.

OUTLINE SHORT AND LONG-TERM MANAGEMENT OF GRASSLAND

The lower benches are likely to be inaccessible due to variable water levels. The habitats will therefore be allowed to natural succeed into a habitat type that is suited to periodic inundation.

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- Key
- Extant planning permissions
 - Existing woodland/vegetated areas to be retained
 - Proposed planting
 - Proposed grassland
 - Proposed water
 - Proposed wet grassland
 - Quarry faces
 - Dip slope

0 m 150 m
Scale 1:2500 @ A3
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Heidelberg Materials
Tytherington Quarry - 6 Million Tonne
Additional Reserves
Landscape and Biodiversity Enhancement Plan (LBEP)

Figure 1
Restoration plan

May 2024



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- Key
- Extant planning permissions
 - Existing woodland/vegetated areas to be retained
 - Proposed planting
 - Proposed grassland
 - Proposed water
 - Proposed wet grassland
 - Quarry faces
 - Dip slope

0 m 75 m
Scale 1:1250 @ A3
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Heidelberg Materials
Tytherington Quarry - 6 Million Tonne
Additional Reserves
Landscape and Biodiversity Enhancement Plan
(LBEP)

Figure 2
Restoration plan (Soil Storage Area)

May 2024



