

Criggion Quarry

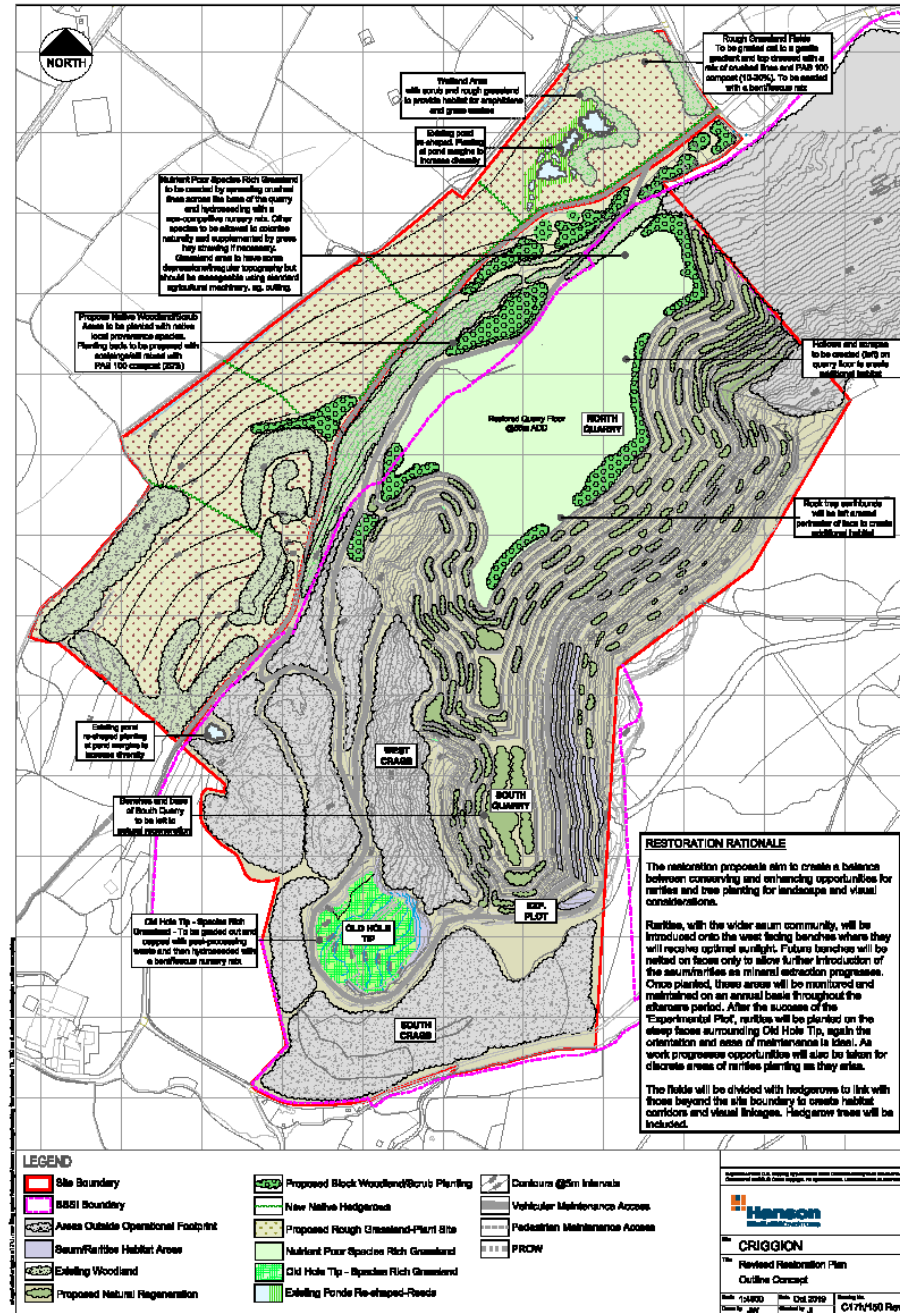
Site Biodiversity Action Plan



Site Information- Criggion

Site Name and Location (incl. Grid Ref.)	Criggion Quarry, near Welshpool, Powys (SJ290144)
Hanson Company	Hanson Aggregates
BAP(s) that will be targeted	UK BAP Powys BAP
Habitat(s) to be developed	Saum' with rarities; Heath/acid grassland; Bare rock with bryophyte and lichens; Rock faces; Woodland; Hedgerows; Ponds; Nutrient poor species rich grassland.
BAP species to be encouraged	Higher plants: <i>Potentilla rupestris</i> *; <i>Sorbus stirtoniana</i> * (syn. <i>S. leptophylla</i>); <i>Silene viscaria</i> ; <i>Veronica spicata</i> ; <i>Pilosella peleteriana subpeleteriana</i> ; <i>Filipendula vulgaris</i> ; <i>Geranium sanguineum</i> ; <i>Orobanche rapum-genistae</i> ; <i>Potentilla argentea</i> ; <i>sedum forsterianum</i> ; <i>Sorbus anglica</i> ; <i>Sorbus rupicola</i> ; <i>Trifolium glomeratum</i> ; Lower plants: <i>Bartramia stricta</i> Birds: Peregrine falcon. Invertebrates: White-letter hairstreak butterfly*. Other notable species: Adder*. * UK BAP listed species
Designated Natural Area	None
Background and site description	Criggion Quarry is situated approximately 10km north-east of Welshpool in Powys, Wales. The quarry is located within the Breidden Hills SSSI, a site designated primarily because of the presence of rare flora and unusual acidic grassland habitat. The management aims for the part of the SSSI within the quarry area is to re-introduce and encourage the populations of rare plant species and communities. This will be achieved in 2 ways, firstly by re-introduction and secondly by management. Seed is collected from rarities already on site and then propagated before being re-introduced. Management to remove trees and scrub that shade the crags is also undertaken. The acid grassland community in the quarry will also be maintained by removing encroaching trees and scrub. Rock faces will be cleared to create the open habitats suitable for the rarities. Elsewhere, woodland will further add to biodiversity. Woodland will be linked with hedgerows as habitat corridors. On final restoration nutrient poor species rich grassland will be created on the quarry floor as well as small ponds, wetland areas, rock outcrops and scree.
National Designations (SSSI, SAC, SPAs, RAMSARs and NPs) within 500m	Breidden Hills SSSI within the site.
Resource Requirements- comment on cost if appropriate	Restoration budget. Propagation and planting of whitebeam tree species and Sticky catchfly Spiked speedwell, Rock cinquefoil , Mouse-eared hawkweed
Contribution to biodiversity	Criggion Quarry, when fully worked and subsequently restored, has the potential to hold national BAP priority habitats and their associated species. The quarry is situated within the Breidden Hills SSSI with the restoration of the site will fit with the existing designated area and increase the biodiversity value of the area as a whole.
Partners and Local initiatives	Natural Resources Wales The Rare British Plants Nursery
Other documents supporting the site BAP	Criggion Quarry - Management Plan Criggion Quarry - Review of Previous Work and Guiding Principles for Establishing 'Saum' Habitat on the Quarry Benches Criggion Restoration Plan

Site Layout



Native Puzos Species Rich Grassland to be created by spreading crushed shell across the base of the quarry and reseeded with a non-competitive nursery mix. Other species to be allowed to colonise naturally and supplemented by grass hay sowing if necessary. Consideration to be given to the removal of any invasive species and the use of appropriate but should be managed using standard agricultural machinery, etc. sowing.

Propose Native Woodland/Borus Areas to be planted with native local provenance species. Planting beds to be prepared with subsoil till with PFA 100 content (20%).

Walled Area with scrub and rough grassland to provide habitat for invertebrates and grass snakes.

Existing road re-graded. Planting of pine saplings to increase density.

Rough Grassland Ponds To be graded out to a gentle gradient and top dressed with a mix of crushed shell and PFA 100 content (10-20%). To be seeded with a beneficial mix.

Hedges and screens to be created (with a quarry floor for waste material) to link.

North trap and benches will be left unseeded. Perimeter of faces to create woodland habitat.

Existing grass over-seeding planting at point margins to increase diversity.

Overgrown and trees of South Quarry to be left to natural succession.

Old Hole Tip - Species Rich Grassland - To be graded out and topped with well-rotted organic waste and then reseeded with a beneficial nursery mix.

CRIGGION

 The Revised Restoration Plan

 Outline Concept

 Date: 15/03/2019

 Rev: 01

 Scale: 1:1000

 Drawing No: CTH/100 Rev D

Action Plan

Item No.	Objective	Biodiversity Feature	Targets	Tasks	Assessing Indicator	Responsible Person	Timescale Completion
1	Increase rare plant species and 'saum'.	Saum habitat with: <i>Sticky catchfly</i> <i>Spiked speedwell</i> <i>Rock cinquefoil</i> <i>Mouse-eared hawkweed</i> <i>Stirton's whitebeam</i>	Increase rarities by seed collection from existing plants and propagation at The Rare British Plants Nursery.	1. Propagation of collected seed. 2. Planting out as plant material becomes available.	Seed collected and successfully propagated. Increase in target populations. Detailed in annual reports.	Rare Plants Nursery Landscape Architect	Ongoing until 2042
2	Management of existing 'saum' habitat on both west and south crags.	'Saum' habitat, including the rarities.	Reduce shade from trees where rarities are present. No loss of exiting rarites.	1. Remove trees (esp. pine/beech/larch) and scrub (gorse/boom/blackberry) 2. Survey, protect, mark and plot on dwg..existing rarities during tree/scrub removal work.	No loss of existing rarities. Success rate of re-introductions.	Landscape Architect	Ongoing until 2042
3	Management of existing heath/acid grassland	Heath/Acid Grassland	Maintain amount of acid grassland on the south crags. No more than 5% cover of scrub inc. gorse and broom.	1. Management to prevent succession through tree/scrub removal, strimming and weed treatment. Remove arisings. 2. Mark, protect and plot on dwg. any rarities found.	Area of Heath/acid grassland species & composition (ha).	Landscape Architect.	Ongoing until 2042
4	Protect existing bryophytes and encourage re-colonisation.	Bryophyte communities associated with volcanic rock including <i>Schistidium helveticum</i>	Increase re-colonisation by bryophytes including <i>Bartamia stricta</i> & <i>Schistidium helveticum</i>	1. Place large rocks on benches as they are restored. 2. Tree and scrub control to keep areas open for colonisation. 3. Potential reintroduction of rare species in consultation with NRW.	Colonisation of lichens.	Site Manager Landscape Architect	Ongoing until 2042
5	Preserve bare rock faces.	Rock faces	Rock faces clear of trees and scrub. Open faces dominated by short grass vegetation.	1. Clear rock faces of trees /scrub that are causing shade esp. pine/larch/gorse/ broom.	Open rock faces.	Site Manager Landscape Architect	Ongoing until 2042
6	Habitat creation and management of woodland.	Broad-leaved woodland.	Increase woodland cover in plant site area and benches that are unsuitable for 'saum'. Elm to be included in any woodland planting mix.	1. Plant broadleaved trees including elm where possible.	Area created and maintained by NVC type (ha).	Landscape Architect.	Ongoing until 2042
7	Habitat creation and management of hedgerows	Hedgerows	Ensure connectivity between woodland blocks through creation of hedgerows.	1. Plant new hedgerows 2. Manage hedgerows by cutting and laying.	Length of hedges planted. (m)	Landscape Architect.	On final restoration 2042
8	Habitat creation/management nutrient poor species-rich grassland.	Nutrient poor species-rich grassland.	Establish areas using seeds of local provenance where possible and natural regeneration.	1. Seed areas with suitable species	Grassland area restored (ha).	Landscape Architect.	On final restoration 2047
9	Create small ponds	Small ponds	Create small ponds and wetland on final restoration.	1. Earthworks to create shallow margins with sinuous edges to	Habitation by wildlife such as frogs and newts.	Landscape Architect	On final restoration

				<p>maximise habitat potential.</p> <p>2. Plant marginals or allow natural regeneration.</p>			2042
10	Species conservation and management	Peregrine falcon. White letter hairstreak butterfly. Adder.	<p>Maintain breeding presence.</p> <p>Include elm in any planted woodlands to encourage White letter hairstreak butterfly.</p> <p>Maintain woodland edge habitat near areas of open grassland to provide suitable habitat for adders.</p>	<p>1. Maintain vigilance of existing nest sites and limit disturbance on site by making site staff aware of habitat areas.</p> <p>2. Plant elm.</p> <p>3. Manage/cut woodland edge.</p>	<p>Site Manager to inform site staff and contractors working close to habitat areas.</p> <p>No. of trees planted.</p> <p>Area managed.</p>	<p>Site Manager</p> <p>Landscape Architect</p>	Ongoing to 2042
11	Communications and publicity	Criggion Quarry biodiversity including flagship species.	<p>Display to be built at the quarry offices so visitors can learn about the habitat and rare plants.</p> <p>Local groups use site as educational resource.</p>	<p>1. Trip to NBGW for local residents/interested parties.</p> <p>2. Visits to Experimental Plot by interested local parties.</p>	No of colleges, schools and students visiting site.	Site Manager.	Ongoing to 2042