

Machen Quarry

Site Biodiversity Action Plan



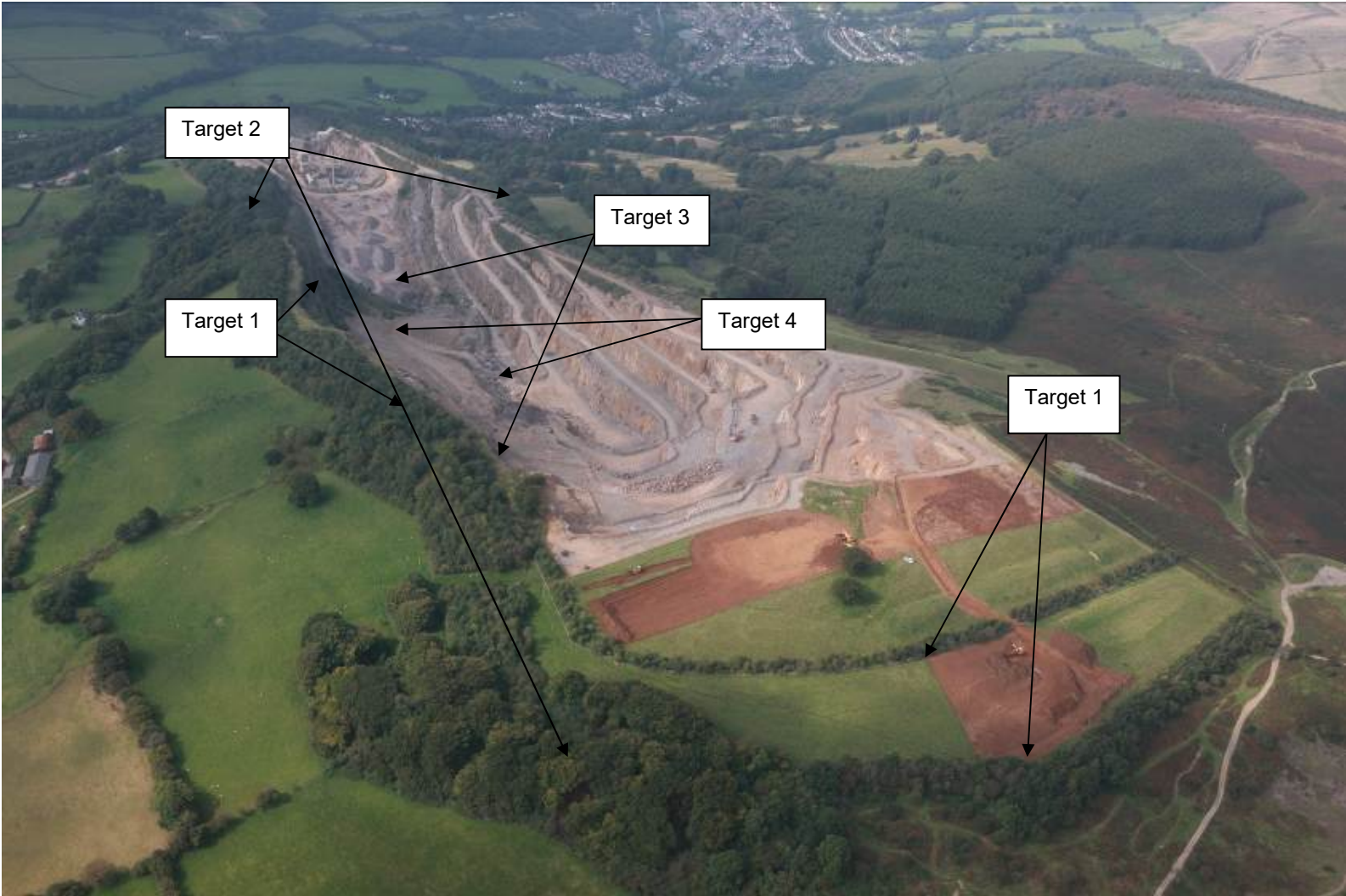
Prepared: December 2009

**Updated: December 2012
October 2013
June 2017
December 2022**

Site Information- Machen Quarry

Site Name and Location (incl. Grid Ref.)	Machen Quarry, Caerphilly ST 22320 88413 (site entrance)
Hanson Company	Hanson Aggregates
BAP(s) that will be targeted	The Newport local Biodiversity Action Plan Biodiversity Action Plan for Caerphilly UK BAP
Habitat(s) to be developed	Neutral and calcareous grasslands Ancient and semi natural woodland Hedgerows
BAP species to be encouraged	Tree sparrow High brown fritillary Dormouse, pipistrelle bat, greater horseshoe bat, lesser horseshoe bat
Designated Natural Area	None
Background and site description	40ha Limestone quarry within c.50Ha landholding, situated between Machen and Lower Machen, surrounded by ancient and other semi- natural beech woodland, young and middle-aged screen plantations and sheep-grazed common to the north east. Coniferous plantations and upland acid grassland occur on higher ground to the north west. Historic mining activity is evident beneath much of the old woodland and common land. Tree and woodland management proposals have already been drafted to satisfy planning condition for quarry extension, and will form the basis for woodland-related elements of this BAP.
National Designations (SSSI, SAC, SPAs, RAMSARs and NPs) within 500m	None
Resource Requirements- comment on cost if appropriate	Quarry restoration budget will cover most aspects of the BAP including planting and maintenance of target habitats. Potential for management grants to be sought from Natural Resources Wales. Additional project management fees may be necessary to assist with implementation of woodland management scheme and to draw up management plan for The Park ancient woodland.
Contribution to biodiversity	Improve quality of existing woodland resource through positive management and the extension and linking of perimeter woodland habitat. Provision of a variety of species-rich calcareous grassland habitats and associated invertebrate interest Safeguards the integrity of ancient beech woodland to south east.
Partners and Local initiatives	None at present
Other documents supporting the site BAP	Approved quarry development and restoration plans drawn up for quarry extension; ecological report for extension application EIA; tree and woodland management proposals prepared for Condition 19.

Site Layout



Action Plan

Item No.	Objective	Biodiversity Feature	Targets	Tasks	Assessing Indicator	Responsible Person	Timescale (Completion)
1	To improve structure and diversity of existing screen/ bench plantations	Broadleaved woodland and associated flora and fauna	Improve habitat quality of middle-aged and young plantations in accordance with Machen tree and woodland management plan (MTWMP)	1. Implement proposals laid out within the MTWMP e.g. replace losses, selective thinning of non-natives to favour natives and provide dead wood habitat.	Actions implemented as per short-medium term (1-5 year) proposals in MTWMP	Landscape Manager	Ongoing Losses replaced in 2011 monitoring of success in 2012 First phase of thinning completed by 2025
2	Positive management of existing Ancient Semi-Natural Woodland (ASNW) and secondary SN woodland blocks	ASNW and its associated flora and fauna	Draw up management plan for The Park. Implement MTWMP for other areas of semi-natural woodland	1. Conduct ecological surveys to direct management plan. 2. Implement MTWMP proposals including selective thinning of non-natives. 3. Fence remaining NE area of The Park beech woodland.	Surveys conducted, management plan produced. Thinnings completed Livestock excluded	Landscape Manager/ Ecological consultant	Management plan by Q4 2025 First phase of non-native alder thinning completed 2013. Next phase by Q4 2024 Fenced by Q4 of 2026

3	Maintain and enhance the existing flower-rich grassland habitat	Mesotrophic and short calcareous grassland and its associated flora and fauna	<p>Open up existing grassland glades in eastern plantations.</p> <p>Establish trial plots on previously vegetated spoil tips to establish appropriate management techniques for maintaining grassland</p>	<p>1. Identify quantity of clearance to maintain and improve open glades and arrange clearance</p> <p>2. Draw up methodology for trial plots and implement and monitor results</p>	<p>Encroaching scrub cleared</p> <p>Trial plots set up and monitored for results</p>	Landscape Architect	<p>Assess glades by Q4 2024.</p> <p>Trial plots completed in 2012</p> <p>Monitoring ongoing with results showing that trying to maintain grassland not feasible due to surrounding trees, soil seedbank and mechanical management challenges on steep ground.</p>
4	Increase extent of flower-rich grassland habitats	Calcareous and neutral grassland and associated flora and invertebrate species	Implement approved restoration scheme to create grassland habitats on restored tips and quarry floor.	<p>1. Design and implement earthworks contracts to ensure suitable substrate for calcareous grassland.</p> <p>3. Implement best methodology for grassland establishment and maintenance drawing on</p>	Species rich grassland sward beginning to develop within 3 years of final soil placement and monitored	Landscape Architect	<p>Ongoing as soil stripping and tip restoration occur.</p> <p>Monitoring ongoing with results showing that trying to maintain</p>

				evidence from trial plots and 2009 tip restoration.			grassland is not feasible due to surrounding and soil seedbank and mechanical management challenges on steep ground.
5	Review current approved restoration design	Calcareous and neutral grassland and woodland	Review restoration design as a result of target 3 and 4 trial plot findings. New design to include more woodland on quarry tips that are difficult to maintain as a result of a lack of grazing and topography. Grassland instead to be considered on easily fenced and accessible areas.	1. Re-design restoration design at next ROMP review.	Design revised and approved.	Landscape Architect	Q4 2032