

Appendix 7S

Evaluation of Future Baseline versus Existing Baseline

Appendix 7S

Evaluation of Future Baseline versus Existing Baseline

Table 7.16: This table details the assumptions made regarding the Future baseline's ecology and evaluation of future baseline ecology.

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
Protected Sites						
SACs	Coedydd Nedd a Mellt SAC, Cwm Cadlan SAC and Blaen cynon	International	Sites designated and protected under the Habitat Regulations 2019	The same SACs are located within the ZoI for the GCRE project.	International	Sites designated and protected under the Habitat Regulations 2019. Protected by local and national planning policy.
SSSIs	Nant llech, Gors Llwyn Onllwyn, Caeau Ton-y-Fildre, Waun Ton-y-Spyddaden Rhos Hen-Glyn-Isaf, Mynydd Du, Ogof Ffynnon Ddu, Ogof Ffynnon Ddu - Pant	National	Sites designated and protected under the Wildlife and Countryside Act 1981 (as amended)	The same twelve SSSIs occur within the ZoI for the GCRE project.	National	Sites designated and protected under the Wildlife and Countryside Act 1981 (as amended).

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
	Mawr, Nant y Rhos, Craig y Rhiwarth, Dyffrynoedd Nedd a Mellt a Moel Penderyn and Caeau Nant y Llechau					Protected by local and national planning policy.
SINCs	Gorsllwyn Meadows, Onllwyn Coal Washery, Dyffryn Cellwen, Intervalley Road, Banwen Pond, Adjacent to Gorsllywn, Aberhenwaun Uchaf, and Land behind Marigold Place	County	Protected by local and national planning policy	A total of eight SINCs are within the ZoI for the GCRE project, which includes an additional three not previously included in the Nant Helen Complementary Earthworks. This includes Banwen pond, Intervalley Road, and Adjacent to Gorsllywn SINCs.	County	Protected by local and national planning policy
Local Wildlife Trust Reserve		County	Protected by local and national planning policy	The Local Wildlife Trust reserve previously in the ZoI for the Nant Helen Complementary Earthworks, remains in the ZoI for the GCRE project.	County	Protected by local and national planning policy
Ancient woodland	One area within the Site boundary. Another area	County	Protected by local and national planning policy	The same ancient woodland areas occur within the ZoI for the GCRE project. As detailed in the Nant Helen ES Chapter, one of these areas	County	Protected by local and national planning policy

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
	partially within the site boundary.			(that is partially within the site boundary) has been shown to be an area previously mined and therefore comprises plantation on backfilled material rather than ancient woodland.		
Habitats						
Mosaic of habitats	Semi-improved acid grassland, neutral grassland, bracken, marshy grassland, dry heathland and acid grassland mosaic (including areas of unimproved acid grassland), improved grassland, short / ephemeral vegetation, dry heathland, poor semi-improved grassland, fen-mire, flushes, wet heathland, scrub, semi-natural broad-leaved woodland (including ancient	County	Habitats present which qualify as UK BAP habitats, and Section 7 habitats. In addition, a number of LBAP habitats are also present. These habitats are protected by local and national planning policy. A number of these habitats are also considered to qualify the site as a SINC, in accordance with published guidelines⁹. These include those habitats above (i.e. UK BAP and Section 7 habitats) in addition to heath, acid grassland mosaic (where unimproved grassland), flushes, ponds and conifer plantation (which are not listed above as	The Future Baseline for the GCRE project excludes habitats from the existing baseline which occur within the footprint of the earthworks (namely purple moor grassland, heathland, woodland, waterbodies, ditches and vegetated coal spoil) in addition to adjacent peatland – mire habitat which will be lost as a result of changes to hydrology. These habitats will be replaced by those shown in the Nant Helen Complementary Earthworks application restoration plan, and shown in the Future Baseline plan, Figure 7.9. Re-established habitats comprise acid grassland on slopes and embankments in addition to an area	Newly planted woodland and acid grassland establishing on new earthworks and adjacent areas of Celtic energy restoration – County value . Newly created waterbodies and peatland – mire habitat –	Habitats recreated as part of the Nant Helen earthworks project and Celtic Energy restoration, will be subject to management to maintain and enhance their value – all habitats should aim to qualify as Section 7 / UK BAP habitats and as a mosaic qualify the site as a SINC. It is acknowledged

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
	woodland), mixed, conifer and broadleaved plantation, hedgerows (species poor), river and streams, standing water, swamp, dry and wet ditches. In addition, there are areas of quarry, bare ground, coal spoil, buildings, fences and areas of gravel and tarmac.		UKBAP/Section 7 habitats) due to being locally important habitats, or due to supporting important vascular plants. Examples of UK BAP/Section 7, SINC and LBAP habitats are however relatively small in extent or species poor examples. Of these habitats for example marshy grassland occurs across the site but is species poor due to agricultural improvement and unsympathetic grazing regimes; the only species-rich examples of this habitat occur to the east of the Site in the washery. There are still examples of good quality habitats of conservation significance importance however within the Site, and which is reflected by the presence of notable plant species (and fungi, and invertebrates), and the high number of different habitats	of woodland on the northern part of the earthworks embankment. There will also be the creation of new waterbodies within retained adjacent marshy grassland habitats and the relocation of peatland – mire habitat (north from its existing location). These habitats will also be subject to long term management. Newly created habitats as part of Celtic Energy’s site restoration are also shown on the Nant Helen restoration plan and include acid grassland, grazed pasture, hedgerows, woodland planting and waterbodies. The Future Baseline for GCRE also incorporates all habitats within the Washery Site, which were not included within the Nant Helen Complementary Earthworks application red line boundary and will therefore be protected from any potential disturbances during the earthworks. The washery site	County Value. Retained habitats within the Nant Helen site including marshy grassland, acid grassland, heathland, waterbodies and broadleaved woodland (including ancient woodland), which will be subject to management – County Value.	that some habitats namely peatland – mire and fungi rich habitats, will take longer to establish (between 20 – 30 years), however the mosaic of habitats created within the Site, providing they are created and managed in accordance with landscape and ecology recommendations , (and be sufficiently species rich) should still meet the criteria as habitats of conservation significance i.e. Section 7 / UK

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
			which occur together, albeit some of lower habitat quality, indicates that the Site (excluding areas subject to disturbances from current mining activities) would qualify as SINC under the 'Mosaic habitat' criteria. As such, it is considered that the Site is of County value for its habitats. It is noted however that some habitats particularly areas of quarry, bare ground, coal spoil, buildings, fences and areas of gravel and tarmac would be of Less than local value if considered separately.	supports a mosaic of marshy grassland, species rich grassland, waterbodies, heathland, scrub and trees. The Future baseline plan also shows these habitats, and they are described in detail in the existing baseline information.	Existing mosaic of species rich habitats within the Washery – County Value. Overall Value = County Value	BAP and or SINC habitats. The retained habitats within the Nant Helen site such as broadleaved woodland (including ancient woodland, waterbodies, acid grassland, marshy grassland and heathland) will continue to be of County value, being Section 7 / UK BAP habitats and qualifying these areas as a SINC. Additionally, these retained habitats will be subject to management

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
						measures which will enhance their value in the longer term. Washery habitats, which will not be directly affected by the Nant Helen earthworks, will be the same value as the existing baseline i.e. Section 7 / UK BAP, and will therefore be of County value.
Protected Species						
Fungi		County	There are several areas within and adjacent to the site, which support a high diversity of fungi species. This includes three areas which are considered to	Suitable habitat for fungi will be retained and enhanced as part of the Nant Helen earthworks project particularly areas of acid grassland within the smaller track. In addition,	Acid grassland establishing on new earthworks	As discussed above under 'Habitats' fungi rich habitats will take between 20 –

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
			qualify as SINC habitat, based on the number of different species, and occurrence of rare species (in accordance with published guidance⁹). The best examples of fungi habitat, which were surveyed, occur in grassland on coal spoil. Due to the known presence of SINC habitats, and the presence of habitats likely to be of conservation importance for fungi, being present within the Site boundary, the Site is considered to be of County value for fungi.	the re-use of suitable substrate (i.e. coileys spoil) within the site will provide suitable conditions for the re-establishment of acid grassland and fungi communities, particularly on railway track slopes / embankments. The Washery comprises a number of areas which are rich in fungi, namely acid grassland habitats occurring in the eastern and southern parts of the site.	and adjacent areas of Celtic energy restoration – Less than Local Value. Retained fungi rich habitats within the Nant Helen site – County Value. Habitats within the Washery – County Value. Overall Value = County Value	30 years to establish, and as such at the time of the Project commencing newly created areas for fungi habitat within the Nant Helen site are considered to provide limited value for fungi, and likely to be of Less than Local Value. Where habitats are retained within the Nant Helen Site, these will continue to support fungi rich habitats, and therefore be of County value. This includes areas of acid

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
						grassland such as extensive areas within the smaller track loop. Within the Washery are fungi rich, will be of County value.
Invertebrates	The Site supports notable invertebrates including species listed in the Red data book (identified as Nationally scarce including NT, Nb, N, NT65	County	The Site supports species of conservation significance including S7 species and red data book. The Site is assessed as being of County Value , due to the presence of a high proportion of habitats which support a diverse invertebrate fauna including	Suitable habitat for invertebrates will be retained and enhanced as part of the Nant Helen earthworks project. Newly established habitats are likely to quickly be colonised by invertebrates within the Site, particularly wetland habitats and acid grassland.	Acid grassland establishing on new earthworks and adjacent areas of Celtic energy restoration –	Retained habitats within the Nant Helen site will continue to support notable invertebrate species. Newly created habitats are likely to

⁶⁵ **NT** - IUCN UK Red List, Near Threatened. A taxon is Near Threatened when it has been evaluated against the IUCN criteria and does not currently qualify for Critically Endangered, Endangered or Vulnerable status, but is close to qualifying, or is likely to do so soon; **Nb** – Nationally Scarce Category B. Taxa thought to occur in between 30 and 100 10 km squares of the National Grid; **NS** – Nationally Scarce. In more recent second status reviews, the Na and Nb sub-divisions have been subsumed into a single category covering species occurring in 16 to 100 10km squares of the National Grid. Unlike the previous ‘N’ category, which covered the same range, the amalgamation does not necessarily result from inadequate information on the British distribution; **pNS** – Provisional Nationally Scarce. The rove beetles *Hadrognathus*

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
	categories), and as species of principal importance for conservation in Wales (i.e. Section 7 species) (S7). In accordance with published guidance. These include scarce blue-tailed damselfly (NT), a water beetle (<i>Helochares punctatus</i>) (NS), a rove beetle (<i>Hadrognathus longipalpis</i>) (pNs), weevils: <i>Anthonomus brunnipennis</i> (Nb), <i>Pelenomus waltoni</i> (Nb) and <i>Magdalis carbonaria</i> (Nb),		species of high conservation status.	The Washery comprises habitats which are used by notable invertebrates including marshy grassland connecting to the Gorsllwyn SSSI and short species rich grassland habitats. Species recorded included the small blue, grayling and small pearl bordered butterfly.	County value. Retained habitats within the Nant Helen site – County Value. Habitats within the Washery – County Value. Overall value = County Value	quickly establish with invertebrate species within the site, and would therefore provide a similar value as the existing baseline (i.e. County Value). It is possible, that in the long term the value of enhanced habitats within the Nant Helen site will be more favourable to invertebrates including those not currently present in the Site but which are known to be present in the

longipalpis and *Zyras collaris* will almost certainly be accorded Nationally Scarce status in the forthcoming Review of this group, but they have no formal conservation status currently.

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
	dingy skipper (S7), double line moth (Nb), a money spider (<i>Walckenaeria kochi</i>), money spiders: <i>Erigonella ignobilis</i> (NS) and <i>Agyneta olivacea</i> (NS), triangle hammock-spider (S7/NS). The majority of these species were recorded in small numbers in one or a few of the sampling areas within the Site. Dingy skipper was recorded in higher numbers, and across the Site in open, ruderal vegetation and is considered to be an important					wider area such as marsh fritillary. In the short term however, and at the time of GCRE commencing, these habitats are considered to be of similar value to invertebrates as the existing baseline and marsh fritillary are assumed to be absent. The Washery, which is unaffected by the Nant Helen earthworks, will have the same value as the existing baseline i.e. County Value.

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
	population of this butterfly. The adjacent washery site supported a number of other notable invertebrates including the small blue, grayling and small pearl bordered butterfly.					
Amphibians	The site is known to support common toad, common frog, common and or smooth newt, which have been found in terrestrial habitat during reptile surveys.	Local	Common toad are a Section 7 species. As such the Site is assessed as being of Local value to amphibian populations.	Suitable habitat for amphibians will be retained and enhanced as part of the Nant Helen earthworks project. Newly established habitats are likely to quickly be colonised by amphibians within the Site. The Washery comprises habitats which are used by amphibians. All species recorded in the Nant Helen site were also recorded within the washery site: common frog, Common toad, palmate and smooth newt.	Newly planted woodland and acid grassland establishing on new earthworks and adjacent areas of Celtic energy restoration – Less than Local value.	Retained habitats within the Nant Helen site will continue to support notable amphibian species. Newly created habitats are likely to quickly establish with amphibian species within the site, although it is noted that newly created acid

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
					Retained habitats within the Nant Helen site including marshy grassland and waterbodies – Local Value. Habitats within the Washery – Local Value. Overall Value = Local Value	grassland, which forms the largest proportion of newly created habitats, is likely to have limited value for amphibians. It is possible, that in the long term the value of enhanced habitats within the Nant Helen Site will be more favourable to amphibians due to the increase in the number of wetland habitats, although at the time of GCRE commencing it is likely a similar population size would be present.

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
						Therefore, these habitats would be of local Value. The Washery, which is unaffected by the Nant Helen earthworks, will have the same value as the existing baseline i.e. Local Value.
Reptiles	Reptile presence / absence surveys recorded peak counts of 17 common lizard and 2 slow worm.	Local	These species are Section 7 species. All native reptiles are protected under Schedule 5 of the Wildlife and Countryside Act 1981 with respect to killing, injury and sale only. As such, the Site is considered to be of Local Value to reptiles.	Suitable habitat for reptiles will be retained and enhanced as part of the Nant Helen earthworks project. In addition, newly established habitats are likely to quickly be colonised by reptiles within the Site. The Washery comprises habitats which are used by reptiles. A peak count of 10 common lizard was recorded within the Washery site.	Newly planted woodland and acid grassland establishing on new earthworks and adjacent areas of Celtic energy restoration – Local value.	Retained habitats within the Nant Helen site will continue to support notable reptile species. Newly created habitats are likely to quickly establish with reptile species within the site.

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
					Retained habitats within the Nant Helen site including marshy grassland and waterbodies – Local Value. Habitats within the Washery – Local Value. Overall Value = Local Value	It is possible, that in the long term the value of enhanced habitats within the Nant Helen Site will be more favourable to reptiles due management of habitats, although at the time of GCRE commencing it is likely a similar population size would be present. Therefore these habitats would be of local Value. The Washery, which is unaffected by the Nant Helen earthworks, will have the same value as the

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
						existing baseline i.e. Local Value.
Breeding birds	Surveys recorded an assemblage of breeding birds typically associated with the habitat surveyed. Surveys recorded the following species: greater Canada goose (<i>Branta canadensis</i>), mallard, common buzzard, lapwing, curlew, woodpigeon (<i>Columba palumbus</i>), Eurasian collared dove (<i>Streptopelia decaocto</i>), cuckoo, nightjar, great spotted woodpecker	County	Of these species ten are included on the BoCCW 3 Red list, 12 on the BoCCW 3 Amber list with 14 being Section 7 species. One species (Common Crossbill) that is included on Schedule 1 of the Wildlife and Country 1981 (as amended) bred within the Study Area. In addition, three of these species are listed as ‘Primary’ species, and ten as ‘Contributory’ species in published guidance⁹, and therefore the site would qualify as SINC based on the presence of these species. One species, the nightjar (a BoCCW 3 Amber list, S7 and SINC ‘Contributory’ species) was recorded in cleared	Suitable habitat for breeding birds will be retained and enhanced as part of the Nant Helen earthworks project. In addition, newly established habitats are likely to quickly be colonised by breeding birds within the Site. The Washery comprises habitats which are used by a range of breeding birds including skylark, linnet, grasshopper warbler, willow warbler, dunnock, lapwing, house sparrow, bullfinch and reed bunting. All Section 7 and or red listed species.	Newly planted woodland and acid grassland establishing on new earthworks and adjacent areas of Celtic energy restoration – County value. Retained habitats within the Nant Helen site including marshy grassland and waterbodies	Retained habitats within the Nant Helen site will continue to support notable breeding bird species. Newly created habitats are likely to quickly establish with breeding bird species within the site. It is possible, that in the long term the value of enhanced habitats within the Nant Helen Site will be more favourable to breeding birds due management of habitats,

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
	(<i>Dendrocopos major</i>), jay (<i>Garrulus glandarius</i>), magpie (<i>Pica pica</i>), jackdaw (<i>Corvus monedula</i>), carrion crow (<i>Corvus corone</i>), goldcrest (<i>Regulus regulus</i>), blue tit (<i>Cyanistes caeruleus</i>), great tit (<i>Parus major</i>), coal tit (<i>Periparus ater</i>), skylark, long-tailed tit (<i>Aegithalos caudatus</i>), chiffchaff (<i>Phylloscopus collybita</i>), willow warbler (<i>Phylloscopus trochilus</i>), blackcap, garden warbler		plantation woodland, south-west of the Site. On the current survey information to date, the site is assessed as being of County value for breeding birds. All wild birds in the UK are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy the nest (whilst being built or in use) or its eggs. Some rarer species (those listed under Schedule 1 of the Act) are afforded additional protection from disturbance when breeding. Barn owl is included on Schedule 1.		– County Value. Habitats within the Washery – County Value. Overall Value = County Value	although at the time of GCRE commencing it is likely a similar population size, and variety of species, would be present. Therefore these habitats would be of County Value. The Washery, which is unaffected by the Nant Helen earthworks, will have the same value as the existing baseline i.e. County Value.

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
	(<i>Sylvia borin</i>), whitethroat (<i>Sylvia communis</i>), grasshopper warbler, sedge warbler (<i>Scrocephalus schoenobaenus</i>), wren (<i>Troglodytes troglodytes</i>), starling, blackbird, song thrush, mistle thrush (<i>Turdus viscivorus</i>), robin (<i>Erithacus rubecula</i>), redstart (<i>Phoenicurus phoenicurus</i>), stonechat, northern wheatear (<i>Oenanthe oenanthe</i>), dunnoek, house sparrow, pied wagtail (<i>Motacilla alba</i>), grey wagtail,					

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
	tree pipit, meadow pipit (<i>Anthus pratensis</i>), chaffinch, bullfinch, linnet, lesser redpoll (<i>Carduelis cabaret</i>), goldfinch (<i>Carduelis carduelis</i>), siskin (<i>Spinus spinus</i>), yellowhammer (<i>Emberiza citrinella</i>) and reed bunting.					
Wintering birds	Surveys recorded the following species: greater Canada goose, mallard, grey heron (<i>Ardea cinerea</i>), red kite, buzzard, snipe, woodpigeon, kestrel, magpie, jackdaw, rook	County	Overall, the assemblage of birds recorded is typical of habitats in upland areas of this part of Wales. No particularly rare species or large aggregations of species of conservation concern were recorded. Of the total of 34 species was recorded, three are included on the Birds BoCCW3 Red list, 12 are included on the	Suitable habitat for wintering birds will be retained and enhanced as part of the Nant Helen earthworks project. In addition, newly established habitats are likely to quickly be colonised by wintering birds within the Site.	Acid grassland establishing on new earthworks and adjacent areas of Celtic energy restoration –	Retained habitats within the Nant Helen site will continue to support notable wintering bird species. Newly created habitats are likely to quickly establish

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
	<i>(Corvus frugilegus)</i> , carrion crow, raven, blue tit, great tit, skylark, wren, starling, blackbird, fieldfare, song thrush, redwing, mistle thrush, robin, stonechat, dunnoek, house sparrow, pied wagtail, meadow pipit, chaffinch, linnet, goldfinch and reed bunting.		BoCCW3 Amber list with seven being included on S7 of the Environment (Wales) Act 2016. In addition, seven of these species are listed as ‘contributory’ species in published guidance, and therefore the site would qualify as SINC based on the presence of these species. On the current survey information to date, the site is assessed as being of County value for wintering birds.	The Washery comprises habitats which are used by wintering birds including starling, house sparrow and mistle thrush. All Section 7 and or red listed species.	County value. Retained habitats within the Nant Helen site including marshy grassland and waterbodies – County Value. Habitats within the Washery – County Value. Overall Value = County Value	with wintering bird species within the site. It is possible, that in the long term the value of enhanced habitats within the Nant Helen Site will be more favourable to wintering birds due management of habitats, although at the time of GCRE commencing it is likely a similar population size, and variety of species, would be present. Therefore these habitats would be of County Value. The Washery, which is

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
						unaffected by the Nant Helen earthworks, will have the same value as the existing baseline i.e. County Value.
Badger	Badger surveys recorded setts within the Site boundary. This included a three hole and five-hole subsidiary sett. None of the sett entrances had any signs of currently being used by badger, but a latrine was recorded in close proximity. An outlier sett, badger latrine and signs of digging by badger were also recorded	Less than Local	A number of badger setts have been recorded within / adjacent to the Site boundary in addition to a number of setts within the wider area. The Site is considered to be of Less than Local value to badgers. Although not rare, badgers are protected under the Protection of Badgers Act 1992 for welfare reasons and therefore are a potential ecological constraint within the site.	Suitable habitat for badger will be retained as part of the Nant Helen earthworks project. No badger setts will be disturbed by the Nant Helen earthworks. In addition, newly established habitats within the Site will be suitable for badger. The Washery comprises limited habitat for badger, and no evidence has been found to suggest they are using this part of the site, although the occurrence of foraging badger at this location cannot be ruled out.	Newly planted woodland and acid grassland establishing on new earthworks and adjacent areas of Celtic energy restoration – Less than Local value. Retained habitats within the	Retained habitats within the Nant Helen site will continue to support badgers, limited to small numbers/infrequent use. Newly created habitats will also be suitable for badgers. These habitats will have a less than local value for badgers. The Washery, which is

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
	in woodland outside of the Site boundary, over 2 km to the south-west.				Nant Helen site including marshy grassland and waterbodies – Less than Local Value. Habitats within the Washery – Less than Local Value. Overall Value = less than Local Value	unaffected by the Nant Helen earthworks, will have the same value as the existing baseline i.e. Less than Local Value.
Otter	Riparian mammal surveys identified a number of otter spraints along the Afon Dulais, therefore outside of the Site boundary. No natal dens or	Local	It is possible that they may occur within the Site, whilst commuting / foraging through the wider area but it is not considered to be used frequently by this species.	Suitable habitat for otter will be retained as part of the Nant Helen earthworks project. In addition, newly established habitats, particularly wetland and connecting terrestrial habitats within the Site will be suitable for otter.	Newly planted woodland and acid grassland establishing on new earthworks	Retained habitats within the Nant Helen site will continue to support otter. Newly created habitats are likely to be used by

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
	couches were identified within the Site, although a potential couch was identified south-west of the Site, along the Afon Dulais. It is possible, due to the large territories of otter, that they may occur within the site whilst foraging or commuting, although due to the exposed nature of the site, current levels of disturbance, lack of well stocked fish ponds, this is considered likely to be infrequent.		Otter are a Section 7 species, and they are also listed in Powy's LBAP. Otters are fully protected by UK law under the Wildlife and Countryside Act 1981 (as amended) through inclusion in Schedule 5. Otter is also included in Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. The site is assessed as being of Local value for otter.	The Washery comprises limited habitat for otter, and no evidence has been found to suggest they are using this part of the site, although evidence has been found along the Afon Dulais further west of the Washery site.	and adjacent areas of Celtic energy restoration – Local value. Retained habitats within the Nant Helen site including marshy grassland and waterbodies – Local Value. Habitats within the Washery – Local Value. Overall Value = Local Value	otter, particularly wetland habitats. These habitats would be of local Value. It is possible, that in the long term the value of enhanced habitats within the Nant Helen Site will be more favourable to otter due management of habitats, although at the time of GCRE commencing it is likely a similar population size, would be present. Therefore these habitats would be of local Value.

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
						The Washery, which is unaffected by the Nant Helen earthworks, will have the same value as the existing baseline i.e. Local Value.
Roosting bats	Various trees were identified during the field survey as having potential roosting features. Additionally, three trees with bat boxes were recorded in woodland in the west of the Site. A road bridge and railway bridge are present just outside of the Site boundary to the south-east of that Site that may also provide	Local	The Site is considered to be of Local value for roosting bats, due to the potential for small numbers of common roosting bat species to occur within trees and buildings. It is acknowledged however that further surveys would be required for any trees affected, and if any rare or notable bat species and or significant numbers of any roosting bats are recorded within the site during these surveys, the Site's value for bats may increase.	No evidence of roosting was recorded within the Nant Helen site, although trees with low suitability were present. Suitable habitat for roosting bats will be retained as part of the Nant Helen earthworks project. Some of the trees with bat potential (low) will have been removed as part of the Earthworks, although newly established habitats (tree planting) within the Site will be suitable for roosting bats in the longer term. The Washery comprises suitable habitats for roosting bats. There were a number of trees and buildings with	Newly planted woodland and acid grassland establishing on new earthworks and adjacent areas of Celtic energy restoration – Less than Local value . Retained habitats	Retained habitats within the Nant Helen site will continue to support roosting bats. Newly created woodland habitats are likely to take some time quickly utilised by roosting bats. It is possible, that in the long term the value of enhanced habitats within the Nant

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
	roosting opportunities for bats. Bat roost surveys undertaken in 2019 recorded no roosts within any trees / buildings within the Study Area; however, 12 trees retained low-moderate roost potential following the tree climbing assessment. A potential Pipistrellus sp. and Natterers bat roost was identified within an old tunnel during the bat roost surveys, as well as during the 2019 transect surveys at NGR SN80138 09411.			roosting suitability. Buildings were assessed as being either negligible (14), low (5) or moderate suitability (3), although no evidence of roosting during further surveys was found. One trees was assessed as being of low suitability (1).	within the Nant Helen site including trees / woodland – Local Value. Habitats within the Washery – less than Local Value. Overall Value = Local Value	Helen Site will be more favourable to roosting bats due management of habitats, and natural development of features within trees/buildings for bats etc , although at the time of GCRE commencing it is likely likely that there would be less opportunities for roosting bats. Therefore these habitats would be of Less than Local value to roosting bats.

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
						The Washery, which is unaffected by the Nant Helen earthworks, will have the same value as the existing baseline i.e. Local Value.
Commuting / foraging bats	During transect surveys soprano and common pipistrelle were by far the most abundantly logged species, with records from each transect, in addition noctule and Myotis species were recorded. A minimum of eight bat species were recorded during static monitoring recorded, of these,	County	On the current survey information to date, the site is assessed as being of County value for foraging/commuting bats, largely due to the presence of serotine and greater horseshoe bats, although it is acknowledged that this species are present infrequently and in lower numbers. All bat species are protected through inclusion on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species	Suitable habitat for foraging / commuting bats will be retained as part of the Nant Helen earthworks project. In addition, newly established habitats within the Site will be suitable for foraging / commuting bats. The Washery comprises limited habitat for foraging bats. Bat activity indexes were relatively low compared to the adjacent Nant Helen site. Species recorded largely comprised common and soprano pipistrelle, although myotis and noctule bats were also recorded.	Newly planted woodland and acid grassland establishing on new earthworks and adjacent areas of Celtic energy restoration – County value. Retained habitats	Retained habitats within the Nant Helen site will continue to support roosting bats. Newly created habitats are likely to quickly utilised by foraging bats. It is possible, that in the long term the value of enhanced habitats within the Nant Helen Site will be more favourable

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
	common and soprano pipistrelle were by far the most commonly recorded, comprising 96.78% of all bat calls recorded. Myotis sp. and Noctule were the next most commonly recorded species/species group. Of those species identified to species-level, serotine (two passes, static monitoring locations 1 and 8) and greater horseshoe bat (an Annex II species), (five passes, static monitoring locations 3, 7, 9 and 16) provided the fewest records.		(Amendment) (EU Exit) Regulations 2019. Eight of the UK's bat species are listed as Section 7 species.		within the Nant Helen site including woodland, marshy grassland and waterbodies – County Value. Habitats within the Washery – Local Value. Overall Value = County Value	to roosting bats due management of habitats, although at the time of GCRE commencing it is likely a similar population size, range of species, would be present. Therefore these habitats would be of County Value. The Washery, which is unaffected by the Nant Helen earthworks, will have a lower value than the existing baseline when considered separately i.e. Local, due to the low bat activity index and

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
	Bat activity levels (and activity by rarer species: greater horseshoe and serotine) were highest at lower elevations and/or when near to optimal foraging habitat (e.g. woodland/water), and lowest at higher elevations and/or near to busier roads (as opposed to access tracks around the site).					absence of rarer bat species.
Notable mammals	Arboreal mammal surveys recorded polecat at one of the feeding stations (captured on video from trail camera deployed for this survey). Red squirrel and pine	Local	The presence of polecat was confirmed during surveys at a feeding station outside of the Site boundary but is considered likely to occur throughout the site, in suitable habitats such as woodland including plantations. Polecat is a UKBAP/S7 and Powys LBAP species.	Suitable habitat for notable mammals will be retained as part of the Nant Helen earthworks project. In addition, newly established habitats within the Site will be suitable for notable mammals. The Washery comprises limited habitat for notable mammals and is	Newly planted woodland and acid grassland establishing on new earthworks and adjacent	Retained habitats within the Nant Helen site will continue to support notable mammal species. Newly created habitats are likely to quickly utilised

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
	marten were found likely to be absent from the survey area. Numerous other native UK species were recorded during this suite of surveys, including red fox, rabbit, and mice.		Brown hare has also been recorded within the Site, which is also UKBAP/S7 and Powys LBAP species. Species such as the West European hedgehog which are considered likely to occur within the Site, are also a S7 species. The above species, which are of conservations significance, occur within the Site, however are likely to be present in small numbers due to the limited habitat available. It is therefore considered that the site is of Local value for notable mammal species.	considered unlikely to support species such as brown hare.	areas of Celtic energy restoration – Local value. Retained habitats within the Nant Helen site including woodland, marshy grassland and waterbodies – Local Value. Habitats within the Washery – less than Local Value. Overall Value = Local Value	by notable mammals. It is possible, that in the long term the value of enhanced habitats within the Nant Helen Site will be more favourable to notable mammals due management of habitats, although at the time of GCRE commencing it is likely a similar population size, range of species, would be present. Therefore these habitats would be of local Value. The Washery, which is unaffected by the

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation
						Nant Helen earthworks, will have a lower value than the existing baseline, when considered separately due to supporting sub-optimal habitats for notable mammal species. i.e. Less than Local Value.
Invasive species	The site is known to support Japanese knotweed, montbretia, rhododendron, cotoneaster species.	Less than Local	Although not valued ecological receptor, as plants listed under Schedule 9 plants of the Wildlife and Countryside Act 1981 (as amended), it is an offence to spread them from the site.	Any INNS previously present within the Nant Helen site will have been treated, and removed from the site as part of the earthworks. As such the only remaining INNS will be any in the Washery. Japanese knotweed has been recorded in the Washery.	Less than Local	Although not valued ecological receptor, as plants listed under Schedule 9 plants of the Wildlife and Countryside Act 1981 (as amended), it is an offence to spread them from the site.

Ecological Receptor	Existing baseline description	Existing Baseline Evaluation (used for the Nant Helen Earthworks)	Justification for Evaluation	Future Baseline description	Future Baseline Evaluation	Justification for Evaluation