



eco-scope
ecological solutions

Ecological Impact Assessment (EclA) for the proposed development of a Gas Peaking Plant, new vehicular access and alterations to Ffordd Waunfawr, internal access and use of land for storage, retention of concrete batching plant and recycling and export of finished materials/products – Seiont Quarry, Caernarfon

for

Jones Bros Ruthin (Civil Engineering) Co Ltd

27 November 2023



Ecoscope Ltd.

Telford Lodge, Benarth Road, Conwy LL32 8UB

t. [03335 771 402](tel:03335771402) e. info@eco-scope.co.uk w. www.eco-scope.co.uk

Registered address as above | Company Number: 08916412 | VAT Reg. No. 199 5268 44

CONTENTS	Page no.
GLOSSARY OF TERMS	1
1. INTRODUCTION	2
1.1 Description of Brief	2
1.2 Details of the proposal	2
2. METHOD	5
2.1 Desk study	5
2.2 Scope of the EcIA	5
3. RESULTS	7
3.1 Protected sites screening	7
3.2 Previous reports: Bats	9
3.3 Previous reports: Reptiles and Amphibians	11
3.4 Previous reports: Breeding Birds	12
3.5 Previous Reports: Otter and Badger	13
3.6 Site description	13
3.7 Summary of results.	17
3.8 Conclusions from Desk Study & Phase 1 Survey	18
4. ECOLOGICAL IMPACT ASSESSMENT	20
4.1 Assessment of potential effects	20
4.2 Proposals for plant: Impact Assessment	22
5. RECOMMENDATIONS	24
5.1 Mitigation Strategy	24
5.2 Avoidance	24
5.3 Protection	24
5.4 Reduction	26
5.5 Enhancement	27
5.6 Mitigation	28
5.7 Mitigation check list	29
6. REVISED RISK ASSESSMENT	30

Ecoscope Ltd.

Telford Lodge, Benarth Road, Conwy LL32 8UB

t. [03335 771 402](tel:03335771402) e. info@eco-scope.co.uk w. www.eco-scope.co.uk

Registered address as above | Company Number: 08916412 | VAT Reg. No. 199 5268 44

6.1	Mitigation effectiveness	30
6.2	Cumulative impacts	31
7.	APPENDIX 1	I
8.	APPENDIX 2	II
9.	APPENDIX 3	III
	Legislation	iii
	Figure 1 Afon Seiont aerial with services	4
	Figure 2 NRW3	10
	Figure 3 Seiont Quarry views	14
	Figure 4 Target Notes #1	14
	Figure 5 Target Notes #2	15
	Figure 6 Route of services	17
	Figure 7 Extent of proposed works	21
	Figure 8 Silt trap solutions	25
	Figure 9 Mitigation #2	29
	Figure 10 Revised Phase 1 Map	i
	Table 1 Personnel	6
	Table 2 International Protected Sites and Qualifying Features within 10km	7
	Table 3 Relevant Protected Species within 1km of the site	8
	Table 4 Preliminary survey results	9
	Table 5 Monthly totals for LHB at NRW3 2018/19	10
	Table 6 Diversity of bat species recorded on transects near Seiont Quarry.	10
	Table 7 Cumulative LHB roost counts at Seiont brickworks 2016-2022	11
	Table 8 Amphibian data for Seiont Quarry	11
	Table 9 BBS results 2015	12
	Table 10 Impact assessment (without mitigation)	22
	Table 11 Hierarchy of impact	23
	Table 12 Indicative N₂ critical load levels for specific habitats	26
	Table 13 Projected and Current N₂ loading	26

Ecoscope Ltd.

Telford Lodge, Benarth Road, Conwy LL32 8UB

t. [03335 771 402](tel:03335771402) e. info@eco-scope.co.uk w. www.eco-scope.co.uk

Registered address as above | Company Number: 08916412 | VAT Reg. No. 199 5268 44

Table 14 Tree planting	27
Table 15 Non-native tree planting	28
Table 16 Mitigation check list	29
Table 17 Revised Impact Assessment	30
Table 18 Target Notes	ii

Ecoscope Ltd.

Telford Lodge, Benarth Road, Conwy LL32 8UB

t. [03335 771 402](tel:03335771402) e. info@eco-scope.co.uk w. www.eco-scope.co.uk

Registered address as above | Company Number: 08916412 | VAT Reg. No. 199 5268 44

Document Issue Date: Monday, 27 November 2023

Draft 5 27th November 2023

Draft 4 4th April 2023

Draft 3 16th February 2023

Draft 2 13th February 2023

Draft 1 2nd February 2023

Approved by: Mr. Stuart Kato M.Sc., MCIEEM

Prepared by: Dr Richard Birch CEng

GLOSSARY OF TERMS

BBS	Breeding Bird Survey
EclA	Ecological Impact Assessment
ES	Environmental Statement
INNS	Invasive Non-Native Species
LHB	Lesser Horseshoe Bat
LWS	Local Wildlife Site
NVC	National Vegetation Classification
NRW	Natural Resources Wales
RTA	Road Traffic Accident
SAC	Special Area of Conservation
SSSI	Site of Special Scientific Interest
STOR	Short-Term Operating Reserve

1. INTRODUCTION

1.1 Description of Brief

1.1.1 Ecoscope Ltd were requested to undertake an Ecological Impact Assessment (EclA) of the former brickworks site at Seiont Quarry, Cae Philip, Bontnewydd, Caeathro, Gwynedd, LL55 2TD (SH 49132 61579).

1.1.2 The EclA will address the following requirements of the Client and authorising agency:

- ‘the baseline data for the assessments conducted [will be] robust, and provide the data necessary to assess any likely significant effects arising from the Proposed Development’ and:
- [it will] ‘include steps to protect and secure a bat roost linked to SAC Glynllifon at building SH 48777 613359.’

1.1.3 To facilitate this, the EclA includes:

- a) Ecological records from Cofnod, the Local Environmental Records Centre,
- b) Up to date ecological information on all protected species (otters, badgers, bats, reptiles, birds etc) and section 7 species (of the Environment [Wales] Act 2016).
- c) Up to date information on invasive non- native species (INNS).
- d) A full Ecological Impact Assessment. NRW have recommended both bat and otters be scoped in for consideration for potential impacts associated with artificial lighting.

1.1.4 The EclA uses as its starting point, the period when it was in use during construction of the A487 Bontnewydd bypass in order to make valid recommendations to achieve a target for net gain.

1.2 Details of the proposal

1.2.1 This report covers two parallel and adjacent projects which are being taken through separate planning processes:

- I. Construction of a 20 MWe gas fired 'Peaking Plant' (also known as a short-term operating reserve (STOR) plant) occupying no more than 0.49 Ha of the quarry site and comprising ten natural gas-fuelled engines with electricity generators and associated infrastructure. The plant uses gas from the existing mains supply that previously fed the brickworks and will feed electricity into the National Grid at an on-site connection. Application for 'Development of National Significance' consent, to Welsh Government;
 - II. changes to the site access and for use of the land as general storage (B8 use class), concrete batching plant area, recycling area, plant maintenance, associated weigh bridge and the siting of portacabins to be used as offices with associated parking and retention of workshop building, all on a permanent basis. Application for planning permission, to Gwynedd Council.
- 1.2.2 An earlier revision of this EclA dated 26th April 2023 was submitted as part of the Supporting Statement for the 'Peaking Plant'. The current revision includes assessment of the concrete batching and related activities and is submitted as part of the Environmental Statement accompanying the planning application.
- 1.2.3 The proposed works include the installation of underground cables in a trench alongside the existing temporary haul route to the north-east of the quarry, following the route as shown in Figure 1.

Figure 1 Afon Seiont aerial with services



Location of the Peaking plant. Red line shows route of buried services also included in the application.

2. METHOD

2.1 Desk study

2.1.1 The desk study involved collecting data from the following sources:

- a) Protected sites locations from Magic Map at <https://magic.defra.gov.uk/MagicMap.aspx>;
- b) Designations and Qualifying Features at <https://naturalresources.wales/environmental-topics/wildlife-and-biodiversity/find-protected-areas-of-land-and-sea>;
- c) Biodiversity data from the Local Environmental Record Centre (LERC) at <https://www.cofnod.org.uk>.
- d) Information contained in reports submitted to Welsh Government prior to and during construction of the A487 Bontnewydd by-pass, including:
 - i. 70018812-WSP-EBD-XX-RP-LE-00010 2019 Bat survey report (JV);
 - ii. 3513874-PB-XX-XX-RP-EN-00048 2018 Bat survey report (JV);
 - iii. A487 Environmental Statement Chapter 9 p.128-172 and Appendices 9.1 to 9.3.
 - iv. 60866 bat & Amphibian spreadsheet for survey results in Seiont Quarry submitted as part of the ES in 201 and resulting in permissions C17/0011/19/MW and C17/0107/19/LL.

2.1.2 Assessments of the noise and emissions to air arising from the construction and operation of the STOR, and assessments of the noise and dust emissions from the proposed concrete batching and mineral recycling operations, were carried out by ITP Energised on behalf of Jones Bros. Results have been considered as part of this desk study stage.

2.2 Scope of the EclA

2.2.1 This will involve:

- Protected sites screening;
- Review of existing survey data from the A487 project including data from Cofnod and observational information.
- Site visits with photographic evidence (and Phase 1 of any land to be cleared).

2.2.2 The EclA will include the Afon Seiont Site of Special Scientific Interest (SSSI) and features of the Menai Strait Special Area of Conservation (SAC) and Special Protection Area (SPA) into which the river flows.

2.2.3 Seiont Quarry was visited on:

- 12th January 2023
- 24th January 2023
- 2nd February 2023

by the following personnel (Table 1).

Table 1 Personnel

PERSONNEL	EXPERIENCE
Dr Richard Birch CEcol	Qualified horticulturalist and 1 st class degree in Botany. 28 years practising ecologist. Licences for bats & newts in Wales. Chartered since 2016
Kira Lovatt BSc	Graduate Ecologist with a 1 st class degree in Zoology and Conservation. Currently studying Conservation and Land Management at master's level.

2.2.4 The site was walked for Phase 1 survey as part of the EclA.

2.2.5 A Phase 1 Map and Target Notes are included in Figure 10 Revised Phase 1 Map, APPENDIX 1 p. i.

3. RESULTS

3.1 Protected sites screening

3.1.1 Protected sites (including Local Wildlife Sites LWS) within 10km of the proposed works area are given in Table 2.

Table 2 International Protected Sites and Qualifying Features within 10km

NAME	CLASSIFICATION	SUMMARY OF QUALIFYING FEATURES	AREA	DISTANCE
Afon Seiont	SSSI*	<ul style="list-style-type: none"> • Strata along the riverbank walls from the Ordovician period 	6.3Ha	774 m
Y Fenai a Bae Conwy/ Menai Strait and Conwy Bay SAC	SAC	<ul style="list-style-type: none"> • Sandbanks which are slightly covered by sea water all the time; • Mudflats and sandflats not covered by seawater at low tide • Reefs; • Large shallow inlets and bays; • Submerged or partially submerged sea caves. 	26,501 Ha	1.7 km
Bae Lerpwl / Liverpool Bay	SPA	<ul style="list-style-type: none"> • Red-throated diver; • Common scoter • Little tern; • Common tern; • Waterbird assemblage 	252,757 Ha	22 km
Traeth Lafan/ Lavan Sands Conway Bay	SPA	<ul style="list-style-type: none"> • 1.4% of UK Oystercatcher population 	2,643 ha	7.8 km
Traeth Lafan	SSSI	<ul style="list-style-type: none"> • Eelgrass beds • Great crested Grebe • Curlew • Red breasted Merganser • Shelduck 	2,700 Ha	7.8 km
Afon Beuno	Wildlife site	<ul style="list-style-type: none"> • Broadleaved woodland, semi-improved neutral grassland, marshy grassland 	12.7 Ha	673 m
Afon Seiont & Glan Gwna	Wildlife site	<ul style="list-style-type: none"> • Broad leaved woodland; running water 	4.2 Ha	944 m
Gallt-y-sil farm	Wildlife site	<ul style="list-style-type: none"> • Semi-improved neutral grassland; bracken; broadleaved woodland 	3.8 Ha	521 m
Maes-merddin	Wildlife site	<ul style="list-style-type: none"> • Marshy grassland, semi-improved neutral grassland 	3.2 km	840 m
Peblig graveyard	Wildlife site	<ul style="list-style-type: none"> • Scrub, open mosaic habitat of previously developed land • Slow worm, common lizard and grasshopper warbler recorded 	1.6 Ha	680 m
Rhyddallt-bach	Wildlife site	<ul style="list-style-type: none"> • Broadleaved woodland, upland oak woodland, river • Lesser horseshoe bat and otter recorded 	13.6 Ha	167 m
Tyddyn-bach	Wildlife site	<ul style="list-style-type: none"> • Broadleaved woodland, semi-improved neutral grassland 	11.7 Ha	797 m

NAME	CLASSIFICATION	SUMMARY OF QUALIFYING FEATURES	AREA	DISTANCE
Tyddyn-Ilwydyn	Wildlife site	<ul style="list-style-type: none"> Semi-improved neutral grassland River corridor, lowland mixed deciduous woodland 	2.3 Ha	245m
Ty'n-y-coed	Wildlife site	<ul style="list-style-type: none"> Broadleaved woodland, marshy grassland 	15.7 Ha	948 m
Waenfawr Road	Wildlife site	<ul style="list-style-type: none"> Semi-improved neutral grassland River corridor, scrub woodland, wet woodland, lowland mixed deciduous woodland, lowland meadow 	7 Ha	518 m

3.1.2 Significant species within 1km of the site are shown in Table 3. (This list is not comprehensive, but shows the species whose habitat requirements are to be found within the proposed area).

Table 3 Relevant Protected Species within 1km of the site

COMMON NAME	LATIN NAME	STATUS	DISTANCE
Hedgehog	<i>Erinaceus europeus</i>	BAP, Bern3, RU-VU, S7	339m
Badger	<i>Meles meles</i>	Protection of Badgers Act, Bern3.	222m
Lesser horseshoe bat	<i>Rhinolophus hipposideros</i>	BAP, Bern2, Bonn2, S7, WCA5.	329m
Otter	<i>Lutra lutra</i>	BAP, Bern2, CITES-A, HDir2, HDir4, S7, WCA5	332m
Common pipistrelle	<i>Pipistrellus pipistrelles</i>	Bern2, Bonn2, HDir4, S7, WCA5	495m
Natterers bat	<i>Myotis nattereri</i>	Bern2, Bonn2, HDir4, WCA5	564m
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	BAP, Bern2, Bonn2, HDir4, S7, WCA5	563m
Brown long-eared bat	<i>Plecotus auritus</i>	Bern2, Bonn2, HDir4, S7, WCA5	563m
Noctule bat	<i>Nyctalus noctula</i>	BAP, Bern2, Bonn2, HDir4, S7, WCA5	580m
Grasshopper warbler	<i>Locustella naevia</i>	LBAP-G, S7 BTO Red	763m
Hare	<i>Lepus europaeus</i>	LBAP-G, S7	1107m
Barn owl	<i>Tyto alba</i>	Bern2, CITES-A, WBA, WCA1.1. BTO Red	285m
House sparrow	<i>Passer domesticus</i>	LBAP-G, S7, BTO Red	339m
Starling	<i>Sturnus vulgaris</i>	BAP, BDir2.2, RL-VU, S7.	339m
Dunnock	<i>Prunella modularis</i>	BAP, Bern2, LBAP-C, S7, BTO Amber	393m
Song thrush	<i>Turdus philomelos</i>	BAP, BDir2.2, S7, UKBA, BTO Red	463m
Herring gull	<i>Larus argentatus</i>	BAP, BDir2.2, - S7, UKBR, BTO Red	464m
Wren	<i>Troglodytes troglodytes</i>	BAP, BDir1, Bern2, BTO Amber	667m
Bullfinch	<i>Pyrrhula pyrrhula</i>	LBAP-G, S7 BTO Amber	738m
Starling	<i>Sturnus vulgaris</i>	BDir2.2, LBAP-G, BTO Red , S7	951m
Lesser Redpoll	<i>Acanthis cabaret</i>	BAP, LBAP-C, LBAP-D, S7, BTO Red	1107m
Linnet	<i>Linaria cannabina</i>	Bern2, LBAP-G, S7, BTO Red	1107m
Fieldfare	<i>Turdus pilaris</i>	BDir2.2, BTO Red WCA1.1	1156m
Kingfisher	<i>Alcedo atthis</i>	BDir1, Bern2, LBAP-G, WCA1.1	1156m
Black-headed gull	<i>Chroicocephalus ridibundus</i>	BDir2.2, LBAP-G, S7, BTO Amber	1156m

COMMON NAME	LATIN NAME	STATUS	DISTANCE
Reed bunting	<i>Emberiza schoeniclus</i>	BAP, Bern2, LBAP-G, S7, UKBA, WBA	1156m
Peregrine	<i>Falco peregrinus</i>	BDir1, Bern2, Bonn2, CITES-A, LBAP-G, WCA1.1	1156m
House martin	<i>Delichon urbicum</i>	Bern2, LBAP-C, RL-VU, BTO Red	407m
Swift	<i>Apus apus</i>	RL-EN, BTO Red	409m
Swallow	<i>Hirundo rustica</i>	Bern2, LBAP-A, LBAP-C, LBAP-G, WBA	580m
Tawny owl	<i>Strix aluco</i>	Bern2, CITES-A, LBAP-C, RL-NT, UKBA	495m
Willow warbler	<i>Phylloscopus trochilus</i>	LBAP-C, BTO Amber	504m
Greenfinch	<i>Chloris chloris</i>	Bern2, BTO Red	667m
Coal tit	<i>Periparus ater</i>	Bern2, LBAP-C, WBA	667m
Mistle thrush	<i>Turdus viscivorus</i>	BDir2.2, BTO Red	785m
Willow warbler	<i>Phylloscopus trochilus</i>	BTO Amber	954m
Dipper	<i>Cinclus cinclus</i>	Bern2, BTO Amber	932m
Mallard	<i>Anas platyrhynchos</i>	BDir2.1, Bonn2, LBAP-G, BTO Amber	1003m
Whitethroat	<i>Curruca communis</i>	BTO Amber	1107m
Sparrow hawk	<i>Accipiter nisus</i>	Bonn2, CITES-A, BTO Amber	1156m
Slow worm	<i>Anguis fragilis</i>	Bern3, LBAP-G, S7, WCA5	763m
Common lizard	<i>Zootoca vivipara</i>	Bern3, LBAP-G, S7, WCA5	763m
Common toad	<i>Bufo bufo</i>	BAP, Bern3, LBAP-A, LBAP-C, LBAP-D, LBAP-F, LBAP-G, LBAP-T, S7, WCA5	1156m
Small heath butterfly	<i>Coenonympha pamphilus</i>	LBAP-G, RL-NT, S7	710m

3.2 Previous reports: Bats

3.2.1 Activity surveys were previously undertaken in 2009 during the Key Stage 2 Route Selection Study (TACP, 2009) and again in during 2014 (Freeman, 2014).

3.2.2 A summary of the results is given in Table 4.

Table 4 Preliminary survey results

2009	2014
Fourteen transects were surveyed in 2009 with a total of 6 species identified, including LHB at 10 of the 14 locations.	Nine transects were surveyed in 2014 with a total of 6 species identified, including LHB at 8 of the 9 locations.

3.2.3 The nearest survey point for A487 bat monitoring is transect NRW3 (see Figure 2).

Figure 2 NRW3



3.2.4 Monthly totals for lesser horseshoe bat (LHB) records from static bat detectors placed at NRW3 in 2018 and 2019 are given in Table 5.

Table 5 Monthly totals for LHB at NRW3 2018/19

NRW3	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER
2018	35	10	9	2	0	36	23
2019	5	42	9	0	3	10	5

3.2.5 Other bat species recorded in surveys undertaken during the construction of the A487 Bontnewydd bypass, and included in previous reports¹ issued as part of the road construction project, are summarised in Table 6.

Table 6 Diversity of bat species recorded on transects near Seiont Quarry.

2018									
TRANSECT	BLE	Daubentons	Noctule	Serotine	Myotis	Common pipistrelle	Soprano pipistrelle	Natterers	LHB
R16	0	0	✓	0	✓	✓	✓	0	0
NRW3	✓	✓	✓	0	✓	✓	✓	0	✓
R7/R7A	✓	0	✓	✓	✓	✓	✓	0	0
2019									
TRANSECT	BLE	Daubentons	Noctule	Serotine	Myotis	Common pipistrelle	Soprano pipistrelle	Natterers	LHB
R16	✓	✓	✓	✓	✓	✓	✓	✓	✓
NRW3	✓	✓	✓	0	✓	✓	✓	0	0
R7/R7A	✓	0	✓	0	✓	✓	✓	0	0

3.2.6 Data from surveys within the quarry and its immediate surroundings from between 2001 and 2012 concluded that between 7 and 23 LHB used a building adjacent the

¹ A487 CAERNARFON AND BONTNEWYDD BYPASS BAT SURVEY REPORT 2018 (Welsh Government) 3513874-PB-XX-XX-RP-EN-00048
A487 CAERNARFON AND BONTNEWYDD BYPASS BAT SURVEY REPORT 2019 (Welsh Government) 70018812-WSP-EBD-XX-RP-LE-00010

site to the SW as a winter hibernation roost. By 2012, this had reduced to just one bat.

3.2.7 Surveys within the quarry (in advance of works to the Caernarfon bypass) between 2009 and 2016 concluded that Lesser Horseshoe, Brown long eared, Common Pipstrelle, Soprano Pipstrelle, *Myotis* and Noctule bats are present within the vicinity of the Quarry Site.

3.2.8 Roost count data for LHB at the former brickworks in Seiont Quarry is included in Table 7.

Table 7 Cumulative LHB roost counts at Seiont brickworks 2016-2022

Year	2016		2017		2018		2019		2020		2021		2022	
Count No.	1	2	1	2	1	2	1	2	1	2	1	2	1	2
Brickworks	4	2	11	16	4	0	3	17	17	1	28	9	2	4

3.3 Previous reports: Reptiles and Amphibians

3.3.1 Prior to draining and partial infilling under work in connection with the bypass, the quarry had become flooded to the level of the overflow drain leading to the Afon Seiont. When full, there was a single water body on site, known as the quarry sump. Surveys in 2017-18 identified Palmate newt (*Lissotriton helvetica*) and Common toad (*Bufo bufo*) from this water body. The A487 ES data (Table 8) indicates Common frog (*Rana temporaria*) and Smooth newt (*Lissotriton vulgaris*)² also occurred, but Great crested newt (*Triturus cristatus*) is not recorded.

3.3.2 Surveys were undertaken before and during construction, including by Ecoscope personnel, who noted tadpoles of Common toad in abundance in May-June 2018. The results are summarised in Table 8 from the E.S Appendices.

Table 8 Amphibian data for Seiont Quarry

Species	Visit 1	Visit 2	Visit 3	Visit 4	Visit 5	Visit 6	Total
	Total	Total	Total	Total	Total	Total	
Common Frog	0	0	0	0	0	0	0
Common Toad	0	0	0	0	0	0	0
Palmate Newt	13	9	110	101	68	102	403
Smooth Newt	9	1	0	0	0	0	10

² This is disputable, as smooth newt is very rare in NW Wales.

3.3.3 However – the data is misleading because:

- No dates are given for the surveys;
- Identification of smooth newt is not substantiated;
- While no adult frog or toad are recorded, tadpoles of common toad were present in the sump pool during surveys in 2017-18;

3.3.4 The ES noted that the habitat is suitable for reptiles including Slow-worm (*Anguis fragilis*) and Common lizard (*Zootoca vivipara*) but does not indicate their presence or that surveys were undertaken. Both are recorded within 700m in data provided by Cofnod, bringing them within the location of the quarry.

3.3.5 It should be added that Grass snake (*Natrix helvetica*) is equally likely to have occurred (and still be present in retained habitat) despite not being recorded. It is the most mobile of the UK reptiles, widespread and sometimes frequent on the coastal strip and the presence of a variety of amphibians forming favoured prey items is conducive to its occurrence.

3.4 Previous reports: Breeding Birds

3.4.1 As part of the bypass ES, Breeding bird surveys (BBS) were conducted by Parsons Brinkerhoff in part within the Seiont Quarry during May and June 2015 using British Trust for Ornithology standard methodology for BBS.

3.4.2 A summary of the results of the combined surveys in 2015 is given in Table 9. Large parts of the western half of the quarry were not covered.

Table 9 BBS results 2015

COMMON NAME	BREEDING	NON-BREEDING	BoCC
Blackbird		1	
Blue tit		1	
Buzzard		1	
Coot	1		
Herring Gull		1	Red list
Jackdaw		2	
Lesser Black-backed Gull		1	Amber list
Little Grebe	1		
Magpie		1	
Mallard		2	Amber list

COMMON NAME	BREEDING	NON-BREEDING	BoCC
Robin		1	
Song Thrush		1	Red list
Sparrowhawk		1	
Stonechat	1		
Swallow		1	Amber list
Tufted Duck		1	Amber list

- 3.4.3 Table 9 (and the data it is sourced from) does not state numbers, e.g. Little Grebe stated as breeding must therefore have been a pair.
- 3.4.4 Additional species were recorded in the 500m buffer which includes the woodland along the boundary of the Afon Seiont and some overlap is to be anticipated.
- 3.4.5 No wintering bird surveys were undertaken, but in the walkover survey for revised Phase 1 undertaken on 12th January 2023, Woodcock, Buzzard and Grey Wagtail were observed, and Dipper recorded from the bridge to the brickworks yard on 24th January 2023.

3.5 Previous Reports: Otter and Badger

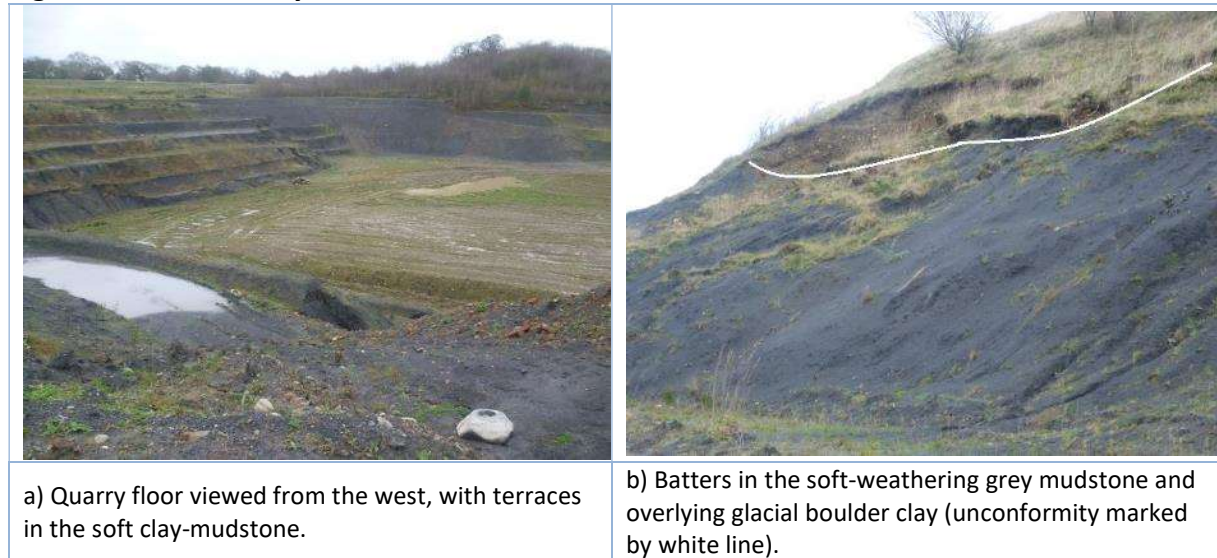
- 3.5.1 Atmos Consulting undertook Otter and Badger surveys in November 2015 as part of the 2017 A487 ES.
- 3.5.2 No sign of Badger activity was recorded.
- 3.5.3 Otter spraint was recorded at four locations along the Seiont where it encircles the quarry, indicating regular use. No holt was found within the quarry boundary.

3.6 Site description

- 3.6.1 The quarry has been heavily reworked as part of works for construction of the A487, including removal of all the vegetation in the quarry bed, most of the standing water bodies and the contours. The sides are steeply battered (see Figure 3a) exposing the dark grey, soft mudstone capped with glacial outfall, sometimes with large boulders (Figure 1b).
- 3.6.2 Quarry sides are steep (between 35-70°), with erosion channels and local collapses. Silt runs into standing water (see Figure 5, p. 15, TN 12) and subsequently via

ditches into the Afon Seiont, with effective silt traps (Figure 4, TN 05) preventing silt entering the Afon Seiont.

Figure 3 Seiont Quarry views



3.6.3 Within the quarry itself, very little habitat remains undisturbed. Marginal wet woodland with a National Vegetation Classification (NVC) of **W7** (Alder-Ash woodland) lines the banks of the Afon Seiont (Figure 4, TN 01/02) and some regenerating scrub grassland remains along the north-western boundary (Figure 5, TN 06).

Figure 4 Target Notes #1





TN 04: Birch/Alder woodland with an understorey of Bramble (*Rubus fruticosus*) bryophytes and ferns. *Polypodium vulgare* (inset.)



TN 05: Wet ditch flowing into Afon Seiont, dominated by Reedmace (*Typha latifolia*) and Fool's watercress (*Apium nodiflorum*).

- 3.6.4 A gas substation (Figure 4, TN 03) lies within the woodland, and there is a low potential for roosting bats.
- 3.6.5 Oak/Birch woodland with an NVC approximating to **W16** (Oak/Birch/Tufted Hairgrass woodland) is regenerating on the established spoil (Figure 4, TN 04), with Gorse scrub on the recently-disturbed slopes (Figure 5, TN 06) and grassland dominated by Tufted Hairgrass (*Deschampsia cespitosa*) as the earliest succession (Figure 5, TN 08).

Figure 5 Target Notes #2



TN 06: Dense/ scattered scrub with Gorse *Ulex europeae*.



TN 08: Grassland and scattered scrub with Tufted Hairgrass *Deschampsia cespitosa*.



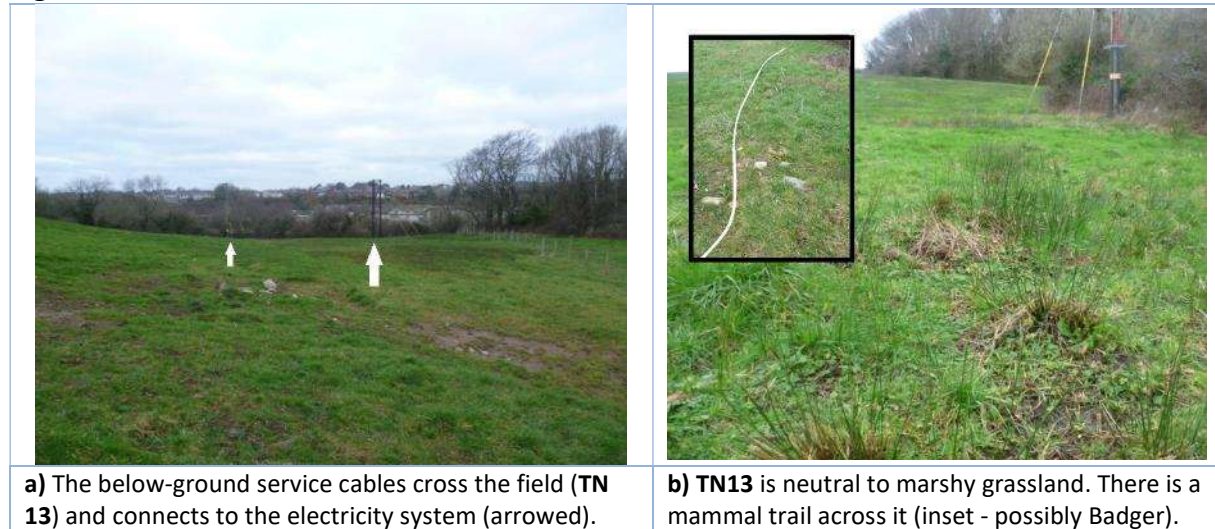
TN 09: Pond with Fool's watercress *Apium nodiflorum* and duckweed ^{cf}*Lemna gibba*. Potential for amphibians.



TN 12: Pond in Quarry bottom, heavily silted. Formerly held large population of palmate newt and common toad.

- 3.6.6 There are two ponds present within the boundary. One is on the top of the batter adjacent the new road (Figure 5, TN 09), and fed by a spring emerging from the south at the top of the batter. The bright green foliage and dieback of aquatic plants suggest it is heavily nitrogen-enriched, but it provides the best habitat for breeding amphibians on site.
- 3.6.7 The second pond is a retained water body in the quarry bed (Figure 5, TN 12) which is fed from springs emerging at the base of the batter and flowing through the quarry from east to west. It is a long term settlement pond and takes any pumped discharge from the quarry bowl.
- 3.6.8 The pond is heavily silted, and overflows into the ditch shown in Figure 4, TN 05, which eventually enters the Afon Seiont through silt traps. This pond formerly supported Palmate Newt (*Lissotriton helvetica*) and Common toad (*Bufo bufo*) but in its current silted state it is sub-optimal as a breeding pond.
- 3.6.9 Part of former agricultural pasture is included within the site boundary (TN 13). Underground services will cross this field to join existing electricity services (Figure 6a).

Figure 6 Route of services



3.6.10 The field is neutral grassland, becoming wetter downslope to the north-east. It is relatively herb rich, but species-poor; dominant herbs being Creeping Buttercup *Ranunculus repens* and Sorrel *Rumex acetosa*, with Soft and Jointed Rush (*Juncus effusus* & *J. inflexus* respectively). Evidence of a mammal trail, possibly Badger, can be seen (Figure 6b inset) although the direction suggests the origin is off-site.

3.6.11 A Phase 1 map is included in Figure 10 Revised Phase 1 Map, APPENDIX 1 p. i, with Target Notes in Table 18 Target Notes, APPENDIX 2, p. ii.

3.7 Summary of results.

3.7.1 Prior to works, there was an established hibernation and night roost of LHB in building associated with the brickworks, although outside the immediate boundary. Survey evidence suggests the numbers of LHB in the roost has reduced from a high of 23 down to just 1 in 2012, possibly due to disturbance and vandalism during that period. Surveys as part of the road development since 2016 (see Table 7, p. 11) indicate small numbers of LHB still use parts of the building.

3.7.2 Surveys indicate that 8 other species are recorded on site, including Brown long eared, Common Pipstrelle, Soprano Pipstrelle, three *Myotis* species, Noctule and possibly Serotine bats also being recorded within the vicinity of the Quarry Site.

- 3.7.3 Otter and Badger survey indicate Otter regularly move along the Seiont, but did not appear to have holts within the quarry boundary. Badger was not present, but may forage across the site from a nearby sett (see Figure 6b, p. 17).
- 3.7.4 The breeding bird survey in 2015 confirmed only 3 species as nesting (Coot, Little Grebe and Stonechat).
- 3.7.5 No reptile survey of the quarry was undertaken; presence relying on data from the Local Record Centre.
- 3.7.6 At the time of the 2018 surveys the flooded quarry supported populations of Common Toad *Bufo bufo* and Palmate Newt *Lissotriton helvetica*, with additional records of Common Frog (*Rana temporaria*) and Smooth Newt (the latter of which are unconfirmed). The extensive works associated with the construction of the A487 will have removed this waterbody, and future recolonisation of the site would only be a result of recruitment.
- 3.7.7 The recent Phase 1 (see Figure 10, APPENDIX 1) is far less detailed than the version provided in the A487 ES. This partly due to seasonality, but largely due to extent of clearance in the quarry since 2015.

3.8 Conclusions from Desk Study & Phase 1 Survey

- 3.8.1 Surveys in the quarry prior to the commencement of site works vary in quality and provide a restricted picture. Phase 1, Badger and Otter surveys and a significant effort focussing on bats provides a useful baseline for EclA of the extended proposals.
- 3.8.2 The field map of records made in the breeding bird survey appears to be an amalgamation of the two visits. Number and species association is proportional to the location, but the conclusions on the number of nesting birds falls below what the field data suggests and indicates excessive caution in interpretation, which could have been rectified by a further survey (in line with modern recommendations). The assumption must be that more species bred in the former quarry than were recorded as doing so.

3.8.3 However, the absence of accurate data on reptiles is particularly significant, and some potential flaws in the recording of amphibians means that conclusions must be based on the likelihood of species being present rather than qualified evidence. Using that approach, based on former records, habitat quality and without additional survey of retained habitat, it must be concluded that slow-worm (*Anguis fragilis*), Common Lizard (*Zootoca vivipara*) and Grass Snake (*Natrix helvetica*) were very likely to have been present on site prior to works, and may still be present in retained habitat.

4. ECOLOGICAL IMPACT ASSESSMENT

4.1 Assessment of potential effects

4.1.1 The EclA is required for additional works that include:

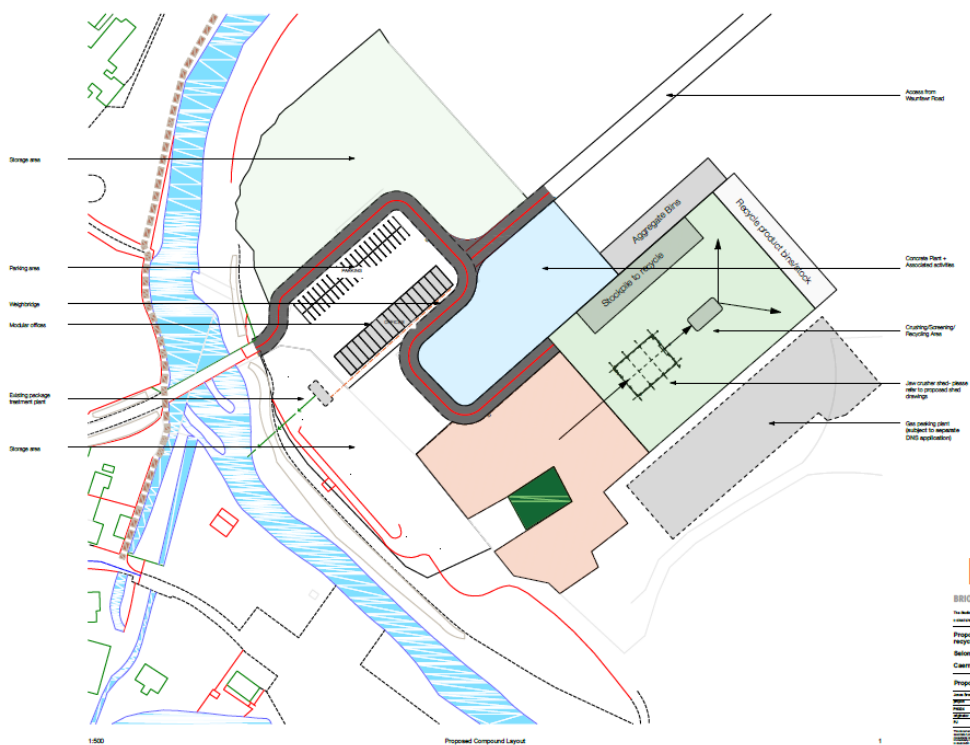
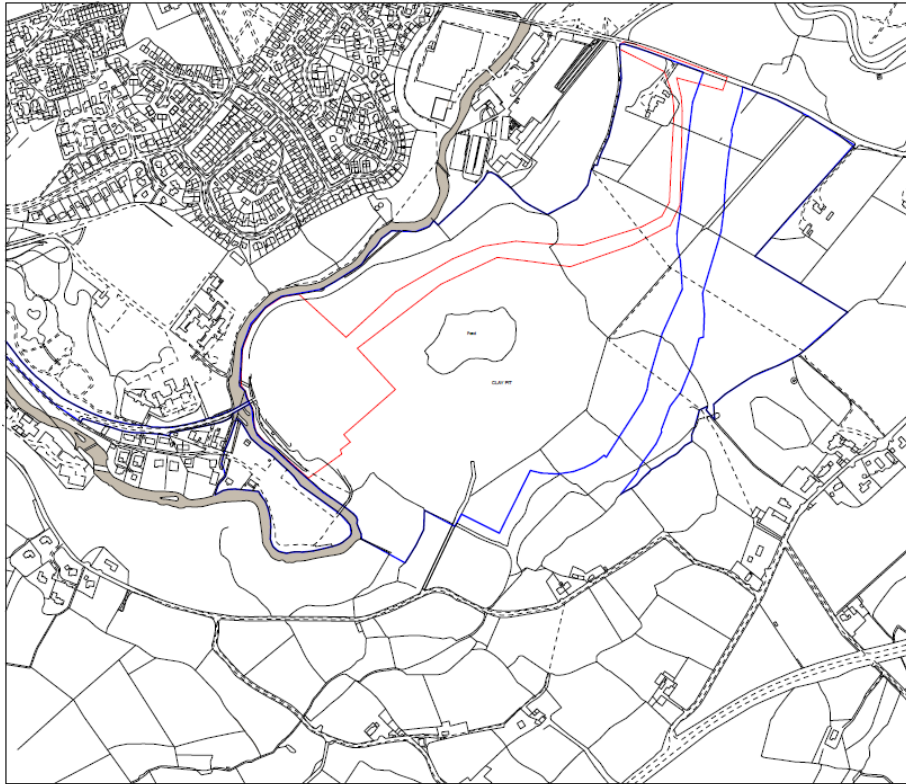
- Phase I of the proposal: 20 MWe gas fired short-term operating reserve (STOR) plant³ occupying no more than 0.49 Ha of the quarry site and comprising ten natural gas-fueled engines and associated infrastructure. The plant uses gas from the existing mains supply that previously fed the brickworks, and will feed electricity into the National Grid at an on-site connection;
- Concrete batching and materials recycling depot, workshop, haul route and Waunfawr road connection works (Phase II).

4.1.2 The majority of the proposed development occurs on land previously occupied by hard standing associated with the former brickworks or on previously excavated areas of the quarry. Underground services connection crosses an agricultural field in the north-east corner which is within the site boundary (see Figure 1, p. 4).

4.1.3 Details of the land take (in respect of the flood risk) is shown in Figure 7.

³ STOR plants function to provide rapid response and balance demand for energy, particularly when wind and solar outputs are low.

Figure 7 Extent of proposed works



Layout of the concrete plant, recycling area, Gas Peaking Plant and associated infrastructure. Blue line indicates extent of applicant's land ownership. Extracted from draft planning application drawings

4.2 Proposals for plant: Impact Assessment

4.2.1 The following potential direct impacts are recognised as a result of the proposals:

- Disturbance associated with Plant, lighting and construction;
- Pollution: Potential impact of silt entering the Afon Seiont during construction;
- Pollution: Emissions (N₂) from proposed gas plant exhausts causing eutrophication of habitat associated with the Afon Seiont and nearby woodlands;
- Dust from crushing, screening and cement use;
- Noise pollution of Plant, with potential impacts on bat activity;
- Light pollution and potential impacts to bats and Otter.

4.2.2 The risk of the potential impacts, both direct and cumulative, are assessed without mitigation in Table 10.

Table 10 Impact assessment (without mitigation)

DIRECT IMPACT	FEATURE AFFECTED	RISK	SEVERITY	RISK × SEVERITY
Afon Seiont	• Geological SSSI	0	0	0
Y Fenai a Bae Conwy/ Menai Strait and Conwy Bay SAC	• SAC & SSSI Coastal and Marine features	3	4	12
Bae Lerpwl / Liverpool Bay	• SPA Wintering wildfowl and waders	1	2	2
LWS within 800m	• Woodland	5	4	20
Disturbance associated with Plant, lighting and construction.	• Bats • Otter	5	4	20
Pollution: Potential impact of silt entering the Afon Seiont.	• Amphibians • Fish • Otter	4	5	20
Pollution: Emissions (N ₂) from proposed gas facility and impacts on air quality	• Habitat Quality • Amphibians • Bats	5	4	20
Pollution: Emissions (N ₂) from proposed gas facility and eutrophication of habitat associated with the Afon Seiont	• Aquatic invertebrates • Bats	5	4	20
Noise pollution from Plant	• Bats	4	4	16
Pollution: Dust from crushing, screening and cement use (alkaline)	• Habitat quality • Fish • Aquatic invertebrates	5	5	25
Light pollution from security lighting post-development	• Bats • Otter	5	4	20

Key

RISK		SEVERITY		RISK × SEVERITY	
1	Negligible	1	Negligible	1-9	Cumulative effect of likelihood × severity = minor negative (potentially positive) impact
2	Slight risk	2	Low level of impact		
3	Moderate risk	3	Moderate impact	10-16	Cumulative effect of likelihood × severity = moderate negative impact
4	Event likely to occur	4	Major impact		
5	High risk of event occurring	5	Severe impact	17 - 25	Cumulative effect of likelihood × severity = major negative impact

4.2.2 Without mitigation, the potential impacts to Protected Sites and their Qualifying Features within 1 km is assessed as **Minor** at a **Local** (SSSI) and **Moderate** at an **International** (SPA, SAC) level.

4.2.3 Without mitigation, the combined development proposals are assessed as having a negative impact on Bats (all species), Otter, Habitat quality and ecological features of the Afon Seiont that is assessed as being **Major** on a **Regional** Level (see Table 11 for definition).

Table 11 Hierarchy of impact

HIERARCHY OF IMPACT	DEFINITION
International	Having an impact on the population size or habitat area of a threatened species which may be significant on a Worldwide scale.
National	Having an impact on a priority habitat or species threatened across its entire UK range.
Regional	Having an impact on a priority habitat or species distribution that may be significant in any of the individual countries making up the British Isles.
Local	Having an impact on a habitat or species that may be significant at a local level (Borough or Parish)

5. RECOMMENDATIONS

5.1 Mitigation Strategy

5.1.1. Risk of ecological and environmental impacts are reduced by implementation of a hierarchy of strategies:

- Avoidance
- Protection
- Reduction
- Enhancement
- Mitigation

5.1.2 Certain potential impacts have been screened out, including impacts to protected sites (SSSI, SAC, SPA), by assessment in Table 10, p. 22.

5.1.3 The mitigation plan also considers the cumulative impacts since the quarry was re-opened for works related to bypass construction and existing mineral extraction rights in 2015.

5.1.4 It is recommended that an ecologist be appointed throughout the construction period.

5.2 Avoidance

5.2.1 During construction, no night-time working must be undertaken. A safe 'dark corridor' must be maintained along the length of the Afon Seiont to allow movement of migratory fish, Otter, and Bats.

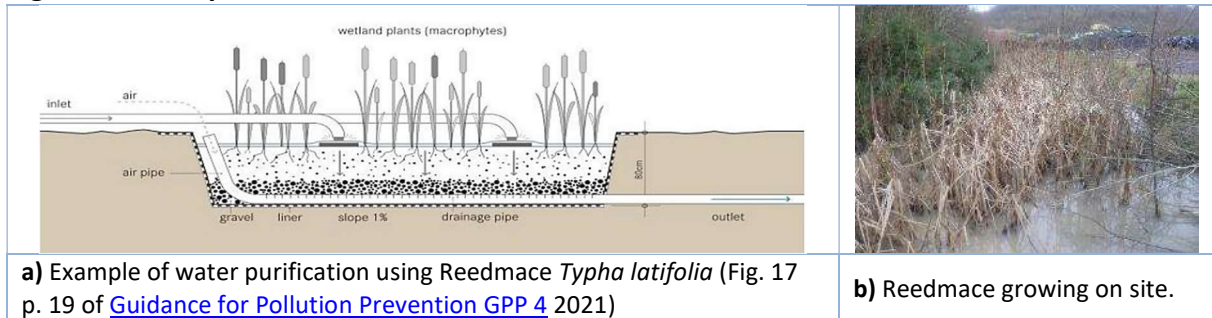
5.2.2 If necessary, light / noise barriers must be fitted between source and the adjacent habitat to achieve this dark corridor.

5.3 Protection

5.3.1 Silt barrier mesh or traps must be fitted throughout construction to avoid surface run-off of silt into the Afon Seiont. Artificial mesh barrier is frequently used around the lower margin of works areas and/or at the mouth of a drain flowing from site

into the tributary to trap silt. A novel solution is to plant the drain with Reedmace *Typha latifolia* which occurs naturally on site. It interrupts silt and purifies water, while supporting a level of biodiversity in the interim (Figure 8).

Figure 8 Silt trap solutions



- 5.3.2 Noise within woodland river corridor not to exceed the baseline of 45dB as shown in the Noise Impact Assessment⁴. Barrier or planted screening between plant and woodland / river corridor will reduce the noise impact, and noise outside working hours no more than 40dB at water's edge.
- 5.3.3. An Incident Response Plan will be required before construction starts, so that accidental spillage and similar incidents do not lead to pollution (see [GPP 21](#)).
- 5.3.4 Cement dust prevented using sealed cement silos with filters and by concrete batching plant operations meeting Regulation 13 of the Environmental permitting (England and Wales) Regulations 2016, regulated by the Local Authority. Airborne dust will be suppressed and controlled using water sprays fitted to crushing and screening plant.
- 5.3.5 Natural Resources Wales (NRW) will monitor levels of N₂ emitted by the STOR during operation, under the conditions of an Environmental Permit to be sought in accordance with the Medium Combustion Plant and Specified Generator rules.
- 5.3.6 Table 12 shows the minimum acceptable range of annual precipitation levels of N₂ on habitats.

⁴ See Seiont Caernarfon Peaking Plant Noise Impact Assessment drawing 2: Noise Contour. p. 17, Seiont Gas Power Peaking Plant Noise Impact Assessment, (24th March 2023, ITP Energised)

Table 12 Indicative N₂ critical load levels for specific habitats

HABIT TYPE	RANGE (KgN/ha/yr)	VALUE FOR USE IN EcIA	COMMENTS
Broadleaved Meso- and eutrophic <i>Quercus</i> woodland	15-20	15	Level designed to protect ground flora.

5.3.7 Table 13 shows the projected output and current baseline, where the output is well below impact levels, but the baseline already exceeds the critical load minimum (15 KgN/ha/yr). The critical load value for woodland is designed to protect the ground flora from compositional change (see link: [Forest Research](#)). The addition to the annual deposition of nitrogen is not expected to have a noticeable effect.

Table 13 Projected and Current N₂ loading

HABITAT TYPE	LEVEL OF DEPOSITION (KgN/ha/yr)	CURRENT SITE LOAD (KgN/ha/yr)
Broadleaved Meso- and eutrophic <i>Quercus</i> woodland	0.20	23.7

5.3.8 ‘Green barriers’ to soak up N₂ are proposed in the enhancements. N₂ deposition into standing waters can be intercepted by plants including Reedmace *Typha latifolia* and Common Reed *Phragmites australis* used in silt traps (Figure 8) and harvested when they grow vigorous to maintain functionality and sequester carbon.

5.3.9 Water with particulates from dust-settling activities would flow off hard surfaces towards the existing settlement ponds located a) north of the works area and b) south of the plant maintenance area. These then discharge into the Afon Seiont. To ensure the effective management of particulates, including dusts captured by dust-suppressing water sprays on the crushing and screening plant, the discharge from each settlement pond should be monitored periodically for pH.

5.4 Reduction

5.4.1 Boundary scrub clearance must not be carried out unless it can be demonstrated as necessary. Scrub regeneration close to working areas must be marked / protected e.g. by barrier fencing throughout the works, to continue providing nesting habitat for birds.

5.5 Enhancement

- 5.5.1 The proposals occupy the area formerly occupied by the brickworks and the bypass construction haul route. The remainder of the former brickworks site remains to be restored in accordance with existing planning permissions.
- 5.5.2 To provide biodiversity enhancements in accordance with the 30 × 30 objective agreed by the Senedd in 2021, future proposals for development and restoration of the quarry will include a selection of the following proposed enhancements:
- Multiple wetland areas of varying sizes and depths for amphibians and invertebrates (to be combined with a sustainable drainage scheme as shown in Figure 8, p. 25);
 - Uneven topography – mounds, banks ridges and drains to provide multiple microhabitats;
 - Tree planting - small groups of Oak/Birch on ridges and Alder in hollows to create a woodland patchwork and wildlife refuges;
 - Tree planting – woodland creation on species-poor grassland along the underground service route (see Figure 6, p. 17. Selection of trees to complement natural regeneration, plus the addition of trees to boost biodiversity. An appropriate native species mix is recommended (Table 14);

Table 14 Tree planting

COMMON NAME	LATIN NAME	%
Silver Birch	<i>Betula pendula</i>	25
Sessile Oak	<i>Quercus petraea</i>	30
Hawthorn	<i>Crataegus monogyna</i>	10
Alder	<i>Alnus glutinosa</i>	10
Hazel	<i>Corylus avellana</i>	10
Elder	<i>Sambucus nigra</i>	5
Beech	<i>Fagus sylvatica</i>	5
Small-leaved Lime	<i>Tilia cordata</i>	5

100

- Tree planting – noise and nitrogen-buffering to augment existing woodland and create woodland corridors between new and existing woodland. This can comprise non-native evergreen tree species with greater capacity to absorb

sound and excess N₂ emissions (Table 15). The selection also provides additional cover, and comprises species with known biodiversity benefits.

Table 15 Non-native tree planting

COMMON NAME	LATIN NAME	COMMON NAME	LATIN NAME
Evergreen Oak (specimen)	<i>Quercus ilex</i>	Lawson Cypress (hedging)	<i>Chamaecyparis lawsoniana</i>
Black Pine (specimen)	<i>Pinus nigra</i>	Monterey Cypress (hedging)	<i>Cupressus macrocarpa</i>

- Subsequent proposals will include redevelopment of the former Lesser Horseshoe Bat roost in the brick yard.
- Reinstating plant species identified in the original Phase 1 and former records, e.g. Vervain *Verbena officinalis* and Yellow Rattle *Rhinanthus minor* as a grassland remediator, and also a potential receptor site for the translocation of the three common reptile species.

5.5.3 Some of the enhancement proposals as recommended can be integrated into engineering features, e.g. sustainable drainage, soils and recycled materials placed to create topographical diversity and secure wildlife corridors.

5.6 Mitigation

5.6.1 Lighting must be minimal impact, directional and sensor-controlled so that lighting is on only when people (authorised or intruders) are present (Figure 9). Lighting must be appropriately positioned (approved in the design by the appointed ecologist) and the position and output must be included in the design.

Figure 9 Mitigation #2



5.7 Mitigation check list

5.7.1 A mitigation checklist for measuring compliance is shown in Table 16.

Table 16 Mitigation check list

STRATEGY	ACTION	COMPLIANCE
Avoidance	Suitably qualified ecologist appointed	
	Avoidance of night-time working	
	'Dark Corridor' maintained along Afon Seiont	
	Light / sound barrier implemented between plant and woodland corridor using selection of screening options appropriate to development.	
Protection	Silt traps fitted	
	N ₂ monitoring implemented. Appropriate strategies implemented to reduce / absorb N ₂	
	Water with particulate matter directed to attenuation ponds. Regular testing of pH before discharge into Afon Seiont.	
	<u>GPP 21</u> pollution plan implemented.	
Reduction	Natural or implemented barrier protection to secure Afon Seiont dark corridor	
	Noise barriers included around gas facility / noise reduction incorporated into design.	
Enhancement	Lighting plan to preserve dark corridor along Afon Seiont	
	Tree planting in former species-poor agricultural grassland along underground services route.	
Mitigation	Wildlife-friendly external lighting incorporated into design	
	Hedging / screening as part of noise / N ₂ reduction and absorption around STOR	

6. REVISED RISK ASSESSMENT

6.1 Mitigation effectiveness

6.1.1 Implementation of the mitigation strategy as outlined will result in a revision of the Impact Assessment (Table 17).

Table 17 Revised Impact Assessment

IMPACT	FEATURE AFFECTED	MITIGATION	RISK	SEVERITY	RISK × SEVERITY
Disturbance associated with Plant, lighting and construction.	<ul style="list-style-type: none"> Bats (all sp.) Otter 	<ul style="list-style-type: none"> Dark corridor implemented; No night-time working; 	4	2	8
Pollution: Potential impact of silt entering the Afon Seiont.	<ul style="list-style-type: none"> Amphibians Fish Otter 	<ul style="list-style-type: none"> Use of regenerative methods to trap silt; 	2	2	4
Pollution: Emissions (N ₂) from proposed gas facility and impacts on air quality.	<ul style="list-style-type: none"> Habitat Quality Amphibians Bats (all sp.) 	<ul style="list-style-type: none"> Gas plant emissions regulated by NRW; N₂ screening 	2	2	4
Pollution: Emissions (N ₂) from proposed gas facility and eutrophication of habitat associated with the Afon Seiont	<ul style="list-style-type: none"> Aquatic invertebrates Bats (all sp.) 	<ul style="list-style-type: none"> Gas plant emissions regulated by NRW; Planting to capture / reduce N₂ 	2	3	6
Pollution: Dust from crushing, screening and cement use (alkaline).	<ul style="list-style-type: none"> Habitat quality Fish Aquatic invertebrates 	<ul style="list-style-type: none"> Water with alkaline particulates diverted through attenuation ponds; Regular pH monitoring. 	2	4	8
Noise pollution from Plant	<ul style="list-style-type: none"> Bats (all sp.) 	<ul style="list-style-type: none"> Noise barrier / screening (No more than 40dB along river corridor) 	2	2	4
Light pollution from security lighting post-development	<ul style="list-style-type: none"> Bats (all sp.) Otter 	<ul style="list-style-type: none"> Screening / planting between Plant and river corridor 	2	2	4

Key

RISK		SEVERITY		RISK × SEVERITY	
1	Negligible	1	Negligible	1-9	Cumulative effect of likelihood × severity = minor negative (potentially positive) impact
2	Slight risk	2	Low level of impact		
3	Moderate risk	3	Moderate impact	10-16	Cumulative effect of likelihood × severity = moderate negative impact
4	Event likely to occur	4	Major impact		
5	High risk of event occurring	5	Severe impact	17 - 25	Cumulative effect of likelihood × severity = major negative impact

6.1.2 Implementation of the strategy reduces the impact of the proposal to **Minor** at a **Regional** level (see Table 11 Hierarchy of impact, p. 23).

6.2 Cumulative impacts

6.2.1 Cumulative impacts remain, in particular:

- i. the cumulative impact of N₂ loading which already exceeds the critical maximum for woodland;
- ii. Potential for high pH discharges to alter the chemistry of the Afon Seiont.

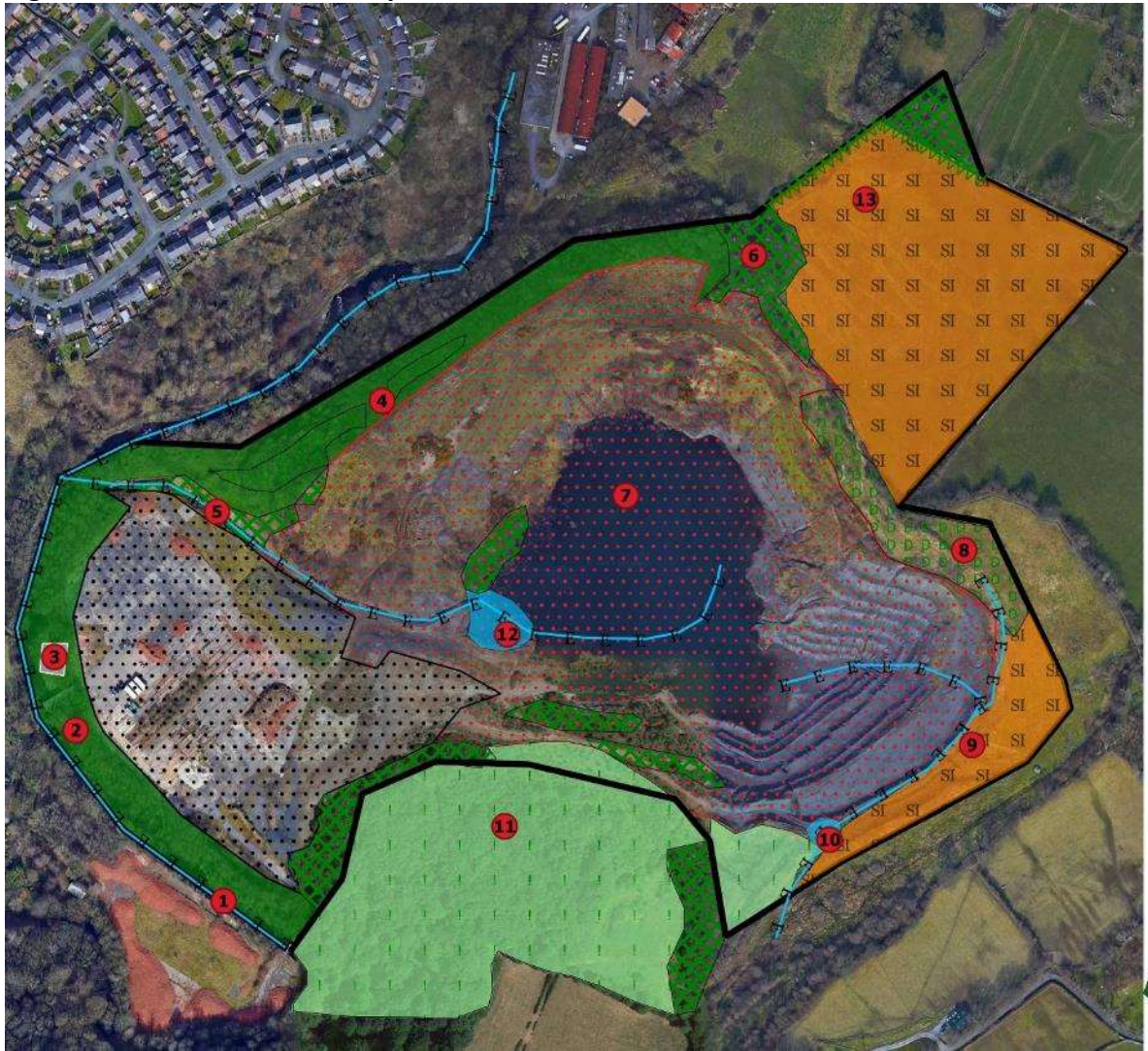
6.2.2 'Forward loading' of enhancements to subsequent phases allows biodiversity net gain (including N₂ buffering and Carbon sequestration) to extend across the future development of the quarry site.

6.2.3 Cumulative impacts include:

- The impacts on habitats and species of the A487 Caernarfon-Bontnewydd bypass construction and opening;
- Impacts on amphibians, reptiles and birds affected by the change of use of the quarry;
- Impacts on bats and otter as a result of activities in the quarry;
- Impacts of N₂ pollution pending assessment by NRW

6.2.4 Strategies listed in Section 5.5 Enhancement will be adopted as part of the future development and are anticipated to meet the environmental and ecological targets outlined in the original brief.

7. APPENDIX 1
 Figure 10 Revised Phase 1 Map



**Phase 1 Habitat Survey
 Seiont Quarry-
 Caernarfon
 (Grid Ref- SH49168
 61578)**

KEY

- Target Note
- E Running Water Eutrophic
- Building
- ▨ Species Rich Hedge
- Semi-Natural Grassland
- Site Boundary
- Dense Scrub
- Pond
- Mixed Woodland
- Hard Standing Ground
- Scattered Scrub
- Quarry
- Broadleaved Woodland



8. APPENDIX 2

Table 18 Target Notes⁵

TN	CODE	DESCRIPTION
1	RWE	Afon Seiont SSSI with Dipper, Grey wagtail, Otter, Lampreys and Salmonid fish
2	BW	Woodland, margins periodically inundated, tree species include: Sycamore (<i>Acer Pseudoplatanus</i>) (C), Sessile Oak (<i>Quercus petraea</i> - O), Alder (<i>Alnus glutinosa</i> - A), Grey willow <i>Salix cinerea</i> - C), Ash (<i>Fraxinus excelsior</i> - C), Hazel (<i>Corylus avellana</i> - A). Ground cover of: <i>Rubus fruticosus</i> (A) <i>Hedera helix</i> (A), <i>Phyllitis scolopendrium</i> (F) with <i>Luzula sylvatica</i> , <i>Dryopteris filix-mas</i> , <i>Eupatorium cannabinum</i> , <i>Buddleja davidii</i> .
3	Building	Moderate suitability for bats
4	BW	Mixed woodland with Silver Birch (<i>Betula pendula</i>) (A) Alder (<i>Alnus glutinosa</i>) (O), Sessile Oak (<i>Quercus petraea</i>), <i>Buddleja davidii</i> , (F), <i>Salix cinerea</i> (O/F), <i>Ulex europeus</i> (LF), <i>Rubus fruticosus</i> (A-C), <i>Carex sylvatica</i> , (F). Largely bryophyte-dominated ground flora at time of survey, including <i>Thuidium tamariscinum</i> , <i>Rhytidiadelphus loreus</i> , <i>Hylocomium splendens</i> and <i>Pleurozium schreberi</i> indicating an acidic substrate.
5	RWE	Cloudy water with no silt trap present, abundant Reedmace (<i>Typha latifolia</i>) (LA) and Fool's watercress (<i>Apium nodiflorum</i>) (LC)
6	DS/SS	45° Slope with Gorse (<i>Ulex Europeus</i>) (A), <i>Salix caprea/cinerea</i> (O), <i>Juncus effusus</i> (LC). Birds seen include Woodcock, Buzzard, Grey wagtail.
7	Q	Cleared ground with ruderal vegetation.
8	SS	Dominated by Gorse <i>Ulex Europaeus</i> (A), with <i>Veronica beccabunga</i> (F), <i>Deschampsia cespitosa</i> (C), <i>Digitalis purpurea</i> (O), <i>Juncus Effusus</i> (C), <i>Phalaris arundinacea</i> (F).
9	RWE	Highly eutrophic drain, with dense cover Fool's watercress <i>Apium nodiflorum</i> and Starwort <i>Callitriche</i> sp.
10	SWE	<i>Apium nodiflorum</i> (A), <i>Salix Fragilis</i> (A), <i>Alnus Glutinosa</i> (F), <i>Callitriche stagnalis</i> (O), <i>Lemna minor</i> (F) <i>Lemna Gibba</i> (F).
11	MW	Mixed Woodland with <i>Betula pendula</i> , <i>Quercus petraea</i> , <i>Salix caprea</i> , <i>salix fragilis</i> , <i>Larix decidua</i> , <i>alnus glutinous</i> , <i>Pinus sylvestris</i> . Outside of site boundary but important feature for bats and birds
12	SWE	Pond. Heavily silted, flows into a secondary pond in the lowest point of the quarry. Formerly known to contain Palmate newt <i>Lissotriton helveticus</i> and Common toad <i>Bufo bufo</i> .
13	SNG	Species-poor unmanaged grassland dominated by Yorkshire Fog (<i>Holcus lanatus</i>), Creeping Bent (<i>Agrostis stolonifera</i>), Cock's-foot (<i>Dactylis glomerata</i>), Creeping Buttercup (<i>Ranunculus repens</i>), sorrel (<i>Rumex acetosa</i>). Progresses to rush-dominated grassland in N corner.

⁵ Abundance estimated using the ACFOR scale where A=Abundant, C=Common, F=Frequent, O=Occasional, R=Rare.

9. APPENDIX 3

Legislation

Bats

In Britain, all bat species and their roosts are legally protected in both domestic (the Wildlife & Countryside Act England & Wales 1981 – as amended) and international (The Habitats Directive 1992 / Conservation of Habitats and Species Regulations 2017 as amended) legislation, whereby it is an offence to:

- Deliberately take, injure or kill a wild bat
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats.
- Damage or destroy a place used by bats for breeding or resting (roosts) (even if bats are not occupying the roost at the time)
- Possess or advertise/sell/exchange a bat of a species found in the wild in the EU (dead or alive) or any part of a bat.
- Intentionally or recklessly obstruct access to a bat roost.

Birds

All birds, their nests and eggs are protected by law and it is thus an offence (with certain exceptions) to:

- Intentionally kill, injure or take any wild bird.
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built.
- Intentionally take or destroy the egg of any wild bird.
- Have in one's possession or control any wild bird, dead or alive, or any part of a wild bird, which has been taken in contravention of the Act.
- Have in one's possession or control any egg or part of an egg which has been taken in contravention of the Act.
- Use traps or similar items to kill, injure or take wild birds.

- Have in one's possession or control any bird of a species occurring on Schedule 4 of the Act unless registered, and in most cases ringed, in accordance with the Secretary of State's regulations in the Act's schedules.
- Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.