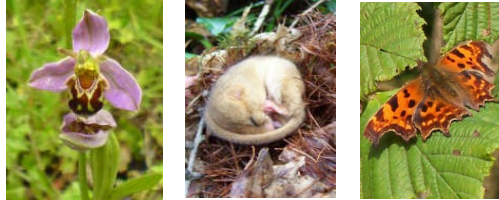


Abbey Sanders Ecology



**RIVER EBBW BANK REPAIR, JUBILEE
PARK, ROGERSTONE, NEWPORT**

**PRELIMINARY ECOLOGICAL
APPRAISAL
JUNE 2024 (SURVEY)**

Abbey Sanders CEcol CEnv MCIEEM

For Rogerstone Community Council

Issue Details:

Author:	Abbey Sanders CEcol CEnv MCIEEM, Principal Ecologist	7 th October 2024
Review:	Andrew Sanders CMLI Associate	11 th October 2024
Issue: DRAFT	Abbey Sanders	11 th October 2024
Issue:	Abbey Sanders	2 nd December 2024
Issue: V2	Abbey Sanders	17 th December 2024

<u>LIST OF CONTENTS</u>	<u>Page No.</u>
SUMMARY.....	4
1.0 INTRODUCTION.....	5
2.0 SPECIES ECOLOGY, LEGISLATION & POLICY.....	7
3.0 METHODS.....	11
4.0 RESULTS.....	12
5.0 ASSESSMENT, CONCLUSIONS & RECOMMENDATIONS.....	40
6.0 REFERENCES.....	47

SUMMARY

- This report contains the results of preliminary ecological appraisal survey, survey of invasive non-native plant species, and otter survey, conducted on the 18th June 2024. The survey consisted of a walkover inspection of the area of recent river bank collapse, the surroundings and likely areas of works including access to repair this, at the site of the River Ebbw adjacent to Jubilee Park, in Newport.
- An assessment of the ecological value of the habitats and potential value as habitat for priority and protected species was undertaken, as well as an impact assessment of the proposals, based on the site visit survey results and a desk study including biological data search (SEWBRc).
- The habitats present within the site boundary were of limited value in themselves, due to the bank collapse, although the in stream watercourse and surrounding woodland, trees, scrub and rough grassland are of local value and are likely to support some level of use by otters, nesting birds and reptiles as well as migratory fish and invasive non-native plant species being present. The river is a designated Site of Importance to Nature Conservation (SINC).
- As the bank collapse was a natural event which the proposals seek to repair, the existing situation is considered to be the ‘baseline’ with the repair forming an enhancement to this situation.
- The works will involve installation of ‘aqua rock’ bags with bank reprofiling with turf over this. Ecological mitigation measures required include timing of works to protect migratory fish, control of non-native invasive plant species during works, minimising works footprint and identifying ecological protection areas on site, an update walkover checks for the presence of otters, nesting birds or reptiles and a ‘tool box’ talk at the start of works, by a suitably qualified ecologist.
- The habitat of the river bank shall be improved following works with wildflower seed mix within the turf and biodiversity net benefit measures installed at the nearby Rogerstone Recreation Grounds close to the north of the site.

1.0 INTRODUCTION

This survey and report in 2024 by Abbey Sanders Ecology was commissioned by Rogerstone Community Council to inform an assessment of the area affected by a recent collapse of the bank of the River Ebbw, which requires repair, adjacent to Jubilee Park, Rogerstone, Newport, ('the site').

The site lies at an approximate National Grid Reference **ST 26376 88131** and What3Words location '**decisions.firmly.mopped**'.



Existing site plan and area of works – extract from Vale Consultancy Feasibility Report: Emergency Revetment Repairs



Collapsed bank area on east bank viewed from west

Abbey Sanders, who has carried out this survey and assessment, is a qualified professional consultant ecologist (BSc and MSc degrees) a Chartered Ecologist and full Member of the Chartered Institute of Ecology and Environmental Management and Chartered Environmentalist. Abbey Sanders is experienced in ecological survey and assessment, for over 20 years, holding survey licences in England and Wales, and has carried out this survey and assessment and produced this report.

The survey aimed to determine the habitats present and their ecological value and any potential for protected and priority species, or designated sites, to be affected by the current proposals, as well as an assessment of impacts where relevant. This was informed by an associated desk study.

The survey was extended to include particular consideration of; assessment of presence of invasive non-native plant species, otter and nesting bird survey and an assessment of potential impact to migratory fish.

2.0 SPECIES ECOLOGY, LEGISLATION & POLICY

2.1 Bats

UK bat species are nocturnal, roosting by day and foraging during the night, particularly at dusk and dawn during the main active months, March to October. Summer roost sites include cavities and crevices within buildings or trees with bats relocating to winter roosts to hibernate, during which they can wake and emerge to feed for short periods. Winter roost sites are in more sheltered sites with relatively constant cool temperatures, such as disused mines or caves. When commuting to feeding sites or foraging, bats tend to follow linear features within the landscape such as hedgerows or rivers and feed on insects where these are readily found. Some bats commute through open areas and some feed over open habitat such as water bodies. All bat species occurring in the UK are afforded full legal protection under the Wildlife and Countryside Act 1981 (as amended) and are included in Schedule 2 of the Conservation (Natural Habitats, &c.) Regulations 1994, amendments to which have been consolidated by the Conservation of Habitats and Species Regulations 2010, consolidated and updated by the Conservation of Habitats and Species Regulations 2017, as amended, which gives them protection under European law. Through this protection it is illegal, among other offences to;

- Capture, kill or injure a bat
- Disturb bats
- Obstruct, damage or destroy the places where they breed or rest

unless a licence has been obtained to do so, for reasons of conservation, scientific research or through development (licences from Natural Resources Wales). Licences are only granted for these purposes where works are necessary and measures to adequately protect the bats are in place. A number of species are also listed under Section 74 of the CROW Act 2000 as being species of principal importance for the conservation of biological diversity and many species are also Priority BAP species on the UKBAP (United Kingdom Biodiversity Action Plan).

2.2 Otters

The European Otter *Lutra lutra* is mammal strongly associated with wetland habitats; rivers, coastal areas, streams and marshes as well as ponds and canals. Having declined

greatly in the late 20th Century largely due to pollution and to some degree persecution, the species has been successfully growing in population numbers and recolonizing former habitats, as their environment becomes less polluted and more suitable habitat is therefore available, although they have not reached their former status. Otters have had a stronghold in some rural parts of Wales and the south-west of England and are now known to inhabit rivers throughout South Wales, also visiting and in some cases regularly using urban areas. Otters are largely active from the evening through to early morning away from the coast in the UK, and can cover large areas over several km in a night, searching for food, which is often fish, amphibians and also can include small mammals and birds. Daytime resting sites include cavities in trees roots and areas of dense vegetation, males tend to have a large range incorporating the range of more than one female, the females seeking out quieter less disturbed areas for breeding.

The Otter in the UK is afforded full legal protection under the Wildlife and Countryside Act 1981 (as amended) and is included in Schedule 2 of the Conservation (Natural Habitats, &c.) Regulations 1994, amendments to which have been consolidated by the Conservation of Habitats and Species Regulations 2010, which gives them protection under European law. Through this protection it is illegal to;

- Kill, injure or handle an Otter
- Disturb an Otter
- Obstruct, damage or destroy the places where they live
- Keep, transport, sell or exchange an Otter whether alive or dead or to

keep Otters in captivity unless a licence has been obtained to do so, for reasons of conservation, scientific research or sometimes through development (licences from Natural England).

Licences are only granted for these purposes where works are necessary and measures to adequately protect the Otters are in place.

2.3 Non-native Invasive Plant Species

Several non-native plant species which are easily spread and known to cause problems through dominant growth are listed on the Schedule 9 of the Wildlife and Countryside Act 1981, as amended, in respect of Wales and England. This means that it is an offence to plant or otherwise cause them to grow in the wild.

2.4 Fish

The River Ebbw is noted for its breeding Brown Trout *Salmo trutta*, a Priority Species (Listed on Section 7 of the Environment Wales Act 2016. It is also noted as being important for migratory anadrous species including Sea Trout (the migratory form of Brown Trout) and Atlantic Salmon *Salmo salar*. These species may live in any part of the river, breeding in upper reaches in gravel beds with egg laying taking place between November and February and migration taking place either side of this, so that there is an embargo on fishing and works that may harm or disturb migratory fish between October and April each year.

2.5 Nesting Birds

The main bird breeding season is between March and August inclusive although breeding activity can also often take place in February and September. Whilst the specific requirements of different bird species are varied, any buildings and areas of vegetative cover including trees, hedgerow, scrub and tussocky grassland can provide potential nesting areas for birds. Under the Wildlife and Countryside Act, 1981, as amended, it is an offence to kill injure or take any wild bird, to take, damage or destroy the nest of a bird whilst it is being built or in use and to take or destroy eggs, or to possess or control a bird or eggs (unless done so legally). Some species have further protection including barn owls *Tyto alba* which are also listed on Schedule 1 of the Wildlife and Countryside Act, which gives them further special protection.

2.6 Reptiles

Species of reptile which may be expected to potentially occur in the wider area include four species of reptile; common or viviparous lizard *Lacerta vivipara*, slow-worm *Anguis fragilis*, grass snake *Natrix natrix* and adder *Vipera berus*. From the habitats present on site it is considered that grass snake, slow-worm and possibly common lizard would be the most likely to occur within the site, although the site is quite exposed and isolated from surrounding similar habitats reducing the likelihood of their presence. All of these reptile species are afforded some protection, including against killing or injury, under the Wildlife and Countryside Act (1981, as amended). Reptiles are active during the summer months, emerging from hibernation from April to breed in the spring and early summer before returning to hibernation from around October. grass snakes are often found in association with water due to their preference for amphibian prey.

Reptile species, including notably adders, often hibernate together and mate on emergence before migrating potentially several hundred metres to habitat where they will spend the rest of the summer. Reptiles require shelter and foraging habitat during the summer months and hibernate in well sheltered areas offering relatively constant temperatures, such as log or rock piles, stone walls, or underground cavities such as around tree roots.

2.9 Planning Policy

The Welsh government has identified a list of priority species and habitats in Wales, under Section 7 of the Environment (Wales) Act 2016. The **priority species** in Newport are: dormouse, (some species of) bats, otter, water vole, (some species of) fungi, small ranunculus moth and shrill carder bee. The **priority habitats** in Newport are: woodland, freshwater, wetlands, farmland, lowland grassland, open greenspace, marine and coastal.

Planning Policy Wales (12, 2024) sets out that planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. This means that development should not cause any significant loss of habitats or populations of species, locally or nationally. Development is required to follow the ‘step-wise’ or mitigation hierarchy approach, whereby impacts should be avoided where possible, or moving down the hierarchy, minimised, or mitigated / restored, or compensated on site, or offsite. Development must also provide a net benefit for biodiversity" (reference para 6.4.5) at any stage of the ‘step-wise’ approach. Enhancement measures to provide this net benefit can include on site habitat creation or form part of the proposals (development) (para 6.4.12).

Natural Resources Wales (NRW) has developed a framework for evaluating ecosystem resilience based on five attributes and properties specified in the Environment (Wales) Act. This is referred to as DECCA: Diversity, Extent, Condition, Connectivity and Aspects of ecosystem resilience. These requirements are also addressed in NRW’s Terrestrial and freshwater Resilient Ecological Networks: a guide for practitioners in Wales.

Newport City Council has published a **Biodiversity Duty Forward Plan (2023 – 25)** with a Biodiversity Interim Report (December 2023) on initial progress.

Note that under the EU exit process, these legal obligations and requirements remain in place.

3.0 METHODS

- A **desk study and data search** were undertaken in early summer 2024. This involved obtaining existing records of priority and protected species, designated sites at the study site and surrounding area and studying maps of the area. This was in order to aid an assessment of the potential for the plot to support protected species and the ecological value of the habitats present. A data search was conducted through the South East Wales Biodiversity Records Centre / Aderyn for records of notable species, habitats and designated sites within 1km of the site. The results of the desk study and site survey are described in 4.0 Results below.
- A **daytime site survey** of the site was carried out on 18th June 2024, during which conditions were mild, still and clear, by experienced ecologist, Abbey Sanders MCIEEM CEcol CEnv.
- This survey broadly followed the methodology for Phase 1 Habitat Survey described within the JNCC '*Handbook for Phase 1 Habitat Survey*' (2003 rev.) together with the methodology for Extended Phase 1 Habitat Survey described within Spon & Spon's '*Guidelines for Baseline Habitat Assessment*' (1995). Following this methodology, existing habitats were recorded and mapped with any notable flora and fauna identified also being recorded (note that the scope of this survey does not include a full detailed list of all species present). This was then used to assess the potential of the site to support any further features of interest which had not been recorded.
- Based on the preliminary ecological appraisal further species specific surveys may be recommended to determine presence or likely absence.

Constraints

There were no constraints which would significantly alter the result of the assessment.

4.0 RESULTS

4.1 Data search and desk study

A data search was conducted through SEWBRcC, the local environmental records centre, for species recorded within approximately 2km of the site on the banks of the Ebbw River, Rogerstone (OS Grid Reference: ST2637688131). The results are summarised in Tables 1 and 2 below with Table 2 showing protected species, species of conservation concern and locally important species, and Table 2 showing invasive species. In both tables, 'distance' reflects the approximate distance from the site of the closest record for each species, and 'year' the most recent record for each species.

Table 1: Protected and Priority Species, Species of Conservation Concern and Locally Important Species within 2km of the site at Rogerstone (Source: SEWBRcC)

Scientific Name	Common Name	No. of records	Distance (approx) (Bat Roost / Breeding birds)	Year (Bat Roost / Breeding birds)	Status	Notes
<i>Alcedo atthis</i>	Kingfisher	66	10 (389)	2023 (2023)	CAT1, BDir1, WCA1.1, Bern, WBAm(RSPB), UKBAm(RSPB), WS_C	Includes confirmed and possible breeding records
<i>Riparia riparia</i>	Sand Martin	6	32 (32)	2022 (2022)	CAT2, Bern, WBAm(RSPB), WS_C	Includes record of nesting in bank
<i>Calopteryx virgo</i>	Beautiful Demoiselle	8	33	2021	CAT3, LI(BIS), LI(SEWBRcC), WS_C	-
<i>Lutra lutra</i>	Eurasian Otter	20	47	2023	CAT1, EPS, HDir, WCA5, S7, Bern,	includes live sightings & field

					CITES, RDB2 (UK), WS_P	signs; holt 1985m from site
<i>Nyctalus noctula</i>	Noctule Bat	22	84 (1435)	2024 (2011)	CAT1, EPS, HDir, WCA5, S7, Bern, RDB2 (UK), WS_P	1 roost; foraging /commuting
<i>Anguis fragilis</i>	Slow-worm	6	135	2021	CAT1, WCA5, S7, Bern, WS_C	includes results of a 2007 survey which indicated a medium sized reptile population nearby
<i>Apus apus</i>	Swift	43	191	2021	CAT2, WBAm(R SPB), UKBAm(RSPB)	-
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	126	204 (676)	2024 (2012)	CAT1, EPS, HDir, WCA5, S7, Bern, RDB2 (UK), WS_P	5 roosts; foraging/ commuting passes
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	45	204 (1435)	2024 (2012)	CAT1, EPS, HDir, WCA5, S7, Bern, RDB2 (UK), WS_P	3 roosts including 2 with count of 100+; foraging/ commuting passes
<i>Myotis daubentonii</i>	Daubenton's Bat	24	212	2024	CAT1, EPS, HDir, WCA5, Bern, RDB2 (UK), WS_P	foraging/ commuting records; 1 bat care call
<i>Anas platyrhynchos</i>	Mallard	163	320 (389)	2024 (2020)	CAT2, BDir21, WBAm(R SPB), UKBAm(RSPB)	Includes confirmed and possible

						breeding records
<i>Troglodytes troglodytes</i>	Wren	115	347	2023	CAT3, Bern	-
<i>Pipistrellus</i>	Pipistrelle Bat species	53	381 (381)	2013 (2013)	CAT1, EPS, WCA5	2 roosts; foraging/commuting passes
<i>Aeshna mixta</i>	Migrant Hawker	5	383	2023	CAT3, LI(BIS)	-
<i>Milvus milvus</i>	Red Kite	13	389	2023	CAT1, BDir1, WCA1.1, WCA9, CITES, WBAm(RSPB), WS P	-
<i>Turdus philomelos</i>	Song Thrush	102	389	2022	CAT1, BDir22, S7, Bern, WBAm(RSPB), UKBR(RSPB), WS C	-
<i>Sturnus vulgaris</i>	Starling	79	389	2022	CAT1, BDir22, S7, Bern, WBR(RSPB), UKBR(RSPB), WS C	-
<i>Chroicocephalus ridibundus</i>	Black-headed Gull	63	389	2022	CAT1, BDir22, S7, WBR(RSPB), UKBAm(RSPB)	-
<i>Turdus pilaris</i>	Fieldfare	16	389	2020	CAT1, BDir22, WCA1.1, WBAm(RSPB), UKBR(RSPB)	-
<i>Turdus iliacus</i>	Redwing	61	389	2020	CAT1, BDir22, WCA1.1, WBAm(RSPB), UKBR(RSPB)	-
<i>Prunella modularis</i>	Dunnock	151	389	2022	CAT1, S7, Bern, UKBAm(RSPB)	-
<i>Accipiter gentilis</i>	Goshawk	11	389	2023	CAT1, WCA1.1, WCA9,	-

					CITES, WS P	
<i>Hyacinthoides non-scripta</i>	Bluebell	16	389	2022	CAT1, WCA8	-
<i>Turdus viscivorus</i>	Mistle Thrush	80	389	2024	CAT2, BDir22, Bern, WBAAm(R SPB), UKBR(RS PB)	-
<i>Larus canus</i>	Common Gull	10	389	2018	CAT2, BDir22, WBR(RSP B), UKBAAm(RSPB)	-
<i>Chloris chloris</i>	Greenfinch	80	389	2022	CAT2, Bern, WBAAm(R SPB)	-
<i>Regulus regulus</i>	Goldcrest	27	389	2024	CAT2, Bern, WBAAm(R SPB)	-
<i>Cinclus cinclus</i>	Dipper	72	389 (389)	2023 (2023)	CAT2, Bern, WBAAm(R SPB), UKBAAm(RSPB)	includes confirmed and probable breeding records.
<i>Motacilla cinerea</i>	Grey Wagtail	118	389 (951)	2022 (2022)	CAT2, Bern, WBAAm(R SPB), UKBR(RS PB)	includes confirmed and probable breeding
<i>Picus viridis</i>	Green Woodpecker	64	389	2022	CAT2, Bern, WBAAm(R SPB), WS C	-
<i>Aegithalos caudatus</i>	Long-tailed Tit	81	389	2024	CAT2, WBAAm(R SPB)	-
<i>Phylloscopus trochilus</i>	Willow Warbler	28	389	2022	CAT2, WBR(RSP B), UKBAAm(RSPB)	-
<i>Coloeus monedula</i>	Jackdaw	176	389	2023	CAT3, BDir22	-
<i>Rana temporaria</i>	Common Frog	33	419	2024	CAT1, HDir, WCA5, Bern, WS C	-
<i>Lissotriton helveticus</i>	Palmate Newt	3	419	2019	CAT1, WCA5, Bern, LI(BIS), WS C	2 records of larvae; 1 adult

<i>Lissotriton vulgaris</i>	Smooth Newt	4	419	2005	CAT1, WCA5, Bern, LI(BIS), WS_C	adults
<i>Erinaceus europaeus</i>	West European Hedgehog	47	432	2024	CAT1, S7, Bern, LBAP (NEW)	-
<i>Pyrrhosoma nymphula</i>	Large Red Damselfly	24	441	2020	CAT3, LI(BIS)	-
<i>Aeshna cyanea</i>	Southern Hawker	10	461	2020	CAT3, LI(BIS)	-
<i>Anacamptis pyramidalis</i>	Pyramidal Orchid	1	473	2015	CAT3, LI(SEWB ReC), WS_C	-
<i>Mustela putorius</i>	Polecat	5	533	2012	CAT1, HDir, S7, Bern, RDB2 (UK), LBAP (NEW)	3 live sightings; 2 dead
<i>Medicago arabica</i>	Spotted Medick	1	579	2014	CAT3, LI(SEWB ReC)	-
<i>Lycia hirtaria</i>	Brindled Beauty	9	623	2021	CAT1, S7	-
<i>Fissidens taxifolius</i>	Common Pocket-moss	10	623	2015	CAT3, RDB1 (Wales) - LC, LI(VC35), LI(WWBI C)	-
<i>Tortula muralis</i>	Wall Screw-moss	7	623	2015	CAT3, RDB1 (Wales) - LC, LI(VC35, LR)	-
<i>Syntrichia virescens</i>	Lesser Screw-moss	3	623	2015	CAT3, RDB1 (Wales) - LC, LI(VC35, LR), LI(WWBI C)	-
<i>Microeurhynchium pumilum</i>	Dwarf Feather-moss	5	623	2015	CAT3, RDB1 (Wales) - LC, LI(VC43, LR)	-
<i>Amblystegium serpens</i>	Creeping Feather-moss	9	623	2015	CAT3, RDB1 (Wales) - LC, LI(WWBI C)	-
<i>Lasiommata megera</i>	Wall	1	631	2012	CAT1, S7, RDB1	-

					(UK) - NT, WS_C	
<i>Coenagrion puella</i>	Azure Damselfly	7	634	2023	CAT3, LI(BIS)	-
<i>Ischnura elegans</i>	Blue-tailed Damselfly	7	634	2023	CAT3, LI(BIS)	-
<i>Meles meles</i>	Eurasian Badger	29	642	2023	CAT1, BA, Bern, WS_P	live sightings; road casualties and field signs; 7 records relating to setts 1.5km- 1.9km away
<i>Larus argentatus</i>	Herring Gull	70	642	2023	CAT1, BDir22, S7, WBR(RSPB), UKBR(RSPB), WS_C	-
<i>Melanitta nigra</i>	Common Scoter	1	642	2016	CAT1, BDir22, WCA1.1, S7, WBAm(RSPB), UKBR(RSPB)	-
<i>Chiroptera</i>	Bat	42	642 (1079)	2023 (2017)	CAT1, EPS, WCA5	roosts; foraging/ commuting
<i>Emberiza schoeniclus</i>	Reed Bunting	2	642	2012	CAT1, S7, Bern, WBAm(RSPB), UKBAm(RSPB), WS_C	-
<i>Charadrius hiaticula</i>	Ringed Plover	1	642	2016	CAT1, S7, Bern, WBR(RSPB), UKBR(RSPB), WS_C	-
<i>Passer domesticus</i>	House Sparrow	132	642	2023	CAT1, S7, WBAm(RSPB), UKBR(RSPB), WS_C	-

<i>Pyrhula pyrrhula</i>	Bullfinch	57	642	2020	CAT1, S7, WBR(RSPB), UKBAm(RSPB), WS_C	-
<i>Mergus serrator</i>	Red-breasted Merganser	1	642	2016	CAT2, BDir22, WBAm(RSPB)	-
<i>Haematopus ostralegus</i>	Oystercatcher	3	642	2020	CAT2, BDir22, WBAm(RSPB), UKBAm(RSPB)	-
<i>Larus marinus</i>	Great Black-backed Gull	2	642	2016	CAT2, BDir22, WBR(RSPB), UKBAm(RSPB), WS_C	-
<i>Tringa totanus</i>	Redshank	1	642	2016	CAT2, BDir22, WBAm(RSPB), UKBAm(RSPB)	-
<i>Hirundo rustica</i>	Swallow	93	642	2022	CAT2, Bern, WBAm(RSPB)	-
<i>Anthus pratensis</i>	Meadow Pipit	11	642	2020	CAT2, Bern, WBAm(RSPB), UKBAm(RSPB)	-
<i>Arenaria interpres</i>	Turnstone	1	642	2016	CAT2, Bern, WBAm(RSPB), UKBAm(RSPB)	-
<i>Ardea cinerea</i>	Grey Heron	35	642	2024	CAT2, WBAm(RSPB)	-
<i>Morus bassanus</i>	Gannet	1	642	2016	CAT2, WBAm(RSPB), UKBAm(RSPB)	-
<i>Phalacrocorax carbo</i>	Cormorant	17	642	2020	CAT2, WBAm(RSPB), WS_C	-
<i>Buteo buteo</i>	Buzzard	72	642	2021	CAT3, CITES	-
<i>Frangula alnus</i>	Alder Buckthorn	5	642	2017	CAT3, LBAP (NEW), LI(SEWB ReC), WS_C	-

<i>Phylloscopus sibilatrix</i>	Wood Warbler	3	690	2024	CAT1, S7, WBR(RSPB), UKBR(RSPB), WS_C	-
<i>Myotis mystacinus/brandtii</i>	Whiskered/Brandt's Bat	9	759	2005	CAT1, EPS, HDir, WCA5, Bern	foraging/commuting
<i>Poecile montanus</i>	Willow Tit	3	762	2019	CAT1, S7, Bern, WBR(RSPB), UKBR(RSPB), WS_P, WS_C	-
<i>Acanthis cabaret</i>	Lesser Redpoll	17	762	2020	CAT1, S7, WBA(RSPB), UKBR(RSPB), WS_C	-
<i>Acronicta rumicis</i>	Knot Grass	52	789	2021	CAT1, S7	-
<i>Amphipoea oculea</i>	Ear Moth	1	789	2004	CAT1, S7	-
<i>Amphipyra tragopoginis</i>	Mouse Moth	7	789	2016	CAT1, S7	-
<i>Caradrina morpheus</i>	Mottled Rustic	8	789	2014	CAT1, S7	-
<i>Diarsia rubi</i>	Small Square-spot	14	789	2016	CAT1, S7	-
<i>Ecliptopera silaceata</i>	Small Phoenix	106	789	2021	CAT1, S7	-
<i>Hoplodrina blanda</i>	Rustic	45	789	2020	CAT1, S7	-
<i>Hydraecia micacea</i>	Rosy Rustic	43	789	2013	CAT1, S7	-
<i>Leucania comma</i>	Shoulder-striped Wainscot	4	789	2012	CAT1, S7	-
<i>Melanchra persicariae</i>	Dot Moth	58	789	2020	CAT1, S7	-
<i>Scotopteryx chenopodiata</i>	Shaded Broad-bar	28	789	2016	CAT1, S7	-
<i>Spilosoma lubricipeda</i>	White Ermine	50	789	2015	CAT1, S7	-
<i>Spilosoma lutea</i>	Buff Ermine	43	789	2020	CAT1, S7	-
<i>Tholera decimalis</i>	Feathered Gothic	15	789	2016	CAT1, S7	-
<i>Timandra comae</i>	Blood-vein	5	789	2014	CAT1, S7	-

<i>Cepphis advenaria</i>	Little Thorn	12	789	2014	CAT3	-
<i>Tetheella fluctuosa</i>	Satin Lutestring	56	789	2017	CAT3, LI(BIS)	-
<i>Curruca communis</i>	Whitethroat	15	793	2020	CAT2, WBR(RSP B)	-
	Pipistrelle	3	822	2012	CAT1, EPS, HDir, WCA5, Bern, RDB2 (UK)	-
<i>Myotis</i>	Myotis Bat species	4	828	2020	CAT1, EPS, HDir, WCA5, Bern	2 foraging records consistent with whiskered / Brandts bats
<i>Plecotus auritus</i>	Brown Long-eared Bat	4	828	2019	CAT1, EPS, HDir, WCA5, S7, Bern, RDB2 (UK), WS_P	foraging
<i>Anguilla anguilla</i>	European Eel	2	882	2009	CAT1, S7, RDB1 (UK) - CR, WS_P	-
<i>Cottus gobio</i>	Bullhead	2	882	2009	CAT3, HDir, WS_P	-
<i>Natrix helvetica</i>	Grass Snake	4	914	2008	CAT1, WCA5, S7, Bern, WS_P	3 found on reptile surveys in 2007
<i>Scolopax rusticola</i>	Woodcock	4	951	2023	CAT2, BDir21, WBR(RSP B), UKBR(RS PB), WS_C	-
<i>Sagittaria sagittifolia</i>	Arrowhead	1	951	2016	CAT2, RDB1 (Wales) - VU, LI(SEWB ReC)	-
<i>Meconopsis cambrica</i>	Welsh Poppy	1	951	2016	CAT2, RDB2 (UK) - S, WS_P	-

<i>Dactylorhiza fuchsii</i>	Common Spotted-orchid	5	951	2024	CAT3	-
<i>Rhinanthus minor</i>	Yellow-rattle	4	951	2017	CAT3,	-
<i>Ceratophyllum demersum</i>	Rigid Hornwort	2	951	2019	CAT3, LI(SEWB ReC), WS_C	-
<i>Nymphaea alba</i>	White Water-lily	1	951	2019	CAT3, LI(SEWB ReC), WS_C	-
<i>Celastrina argiolus britanna</i>	Holly Blue	3	1026	2015	CAT3	-
<i>Rhinolophus hipposideros</i>	Lesser Horseshoe Bat	3	1059	2021	CAT1, EPS, HDir, WCA5, AnII, S7, Bern, RDB2 (UK), WS_P	field records
<i>Malva neglecta</i>	Dwarf Mallow	1	1064	2019	CAT3, RDB1 (Wales) - NT, LI(SEWB ReC), WS_C	-
<i>Leptophyes punctatissima</i>	Speckled Bush-cricket	6	1067	2023	CAT3, LI(SEWB ReC), WS_C	-
<i>Falco peregrinus</i>	Peregrine	5	1069	2020	CAT1, BDir1, WCA1.1, Bern, CITES, WS_P, WS_C	-
<i>Linaria cannabina</i>	Linnet	22	1069	2020	CAT1, S7, Bern, WBR(RSPB), UKBR(RSPB), WS_C	-
<i>Passer montanus</i>	Tree Sparrow	1	1069	2010	CAT1, S7, WBR(RSPB), UKBR(RSPB), WS_P	-
<i>Larus fuscus</i>	Lesser Black-backed Gull	47	1069	2022	CAT2, BDir22, WBA m(RSPB), UKBA m(RSPB), WS_C	-

<i>Cinclus cinclus gularis</i>	British Dipper	25	1069 (1288)	2011 (2011)	CAT3	Includes nesting record
<i>Enallagma cyathigerum</i>	Common Blue Damselfly	7	1075	2022	CAT3, LI(BIS)	-
<i>Myotis nattereri</i>	Natterer's Bat	2	1114	2005	CAT1, EPS, HDir, WCA5, Bern, RDB2 (UK), WS_P	foraging/commuting
<i>Phragmites australis</i>	Common Reed	4	1126	2010	CAT3	-
<i>Anax imperator</i>	Emperor Dragonfly	9	1131	2023	CAT3, LI(BIS)	-
<i>Triturus cristatus</i>	Great Crested Newt	13	1139	2005	CAT1, EPS, HDir, WCA5, S7, Bern, RDB2 (UK), WS_P	-
<i>Sympetrum striolatum</i>	Common Darter	5	1150	2022	CAT3, RDB1 (UK) - DD, LI(BIS)	-
<i>Poecile palustris</i>	Marsh Tit	1	1152	2000	CAT1, S7, Bern, WBR(RSPB), UKBR(RSPB), WS_P, WS_C	-
<i>Myriophyllum alterniflorum</i>	Alternate Water-milfoil	1	1152	1990	CAT3, LI(SEWB ReC), WS_C	-
<i>Mustela nivalis</i>	Weasel	2	1162	2021	CAT1, NRW, Bern, LBAP (NEW)	live sightings
<i>Vanellus vanellus</i>	Lapwing	4	1182	2018	CAT1, BDir22, S7, WBR(RSPB), UKBR(RSPB), WS_C	-
<i>Fringilla montifringilla</i>	Brambling	9	1182	2020	CAT1, WCA1.1, LBAP (CON), WBAm(RSPB)	-

<i>Phoenicurus phoenicurus</i>	Redstart	3	1225	2021	CAT2, Bern, WBA m(R SPB), UKBA m(RSPB), WS C	-
<i>Tyto alba</i>	Barn Owl	4	1226	2021	CAT1, WCA1.1, WCA9, Bern, CITES, WS P	-
<i>Libellula depressa</i>	Broad-bodied Chaser	8	1226	2023	CAT3, LI(BIS)	-
<i>Tyria jacobaeae</i>	Cinnabar	12	1272	2019	CAT1, S7	-
<i>Loxia curvirostra</i>	Crossbill	6	1272	2020	CAT1, WCA1.1, Bern, WS C	-
<i>Gallinago gallinago</i>	Snipe	2	1272	2018	CAT2, BDir21, WBA m(R SPB), UKBA m(RSPB), WS C	-
<i>Eudonia delunella</i>	Pied Grey	1	1272	2021	CAT2, RDB2 (UK) - NB	-
<i>Sorex araneus</i>	Eurasian Common Shrew	3	1272	2022	CAT3, Bern, LBAP (NEW)	-
<i>Alauda arvensis</i>	Skylark	15	1288	2022	CAT1, BDir22, S7, WBA m(R SPB), UKBR(RS PB), WS C	-
<i>Coccothraustes coccothraustes</i>	Hawfinch	2	1288	2018	CAT1, S7, Bern, WBA m(R SPB), UKBR(RS PB)	-
<i>Falco subbuteo</i>	Hobby	2	1288	2020	CAT1, WCA1.1, Bern, CITES, WS P	-
<i>Saxicola rubetra</i>	Whinchat	1	1288	2008	CAT2, Bern, WBR(RSP B), UKBR(RS PB)	-
<i>Lepidium campestre</i>	Field Pepperwort	1	1288	1989	CAT2, RDB1 (Wales) - VU	-

<i>Syntrichia laevipila</i>	Small Hairy Screw-moss	2	1288	2002	CAT3, RDB1 (Wales) - LC, LI(WWBI C)	-
<i>Calidris alpina</i>	Dunlin	2	1291	2020	CAT2, Bern, WBR(RSP B), UKBAm(RSPB)	-
<i>Acronicta psi</i>	Grey Dagger	23	1305	2015	CAT1, S7	-
<i>Allophyes oxyacanthae</i>	Green-brindled Crescent	12	1305	2020	CAT1, S7	-
<i>Atethmia centrargo</i>	Centre-barred Sallow	9	1305	2020	CAT1, S7	-
<i>Ennomos erosaria</i>	September Thorn	9	1305	2017	CAT1, S7	-
<i>Ennomos fuscantaria</i>	Dusky Thorn	29	1305	2020	CAT1, S7	-
<i>Euxoa nigricans</i>	Garden Dart	1	1305	2020	CAT1, S7	-
<i>Hemistola chrysoprasaria</i>	Small Emerald	14	1305	2020	CAT1, S7	-
<i>Hepialus humuli</i>	Ghost Moth	13	1305	2015	CAT1, S7	-
<i>Watsonalla binaria</i>	Oak Hook-tip	24	1305	2014	CAT1, S7	-
<i>Ennomos quercinaria</i>	August Thorn	8	1305	2016	CAT1, S7, LI(BIS)	-
<i>Rheumaptera undulata</i>	Scallop Shell	8	1305	2014	CAT3, LI(BIS)	-
<i>Vespertilio</i>	Vespertilio Bat species	1	1338	2022	CAT1, EPS, WCA5	unidentified dead bat and droppings in loft
<i>Pyrochroa coccinea</i>	Black-headed Cardinal Beetle	1	1359	2021	CAT2, RDB2 (UK) - NB	-
<i>Emberiza citrinella</i>	Yellowhammer	5	1374	2016	CAT1, S7, Bern, WBR(RSP B), UKBR(RSPB), WS_P, WS_C	-
<i>Fulica atra</i>	Coot	19	1374	2020	CAT2, BDir21,	-

					WBAm(R SPB)	
<i>Alisma lanceolatum</i>	Narrow-leaved Water-plantain	1	1374	1985	CAT3, LI(SEWB ReC)	-
<i>Bryonia dioica</i>	White Bryony	2	1374	2013	CAT3, LI(SEWB ReC), WS C	-
<i>Ballota nigra</i>	Black Horehound	2	1374	2013	CAT3, LI(SEWB ReC), WS C	-
<i>Veronica agrestis</i>	Green Field-speedwell	2	1374	2013	CAT3, LI(SEWB ReC), WS C	-
<i>Regulus ignicapilla</i>	Firecrest	1	1401	2006	CAT1, WCA1.1, Bern, WBAm(R SPB), LI(VC43), WS C	-
<i>Rhinolophus ferrumequinum</i>	Greater Horseshoe Bat	2	1404	2021	CAT1, EPS, HDir, WCA5, AnII, S7, Bern, RDB2 (UK), WS P	field records
<i>Ophrys apifera</i>	Bee Orchid	2	1413	2020	CAT3, CITES, LI(SEWB ReC), WS C	-
<i>Circus aeruginosus</i>	Marsh Harrier	1	1425	2010	CAT1, BDir1, WCA1.1, CITES, WBAm(R SPB), UKBR(RS PB), UKBAm(RSPB), WS P	-
<i>Centaurea cyanus</i>	Cornflower	2	1447	2012	CAT1, S7, RDB1 (Wales) - CR	-
<i>Glebionis segetum</i>	Corn Marigold	2	1447	2012	CAT2, RDB1 (UK) - VU, LI(SEWB ReC)	-
<i>Polydrusus formosus</i>	Polydrusus formosus	1	1447	2012	CAT2, RDB2 (UK) - NA	-

<i>Bufo bufo</i>	Common Toad	2	1466	2013	CAT1, WCA5, S7, Bern, WS C	-
<i>Apamea remissa</i>	Dusky Brocade	3	1473	2013	CAT1, S7	-
<i>Arctia caja</i>	Garden Tiger	2	1473	2013	CAT1, S7	-
<i>Ceramica pisi</i>	Broom Moth	2	1473	2014	CAT1, S7	-
<i>Chiasmia clathrata</i>	Latticed Heath	25	1473	2015	CAT1, S7	-
<i>Cirrhia icteritia</i>	Sallow	21	1473	2013	CAT1, S7	-
<i>Litologia literosa</i>	Rosy Minor	10	1473	2013	CAT1, S7	-
<i>Tholera cespitis</i>	Hedge Rustic	2	1473	2013	CAT1, S7	-
<i>Xanthorhoe ferrugata</i>	Dark-barred Twin-spot Carpet	12	1473	2013	CAT1, S7	-
<i>Melanthia procellata</i>	Pretty Chalk Carpet	16	1473	2013	CAT1, S7, LI(BIS)	-
<i>Coenonympha pamphilus</i>	Small Heath	10	1518	2020	CAT1, S7, RDB1 (UK) - NT, WS C	-
<i>Erynnis tages</i>	Dingy Skipper	5	1518	2019	CAT1, S7, RDB1 (UK) - VU, LI(SEWB ReC), WS C	-
<i>Calopteryx splendens</i>	Banded Demoiselle	2	1625	2019	CAT3, LI(BIS), LI(SEWB ReC), WS C	-
<i>Cordulegaster boltonii</i>	Golden-ringed Dragonfly	4	1625	2023	CAT3, LI(BIS), LI(SEWB ReC), WS C	-
<i>Plasteurhynchium striatulum</i>	Lesser Striated Feather-moss	1	1625	2007	CAT3, RDB1 (Wales) - LC, LI(BIS), LI(VC35), LI(VC35, LR), LI(WWBI C)	-
<i>Numenius phaeopus</i>	Whimbrel	2	1635	2020	CAT1, BDir22, WCA1.1, WBA m(R SPB), UKBR(RS PB)	-

<i>Anas crecca</i>	Teal	3	1635	2020	CAT2, BDir21, CITES, WBA m(R SPB), UKBA m(RSPB), WS_C	-
<i>Aythya fuligula</i>	Tufted Duck	6	1635	2023	CAT2, BDir21, WBA m(R SPB)	-
<i>Hippophae rhamnoides</i>	Sea-buckthorn	1	1635	2017	CAT2, RDB2 (UK) - S, INNS	-
<i>Dactylorhiza praetermissa</i>	Southern Marsh-orchid	1	1635	2017	CAT3	-
<i>Branta leucopsis</i>	Barnacle Goose	1	1635	2020	CAT3, BDir1, WCA9, Bern, UKBA m(RSPB), INNS	-
<i>Argynnis paphia</i>	Silver-washed Fritillary	1	1635	2004	CAT3, LBAP (NEW), LI(SEWB ReC), WS_C	-
<i>Iris foetidissima</i>	Stinking Iris	3	1635	2019	CAT3, LI(SEWB ReC), LI(VC51, LS), WS_C	-
<i>Lathyrus nissolia</i>	Grass Vetchling	1	1635	2017	CAT3, LI(SEWB ReC), WS_C	-
<i>Tetrix subulata</i>	Slender Ground-hopper	1	1641	2004	CAT3, LI(SEWB ReC), WS_C	-
<i>Potamogeton berchtoldii</i>	Small Pondweed	2	1648	1981	CAT3, LI(SEWB ReC)	-
<i>Lemna trisulca</i>	Ivy-leaved Duckweed	1	1648	1981	CAT3, LI(SEWB ReC), WS_C	-
<i>Sparganium emersum</i>	Unbranched Bur-reed	2	1648	1981	CAT3, LI(SEWB ReC), WS_C	-
<i>Spirodela polyrhiza</i>	Greater Duckweed	1	1648	1981	CAT3, LI(SEWB ReC), WS_C	-
<i>Zannichellia palustris</i>	Horned Pondweed	1	1648	1981	CAT3, LI(SEWB ReC),WS_ C	-

<i>Prionus coriarius</i>	Tanner Beetle	1	1673	2020	CAT2, RDB2 (UK) - NA	-
<i>Tinodes rostocki</i>	Tinodes rostocki	1	1702	1965	CAT2, RDB2 (UK) - N	-
<i>Caprimulgus europaeus</i>	Nightjar	1	1724	2020	CAT1, BDir1, S7, Bern, WBA m(R SPB), UKBA m(RSPB), WS_P	-
<i>Orchis mascula</i>	Early-purple Orchid	1	1762	2022	CAT3	-
<i>Salmo trutta</i>	Brown/Sea Trout	1	1769	2001	CAT1, S7, LI(BIS), WS_P	-
<i>Callitriche platycarpa</i>	Various-leaved Water-starwort	1	1781	2014	CAT3, LI(SEWB ReC), WS_C	-
<i>Carex strigosa</i>	Thin-spiked Wood-sedge	2	1781	2019	CAT3, LI(SEWB ReC), WS_C	-
<i>Myosoton aquaticum</i>	Water Chickweed	1	1781	2014	CAT3, LI(SEWB ReC), WS_C	-
<i>Mustela erminea</i>	Stoat	1	1782	2000	CAT1, NRW, Bern, LBAP (NEW)	-
<i>Falco tinnunculus</i>	Kestrel	1	1782	2000	CAT1, S7, Bern, CITES, WBR(RSP B), UKBA m(RSPB), WS_C	-
<i>Vipera berus</i>	Adder	1	1782	2000	CAT1, WCA5, S7, Bern, WS_P	-
<i>Schoenoplectus triqueter</i>	Triangular Club-rush	1	1782	2000	CAT1, WCA8, RDB1 (UK) - CR, RDB2 (UK) - R	-
<i>Atropa belladonna</i>	Deadly Nightshade	1	1782	2000	CAT2, RDB1 (Wales) - EN	-
<i>Potentilla tabernaemontani</i>	Spring Cinquefoil	1	1782	2000	CAT2, RDB2 (UK) - S, LI(SEWB ReC)	-

<i>Athene noctua</i>	Little Owl	1	1782	2000	CAT3, Bern, CITES	-
<i>Dryopteris aemula</i>	Hay-scented Buckler-fern	1	1782	2000	CAT3, LI(SEWB ReC),	-
<i>Libellula quadrimaculata</i>	Four-spotted Chaser	1	1835	2023	CAT3, LI(BIS)	-
<i>Numenius arquata</i>	Curlew	1	1851	2018	CAT1, BDir22, S7, WBR(RSP B), UKBR(RS PB), WS_C	-
<i>Galium parisiense</i>	Wall Bedstraw	1	1851	2019	CAT2, RDB1 (UK) - VU, RDB2 (UK) - S	-
<i>Echium vulgare</i>	Viper's-bugloss	1	1851	2020	CAT3, LI(SEWB ReC), WS_C	-
<i>Aporophyla lutulenta</i>	Deep-brown Dart	1	1854	2012	CAT1, S7	-
<i>Eugnorisma glareosa</i>	Autumnal Rustic	1	1854	2012	CAT1, S7	-
<i>Orthosia gracilis</i>	Powdered Quaker	2	1854	2007	CAT1, S7	-
<i>Perizoma albulata</i>	Grass Rivulet	2	1854	2012	CAT1, S7	-
<i>Erythromma najas</i>	Red-eyed Damselfly	4	1900	2023	CAT3, LI(BIS), LI(SEWB ReC), WS_P	-
<i>Heterocladium flaccidum</i>	Heterocladium flaccidum	2	1910	2002	CAT3, RDB1 (Wales) - LC	-
<i>Dicranum tauricum</i>	Fragile Fork-moss	2	1910	2002	CAT3, RDB1 (Wales) - LC, LI(VC35, LS)	-
<i>Anthus trivialis</i>	Tree Pipit	1	1912	2020	CAT1, S7, Bern, WBAm(RSPB), UKBR(RS PB), WS_C	-
<i>Plagiothecium denticulatum</i> var. <i>denticulatum</i>	Swamp Silk-moss	2	1913	2006	CAT3, RDB1 (Wales) - LC, LI(BIS),	-

					LI(WWBI C)	
<i>Bromopsis erecta</i>	Upright Brome	1	1940	1988	CAT3, LI(SEWB ReC), WS C	-
<i>Trichocolea tomentella</i>	Handsome Woollywort	2	1943	2006	CAT3, RDB1 (Wales) - LC, LI(VC35, LS)	-
<i>Orthetrum cancellatum</i>	Black-tailed Skimmer	3	1952	2023	CAT3, LI(BIS), LI(SEWB ReC), WS C	-
<i>Aythya ferina</i>	Pochard	3	1958	2023	CAT2, BDir21, WBR(RSPB), UKBR(RSPB), WS C	-
<i>Sinapis arvensis</i>	Charlock	1	1980	2018	CAT2, RDB1 (Wales) - VU	-
<i>Tringa erythropus</i>	Spotted Redshank	1	1996	2022	CAT2, BDir22, WBAm(RSPB), UKBAm(RSPB)	-
<i>Oenanthe oenanthe</i>	Wheatear	1	1996	2015	CAT2, Bern, WBAm(RSPB)	-
<i>Primula veris</i>	Cowslip	1	1996	2019	CAT3	-

Status Abbreviations BA = Protection of Badgers Act; BDir1 = EC Birds Directive Annex 1 Species; BDir21 = EC Birds Directive Annex 2.1 Species; BDir22 = EC Birds Directive Annex 2.2 Species; Bern = The Bern Convention on the Conservation of European Wildlife and Natural Habitats; CAT1: Protected and Priority Species = Species with European and UK Legal Protection, and Environment Act (Wales) Section 7 Priority Species; CAT 2: Species of Conservation Concern = Global Red List, British Red Data Book, Nationally Rare & Scarce, Welsh Red and Amber Birds & Welsh Vascular Plant Red Data List where these are not identified in Priority category; CAT 3: Locally Important Species = LBAP Species not identified as Priority or SOCC. Locally Important species as specified by local experts. CITES = Convention on International Trade in Endangered Species; EPS = European Protected Species; HDir = EU Habitats Directive Species; RD1 (Wales) = Welsh Red Data Book listing based on IUCN guidelines; RD1 (UK) = UK Red Data Book listing based on IUCN guidelines; RD2 (UK) = UK Red Data Book listing not based on IUCN guidelines (Nationally Rare and Scarce); SINC: Site of Importance for Nature Conservation (locally identified); WBR (RSPB) = RSPB Welsh Red listed birds (not based on IUCN criteria); WBAm (RSPB) = RSPB Welsh Amber listed birds (not based on IUCN criteria); UKBR (RSPB) = RSPB UK Red listed birds (not based on IUCN criteria); UKBAm (RSPB) = RSPB UK Amber listed birds (not based on IUCN criteria); S7 = Environment Act (Wales) Section 7 Species; WCA5 = Wildlife and Countryside Act Schedule 5 Species; LBAP (MON) = Local Biodiversity Action Plan Species (Monmouthshire); LI (SEWBReC) = Locally Important Species (as identified by local specialists) in SEWBReC area; LI (BIS) = Locally Important Species (as identified by local specialists) in BIS area; LI (VC35) = Locally Important Species (as identified by local specialists) in Vice County 35 (Monmouthshire)

Table 2: Invasive/Introduced Non-native Species within 2km of the site at Rogerstone (Source:SEWBRcC)

Scientific Name	Common Name	No. of records	Distance (m)	Year	Status	Notes
<i>Fallopia japonica</i>	Japanese Knotweed	438	4	2021	CAT4, WCA9, INNS	-
<i>Sciurus carolinensis</i>	Eastern Grey Squirrel	20	371	2024	CAT4, WCA9, INNS	-
<i>Impatiens glandulifera</i>	Himalayan Balsam	6	389	2018	CAT4, WCA9, INNS	-
<i>Buddleja davidii</i>	Butterfly-bush	9	466	2024	CAT4, INNS	-
<i>Heracleum mantegazzianum</i>	Giant Hogweed	1	466	2001	CAT4, WCA9, INNS	-
<i>Leycesteria formosa</i>	Himalayan Honeysuckle	3	579	2017	CAT4, INNS	-
<i>Lonicera nitida</i>	Wilson's Honeysuckle	2	579	2017	CAT4, INNS	-
<i>Prunus laurocerasus</i>	Cherry Laurel	10	579	2019	CAT4, INNS	-
<i>Cotoneaster horizontalis</i>	Wall Cotoneaster	4	579	2019	CAT4, WCA9, INNS	-
<i>Crocsmia pottsii x aurea</i> = <i>C. x crocosmiiflora</i>	Montbretia	3	579	2019	CAT4, WCA9, INNS	-
<i>Parthenocissus quinquefolia</i>	Virginia-creeper	2	579	2017	CAT4, WCA9, INNS	-
<i>Branta canadensis</i>	Canada Goose	34	642	2023	CAT4, BDir21, WCA9, INNS	-
<i>Harmonia axyridis</i>	Harlequin Ladybird	21	770	2021	CAT4, INNS	-
<i>Crangonyx pseudogracilis/floridanus</i>	Crangonyx pseudogracilis/floridanus	2	882	2018	CAT4, INNS	-
<i>Neovison vison</i>	American Mink	1	910	2013	CAT4, WCA9, INNS	live sighting
<i>Symphoricarpos albus</i>	Snowberry	1	951	2019	CAT4, INNS	-
<i>Myriophyllum aquaticum</i>	Parrot's-feather	1	1152	2001	CAT4, WCA9, INNS	-
<i>Elodea canadensis</i>	Canadian Waterweed	2	1182	1983	CAT4, INNS	-

<i>Chrysolophus pictus</i>	Golden Pheasant	1	1182	2016	CAT4, WCA9, CITES, INNS	-
<i>Aix galericulata</i>	Mandarin Duck	2	1182	2018	CAT4, WCA9, INNS	-
<i>Leptoglossus occidentalis</i>	Western Conifer Seed Bug	1	1595	2012	CAT4, INNS	-
<i>Allium triquetrum</i>	Three-cornered Garlic	1	1633	2024	CAT4, WCA9, INNS	-
<i>Mimulus guttatus</i>	Monkeyflower	1	1635	2017	CAT4, INNS	-
<i>Cotoneaster simonsii</i>	Himalayan Cotoneaster	1	1635	2017	CAT4, WCA9, INNS	-
<i>Lagarosiphon major</i>	Curly Waterweed	1	1635	2017	CAT4, WCA9, INNS	-
<i>Lamiastrum galeobdolon subsp. argentatum</i>	Lamiastrum galeobdolon subsp. argentatum	3	1635	2019	CAT4, WCA9, INNS	-
<i>Potamopyrgus antipodarum</i>	Jenkins' Spire Snail	1	1648	1981	CAT4, INNS	-
<i>Lemna minuta</i>	Least Duckweed	1	1656	2022	CAT4, INNS	-
<i>Hyacinthoides non-scripta x hispanica</i> = <i>H. x massartiana</i>	Bluebell	1	1762	2022	CAT4, INNS	-
<i>Australoplane sanguinea</i>	Australoplane sanguinea	1	1770	2020	CAT4, INNS	-
<i>Rhododendron ponticum</i>	Rhododendron ponticum	3	1781	2019	CAT4, WCA9, INNS	-
<i>Elodea</i>	Waterweed	1	1820	1971	CAT4, WCA9, INNS	-
<i>Sedum album</i>	White Stonecrop	1	1851	2019	CAT4, INNS	-
<i>Vinca major</i>	Greater Periwinkle	1	1851	2019	CAT4, INNS	-

Status Abbreviations: INNS=Invasive/Introduced non-native species, WCA9= Wildlife and Countryside Act 1981 Schedule 9 species (non-native animals which are established in the wild which may not be released or allowed to escape into the wild unless authorised by a licence)

Designated Sites

The SEWBReC data search included details of locally important wildlife sites within 500m of the site. Defra's Magic website was checked for details of nationally important wildlife sites within 2km, and sites designated specifically for bats within 10km.

Locally important wildlife sites (SINCs) within 500m

River Ebbw SINC – The SINC designation covers the river and its associated habitats of semi-improved neutral grassland and marshy grassland, swamp, scrub and semi-natural woodland. Reasons for designation include the presence of bulbous foxtail *Alopecurus bulbosus*, kingfisher, sand martin and grass snake.

Nationally important wildlife sites within 2km

No SSSI or SACs were identified within 2km of the site.

Bat sites within 10km

No sites designated specifically for bats were identified within 10km of the site.

Habitats at and around the site

The SEWBReC data search identified patches of linear ancient woodland along the riverbank which is lined with trees on both sides. To the north and east of the site, the site is closely bordered by a recent housing development with the city of Newport beyond. West of the site, the landscape is rural with pasture bordered by hedgerows and tree lines and larger woodland patches. The river itself provides a linear habitat connection through the wider landscape.

4.2 Survey results

The site of the proposed works comprises of the remains of the bank top path, part of this and the remaining bank having collapsed into the river. To the immediate south of the site, there is a footbridge across the river so this area is reduced in vegetation

compared to the wider area south and north of the site, which is lined by mature trees. It is likely that some mature trees were present at the site before the bank collapsed. Mature trees bordering the river are dominated by Sycamore *Acer pseudoplatanus* and Alder *Alnus glutinosa* with Ash *Fraxinus excelsior*, Pedunculate Oak *Quercus robur*, Goat Willow *Salix caprea*, Hawthorn *Crataegus monogyna*, occasional Bramble *Rubus fruticosus* agg., Laurel species, and tall herbs including Greater Willowherb *Epilobium hirsutum* and Stinging Nettle *Urtica dioica*. A small Sycamore remained at the edge of the collapsed bank and a small Alder at the back of the footpath in the area of required repair works.

The bank in the wider area north and south of the site is relatively steep sloping to the fast flowing water with the opposite bank having a large pebble beach area.

Large stands of **Japanese Knotweed** are present on both banks and either side of the site, so are likely to have been present in the site in the past. Rhizomes of this species may remain in the ground in the area of works. Some **Himalayan Balsam** is also present in the wider area.

No confirmed signs of **Otter** were observed during the survey although a faint footprint likely of a small mustelid (possibly small Otter, with non native American Mink *Neovison vison* or native Polecat *Mustela putorius* being most likely) recorded on the bank opposite the site, south of the footbridge. The general area around the site and particularly opposite the site provides a foraging and commuting corridor that is highly likely to be used by Otter and with some areas of cover suitable for lying up sites or holts, although the frequent use of the area by pedestrians is likely to reduce the potential for this.

Birds A Robin *Erithacus rubecula* was observed in the overhanging area of collapsed bank within tree roots and may have been nesting here. Grey Wagtail *Motacilla cinerea* and Pied Wagtail *Motacilla alba* were observed foraging within the watercourse close to the site.

To the immediate east of the site is a **flood protection wall** with the recent housing development beyond. Immediately behind the wall are informal landscaping and amenity areas including fenced areas of immature **scrub and rough grassland**, these are likely to support protected species including nesting birds and reptiles in particular.



Site of river bank collapse looking south towards footbridge and illustrating pebble beach opposite



Site of river bank collapse looking north and illustrating pebble beach opposite



North end of area of collapse illustrating Japanese Knotweed and adjacent bankside trees



Path south of site illustrating likely vegetation structure that would have been present at the site before the collapse



View from river edge north of the site looking back to site, illustrating well connected woody banks and dense Knotweed stands



Knotweed at the path edge further north between the site and recreation grounds



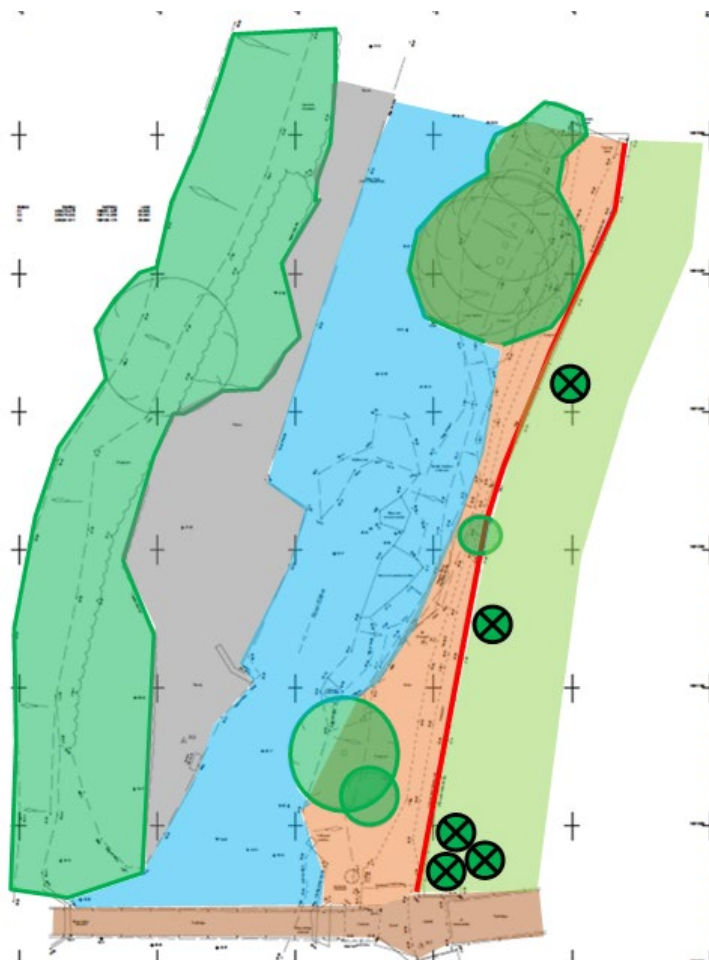
Scrub and rough grassland habitat behind flood defence wall adjacent to site



Small mustelid footprint on opposite side of river bank from site

Survey Results Plan:

See numbered habitat descriptions above.



KEY

-  Open water
-  Bank top, footpath and collapsed bank
-  Broadleaved woodland and trees with stands of Japanese Knotweed
-  Pebble beach
-  Bridge and access
-  Amenity grassland
-  Scrub and rough grassland
-  Flood protection wall

5.0 ASSESSMENT, CONCLUSIONS & RECOMMENDATIONS

The proposals are to repair the collapsed section of bank of the River Ebbw as described in the engineering Feasibility Report;

‘Extensive riverbank erosion on the River Ebbw has taken place along a 25-metre section of the footpath, immediately downstream of Rogerstone Welfare Ground... This has resulted in complete failure of the existing riverbank, sections of which now lie in the river channel and only approximately a 1 metre width of footpath remains’....’ Consequently, and due to erosion since the 2014 survey a 3.5m-4m width of progressive loss over a 25-metre length of the footpath has occurred, which could well continue depending on the frequency and severity of the storm/river flood events’...’ Since the collapse unrecovered sections of the embankment lie within the river channel. A site survey was carried out by Vale Consultancy in July 2023 to review the extent of the damage and assess the feasibility and potential of an appropriate technique for the remedial works to the collapsed section of embankment...’

‘..The visual inspection carried out by Vale Consultancy determined that the probable cause of the embankment collapse was due to the hydraulic action against that section of riverbank and the resultant fluvial erosion, which undermined the bottom of the bank and created a steeper angle and bank overhang, resulting in a localised collapse or a further possibility is that the trench excavation and backfill in the footpath for the HV electrical cables may have caused an instability of the riverbank by the vertical cut along the footpath.

At the location of the riverbank collapse the public footpath has been compromised and narrowed to approximate 600mm in the width making it unsafe for public use and Newport CC has closed off this section of the footpath, however, at the time of the inspection the public were still using the footpath, and underground electricity cables were exposed’.

Various hard and soft landscaping options have been considered and evaluated. It is understood that ‘aqua rock’ bags are the preferred solution, to allow for a more natural bank shape and soft surface covered over with sheer stress turf and this then seeded.

Works will therefore involve;

River Ebbw Bank Repair, Rogerstone, Newport
Preliminary Ecological Appraisal 2024

- Access of vehicles, machinery, equipment and materials via either the footpath from the recreation grounds to the north or via the housing estate to the east.
- Preparation of the area and immediate surroundings for the works.
- Bringing in and laying of 'aqua rock' bags.
- Covering 'aqua rock' with turf.
- Making good of site and works area.

The 'Step-wise' approach would require avoidance of ecological impacts where possible, then on a sliding scale where this is not possible, minimised, or mitigated / restored, or compensated on site, or offsite. However, in this case, the 'development' proposed is limited to engineering works to restore the damaged river bank and protect it from further future erosion. and the application seeks to restore damage resulting from a natural event. It can therefore be considered that the existing situation is the baseline and that the application seeks to enhance and restore the site.

The identified potential ecological impacts of the proposed works, in the absence of mitigation, are as follows;

- Impacts of construction works leading to potential siltation, debris entry, in channel blockages affecting the flow of the watercourse and movement of species within and along the river.
- Associated impacts to fish movement or long term water quality affecting fish and other species in the watercourse
- Damage to the features and the designated site status of the River Ebbw Site of Importance to Nature Conservation that may also affect downstream watercourses and their designated status.
- Potential disturbance during works to Otters using the watercourse to forage and commute and potentially to any use by Otters of nearby resting or breeding places.
- Damage, destruction or disturbance impacts to nesting birds during the nesting season and loss of nest sites in the longer term.
- Cause of spreading of non-native invasive plant species during works

- Risk of damage to surrounding vegetation during works or in the longer term due to movement of vehicles and equipment that may directly affect trees and plants or the root protection areas (RPAs) of trees
- Risk of direct harm and habitat loss to reptiles that may be present in the area of works and surrounding environment.
- Potential harm to individual wild animals through stored materials or equipment which is subsequently moved or through open trenches overnight.

As a positive impact, the aqua rock bags will provide micro habitats for aquatic plants and invertebrates below and above the water and sediment trapping will have a localised water quality benefit.

Ecological mitigation and biodiversity enhancement measures to meet best practice and planning authority requirements, are to be implemented as follows (or suitable alternative as approved by an ecologist);

- **Works shall be timed to best meet the required legislation protecting migratory fish as well as nesting birds and other breeding species of wildlife.** Therefore autumn and early spring are likely to offer the best window of works, in September to early October or April to May.
- Works shall proceed in accordance with current best practice Natural Resources Wales for the control of non-native invasive plants. **No potentially invasive non-native plant species cleared will be disposed of on site or allowed to grow in the wild.**
- An **update walkover survey** will be carried out to assess potential presence of and impacts to protected species including otters, nesting birds or reptiles, within 4 weeks of works commencing and any specific measures identified at this stage will be put in place before and / or during works as necessary.
- A **suitably qualified ecologist** will be appointed for the duration of works and will visit site at the start of works to provide a **toolbox talk** to

construction workers to inform them of environmental features and constraints at the site, including the presence of the SINC site, the potential for protected species to be present and the mitigation and protection measures to be put in place.

- At the outset of works the **boundary of the working area and all areas of vegetation to be removed or pruned** will be agreed on site with construction workers and marked out to prevent any entry of machinery, equipment or runoff into environmentally sensitive areas. This will include areas of watercourse and banks within which relevant works can take place and those to be avoided.
- The **ecologist shall oversee works** to more sensitive areas where required, such as any protected species issues identified close to the area of works in update surveys.
- **Within 48 hours of designated site clearance**, the ecologist shall inspect the site for wildlife including nesting birds and reptiles and hedgehogs, unless works are carried out between November to February and the ecologist has confirmed in advance that the areas are not likely to support hibernating animals.. Where necessary the ecologist shall remove any of these animals present (where permitted according to licencing and legal protection) to a **suitable retained habitat area, well away from the area of works. This area shall be identified in advance of works. It has been agreed that this can be within Rogerstone Recreational Grounds close to the north of the site.**
- Should any **nesting birds** be found during works, works to the relevant area will need to be delayed until the young birds have left the nest, as nesting birds are protected under the Wildlife and Countryside Act, 1981 (as amended).
- **During works and in the long term, any external lighting** if required must be is designed to have a minimal spill that might affect wildlife including foraging or commuting bats. Suitable lighting considerations

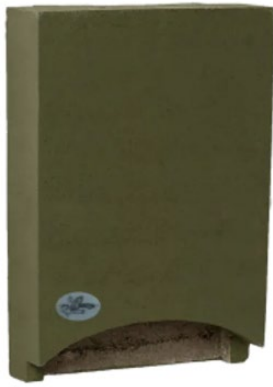
include downward pointing shielded lamps below eaves level and lighting operated on a timed PIR system – refer to ILP / BCT Guidance Note 8 Bats and Artificial Lighting at Night 2023. No additional external lighting is currently expected.

- Any **excavations** left open over night will require a ramp laid at a 45° angle to allow any animals which have entered by mistake the chance to escape. These areas will also need to be checked visually before works start for the presence of any animals.
- Any **materials** must be kept stored off the ground in suitable bags or on pallets etc. to avoid attracting sheltering animals. No spill of materials will be allowed into the watercourse.
- **Machinery** and stored materials should be checked in the morning before work begins for any trapped or resting animals.
- **Habitat replacement** –the turf to be installed over the new bank infrastructure will be seeded with an appropriate wildflower mix - Emorsgate Seeds Mix EM8 Meadow Mixture for Wetlands - or suitable alternative as approved by an ecologist.
- **Biodiversity net benefit / enhancements**

As agreed with the Community Council.

As many as possible of the following to be accommodated within the south west corner of Rogerstone Recreation Grounds close to the north of the site;

- One each of bird and bat boxes (constructed of long-term durable materials) on the south-east elevation mature trees on the woodland edge.



Elisa Wood Concrete Bat Box

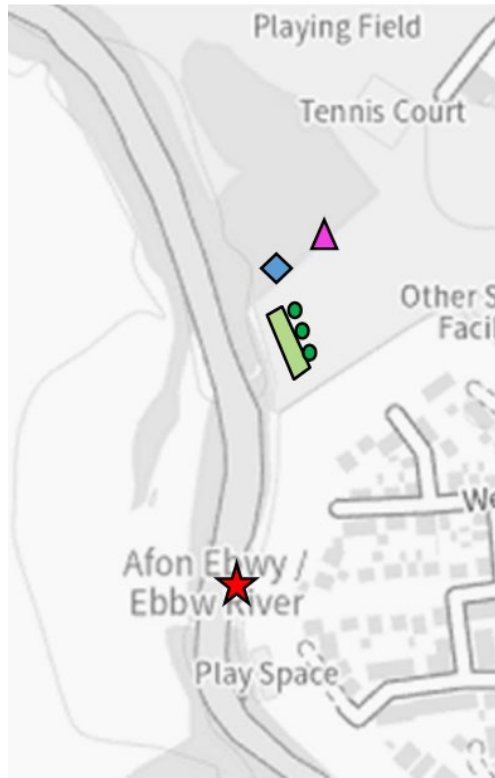


Vivaro Pro 32mm Woodstone Bird Box

- Additional planting / seeding of locally typical, native species of grassland (5m x 5m area of Emorsgate Seed Mixture EM2 Standard General Purpose Meadow Mix.).
- Additional planting of 3 x crab apple trees 12-14cm girth standards, with double stake and adjustable tie and wire mesh guard, and a ring of bark mulch and a protective strimmer guard surrounding each tree.
- Removal and treatment plan for non-native invasive plant species to be extended to surrounding areas along the river bank -this has already taken place with treatment along the riverbank adjacent to the Recreation Ground.

Or suitable alternatives as approved by an ecologist.

Location of proposed additional enhancement measures to secure **net biodiversity benefit**;



KEY

-  Location of works site (approx.).
-  Grassland planting
-  Tree
-  Bat box
-  Bird box

Base plan from Newport City Council planning portal map

Lifetime of the ecology survey and report: It should be noted that, whilst it is understood that the planning application and proposed works are due to take place in the near future, ecology surveys are generally considered up to date for a maximum of 2 years, so if there is any significant delay it is recommended that update advice is sought from an ecologist before commencing.

6.0 REFERENCES

CIEEM ‘Guidelines for Ecological Impact Assessment in the UK and Ireland, Terrestrial, Freshwater, Coastal and Marine’ Version 1.2 Updated April 2022

CIEEM ‘Guidelines for Preliminary Ecological Appraisal’ 2nd Edition, December 2017

Gent, T., Gibosn, S; **‘Herpetofauna Workers’ Manual’** 2003, JNCC (Joint Nature Conservation Committee).

JNCC (Joint Nature Conservation Committee) **‘Handbook for Phase 1 Habitat Survey – A technique for environmental audit’** 1990, 2003 (rev).

Newton, J., Thackray, C. and Nicholson, B. **‘Working With Wildlife Site Guide’** CIRIA 2005

Spon (E) & Spon (F N) **‘Guidelines for Baseline Ecological Assessment’** Institute of Environmental Assessment, 1995.

Abbey Sanders Ecology

Chepstow
T: 07962 172453
E: asecology@hotmail.com

Abbey Sanders Chartered Ecologist BSc. MSc. CEcol CEnv MCIEEM