



Sirius Planning

Land off Goat Mill Road, Merthyr Tydfil

Ecological Addendum

March 2022

FPCR Environment and Design Ltd

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1.0 INTRODUCTION

- 1.1 Since 2019 FPCR have been conducting ongoing ecological works on behalf of Sirius Planning at Land off Goat Mill Road, Merthyr Tydfil. The works have been completed to accompany a planning application for a proposed plastic recycling and processing facility with associated office accommodation, external storage area, vehicular parking and weighbridge, surface water lagoon.
- 1.2 To date FPCR have provided an Ecological Appraisal (Eco App) – dated September 2021. The Eco App details the results of all ecological survey work conducted by the time of the pre-application consultation and second pre-application request submission to Merthyr Tydfil CBC. The Eco App discusses the expected ecological impact of the proposed development and, where necessary provides recommendations to avoid, mitigate and compensate for any such impacts.
- 1.3 Following submission of the second pre-application request to Merthyr Tydfil CBC comments from the LPA Ecologist were received, dated 3rd November 2021.
- 1.4 FPCR have produced three further documents to address the comments provided by the LPA ecologist, these are as follows:
 - a) Ecology Response
 - b) Ecological Addendum
 - c) Construction and Landscape Ecological Management Plan (CLEMP)
- 1.5 The present report forms Item b. It is intended as an addendum to the Eco App and therefore does not supersede this existing report. The present Addendum should therefore be read in conjunction.
- 1.6 The various responses provided by the LPA Ecologist were divided into subsections by sub-headers. Consequently, for ease of reading, this Addendum has been sub-divided into subsections with the same titles as the LPA comments – the objective of each subsection being to provide additional information requested by the LPA Ecologist.
- 1.7 Where subheadings have not been covered within the present Addendum, these have been discussed within the Ecology Response.

2.0 ECOLOGICAL SURVEY WORK

Badgers

- 2.1 As discussed in the Ecology Response (Item a) a walkover of the site was conducted on 14th January 2022. During this walkover an opportunity was taken to update the assessment of badger use on site.
- 2.2 For methods see description detailed within the Eco App.
- 2.3 The 2022 identified no signs of badgers utilising the site. The recommendations relating to badgers as detailed within the Eco App are therefore appropriate. Measures to prevent harm to badgers (and other animals) during construction have been detailed within the CLEMP (Item c).

Scoping Wintering Bird Survey

- 2.4 During the walkover of the site (described above) on 14th January 2022 an experienced ornithologist conducted a second Scoping Wintering Bird Survey (WBS).

- 2.5 For methods see description detailed within the Eco App.
- 2.6 Table 1 provides details of weather conditions noted during the WBS.

Table 1: Scoping WBS survey date and weather conditions – January 2022

Date	Rain	Wind	Visibility
14 th January 2022	0	3	Very good

WBS Results

- 2.7 A total of 20 bird species were recorded during the WBS, with a total of four being recorded as notable species in accordance with current bird reports¹. Notable species are listed in Table 2 below. The locations and conservation status for each one is presented in the WBS plan (Figure 1). A full list of species recorded during the survey is presented within Appendix A.

Table 2: WCA Schedule 1, NERC S41, and BoCC red and amber listed bird species recorded in the 2022 wintering season.

Species	Scientific Name	Survey	Conservation Status	County Status according to the Glamorgan Bird Report 2018
Wood Pigeon	<i>Columba palumbus</i>	4	Amber List	Common resident breeder.
Lesser Black Backed Gull	<i>Larus fuscus</i>	1	Amber list	Common resident breeder, passage migrant and winter visitor, breeder on flat holm and on rooftops mainly in Cardiff city centre, but occasionally inland.
Rook	<i>Corvus Frugilegus</i>	2	Amber List	Common resident breeder, large flocks frequently noted on passage at coastal sites in late autumn.
Dunnock	<i>Prunella modularis</i>	1	Amber List NERC	Common resident breeder.

WBS Discussion

- 2.1 The results of this second scoping winter bird survey further confirm the assessment made in the Eco App, Paragraph 7.40: “*No suitable habitat with the potential to support significant populations of overwintering waterfowl nor large flocks of farmland birds was present within the Application Site.*”
- 2.2 A discussion in relation to bird survey results as a whole, combined with recent data obtained from the BTO has been made within the Ecology Response (Item a). To summarise, owing to a number of factors – primarily lack of suitable habitat and high levels of disturbance – the site provides a limited resource to birds, both as overwintering habitat and as a breeding site.

¹ Stanbury, A.J., Eaton, M.A., Aebischer, N.J., Balmer, D., Brown, A.F., Douse, A., Lindley, P., McCulloch, N., Noble, D.G. & Win, I. (2021). The fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. British Birds. Volume 114.

- 2.3 Recommendations within the Eco App detail how impacts upon birds can be mitigated during construction. These have been detailed further within the CLEMP (Item c).
- 2.4 Further, compensation for the loss of trees and scrub in the form of nest boxes, to be installed within retained vegetation, has been recommended within the Eco App. Again, this is further detailed within the CLEMP (Item c).
- 2.5 The scheme offers the chance to provide enhancements for birds. The provision of the lagoon in the retained south area of the site will provide a foraging resource and place of shelter for bird species that does not currently exist on site. Additionally, the scrapes, as shown on the Landscape and Ecological Masterplan (Appendix B of present Addendum) will add heterogeneity to the retained south area of the site. These ephemeral features will complement the newly created lagoon. Details of both the lagoon and scrapes have been included within the CLEMP (Item c).

3.0 SINC QUALITY

- 3.1 The Eco App detailed assessments of grassland habitats on site in accordance with National Vegetation Classification (NVC) and Priority Habitat status. To this end five habitat areas (Habitats 1 – 5) were subject to the NVC assessment. Condition assessments to ascertain Priority Habitat status were conducted on three habitat areas (Habitats 2, 4 and 5).
- 3.2 The assessment within the Eco App did not include an assessment against “Criteria for the Selection of Sites of Importance for Nature Conservation in the County Boroughs of Blaenau Gwent, Caerphilly, Merthyr Tydfil and Rhondda Cynon Taff (the ‘Mid-Valleys Area’)² (hereafter referred to as “SINC Criteria”).
- 3.3 This assessment has now been made and the findings are detailed below.

Habitat 1 – Marshy grassland

- 3.4 Habitat 1 has been measured at c.0.5ha.
- 3.5 Table 5 of the SINC Criteria lists Marshy Grassland indicator species. Grassland upon which 12 species or more from Table 5 are recorded is considered species-rich. 15 species included within Table 5 of the SINC Criteria were recorded within Habitat 1.
- 3.6 The SINC Criteria states the following as meeting the criteria for SINC Marshy grassland (H7):
- 3.7 *“All examples of species-rich M23 over 0.2 ha, which include 12 species in Table 5 and all stands of moderately species-rich M23 (8 species from Table 5) over 0.5 ha”.*
- 3.8 As noted in the Eco App, Habitat 1 had no strong affinity to any particular NVC community. The strongest affinity was to MG8b. The fit to MG8b was however “very poor” with a goodness of fit measure of 31. The second strongest affinity was to M23, however again the affinity to this habitat type was “very poor” with a goodness of fit measure of 28.
- 3.9 According to the SINC Criteria Habitat 1 therefore presents as SINC quality marshy grassland (H7) due to the species-richness, however it is noted that it is a poor example of M23 marshy grassland.

Habitats 2 and 5 – calcareous grassland

² Caerphilly County Borough Council, Merthyr Tydfil County Borough Council and Rhondda Cynon Taff County Borough Council (2008). Criteria for the Selection of Sites of Importance for Nature Conservation in the County Boroughs of Blaenau Gwent, Caerphilly, Merthyr Tydfil and Rhondda Cynon Taff (the ‘Mid-Valleys Area’). Available at: <http://www.sewbrec.org.uk/content/attachments/Mid%20Valley%20SINCS%20Introduction%20Section%201.pdf> (Accessed: 09.02.2022).

- 3.10 Habitats 2 and 5 were located within the central plateau of the site and in the south of the site. Collectively they covered an area >0.2ha.
- 3.11 Table 3 of the SINC Criteria lists calcareous grassland indicator species. It states that grassland with eight or more species from Table 3 is considered species-rich. 12 species included within Table 3 of the SINC Criteria were recorded within Habitat 2, whilst 9 species were recorded within Habitat 5.
- 3.12 The SINC Criteria states the following as meeting the criteria for SINC Calcareous Grassland (H5):
- 3.13 *“All examples of species-rich semi-improved or secondary calcareous grassland over 0.2 ha.... Secondary calcareous grassland can also develop away from the main Carboniferous limestone areas on post-industrial land.... grassland that develops on such ‘secondary’ sites is often only poorly described by the National Vegetation Classification (NVC) but may nevertheless be species-rich and of high conservation value.”*
- 3.14 The site has established on former mine spoil as noted within the Eco App. Habitat 2 had a very poor affinity to NVC community CG1f with a goodness of fit match of 47. Habitat 5 had a poor affinity to NVC community CG3c with a goodness of fit measure of 51.
- 3.15 Both habitats 2 and 5 therefore match the descriptions of secondary calcareous grasslands as described in the SINC Criteria and had sufficient numbers of indicator species to be considered species-rich. Habitats 2 and 5 therefore meet the criteria for SINC quality secondary calcareous grassland (H5).

Habitats 3 and 4 – Mesotrophic grassland

- 3.16 Habitats 3 and 4 were located towards the outer edges of the central plateau of the site. They covered an area >0.2ha.
- 3.17 Table 2 of the SINC Criteria lists neutral grassland indicator species. It states that grassland with eight or more species from Table 2 is considered species-rich. 11 species included within Table 2 of the SINC Criteria were recorded within Habitat 3, whilst 9 species were recorded within Habitat 4.
- 3.18 The SINC Criteria states the following for meeting the criteria of SINC Neutral Grassland (H4):
- 3.19 *“All examples of crested dog’s-tail - common knapweed grasslands (MG5) over 0.2 ha.... All stands of species-rich atypical NVC neutral grassland, with at least 8 species from Table 2 over 0.2 ha. In particular important grassland communities, which occur on road verges, or brown field sites, are often not easily referable to NVC community.”*
- 3.20 As noted within the Eco App Habitat 3 had a very poor match to NVC community MG5a with a goodness of fit of 44. Habitat 4 had a good match to the same NVC community, with a goodness of fit match of 71.
- 3.21 Both Habitat 3 and Habitat 4 can be described as species-rich in accordance with the SINC Criteria. Given their species richness and their affinity with NVC community MG5 (albeit very poor affinity for Habitat 3), both Habitats 3 and 4 meet the criteria for SINC quality neutral grassland (H4).

Mineral spoil tips and other post-industrial land

- 3.22 Given the presence of the three SINC habitat types (H4, H5 and H7) on site, and the sites history as a spoil tip, it is also considered to accord with the following description of Mineral spoil tips and other post-industrial land (H18) – as included within the SINC Criteria:
- 3.23 *“All examples of species-rich mineral spoil tips/post-industrial land that have naturally re-vegetated with a diverse range of native and archaeophyte non-woody plant species. The constituent habitats will be assessed against individual habitat criteria as set out in this document or as part of large mosaic SINC.”*

Invertebrates

- 3.24 The author of the invertebrate report was contacted for their view of the site’s quality in relation to SINC Criteria for invertebrates (S6:Invertebrates). The full responses, received via two separate emails, from the author of the invertebrate report, have been provided within Appendix C.
- 3.25 To summarise, the site is thought to qualify as SINC quality due to the presence of the Dingy Skipper – a section 42/ Section 7 of the Environment (Wales) Act, 2016) species.
- 3.26 Technically the site qualifies as a SINC for invertebrates due to a total of 14 species of butterfly being recorded on site. Though as the author of the invertebrate report notes, of these, it is only the Dingy Skipper that could not be considered common and widespread.
- 3.27 Five nationally scarce invertebrates were recorded on site, which again would qualify the site as SINC quality. It was noted by the author of the invertebrate that *Polydrusus formosus* is expanding in it’s range and therefore should not be considered a qualifying feature for the SINC.
- 3.28 Lastly, the presence of a single Keeled Skimmer damselfly could indicate the site qualifies as SINC quality on this basis. However, as noted by the author of the invertebrate report, the site held limited suitable habitat for this species.

SINC Discussion

- 3.29 The assessment confirms that the habitats and invertebrate population on site qualify in accordance with SINC criteria. In recognition of the habitats present on site, Section 4 below outlines the approach taken to ensure an appropriate stepwise approach to the proposals has been taken.

4.0 STEPWISE APPROACH

Avoid

- 4.1 The site has been identified within the Merthyr Tydfil Replacement Local Development Plan³ as an allocated site for employment - Policy EcW2: Protecting Employment Sites. Policy EcW2 states development will be permitted if *“It is an appropriate waste management facility compatible with existing industrial and commercial activities.”* The proposals accord with this stipulation.

³ Merthyr Tydfil County Borough Council (2020). Cyngnor Bwrdeistref Sirol Merthyr Tudful Cynllun Datblygu Lleol Amnewid (2016 - 2031) Merthyr Tydfil County Borough Council Replacement Local Development Plan (2016 - 2031). Available at: <https://www.merthyr.gov.uk/media/5642/replacement-ldp-written-statement-final-composite-version-140120.pdf> (Accessed: 16.02.2022).

- 4.2 Further, Policy EcW1 also states that the application site is identified as a preferred area of search for waste management facilities. The site is located in an area characterised by industrial operations and the proposal is considered to be compatible with existing industrial and commercial activities surrounding the site.
- 4.3 Section 5 of the separate Planning Statement accompanying the planning application for the proposals provides greater detail in terms of a Local and National planning policy appraisal.
- 4.4 Avoidance of the site for the proposed development is therefore not considered necessary, given the site's allocation and adherence of the proposals to local policies.
- 4.5 Taking this into account, the proposals have sought, where possible, to minimise and mitigate ecological impacts. Further, measures have/will be taken to compensate and enhance where possible.

Minimise

- 4.6 The topography of the site and the required capacity of the proposals has largely dictated their placement – they are proposed within the central plateau of the site.
- 4.7 The placement of the proposals has however sought to minimise impacts on the boundary features. This has allowed for mitigation measures to be implemented in retained areas of the site with the intention that the proposals should not preclude the use of these retained areas by wildlife.

Mitigate

- 4.8 Mitigation has been provided to ensure that the character of the retained areas of habitat remain in line with the baseline. Management will be provided that ensures areas of Open Mosaic Habitat (OMH) persist within the two areas of retained habitat – those north and south of the proposals respectively. For management prescriptions see the CLEMP (Item c).
- 4.9 The retention of the boundary features – in particular the eastern boundary – will mitigate the impact of the developable area and will maintain access to areas of habitat both onsite and offsite. In addition, the sensitive lighting scheme, as discussed within the Ecology Response (Item a), will ensure that bats (and other nocturnal species) are able to move around these habitats after dark.
- 4.10 A detailed construction plan (forming part of the CLEMP (Item c)) has been produced that will mitigate the impact of the construction phase on ecology. Specifically, the CLEMP details methods to prevent harm to the following:
- Retained terrestrial habitats;
 - Watercourses;
 - Bats;
 - Birds;
 - Reptiles; and
 - Wildlife accidents i.e. entrapment
- 4.11 Lastly, mitigation for the removal of some tree and scrub stock will be provided in the form of nest boxes for birds. These will be installed in retained trees within the eastern area of the site. Specifications for these nest boxes have been provided within the CLEMP (Item c).

Compensate

- 4.12 The required capacity of the proposals and the topography of the site do not provide sufficient space to compensate for the loss of habitat on site. The recognition of the site as classifying as Open Mosaic Habitat as well meeting the local SINC criteria, highlight the value of compensation for those areas of habitat to be lost.
- 4.13 Offsite habitat compensation, equal to the area of grassland that is to be lost to the proposals is therefore proposed. A financial contribution to management of a similar offsite location is considered an appropriate (and the most pragmatic) option. The proposals remove an area of c.10ha, consequently a contribution to management of a suitable site of an area, no less than 10ha is deemed appropriate.
- 4.14 The desk study as detailed within the Eco App identified three SINC's that are located within 1km of the site. These are as follows:
- Glynmil
 - Merthyr Common Central
 - Merthyr Common South
- 4.15 The site descriptions of each of these SINC's match the habitat observed on the site – i.e. a mosaic of habitats, partly on old spoil tips. A contribution to management of one of these offsite SINC's would therefore be appropriate.

Enhance

- 4.16 Onsite enhancements will be provided through the provision of the lagoon (see section 6 below) and scrapes that will be created in the areas adjacent to the lagoon.
- 4.17 Additionally, a night roost will be provided on site that will provide a suitable place of shelter for bats (including lesser horseshoe *Rhinolophus hipposideros*). Results of bats using the site were relatively low, as noted in the Eco App. The purpose of this enhancement is therefore to increase the availability of retained habitats for bats on site.
- 4.18 Further enhancements for bats in the form of tree mounted roost boxes will be erected in retained habitat in the east of the site.
- 4.19 The proposed lagoon and adjacent scrapes will provide areas of standing water and habitat that are not currently present on site. Similarly, at present there is no adequate roost provision on site for bat species. Details of each of these enhancements are provided within the CLEMP (Item c).

5.0 PHOTOGRAPHS OF SITE

- 5.1 A table containing photos taken across the site has been provided as Appendix D. Descriptions have been provided where appropriate to link with text included within the Eco App, and the present Ecological Addendum.

6.0 LAGOON DESIGN

- 6.1 The final details of the lagoon design will be established at the detailed design stage within the full SAB application. Following consultation with the design team at present it is anticipated that the lagoon will incorporate variations in depth.

- 6.2 Aquatic and marginal plants will be planted within the lagoon. Further, turves from Habitat 1 (marshy grassland) will be translocated to the edges of the lagoon. The lagoon is to be sited partially in a locally wet area of the site. The aim is to retain some of the existing wet tolerant seedbank at the edges of the newly created lagoon.
- 6.3 A series of scrapes in the immediate area surrounding the lagoon will be created to introduce heterogeneity and ephemeral wet areas close to the new lagoon. The material removed from the scrapes will not be removed from site. It will be formed into piles or spread in areas of retained habitat to maintain a level of disturbance – in keeping with the site's heritage.
- 6.4 Details of proposed lagoon planting, grassland translocation and lagoon creation, management, maintenance etc have been given within the CLEMP (Item c).

7.0 CONCLUSION

- 7.1 It is concluded that the surveys conducted to date as detailed within the Eco App, Ecology Response (Item a) and the present Addendum (Item b), have appropriately assessed the habitats on site and the site's value to protected and or notable species.
- 7.2 The proposed management methods, as detailed within the CLEMP (Item c) will mitigate the impacts of the construction and operation phases of the proposals. The CLEMP (Item c) also details proposed enhancements that will be accommodated on site. A stepwise approach to the proposals has therefore been taken.
- 7.3 We conclude that the only outstanding matter to be addressed following submission of the Ecology Response, Ecological Addendum and CLEMP, should be securing the offsite habitat compensation.

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FIGURES

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Key

Site Boundary

Fly Over Only

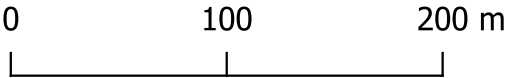
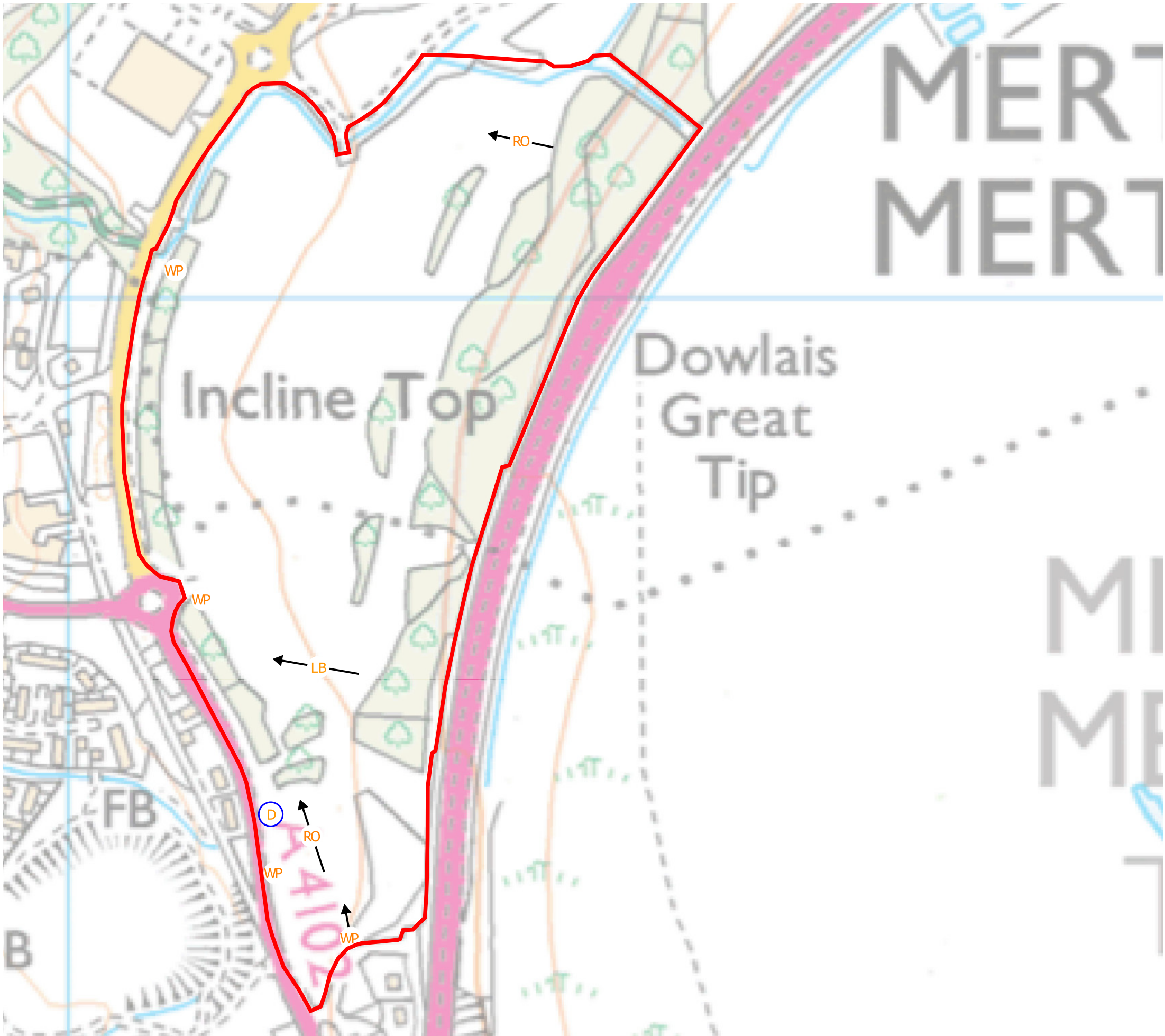
BoCC Amber Listed Species
(Blue Circle Indicates NERC S41 Species)

D Dunnock

LB Lesser Black-backed Gull

RO Rook

WP Woodpigeon



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APPENDICES

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Appendix A – Results of second scoping bird survey 2022

Common Name	Scientific Name	Survey 2 (14.01.2022)	Conservation Status	County Status
Blackbird	<i>Turdus merula</i>	2	Green list	Common resident breeder
Bluetit	<i>Cyanistes caeruleus</i>	4	Green list	Common resident breeder
Buzzard	<i>Buteo buteo</i>	1	Green list	Common resident breeder
Carrion Crow	<i>Corvus corone</i>	4	Green list	Common resident breeder
Chaffinch	<i>Fringilla coelebs</i>	2	Green list	Common resident breeder
Coal tit	<i>Parus ater</i>	4	Green list	Locally common resident breeder
Dunnock	<i>Prunella modularis</i>	1	Amber list; NERC S41	Common resident breeder
Great tit	<i>Parus major</i>	3	Green list	Common resident breeder
Jackdaw	<i>Corvus monedula</i>	1	Green List	Common resident breeder
Lesser black-backed gull	<i>Larus fuscus</i>	1	Amber list	Common resident breeder, passage migrant and winter visitor, breeder on flat holm and on rooftops mainly in Cardiff city centre, but occasionally inland.
Long-tailed Tit	<i>Aegithalos caudatus</i>	6	Green list	Common resident breeder
Magpie	<i>Pica pica</i>	10	Green list	Common resident breeder
Pied Wagtail	<i>Motacilla alba</i>	1	Green list	Common resident breeder and passage migrant
Robin	<i>Erithacus rubecula</i>	2	Green list	Common resident breeder
Rook	<i>Corvus frugilegus</i>	2	Amber list	Common resident breeder
Siskin	<i>Spinus spinus</i>	4	Green list	Locally common resident breeder
Treecreeper	<i>Certhia familiaris</i>	1	Green list	Common resident breeder
Wood pigeon	<i>Columba palumbus</i>	4	Amber	Common resident breeder, large flocks frequently noted on passage at coastal sites in late autumn
Total number of species: 18				

APPENDIX B

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CLIENT





REPRODUCED FROM ORDNANCE SURVEY SUPERPLAN DATA WITH THE PERMISSION OF THE CONTROLLER OF HER MAJESTY'S STATIONARY OFFICE, CROWN COPYRIGHT. ALL RIGHTS RESERVED. LICENCE NUMBER: 10001998

JOB TITLE

GOAT MILL ROAD, MERTHYR

DRAWING TITLE

LANDSCAPE AND ECOLOGICAL MASTERPLAN

KEY

 PLANNING APPLICATION BOUNDARY

 RETAINED OPEN MOSAIC GRASSLAND HABITAT (incl Translocation)

 RETAINED WOODLAND AND SCRUB

 PROPOSED NATIVE WOODLAND / SCRUB MITIGATION PLANTING (MIX A)

 STANDARD TREES (CAR PARK AREA)

 PROPOSED SURFACE WATER POND

 PROPOSED MARGINAL WETLAND PLANTING (MIX B)

 PROPOSED WET SCRAPES

 PROPOSED CLOSE BOARDED FENCE

 PROPOSED PALADIN SECURITY FENCE

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REV	DESCRIPTION	DATE	BY
1			

DRAWN	DATE	APPROVED	DATE
S.T	28/2/2022	D.B	28/2/2022

SCALE	SHEET	DRAWING NUMBER	REVISION
nts	t 1	JAY1001/04/21	0



PLANTING ESTABLISHMENT AND MAINTENANCE NOTES

1.0 GENERAL

- These outline specification notes are for guidance only.
- All works to be undertaken by a competent and qualified specialist landscape contractor.
 - The contractor must verify the locations of all below ground services prior to tree planting and other works
 - Existing trees and shrubs to be retained to be fenced in accordance with the provisions of BS5837 (Trees in Relation to Construction) prior to commencement of works.
 - Trees, hedges and shrubs to be retained are to be protected and clearly marked on site.
 - No spoil heaps, rubbish, machinery, plant or fuel to be stored in proximity to existing plants - in the case of trees this restriction extends to the spread of the tree canopy.
 - Protective fencing to be maintained during site works.

2.0 LANDSCAPE MANAGEMENT GENERAL

- The overall objectives for the Management Plan are as follows:
- To ensure the successful planting operations, establishment and continued growth through to maturity of the trees, shrubs, hedgerow planting for the benefits of the users and wildlife;
 - To ensure that both the existing planting to the boundaries of the site and proposed planting integrate successfully in creating an enhanced landscape structure and effective visual screen for sensitive receptors with potential views to the development area;
 - To ensure the methods employed respect and encourage wildlife, wherever possible; and
 - Defects in the landscape are identified early and addressed promptly.

3.0 MAINTENANCE & PLANT GUARANTEE

- All planting beds / tree pits to be kept in a weed free condition.
- Spot treat pernicious or notifiable weeds (e.g. thistle, nettle, dock, ragwort).
- Watering to be undertaken as necessary to ensure good establishment and growth of plants.
- Stakes and ties to be checked and adjusted regularly.
- Litter to be removed from planting beds.
- Pruning to be undertaken as necessary to ensure development of correct form and habit
- All planting and seeding to be subject to 12 month defects replacement guarantee period whereby all failed material to be replaced to original specification.
- Long term maintenance to comprise removal of tree stakes (circa year 3-5 after planting), crown pruning as necessary to maintain shape, removal of damaged or diseased branches.

4.0 SOILS, CULTIVATION & MULCH

SOILS, CULTIVATION & MULCH IMPORTED OR EXISTING SITE SUBSOIL

DEPTHS TO BE FORMED FOR NEW PLANTING AREAS

- SUBSOIL: minimum 500mm
- TOP SOIL: minimum 500mm
- Used as a free draining subbase to topsoiled areas and a rooting substrate for deeper rooting plants. Subsoil to be approved by the CA prior to spreading topsoil.
 - Subsoil to be friable, free draining, free from weeds and stone greater than 75mm in any dimension, free from phytotoxic compounds, waste, rubble, hazardous or other deleterious material.
 - Base of planting beds to be existing approved subsoil broken up and thoroughly decompacted to minimum 300mm depth (or otherwise as necessary to ensure a free draining rooting medium) prior to placing topsoil. Where existing substrates are unsuitable as a subsoil, excavate and remove substrates and replace with an imported subsoil spread to 600mm settled depth.

IMPORTED OR EXISTING SITE SUBSOIL

- Used as a free draining subbase to topsoiled areas and a rooting substrate for deeper rooting plants. Subsoil to be approved by the CA prior to spreading topsoil.
- Subsoil to be friable, free draining, free from weeds and stone greater than 75mm in any dimension, free from phytotoxic compounds, waste, rubble, hazardous or other deleterious material.
- Base of planting beds to be existing approved subsoil broken up and thoroughly decompacted to minimum 300mm depth (or otherwise as necessary to ensure a free draining rooting medium) prior to placing topsoil. Where existing substrates are unsuitable as a subsoil, excavate and remove substrates and replace with an imported subsoil spread to 500mm settled depth.

IMPORTED OR SITE RECLAIMED TOPSOIL

- Used as a planting medium for trees and shrubs.
- Imported topsoil to be an approved quality general purpose topsoil to BS 3882, free of weeds, stones, contamination and all deleterious material.
- Topsoil to be placed on friable, free draining subsoil.
- Topsoil to planting beds to be 500mm settled depth.
- Topsoil in new or replanted beds to be rotovated to 200mm depth to produce a medium tilth, incorporating soil conditioner
- Planting beds to be cleared of weed/grass growth prior to planting.
- All tree and shrub planting pits and planting areas to receive approved quality 'Amenity Bark Mulch' to 75mm settled depth after planting.

5.0 ESTABLISHMENT MAINTENANCE & PLANT GUARANTEE

- All planting beds / tree pits to be kept in a weed free condition.
- Spot treat pernicious or notifiable weeds (e.g. thistle, nettle, dock, ragwort).
- Watering to be undertaken as necessary to ensure good establishment and growth of plants.
- Stakes and ties to be checked and adjusted regularly.
- Litter to be removed from planting beds.
- Pruning to be undertaken as necessary to ensure development of correct form and habit
- All planting and seeding to be subject to 12 month defects replacement guarantee period whereby all failed material to be replaced to original specification.
- Long term maintenance to comprise removal of tree stakes (circa year 3-5 after planting), crown pruning as necessary to maintain shape, removal of damaged or diseased branches and addition of slow release fertiliser in Year 2-3 after planting.

Tree and Scrub Planting

					Area: 2262m²
Species	Common Name	% mix	Density	Specification	Number
Alnus glutinos	Alder	10	1.5 m² spacing	BR 1+1 60-80	151
Betula pendula	Birch	10	1.5 m² spacing	BR 1+1 60-80	151
Betula pubescens	Downy Birch	10	1.5 m² spacing	BR 1+1 60-80	151
Crataegus monogyna	Hawthorn	15	1.5 m² spacing	BR 1+1 60-80	226
Pinus sylvestris	Pine	10	1.5 m² spacing	3L 40-60	151
Prunus spinosa	Blackthorn	10	1.5 m² spacing	BR 1+1 60-80	151
Sorbus aucuparia	Rowan	10	1.5 m² spacing	BR 1+1 60-80	151
Salix caprea	Goat Willow	7.5	1.5 m² spacing	BR 1+1 60-80	113
Salix cinerea	Gret Willow	7.5	1.5 m² spacing	BR 1+1 60-80	11
Ulex europaeus	Gorse	10	1.5 m² spacing	2L 20-30	11

Whip planting within plastic shelters, in accordance with specification. Pine & Gorse in wider diameter shrub shelters

Plants to be planted in odd number groups, minimum 5 plants per group. **Excluding Pine** - single planting spaced throughout plantation

Salix and Alder to be planted within areas of wet soils, notably the northern ditch corridor

Attenuation Basin - Marginal and Emergent Planting

Species
Typha latifolia
Phragmites australis
Caltha palustris
Mernta aquatica
Iris pseudacorus
Myosotis scorpioides

Wetland fringes to be created using translocated material taken from site.

Donor areas of marshy grassland will be cut and turves translocated to the edge of the attenuation basin.

Substrate from wet areas adjacent to the basin will be translocated to the help form the wetland fringe.



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JOB TITLE

GOAT MILL ROAD, MERTHYR

DRAWING TITLE

LANDSCAPE AND ECOLOGICAL MASTERPLAN

KEY

- PLANNING APPLICATION BOUNDARY
- RETAINED OPEN MOSAIC GRASSLAND HABITAT (incl Translocation)
- RETAINED WOODLAND AND SCRUB
- PROPOSED NATIVE WOODLAND / SCRUB MITIGATION PLANTING (MIX A)
- STANDARD TREES (CAR PARK AREA)
- PROPOSED SURFACE WATER POND
- PROPOSED MARGINAL WETLAND PLANTING (MIX B)
- PROPOSED WET SCRAPES
- PROPOSED CLOSE BOARDED FENCE
- PROPOSED PALADIN SECURITY FENCE

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REV	DATE	DESCRIPTION	APPROVED	DATE	BY
S.T	28/2/2022		D.B	28/2/2022	
SCALE	nts	SHEET	t 2	DRAWING NUMBER	JAY1001/04/21
		REVISION			0

Appendix C – Response from invertebrate specialist in relation to SINC quality for invertebrates

Email 1: Received at 0900 – 02/03/2022

- 1.1 “In regard to the qualification of the site as a SINC for invertebrates, I’d make the following observations relating to the various criteria for site selection listed in Section 6 of the SINC site selection document for the Mid-Valleys Area you attached :
- 1.2 1. ‘Any site which supports a species that is listed in the UK Red Data Book or the Natural Environment and Rural Communities Act 2006 Section 42 list’; or, under the criteria for butterflies, ‘Any site that supports a Natural Environment and Rural Communities Act 2006 Section 42 species (WAG, 2007) and/or a species that fulfils the criteria for a Wales Action Plan Priority Species (Butterfly Conservation, in prep), as shown in list ‘A’ in Table 12a below.’ The Dingy Skipper is a Section 42 (now, I believe, superseded by Section 7 of the Environment (Wales) Act, 2016) species and is also listed in Table 12a of the SINC site selection document, so it would qualify under either of these criteria. As I said in my report, the two other S7 Lepidoptera recorded (Small Heath Butterfly and Cinnabar Moth) are still quite common in Wales, though they have shown a decline in other parts of their British range (especially southern and eastern England) and should not be afforded the same weight in decision-making as Dingy Skipper.
- 1.3 2. ‘Sites will also be considered for selection with 2 or more species from list ‘B’ in Table 12a, other LBAP species not already included or where 10 or more species of any butterfly occur (including common species).’ The only list B species recorded here is the Small Heath Butterfly (see above), so it does not qualify under this sub-criterion. With 14 species of butterfly recorded here in , the site could qualify under this sub-criterion. However, with the exception of Dingy Skipper, the other species recorded from the site are all common and widespread in south Wales, so I’m not convinced this is a compelling argument for selection of the site as a SINC.
- 1.4 3. ‘Any site which supports an important assemblage or population(s) of ‘Nationally Scarce’ species (to be determined in consultation with the appropriate experts).’ I recorded five Nationally Scarce species from the site: the tortoise beetle *Cassida prasina*, the ground bug *Megalonotus dilatatus*, the weevils *Protapion filirostre* and *Polydrusus formosus* and the Six-belted Clearwing Moth. As I explained in my report, *P. formosus* has undergone a large range expansion in Britain (probably due to warmer weather) and will certainly not be listed in the next update to the Status Review of this group. It should not therefore be considered as a qualifying feature for selection as a SINC. The remaining four do seem to be genuinely scarce species of dry, flower-rich grasslands and scrub edge. Like the Dingy Skipper, they are often found in ruderal brownfield sites such as this, where there is a mosaic of grassland and patches of bare ground. The importance of the site for this invertebrate assemblage will in part relate to the amount of these brownfield habitats still found in the area around the site and the likelihood of new areas becoming available for them to colonise. For example, I’ve found the Dingy Skipper at all three of the brownfield sites I’ve looked at in the south Wales valleys over the last decade and there may be other large populations in the Merthyr area. It

is often difficult to ensure ongoing management of such sites to ensure they retain the early-successional habitats these species require and the continued occurrence of good populations in south Wales is partly a product of the presence here of a network of large, post-industrial sites that they are able to colonise as older sites become colonised with later-successional communities of rank grassland, scrub and woodland.”

Email 2: Received at 0913 – 02/03/2022

- 1.5 “I realised I hadn’t addressed the dragonfly and damselfly criteria in my previous e-mail.
 - 1.6 It is possible that the site could qualify as a SINC under the criterion ‘Any site which supports a species from list ‘A’ in Table 13.’ The Keeled Skimmer is included in this list and I did find a single adult flying around the small ditches at the northern end of the site. It is possible that there is a breeding colony here, as it is a species that breeds in shallow, peaty flushes and runnels. However, it is likely that any breeding colony is small, given both the fact that I only recorded a single adult and the very limited amount of potentially suitable habitat present.”
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Appendix D – Sitewide Photographs



Photograph 1: Central plateau of the site. Looking east to plantation woodland bordering A4060 on eastern boundary.



Photograph 2: Central plateau of the site. Looking north, showing scrub interspersed with rocky substrate and grassland – representative of Habitats 2, 3 and 4 as described in the Eco App.



Photograph 3: Central plateau of the site. Looking west to existing roundabout and turning head. Showing bare ground/rocky substrate and grassland – representative of Habitat 2 as described in the Eco App.



Photograph 4: Southern extent of site, looking south. Showing scrub interspersed with rocky substrate and grassland, which transitions into Habitat 5 as described in the Eco App.

Photograph shows approximate location of proposed attenuation basin.



Photograph 5: Composition of marshy grassland – Habitat 1 as described in Eco App. Photo taken centrally within area of marshy grassland located in north west of the site.



Photograph 6: Marshy grassland transitioning into boundary vegetation. Photograph taken on the north west boundary of the site at the western edge of Habitat 1 as described in the Eco App, looking south.



Photograph 7: Engineered stream which follows northern and western boundaries of the site. Photo taken in far north of the site looking south west.



Photograph 8: Area of standing water located in the north of the site. Depression is orientated north west/south east and connects to engineered stream on northern boundary.