APPENDIX ES W



DRAFT BASED ON DEFRA METRIC VERSION 2.0 SHORTLY TO BE WITHDRAWN

NATURAL PROGRESSION

Land north of Loxwood Road, Billingshurst, West Sussex

Biodiversity Net Gain Assessment

June 2021

NATURAL PROGRESSION



Land north of Loxwood Road, Billingshurst, West Sussex

Biodiversity Net Gain Assessment

-									
Client:	Loxwood Clay Pits Limited								
Report No.:	UE0363_Loxwood_BNG_1_2106	28							
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Urban Edge Environmental Consultir and Environmental Management. Th and were prepared and provided in a that the opinions expressed are our	ng Ltd is a Registered Practice of the C ne information, advice and opinions pr ccordance with CIEEM's <u>Code of Profe</u> true and professional bona fide opinior	hartered Institute of Ecology ovided in this report are true <u>ssional Conduct</u> . We confirm ns.	CIEEM REGISTERED PHACTICE 2020-2023						

that the opinions expressed are our true and professional bona fide opinions.

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Abbreviations

BNG	Biodiversity	Net	Gain
DIVO	Diodiversity	1400	Guin

- BU Biodiversity Unit
- NPPF National Planning Policy Framework
- PEA Preliminary Ecological Appraisal
- UEEC Urban Edge Environmental Consulting



0 Executive Summary

0.1 Introduction and Purpose of the Report

- 0.1.1 Biodiversity Net Gain (BNG) is an approach to development which leaves the natural environment in a better state than beforehand. Defra has published a metric by which the biodiversity losses and gains associated with a particular development can be calculated.
- 0.1.2 Urban Edge Environmental Consulting (UEEC) was commissioned by Loxwood Clay Pits Ltd ('the Applicant') to produce a BNG assessment using the Defra Metric 2.0 for the site of a proposed minerals and waste development at Land north of Loxwood Road, Billingshurst, West Sussex (Grid Reference: 505115, 132770).

0.2 Policy Background Summary

- 0.2.1 The requirement for BNG is set out in national and local planning policy.
- 0.2.2 The 2019 National Planning and Policy Framework (NPPF) advocates that planning policies and decisions should take opportunities to achieve net environmental and biodiversity gains such as developments that would enable habitat creation. It also advocates that, when making planning decisions, local planning authorities should encourage biodiversity enhancements, especially where this can secure measurable gains for biodiversity. In 2018 the Government published its '25 Year Environment Plan' which set out an ambition to embed mandatory biodiversity net gain into all development projects. This is mandated in the Draft Environment Bill which requires a minimum of 10% biodiversity net gain. Timescales for the enactment of the Bill are currently unknown.
- 0.2.3 Policy M17 of the Adopted West Sussex Joint Minerals Local Plan requires that minerals development proposals should, where possible, achieve net gains in biodiversity.

0.3 Methodology

0.3.1 The BNG assessment has been carried out using the 2019 Defra Biodiversity Metric 2.0 which uses habitats as a proxy for wider biodiversity. Pre-intervention Biodiversity Units (BUs) were calculated, informed by a series of walkover surveys in February 2021 to establish the habitat parcels present within the development Site and wider land within the Applicant's control, together with their size and condition.

0.4 Results

- 0.4.1 Prior to development, the area habitats totalling c.8.26ha within the proposed development Site (red line boundary) are equivalent to **97.76 BUs.** No linear habitats were recorded within the development Site.
- 0.4.2 The area habitats totalling c.113.90ha within the Applicant's control (blue line boundary) are equivalent to **1,607.05 BUs.** No linear habitats were recorded.
- 0.4.3 Post-intervention the area habitats within the proposed development Site (red line boundary) are equivalent to **43.60 BUs** (inclusive of retained and newly created habitats).
- 0.4.4 Post-intervention the area habitats within the Applicant's control (blue line boundary) are equivalent to **1,625.44 BUs** (inclusive of retained, enhanced and newly created habitats).

0.5 Biodiversity Impact Assessment Score

0.5.1 Overall the proposed development, including proposals for habitat retention, creation and enhancement, is predicted to result in a **net loss** of **-35.77 BUs**, equivalent to **-36.59%**.



1 Introduction

1.1 Purpose of the Report

- 1.1.1 Urban Edge Environmental Consulting (UEEC) was commissioned by Loxwood Clay Pits Ltd ('the Applicant') to produce a Biodiversity Net Gain (BNG) assessment for the site of a proposed minerals and waste development at Land north of Loxwood Road, Billingshurst, West Sussex (Grid Reference: 505115, 132770).
- 1.1.2 The Site is located on the old Pallinghurst Estate approximately 1.5km to the east / north east of the village of Loxwood in the Chichester district of West Sussex and includes the Site of the proposed development as shown in red on Figure 1.1, and its proposed access from Loxwood Road shown in green.
- 1.1.3 The Site comprises c.8.26ha of land currently dominated by woodland including semi-natural deciduous, deciduous plantation and mixed plantation woodland. The access route comprises an existing c.1.33km aggregate surfaced forest track with adjoining verges and ditches.
- 1.1.4 Land within the Applicant's control and adjoining the Site (edged in blue on Figure 1.1) is formed of semi-natural and ancient deciduous woodland, relatively recently planted deciduous plantation, mature coniferous plantation and semi-improved neutral grassland.
- 1.1.5 Planning consent is sought for the extraction of approximately 400k tonnes of clay to be used in brick making and other construction/industrial applications. Following clay extraction, the Site will be sequentially restored with suitable treated imported materials which will be sourced from the proposed on-site construction materials recycling facility (CMRF). The restoration scheme has been designed for nature conservation with water bodies, wetland habitats and interim species rich seeded grassland to be replaced with plantation broadleaved woodland.

1.2 Biodiversity Net Gain and the Defra Metric

- 1.2.1 Biodiversity is the variety of life on earth; it includes all living things and the places in which they live. It is essential to sustain our society, well-being and economy. Biodiversity in the UK and internationally is declining as it comes under increasing pressure from development and land management practices. Enhancing biodiversity is integral to sustainable development, and BNG is an approach to development which leaves the natural environment in a measurably better stated than beforehand.
- 1.2.2 In 2019 Defra published the Biodiversity Metric 2.0 ('the Metric') (Crosher *et al.*, 2019). The metric provides a means of evaluating biodiversity losses and gains through development in a robust and consistent manner. The metric enforces the mitigation hierarchy whereby impacts to biodiversity should first be avoided, then minimised and mitigated, before being compensated where losses cannot be avoided. The Metric calculates the biodiversity value of a site before and

after development to establish the change in biodiversity attributable to a particular development project.

Loxwood Clay Pits, West Sussex



Figure 1.1: Site location and land within Applicant's control

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	M	eters		\wedge
© Crow Ordnan	n copyright a ce Survey 010	nd database 00031673	e rights 2021	
Scale:	1:7,500	Cre	eated by:	AD
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Drawin	ng number:			
UE0363	ECO-A3Land	lholderCom	partments210	521
		NEDGE	Tel: 0	1273 686 766

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2 Policy Background

2.1 National Planning Policy

- 2.1.1 The revised National Planning and Policy Framework (NPPF; MHCLG, 2019) advocates biodiversity and environmental gains¹ in the following paragraphs:
 - Paragraph 118: "Planning policies and decision should a) encourage multiple benefits from both urban and rural land ... and taking opportunities to achieve net environmental gains
 such as developments that would enable new habitat creation..."
 - Paragraph 170: "Planning policies and decisions should contribute to and enhance the natural and local environment by d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures."
 - Paragraph 171: "Plans should...plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries"
 - Paragraph 174: "To protect and enhance biodiversity and geodiversity, plans should b)... pursue opportunities for securing measurable net gains for biodiversity."
 - Paragraph 175: "When determining planning applications, local planning authorities should apply the following principles d)... opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity."
- 2.1.2 The Government's 25 Year Environment Plan (HMG, 2018) set out a policy ambition to consult on mandatory BNG for development and to embed environmental net gain principle into the planning system. A Defra consultation on mandatory BNG, advocating a minimum of 10% BNG for all development, took place in December 2018² with the responses published in July 2019³. The Draft Environment Bill proposes to mandate a minimum of 10% BNG for all development. Timescales for the enactment of the Bill are currently unknown.

2.2 Local Planning Policy

2.2.1 The West Sussex Joint Minerals Local Plan 2033 (adopted July 2018) provides the basis for making decisions about planning applications for mineral activities in West Sussex, including in the South Downs National Park. Extracts from policies of relevance to BNG are listed below.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/819823/net-gain-consult-sumresp.pdf



¹ Environmental gains extend beyond biodiversity gains to also include social, economic, amenity and natural capital gains,

² Defra (2018): Net Gain – Consultation proposals. Available online: <u>https://consult.defra.gov.uk/land-use/net-gain/</u>

³ Defra (2019): Net Gain – Summary of responses and government response. Available online:

Policy M17: Biodiversity and Geodiversity

Proposals for minerals development will be permitted provided that:

... (e) Where possible, there are net gains in biodiversity, including, the creation, enhancement, and management of habitats, ecological networks, geodiversity and ecosystem services shall be secured consistent with wider environmental objectives, including Biodiversity Opportunity Areas and the South Downs Way Ahead Nature Improvement Area; and ...

Policy M24: Restoration and Aftercare

... (c) Are appropriate to their locations, maximising benefits taking into account local landscape character, the historic environment, biodiversity gain, priority habitat creation, and wider environmental objectives; ...

2.2.2 The West Sussex Joint Waste Local Plan 2031 (adopted April 2014) provides the basis for making decisions about planning applications for waste management facilities in West Sussex, including in the South Downs National Park. The Waste Local Plan makes no specific reference to BNG but policy W14: Biodiversity and Geodiversity states that:

... (d) where development would result in the loss of or adversely affect an important area, site or feature, the harm is minimised, mitigated, or compensated for, including, where practicable, the provision of a new resource elsewhere which is of at least equivalent value;

(e) where appropriate, the creation, enhancement, and management of habitats, ecological networks, and ecosystem services is secured consistent with wider environmental objectives including Biodiversity Opportunity Areas and the South Downs Way Ahead Nature Improvement Area; and ...

2.2.3 The Chichester Local Plan: Key Policies 2014-2029 (adopted July 2015) provides the broad policy framework and a long-term strategy to manage development, protect the environment, deliver infrastructure and promote sustainable communities within Chichester District (excluding the area within the South Downs National Park). Chichester District Council consulted on the Local Plan Review: Preferred Approach 2016-2035 during winter 2018/2019. Extracts from policies of relevance to BNG are listed below.

Draft (Preferred Approach) Policy DM29: Biodiversity

... 3. The proposal has incorporated features that enhance biodiversity as part of good design and sustainable development, and identifies and pursues opportunities for achieving a net gain in biodiversity; ...

3 Methodology

3.1 Overview

- 3.1.1 The BNG assessment has been carried out using the 2019 Defra Biodiversity Metric 2.0 and accompanying User Guide (Crosher *et al.*, 2019). The Metric uses habitats as a proxy for wider biodiversity with different habitat types scored according to their relative biodiversity value. This value is then adjusted depending on the condition and location of the habitat, to calculate 'Biodiversity Units' (BU) for the specific development site. Pre-intervention BUs are subtracted from the post-intervention BUs to determine the change in biodiversity value attributable to the development.
- 3.1.2 There are four key steps to using the Metric which are illustrated in Figure 3.1 and described further in the following sections.



Figure 3.1: Key steps to applying the Defra Metric



3.2 Project Planning (Step 1)

- 3.2.1 The development Site for which the BNG assessment has been undertaken includes the red line boundary shown on Figure 1.1. There are no linear habitats within the Site and so only the area component of the Metric has been applied.
- 3.2.2 The vegetation within the Site will be removed in three phases: during the early stages of construction in year 0; during operation in year 10; and during operation in year 22. In order to assist with mitigation planning for the development, and in anticipation that it may be impractical to achieve BNG within the Site at least until it is fully restored, BNG baseline surveys were also carried out for all land within the Applicant's control, as shown edged in blue on Figure 1.1.

3.3 Data Collection (Step 2)

- 3.3.1 A range of ecological surveys have been carried out within the Site and its proposed access during 2019-2021, including Preliminary Ecological Appraisal, vegetation communities and protected species surveys. Additionally an experienced ecologist completed Phase 1 habitat surveys on 4 and 8 February 2021 on wider land within the Applicant's control to establish the classification, extent and current condition of the habitats present. The BNG baseline was calculated from the results of the February 2021 survey. The survey area was equal to the blue line boundary shown on Figure 1.1.
- 3.3.2 The survey followed the methodology for Phase 1 Habitat Survey (Joint Nature Conservation Council, 2010), which allows rapid visual assessment of the extent and distribution of different habitat types. The site was divided into land parcels (in this case woodland compartments), based on the different habitats present. For each habitat, lists of plant species were also recorded, as well as an indication of their relative frequency and abundance (using the DAFOR⁴ scale). The condition of each habitat present was noted, with reference to The Biodiversity Metric 2.0 Technical Supplement (Crosher *et al.*, 2019), and areas and habitats which presented opportunities for habitat enhancement or creation were identified.
- 3.3.3 Annotated field maps were then digitised in ArcGIS 10.7 to produce the Phase 1 habitats plan shown at Appendix I, together with surveyor field notes on the characteristics of each woodland compartment. Each habitat polygon was clipped to the red line Site boundary, and its area then calculated in GIS and exported to MS Excel for use in BNG baseline calculations. The size of each habitat parcel was recorded in hectares (ha). Phase 1 habitats were translated to the UK Habitats Classification System⁵ with reference to the translation table provided with The Biodiversity Metric 2.0 Calculation Tool. Each habitat parcel was assigned a condition score of Low, Medium or High, informed by the site survey and Condition Assessment Sheets within the Technical Supplement to the Metric⁶.

⁶ http://publications.naturalengland.org.uk/publication/5850908674228224



⁴ D – Dominant; A – Abundant; F – Frequent; O – Occasional; R – Rare.

⁵ UK Habitat Classification: http://ecountability.co.uk/ukhabworkinggroup-ukhab/ (Accessed 08/08/2020)

3.4 Calculation (Step 3)

Calculation tool

- 3.4.1 The Metric is accompanied by a calculation tool which uses a number of input fields in order to calculate pre- and post-intervention biodiversity units, including:
 - Habitat types: As described in the UK Habitats Classification System.
 - Area of habitats and length of linear habitats: In hectares and kilometres.
 - Habitat condition: Parcels of habitat will be in different ecological conditions. In addition, interventions to improve habitats will not always involve taking a habitat in poor condition and improving it to good condition. The metric therefore takes account of variations in habitat condition.
 - Habitat connectivity: The relationship of a particular habitat patch to other surrounding similar or related semi-natural habitats. These help facilitate flows of species and ecosystem services increasing habitat resilience. The 2.0 version of the Metric uses a default value of 'Low' except for high or very high distinctiveness habitats which are scored as 'Medium.
 - Strategic significance: The idea of strategic significance works at a landscape scale. It gives additional unit value to habitats that are located in preferred locations for biodiversity and other environmental objectives as set out in published local plans.
- 3.4.2 Habitat type, area and condition were established via the site walkover described in section 3.3. Connectivity was scored as Low, Medium or High. Version 2.0 of the Metric calculation tool (used here) recommends assigning a default 'Low' connectivity score except for high or very high distinctiveness habitats which should be scored as 'Medium'⁷.
- 3.4.3 The development Site is not located within any designated ecological sites or strategic initiatives and therefore 'Low Strategic Significance' has been applied for all habitat parcels.
- 3.4.4 The Calculation Tool also includes a number of pre-assigned fields which are automatically populated based on habitat type inputs:
 - Habitat distinctiveness: Based on an assessment of the distinguishing features of a habitat or linear feature, including the consideration of species richness, rarity (at local, regional, national and international scales), and the degree to which a habitat supports species rarely found in other habitats.
 - Risk multipliers (Post-intervention only): Three different risks are recognised in the Metric: difficulty of habitat creation and restoration; temporal risk i.e. the time it takes for a newly created habitat to reach target condition; and off-site risk which accounts for decreasing ecosystem services provided to the local community with compensation provided further from the development site.

⁷ Defra have advised that a forthcoming update to the tool will enable a more sophisticated approach to connectivity to be used.



Calculation of Biodiversity Units

3.4.5 Using the factors described above, equivalent BU were calculated for the red line and blue line boundaries pre- and post-intervention. The following formula is used to calculate the change in BU as a consequence of the proposed development:

POST-INTERVENTION BIODIVERSITY UNITS – PRE-INTERVENTION BIODIVERSITY UNITS = CHANGE IN BIODIVERSITY UNITS

3.4.6 Where the resulting score is negative there is a net loss in biodiversity. If the score is zero there is no net loss in biodiversity. Where the resulting score is positive, there is a net gain in biodiversity.

3.5 Informing Design and Decisions (Step 4)

3.5.1 In this case the clay pit design had not yet been fixed when work on the BNG assessment commenced, and initial results were used to inform proposed habitats for the Site and habitat enhancements for surrounding land within the Applicant's control.



4 Results

4.1 Baseline Habitats

4.1.1 The habitats recorded during the walkover survey are shown in Appendix I. Data collection records, including habitat type, area and condition score for those falling within the development Site and wider land within the Applicant's control are provided at Appendix II. No irreplaceable habitats⁸ were identified within the development Site (a small area of Plantation on Ancient Woodland is present outside the Site at the north-west corner and will be retained and protected during construction and operation). Several stands of Ancient Semi-Natural Woodland and Plantation on Ancient Woodland are present on land within the Applicant's control.

4.2 Pre-Intervention Biodiversity Units

- 4.2.1 Prior to development, the area habitats totalling c.8.26ha within the proposed development Site (red line boundary) are equivalent to **97.76 BUs.** No linear habitats were recorded within the development Site.
- 4.2.2 The area habitats totalling c.113.90ha within the Applicant's control (blue line boundary) are equivalent to **1,607.05 BUs.** No linear habitats were recorded.

4.3 Proposed Habitats

4.3.1 No linear habitats are proposed on-site (within the development Site red line boundary) or offsite (within the blue line boundary).

Baseline habitats to be retained and enhanced

- 4.3.2 A total of c.1.51ha of woodland habitats and bare ground within the red line boundary along the proposed access route will be retained. None of the retained habitat within the red line boundary is proposed for enhancement.
- 4.3.3 A total of c.93.02ha of predominantly woodland habitats within the blue line boundary will be retained, while c.17.23ha will be enhanced.

Baseline habitats lost

4.3.4 All remaining habitats within the red line boundary will be removed during site clearance, amounting to c.6.75ha.

⁸ Habitats that cannot be recreated within a specified time frame (typically, the timescale of the project) e.g. ancient woodland



4.3.5 Approximately 3.65ha of broadleaved plantation woodland habitat within the blue line boundary will be removed to enable the reptile mitigation strategy.

Habitats to be created or enhanced

- 4.3.6 All habitats proposed to be created or enhanced as part of the proposed development, within both the red and blue line boundaries, are set out in Appendix III together with their target condition.
- 4.3.7 Within the red line boundary c.6.75ha of new habitat will be created, including semi-natural broadleaved woodland, broadleaved plantation woodland, mixed scrub, neutral grassland and pond.
- 4.3.8 Within the blue line boundary c.17.23ha will be enhanced through a combination of improved management, creation of micro-habitats such as deadwood, and conversion from coniferous plantation to semi-natural broadleaved woodland and flower-rich grassland. The c.3.65ha of broadleaved plantation woodland habitat to be removed to enable the reptile mitigation strategy will be replaced with a combination of mixed scrub and neutral grassland.

4.4 Post-intervention Biodiversity Units

- 4.4.1 Post-intervention the area habitats within the proposed development Site (red line boundary) are equivalent to **43.60 BUs** (inclusive of retained and newly created habitats).
- 4.4.2 Post-intervention the area habitats within the Applicant's control (blue line boundary) are equivalent to **1,625.44 BUs** (inclusive of retained, enhanced and newly created habitats).

4.5 Biodiversity Impact Assessment Score

4.5.1 The headline results from the Defra Metric 2.0 Calculation Tool are provided in Appendix IV. Overall the proposed development, including proposals for habitat retention, creation and enhancement, is predicted to result in a **net loss** of **-35.77 BUs**, equivalent to **-36.59%**.

5 Conclusion

- 5.1.1 Overall this assessment has shown that the majority of baseline area habitats within the Site will be lost, with small areas of woodland along the access route corner being retained. Areas of new habitats will be created as part of Site restoration, and a large extent of off-site habitat will be enhanced. However, these interventions are outweighed by the impact of development of seminatural broadleaved woodland which is a Habitat of Principal Importance, resulting in an overall net loss of -**36.59%** in area habitats.
- 5.1.2 Each of the habitats retained, created or enhanced as part of the proposed development have been assigned a target condition score informed by the Condition Assessment Sheets within the Technical Supplement to the Metric⁹. The significant baseline extent of deciduous woodland in 'fairly good' condition allows limited headroom for improving habitat condition despite the extent of enhancements proposed. An ecological management plan will be produced to ensure that the habitats are maintained in target condition for the lifetime of the development.
- 5.1.3 There will be additional biodiversity mitigation and enhancement measures provided as part of the proposed development with objective of maintaining or extending the availability of habitats suitable for species recorded within the Site, including breeding/wintering birds, invertebrates, roosting/foraging/commuting bats, and reptiles. However, these are currently not accounted for in version 2.0 of the Defra Metric.

⁹ http://publications.naturalengland.org.uk/publication/5850908674228224



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References and Bibliography

Baker J, Hoskin R & Butterworth T (2019): Biodiversity Net Gain – Good Practice Principles for Development. Part A: A Practical Guide. CIRIA C776a, in partnership with CIEEM and IEMA.

Botanical Society of the British Isles (2004): UK Plant List.

British Standards Institution (BSI; 2013): *BS42020:2013 Biodiversity – Code of practice for planning and development.* BSI Standards Limited, London.

Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020). *The UK Habitat Classification User Manual Version 1.1* at http://www.ukhab.org/

Chartered Institute of Ecology and Environmental Management (CIEEM, 2017a): *Guidelines for Ecological Report Writing*. 2nd Edition, CIEEM, Winchester.

CIEEM (2017b): Guidelines for Preliminary Ecological Appraisal. 2nd Edition, CIEEM, Winchester.

CIEEM (2018): Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. CIEEM, Winchester. Version 1.1, updated September 2019.

IAN CROSHER A, SUSANNAH GOLD B, MAX HEAVER D, MATT HEYDON A, LAUREN MOORE D, STEPHEN PANKS A, SARAH SCOTT C, DAVE STONE A & NICK WHITE A. 2019. The Biodiversity Metric 2.0: auditing and accounting for biodiversity value. User guide (Beta Version, July 2019). Natural England [A – Natural England, B – Imperial College, University of London, C – Environment Agency, D – Department for Environment, Food and Rural Affairs].

IAN CROSHER A, SUSANNAH GOLD B, MAX HEAVER D, MATT HEYDON A, LAUREN MOORE D, STEPHEN PANKS A, SARAH SCOTT C, DAVE STONE A & NICK WHITE A. 2019. The Biodiversity Metric 2.0: Auditing and accounting for biodiversity value: technical supplement (Beta version, July 2019). Natural England [A – Natural England, B – Imperial College, University of London, C – Environment Agency, D – Department for Environment, Food and Rural Affairs].

Gunnel K., Grant, G. and Williams, C. (2012): Landscape and Urban Design for Bats and Biodiversity. Bat Conservation Trust.

Gunnel K, Murphy B, Williams C (2013): Designing for biodiversity: A technical guide for new and existing buildings. RIBA Publishing and Bat Conservation Trust.

HM Government (2018): A Green Future: Our 25 Year Plan to Improve the Environment.

Joint Nature Conservation Committee (2010): Handbook for Phase 1 Habitat Survey. A Technique for Environmental Audit, Joint Nature Conservation Committee, Peterborough.



Maddock A. (ed.) (2008): UK Biodiversity Action Plan: Priority Habitat Descriptions. UK Biodiversity Reporting and Information Group. Updated December 2011.

Ministry for Housing, Communities & Local Government (MHCLG; 2019): National Planning Policy Framework.

Multi-agency Geographic Information for the Countryside (MAGIC) (www.magic.gov.uk)

Rodwell J.S. (2006): National Vegetation Classification: Users' Handbook. Joint Nature Conservation Committee, Peterborough.

Rose F., revised and updated by O'Reilly C. (2006): The Wild Flower Key. Penguin, London.



Appendix I: Phase 1 Habitats Plan

Please see insert.



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Loxwood Clay Pits, West Sussex







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Cpt	Habitats	Priority	Ancient	19 th C OS maps	Comments
•		Habitats	Woodland		
West	ern Block				
25	S-n broadleaved woodland Broadleaved plantation Coniferous plantation	Deciduous woodland	No (possibly small strip on S bdy but may be digitising error)	Woodland, with exception of b	Most of centre is recent broadleaved plantation with patchy and locally dense scrub and tree regen an Northern edge comprises wooded and quite rich banks beside PRoW Woodland in NW corner, between bank and stream, mature/semi-mature oak, ash and LA elm with spa Small area of mature coniferous plantation between western bdy and stream. Active badger sett Small area of richer mature oak/ash/hazel woodland in SW corner
26?	S-n broadleaved woodland Broadleaved plantation	Deciduous woodland	All (PAWS + ASN)	Woodland	Eastern part is recent broadleaved plantation with patchy and locally dense scrub and tree regen and s Western part, incl. either side of stream, mature oak/hazel and oak/ash/hazel woodland
27	S-n broadleaved woodland Broadleaved plantation	Deciduous woodland	Part (PAWS) in NW corner	Woodland	Mostly recent broadleaved plantation with patchy and locally dense scrub and tree regen and scattere Narrow strip of s-n woodland on western bdy beside ride
28	Broadleaved plantation	Deciduous woodland	No	Not woodland	Northern part established broadleaved plantation of mostly oak and ash. Patchy shrub layer and rather Southern part is recent broadleaved plantation with patchy and locally dense scrub and tree regen and
29	S-n broadleaved woodland Broadleaved plantation Coniferous plantation	Deciduous woodland	No (possibly small strip on S & E bdy of c, but may be digitising error)	Not woodland, with exception of – - beside stream on SE bdy (b) - along parallel banks on NW/W bdy (a and d) - on bdy between a and d	Complex patchwork of habitat/stand types - c NE part mature oak/ash woodland with rather sparse shrub layer but LA birch regen. Field layer dom AWIs present. SW part is recent broadleaved plantation with sparse scrub and tree regen (compared to similar) and appears very grassy. a , b & d Area of mature coniferous plantation, esp alongside stream, but also extends to N (partly approximatin Two areas of established broadleaved plantation of mostly oak and ash with sparse shrub layer and rat Locally dense birch and willow regen (a and d) Area of open mixed broadleaved and coniferous woodland with sparse shrub and rather spp poor field Mature oak/hazel on bank between a & d Mature oak/hazel woodland on double parallel banks on N/NW bdy (a and d) as well as beside stream
30	S-n broadleaved woodland	Deciduous woodland	All (ASN)	Woodland	Mature oak/ash/hazel woodland either side of stream
31	S-n broadleaved woodland	Deciduous woodland	Some either side of stream in W (ASN)	Woodland	Mature oak/hazel woodland in majority eastern part Mature oak/ash/hazel woodland in W and S, either side of streams, with LF alder on banks
32	S-n broadleaved woodland	Deciduous woodland	No	Woodland	Mature oak/hazel woodland, open in centre with sparse shrub layer Scattered conifers and small area of wet woodland with willow and aspen on E bdy
33	S-n broadleaved woodland	Deciduous woodland	No	Woodland	Mature oak/hazel woodland in north. Some planted hazel in places Mature oak/ash/hazel woodland in S, either side of stream, with LF alder on banks
34	Broadleaved plantation		No	Not woodland 1871 Woodland 1895	Mostly recent broadleaved plantation with patchy and locally dense scrub and tree regen and scattere ride/tracks
35	S-n broadleaved woodland Broadleaved plantation Coniferous plantation	Deciduous woodland	No	Woodland	Patchwork of habitat/stand types – a recent broadleaved plantation with patchy and locally dense scrub and tree regen and scattered matu b, d & e Mature oak/hazel woodland and mature oak/ash/hazel woodland in S, alongside stream. Field layer ap c Roughly corresponds to area of mature coniferous plantation, though this is located further to the N, trees and quite open canopy in places as well as scattered, incl. mature, broadleaved trees. Abundant
36	S-n broadleaved woodland	Deciduous woodland	No	Woodland	Mature oak/hazel woodland
37	S-n broadleaved woodland Coniferous plantation	Deciduous woodland	Northern part of b (ASN)	Woodland	 a Mostly dense mature conifer plantation. Some patchy windthrow. Mature oak/hazel woodland strip on V except in areas of bdlvd woodland, probably due to shade, but incl. some AWIs b Mature oak/ash/hazel woodland with rich field layer

nd scattered mature or semi-mature trees

barse shrub layer. Field layer appears not rich.

scattered mature or semi-mature trees

ed mature or semi-mature trees

er spp poor field layer d scattered mature or semi-mature trees

ninated by bramble and pendulous sedge, but some

d scattered mature or semi-mature trees. Field layer

ing to **b**). ther spp poor field layer (**a** and **d**)

d layer in centre N (northern part of **a**)

n in NE (**b**)

ed mature or semi-mature trees, especially alongside

are or semi-mature trees

opears quite rich

, and not alongside stream in S. Includes many fallen t bramble and some bracken in field layer

W and N bdy. Field layer appears relatively spp poor,

Cpt	Habitats	Priority Habitats	Ancient Woodland	19 th C OS maps	Comments
38	S-n broadleaved woodland	Deciduous woodland Wet woodland	No	Not woodland	Most lies within footprint of historic ponds alongside stream and is wet woodland dominated by willow and aspen. Many fallen and split trees. Field layer includes LA nettle and F pendulous sedge Mature oak/ash/hazel woodland on edges/banks, where less wet.
39	S-n broadleaved woodland	Deciduous woodland	All (ASN)	Woodland	Mature oak/hazel woodland
40?	S-n broadleaved woodland Broadleaved plantation Coniferous plantation	Deciduous woodland	Eastern part (mostly PAWS with small area of ASN in N)	Woodland	Most of E part is mature conifer plantation which includes LF broadleaved trees (incl. mature), so parts W part is recent broadleaved plantation with patchy and locally dense scrub and tree regen and scat bluebell and wood anemone
41	S-n broadleaved woodland	Deciduous woodland	All (ASN)	Woodland	Mature oak/hazel woodland. Area in centre with more open canopy recently planted with mostly oak. F
42	S-n broadleaved woodland	Deciduous woodland	All (ASN), apart from far SW corner by stream	Woodland	Mature oak/hazel woodland. Field layer appears quite rich throughout.
43	S-n broadleaved woodland	Deciduous woodland	All (ASN) of S section (Beggars Copse)	Woodland	Mature oak/hazel woodland. Field layer appears quite rich throughout.
44	S-n broadleaved woodland Coniferous plantation	Deciduous woodland	No	Not woodland (Except E +W bdys) 1871 Conifer plantation + woodland 1895	Centre is mature conifer plantation but with many fallen trees so quite open canopy which also incl F by Rhododendron. Field layer appears relatively spp poor with mostly bramble and bracken Mature oak/hazel woodland on edges with AWIs such as bluebell etc
Easte	ern Block				·
48	S-n broadleaved woodland Broadleaved plantation	Deciduous woodland	All (PAWS)	Woodland	Most is recent broadleaved plantation with F and LA scrub and tree regen. Field layer incl. LA bra broadleaved trees. Groups of mature conifers on edges Narrow strip of s-n woodland on northern edge
49	S-n broadleaved woodland	Deciduous woodland	All (mostly ASN with small area of PAWS in NE (b))	Woodland Brick works in W corner	Mature oak/hazel woodland (a), with LF/A hornbeam in western and southern parts. Shrub layer patchy Area in NE with sparse canopy (b) has been recently planted, mostly with oak Ponds in western corner
50	S-n broadleaved woodland	Deciduous woodland	Nearly all (mostly ASN, PAWS N-S through centre), except far N cnr	Woodland Brick works in SW corner	Mature oak/hazel woodland (a). Occasional ash, hornbeam and birch. Bracken LA in field layer, but mu appears to have fewer large mature trees. Active badger setts present on western side. Northern corn especially in field layer, which is eutrophic (e.g. cleavers) and tends to lack AWIs, which are frequent in a Area in centre with sparse canopy (c) has been recently planted, mostly with oak Area in SW (b) has ponds and parts appear more eutrophic, with nettle etc
51	S-n broadleaved woodland	Deciduous woodland	All (ASN)	Woodland	Mature oak/hazel woodland. Birch LF in SW with LA bracken. Small stream runs W-E in north with O ash appears particularly rich in area adjoining stream, incl. yellow archangel AWI. Area in west, adjoining tra badger sett near SW corner.
52	S-n broadleaved woodland	Deciduous woodland	All (ASN)	Woodland	Mature oak/hazel woodland.
53	S-n broadleaved woodland Broadleaved plantation	Deciduous woodland	All (ASN + PAWS)	Woodland	Includes an area of mature oak/hazel woodland (Ancient) in the SW corner Most is recent broadleaved plantation with patchy and locally dense scrub and tree regen (incl. LF conif of section east of N-S ride appear to have been cut between rows of trees.

ws with LF alder on stream banks, but also some ash

approach s-n broadleaved woodland ttered mature or semi-mature trees. Field layer incl.

-ield layer appears quite rich.

roadleaved trees (incl mature). LA conifer regen and

amble and bracken. Scattered mature/semi-mature

with some sparse areas. Bracken LA in field layer.

uch appears quite rich. Area in east, adjoining track, her not Ancient and this is apparent in structure and adjoining ASN woodland

n and alder. Stands of hornbeam present. Field layer ack, appears to have fewer large mature trees. Active

fer) and scattered mature or semi-mature trees. Parts

Appendix II: Baseline Habitats

Please see overleaf.



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Lowwood Clay Pits - Proposed Development Site (Red Line June 2021) A-1 Site Habitat Baseline

_		Habitats and areas		Habitat disti	activeness	Habitat	condition		Ecological connectivit	tw.	Strateg	k simificance			Ecological				Retention cal	terrory blodie	ensity value			
										-				Suggested action to address	baseline				-	Revelles	Baseline			
Ref	f Broad Habitat	Habitat type	Area (hectares)	Distinctiveness	Score	Condition	Score	Ecological connectivity	Connectivity	Connectivity multiplier	Stratogic significance	Strategic significance	Strategic position multiplier	habitat losses	Total habitat units	Area retained	Area d enhanced	Area succession	units	units	units	Area lost	Units lo	
1	Woodland and forest	Woodland and forest - Other woodland; broadleaved	1.82	Medium	4	Moderate	2	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same broad habitat or a higher distinctiveness habitat required	34.56				0.00	0.00	02.0	1.82	14.56	
2	Woodland and forest	Woodland and forest - Other woodland; broadleaved	1.84	Medium	4	Moderate	2	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same broad habitat or a higher distinctiveness habitat required	14.72				0.00	0.00	02.0	1.84	14.72	
3	Woodland and forest	Woodland and forest - Lowland mixed deciduous woodland	0.28	High	6	Fairly Good	2.5	Medium	Moderately connected habitat	ц	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same habitat required	4.62				0.00	0.00	0.00	0.28	4.62	
4	Woodland and forest	Woodland and forest - Other woodland; broadleaved	0.12	Medium	4	Moderate	2	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no-local strategy	Low Strategic Significance	1	Same broad habitat or a higher distinctiveness habitat required	0.96				0.00	0.00	0.00	0.12	0.96	
5	Woodland and forest	Woodland and forest - Lowland mixed deciduous woodland	0.05	High	6	Fairly Good	2.5	Nedum	Moderately connected habitat	11	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same habitat required	0.83				0.00	0.00	0.00	0.05	0.83	
6	Woodland and forest	Woodland and forest - Lowland mixed deciduous woodland	0.17	High	6	Fairly Good	2.5	Nedum	Moderately connected habitat	ш	Area/compensation not in local strategy/ no-local strategy	Low Strategic Significance	1	Same habitat required	2.81	0.17			2.81	0.00	00.0	0.00	0.00	
7	Woodland and forest	Woodland and forest - Lowland mixed deciduous woodland	0.28	High	6	Fairly Good	2.5	Medium	Moderately connected habitat	11	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same habitat required	4.62				0.00	0.00	0.00	0.28	4.62	
	Woodland and forest	Woodland and forest - Lowland mixed deciduous woodland	2.42	High	6	Fairly Good	2.5	Nedum	Moderately connected habitat	11	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same habitat required	29.93	0.06			0.99	0.00	0.00	2.36	38.94	
9	Woodland and forest	Woodland and forest - Other woodland; broadleaved	0.3	Medium	4	Moderate	2	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same broad habitat or a higher distinctiveness habitat required	2.4D	6.3			2.40	0.00	00.0	6.00	0.00	
10	Woodland and forest	Woodland and forest - Other woodland; mixed	0.11	Medium	4	Fairly Poor	15	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same broad habitat or a higher distinctiveness habitat required	Same broad habitat or a higher distinctiveness habitat required		0.11			0.66	0.00	0.00	0.00	0.00
11	Woodland and forest	Woodland and forest - Other woodland; broadleaved	0.12	Medium	4	Moderate	2	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same broad habitat or a higher distinctiveness habitat required	0.96	0.12			0.96	0.00	02.0	6.00	0.00	
12	Woodland and forest	Woodland and forest - Lowland mixed deciduous woodland	0.07	High	6	Fairly Good	2.5	Medium	Moderately connected habitat	ц	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same habitat required	1.16	0.07			1.16	0.00	02.0	6.00	0.00	
13	Woodland and forest	Woodland and forest - Lowland mixed deciduous woodland	0.36	High	6	Fairly Good	2.5	Nedum	Moderately connected habitat	ш	Area/compensation not in local strategy/ no-local strategy	Low Strategic Significance	1	Same habitat required	5.94	0.36			5.94	0.00	00.0	0.00	0.00	
14	Woodland and forest	Woodland and forest - Lowland mixed deciduous woodland	0.004	High	6	Fairly Good	2.5	Medium	Moderately connected habitat	11	Area/compensation not in local strategy/ no-local strategy	Low Strategic Significance	1	Same habitat required	0.07	0.004			0.07	0.00	0.00	6.00	0.00	
15	Woodland and forest	Woodland and forest - Lowland mixed deciduous woodland	0.11	High	6	Fairly Good	2.5	Nedum	Moderately connected habitat	ш	Area/compensation not in local strategy/ no-local strategy	Low Strategic Significance	1	Same habitat required	1.82	0.11			1.82	0.00	00.0	6.00	0.00	
16	Woodland and forest	Woodland and forest - Lowland mixed deciduous woodland	0.09	High	6	Fairly Good	2.5	Medium	Moderately connected habitat	11	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same habitat required	1.49	0.09			1.49	0.00	0.00	6.00	0.00	
17	Urban	Urban - Vacant/derelict land/ bareground	0.12	Low	2	Poor	1	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no-local strategy	Low Strategic Significance	1	Same distinctiveness or better habitat required	0.24	0.12			0.24	0.00	00.0	6.00	0.00	
18																								
19																		L						
20																								
21																		L						
22																								
		Total site area ha	8.26											Total Site baseline	97.76	1.51	0.00	0.00	18.52	0.00	0.00	6.75	79.25	

Ι

Bespoke	Com	amenta						
agreed for								
unacceptable	Assessor comments	Reviewer comments						
	Compariment 27 - site							
	Compariment 28 - site							
	Compariment 28 - site							
	Compariment 28 - site							
	Compartment 25-site							
	Compariment 31 - access							
	Compariment 33 - site							
	Compartment 33 - mainly site, part access							
	Compariment 34 - access, includes westerly passing place. ANSW fragment							
	Compariment 4D - access, includes easterly passing place. PAWS - mapped as conferous plantation but includes a significant broadleaved component, both self-seeded and retained mature trees.							
	Compariment 4D - access							
	Compariment 41 - access. PAWS (most of compariment is mapped as ANSW but southern strip is PAWS)							
	Compariment 42 - access. ANSW							
	Compariment 43 - access. This section not ANSW							
	Compariment 49 - access. ANSW							
	Compariment SD - access. ANSW							
	Area of access track on third party land ownership							
	•							

Loxwood Clay Pits - Proposed Development Site (Red Line June 2021)

D-1 Off Site Habitat Baseline

Habitats and areas Ecological connectivity Strategic signif Baseline units Strategic position multiplier units Ecological Area Daseline ref units Habitat typ Score Broad habit Strategic significant units Units lost nultiolk Low Strategic Significance Low Strategic Significance Low Strategic Significance Low Strategic Fairly Good not in local s 37.95 0.00 0.00 0.00 1 High 2.5 2.3 Medium 1.1 1 17.95 2.3 0.00 strategy 0.17 Low Fairly Poor 1.5 Law 1 0.51 0.17 0.51 0.00 0.00 0.00 0.00 2 1 strategy 3 1.65 Medium Moderate 2 Law 1 29.20 0 0.0 0.00 3.45 29.20 Voodland and fo 1 strategy n not in local s 4 0.91 Moderate Law 1 0 7.26 0.00 0.00 Woodland and fore Medium 2 1 7.28 0.91 0.00 Uncon d habitat strategy n not in local r Significance Low Strategic 5 11.715 0.00 0.00 0.71 High Fairly Good 2.5 Medium 1.1 0.71 0.00 0.00 oodland and for 1 strategy n not in local Significance Low Strategic 6 0.4 Medium Moderate Law 3.2 0.00 0.00 0.00 2 0.4 strategy Significance Low Strategic stinctiveness habitat require 7 0.28 High Fairly Good 2.5 Medium 1.1 0.28 4.62 0.00 0.00 0.00 0.00 strategy n not in local strateg Significance Low Strategic . 2.64 0.00 0.00 0.00 0.33 Medium 2 Law 0.00 Moderate 1 1 2.64 0.33 oodland and fore strategy n not in local strategy Significance Low Strategic 9 High Fairly Good 2.5 1 1.485 0.00 0.00 0.00 0.09 Medium 1.1 0.09 0.00 oodland and fores 1.49 Same habitat required strategy on not in local s Significance Low Strategi 49.335 0.00 0.00 10 High Fairly Good 2.5 Medium 1 49,34 0.00 0.00 2.99 1.1 2.99 Significance Low Strategic Significance Low Strategic Significance Low Strategic strategy ion not in local strategy 11 1.82 Low Fairly Poor 1.5 Law 1.82 0 5.46 0.00 0.00 0.00 1 1 5.46 habitat required 12 3.63 30.64 0.00 0.00 Medium Moderate 2 Law 1 30.64 3.63 0.00 0.00 Voodland and for 1 strategy n not in local st tinctiveness habitat requi 13 0.46 7.59 0.00 0.00 0.46 Fairly Good 2.5 Medium 1.1 0.00 Woodland and fore High 1 Same habitat required 7.59 0.00 Significance Low Strategic strategy n not in local s 34 8.18 Medium 1.87 30.855 104.12 0.00 Fairly Good 2.5 1.1 134.97 6.31 0.00 High 1 0.00 strategy ion not in local strategy Significance Low Strategic 15 0.14 Medium Moderate Law 0.14 0 1.12 0.00 0.00 Significance Low Strategic 16 odland and for 0.05 High Fairly Good 2.5 Medium 11 1 0.83 0.05 0.825 0.00 0.00 0.00 0.00 strategy on not in local str Significance Low Strategic Significance Low Strategic 17 93.56 91.555 0.00 0.00 5.67 2.5 0.00 0.00 High Fairly Good Medium 1.1 1 5.67 Voodland and forv 6 Same habitat required strategy n not in local strategy 18 Medium 0 29.52 0.00 0.00 3.69 2 1 29.52 3.69 0.00 Moderate Law 1 oodland and for strategy ion not in local s strategy ion not in local s Significance Low Strategic Significance stinctiveness habitat requires 19 1.63 High Fairly Good 2.5 Medium 11 26.90 26,895 0.00 0.00 0.00 0.00 6 1 Same habitat r 1.63 20 3.86 High Fairly Good 2.5 Medium 11 Low Strategic Significance Low Strategic 63.69 3.54 0.32 58.41 5.28 0.00 0.00 0.00 6 1 Same habitat required strategy not in local strategy 21 Woodland and fore 1.78 Medium Moderate 2 Law 1 1 14.24 1.78 14.34 0.00 0.00 0.00 0.00 strategy Significance tinctiveness habitat requir 22 on not in local strategy/ strategy Low Strategic Significance Same broad habitat or a higher 1.5 Law 4.26 0.71 4.26 000 0.00 0.00 0.00 0.71 Medium Fairly Poor 1 1 not in local 23 2.94 High Fairly Good 2.5 Medium Low Strategie 48.51 1.48 24.09 24.42 0.00 0.00 oodland and fore 1.1 1.46 Low Strategic Significance Low Strategic Significance Low Strategic Significance Low Strategic Significance 1 strategy 24 Woodland and forv 1.63 High 6 Fairly Good 2.5 Medium 1.1 1 Same habitat required 26.90 1.63 26.895 0.00 0.00 0.00 0.00 strategy n not in local s 25 Low 1.5 Law 00.0 00.0 0 0.00 Woodland and fore 1 Fairly Poor 1 1 3.00 1 0.00 strategy on not in local strategy/ habitat required 2.14 0.00 26 2.86 High Fairly Good 2.5 1.1 1 47.19 2.73 0.129999 45.045 0.00 0.00 Voodland and forv Medium Same habitat required strategy on not in local strategy/ n 22.94 22.935 0.00 0.00 27 oodland and forv 1.39 High Fairly Good 2.5 Medium 1.1 1 Same habitat required 1.39 0.00 0.00 strategy n not in local s Low Strategic Significance arre broad habitat or a highe 0.00 28 1.08 Medium Fairly Poor 1.5 Law 1 1 6.48 0.29 0.79 1.74 4.74 0.00 0.00 strategy Low Strategic Significance Low Strategic Significance Low Strategic Significance n not in local s arre broad habitat or a high 29 0 5.12 0.00 0.64 Voodland and fore 0.64 Medium Moderate 2 Law 1 1 5.12 0.00 0.00 Uncon strategy distinctiveness habitat requires 30 not in local 3.465 0.00 0.00 0.21 Fairly Good Medium 1.47 0.00 High 2.5 1.1 0.21 oodland and for 1 strategy 31 1.51 High Fairly Good 2.5 Medium 1.1 Same habitat required 24.92 1.51 24.915 0.00 0.00 0.00 0.00 Woodland and for 1 strategy Significance Low Strategic Significance Low Strategic Significance Voodland and fo 32 250.31 250.305 0.00 0.00 0.00 15.17 High Fairly Good 2.5 Medium 1.1 1 Same habitat required 15.17 0.00 Voodland and forv strategy on not in local strategy 33 High 2.5 96.53 96.525 0.00 0.00 0.00 0.00 5.85 Fairly Good Medium 1.1 1 Same habitat required 5.85 Voodland and for strategy 34 1.13 Medium Fairly Poor Law strategy Low Strategic Significance arne broad habitat or a highe 6.78 6.78 0.00 0.00 0.00 1.5 1 1 1.13 0.00 Low Strategie 0.46 High 2.5 Medium 11 0.46 7.59 0.00 0.00 0.00 0.00 oodland and for Fairly Good 1 7.59 Significance Low Strategic Significance Low Strategic strategy n not in local s Woodland and forest 0.7 Medium Moderate 2 Law 1 1 5.60 0.7 5.6 0.00 0.00 0.00 0.00 lines strategy n not in local istinctiveness habitat require 0.00 6.765 0.00 0.00 Woodland and fore 0.41 High Fairly Good 2.5 Medium 1.1 1 Same habitat required 6.77 0.41 0.00 strategy on not in local Significance Low Strategic 102.63 0.00 0.00 Medium Woodland and for 6.22 Fairly Good 2.5 11 Same habitat re 102.63 6.22 0.00 0.00 High 1 strategy Significance Low Strategic 0.4 Medium Moderate Law 1.20 0.4 3.2 0.00 0.00 0.00 0.00 Voodland and forv 2 0.00



Bespake	Com	nests
compensation agreed for unacceptable	Assessor comments	Reviewer comments
	Compariment 25	
	Compariment 25	
	Compariment 25	
	Compariment 26 - PAWS	
	Compariment 26 - ASNW	
	Compariment 27 - PAWS (fraament)	
	Compariment 27 - DAWS (fragment)	
	Compariment 28	
	Compariment 28	
	Compariment 29	
	Compariment 29	
	Companya i 33	
	Comparison 27	
	Compariment 31 - 45MW	
	Compariment 31	
	Comparing at 13	
	Compariment 33	
	Compariment 34	
	Compariment 34	
	Compariment 35	
	Compariment 35	
	Compariment 35 - mapped as conferous plantation but	
	includes a significant broadleaved component, both self- seeded and retained mature trees	
	Compariment 36	
	Compariment 37 - ASNW (part)	
	Compariment 37	
	Compartment 38	
	Compartment 39 - ASNW (tragment)	
	Compariment 40 - PAWS - mapped as conferous plantation but includes a significant broadleaved component, both self- seeded and retained mature trees	
	Compariment 40	
	Compariment 40	
	Compariment 41 - ASNW	
	Compariment 42 - ASNW	
	Compariment 43 - ASNW	
	Compariment 44 - mapped as coniferous plantation but includes a significant broadleaved component, both self- seeded and retained mature trees	
	Compariment 44	
	Compariment 48 - PAWS	
	Compariment 48	
	Compariment 49 - ASNW	
	Compariment 49 - PAWS	
	compariment 50 - ASNW	
	Compariment 50 - PAWS	
	compartment 51 - ASNW (part)	
	Companyment 51	
	Emperational \$1, DAME (num)	
	Comparisment 53 - ASNW (part)	
	erenden megen men den di	
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Appendix III: Post-intervention Habitats

Please see overleaf.



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Loxwood Clay Pits - Proposed Development Site (Red Line June 2021) A-2 Site Habitat Creation Post development/ post intervention habitats ological connectivit Strategic sign cance Temp Difficulty multipliers Area labitat units Strategic position Difficulty of Difficulty of Proposed habitat Score Conditio Score Ecological Connectivit multiplier Strategic significance Time to target condition/years Time to target multiplier delivered (hectares Connectivity Strategic significance creation creation connectivity category nultiplier Woodland and forest - Lowland mixed deciduous woodland Low Strategic Moderately connect habitat Area/compensation not in local 1.2 6 Good 1.1 0.33 2.51 Medium 1 32+ High з 0.320 High strategy/ no local strategy Significance Lakes - Ponds (Non- Priority Habitat) Area/compensation not in local strategy/ no local strategy Low Strategic Significance Moderately connecte habitat 0.45 High 6 Moderate 2 Medium 1.1 1 з 0.899 Low 1 5.34 Woodland and forest - Other woodland; broadleaved Low Strategic Significance Area/compensation not in local 3.315 Medium 4 Moderate Low Unconnected habitat 1 30 0.343 Medium 0.67 6.10 2 1 strategy/ no local strategy Grassland - Other neutral grassland Area/compensation not in local Low Strategic 1.071 10 0.700 1 6.00 Medium 4 Moderate Low 1 Unconnected habitat 1 Low 2 strategy/ no local strategy Significance Heathland and shrub - Mixed scrub Low Strategic Significance Area/compensation not in local 0.714 Moderate 5.13 Medium 4 Low Unconnected habitat 1 1 з 0.899 1 2 Low strategy/ no local strategy Total Units 25.08 Totals

Loxwood Clay Pits - Proposed Development	nt Site (Red Line J	ine 2021)																			
D-2 Off Site Habitat Creation																					
Condense / Show Columns	Conderse / S	now Rows																			
Main Menu	Instruc	ions																			
Post development/ post intervention habitats																					
								Ecological connectivity		Strategic sign	ificance		Temporal multiplier		Difficulty	multipliers	Spatial risk multiplier			Comm	sents
Proposed habitat	Area b	Distinctive	ness Sco	me	Condition	Score	Ecological connectivity	Connectivity	Connectivity multiplier	Strategic significance	Strategic significance	Strategic position multiplier	Time to target condition/years	Time to target multiplier	Difficulty of creation category	Difficulty of creation multiplier	Spatial risk category	Spatial risk multiplier	Habitat units delivered	Assessor comments	Reviewer comments
Grassland - Other neutral grassland	2.19	Mediu			Good	3	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	15	0.586	Low	1	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	1	15.40	Compartment 25 broadleaved plantation converted to grassland, scrub and scattered trees for benefit of reptiles and nightingale	
Heathland and shrub - Mixed scrub	1.46	Mediu			Good	ĸ	Low	Unconnected habitat	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	7	0.779	Low	1	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	1	13.65	Compartment 25 broadleaved plantation converted to grassland, scrub and scattered trees for benefit of reptiles and nightingale	
Totais	3.65																	Total Units	29.05		

Cor	nments
Assessor comments	Reviewer comments
Area of existing BLSN woodland translocated	
from cells 15-27 to cells 1 to 10	
Area of operational surface water lagoon	
converted to pond during decommissioning	
Remaining area of extraction site restored to BL	
woodland during decommissioning, comprising	
approx. 65% woodland and 35% scrub/grass	
(60:40) mosaic	
Remaining area of extraction site restored to BL	
woodland during decommissioning, comprising	
approx. 65% woodland and 55% scrudygrass	
(eu:eu) moseic Remaining area of extraction site certored to BI	
woodbod during decommissioning comprising	
approx 65% woodland and 35% scrub/grass	
(60:40) mosair	
landal means	

Loxwood Clay Pits - Proposed Development Site (Re

D-3 Off Si	te Habitat Enhancment														
Condense / Sh	now Columns Condense / Show Rows														
Main I	denu testeustines														
	Instructions					Post developm	ent/post interve	intion habitats							
	Baseline habitats		Change in distinctiveness a					Ecological connectivity	Strategic significance	Temporal multiplier Difficulty multipliers		Spatial risk multiplier		Comments	
Baseline ref	Baseline habitat	Proposed habitat (Pre-Populated but can be overridden)	Distinctiveness change	Condition change	Area ha	Distinctiveness	Condition	Ecological connectivity score	Strategic significance	Time to target condition/years	Difficulty of enhancement category	Spatial risk category	Habitat units delivered	Assessor comments	Reviewer comments
4	Woodland and forest - Other woodland; broadleaved	Woodland and forest - Other woodland; broadleaved	Medium - Medium	Moderate - Good	0.91	Medium	Good	Low	Area/compensation not in local strategy/ no local strategy	15	Medium	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	8.71	Compartment 26 - PAWS - enhanced through thinning/coppicing & deadwood for benefit of birds, reptiles and inverts	
11	Woodland and forest - Other coniferous woodland	Woodland and forest - Lowland mixed deciduous woodland	Low - High	Lower Distinctiveness Habitat - Fairly Good	1.82	High	Fairly Good	Medium	Area/compensation not in local strategy/ no local strategy	32+	High	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	8.54	Compartment 29 - conversion to deciduous woodland, supplemented by woodland translocation from vegetation clearance in cells 11 to 30	
14	Woodland and forest - Lowland mixed deciduous woodland	Woodland and forest - Lowland mixed deciduous woodland	High - High	Fairly Good - Good	6.31	High	Good	Medium	Area/compensation not in local strategy/ no local strategy	10	High	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodivensity loss	108.93	Compartment 31 - ASNW - enhanced through thinning/copicing, focus for translocation / creation of deadwood habitats and deciduous woodland field layer, for benefit of habitats, inverts and breeding birds including nightingale	
15	Woodland and forest - Other woodland; broadleaved	Woodland and forest - Other woodland; broadleaved	Medium - Medium	Moderate - Fairly Good	0.14	Medium	Fairly Good	Low	Area/compensation not in local strategy/ no local strategy	10	Medium	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	1.25	Compartment 31 - as above	
18	Woodland and forest - Other woodland; broadleaved	Woodland and forest - Other woodland; broadleaved	Medium - Medium	Moderate - Fairly Good	3.69	Medium	Fairly Good	Low	Area/compensation not in local strategy/ no local strategy	30	Medium	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodivensity loss	32.98	Compartment 34 - enhanced through combination of langeted removal of trees / scrub from tracksides for bondle of wood while / other invests periodic rotational cutting/cosposing of trees/scrub for nightingside and docid woodband thrining / cospicing to benefit field layer, inverts and beseding birds	
20	Woodland and forest - Lowland mixed deciduous woodland	Woodland and forest - Lowland mixed deciduous woodland	High - High	Fairly Good - Good	0.32	High	Good	Međum	Area/compensation not in local strategy/ no local strategy	10	High	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	5.52	Compartment 35 - part enhanced through thinning / coppicing to benefit field layer, inverts and breeding birds	
23	Woodland and forest - Lowland mixed deciduous woodland	Woodland and forest - Lowland mixed deciduous woodland	High - High	Fairly Good - Good	1.48	High	Good	Medium	Area/compensation not in local strategy/ no local strategy	10	High	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	25.55	Compartment 36 - part enhanced through thinning / coppicing to benefit field layer, inverts and breeding birds	
25	Woodland and forest - Other coniferous woodland	Woodland and forest - Lowland mixed deciduous woodland	Low - High	Lower Distinctiveness Habitat - Good	1	High	Good	Medium	Area/compensation not in local strategy/ no local strategy	32+	High	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	5.04	Compartment 37 - conversion to deciduous woodland	
26	Woodland and forest - Lowland mixed deciduous woodland	Woodland and forest - Lowland mixed deciduous woodland	High - High	Fairly Good - Good	0.13	High	Good	Medium	Area/compensation not in local strategy/ no local strategy	10	High	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	2.24	Compartment 38 - part enhanced through thinning / coppicing to benefit field layer, inverts and breeding birds	
28	Woodland and forest - Other woodland; mixed	Grassland - Other neutral grassland	Medium - Medium	Fairly Poor - Moderate	0.79	Medium	Moderate	Low	Area/compensation not in local strategy/ no local strategy	10	Low	Compensation inside LPA or NCA, or deemed to be sufficiently local, to site of biodiversity loss	5.85	Compartment 40 - PAWS - conifer removal & seed sowing wildflower grass mix with plug planting of wood white larval food plants	
29	Woodland and forest - Other woodland; broadleaved	Woodland and forest - Other woodland; broadleaved	Međum - Međium	Moderate - Good	Q.64	Medium	Good	Low	Area/compensation not in local strategy/ no local strategy	15	Medium	Companisation inside LPA or NCA, or deemed to be sufficiently local, to site of biodivensity loss	6.13	Compartment 40 - young decid 8L plantation maintained as open glades through tree/scrub removal / rotational cutting, seed sowing with wildflower and plug planting of wood white larval food plants	
				Total site area	17.23							Total off-site area	210.74		

Appendix IV: Defra Metric Headline Results

Loxwood Clay Pits - Proposed Development Site (Re	urn to	
Headline Results result	ts menu	
	the block and be	07.76
On site baseline	Habitat units	97.76
Un-site baseline	Pivor units	0.00
	River units	0.00
On-site post-intervention	Habitat units	43.60
(Including babitat retention practice enhancement 9	Hedgerow units	0.00
(including habitat retenuon, creation, enhancement &	River units	0.00
Chirdeenni		
	Habitat units	1607.05
Off-site baseline	Hedgerow units	0.00
	River units	0.00
Off-site post-intervention	Habitat units	1625.44
on site post intervention	Hedgerow units	0.00
(Including habitat retention, creation, enhancement &	River units	0.00
	Habitat units	25 77
Total net unit change	Hedgerow units	0.00
(including all on-site & off-site habitat retention/creation)	River units	0.00
		0100
Total not % change	Habitat units	-36.59 %
Total net % change	Hedgerow units	0.00%
(including all on-site & off-site habitat creation + retained habitats)	River units	0.00%

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