

Fathom Ecology Limited

Extended Phase 1 Habitat Survey

Clymping Mill, Nr. Littlehampton, West Sussex

18/07/2019

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**EXTENDED PHASE 1 HABITAT SURVEY
CLYMPING MILL**

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Table of Contents

Table of Figures	iv
1. Introduction	1
2. Methodology.....	2
2.1. Desk Study.....	2
2.2. Extended Phase 1 Habitat Survey	2
2.3. Limitations.....	2
3. Results.....	3
3.1. Desk Study.....	3
3.1.1 Statutory sites	3
3.1.2 Non-statutory sites.....	3
3.2. Species	4
3.3. Extended Phase 1 Habitats Survey	10
3.3.1 Habitats	10
3.3.2 Amenity Grassland	10
3.3.3 Arable	10
3.3.4 Buildings and Hardstanding.....	11
3.3.5 Broad leaved woodland	11
3.3.6 Scattered Trees	12
3.3.7 Coniferous trees.....	12
3.3.8 Introduced Shrub	12
3.3.9 Hedgerows	12
3.3.10 Standing Water	12
3.3.11 Tall Ruderal.....	12
3.4. Protected and Notable Species	13
3.4.1 Plants.....	13
3.4.2 Invertebrates.....	13
3.4.3 Badgers.....	13
3.4.4 Bats.....	13
3.4.5 Otter	14
3.4.6 Other Mammals	14
3.4.7 Birds	15
3.4.8 Amphibians	15

**EXTENDED PHASE 1 HABITAT SURVEY
CLYMPING MILL**

3.4.9	Reptiles.....	16
4.	Conclusions	16
4.1.	Designated Sites	16
4.2.	Habitats	16
4.3.	Habitats within the Survey boundary.....	16
4.4.	Protected and Notable Species	17
5.	Recommendations	17
5.1.	Amphibians	17
5.2.	Bats.....	17
5.3.	Nesting Birds	18
6.	References	19
6.1.	Websites.....	19
8.	Appendix 1	20
8.1.	Plant Species	20
9.	Appendix 3	23
9.1.	Target Notes.....	23
10.	Appendix 4	24
10.1.	Site Photos	24

Table of Figures

Figure 1. Extent of Extended Phase 1 Habitat Survey – survey area (red) and the Site proposed for development including 50 m perimeter (orange)..... 1

Figure 2. A close up of the Site showing the Farmhouse and outbuildings ...**Error! Bookmark not defined.**

Figure 3 Map of Statutory and non-statutory nature conservation sites within 1 km of the Site. **Error! Bookmark not defined.**

Figure 4. Outbuilding 2 viewed from the north (a), east (b) and west (c) and from within (d) showing bat droppings on table.**Error! Bookmark not defined.**

1. Introduction

Fathom Ecology Limited (Fathom) was commissioned by Gary Love to undertake an Extended Phase 1 habitat assessment of land at Clymping Mill, Clymping, West Sussex. The Site is located approximately 150 m north of Atherington (Clymping) beach and approximately 1.5 km southwest from Littlehampton (grid reference for the centre of the Site: TQ 015012). The Site is bordered by a golf course to the east, beach/dunes to the south and arable farmland to the north and west. The following gives an overview of the nature of the proposed development:

- Construction of flood defence wall and gates;
- Excavation of pond and construction of flood defence vegetated bunds using excavated spoil;
- No change to existing access routes off of Clymping Street;
- The size of the plant/equipment used for the construction and demolition works will be kept to a minimum;
- All existing deciduous woodland would be retained;
- Appropriate buffers from any trees would be incorporated to respect rooting zones;
- The construction period will take 3 years

This report provides a description of the habitats present across the Site (Figure 1) and within easily accessible areas within 100 m of the survey boundary. The current ecological value of the survey area along with potential ecological constraints of the proposed development relating to legally protected or notable habitats or species are highlighted, with recommendations for further survey work made where appropriate.



Figure 1. Extent of Extended Phase 1 Habitat Survey (yellow) and the development site (orange). It is not anticipated that habitats outside of the development site will be impacted.

2. Methodology

2.1. Desk Study

Records of statutory sites designated for their nature conservation value within 1 km of the survey boundary were requested from the Sussex Biodiversity Records Centre (SxBRC). Sites with statutory, national or international designations could typically include notified or candidate Sites of Special Scientific Interest (SSSI), Local Nature Reserves (LNRs), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas and Ramsar Sites.

Details of non-statutory wildlife sites and legally protected, priority species and habitats, red data book (RDB) and county notable species within 1 km search radius surrounding the survey boundary were also requested from SxBRC. Non-statutory sites of local value include Local Wildlife Sites (LWS) and Local Geological Sites (LGS).

Habitats and Species Action Plans in the National Biodiversity Action Plan (UKBAP) as well as the local Sussex BAP were also consulted with regards to species and habitats that might be present on or adjacent to the Site. These government Action Plans have been produced for a whole suite of habitats as a commitment to maintain and enhance local and national biodiversity. Appendix 1 lists the habitats and species for which action plans have been formulated within the Sussex BAP.

2.2. Extended Phase 1 Habitat Survey

The Site was surveyed by Rayner Piper, an experienced ecologist on the 23rd of June 2019. June is an optimal month to survey as many plant species are conspicuous and in flower, as are the dominant species (as required under the Extended Phase 1 Habitat Survey methodology) allowing easy characterisation of vegetative identification features.

Habitats and obvious features within the Site were mapped following the Joint Nature Conservation Committee's Phase 1 Habitat Survey Method (JNCC, 2010) to map habitats and land use categorised to a consistent level of detail and accuracy. Habitat types were recorded on a large scale site map. Characteristic plant species associated with each habitat type were recorded and named following standard nomenclature (Stace, 2010). Target notes were prepared to highlight features of interest.

The scope of the Phase 1 Habitat Survey was further widened in accordance with the methodology provided by the Institute of Environmental Assessment (IEA, 1995) in that provision was made for recording information on features suitable for fauna of conservation interest. This included, for example, an assessment from ground level of all mature trees and buildings on Site which were inspected for their potential for supporting roosting bats and or Barn Owls *Tyto alba* as well as a search for any evidence of Badger *Meles meles*.

2.3. Limitations

The findings presented in this study represent those at the time of survey and reporting, with data collected from available sources. Ecological surveys are limited by factors which affect the presence of plants and animals, such as the time of year, migration patterns and behaviour. The intention of an Extended Phase 1 habitat survey is not produced a complete list of plants and animals present at the site. The purpose is to allow evaluation of nature conservation value of the survey area, to assess the

EXTENDED PHASE 1 HABITAT SURVEY CLYMPING MILL

significance of potential impacts that may arise from the proposals and to consider appropriate mitigation measures. Every effort has been made to ensure that the findings of the study present as accurate an interpretation as possible of the status of flora and fauna within the study area.

It is recognised that June is an optimal time to carry out an Extended Phase 1 Habitat Survey (the optimal period being April-September). However, it is possible that due to the date of the survey that some spring and winter species were not evident during the survey. In addition, many animal species have large home ranges or only visit the site at a certain time of year, such as migrant birds. Therefore, the absence of a record of a species does not mean the species cannot be present at the Site.

3. Results

3.1. Desk Study

3.1.1 Statutory sites

There was a single statutory site designated for its nature conservation value within the 1 km search radius surrounding the Site. Details of this site are provided in the Table 1 and the location is shown in Figure 3.

Table 1. Statutory nature conservation sites within 1 km of the Site.

Site Name	Site Code	Reason for designation	Distance from Site	Direction from Site
SSSI				
Climping Beach	OLD1004174	Vegetated shingle beach and dune system. Important for overwintering birds, especially sanderling.	100 m	South

3.1.2 Non-statutory sites

There were 2 non-statutory site designated for its nature conservation value within the 1 km search radius surrounding the Site. Sites of Nature Conservation Importance (SNCI's) are designations applied to the most important non-statutory conservation sites and are recognised by the National Planning Policy Framework (2012). Details of these sites are provided in Table 2.

Table 2. Non-statutory nature conservation sites within 1 km of the Site.

Site Name	Site Code	Reason for designation	Distance from Site	Direction from Site
Local Wildlife Sites				
West Beach LNR	ST21/017	Site forms part of Climping Beach SSSI. The LNR includes mud and sand flats, shingle and dunes.	700 m	South-west

EXTENDED PHASE 1 HABITAT SURVEY
CLYMPING MILL

Site Name	Site Code	Reason for designation	Distance from Site	Direction from Site
Little Hampton Golf Club and Sand Dunes	Ar06	Extensive vegetated dunes including species of conservation importance Nottingham Catchfly and Sand Catchfly	30 m	East

The proposed development at Clymping Mill does not seek to alter any statutory or non-statutory protected sites. The development is not anticipated to adversely affect any statutory or non-statutory sites.

3.2. Species

SxBRC held a number of records of legally protected, biodiversity priority, RDB or county notable species within the 1km search area. These species of conservation importance are presented in Table3.

Table 3. Species of conservation importance recorded within 1 km of the Site

Taxon Group	Species name	Common name	Status
Amphibians			
	<i>Triturus cristatus</i>	Great Crested Newt	UK BAP Priority
Higher Plants – Ferns			
	<i>Polypodium cambricum</i>	Southern Polypody	Sussex Rare
Higher Plants – Flowering Plants			
	<i>Agrostemma githago</i>	Corncockle	Sussex Rare
	<i>Alopecurus bulbosus</i>	Bulbous Foxtail	Nat Scarce, Sussex Rare
	<i>Anacamptis morio</i>	Green-winged Orchid	Red List GB Near Threatened
	<i>Arum italicum subsp. neglectum</i>		Red List GB Near Threatened
	<i>Bromus lepidus</i>	Slender Soft-brome	Sussex Rare
	<i>Cakile maritima</i>	Sea Rocket	Sussex Rare
	<i>Calystegia soldanella</i>	Sea Bindweed	Red List GB Near Threatened
	<i>Carex arenaria</i>	Sand Sedge	Sussex Rare
	<i>Carex extensa</i>	Long-bracted Sedge	Sussex Rare
	<i>Carlina vulgaris</i>	Carlina Thistle	Red List Near Threatened
	<i>Centaurea cyanus</i>	Cornflower	UK Bap Priority, Sussex Rare

EXTENDED PHASE 1 HABITAT SURVEY
CLYMPING MILL

Taxon Group	Species name	Common name	Status
	<i>Cyperus longus</i>	Galingale	Red List Near Threatened, Nat Scarce, Sussex Rare
	<i>Dianthus deltoides</i>	Maiden Pink	Red List Vulnerable, Nat Scarce, Sussex Rare
	<i>Echium plantagineum</i>	Purple Viper's-bugloss	Sussex Rare
	<i>Erodium moschatum</i>	Musk Stork's-bill	Sussex Rare
	<i>Eryngium maritimum</i>	Sea-holly	Red List Near Threatened, Sussex Rare
	<i>Euphorbia exigua</i>	Dwarf Spurge	Red List Vulnerable
	<i>Festuca rubra</i> x <i>Vulpia fasciculata</i> = <i>X Festulopia hubbardii</i>	Grass	Sussex Rare
	<i>Fragaria vesca</i>	Wild Strawberry	Red List Near Threatened
	<i>Frankenia laevis</i>	Sea-heath	Red List Near Threatened, Nat Scarce, Sussex Rare
	<i>Geranium purpureum</i>	Little-robin	Nat Rare, Nat Scarce, Sussex Rare
	<i>Glaucum flavum</i>	Yellow Horned-poppy	Red List Near Threatened
	<i>Helleborus foetidus</i>	Stinking Hellebore	Nat Scarce, Sussex Rare
	<i>Hieracium aggregatum</i>	Hawkweed	Red List Data Deficient, Nat Rare
	<i>Hippophae rhamnoides</i>	Sea-buckthorn	Nat Scarce, Sussex Rare
	<i>Hordeum marinum</i>	Sea Barley	UK BAP Priority, Red List Vulnerable, Nat Scarce, Sussex Rare
	<i>Hyoscyamus niger</i>	Henbane	Red List Vulnerable, Sussex Rare
	<i>Hypochaeris glabra</i>	Smooth Cat's-ear	Red List Vulnerable, Sussex Rare
	<i>Iberis amara</i>	Wild Candytuft	UK BAP Priority, Red List Vulnerable, Nat Scarce, Sussex Rare
	<i>Knautia arvensis</i>	Field Scabious	Red List Near Threatened
	<i>Malva pusilla</i>	Small Mallow	Sussex Rare
	<i>Medicago polymorpha</i>	Toothed Medick	Nat Scarce, Sussex Rare
	<i>Mentha arvensis</i>	Corn Mint	Red List Near Threatened

EXTENDED PHASE 1 HABITAT SURVEY
CLYMPING MILL

Taxon Group	Species name	Common name	Status
	<i>Minuarita hybrida</i>	Fine-leaved Sandwort	UK BAP Priority, Red List Endangered, Nat Scarce, Sussex Rare
	<i>Muscari neglectum</i>	Grape-hyacinth	UK BAP Priority, Red List Vulnerable, Nat Rare
	<i>Ononis spinosa</i>	Spiny Restharrow	Red List Near Threatened
	<i>Phleum arenarium</i>	Sand Cat's-tail	Red List Near Threatened, Sussex Rare
	<i>Plantago media</i>	Hoary Plantain	Red List Near Threatened
	<i>Poa bulbosa</i>	Bulbous Meadow-grass	Nat Scarce, Sussex Rare
	<i>Poa infirma</i>	Early Meadow-grass	Nat Scarce, Sussex Rare
	<i>Polygonum oxyspermum</i>	Ray's Knotgrass	Sussex Rare
	<i>Polypogon monspeliensis</i>	Annual Beard-grass	Nat Scarce, Sussex Rare
	<i>Puccinellia rupestris</i>	Stiff Saltmarsh-grass	Nat Scarce, Sussex Rare
	<i>Ruppia cirrhosa</i>	Spiral Tasselweed	Red List Near Threatened, Nat Scarce, Sussex Rare
	<i>Ruppia maritima</i>	Beaked Tasselweed	Red List Near Threatened
	<i>Senecio aquaticus</i>	Marsh Ragwort	Red List Near Threatened
	<i>Silene concica</i>	Sand Catchfly	Red List Endangered, Nat Scarce, Sussex Rare
	<i>Silene flos-cuculi</i>	Ragged-Robin	Red List Near Threatened
	<i>Silene nutans</i>	Nottingham Catchfly	Red List Endangered, Nat Scarce, Sussex rare
	<i>Solidage virgaurea</i>	Goldenrod	Red List Near Threatened
	<i>Spergula arvensis</i>	Corn Spurrey	Red List Endangered
	<i>Spiranthes spiralis</i>	Autumn Lady's-tresses	Red List Near Threatened
	<i>Trifolium fragiferum</i>	Strawberry Clover	Red List Vulnerable
	<i>Trifolium squamosum</i>	Sea Clover	Nat Scarce, Sussex Rare
	<i>Trifolium sufficatum</i>	Suffocated Clover	Nat Scarce, Sussex Rare
	<i>Vicia lutea</i>	Yellow-vetch	Red List Vulnerable, Nat Scarce, Sussex Rare
	<i>Vulpia ciliata subsp. ambigua</i>	Purple Fescue	Nat Scarce, Sussex Rare

EXTENDED PHASE 1 HABITAT SURVEY
CLYMPING MILL

Taxon Group	Species name	Common name	Status
	<i>Vulpia fasciculata</i>	Dune Fescue	Nat Scarce, Sussex Rare
Invertebrates – Ants, Bees, Sawflies & Wasps			
	<i>Andrena bucephala</i>	Big-headed Mining Bee	Notable A, Sussex Rare
	<i>Colletes marginatus</i>	Margined Colletes	Notable A, Sussex Rare
	<i>Hedychridium cupreum</i>	A wasp	Notable B
	<i>Lasioglossum malachurum</i>	Sharp-collared Furrow Bee	Notable B, Sussex Rare
	<i>Megachile leachella</i>	Silvery Leafcutter Bee	Notable B, Sussex Rare
	<i>Myrmica specioidea</i>	A red ant	Sussex Rare
	<i>Oxybelus argentatus</i>	Silver Spiny Digger Wasp	Notable A
	<i>Philanthus Triangulum</i>	Bee Wolf	Red List Vulnerable, Sussex Rare
Invertebrates - Beetles			
	<i>Agabus bipustulatus</i>	A Beetle	Sussex Rare
	<i>Agabus didymus</i>	A Beetle	Sussex Rare
	<i>Agabus nebulosus</i>	A Beetle	Sussex Rare
	<i>Calathus cinctus</i>	A Beetle	Sussex Rare
	<i>Enochrus bicolor</i>	A Beetle	Nat Scarce, Sussex Rare
	<i>Harplus attenuatus</i>	A Beetle	Nat Scarce, Sussex Rare
	<i>Hydrochus angustatus</i>	A Beetle	Nat Scarce, Sussex Rare
	<i>Melanimon tibialis</i>	A Beetle	Nat Scarce, Sussex Rare
	<i>Microplantus triangulum</i>	A Beetle	Notable B, Sussex Rare
	<i>Notoxus monoceros</i>	Monoceros Beetle	Sussex Rare
	<i>Oedemera femoralis</i>	A Beetle	Nat Scarce, Notable B, Sussex Rare
	<i>Oxypoda nigricornis</i>	A Beetle	Notable
	<i>Panagaeus bipustulatus</i>	A Beetle	Nat Scarce, Notable B, Sussex Rare
	<i>Philopodon plagiatus</i>	Marram Weevil	Sussex Rare
	<i>Psilithrix viridicoeruleus</i>	A Beetle	Sussex Rare
	<i>Silpha laevigata</i>	A Beetle	Sussex Rare
Invertebrates - Butterflies			
	<i>Coenonympha pamphilus</i>	Small Heath	Red List Near Threatened
	<i>Satyrus w-album</i>	White-letter Hairstreak	Red List Endangered
	<i>Thecla betulae</i>	Brown Hairstreak	Red List Vulnerable, Sussex Rare
Invertebrates – Dragonflies & Damselflies			

EXTENDED PHASE 1 HABITAT SURVEY
CLYMPING MILL

Taxon Group	Species name	Common name	Status
	<i>Sympetrum fonscolombii</i>	Red-veined Darter	Sussex Rare
Invertebrates – Grasshoppers & Crickets			
	<i>Conocephalus fuscus</i>	Long-winged Cone-head	Sussex Rare
Invertebrates - Molluscs			
	<i>Anisus vorticulus</i>	Little Whirlpool Ram's-horn Snail	UK BAP, Red List Vulnerable, Nat Rare, Sussex Rare
	<i>Cerastoderma glaucum</i>	Lagoon Cockle	Sussex Rare
	<i>Helicella itala</i>	Heath Snail	Sussex Rare
Invertebrates - Moths			
	<i>Acronicta rumicis</i>	Knot Grass	UKBAP Priority
	<i>Agrochola lychnidis</i>	Beaded Chestnut	UK BAP Priority
	<i>Allophyes oxyacanthae</i>	Green-brindled Crescent	UK BAP Priority
	<i>Amphipyra tragonpoginis</i>	Mouse Moth	UK BAP Priority
	<i>Ancylolysis obitella</i>	Saltmarsh Knot-horn	Notable, Sussex Rare
	<i>Apoda limacodes</i>	Festoon	Sussex Rare
	<i>Arctia caja</i>	Garden Tiger	UK BAP Priority
	<i>Calophasia lunula</i>	Toadflax Brocade	Sussex Rare
	<i>Catocala sponsa</i>	Dark Crimson Underwing	UK BAP Priority
	<i>Chesias legatella</i>	Streak	UK BAP Priority
	<i>Chilodes maritima</i>	Silky Wainscot	Sussex Rare
	<i>Crombrugghia distans</i>	Breckland Plume	Sussex Rare
	<i>Diarsia rubi</i>	Small Square-spot	UK BAP Priority
	<i>Earias clorana</i>	Cream-bordered Green Pea	Sussex Rare
	<i>Epirrhoe galiata</i>	Galium Carpet	UK BAP Priority
	<i>Eudonia pallida</i>	Marsh Grey	Sussex Rare
	<i>Eulamprotes wilkella</i>	Painted Neb	Notable B, Sussex Rare
	<i>Eupthecia millefoliata</i>	Yarrow Pug	Sussex Rare
	<i>Euxoa nigricans</i>	Garden Dart	UK BAP Priority
	<i>Euxoa tritici</i>	Dusky Dart	UK BAP Priority
	<i>Hoplodrina blanda</i>	Rustic	UK BAP Priority
	<i>Hydraecia micacea</i>	Rosy Rustic	UK BAP Priority
	<i>Lacanobia suasa</i>	Dog's Tooth	Sussex Rare
	<i>Leucania comma</i>	Shoulder-striped Wainscot	UK BAP Priority
	<i>Litoligia literosa</i>	Rosy Minor	UK BAP Priority
	<i>Melanthia procellata</i>	Pretty Chalk Carpet	UK BAP Priority
	<i>Mythimna l-album</i>	L-album Wainscot	Sussex Rare
	<i>Mythimna littoralis</i>	Shore Wainscot	Sussex Rare
	<i>Phyllocnistis xenia</i>	Kent Bent-wing	Red List Vulnerable
	<i>Platytes alpinella</i>	Hook-tipped Grass-veneer	Sussex Rare

EXTENDED PHASE 1 HABITAT SURVEY
CLYMPING MILL

Taxon Group	Species name	Common name	Status
	<i>Psamathocrita argentella</i>	Silvery Neb	Red List Vulnerable, Sussex Rare
	<i>Rhizedra lutosa</i>	Large Wainscot	UK BAP Priority
	<i>Scopula emutaria</i>	Rosy Wave	Sussex Rare
	<i>Scopula marginepunctata</i>	Mullein Wave	UK BAP Priority
	<i>Scotopteryx chenopodiata</i>	Shaded Broad-bar	UK BAP Priority
	<i>Senta flammea</i>	Flame Wainscot	Sussex Rare
	<i>Sideridis turbida</i>	White Colon	Sussex Rare
	<i>Sitochroa palealis</i>	Sulphur Pearl	Notable, Sussex Rare
	<i>Spilosoma lubricipeda</i>	White Ermine	UK BAP Priority
	<i>Synaphe punctalis</i>	Long-legged Tabby	Notable B, Sussex Rare
	<i>Tholera cespitis</i>	Hedge Rustic	UK BAP Priority
	<i>Tyria jacobaeae</i>	Cinnabar	UK BAP Priority
	<i>Watsonalla binaria</i>	Oak Hook-tip	UK BAP Priority
Invertebrates - Spiders			
	<i>Sitticus saltator</i>	A Spider	Sussex Rare
Invertebrates – True Bugs			
	<i>Saldula pilosella</i>	A True Bug	Nat Scarce
	<i>Syromastus rhombeus</i>	Rhombic Leatherbug	Sussex Rare
Invertebrates – True Flies			
	<i>Acrosathe annulata</i>	Coastal Silver-stiletto	Nat Scarce
	<i>Philonicus albiceps</i>	Dune Robberfly	Nat Scarce
	<i>Thereva bipunctata</i>	Twin-spot Stiletto	Nat Scarce
	<i>Volucella zonaria</i>	A True Fly	Sussex Rare
Lichens			
	<i>Diploschistes muscorum</i>	A lichen	Sussex Rare
	<i>Peltigera canina</i>	A Lichen	Sussex Rare
	<i>Rhizocarpon geographicum</i>	A Lichen	Sussex Rare
Lower Plants - Mosses			
	<i>Hennediella heimii</i>	Heim's Pottia	Sussex Rare
Mammals			
	<i>Arvicola amphibius</i>	European Water Vole	UK BAP Priority, Sussex Rare
	<i>Erinaceus europaeus</i>	West European Hedgehog	UK BAP Priority
	<i>Chiroptera sp.</i>	Bat species	UK BAP Priority
	<i>Myotis daubentonii</i>	Daubenton's Bat	
	<i>Myotis mystacinus/brandtii</i>	Whiskered/Brandt's Bat	
	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	UK BAP Priority
	<i>Plecotus sp.</i>	Long-eared sp.	UK BAP Priority
Reptiles			
	<i>Anguis fragilis</i>	Slow-worm	UK BAP Priority

**EXTENDED PHASE 1 HABITAT SURVEY
CLYMPING MILL**

Taxon Group	Species name	Common name	Status
	<i>Zootoca vivipara</i>	Common Lizard	UK BAP Priority

3.3. Extended Phase 1 Habitats Survey

3.3.1 Habitats

Detailed habitat descriptions are provided below, which should be read in conjunction with the habitat map, target notes and accompanying photographs. A list of plant species recorded during the survey is provided in Appendix 1.

The Survey Area comprised approximately 3.3 hectares of deciduous woodland, amenity grassland, hardstanding and standing water. Boundary features comprised intact shrubs along the woodland edges, dense scrub and fences. To the north and east of the site boundary is a public footpath. The surrounding landscape is dominated by arable farmland to the north and west, Littlehampton Golf course a Site of Nature Conservation Interest and the SSSI Climping Beach and West Beach Local Nature Reserve to the south.

Summary descriptions of the habitats found on or adjacent to the Survey Area are given below. Where habitats are considered important, defined here as those that would qualify for inclusion in a local or UK BAP or those that are otherwise important in a local context, this is indicated.

3.3.2 Amenity Grassland

All amenity grassland found within the survey area occurred to the west of the buildings and the main access route to the site. This grassland had a medium sward length and was species-poor, being characterised by abundant perennial rye-grass *Lolium perenne*, Cocks-foot *Dactylis glomerata*, Yorkshire fog *Hoculus lanatus* and white clover *Trifolium repens*. Towards the northeast corner of the site the grassland structure remained the same, but the species composition varied being characterised by abundant fescue *Festuca rubra* and perennial rye-grass. The amenity grassland contained a wide variety of herbs Daisy *Bellis perennis*, Ribwort Plantain *Plantago lanceolata*, dock and dandelion *Taraxacum officinale*. As well as occasional Scentless Mayweed, Lesser Burdock, Hemlock, Cleavers, Groundsel, Dead nettles, Creeping Buttercup and Creeping Cinquefoil and Doves-foot cranesbill.

3.3.3 Arable

Survey Area

Arable fields were present to the north-east and west of the site. At the time of survey, the fields contained wheat. Field margins were narrow measuring approximately 1 m and comprised coarse grasses and ruderal species including cock's-foot, rough meadow grass, red fescue and false oat grass.

EXTENDED PHASE 1 HABITAT SURVEY CLYMPING MILL

3.3.4 Buildings and Hardstanding

Site

A total of six buildings are present on the site, comprising Clymping Mill and a complex of five outbuildings (Figure 2):

- Building B1, the Clymping Mill Building, a substantial traditional flint and brick building extended numerous times. The old windmill remains with top section and sails removed. It is attached to the main building by a flat roof which adjoins a tile clad gable roof, recently restored. The L-shaped northern abutment was made of brick and tile and of more recent construction than the remainder of this substantial building.
- Building B2, the single storey Cottage had been recently restored with the clay tiled roof removed and replaced;
- Building B3, Thatched barn, the thatch was old but intact. The northern wall of the building had been removed and the remaining flint and brick walls recently restored.
- Building B4, Trailer home – a raised wheeled trailer home of recent construction with felt and tile roof. Windows and roofing in good condition, this building was currently occupied by site staff.
- Building B5, Former School Building, this large pre-fabricated building was in a state of disrepair. Some rooms were used to store for wood and guttering in the north of the building. The southern end of the building had collapsed ceilings, walls, floors and windows;
- Building B6, Storage Building a single story prefabricated panel wall building with corrugated metal roof, used for storage. Building intact;

In addition to the buildings described above were four shipping containers approximately 12 m long by 3 m wide and 3 m high. Three were located perpendicular to the asphalt drive to the south of the thatched barn. The remaining container was had been placed to the south of building B6. All the containers were being used for storage of construction materials and tools.

Between buildings 1 and 2 was an area of hardstanding with occasional ruderal vegetation including nettle and bramble. It lead to an asphalt drive connecting the property to Climping Street.

3.3.5 Hard/Bare ground

Access is from the south of the site along an asphalt driveway. In the north-east corner behind Building B6 there is parking as well as next to Building B1 and B2. To the west of the site are areas of bare ground, compacted by ongoing renovation works. Tall ruderal plants are beginning to colonise the bare ground in some areas.

3.3.6 Broad leaved woodland

The north and east of the Site is mature broad-leaved woodland, up to 20 m high. Pedunculate Oak *Quercus robur* and Hazel *Corylus avellana* were frequent, with Ash *Fraxinus excelsior* Common. The understory comprised Holy *Ilex aquifolium*, Ground ivy *Glechoma heder*a, Bramble *Rubus fruticosus* agg. Lowland mixed deciduous woodland is a priority habitat under the UK BAP.

No Broadleaved woodland occurred within the area of the Site proposed for development.

EXTENDED PHASE 1 HABITAT SURVEY CLYMPING MILL

3.3.7 Scattered Trees

Occasional mature and semi-mature broadleaved trees including oak *Quercus robur* were present along the north-eastern boundary of the site. Other species included elm, ash, hazel and sycamore.

3.3.8 Coniferous trees

No coniferous trees were found in the site though a number of large tree stumps were noted between buildings B3 and B4. These were all that remained of a tall stand of Scotts Pine tree's felled in the great storm of 1987.

3.3.9 Introduced Shrub

In flower beds surrounding the Clymping Mill were a number of introduced shrubs including Cotoneaster, Russian vine and Roses.

3.3.10 Hedgerows

A broken hedgerow occurred along the eastern boundary. The hedge was predominantly between 1 and 1.5 m tall and was unmanaged. Mature hedgerow trees occurred throughout and included pedunculated oak, hazel, ash, birch and field maple. Shrub species included hawthorn, blackthorn, willow, elm, hazel, holly, dog-rose, honeysuckle and elder. The ground flora was generally species poor but included ground ivy, ivy, mares tails, hedge-parsley, dogs mercury and harts tongue fern.

Hedgerows have potential to qualify as 'important' under the ecological criteria of the Hedgerow Regulations 1997 (as amended). No hedgerows occurred within the area of the site proposed for development.

3.3.11 Standing Water

A single pond of recent construction was recorded within the survey area and a further open septic tank was recorded immediately to the west of building B3.

A pond of approximately 20 m diameter was located west-south west of Building B4 the old school. Recently formed it had no aquatic or marginal vegetation. Mallard were observed at the pond as were occasional dragon and damselfly. The bare earth surrounding the pond was colonised by Yorkshire Fog and ruderal species including Common Sorrel *Rumex acetosa*, Spear thistle *Cirsium vulgare*, Hogweed *Heracleum sphondylium* and teasel *Dipsacus fullonum*.

A small septic tank was unearthed during construction works and remains open. This man-made tank was due west of building B3. There was no aquatic vegetation and the water was stained with tannins, soil and accumulated leaf debris.

3.3.12 Tall Ruderal

Tall ruderal vegetation occurred to the north and west of buildings B3 and B4. Species include the common nettle which was dominant, with other species including hogweed *Heracleum sphondylium*, broadleaved dock, fat-hen *Chenopodium album* and willow-herb *Chamerion angustifolium*. Beneath the trees purple toadflax *Linaria purpurea*, morning campion *Silene dioica*, Common Mallow *Malva sylvestris* and foxglove *Digitalis purpurea* were occasional, feverfew *Tanacetum parthenium* abundant and nettle dominant.

EXTENDED PHASE 1 HABITAT SURVEY CLYMPING MILL

Further patches of tall ruderal vegetation occurred along the field edges and footpaths bordering the site.

3.4. Protected and Notable Species

During the survey the site was assessed for its potential to support legally protected or notable species. The results of this assessment are presented below, under separate headings for the different groups or species. Where protected species are not listed, e.g. white-clawed crayfish, it was considered that there was no suitable habitat within or adjacent to the site, and therefore there was no significant potential for those species to be present.

3.4.1 Plants

A total of 60 notable plant records were held by SxBRC within the 1 km study area. Whilst no notable plant species were recorded during the Extended Phase 1 survey the presence of cryptic species is considered likely.

No legally controlled invasive/non-native species such as Japanese knotweed were recorded during the survey.

3.4.2 Invertebrates

Grassland, pond and woodland habitat were suitable for a range of common / widespread invertebrate species. A Comma, Red Admiral and Speckled Wood butterflies were observed along the north-eastern boundary of the site as were unidentified damsel and dragonflies. Blackthorn within the hedgerows and woodland may provide suitable egg-laying habitat for the Priority Species Brown Hairstreak. The presence of other notable invertebrate species is considered likely.

3.4.3 Badgers

Badgers are legally protected species. Records of this species remain confidential and were not included in the SxBRC report.

A detailed survey for badgers was not undertaken during the Extended Phase 1 survey; however no mammal holes were identified within the site and the small number of mammal paths identified, were considered to belong to roe deer (observed) and fox.

3.4.4 Bats

All species of bats occurring in the UK receive full protection under the Habitats Regulations 1994, and the Wildlife and Countryside Act 1981 (as amended).

The desk study returned several records of bats including long-eared bats *Plecotus spp*, Common Pipistrelle *Pipistrellus pipistrellus*, Daubenton's Bat *Myotis daubentonii*, and Whiskered/Brandts Bat *Myotis mystacinus/brandtii*.

Bats in Buildings

A bat scoping survey of the site was carried out by the Ecology Co-op on the 7th February 2018. This included a ground-based external inspection of the buildings, internal inspection of enclosed loft spaces

EXTENDED PHASE 1 HABITAT SURVEY CLYMPING MILL

where possible and an appraisal of the surrounding habitats, to evaluate the site for its potential to support roosting bats.

This work identified potential roost sites in two buildings, the Old Mill House and the thatched cottage. Emergence surveys were undertaken in May, June and September 2018 to determine the presence of roosting bats and to evaluate the conservation importance of the site for bats. No emergences from the buildings were observed on any of the surveys (Ecology Co-op 2019). Bat activity at the site was observed with five species identified; Common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, nathusius pipistrelle *Pipistrellus nathusii*, serotine *Eptesicus serotinus* and brown long-eared bats *Plecotus auritus*. Given the results of the surveys, the Ecology Co-op concluded that a precautionary approach to mitigation should be taken and that an ecologist should soft strip the rooves of buildings B1 and B3 prior to any construction work on the rooves commencing.

Since the emergence surveys were carried out, the rooves of both buildings B1 and B3 have been renovated. No bats were found during this work.

Bats in Trees

A number of mature trees including pedunculate oak and sycamore were sited across the Site and had potential to provide good habitat for bats with cracks, splits, loose bark, cavities and ivy that would be suitable for roosting bats. Overall the trees on site are considered to have moderate potential for supporting roosting bats.

NB: No trees are to be felled as part of the planning application.

Foraging Bats

The surrounding landscape includes a garden with numerous trees, large expanses of amenity grassland and a large pond. Adjacent to the Site are substantial areas of lowland deciduous woodlands. These habitats are likely to provide foraging habitats for bats, increasing the likelihood that bats will be present within the local area.

Overall, the extent of the habitat on Site that is likely to be used by foraging bats is substantial with mature trees which could be used for roosting and hedgerows which could be used as navigational features by foraging bats within the wider area. The presence of the pond is likely to support a reasonable assemblage of invertebrates including flying insects that would serve as prey to foraging bats. Five bat species were recorded using the site during survey work in 2018 (Ecology Co-op 2018).

3.4.5 Otter

Although there is a large pond on site, this is of recent construction and of limited ecological importance currently. As such the Site is not considered to be of value for otter. The shallow water depth and the absence of fish in the pond mean that there would be limited food resources at the Site. The likelihood of otter using the Site is considered to be low.

3.4.6 Other Mammals

A single Roe deer were observed in arable fields to the west of the survey area, and three field voles were observed beneath a plywood sheet adjacent to the old school building (B4).

EXTENDED PHASE 1 HABITAT SURVEY CLYMPING MILL

3.4.7 Birds

Native birds and regularly visiting migrants along with their nests are protected by the Wildlife and Countryside Act 1981, (as amended). Under this legislation it is an offence to intentionally kill, injure or take birds of their eggs, or to intentionally destroy or disturb a nest, when it is in use of being built.

The desk study returned numerous records for birds including the song birds corn bunting and marsh tit. Birds identified during the survey of the Site included the following Schedule 1 species, Priority Species and 'Species of Conservation Concern' (SoCC):

- Barn swallow (Amber)
- Dunnock (Amber)
- Green Woodpecker (Amber)
- House sparrow (Red, Priority Species)
- Kestrel (Amber)
- Sand martin (Amber) and
- Skylark (Red, Priority Species)
- Song Thrush (Red, Priority Species)
- Stockdove (Amber)

Other species observed included buzzard, carrion crow, chiffchaff, great tit, long-tailed tit, goldfinch, greenfinch, mallard, pheasant, magpie and woodpigeon. All the trees, ornamental shrubs, tall herb vegetation and emergent vegetation found on the site have the potential to support nesting birds, as do the arable and pasture fields.

3.4.8 Amphibians

The desk study revealed records of four amphibian species within 1 km of the Site.

The great crested newt *Triturus cristatus* receives full protection under the Conservation of Habitats and Species Regulations 2017 [the 'Habitat Regulations'], and the Wildlife and Countryside Act 1981, (as amended). Great crested newt is also a UK BAP priority species. The SxBRC report returned 16 records for great crested newts within 1 km of the Site between 1992 and 2014. The SxBRC data identified records of common frog, smooth newt and palmate newt within approximately 1 km from the Site.

The freshwater habitats on the site comprised a large shallow pond of approximately 20 m by 20 m with no aquatic or marginal vegetation, and an open septic tank of 2 m diameter. No amphibians were observed.

The pond surveyed within the Site provided suitable habitat for breeding amphibians, potentially including great crested newt. Hedgerows, woodland, scrub, grassland and field margins provided potential terrestrial habitat.

Whilst habitat exists on the site which is potentially suitable for great crested newt, the absence of any known local populations in the area since 2014 and the recent construction of the pond at Clymping Mill reduces the likelihood of these habitats being used by this protected species.

The pond was tested for the presence of great crested newt using eDNA.

3.4.9 Reptiles

All reptiles are legally protected, Priority Species and Somerset BAP species. The desk study revealed two species of reptile within the 1 km study area. These were the common lizard *Zootoca vivipara* and the slow worm *Anguis fragilis*. Slow worm records came predominantly from Littlehampton, whilst the common lizard has been recorded from the Golf course, Clymping Beach and West Beach which are adjacent to the Site.

No reptiles were observed during the survey. Hedgerows, woodland and associated field margins provided suitable habitat for reptiles. The majority of arable fields adjacent to the site provided sub-optimal habitat.

4. Conclusions

4.1. Designated Sites

A single designated site, West Beach SSSI was identified during the desk study. The remainder of the sites are LWS, listed for the presence of county notable species.

The survey area does not lie within the Ecological Zone of Influence for any European Site. Impacts to other statutory and non-statutory sites are considered unlikely. The development works are contained within a small area of the Site and are considered unlikely to impact West Beach SSSI.

4.2. Habitats

4.3. Habitats within the Survey boundary

The survey area covered approximately 3.4 hectares and comprised amenity grassland, bare earth and hardstanding, broadleaved woodland, hedgerows and fences. A large pond was present. A complex of six buildings and hard standing was located to the north-east of the site.

The proposed development works will be limited to the Site which includes buildings and areas of hardstanding and includes a 50 m perimeter surrounding this. It is not anticipated that any habitats outside of the Site boundary will be impacted by the proposed development and many of those within the Site will remain intact.

The majority of habitats recorded within the Site including amenity grassland, semi-improved grassland, tall ruderal and ornamental shrub planting are all relatively small in extent and of limited nature conservation value. Some mature scattered mixed trees occur within the development zone. All existing hedgerows and trees within and beyond the Site will be retained. Appropriate buffers from any trees would be incorporated to respect rooting zones.

The habitats likely to be impacted by the proposed development are dominated by buildings, bare earth and amenity grassland and are of low ecological. However, some naturalised habitats are likely to be impacted including a small area of tall ruderal vegetation. The newly created large pond will be further developed to create a wetland habitat suitable for native wildlife. Native planting of aquatic and marginal vegetation will be encouraged in order to create a refuge for wildlife.

EXTENDED PHASE 1 HABITAT SURVEY

CLYMPING MILL

The newly formed earth flood defence bunds have been planted with bare-root whips in March 2020, most of which have taken root and are being irrigated daily. The bund along the most vulnerable southern edge of the property have been planted extensively with White Poplar which, although not indigenous to the UK, has been naturalized for centuries, as evidenced by the name Abele occurring in Old English. White Poplar has been chosen for this section of the flood defence due to its unique suckering growth habit, and its tolerance of salt and coastal conditions, to quickly establish a strong root system to bind the earthworks. The trees will be coppiced on a 3-5 year cycle in order to promote strong root growth. The bunds along the more protected edges of the property have been planted with locally sourced indigenous mixed hedgerow species with the mix as follows: Blackthorn, Hawthorn, Elder, Field Maple, Sea Buckthorn, Wild Privet and Dog Rose. All species have been chosen for their benefit to wildlife and it is expected that the bund planting that has been carried out will, in time, significantly improve the biodiversity on the property.

In addition to the biodiversity gain to be expected from the newly planted areas of the bunds, it is recognized that areas of bare earth and sparse vegetation are also important for a range of declining species, in particular butterflies, which require the heat of the sun to provide energy to fly, as well as Solitary Bees, most of whom are miners and nest underground. With this in mind it is proposed to leave areas along the southern face of the bunds unplanted, and to put in place a management programme whereby the south-facing slopes are scarified by hand every year to leave areas of bare earth to specifically benefit invertebrates and reptiles.

4.4. Protected and Notable Species

Previous surveys identified Buildings B1 and B3 as possessing features with the potential to serve as roosting sites for bats. Scoping and then emergence surveys recorded no bats using these buildings as roosts (Ecology Co-op 2018). Since the surveys both buildings have been renovated including roof repairs and neither building is considered a potential bat roost.

Building B2 is known to support a nesting wren (*Troglodytes troglodytes*). All the trees, hedgerows, ornamental shrubs, tall herb vegetation and emergent vegetation found on the site have the potential to support nesting birds, as do the arable and pasture fields beyond.

5. Recommendations

5.1. Amphibians

There is the potential for Great Crested Newts to use the recently constructed Pond. An Environmental DNA sample was collected and the results. **The findings from this survey will be reported in a separate document.**

5.2. Bats

A number of bat surveys undertaken by the Ecology Co-op did not find active roosts in any buildings on site. Five species of bats used the site for foraging and are likely to continue to do so. No further survey

EXTENDED PHASE 1 HABITAT SURVEY CLYMPING MILL

work is considered necessary at this time. Bat's should be encouraged to use the site and boxes should be installed as part of the development.

NB: To date three emergence bat surveys have been undertaken in 2018 and prior to that at least two separate scoping surveys. The scoping surveys identified Buildings B1 and B3 as potential bat roosts. A series of emergence surveys followed between May and September 2018. None of the emergence surveys identified active roosts in any buildings on site. No further bat surveys are considered necessary at this time.

5.3. Nesting Birds

It is recommended that the clearance of scrub and trees should be conducted outside of the breeding and nesting season, generally considered to be March to September inclusive.

Where it is not possible to conduct these operations outside of the breeding season, trees and other vegetation should be inspected by an ecologist, immediately prior to works commencing.

In the event that actively used nests are found works should cease and the area be cordoned off to a radius of 10 m. No works would be allowed to commence until an ecologist had confirmed that the breeding or nesting birds were no longer present.

6. Overall

The overall value of the site is considered to be low. No rare or unusual plants or invertebrate species were identified during the survey. The site comprised of common and widespread habitat types.

The proposed pond at Clymping Mill will introduce a much needed freshwater priority habitat into an area currently composed of bare ground and amenity grassland. The will re-create, restore and successfully reconnect high quality habitats across the Parish of Clymping, linking into the wider biodiversity network across the Arun District. The pond is likely to substantially increase the biodiversity value of the Site and of the wider area with Priority species including potentially the great crested newt, Little Whirlpool's Ramshorn snail, black chaser and the Black Poplar all benefiting from the scheme.

The proposed pond recognises the importance of biodiversity, and makes efforts to enhance biodiversity and prevent future losses in quality and quantity of wildlife habitats. Given consent, the planning proposal will ensure a healthy and wildlife rich future for Clymping Mill and its wider surrounds.

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7.1. Websites

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www.magic.gov.uk (MAGIC)

www.naturalengland.org (Natural England)

www.nbn.org.uk (National Biodiversity Network)

www.rspb.org.uk (Royal Society for Protection of Birds)

8. Appendix 1

8.1. Plant Species

The tables below list the species identified in each habitat type. These lists are not exhaustive but provide the incidental records gathered during the survey.

The relative abundance of each species within the habitats observed was estimated using the DAFOR scale shown in the table below.

DAFOR scale	Relative abundance
D	Dominant
A	Abundant
F	Frequent
O	Occasional
R	Rare

Amenity Grassland

Common name	Species name	DAFOR
Annual Meadow-grass	<i>Poa annua</i>	D
Daisy	<i>Bellis perennis</i>	O
Cocks-foot	<i>Dactylis glometra,</i>	F
Perennial Rye-grass	<i>Lolium perenne</i>	D
Ribwort Plantain	<i>Plantago lanceolata</i>	O
Yorkshire fog	<i>Hoclus lanatus</i>	F
Red fescue	<i>Festuca rubra</i>	A
Ribwort Plantain	<i>Plantago lanceolata</i>	F
Dandelion	<i>Taraxacum officinale</i>	O

Broad-leaved semi-natural woodland

Common name	Species name	DAFOR
Pedunculate Oak	<i>Quercus robur</i>	A
Elder	<i>Sambucus nigra</i>	A
Hazel	<i>Corylus avellana</i>	F
Hawthorn	<i>Crataegus monogyna</i>	O
Ash	<i>Fraxinus excelsior</i>	O
Sycamore	<i>Acer pseudoplatanus</i>	F

Hedgerows

Common name	Species name	DAFOR
Blackthorn	<i>Prunus spinose</i>	O
Hawthorn	<i>Crataegus monogyna</i>	F
Ash	<i>Fraxinus excelsior</i>	R
Field Maple	<i>Acer campestre</i>	F

EXTENDED PHASE 1 HABITAT SURVEY
CLYMPING MILL

Elm	<i>Ulmus minor</i>	O
Ivy	<i>Hedera helix</i>	F
Honeysuckle	<i>Lonicera periclymenum</i>	O
Dog rose	<i>Rosa canina</i>	O
Oak	<i>Quercus robur</i>	F
Hazel	<i>Corylus avellana</i>	F
Elder	<i>Sambucus nigra</i>	F
Holly	<i>Ilex aquifolium</i>	O
Bramble	<i>Rubus fruticosus</i>	F
Horsetail	<i>Equisetum avense</i>	O

Scattered Trees – Pond 2, Field 9

Common name	Species name	DAFOR
Pedunculate Oak	<i>Quercus robur</i>	A
Ash	<i>Fraxinus excelsior</i>	R
Hazel	<i>Corylus avellana</i>	F
Sycamore	<i>Acer pseudoplatanus</i>	F

Tall ruderal

Common name	Species name	DAFOR
Cleavers	<i>Galium aparine</i>	O
Common Mallow	<i>Malva sylvestris</i>	O
Common Nettle	<i>Urtica dioica</i>	D
Cow Parsley	<i>Anthriscus sylvestris</i>	O
Fat-hen	<i>Chenopodium album</i>	D
Field Bindweed	<i>Convolvulus arvensis</i>	D
Hedge Bindweed	<i>Caystegia sepium</i>	O
Hedge Mustard	<i>Sisymbrium officinale</i>	O
Hedge Woundwort	<i>Stachys sylvatica</i>	O
Hemlock	<i>Conium maculatum</i>	D
Hoary Willowherb	<i>Epilobium parviflorum</i>	O
Hogweed	<i>Heracleum sphondylium</i>	D
Lesser Burdock	<i>Arctium minus</i>	O
Rosebay Willowherb	<i>Chamerion angustifolium</i>	D
Cleavers	<i>Galium aparine</i>	O
Common Mallow	<i>Malva sylvestris</i>	O

Introduced Shrub

Common name	Species name	DAFOR
Virginia Creeper	<i>Parthenocissus quinquefolia</i>	O
Ornamental Iris	<i>Irideae</i>	O
Ornamental rose	<i>Rosa spp.</i>	O
Japanese burberry	<i>Berberis thunbergii</i>	O
Aquilegia	<i>Aquilegia vulgaris</i>	O

EXTENDED PHASE 1 HABITAT SURVEY
CLYMPING MILL

Cranesbill Geranium	<i>Geranium johnsonii</i>	0
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9. Appendix 2

9.1. Target Notes

1. Large fire wood piles stacked on north-eastern edge of Building B6. Behind these is bare ground for car parking and large piles of rip rap and rubble as well as piles of timber for construction works.
2. Leaf litter below stand of pedunculated oak with occasional grasses, goose grass and various flowering plants emerging through.
3. Wild plum tree along north-east boundary, 5 m plus and fruit ripening.
4. Old toilet, wood piles, palettes and other debris to west of Building B4 trailer house.
5. Stumps of scotts pine trees on amenity grassland between Buildings B3 the old school and B4 the Trailer Home.
6. Open septic tank between scattered trees and electricity pylon to the north of the old school. Surface thick with scum and filamentous green algae.
7. Short stands of nettle with occasional creeping thistle and dock amongst amenity grassland to west of Buildings B3 and B4, with occasional dense patches of bramble beyond.
8. Mounds of earth covered in grass, nettle and thistle with occasional branch debris piled on floor.
9. Newly erected steel fence along eastern and northern boundary of site adjacent to public footpath. Overgrown with nettle, occasional buttercup. Hawthorn, elder and blackthorn overhang fence from intact hedgerow adjacent to golf course.
10. Diggers and other heavy machinery on bare earth to east of pond.
11. Two male mallard and occasional dragonflies noted at large pond.
12. Three large shipping containers to east of main track to site. Large spoil heaps behind and beyond this tall ruderal vegetation including foxglove, opium poppy, thistles, Yorkshire fog and False oat grass.
13. Large bags of rubble on western edge of containers adjacent to main track along with palletised construction materials.
14. Old flint wall to west of main track, beyond which tall ruderal and occasional scattered hawthorn.
15. Skips, bins and a further shipping container along main track approaching building B6.
16. Glass house next to renovated flint and mortar wall in grounds of Old Mill, surrounded by tall ruderal and occasional introduced shrub including fuschia.
17. Stag Roe deer and in Wheat Field east of the development site.
18. Field vole – 1 adult, two juveniles encountered under ply sheet outside former school building B5.
19. Wren nest noted in vent at base of building B4 trailer park.

10. Appendix 3

10.1. Site Photos

1	Farm house viewed from north-west
2	 Building B1 The Old Mill viewed from the south, showing bare earth in foreground, tall ruderal along the east and pedunculated oak behind.
3	 Building B1 – viewed from the north-east, showing the Thatched Cottage (Building B3) behind and the main route in and out of the site to the left of the picture.

EXTENDED PHASE 1 HABITAT SURVEY
CLYMPING MILL

4



Building B2 The Cottage viewed from the south-east, with the Old School to the west, the Old Mill behind and the thatched cottage to the east

5



Building B3 The Thatched Cottage viewed from the south-east

EXTENDED PHASE 1 HABITAT SURVEY
CLYMPING MILL

6



Building B4 – The Old School a prefabricated building in disrepair, currently used as a workshop and storage facility

7



Building B5 – a modern trailer home

EXTENDED PHASE 1 HABITAT SURVEY
CLYMPING MILL

8



Building B6 (left) a prefabricated storage facility viewed from north-east. with plant machinery in storage. Note log piles to north of building

9



The pond viewed from the east, showing standing water, bare ground and tall ruderal vegetation with scattered trees and deciduous woodland behind.

EXTENDED PHASE 1 HABITAT SURVEY
CLYMPING MILL

10



Septic tank to the east of the modern trailer home.

11



.Shipping containers to the east of the track as you enter the site

EXTENDED PHASE 1 HABITAT SURVEY
CLYMPING MILL

12



Shipping containers, pallets and skips alongside the main track to site



Field voles found beneath plywood board adjacent to the Old School Building.

EXTENDED PHASE 1 HABITAT SURVEY
CLYMPING MILL

13



Footpath marking boundary to the north east of the site with scrub including elder and ivy.

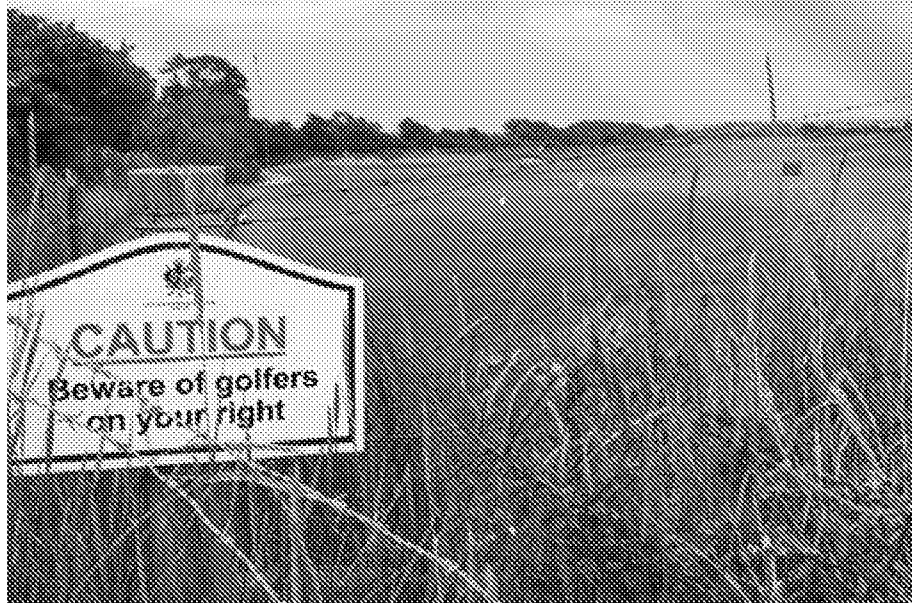
14



Arable field looking south-east from Site with young wheat crop and false oat grass, cow parsley and dock in field margin.

EXTENDED PHASE 1 HABITAT SURVEY
CLYMPING MILL

15



Littlehampton Golf Course a Site of Nature Conservation Importance seen from footpath marking boundary to the south-east of the site

16



West Beach SSSI due south of site showing vegetated shingle with sea kale in foreground and dune system covered in Marram grass behind

EXTENDED PHASE 1 HABITAT SURVEY
CLYMPING MILL

17



Amenity grassland, scattered trees and scots pine tree stumps to north of Building B4.

18



Pedunculate oak, spoil piles and wood heaps at the north east corner of the Site