ECOLOGICAL ASSESSMENT OF

LAND TO REAR OF SHERINGHAM HOUSE, CREMERS DRIFT SHERINGHAM, NORFOLK

On behalf of

Sutherland Homes
Sheringham House
Cremers Drift
Sheringham
Norfolk
NR26 8HZ

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ERAs Consultancy

September 08

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1.0 Introduction

The ERAs Consultancy was commissioned to survey an area of orchard, former vegetable garden, an in-filled pit and an arable field to the rear of Sheringham House. The arable field has had soil stored on it for approximately 8 years. Apart from the grass in the orchard, the site has not been managed. It is proposed that the stored soil be removed and the field re-instated to its original contours prior to a development of houses being built on the site. The development would be accessed via Sheringham House.

The objective of the survey was to carry out a Phase 1 habitat and protected species assessment of the land.

2.0 Site Description

2.1 The site is 'L' shaped. The north/south arm of the site has a gentle north-facing slope rising to the highest point in the south-east corner where an old gravel pit was infilled approximately 8 years ago. The east/west arm is a former arable field that has been used to store spare soil from the building of Sheringham House, which was built on the footprint of the former convalescent home. The site is within the suburbs of Sheringham at Ordnance Survey grid reference: TG 160422.

3.0 Survey Methods and Constraints

3.1 The field survey took place on the 24 August 2008 with subsequent visits to monitor reptile refugia.

3.2 The field survey involved walking over the study area to search for plants and animals and to assess the habitat types. The habitat survey followed the methodology set out in JNCC guidelines (1993).

3.3 The survey for the presence of animals with statutory protection followed best practice guidelines and involved looking for signs such as suitability of habitat, paths made, droppings and physical presence.

4.0 Statutory Wildlife Designations

There are no statutory wildlife designations within the study site or immediately adjacent either under the *Wildlife and Countryside Act 1981* (W&C Act) (as amended) or under international legislation such as *The Habitats Directive* embodied in *the Conservation (Natural Habitats, &c.) Regulations 1994.* The UK's Biodiversity Action Plans list species of concern, which do not necessarily have Statutory Protection, but are regarded as requiring positive management to enhance populations. **See Appendix 3 for the Norfolk BAP list**.

5.0 Flora – Habitat Summary

The walk-over survey identified the broad character of the habitats found within the study area. The following notes summarise the main habitat types. Plant identification follows Clapham, Tutin and Moore, 1987. **See Appendix 1 for plant lists.**

No plant listed on Schedule 8 of the W&C Act (1981) was found growing on the site.

5.1 Hedges, trees and scrub

5.1.1 Hedges and trees

On all sides of the survey site are belts of mature trees or tall, mature hedgerows. The hedge on the southern boundary is mainly mature plum. The other boundaries are belts of pine with hawthorn etcetera. The former pit in the south-east corner of the site has a narrow belt of trees on the northern and eastern boundaries with Scots pine, sycamore, turkey oak and hawthorn. The species lists of each one numbered on the plan are in **Appendix 1**.

5.1.2 Scrub

There is incipient scrub developing in the grassland with seedling oak, turkey oak, silver birch, poplar, pine and sycamore and larger scrub of goat willow and buddleia. On the western boundary of Area F there is a strip of mature gorse.

5.2 Grassland

The species lists for the areas below can be found in Appendix 1. There are well defined tracks across these areas where lorries had access to deposit the spare soil.

Area A

The grassland under the apple trees has been maintained by cutting. It is moderately diverse, with a range of grasses, but is deficient in broad-leaved herbs. The site has a slight north facing slope. The grassland could be described as semi-improved.

Area B

The coarse grassland on Area B developed after cessation of management for vegetable growing for the convalescent home. It is dominated by Yorkshire fog which suggests the drainage is impeded but there is 100% ground cover probably due to the longer period of time this area has had to become vegetated. The grassland is also on a slight north facing slope becoming steeper as it approaches the trees surrounding Area C. Several piles of decomposing grass cuttings, shrub trimmings etc. have been dumped beside the access track. These are the result of the maintenance of gardens around Sheringham House.

Area C

The grassland on Area C is moderately diverse with 80% ground cover. It has developed on soil, and possibly rubble, used to infill the pit approximately 8 years ago. Yorkshire fog is still the dominant grass and field horsetail is abundant. The area is damp and hard rush is locally frequent, again suggesting impeded drainage. This may be due partly to the unstructured infilling of the former pit and partly to the nature of the sandy soil which

occurs here. The area has a slight slope to the east and is below the level of Area D by at least 1metre.

Area D
The grassland has developed on soil from the building of Sheringham House that has been stored on the arable field. There is high, plateau area which is on a level with the trees bordering the old pit with steep slopes to the north, west and south which are vegetated with patches of buddleia and goat willow. The nutrient-poor, sandy soil supports a sparse (c.60% cover), dry grassland. It is moderately diverse botanically. Yorkshire fog is still the dominant grass along with red fescue. It appears to have developed from the seed bank in the soil moved from the building of Sheringham house where the lawns have species in common, such as bird's-foot trefoil.

Area E
This is the original ground level from when areas D, E and F were an arable field. It has a c. 50% plant cover with similar species to Area D.

Area F is also an area of stored soil with a plateau area on top with slopes on four sides, the highest towards the east. The vegetation is similar to D and E with c. 60% cover of mainly Yorkshire fog along with red fescue, field horsetail and a stand of common reed. A strip of mature common gorse has developed along the western edge to the plateau area.

5.3 Wetland
Although several areas show signs of impeded drainage and species such as hard rush and common reed grow on the site, there are no ponds or marshes on the site or in the immediate vicinity.

5.4 Boundaries
On the attached plan the boundaries have been marked 1-8 and a species list for each one is in Appendix 1. As shown in the aerial photograph the site is surrounded on all sides by trees, whether as woodland, belts of trees or as thick hedgerows. Scots and Corsican pine are locally abundant and there are tall hedges of plum.

5.5 Adjacent land use
To the north-west is a strip of woodland separating the grounds of Sheringham House from the site. The woodland is subject to a Tree Protection Order (TPO). To the north is an area of secondary woodland in the grounds of Sheringham House. To the east and south are housing estates separated from the site by tall hedges and narrow belts of trees. To the west is an area of open land which is itself surrounded by housing estates. See attached aerial photograph.

6.0 Fauna

6.1 Mammals
Surveys were targeted at those mammal species having statutory protection under *The Wildlife and Countryside Act 1981; Conservation (Natural Habitats, &c.) Regulations 1994; Badger Protection Act 1992;* those listed in the *UK Biodiversity Action Plan;* and in national and local Red Data lists. The aim was to use survey techniques to identify the presence or likely occurrence of protected species.

6.1.1 Bats

All species of bat and their roosts are protected under Section 9 of the Wildlife and Countryside Act 1981 (Schedule 5). Roost sites are protected at all times irrespective of whether bats are present.

There is no previous information on bat species at the survey site. There are roost records for brown long-eared and pipistrelle in this 10 kilometre square.

There are no buildings on the site. The trees are mainly round the boundary. The few trees actually on the site are part of B2 and B3, around the old pit. These were checked for potential bat roost sites using close focusing binoculars. Bats use rot holes, old woodpecker holes, loose bark, splits etc as roost sites. None of the trees on site have developed any of these features.

6.1.2 Badger

The badger is protected by the *Protection of Badgers Act 1992* although it is the sett rather than the animal itself that carries the protection. The site was checked for footpaths, latrines, badger setts and feeding activity. No signs were found that badgers live or feed over this site and there are no records of setts within 50 metres of the boundary.

6.2 Amphibians

Natural England (until recently called 'English Nature') advises that all water bodies within 500m of a development site be checked for great crested newts. Great crested newts (GCN) are protected under European legislation because of their scarcity there. However, despite the population declining here they are still quite widespread in England. There are national records for GCN for this 10 km square. However, there are no ponds on the site, neither are there any natural water bodies known from the immediate vicinity.

6.3 Reptiles

The commoner reptiles such as common lizard, slow-worm, grass-snake and adder are protected from being killed or injured.

The site supports habitat that is suitable for reptiles and a reptile survey was carried in September to check which species, if any, occur on the site and to indicate their distribution and numbers. **See Appendix 2 for the results of this survey**.

6.4 Birds

Species
Black-headed gulls
Jay
Green woodpecker
Magpie
Wood pigeon

6.5 Non-protected animals recorded on site

Fox
Red admiral
Common blue butterfly
Ruddy darter

7.0 Discussion

7.1 No plant species listed on Schedule 8 of the Wildlife and Countryside Act 1981 were found on growing on the site. Neither were any of the BAP species listed by Norfolk County Council. (See Appendix 3)

7.2 No badger sett was found on or adjacent to the site.

7.3 No notable birds or invertebrates are known from the site.

7.4 There is no pond on the site and none are known from the immediate vicinity. Great crested newt is not expected to occur here.

7.5 The mix of grassland and scrub with warm banks for sunning, did suggest the possibility of reptiles using the site. Because of this, pieces of roofing felt where laid around the site and allowed to bed in for a week then monitored on warm days. September was very unsettled with rain on many days. However, it was possible to check for reptiles in sunny periods. The site was found to support a medium sized colony of slow-worms. The refugia were mostly used by females and juveniles. In August/September females are pregnant and bask to speed up the development of the eggs which they retain inside them ready for birth in the spring. Animals were found on Areas B to F. In Area A, the orchard, the grass is cut on a regular basis and this area has no habitat suitable for reptiles. There is a quantity of building material stored on the site plus one small area of stored waste material in Area D. Both of these could be used by slow-worms. There are also mounds of composting plant material from the adjacent grounds of Sheringham House which could be used for over-wintering

As it is illegal to kill slow worms the site will need to be cleared of animals prior to work being carried out on the site. It is intended that the soil stored on the former arable field should be removed and the original contours of the field restored before development takes place.

Animals can either be relocated on a temporary basis to part of the site such as Area C, the in-filled pit, which can form part of the landscaping of the site, or to a site in the vicinity of Sheringham where the habitat is suitable and the population of slow-worms is low enough for additional animals to be introduced. Advice on a suitable location in the vicinity could be obtained from the Norfolk Wildlife Trust. Land to the east of the survey site might be suitable.

Slow-worms will go into hibernation, using old mouse runs, piles of rubble, compost heaps etc, as the weather becomes colder and are unlikely to re-emerge until the spring of 2009. They will emerge from March onwards, depending on how warm it is and whether their food items, such as slugs, worms and spiders are available. However it is possible to start working towards clearance ahead of their re-emergence.

8.0 Recommendations

Initially a decision has to be made whether animals should be relocated to a part of the same site, such as Area C (Option 1), or whether it would be better to find a site close by with suitable habitat and which does not currently support a large colony of slow-worms and the landowner is agreeable to relocation taking place (Option 2). The Norfolk Wildlife Trust should be able to advise on whether the open country to the east would be suitable and an approach can then be made to the landowner.

Option 1 Relocate slow-worms to Area C
Order of work

1. Remove all but the pine trees on the northern and western boundaries of Area C (the infilled pit) to reduce the seed source and slow down the incursion of scrub onto this area.

2. Create hibernacula in the form of banks for the slow worms on Area C. Orientate them east/west to give sunny banks for basking. First create a 0.5m deep depression. Lay lengths of 50mm pipe into the mound at the base to facilitate access and cover with waste rubble or a mix of rubble and wood or plant cuttings to make them 1m high and 2m wide. Cover 90% of the material with soil leaving some uncovered areas. The banks can be left to vegetate naturally or be seeded with red fescue grass plus seeds of the native bird's-foot trefoil. (Plants of this could also be collected from Area D and planted onto the banks)

3. Remove all of the composting grass and shrub cuttings from Area B. Some can be used in creating the hibernacula. It is advised that the rest should either be removed from the site or moved onto the adjacent trackway and burned. It is important that nothing is burnt *in situ* as slow-worms and hedgehogs could be over-wintering in these piles.

4. Remove the pile of dumped waste material from the side of Area D carefully in case it is being used as a hibernaculum. Do this before the weather gets very cold or in the spring.

5. Erect a complete reptile fence around the boundary to the old pit, inside of the trees, to receive the re-located slow-worms.

6. In March/April 2009 lay out refugia around the margins of the site and allow to bed in for 7-10 days. At the end of this period start to strim from the centre of each area towards the edges. Monitor the refugia and collect and re-locate animals using them.

7. Erect a reptile fence around the edges of the site to prevent any animals left on the boundaries from accessing the site during the soil removal and construction phase.

Option 2 Relocate slow-worms to a site close to Sheringham.
Order of work

1. Remove all composting grass and shrub cuttings from Area B. It is advised that it should be either removed from site or moved onto the trackway and burned. It is important that nothing is burnt *in situ* as slow-worms and hedgehogs could be over-wintering in these piles.

2. Remove the pile of dumped waste material from the side of Area D carefully in case it is being used as a hibernaculum. Do this before the weather gets very cold or in the spring.

3. Clear the apple trees and re-locate the spare building materials to this area, continuing to cut the grass to avoid slow-worms moving into this area.

4. In March/April 2009 lay out refugia around the margins of the site and allow to bed in for 7-10 days. At the end of this period start to strim from the centre of each area towards the edges. Monitor the refugia and collect and re-locate animals using them.

5. Erect a reptile fence around the edges of the site to prevent any animals left on the boundaries from accessing the site during the soil removal and construction phase.

9.0 References

Anon 1981 *Wildlife and Countryside Act*

Bat Conservation Trust 2007 *Bat Surveys: Good practice guidelines*

Clapham, A R, Tutin, T G & Moore, D M (1987) *Flora of the British Isles*. 3rd Edition, Cambridge University Press

English Nature 2004 *Reptiles: Guidelines for developers*

JNCC guidelines 1993

JNCC 1995 *Atlas of amphibians and reptiles in Britain*. H R Arnold.

JNCC 2003 *Herpetofauna Workers' Manual*

HMSO 1992 *Protection of Badgers Act*

Richardson, P. 2000 *Distribution Atlas of Bats in Britain and Ireland*. BCT London

APPENDIX 1 - Plant species

A= abundant, D = dominant, F = frequent, L = local/locally, O = occasional, R = rare

Boundaries

B1

Common name	Scientific name	Frequency
Hawthorn	*Crataegus monogyna*	A
Scots pine	*Pinus sylvestris*	A
Trees with dense ivy	*Hedera helix*	LD

B2

Common name	Scientific name	Frequency
Ash	*Fraxinus excelsior*	O
Hawthorn	*Crataegus monogyna*	LF
Oak sapling	*Quercus robur*	O
Plum	*Prunus* sp	O
Sycamore	*Acer pseudoplatanus*	R
Turkey oak	*Quercus cerris*	O

B3

Common name	Scientific name	Frequency
Bramble	*Rubus fruticosus* agg	LA
Hawthorn	*Crataegus monogyna*	F
Oaks - medium aged	*Quercus robur*	O
Scots pine	*Pinus sylvestris*	F
Sycamore	*Acer pseudoplatanus*	O
Turkey oak	*Quercus cerris*	O

B4

Common name	Scientific name	Frequency
Hawthorn	*Crataegus monogyna*	L
Plum	*Prunus* sp	LD
Scots pine	*Pinus sylvestris*	L
Trees with dense ivy	*Hedera helix*	L

B5 Strip of trees c. 5-6m wide

Common name	Scientific name	Frequency
Pine	*Pinus* sp.	Co-dom
Scots pine	*Pinus sylvestris*	Co-dom

Understorey of volunteer beech, sycamore and hawthorn with dense bramble and ivy.

B6 Strip of trees with TPO order between site and new residential block

Common name	Scientific name	Frequency
Beech	*Fagus sylvestris*	F
Cypress	*Cupressus* sp.	O
Field maple	*Acer campestre*	LF
Hawthorn	*Crataegus monogyna*	LF
Pine	*Pinus* sp.	F
Plum	*Prunus* sp	LD
Scots pine	*Pinus sylvestris*	F
Sycamore	*Acer pseudoplatanus*	O

B7 – relict hedgeline with gaps

Common name	Scientific name	Frequency
Hawthorn	*Crataegus monogyna*	LF

B8 Woodland area – deciduous plantation

Common name	Scientific name	Frequency
Sycamore	*Acer pseudoplatanus*	D

Area A: Orchard with regularly cut grass

Common name	Scientific name	Frequency
Creeping bent-grass	*Agrostis stolonifera*	F
Field horse-tail	*Equisetum arvense*	LA
Red fescue	*Festuca rubra*	A
Ryegrass	*Lolium perenne*	O
Smooth meadow-grass	*Poa pratensis*	F
Yellow hair-grass	*Trisetum flavescens*	O
Yorkshire fog	*Holcus lanatus*	A
Autumnal hawkbit	*Leontodon autumnalis*	F
Common cat's-ear	*Hypochoeris radicata*	A
Common vetch	*Vicia sativa*	O
Cow parsley	*Anthriscus sylvestris*	O
Dandelion	*Taraxacum officinale*	F
Mouse-ear chickweed	*Cerastium fontanum*	F
Ragwort	*Senecio jacobaea*	O
Ribwort plantain	*Plantago lanceolata*	O
White clover	*Trifolium repens*	LF

Area B: Rough grassland with compost heaps

Common name	Scientific name	Frequency
Creeping bent-grass	*Agrostis stolonifera*	LF
Field horse-tail	*Equisetum arvense*	LA
Yorkshire fog	*Holcus lanatus*	D
Black medick	*Medicago lupulina*	F-LA
Broad-leaved dock	*Rumex obtusifolius*	O
Coltsfoot	*Tussilago farfara*	O-LA
Common cat's-ear	*Hypochoeris radicata*	O
Common vetch	*Vicia sativa*	O
Creeping thistle	*Cirsium arvense*	O
Fleabane	*Pulicaria dysenterica*	O
Greater willow herb	*Epilobium hirsutum*	O
Perforate St John's-wort	*Hypericum perforatum*	O
Ragwort	*Senecio jacobaea*	O
Red bartsia	*Odontites verna*	F
Ribwort plantain	*Plantago lanceolata*	LA
White clover	*Trifolium repens*	A
Winter heliotrope	*Petasites fragrans*	LF
Moss	*Rhytidiadelphus squarrosus*	LA

Seedling: poplar, oak, buddleia, alder and sycamore scattered throughout grassland

Area C - infilled gravel pit

Common name	Scientific name	Frequency
Cock's-foot	*Dactylis glomerata*	O
Creeping bent-grass	*Agrostis stolonifera*	O
Field horse-tail	*Equisetum arvense*	A
Hard rush	*Juncus inflexus*	O-LF
Red fescue	*Festuca rubra*	F
Yorkshire fog	*Holcus lanatus*	D
Autumnal hawkbit	*Leontodon autumnalis*	O
Bird's-foot trefoil	*Lotus corniculatus*	O
Black medick	*Medicago lupulina*	LA
Coltsfoot	*Tussilago farfara*	O-LF
Common centaury	*Centaurium erythraea*	LF
Creeping buttercup	*Ranunculus repens*	O-LF
Creeping cinquefoil	*Potentilla reptans*	O
Creeping thistle	*Cirsium arvense*	LF
Greater willow herb	*Epilobium hirsutum*	F
Meadow buttercup	*Ranunculus acris*	O
Ragwort	*Senecio jacobaea*	O-LF
Red bartsia	*Odontites verna*	O
Red clover	*Trifolium pretense*	O
Ribwort plantain	*Plantago lanceolata*	F
White clover	*Trifolium repens*	A
Winter heliotrope	*Petasites fragrans*	O
Yarrow	*Achillea millefolium*	O
Yellow meadow-vetchling	*Lathyrus pratensis*	A
Bramble	*Rubus fruticosus* agg	LF
Goat willow seedling	*Salix caprea*	O
Oak seedling	*Quercus robur*	O

Area D - Mound of stored soil with sparse vegetation cover

Common name	Scientific name	Frequency
Field horse-tail	*Equisetum arvense*	LA
Red fescue	*Festuca rubra*	LF
Yorkshire fog	*Holcus lanatus*	A
Autumnal hawkbit	*Leontodon autumnalis*	F
Bird's-foot trefoil	*Lotus corniculatus*	LA
Black medick	*Medicago lupulina*	LA
Coltsfoot	*Tussilago farfara*	LF
Common cat's-ear	*Hypochoeris radicata*	O
Creeping thistle	*Cirsium arvense*	O
Greater plantain	*Plantago major*	O
Ragwort	*Senecio jacobaea*	O
Ribwort plantain	*Plantago lanceolata*	O
Self-heal	*Prunella vulgaris*	LF
White clover	*Trifolium repens*	F
Yarrow	*Achillea millefolium*	F
Bramble	*Rubus fruticosus* agg	LF
Buddleia	*Buddleja davidii*	LF

Seedlings of birch, goat willow and oak

Area E - Original level of arable field with sparse vegetation cover

Common name	Scientific name	Frequency
Field horse-tail	*Equisetum arvense*	LA
Red fescue	*Festuca rubra*	F-LD
Yorkshire fog	*Holcus lanatus*	A
Autumnal hawkbit	*Leontodon autumnalis*	F
Bird's-foot trefoil	*Lotus corniculatus*	LA
Black medick	*Medicago lupulina*	LA
Coltsfoot	*Tussilago farfara*	O
Common cat's-ear	*Hypochoeris radicata*	F
Common vetch	*Vicia sativa*	O
Creeping thistle	*Cirsium arvense*	O
Mugwort	*Artemisia vulgaris*	O
Ragwort	*Senecio jacobaea*	O
Red clover	*Trifolium pretense*	O

Seedlings of pine and turkey oak

Area F - Mound of stored soil with sparse vegetation cover

Common name	Scientific name	Frequency
Common reed	*Phragmites communis*	LA
Field horse-tail	*Equisetum arvense*	O-LA
Red fescue	*Festuca rubra*	A
Yorkshire fog	*Holcus lanatus*	A
Autumnal hawkbit	*Leontodon autumnalis*	F
Bird's-foot trefoil	*Lotus corniculatus*	F
Black medick	*Medicago lupulina*	F
Broad-leaved dock	*Rumex obtusifolius*	O
Common cat's-ear	*Hypochoeris radicata*	O
Creeping thistle	*Cirsium arvense*	O-LF
Dandelion	*Taraxacum officinale*	O
Hedge wound-wort	*Stachys sylvatica*	O
Mugwort	*Artemisia vulgaris*	O
Perforate St. John's-wort	*Hypericum perforatum*	O
Ragwort	*Senecio jacobaea*	O
Self-heal	*Prunella vulgaris*	O
Silverweed	*Potentilla anserina*	LA
Yarrow	*Achillea millefolium*	LF
Bramble	*Rubus fruticosus* agg	LA
Gorse	*Ulex europaeus*	LD

Seedlings of Scots pine, sweet chestnut and goat willow

APPENDIX 2
REPTILE RECORDING SHEET

Site: Land to the rear of Sheringham House, Sheringham, Norfolk **Recorder:** Karen L Buckley

Date	Start time	Degrees C	Common Lizard			Slow worm			Grass Snake		Adder		Comments
			Male	Fem.	Juv.	Male	Fem.	Juv.	Adult	Juv.	Adult	Juv.	
2.9.08	14.30	17.5					3	1					Warm afternoon after overcast morning. Areas B, D & F
3.9.08	10.15	16.0					3						Southerly breeze, damp after overnight rain Areas A, D & F
8.9.08	13.50	18.0					6	4					Areas A, D & F - 4 by gorse
10.9.08	14.15	20.00				1	8	4					High cloud, sunny, breezy after overnight rain.
18.9.08	15.20	16.5				1	3	8					Cloud with sunny periods Following rain.

APPENDIX 3

Biodiversity Action Plan for Norfolk
June 2007 - Habitats
Ancient and/or species-rich hedgerows
Aquifer-fed naturally fluctuating waterbodies
Built-up areas and urban green space
Cereal field margins
Chalk rivers
Churchyards and cemeteries
Coastal and floodplain grazing marsh
Coastal sand dunes
Eutrophic standing water
Fens
Littoral and sub-littoral chalk
Lowland calcareous grassland
Lowland heathland and dry acid grassland
Lowland meadows and pastures
Lowland mixed deciduous woodland
Lowland wood-pasture and parkland
Maritime cliff and slopes
Mesotrophic lakes
Reed beds
Saline lagoons
Sea-grass beds
Traditional orchards
Wet woodland

Biodiversity Action Plan for Norfolk - Species
Mammals
Bat species
Brown hare
Otter
Water vole

Birds
Bittern
Corn bunting
Grey partridge
Night jar
Skylark
Spotted flycatcher
Stone curlew
Tree sparrow
Turtledove
Woodlark

Amphibians
Great crested newt

Butterflies
Silver studded blue

Crustacean
White clawed crayfish

Molluscs
Depressed river mussel
Desmoulin's whorl snail
Little whirl-pool ram's-horn snail
Narrow-mouth whorl snail
Shining ram's-horn snail

Beetles
Ophonus lalticollis
Harpalus froelichii

Starlet sea anemone

Plants
Fen orchid
Floating water-plantain
Greater water parsnip
Holly-leaved naiad
Native black poplar
Pill wort
Red-tipped cudweed
Ribbon-leaved water-plantain
Small-flowered catchfly
Tassel stonewort
Tower mustard

Nail fungus
Starry breck-lichen
Orange-fruited elm-lichen

Liverwort
Norfolk flapwort *Leiocolea rutheana*

Photo 1: Looking north across Areas B to Area A (orchard)

Photo 2: Looking south-east across Area C – infilled quarry

Photo 3: Looking west across Area D to area F (Area E is not visible)

Photo 4: Looking west across Area E to Area F