

## Appendix F1 PHASE 1 HABITAT SURVEY 2008: TARGET NOTES

Target Note	Description/Comment
	Birds Seen/Heard: Skylark, Meadow Pipit, Stonechat, Goldfinch, Robin, Dunnock, Bullfinch, Pied Wagtail, Blackbird, Great Tit, Blue Tit, Wren, Song Thrush, Kestrel, Carrion Crow, Herring Gull, Black Headed Gull, Lesser Black-backed Gull, Wood Pigeon, Magpie, Great Crested Grebe, Cormorant
1	One well-established and probably untreated colony of Japanese Knotweed straddling the site boundary fence in Butterfly-bush scrub. Dimensions of colony estimated to be 8m x 10m.
2	Very dense Butterfly bush and Gorse scrub along bank associated with railway - bushes have retained leaves throughout the winter and so may conceal small stands of Japanese Knotweed. The scrub is several metres high. Many mammal paths leading into scrub indicative of rabbit/fox (Fox hair found). High bird nesting potential.
3	Small clumps of Japanese Knotweed on railway embankment (outside survey area but within a few metres of the boundary). Railway track inclines on an earth bank towards the west providing opportunities for Badgers along the length of the bank. Boundary fence backs onto an unmanaged railway track fully colonised by broadleaved shrubs and scrubs over gravel and early successional vegetation. Railway track is likely to function as a suitable wildlife corridor for mammals, reptiles and birds. Fence line has a sizable gap underneath along its entire length, which provides ample opportunities for mammals to enter the site. Evidence of rabbits along identified mammal paths. Dense Gorse scrub and Butterfly Bush encroaches onto the site along the fence line.
4	Several small colonies of Japanese Knotweed close to the fence (within survey area). Scrub along fence line has high potential for nesting birds. Long grassland, tall herbs and dense scrub adjacent to a railway corridor provide a suitable foraging and nesting habitat for birds. Large banks of colonised rubble to the south also provide good shelter from wind/weather. Large flock of goldfinches foraging around Teasel stands.
5	Spoil pile comprising large irregular blocks of concrete rubble, with the top parts colonised by Butterfly bush but little other vegetation.
6	Very closely rabbit-grazed grassland community which appears to be moderately diverse with small annual mouse-ears, Buck's-horn Plantain and the mosses <i>Homalothecium lutescens</i> , <i>Brachythecium albicans</i> and <i>Barbula unguiculata</i> . Less suitable for reptiles or nesting skylark.
7	These spoil heaps are typically 3-4 metres high with an underlying substrate of gravel-stone-soil or rubble and soil, deposited in a series of steps/terraces with steep sides. They are mostly fully vegetated with neutral grassland likely to be of low diversity. In many places Creeping Bent and Hairy Sedge are abundant, with Gorse and Butterfly bush on the slopes. Vigorous herbs are also present, especially Bristly Ox-tongue, docks, Wild Parsnip and Creeping Thistle. Some areas support significant stands of Great Horsetail. The heaps

	have been used for informal recreation e.g. biking and there are some areas of erosion.
8	Area of standing water (ca. 30m across) at foot of spoil heaps. Up to 30cm of water but may be seasonal. Vegetation suggests that the ground stays damp all year at least. Species present include small stands of Sea Club-rush, Bulrush, Hard Rush and an unidentified sweet-grass. There are also extensive carpets of the moss <i>Warnstorffii aduncus</i> . Potentially suitable for common amphibians and will require amphibian survey. Water frequently used by crows and gulls.
9	Rank neutral grassland dominated by False Oat-grass considered to have low intrinsic botanical interest but supporting a small population of Corky-fruited Water-dropwort, a species of considerable local rarity value.
10	Very steep cliff/bank supporting inaccessible neutral to slightly calcareous grassland with scattered saplings and scrub (mostly Hawthorn). False Brome is the dominant grass on the bank - the vegetation community appears to be relatively species-poor. Bramble and Traveller's-joy are encroaching. Steep cliff largely colonised by grass and scrub with few areas of exposed rock- Not likely to be suitable for nesting birds-of-prey although scrub has some potential for passerines despite heavy shading.
11	Large industrial Warehouse. Building is corrugated steel throughout with corrugated sheeting on the roof. The inside of the building consists of a large void extending up to metal rafters, which backs onto single corrugated roof sheets which is intact throughout. The western elevation is largely exposed – allowing wind and rain in. The building appears wholly unsuitable for bats although it was not closely inspected due to H & S issues. Nearby small brick-built flat-roofed hut to southwest with front access exposed. Whole building is covered in dense ivy covering. No value to roosting bats
12	Brownfield vegetation developed across an area of demolished structures. Substrate appears to be crushed brick and concrete. Appears to be at least moderately botanically diverse and could support notable species. Species that could be identified in the community at the time of survey included Tall Melilot, Hoary Mustard, Bristly Ox-tongue and Colt's-foot. Bare ground in between foundations colonised by rank grassland and ephemeral vegetation potentially suitable to support common reptiles particularly lizards. Some poorly drained areas holding water may need checking later in the season.
13	Brick built sub station with flat concrete roof and few opportunities for access. Of little if any value to roosting bats. Fascia boards lifting and split in places although the building is isolated and exposed to weather.
14	Very species-poor neutral grassland dominated by Red Fescue, along with frequent Creeping Thistle and Cock's-foot. Of very low intrinsic botanical interest. Grassland seems to be frequently used by dog walkers. Likely to support common reptiles, small mammals and grassland nesting bird species such as Skylark, Meadow Pipit and Wheatear. Area is relatively undisturbed and likely to be rich in invertebrates- providing foraging habitat for bats. Kestrel noted hunting over all grassland areas. Crow assemblage noted in numbers exceeding 50. The grassland contains areas of scrub and tall herbs such as teasel, which are valuable to foraging birds. Some areas with sporadic stands of pampas grass, which may provide

	<p>suitable shelter for reptiles. Reptile mats were noted across the site. Further surveys recommended for birds, bats, reptiles and invertebrates. Many areas are poorly drained and large pools of standing water have formed in many areas proving potential breeding habitat for common amphibians. Further survey required. Area of gorse lining the trackway over grassland of high value to nesting birds. Likely to support a diversity of finches and warblers.</p>
15	<p>Horizontally inter-bedded cliff exposure. Appears to be limestone interbedded with mudstone or shale. Supports patchy False Brome grassland and scrub species, which suggest that soils are likely to be near neutral to slightly calcareous in reaction.</p>
16	<p>Species-rich early successional vegetation supporting a variety of different herbs, grasses and mosses. Herbaceous species include Lesser Trefoil, Common Vetch, Field Madder, Perforate St. John's-wort and frequent Canadian Fleabane. Vegetation and substrate likely to support common Lizard. Prominent mosses include <i>Barbula unguiculata</i>, <i>Bryum capillare</i>, <i>Bryum bicolor</i> and <i>Funaria hygrometrica</i>.</p>
17	<p>Sea-water dock. Deep water retained by vertical stone walls with negligible maritime vegetation.</p>
18	<p>Exposed cliff face with well defined stratified layers of limestone and scree. Fallen/eroded rocks at base of cliffs have ammonite fossils. Potential geological importance. Mature Willow on cliff with few splits and cracks and fallen limbs. Generally considered of low potential for bats. Well used mammal path up cliff face to around base of tree- no setts or burrows. A Goat Willow or Goat Willow-Grey Willow hybrid at the top of a low cliff. Has two main trunks, each c. 30cm diameter. The tree is c. 6-7 metres high and is apparently in good health. Cliff is steep and heavily vegetated with dense bramble and grass with occasional tree and shrub. There are no suitable ledges for nesting birds of prey such as kestrel or Peregrine although the trees may serve as perches. Dense bramble may have value for breeding passerines.</p>
19	<p>Area where there is a complex mosaic of bare ground (concrete footings) surrounded by early successional vegetation, scattered Butterfly-bush scrub and small patches of neutral grassland dominated by Creeping Bent.</p>
20	<p>This is an area where there were previously many silos/storage tanks, now removed and leaving patches of bare and broken ground. An irregular mosaic of Brownfield vegetation and small patches of species-poor neutral grassland has subsequently developed across the area.</p>
21	<p>Sub station similar to others. Brick built with flat roof of low potential to bats. Fascia boards are cracked and lifted but building is fairly isolated and exposed to the weather.</p>
22	<p>Excavated area with spoil and dumped material including masonry and household waste. Appears to have impeded drainage, as there are a few small puddles of standing water. Dipped area of ground with some pools of standing water some with algae. Very little if any opportunities for breeding amphibians and likely to be seasonally dry. Pigeon kill suggestive of fox.</p>
23	<p>Two trees on cliff face with ivy covering and visible splits. Generally low</p>

	potential to bats. Dense scrub below colonised over a disused railway track-good connectivity/corridor into nearby habitats. Scrub is very dense and may require a through search for badger sett if affected by development
24	Interesting short-herb vegetation growing over stone chippings and in tarmac cracks. Species recorded here included the mosses <i>Didymodon fallax</i> , <i>Barbula unguiculata</i> and <i>Ceratodon purpureus</i> , Biting Stonecrop, Common Whitlowgrass, Oxford Ragwort, Weld, Hoary Mustard, Rue-leaved Saxifrage, Field Mouse-ear and Wild Carrot. There is also a small population of the locally rare Lesser Chickweed.
25	Planted standard maples (not possible to identify to species without leaves) in front of derelict building, growing in what is now rank MG1 grassland. The trees are young, not more than 6 metres high, with a trunk diameter of 20-30cm. They are not in good condition, as some are leaning, with dead branches and cracked bark.
26	NERC Vessel Research Services. Flat roofed, brick built office block with most windows boarded up. Spaces under boards and smashed windows provide adequate means of entrance. Buildings are of medium potential for bats and require further investigation. The west side of the warehouse provides a well-used pigeon roost.
27	Species-poor rank False Oat-grass (MG1) neutral grassland, probably former amenity grassland, long unmanaged suitable for reptiles. Many Hawthorn bushes are encroaching into the grassland. Large bank to the east colonised by a dense stand of hawthorn blackthorn scrub with some gorse. Likely to be a hot spot for nesting birds. Fox seen. No signs of badger seen.
28	Two sub-mature planted willows, likely to be either White Willow or Crack Willow cultivars. Both trees appear to be healthy, with a canopy height of about 10m and Ivy growth on the trunks.
29	Two 10m tall Leyland Cypress at the edge of an encroaching scrub belt. Bare at the base, but upper parts are dense and apparently healthy.
30	Bank appears to be relatively nutrient-poor and supports a patchy but moderately diverse vegetation cover, which includes Common Centaury.
31	Young ornamental pine saplings (no cones present). 2-3 metres high, planted at intervals beside pavement.
32	Rank sward suitable for reptiles. Nearby railway track provides connectivity to nearby habitats for reptiles and mammals. Sward is rabbit grazed and is used by gulls as a roost site- mussel shells and feathers around- wings feathers also found (suggestive of fox kill).
33	Earth Bank along access road with areas of dense scrub. Numerous rabbit burrows-with rabbit fur on nibbled bramble around entrance holes. No signs of badger. Dense scrub along railway track of high value to breeding birds. The whole area is fairly undisturbed other than a low speed train passing nearby once or twice a day
34	Rabbit burrows in earth bank. Larger holes near to harbour edge although the hole tapers off into small hole- not badger.
35	Substation. Brick built with flat roof and limited access into the internal void. Largely unsuitable for bats. Wooden fascias are loose and there are gaps in the soffit but unlikely to be suitable on account of exposed and isolated

	nature of building.
36	Dock wall 6-8 metres above water level is lined with stone setts with a gradient estimated to be c. 45°.
37	Dense cluster of gorse likely to be of value to nesting birds and used for shelter by rabbits. Evidence of rabbit 'forms' and grazing around base. Grassland of value to reptiles, gulls and grassland nesting species such as skylark and meadow pipit. Few areas of standing water but likely to be seasonally dry- unsuitable for breeding amphibians. No evidence of badger foraging or dung pits.
38	Bank along fence has numerous rabbit holes and burrows. The bank also contains a hole characteristic of badger with guard hair on the ceiling of the entrance
39	Another series of badger holes with guard hair at entrance. Clear current use by rabbits
40	Underground compartment associated with swing bridge. Low potential for bats.
41	Culvert over earth partially covered by a large steel plate. Large hole in earth with hole characteristic of badger. Entrance to culvert has a lot of fry grass bedding and badger guard hairs. Likely to be an outlier sett.
42	An extensive area of Brownfield vegetation over calcareous stone chippings. Appears to be at least moderately diverse and may support notable plant species. Identifiable species include Common Bird's-foot-trefoil, Ribwort Plantain and the moss <i>Cratoneuron filicinum</i> .
43	Landscaped gravel garden based on minimalistic planting of e.g. phormium and cordyline species over a substrate of marine gravel and slate chippings. Unoccupied modern building with boarded window on southern elevation where window has been smashed. Of no value to bats.

## Appendix F2: Bird Species Recorded

### Appendix II Bird Species List

Species		Conservation Significance	Notes
Common Sandpiper	<i>Actitis hypoleucos</i>		Seen offsite on outflow pipe on Esplanade
Black Redstart	<i>Phoenicurus ochrurus</i>	S1 BCC(A)	Seen once around the scrub in West Pond.
Blackbird	<i>Turdus merula</i>		Numerous
Blackcap	<i>Sylvia atricapilla</i>		In scrub in the south of west pond
Blue Tit	<i>Cyanistes caeruleus</i>		Seen occasionally in dense scrub
Carrion Crow	<i>Corvus corone</i>		Numerous. Abundant on grassland
Chaffinch	<i>Fringilla coelebs</i>		In scrub in West Pond
Chiffchaff	<i>Phylloscopus collybita</i>		West Pond behind Tank Wash
Cormorant	<i>Phalacrocorax carbo</i>	BCC(A)	Associated with dock basin and edge.
Curlew	<i>Numenius arquata</i>	UKBAP BCC(A)	13 seen flying over from west
Dunnock	<i>Prunella modularis</i>	UKBAP BCC(A)	Occasional. Associated with scrub
Feral Pigeon	<i>Columba livia</i>		Dominant. Associated with abandoned buildings
Goldfinch	<i>Carduelis carduelis</i>		Seen across the site in scrub
Great Crested Grebe	<i>Podiceps cristatus</i>		Frequently seen in dock basin
Great Tit	<i>Parus major</i>		Seen occasionally in dense scrub
Greenfinch	<i>Carduelis chloris</i>		Numerous. Associated with trees and hedgerows
Herring Gull	<i>Larus argentatus</i>	UKBAP BCC(A)	Dominant
Hobby	<i>Falco subbuteo</i>	S1	Seen once flying around scrub in West Pond
House Martin	<i>Delichon urbicum</i>	BCC(A)	Flying over site from north
House Sparrow	<i>Passer domesticus</i>	UKBAP BCC(R)	Associated with site boundary
Jackdaw	<i>Corvus monedula</i>		Numerous. Abundant on grassland
Kestrel	<i>Falco tinnunculus</i>	BCC(A)	Frequently seen hunting on West Pond
Lesser Black backed Gull	<i>Larus fuscus</i>	BCC(A)	Dominant
Lesser Whitethroat	<i>Sylvia curruca</i>		One heard on northern boundary of west pond
Linnet	<i>Carduelis cannabina</i>	S42 UKBAP BCC(R)	Seen in scrub in West Pond
Long-tailed Tit	<i>Aegithalos caudatus</i>		2-3 seen along main scrub line in southwest of West Pond
Magpie	<i>Pica pica</i>		In scrub and grassland
Mallard	<i>Anas platyrhynchos</i>		Occasionally associated with pond in West Pond
Mute Swan	<i>Cygnus olor</i>	BCC(A)	Occasionally flying over
Meadow Pipit	<i>Anthus pratensis</i>	BCC(A)	Occasionally seen in grassland areas
Pied Wagtail	<i>Motacilla alba</i>		on Esplanade

Robin	<i>Erithacus rubecula</i>		Seen in scrub on South Quay
Sandwich Tern	<i>Sterna sandvicensis</i>		Seen on water edge
Shelduck	<i>Tadorna tadorna</i>	BCC(A)	Flying over water basin
Short-eared Owl	<i>Asio flammeus</i>	BCC(A)	Seen on one occasion over West Pond (mobbed by gulls)
Skylark	<i>Alauda arvensis</i>	S42 UKBAP BCC(R)	Abundant in open grassland areas in West Pond and East Quay
Song Thrush	<i>Turdus philomelos</i>	S42 UKBAP BCC(R)	in West Pond
Starling	<i>Sturnus vulgaris</i>	UKBAP BCC(R)	seen in pairs flying around the site with young birds
Swallow	<i>Hirundo rustica</i>	BCC(A)	Seen foraging over grassland
Wheatear	<i>Oenanthe oenanthe</i>		A pair frequently seen on the grass and bare areas and on spoil piles
Whitethroat	<i>Sylvia communis</i>		Heard in scrub in west pond
Woodpigeon	<i>Columba palumbus</i>		Numerous. Associated with scrub and site boundary
Wren	<i>Troglodytes troglodytes</i>		Frequently heard

## Appendix F3: Terrestrial Invertebrates Recorded

Group/Species	Common Name	Status/notes	6th June 2008			8th July 2008			15th Aug 2008		
			A	B	C	A	B	C	A	B	C
<b>Mollusca: Gastropoda</b>	<b>Snails &amp; Slugs</b>										
<i>Arion ater</i>	Large black slug			X			X	X			
<i>Cepaea hortensis</i>	White-lipped snail				X						
<i>Deroceras reticulatum</i>	Field slug			X							
<i>Helix aspersa</i>	Garden snail			X	X		X			X	X
<i>Limax flavus</i>	slug				X						
<i>Trichia hispida</i>	hairy snail				X						
<b>Crustacea: Isopoda</b>											
<i>Armadillidium nasatum</i>	Woodlouse	Local	X	X			X	X			X
<i>Armadillidium vulgare</i>	Woodlouse				X	X		X		X	
<i>Ligia oceanica</i>	Woodlouse						X				
<i>Oniscus asellus</i>	Woodlouse				X	X		X			X
<i>Philoscia muscorum</i>	Woodlouse			X				X			
<i>Porcellio scaber</i>	Woodlouse				X			X		X	X
<b>Myriapoda: Diplopoda</b>											
<i>Glomeris marginata</i>	Pill millipede							X			
<i>Tachypodoiulus niger</i>	Millipede				X						
<b>Arachnida: Aranea</b>	<b>Spiders</b>										
<i>Araniella cucurbitina / opisthographa</i>	Green orb spider		X					X		X	X
<i>Araneus diadematus</i>	Garden spider								X	X	X
<i>Dysdera crocata</i>	Woodlouse spider							X		X	X
<i>Misumena vatia</i>	Crab spider		X								
<b>Coelenterata - Cnidaria</b>											
<i>Aurelia aurata</i>	Moon jellyfish	In quay			X						X
<b>Insecta: Lepidoptera</b>	<b>Butterflies</b>										
<i>Aglais urticae</i>	Small tortoiseshell										X
<i>Aphantopus hyperantus</i>	Ringlet							X			
<i>Erynnis tages</i>	Dingy skipper	UK BAP			X						
<i>Gonepteryx rhamni</i>	Brimstone										X
<i>Lycaena phlaeas</i>	Small copper										X
<i>Maniola jurtina</i>	Meadow brown					X		X	X	X	X
<i>Ochlodes venata</i>	Large skipper			X	X			X			
<i>Pararge aegeria</i>	Speckled wood				X						X
<i>Pieris brassicae</i>	Large white				X	X			X		X
<i>Pieris napi</i>	Green-veined white				X						X
<i>Pieris rapae</i>	Small white			X							X
<i>Polyommatus icarus</i>	Common blue		X	X	X				X	X	X
<i>Pyronia tithonus</i>	Gatekeeper						X	X	X		X



Group/Species	Common Name	Status/notes	6th June 2008			8th July 2008			15th Aug 2008		
			A	B	C	A	B	C	A	B	C
<i>Thymelicus sylvestris</i>	Small skipper					x		x			
<i>Vanessa atalanta</i>	Red admiral										x
<b>Insecta: Lepidoptera</b>	<b>Moths</b>										
<i>Agriphila geniculea</i>	a grass-moth									x	x
<i>Agriphila latistria</i>	a grass-moth	Local									
<i>Agriphila straminella</i>	a grass-moth										x
<i>Agriphila tristella</i>	a grass-moth								x	x	
<i>Ancylis badiana</i>	a tortricid moth								x		
<i>Aplocera plagiata</i>	Treble Bar	Local									x
<i>Autographa gamma</i>	Silver y					x				x	x
<i>Bryotropha terrella</i>	a micro-moth						x				
<i>Campptogramma bilineata</i>	Yellow-shell		x	x			x				x
<i>Chiasmia clathrata</i>	Latticed heath	UK BAP								x	x
<i>Crambus perlella</i>	a grass-moth						x	x			
<i>Cydia nigricana</i>	a tortricid moth							x			
<i>Elachista argentella</i>	a micro-moth		x								
<i>Epiphyas postvittana</i>	Light brown apple moth										x
<i>Euclidia glyphica</i>	Burnet companion	Local		x							
<i>Grapholita compositella</i>	a tortricid moth									x	
<i>Gymnoscelis rufifasciata</i>	Double-striped Pug										x
<i>Hedya nubiferana</i>	a tortricid moth				x						
<i>Lyonetia clerkella</i>	a micro-moth							x			
<i>Mesoligia furuncula</i>	Cloaked minor								x	x	
<i>Semiaspilates ochrearia</i>	Yellow belle	Local							x	x	x
<i>Tyria jacobaeae</i>	Cinnabar	UK BAP			x		x	x			
<i>Zygaena filipendulae</i>	Six-spot burnet			x	x	x	x	x	x	x	x
<i>Zygaena lonicerae</i>	Narrow-bordered Five-spot burnet					x	x				
<b>Insecta: Odonata</b>	<b>Dragonflies &amp; Damselflies</b>										
<i>Anax imperator</i>	Emperor dragonfly				x						x
<i>Coenagrion puella</i>	Azure damselfly				x						
<i>Cordulegaster boltonii</i>	Golden-ringed dragonfly	SINC C						x			
<i>Ischnura elegans</i>	Blue-tailed damselfly							x			x
<i>Libellula depressa</i>	Broad-bodied chaser				x						
<i>Orthetrum cancellatum</i>	Black-tailed skimmer	SINC C									x
<i>Pyrrhosoma nymphula</i>	Large red damselfly										x
<i>Sympetrum striolatum</i>	Common darter										x
<b>Insecta: Orthoptera</b>	<b>Grasshoppers &amp; Crickets</b>										
<i>Chorthippus brunneus</i>	Common field				x	x	x	x	x		x

Group/Species	Common Name	Status/notes	6th June 2008			8th July 2008			15th Aug 2008		
			A	B	C	A	B	C	A	B	C
	grasshopper										
<i>Chorthippus parallelus</i>	Meadow grasshopper				X		X	X	X	X	X
<i>Conocephalus discolor</i>	Long-winged conehead	SINC P					X	X	X		X
<i>Forficula auricularia</i>	Common earwig			X	X	X			X		
<i>Leptophytes punctatissima</i>	Speckled bushcricket	SINC C							X		X
<i>Myrmeleotettix maculatus</i>	Mottled grasshopper	SINC C						X	X		
<b>Insecta: Coleoptera</b>	<b>Beetles</b>										
<i>Adalia bipunctata</i>	Two-spot ladybird					X				X	X
<i>Amara lunicollis</i>	Ground beetle										X
<i>Apion assimile</i>	Weevil		X								
<i>Apion ervi</i>	Weevil			X							
<i>Bembidion lampros</i>	Ground beetle							X			
<i>Bradycellus harpalinus</i>	Ground beetle										X
<i>Calathus fuscipes</i>	Ground beetle				X						X
<i>Cantharis thoracica</i>	Soldier beetle				X						
<i>Cassida flaveola</i>	Leaf beetle				X						
<i>Chrysolina hyperici</i>	Leaf beetle				X						
<i>Cionus scrophulariae</i>	Weevil			X							
<i>Coccinella septempunctata</i>	Seven-spot ladybird		X	X		X	X	X	X	X	X
<i>Harmonia axyridis</i>	Harlequin Ladybird	Alien				X					X
<i>Harpalus affinis</i>	Ground beetle		X	X	X		X	X			
<i>Harpalus rubripes</i>	Ground beetle							X			
<i>Harpalus rufipes</i>	Ground beetle							X			X
<i>Hippodamia variegata</i>	Adonis ladybird	Local									X
<i>Lampyris noctiluca</i>	Glow-worm	SB (2008)									
<i>Nebria salina</i>	Ground beetle	Local			X						
<i>Ocypus olens</i>	Devil's coach-horse beetle						X				X
<i>Oedemera lurida</i>	Thick-legged flower beetle				X						
<i>Oedemera nobilis</i>	Thick-kneed beetle				X	X					
<i>Olisthopus rotundatus</i>	Ground beetle				X		X	X			
<i>Ophonus ardosiacus</i>	Ground beetle	<b>NNb</b>									X
<i>Ophonus sp.</i>	Ground beetle			X							X
<i>Otiorhynchus rugosostriatus</i>	Weevil	Local		X							
<i>Oxystoma ?cerdo</i>	Weevil	<b>NNb</b>									X
<i>Paradromius linearis</i>	Ground beetle			X							
<i>Polydrusus formosus</i>	Weevil	<b>NNa</b>		X							
<i>Pterostichus madidus</i>	Ground beetle			X	X		X	X			X
<i>Pterostichus niger</i>	Ground beetle				X			X			
<i>Rhagonycha fulva</i>	Soldier-beetle					X	X	X			
<i>Rhagonycha translucida</i>	Soldier-beetle				X						
<i>Sitona humeralis</i>	Weevil								X		

Group/Species	Common Name	Status/notes	6th June 2008			8th July 2008			15th Aug 2008		
			A	B	C	A	B	C	A	B	C
<i>Sitona puncticollis</i>	Weevil	Local				x					
<i>Sitona striatellus</i>	Weevil			x							x
<b>Insecta: Hymenoptera</b>	<b>Bees, Wasps &amp; Ants</b>										
<i>Ammophila sabulosa</i>	A sand wasp										x
<i>Apis mellifera</i>	Honey bee						x		x	x	
<i>Bombus hortorum</i>	Garden bumblebee				x	x	x	x			x
<i>Bombus lapidarius</i>	Red-tailed bumblebee		x		x	x		x	x	x	x
<i>Bombus pascuorum</i>	Common carder-bee		x			x		x	x	x	x
<i>Bombus pratorum</i>	Early Bumblebee									x	
<i>Bombus terrestris</i>	Buff-tailed bumblebee		x		x	x		x	x	x	x
<i>Diplolepis rosae</i>	Robin's pin-cushion gall wasp						x				
<i>Lasius flavus</i>	Yellow meadow-ant			x			x	x			
<i>Lasius niger</i>	Black garden ant		x		x					x	x
<i>Vespula vulgaris</i>	Common wasp										x
<b>Insecta: Diptera</b>	<b>Flies</b>										
<i>Anomoia purmunda</i>	Tephritid fly							x			
<i>Chloromyia formosa</i>	Soldier-fly				x						
<i>Dolichopus plumipes</i>	Dolichopodid fly				x						
<i>Episyrphus balteatus</i>	Hoverfly				x				x		x
<i>Eristalis arbustorum</i>	Hoverfly							x			x
<i>Eristalis tenax</i>	Hoverfly								x	x	x
<i>Eupeodes corollae</i>	Hoverfly										x
<i>Helophilus pendulus</i>	Hoverfly							x			x
<i>Helophilus trivittatus</i>	Hoverfly	Local									x
<i>Hercostomus germanus</i>	Dolichopodid fly				x						
<i>Ilione albiseta</i>	Snail-killing fly				x						
<i>Limnia paludicola</i>	Snail-killing fly				x						
<i>Melanostoma mellinum</i>	Hoverfly					x					
<i>Melanostoma scalare</i>	Hoverfly					x					
<i>Oxyna parientina</i>	Tephritid fly				x						
<i>Pipizella virens</i>	Hoverfly				x						
<i>Platycheirus albimanus</i>	Hoverfly				x						
<i>Platycheirus angustatus</i>	Hoverfly				x		x				
<i>Platycheirus clypeatus</i>	Hoverfly					x					
<i>Poecilobothrus nobilitatus</i>	Dolichopodid fly					x		x			
<i>Scaeva pyrastris</i>	Hoverfly								x	x	x
<i>Scathophaga stercoraria</i>	Yellow dung-fly				x	x		x	x	x	x
<i>Sphaerophoria interrupta</i> agg.	Hoverfly			x	x						x
<i>Sphaerophoria scripta</i>	Hoverfly				x	x			x		
<i>Syntornom pallipes</i>	Dolichopodid fly				x						
<i>Syrirta pipiens</i>	Hoverfly		x		x						x

Group/Species	Common Name	Status/notes	6th June 2008			8th July 2008			15th Aug 2008		
			A	B	C	A	B	C	A	B	C
<i>Syrphus ribesii</i>	Hoverfly				x						
<i>Syrphus vitripennis</i>	Hoverfly										x
<i>Terellia serratulae</i>	Tephritid fly				x						
<i>Tipula oleracea</i>	Cranefly				x						x
<i>Tipula paludosa</i>	Cranefly				x		x				x
<i>Urophora cardui</i>	Gall-fly				x						
<i>Urophora stylata</i>	Tephritid fly				x						
<i>Urophora sp</i>	Fruit-fly				x						
<i>Xanthogramma pedissequum</i>	Hoverfly				x						
<i>Xyphosia miliaria</i>	Tephritid fly				x						
<b>Insecta: Heteroptera</b>	<b>True Bugs</b>										
<i>Adelphocoris lineolatus</i>	Lucerne bug										x
<i>Aelia acuminata</i>	Bishop's mitre bug										x
<i>Closterotomus norwegicus</i>	Potato capsid						x				
<i>Coriomerus denticulatus</i>	A squash bug	Local		x	x						
<i>Corizus hyoscyami</i>	Rhopalid bug	Local							x		
<i>Cymus melanocephalus</i>	Stiltbug										x
<i>Deraeocoris lutescens</i>	Mirid bug						x				
<i>Dichyphus annulatus</i>	Mirid bug						x				
<i>Dolycoris baccarum</i>	Hairy shieldbug								x	x	x
<i>Elasmotethus interstinctus</i>	Shieldbug				x						
<i>Eurygaster testudinaria</i>	Tortoise bug										x
<i>Gerris sp</i>	Pond skater										x
<i>Himacerus mirmicoides</i>	ant damsel bug						x	x	x		
<i>Leptopterna ferrugata</i>	Mirid bug						x				
<i>Lygocoris pabulinus</i>	Common green capsid				x		x	x	x	x	
<i>Macrotylus paykulli</i>	Mirid bug						x				
<i>Nabicula flavomarginata</i>	Broad damsel bug										x
<i>Nabis rugosus</i>	Common damsel bug						x				
<i>Notostira elongata</i>	Mirid bug						x		x	x	x
<i>Palomena prasina</i>	Common green shieldbug				x						
<i>Phytocoris varipes</i>	Mirid bug						x				x
<i>Plagiognathus chrysanthemi</i>	Mirid bug						x				
<i>Stenodema laevigatum</i>	Mirid bug							x			
<i>Stenotus binotatus</i>	Mirid bug						x	x			
<i>Trigonotylus ruficornis</i>	Mirid bug							x			
<b>Insecta: Homoptera</b>	<b>Froghoppers, leafhoppers &amp; aphids</b>										
<i>Aphrophora alni</i>	Alder spittlebug				x			x			
<i>Livia juncorum</i>	Jumping plant louse	Local						x			
<i>Macrosiphum rosae</i>	Rose aphid						x	x		x	x

Group/Species	Common Name	Status/notes	6th June 2008			8th July 2008			15th Aug 2008		
			A	B	C	A	B	C	A	B	C
<i>Neophilaenus lineatus</i>	Spittle bug					x					
<i>Philaenus spumarius</i>	Common froghopper				x						x
<b>Insecta: Neuroptera</b>	<b>Ant-lions, lacewings &amp; allies</b>										
<i>Chrysoperla carnea</i> agg	Green lacewing										x

### Key

**NNa** : Nationally Notable 'A': Recorded in 15-35 10km squares in the UK  
**NNb** : Nationally Notable 'B': Recorded in 36-100 10km squares in the UK  
 UK BAP : UK Biodiversity Action Plan Priority Species  
 Local : Local species

**SINC Status:** lists compiled in *Guidelines for the Selection of Wildlife Sites in South Wales* (2004)

SINC P : Qualifying species  
 SINC C : Contributory species

**Land at Barry Waterfront,  
Vale of Glamorgan:**

**Survey of Invertebrates**

**Plan1: Site Layout**

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## Appendix F4 Note on status of invertebrate species

### **NATIONALLY RARE**

species are those falling within the Status categories defined in the *British Red Data Books* (Bratton, 1991; Shirt, 1987). These are internationally recognised species listed in the various *Red Data Books* published by, or under the auspices of, the International Union for the Conservation of Nature (IUCN). Species included may not be informally removed or transferred between categories. There are four categories as follows:

#### **RDB 1 – “Endangered”**

Taxa in danger of extinction and whose survival is unlikely if the causal factors continue operating. These include Species known from only a single locality since 1970, species restricted to habitats which are especially vulnerable species which have shown a rapid and continuous decline in the last twenty years and are now estimated to exist in five or fewer localities and species believed extinct but which would need protection if re-discovered.

#### **RDB 2 “Vulnerable”.**

Taxa believed likely to move into the Endangered category in the near future if the causal factors continue operating. These include species declining throughout their range, species in vulnerable habitats and species whose populations are low.

#### **RDB 3 “Rare”.**

Taxa with small populations which are not at present endangered or vulnerable but which are at risk. These are species which are estimated to occur in fifteen or fewer localities.

#### **RDB K. “Unknown”**

Taxa suspected to fall within the RDB categories but which are at present insufficiently known to enable placement.

### **NATIONALLY SCARCE**

species are those falling within the Nationally Notable categories introduced by Ball (1986). They are species which are estimated to occur within the range of 16 to 100 ten-kilometre squares of the British National Grid system since 1970. The specific categorisations of species have been revised since their inception for a number of taxa; those revisions are taken into account in the present report.

Notable species are subdivided as follows:

**Na:** species estimated to occur within the range of 16 to 30 10-kilometre squares of the National Grid System.

**Nb:** species estimated to occur within the range 31 to 100 10-kilometre squares of the National Grid System.

### **NATIONALLY LOCAL**

species are those which, whilst fairly common, are evidently less widespread than truly common species, but also not qualifying as Nationally Notable having been recorded from over one hundred, but less than three hundred, ten-kilometre squares of the UK National Grid.

Remaining species have either been formally declared “Common” or else are listed as “Unknown” where insufficient data is available to assign a species to any category.