



**The Great Grid Upgrade**

Sea Link

# Sea Link

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Terrestrial Invertebrate Survey Report

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# 1. Terrestrial Invertebrate Survey Report

## 1.1 Introduction

### Background

- 1.1.1 The Sea Link Project (hereafter referred to as the 'Proposed Project') is a proposal by National Grid Electricity Transmission plc (hereafter referred to as National Grid) to reinforce the transmission network in the southeast and East Anglia. The Proposed Project is required to accommodate additional power flows generated from renewable and low carbon generation, as well as accommodating additional new interconnection with mainland Europe. This would be achieved by reinforcing the network with a High Voltage Direct Current (HVDC) Link between the proposed Friston substation in the Sizewell area of Suffolk and the existing Richborough to Canterbury 400 kV overhead line close to Richborough in Kent.
- 1.1.2 The purpose of this document is to detail the results of ecological surveys for terrestrial invertebrates conducted in relation to the Suffolk Onshore Scheme.
- 1.1.3 The baseline findings of this report provide information on any potential ecological constraints associated with invertebrates for incorporation into **Application Document 6.2.2.2 Part 2 Suffolk Chapter 2 Ecology and Biodiversity**.
- 1.1.4 Details of avoidance, mitigation, compensation and enhancement measures relating to invertebrates are not included in this report but are instead reported within **Application Document 6.2.2.2 Part 2 Suffolk Chapter 2 Ecology and Biodiversity**.
- 1.1.5 This appendix should be read in conjunction with the following figures:
- **Application Document 6.4.2.2.G Terrestrial Invertebrate Survey Report.**

### Scope

- 1.1.6 The survey areas are shown in **Application Document 6.4.2.2.G.1 Suffolk Terrestrial Invertebrate Survey Locations**. Invertebrate survey areas were selected following a review of mapping data, aerial imagery and observations made during the extended Phase 1 survey. This report provides the results of terrestrial invertebrate surveys undertaken within the Suffolk Onshore Scheme Order Limits. The findings of terrestrial invertebrate survey work have informed ecological best practice and mitigation measures as required.

## 1.2 Legislation, Policy and Guidance

- 1.2.1 Schedule 5, Section 9 (1) of the Wildlife and Countryside Act 1981 (as amended) (HM Government, 1981) lists the species of invertebrates which are protected from intentional harm (killing or injury).
- 1.2.2 Many invertebrates are listed as rare and most threatened species under Section 41 of the Natural Environment and Rural Communities Act (2006) (HM Government, 2006).



Due regard for the conservation of Section 41 species must be considered as part of planning decisions.

- 1.2.3 The Suffolk Biodiversity Check List (Suffolk Biodiversity Information Service, 2019) identifies one family and one subclade as protected invertebrate species:

- Stag beetle (family *Lucanidae*); and,
- *Aculeate Hymenoptera*.

## 1.3 Methodology

### Desk Study

- 1.3.1 A desk study to obtain background records relevant to the Suffolk Onshore Scheme was undertaken. The data obtained provides contextual information for the scope of field surveys, to aid the evaluation of field survey results, and to provide supplementary information where complete field survey coverage is not possible.
- 1.3.2 The desk-study was undertaken on 6 June 2022 and updated on 4 October 2024 to obtain records protected and notable species (Joint Nature Conservation Committee, 2023; HM Government, 2006; Suffolk Biodiversity Information Service, 2012), within the Suffolk Onshore Scheme Order Limits.

### Field Survey

- 1.3.3 Field surveys were undertaken by an experienced independent entomologist and Fellow of the Royal Entomological Society.
- 1.3.4 Three survey areas were identified for targeted invertebrate assessment these are shown in **Application Document 6.4.2.2.G.1 Suffolk Terrestrial Invertebrate Survey Locations**.
- East of Leiston Road. TM458585 (land parcel 193). Two fields of improved grassland, used for hay or silage to the east of Leiston Road.
  - South Warren (East). TM450585 (land parcel 152). An area of rough scrub and a field used for hay or silage, north of the Aldeburgh golf course.
  - South Warren (West). TM444586 (land parcel 152). Two fields used for hay or silage, with scattered scrub, north of the Aldeburgh golf course.
- 1.3.5 Survey visits were undertaken on 10 May 2024, 14 June 2024 and 4 September 2024. A walk-over assessment of the above survey areas was complemented by the collection of specimens.
- 1.3.6 Invertebrates were located and collected using a sweep net, beating tray and a stout trowel. A visual search was undertaken of flowers, leaf surfaces, rocks, bare ground, logs and tree trunks, and finger-tip grubbing was undertaken in loose soil, plant roots, logs, stumps and animal dung. Voucher specimens of all but the most common and characteristic species were collected for later examination under the microscope.
- 1.3.7 The survey concentrated on the following major groups: *Coleoptera* (beetles), *Diptera* (flies), *Hemiptera* (bugs, froghoppers, etc.), *Hymenoptera* (bees, wasps, ants, etc.), and *Lepidoptera* (butterflies and moths). If other groups were seen, examples were noted.

- 1.3.8 The following categories have been developed to describe invertebrates by their relative rarity:
- Endangered (RDB-1). The rarest taxa. Taxa in danger of extinction in Great Britain; species with very few recorded localities or living in especially vulnerable habitats.
  - Vulnerable (RDB-2). Very rare species. Taxa likely to move into the RDB1 category; species declining in their range.
  - Rare (RDB-3). Rare species. Taxa with small populations and which are at risk; species estimated to occur in 15 or fewer of the 10 km squares in the national Ordnance Survey grid since 1970.
  - Insufficiently known (RDB-K). Species thought to be very rare in Britain, recorded from less than 15 of the 10 km squares of the national Ordnance Survey grid since 1970, and which warrant RDB classification of some sort, but for which there is a recognized lack of accurate information.
  - Nationally scarce (notable A). Very local species, thought to occur in 16 to 30 of the 10 km squares of the national Ordnance Survey grid since 1970.
  - Nationally scarce (notable B). Very local species, thought to occur in 31 to 100 of the 10 km squares of the national Ordnance Survey grid since 1970.
  - Nationally scarce status is sometimes not subdivided into categories A and B, (notable, occurring in 16 to 100 10 km squares).
  - Very local status is a much more subjective, but nevertheless useful, measure of scarcity and is based on personal experience, published and unpublished records. It is applied to species that are very limited in distribution or confined to very limited specialist habitats.

## Limitations

- 1.3.9 Relevant conditions which may impact the results of the survey on two of the plots were:
- East of Leiston Road. TM458585. This area had been mown shortly before the September field visit.
  - South Warren (East). TM450585. This area had been mown just before the September field visit.
  - South Warren (East). TM450585. Access was not available in June and therefore this area was not surveyed in that month.
  - South Warren (West). TM444586. Part of this area was being developed for the golf course shortly before the September visit.
  - South Warren (West). TM444586. Access was not available in June and therefore this area was not surveyed in that month.
- 1.3.10 It should be noted that ecosystems are dynamic and constantly changing, and therefore species may move, or new species may be recorded in subsequent years. For this reason and in accordance with current guidance, the field survey data detailed in this report are valid for two years (The Chartered Institute of Ecology and Environmental Management, 2019). After this date, updated surveys may be required, and advice should be sought from an appropriately qualified ecologist to determine the survey scope and methods.

## 1.4 Results

### Desk Study

- 1.4.1 Table 1.1 Summary of data records returned by the desk study below contains a summary of the results of the desk study for the Suffolk Onshore Scheme showing records for protected and notable species of invertebrates within 2 km.

**Table 1.1 Summary of data records returned by the desk study**

<b>Common name</b>	<b><i>Scientific name</i></b>	<b>Legally protected species</b>	<b>Species of principal importance</b>	<b>Other notable species</b>	<b>Present on Site</b>	<b>Present/potentially present in wider Zone of Influence</b>	<b>Latest record (approximate distance)</b>	<b>Closest record (approximate distance)</b>
Bryony mining bee	<i>Andrena florea</i>	-	-	Y	-	Y	640 m, S, 2023	640 m, S, 2023
Small heath	<i>Coenonympha pamphilus</i>	-	Y	-	Y	Y	Within Suffolk Onshore Scheme, 2015	Within Suffolk Onshore Scheme, 2015
Grayling	<i>Hipparchia Semele</i>	-	Y	-	Y	Y	Within Suffolk Onshore Scheme, 2015	Within Suffolk Onshore Scheme, 2015
Wall	<i>Lasiommata megera</i>	-	Y	-	-	Y	700 m, N, 2017	300 m, S, 2013
White admiral	<i>Limenitis camilla</i>	-	Y	-	-	Y	300 m, N, 2019	75 m, S, 2017
Silver-studded blue	<i>Plebejus argus</i>	Y	Y	-	-	Y	700 m, N, 2017	700 m, North (N), 2017
White-letter hairstreak	<i>Satyrrium w-album</i>	Y	Y	-	-	Y	150 m, S, 2013	150 m, S, 2013



Common name	Scientific name	Legally protected species	Species of principal importance	Other notable species	Present on Site	Present/potentially present in wider Zone of Influence	Latest record (approximate distance)	Closest record (approximate distance)
Norfolk aeshna	<i>Anaciaeschna isoceles</i>	Y	Y	-	-	Y	500 m, N, 2019	400 m, N, 2018
Grey dagger	<i>Acronicta psi</i>	-	Y	-	-	Y	500 m, N, 2014	500 m, N, 2014
Brown-spot pinion	<i>Agrochola litura</i>	-	Y	-	-	Y	400 m, N, 2015	400 m, N, 2015
Beaded chestnut	<i>Agrochola lychnidis</i>	-	Y	-	-	Y	400 m, N, 2015	400 m, N, 2015
Green-brindled crescent	<i>Allophyes oxyacanthae</i>	-		-	-	Y	400 m, N, 2015	400 m, N, 2015
Ear moth	<i>Amphipoea oculea</i>	-	Y	-	-	Y	500 m, N, 2015	500 m, N, 2015
Mouse moth	<i>Amphipyra tragopoginis</i>	-	Y	-	-	Y	800 m, N, 2022	500 m, N, 2014
Deep-brown dart	<i>Aporophyla lutulenta</i>	-	Y	-	-	Y	400 m, N, 2015	400 m, N, 2015
Garden tiger	<i>Arctia caja</i>	-	Y	-	-	Y	1.9 km, S, 2017	500 m, N, 2014
Centre-barred sallow	<i>Atethmia centrargo</i>	-	Y	-	-	Y	400 m, N, 2015	400 m, N, 2015
Broom moth	<i>Ceramica pisi</i>	-	Y	-	-	Y	500 m, N, 2014	500 m, N, 2014

Common name	Scientific name	Legally protected species	Species of principal importance	Other notable species	Present on Site	Present/potentially present in wider Zone of Influence	Latest record (approximate distance)	Closest record (approximate distance)
Streak	<i>Chesias legatella</i>	-	Y	-	-	Y	400 m, N, 2015	400 m, N, 2015
Latticed heath	<i>Chiasmia clathrata</i>	-	Y	-	-	Y	602 m, N, 2022	400 m, N, 2015
Small phoenix	<i>Ecliptopera silaceata</i>	-	Y	-	-	Y	400 m, N, 2015	400 m, N, 2015
Autumnal rustic	<i>Eugnorisma glareosa</i>	-	Y	-	-	Y	400 m, N, 2015	400 m, N, 2015
Dusky dart	<i>Euxoa tritici</i>	-	Y	-	-	Y	500 m, N, 2015	500 m, N, 2015
Crescent	<i>Helotropha leucostigma</i>	-	Y	-	-	Y	500 m, N, 2015	500 m, N, 2015
Small emerald	<i>Hemistola chrysoprasaria</i>	-	Y	-	-	Y	500 m, N, 2014	500 m, N, 2014
Rustic	<i>Hoplodrina blanda</i>	-	Y	-	-	Y	500 m, N, 2015	500 m, N, 2015
Rosy rustic	<i>Hydraecia micacea</i>	-	Y	-	-	Y	500 m, N, 2014	500 m, N, 2014
Rosy minor	<i>Litoligia literosa</i>	-	Y	-	-	Y	500 m, N, 2015	500 m, N, 2015
Dot moth	<i>Melanchra persicariae</i>	-	Y	-	-	Y	500 m, N, 2015	500 m, N, 2015

Common name	Scientific name	Legally protected species	Species of principal importance	Other notable species	Present on Site	Present/potentially present in wider Zone of Influence	Latest record (approximate distance)	Closest record (approximate distance)
Powdered quaker	<i>Orthosia gracilis</i>	-	Y	-	-	Y	400 m, N, 2015	400 m, N, 2015
Bee Wolf	<i>Philanthus triangulum</i>	-	Y	-	-	Y	1.1km, N, 2023	1.1km, N, 2023
Large wainscot	<i>Rhizedra lutosa</i>	-	Y	-	-	Y	400 m, N, 2015	400 m, N, 2015
Shaded broad-bar	<i>Scotopteryx chenopodiata</i>	-	Y	-	-	Y	500 m, N, 2015	500 m, N, 2015
White ermine	<i>Spilosoma lubricipeda</i>	-	Y	-	-	Y	400 m, N, 2015	400 m, N, 2015
Buff ermine	<i>Spilosoma lutea</i>	-	Y	-	-	Y	400 m, N, 2015	400 m, N, 2015
Hedge rustic	<i>Tholera cespitis</i>	-	Y	-	-	Y	400 m, N, 2015	400 m, N, 2015
Feathered gothic	<i>Tholera decimalis</i>	-	Y	-	-	Y	400 m, N, 2015	400 m, N, 2015
Cinnabar	<i>Tyria jacobaeae</i>	-	Y	-	Y	Y	Within Suffolk Onshore Scheme, 2017	Within Suffolk Onshore Scheme, 2017
Narrow-mouthed whorl snail	<i>Vertigo (Vertilla) angustior</i>	-	Y	-	-	Y	1.6 km, S, 2016	1.6 km, S, 2016

Common name	Scientific name	Legally protected species	Species of principal importance	Other notable species	Present on Site	Present/potentially present in wider Zone of Influence	Latest record (approximate distance)	Closest record (approximate distance)
Carthusian snail	<i>Monacha</i> ( <i>Monacha</i> ) <i>cartusiana</i>	-	-	-	Y	Y	1.7 km, S, 2016	1.7 km, S, 2016

## Field Survey

- 1.4.2 Surveys were conducted in suitable conditions which are recorded in Table 1.2 Weather data below.

**Table 1.2 Weather data**

Date	Temperature	Weather	Wind
10 May 2024	20°C	Dry, partly sunny	Light breeze Easterly
14 June 2024	17°C	Scattered showers	Strong breeze South-westerly
4 September 2024	17°C	Dry, partly sunny	Light Breeze North-westerly

- 1.4.3 A total of 154 invertebrate species were recorded, Table 1.3 Family summary of identified species summarises these by family.

**Table 1.3 Family summary of identified species**

Family	Number of Species
Coleoptera (beetles)	64
Dermaptera (earwigs)	1
Diptera (flies)	18
Hemiptera (bugs)	35
Hymenoptera (bees, wasps etc)	5
Lepidoptera (butterflies & moths)	15
Odontata (dragonflies)	5
Orthoptera (grasshoppers)	4
Aranaea (spiders)	3
Opiliones (harvestmen)	1
Isopoda (woodlice and hoglice)	2
Mollusca (slugs and snails)	1

## East of Leiston Road – TM458585



- 1.4.4 This land is east of Leiston Road and the survey area comprises two fields of improved acid grassland, used for hay or silage.

### Survey results

- 1.4.5 The area had been mown shortly before the September visit.
- 1.4.6 107 species were recorded in this survey area, Table A.1 in **Annex 2.G.1** lists these species.
- 1.4.7 Details of the rarer species (excludes those with status 'common' or 'local' as these are both relatively common and widespread species and therefore less notable) are provided in Table 1.4 below.

**Table 1.4 Terrestrial invertebrate species of interest, East of Leiston Road**

Species (Family)	Status	Notes
<i>Acetropis gimmerthali</i> (Miridae)	Very Local	Small pale grassbug, associated with rough grassy habitats in southern England and Wales. Several specimens were recorded during the June survey.
<i>Crypticus quisquilius</i> (Tenebrionidae)	Nationally Scarce, Notable (Hyman & Parsons, 1992)	Small black darkling beetle, almost exclusively coastal, occurring at the roots of plants on sand dunes, the upper reaches of shingle beaches, heathlands and sandpits. A single specimen was recorded during the June survey.
<i>Kalama (Dictyonota) tricornis</i> (Tingidae)	Very Local	Minute dark lacebug, found in dry chalky or sandy places, flowery marshes and roadside verges. Several specimens were recorded during the September survey.
<i>Lampyris noctiluca</i> (Coleoptera)	Very Local	Medium-sized grey beetle, this glow-worm occurs mainly in areas of chalk or limestone soil (Alexander, 2003). Several larvae were recorded during the May survey.
<i>Onthophagus similis</i> (Scarabaeidae)	Very Local	Small mottled dung beetle, occurring widely across Britain, this local species seems to be mainly associated with moorland in Wales, the East Anglian Breck and the lowland heaths from Surrey to Dorset. Several specimens were recorded during the September survey.
<i>Philopodon plagiatus</i> (Curculionidae)	Very Local	Small grey weevil, almost exclusively coastal, occurring on sand dunes and the upper reaches of beaches. Several specimens were recorded during the May and June surveys.
<i>Plinthisus brevipennis</i> (Lygaeidae)	Very Local	Small brown ground bug, a species of dry sandy places such as heaths, sand pits and sea cliffs largely limited to the southern-most counties of

Species (Family)	Status	Notes
		England. Numerous specimens were recorded during May and September surveys.
<i>Protopion dissimile</i> (Apionidae)	Nationally scarce, notable B (Hyman & Parsons, 1992)	Tiny grey weevil, occurs widely across southern England and Wales, but is generally uncommon and scarce. Several specimens were recorded during the June survey.
<i>Syntomus</i> (Metabletus) <i>truncatellus</i> (Carabidae)	Very Local	Very small bronze ground beetle which occurs in very dry places, usually with areas of bare ground and sparse vegetation, on chalky or sandy soil. Several specimens were recorded during surveys in May, June and September.
<i>Tettigonia viridissima</i> (Tettigoniidae)	Very Local	Great green bush-cricket usually associated with rough grassy and disturbed places, particularly around the coasts of southern England and Wales. Two nymphs were recorded during the June survey.
<i>Trapezonotus arenarius/dispar</i> (Lygaeidae)	Very Local	Small mottled ground bug, the two species are very difficult to separate. Both species are very local, occurring on sandy acid soils, heathlands, coastal cliffs and dunes, mostly in southern England. One specimen was recorded during the June survey.

### South Warren (east) – TM450585

1.4.8 The survey area comprised an area of rough scrub and a field used for hay or silage.

#### Survey results

1.4.9 The field had been mown immediately prior to the September visit.

1.4.10 No survey was undertaken in June due to access constraints.

1.4.11 42 species were recorded in this survey area, Survey Area South Warren (east)

1.4.12 Table A.2 Survey Area South Warren (east)

1.4.13 Table A.2 Terrestrial invertebrate species results for South Warren (east) in **Annex 2.G.1** lists these species.

1.4.14 Details of the rarer species (excludes those with status common or local) are provided in Table 1.5 .

### Table 1.5 Terrestrial invertebrate species of interest, South Warren (East)

Species (Family)	Status	Notes
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<i>Lampyris noctiluca</i> (Coleoptera)	Very Local	Medium-sized grey beetle, this glow-worm, occurs mainly in areas of chalk or limestone soil (Alexander, 2003). Several larvae were recorded during the May survey.
<i>Philopodon plagiatus</i> (Curculionidae)	Very Local	Small grey weevil, almost exclusively coastal, occurring on sand dunes and the upper reaches of beaches. Several specimens were recorded during the May and June surveys.
<i>Pyrrhocoris apterus</i> (Pyrrhocoridae)	RDB-3 (Bantock, 2016)	Medium-sized black and red ground bug (firebug), feeds gregariously on various plants, particularly mallows and lime (linden) trees. A colony adults and nymphs were recorded during the September surveys.

### South Warren (west) – TM444586

- 1.4.15 Two fields used for hay or silage, with scattered scrub. Part of this area was being developed for the golf course shortly before the September visit.

#### Survey results

- 1.4.16 No surveys were undertaken in June due to access constraints.
- 1.4.17 42 species were identified in this survey area, Table A.3 Terrestrial invertebrate species results for South Warren (West) in **Annex 2.G.1** lists these species.
- 1.4.18 Details of the rarer species (excludes those with status common or local) are provided in Table 1.6.

**Table 1.6 Terrestrial invertebrate species of interest, South Warren (west)**

Species (Family)	Status	Notes
<i>Argiope bruennichi</i> (Araneidae)	Notable A (Telfer, 2016)	Wasp spider, a large black and yellow orb-web spider, spins its webs low down in long grass. A single specimen was reported in its web by another ecology surveyor, in September 2024.
<i>Harpalus anxius</i> (Carabidae)	Very Local	Medium-sized black ground beetle, species of coastal sites, dunes and sometimes inland on sandy heaths (Luff, 1998). One specimen was recorded during the May survey.
<i>Lasioglossum puncticolle</i> (Halictidae)	Notable B (Falk, 1991)	Small dark solitary bee which visits a variety of flowers in warm dry localities. One specimen was recorded during the September survey.
<i>Megalonotus praetextatus</i> (Lygaeidae)	Notable (Kirby, 1992)	Small, mottled ground bug, found mainly on dry sandy, chalky or slaty soils with sparse vegetation,

Species (Family)	Status	Notes
		and often near the coast. Several specimens were recorded during the May survey.
<i>Sehirus luctuosus</i> (Cydnidae)	Very Local	Small black shieldbug which occurs in scattered localities across England. It is more or less confined to dry sand and chalk soils. One specimen was recorded during the May survey.
<i>Syntomus</i> (Metabletus) <i>truncatellus</i> (Carabidae)	Very Local	Very small bronze ground beetle which occurs in very dry places, usually with areas of bare ground and sparse vegetation, on chalky or sandy soil. Several specimens were recorded during surveys in May and September.
<i>Xantholinus gallicus</i> (Staphylinidae)	Very Local	Medium-sized brown rove beetle, which prefers sandy, acid or moorland habitats. A single specimen was recorded during the September survey.

## 1.5 Discussion

- 1.5.1 The vast majority of the scarcer species named above are associated with rough, dry, flowery grassland of the type found in Suffolk.
- 1.5.2 These species exactly fit the type of fauna to be expected in the survey areas, and they likely occur widely across neighbouring areas too.
- 1.5.3 Visual comparison with neighbouring plots of land on the other side of the boundary fences suggests that the management regime of the survey area probably lowered the overall invertebrate interest below that of the surrounding areas. The uniformity of the hay meadow-type habitat did not improve the invertebrate diversity of the site.
- 1.5.4 The land in the survey areas has some invertebrate interest because of its situation on sandy soils near the coast. The coast of East Anglia and the Breck are important areas for nature conservation in Britain. The survey areas have some unusual and scarce insects which are likely to be widespread in the general area. Consequently, this area is ranked as being of medium invertebrate interest. This equates to being below a site of local importance.

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## Annex 2.G.1 Survey Presence Results

A.1.1 The following tables detail all species identified during the surveys for each of the survey areas.

### A.2 Survey Area East of Leiston Road

**Table A.1 Terrestrial invertebrate species results for East of Leiston Road**

Species	Status
<i>Acetropis gimmerthali</i>	Very Local
<i>Aelia acuminata</i>	Local
<i>Aeshna mixta</i>	Common
<i>Agrypnus murinus</i>	Local
<i>Amara aenea</i>	Common
<i>Amara tibialis</i>	Common
<i>Aphrodes makarovi</i>	Common
<i>Apion haematodes</i>	Local
<i>Athous haemorrhoidalis</i>	Common
<i>Autographa gamma</i>	Common
<i>Calathus melanocephalus</i>	Common
<i>Callistege mi</i>	Common
<i>Calvia 14-guttata</i>	Common
<i>Camptogramma bilineata</i>	Common
<i>Cellastrina argiolus</i>	Common
<i>Chloromyia formosa</i>	Common
<i>Chorthippus brunneus</i>	Common
<i>Chorthippus parallelus</i>	Common
<i>Chrysopilus cristatus</i>	Local
<i>Chrysotoxem bicinctum</i>	Local
<i>Closterotomus trivialus</i>	Local
<i>Clytus arietis</i>	Common
<i>Coenagrion puella</i>	Common

Species	Status
<i>Coenonympha pamphilus</i>	Local
<i>Coremacera marginata</i>	Common
<i>Crypticus quisquilius</i>	Notable
<i>Ditropis pteridis</i>	Common
<i>Dolycoris baccarum</i>	Local
<i>Dromius meridionalis</i>	Common
<i>Drusilla canaliculata</i>	Local
<i>Enallagma cyanthigerum</i>	Common
<i>Eurydema oleracaea</i>	Common
<i>Eurygaster testudinaria</i>	Local
<i>Forficula auricularia</i>	Common
<i>Formica fusca</i>	Common
<i>Gymnetron pascuorum</i>	Common
<i>Helophilus pendulus</i>	Common
<i>Himacerus mirmicoides</i>	Common
<i>Inachis io</i>	Common
<i>Isomira murina</i>	Local
<i>Kalama (Dictyonota) tricornis</i>	Very Local
<i>Kleidocerys resedae</i>	Common
<i>Lampyrus noctiluca</i>	Very Local
<i>Larinioides cornutus</i>	Local
<i>Lasioglossum albipes</i>	Common
<i>Lasioglossum lativentre</i>	Common
<i>Leistus ferrugineus</i>	Local
<i>Leptogaster cylindrica</i>	Local
<i>Leptopterna dolobrata</i>	Common
<i>Limonia (Kibunia) poneli</i>	Local
<i>Lycaena phlaeas</i>	Common
<i>Malachius viridis</i>	Common
<i>Maniola jurtina</i>	Common

Species	Status
<i>Mecinus pyrastrer</i>	Common
<i>Metabletus foveatus</i>	Local
<i>Metrioptera roeselii</i>	Local
<i>Micraspis 16-punctata</i>	Common
<i>Microchrysa polita</i>	Common
<i>Oedemera lurida</i>	Common
<i>Oedemera nobilis</i>	Local
<i>Olibrus aeneus</i>	Common
<i>Onthophagus similis</i>	Very Local
<i>Orthetrum cancellatum</i>	Common
<i>Orthocephalus saltator</i>	Local
<i>Othius laeviusculus</i>	Local
<i>Pentatoma rufipes</i>	Common
<i>Perapion violaceum</i>	Common
<i>Peritrechus geniculatus</i>	Common
<i>Philaenus spumarius</i>	Common
<i>Philopedon plagiatum</i>	Very Local
<i>Phyllobius maculicornis</i>	Local
<i>Phyllobius pyri</i>	Common
<i>Phyllobius roboretanus</i>	Common
<i>Physatocheila dumetorum</i>	Local
<i>Pieris brassicae</i>	Common
<i>Pieris rapae</i>	Common
<i>Piezoderus lituratus</i>	Common
<i>Pithanus maerkeli</i>	Common
<i>Platycheirus albimanus</i>	Common
<i>Plinthisus brevipennis</i>	Very Local
<i>Pocadius ferrugineus</i>	Local
<i>Podops inuncta</i>	Local
<i>Porcellio scaber</i>	Common

Species	Status
<i>Propylea 14-punctata</i>	Common
<i>Protapion dissimile</i>	Notable B
<i>Pseudovadonia (Leptura) livida</i>	Local
<i>Psyllobora 22-punctata</i>	Common
<i>Pyronia tithonus</i>	Common
<i>Rhinonchus castor</i>	Local
<i>Scathophaga stercoraria</i>	Common
<i>Scolopostethus affinis</i>	Common
<i>Siphona cristata</i>	Local
<i>Sitona lineatus</i>	Common
<i>Stethorus pusillus (Herbst) formerly punctillum</i>	Local
<i>Strongylogaster multifasciata</i>	Local
<i>Strophosoma melanogrammum</i>	Common
<i>Stygnocoris fuliginus</i>	Common
<i>Subcoccinella 24-punctata</i>	Common
<i>Sympetrum striolatum</i>	Common
<i>Syntomus (Metabletus) truncatellus</i>	Very Local
<i>Tephritis matricariae</i>	Local
<i>Tettigonia viridissima</i>	Very Local
<i>Tingis ampliata</i>	Common
<i>Trapezonotus arenarius/dispar</i>	Very Local
<i>Trichosirocalus troglodytes</i>	Common
<i>Tyria jacobaeae</i>	Common
<i>Vanessa atalanta</i>	Common

### A.3 Survey Area South Warren (east)

**Table A.2 Terrestrial invertebrate species results for South Warren (east)**

Species	Status
<i>Aelia acuminata</i>	Local

Species	Status
<i>Araneus diadematus</i>	Common
<i>Armadillidium vulgare</i>	Common
<i>Cellastrina argiolus</i>	Common
<i>Ceutorhynchus punctiger</i>	Common
<i>Chorthippus brunneus</i>	Common
<i>Chorthippus parallelus</i>	Common
<i>Coccinella 7-punctata</i>	Common
<i>Coenonympha pamphilus</i>	Local
<i>Conocephalus fuscus</i> = <i>discolor</i>	Local
<i>Coremacera marginata</i>	Common
<i>Coriomeris denticulatus</i>	Local
<i>Cryptophagus lycoperdi</i>	Local
<i>Dichetophora oblitterata</i>	Local
<i>Dolycoris baccarum</i>	Local
<i>Drusilla canaliculata</i>	Local
<i>Euproctis chrysorrhoea</i>	Local
<i>Eurygaster testudinaria</i>	Local
<i>Exapion ulicis</i>	Common
<i>Harpalus affinis</i>	Common
<i>Harpalus rubripes</i>	Common
<i>Harpalus tardus</i>	Local
<i>Helophilus pendulus</i>	Common
<i>Lampyrus noctiluca</i>	Very Local
<i>Larinioides cornutus</i>	Local
<i>Lasioglossum albipes</i>	Common
<i>Legnotus limbosus</i>	Local
<i>Machimus atricapillus</i>	Common
<i>Megalinus (Xantholinus) glabratus</i>	Common
<i>Merodon equestris</i>	Common
<i>Nabis flavomarginatus</i>	Common



Species	Status
<i>Ocypus (Staphylinus) olens</i>	Common
<i>Olibrus aeneus</i>	Common
<i>Oxystoma pomonae</i>	Common
<i>Pararge aegeria</i>	Common
<i>Peritrechus geniculatus</i>	Common
<i>Philopedon plagiatum</i>	Very Local
<i>Pieris rapae</i>	Common
<i>Porcellio scaber</i>	Common
<i>Pyrrhocoris apterus</i>	RDB2
<i>Scolopostethus decorates</i>	Local
<i>Stictopleurus abutilon</i>	Local

## A.4 Survey Area South Warren (west)

**Table A.3 Terrestrial invertebrate species results for South Warren (West)**

Species	Status
<i>Apion haematodes</i>	Local
<i>Argiope bruennichi</i>	Notable A
<i>Armadillidium vulgare</i>	Common
<i>Autographa gamma</i>	Common
<i>Bruchidius varius</i>	Local
<i>Cellastrina argiolus</i>	Common
<i>Cepaea hortensis</i>	Common
<i>Chorthippus brunneus</i>	Common
<i>Chrysotoxem cautum</i>	Local
<i>Conocephalus fuscus = discolor</i>	Local
<i>Cryptocephalus fulvus</i>	Local
<i>Dromius (Philorhizus) melanocephalus</i>	Common
<i>Exapion ulicis</i>	Common
<i>Formica fusca</i>	Common

Species	Status
<i>Harpalus anxius</i>	Notable
<i>Lasioglossum puncticolle</i>	Notable B
<i>Lasioglossum villosulum</i>	Common
<i>Machimus atricapillus</i>	Common
<i>Maniola jurtina</i>	Common
<i>Megalonotus praetextatus</i>	Notable
<i>Myathropa florea</i>	Common
<i>Myrmica rubra</i>	Common
<i>Nemastoma bimaculatum</i>	Common
<i>Oniscus asellus</i>	Common
<i>Oxystoma subulatum</i>	Common
<i>Pemphredon lugubris</i>	Common
<i>Pentatoma rufipes</i>	Common
<i>Perapion curtirostre</i>	Common
<i>Psen dahlbomi</i>	Local
<i>Pseudovadonia (Leptura) livida</i>	Local
<i>Pyrochroa serraticornis</i>	Local
<i>Rhinonchus castor</i>	Local
<i>Sehirus luctuosus</i>	Very Local
<i>Stictopleurus abutilon</i>	Local
<i>Stictopleurus punctatonervosus</i>	Local
<i>Strongylogaster multifasciata</i>	Local
<i>Sympetrum striolatum</i>	Common
<i>Syntomus (Metabletus) truncatellus</i>	Very Local
<i>Taphropeltus contractus</i>	Common
<i>Tephritis matricariae</i>	Local
<i>Xantholinus gallicus</i>	Very Local
<i>Xylota segnis</i>	Common

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