

Table EDP A11.1.4. 2020 Gavray Meadows species list showing UK status and recorded subsites per species

Common Name	Scientific Name	Family	UK Rarity Status	Threat Status	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14	F15	General	BS01/2.2
Freshwater shrimps (Amphipoda)																					
A freshwater shrimp	<i>Crangonyx pseudogracilis</i>	Crangonyctidae	Introduced (widespread)								x			x							
A freshwater shrimp	<i>Gammarus pulex</i>	Gammaridae	Widespread	LC											x						
Spiders (Araneae)																					
An orb-web spider	<i>Agalenatea redii</i>	Araneidae	Local	LC					x	x	x				x	x					
An orb-web spider	<i>Araneus diadematus</i>	Araneidae	Widespread	LC						x											
A cucumber spider	<i>Araniella cucurbitina</i>	Araneidae	Widespread	LC								x									x
A cucumber spider	<i>Araniella opisthographa</i>	Araneidae	Widespread	LC									x								x
An orb-web spider	<i>Hypsosinga pygmaea</i>	Araneidae	Local	LC					x	x											
An orb-web spider	<i>Larinioides cornutus</i>	Araneidae	Widespread	LC							x										
An orb-web spider	<i>Mangora acalypha</i>	Araneidae	Local	LC	x		x				x	x			x						
A linyphiid spider	<i>Porrhomma convexum</i>	Araneidae	Nationally Scarce	LC								x									
An orb-web spider	<i>Zygiella atrica</i>	Araneidae	Widespread	LC											x	x					
A clubionid spider	<i>Cheiracanthium erraticum</i>	Clubionidae	Local	LC					x	x					x						
A clubionid spider	<i>Clubiona brevipes</i>	Clubionidae	Widespread	LC											x	x					
A clubionid spider	<i>Clubiona comta</i>	Clubionidae	Widespread	LC																	x
A clubionid spider	<i>Clubiona lutescens</i>	Clubionidae	Widespread	LC												x					
A dictynid spider	<i>Dictyna arundinacea</i>	Dictynidae	Widespread	LC			x			x	x				x	x					
A dictynid spider	<i>Dictyna latens</i>	Dictynidae	Local	LC											x						
A dictynid spider	<i>Dictyna uncinata</i>	Dictynidae	Widespread	LC						x						x					x
A gnaphosid spider	<i>Drassyllus pusillus</i>	Gnaphosidae	Local	LC					x	x				x							
A gnaphosid spider	<i>Micaria pulicaria</i>	Gnaphosidae	Widespread	LC								x				x					
A hahniid spider	<i>Iberina montana</i>	Hahniidae	Widespread	LC	x																
A linyphiid spider	<i>Diplostyla concolor</i>	Linyphiidae	Widespread	LC					x	x											
A linyphiid spider	<i>Erigone atra</i>	Linyphiidae	Widespread	LC																	x
A linyphiid spider	<i>Erigone dentipalpis</i>	Linyphiidae	Widespread	LC																	x
A linyphiid spider	<i>Hylyphantes graminicola</i>	Linyphiidae	Local	LC											x	x					
A linyphiid spider	<i>Kaestneria dorsalis</i>	Linyphiidae	Local	LC																	x
A linyphiid spider	<i>Lepthyphantes leprosus</i>	Linyphiidae	Widespread	LC	x																
A linyphiid spider	<i>Lepthyphantes minutus</i>	Linyphiidae	Widespread	LC											x	x					
A linyphiid spider	<i>Linyphia hortensis</i>	Linyphiidae	Widespread	LC			x														
A linyphiid spider	<i>Linyphia triangularis</i>	Linyphiidae	Widespread	LC	x						x										
A linyphiid spider	<i>Microlinyphia impigra</i>	Linyphiidae	Local	LC												x					
A linyphiid spider	<i>Microlinyphia pusilla</i>	Linyphiidae	Widespread	LC			x														
A linyphiid spider	<i>Neriene clathrata</i>	Linyphiidae	Widespread	LC			x							x							
A linyphiid spider	<i>Neriene peltata</i>	Linyphiidae	Widespread	LC																	x
A linyphiid spider	<i>Obscuriphantes obscurus</i>	Linyphiidae	Widespread	LC																	x
A linyphiid spider	<i>Porrhomma pygmaeum</i>	Linyphiidae	Widespread	LC			x														
A linyphiid spider	<i>Tenuiphantes flavipes</i>	Linyphiidae	Widespread	LC			x			x											
A linyphiid spider	<i>Tenuiphantes mengei</i>	Linyphiidae	Widespread	LC		x				x											
A linyphiid spider	<i>Tenuiphantes tenuis</i>	Linyphiidae	Widespread	LC			x														
A linyphiid spider	<i>Tenuiphantes zimmermanni</i>	Linyphiidae	Widespread	LC			x									x					
A lycosid spider	<i>Alopecosa cuneata</i>	Lycosidae	Nationally Scarce	LC			x														
A lycosid spider	<i>Alopecosa pulverulenta</i>	Lycosidae	Widespread	LC		x	x				x	x		x							
A lycosid spider	<i>Pardosa amentata</i>	Lycosidae	Widespread	LC										x		x					
A lycosid spider	<i>Pardosa nigriceps</i>	Lycosidae	Widespread	LC		x									x						
A lycosid spider	<i>Pardosa palustris</i>	Lycosidae	Widespread	LC						x											
A lycosid spider	<i>Pardosa prativaga</i>	Lycosidae	Widespread	LC			x		x	x				x		x					

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A jewel beetle	<i>Agrilus laticornis</i>	Buprestidae	Local	LC								x									
A soldier beetle	<i>Cantharis cryptica</i>	Cantharidae	Widespread	LC									x								x
A soldier beetle	<i>Cantharis decipiens</i>	Cantharidae	Widespread	LC																	x
A soldier beetle	<i>Cantharis figurata</i>	Cantharidae	Widespread	LC																	x
A soldier beetle	<i>Cantharis lateralis</i>	Cantharidae	Widespread	LC						x											
A soldier beetle	<i>Cantharis pellucida</i>	Cantharidae	Widespread	LC																	x
A soldier beetle	<i>Cantharis rufa</i>	Cantharidae	Widespread	LC			x														
A soldier beetle	<i>Malthinus flaveolus</i>	Cantharidae	Widespread	LC																	x
A soldier beetle	<i>Rhagonycha fulva</i>	Cantharidae	Widespread	LC	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
A ground beetle	<i>Acupalpus exiguus</i>	Carabidae	Nationally Scarce	LC												x					
A ground beetle	<i>Amara apricaria</i>	Carabidae	Widespread	LC	x		x			x	x				x	x					
A ground beetle	<i>Amara communis</i>	Carabidae	Widespread	LC			x								x	x					
A ground beetle	<i>Amara familiaris</i>	Carabidae	Widespread	LC								x		x							
A ground beetle	<i>Amara lunicollis</i>	Carabidae													x						
A ground beetle	<i>Badister bullatus</i>	Carabidae	Widespread	LC			x														
A ground beetle	<i>Bembidion biguttatum</i>	Carabidae	Widespread	LC												x					
A ground beetle	<i>Bembidion clarkii</i>	Carabidae	Local	LC												x					
A ground beetle	<i>Bembidion guttula</i>	Carabidae	Widespread	LC									x		x	x					
A ground beetle	<i>Bembidion lunulatum</i>	Carabidae	Widespread	LC									x								
A ground beetle	<i>Bembidion obtusum</i>	Carabidae	Widespread	LC			x		x	x											
A ground beetle	<i>Bradycellus verbasci</i>	Carabidae	Widespread	LC	x		x			x	x				x	x					
A ground beetle	<i>Curtonotus aulicus</i>	Carabidae	Widespread	LC					x												
A ground beetle	<i>Dromius quadrimaculatus</i>	Carabidae	Widespread	LC	x																
A ground beetle	<i>Harpalus rufipes</i>	Carabidae	Widespread	LC	x		x			x	x				x	x					
A ground beetle	<i>Microlestes minutulus</i>	Carabidae	Local	LC						x											
A ground beetle	<i>Notiophilus palustris</i>	Carabidae	Widespread	LC						x						x					
A ground beetle	<i>Ophonus ardosiacus</i>	Carabidae	Local	LC	x		x					x									
A ground beetle	<i>Paradromius linearis</i>	Carabidae	Widespread	LC					x	x						x					
A ground beetle	<i>Poecilium cupreus</i>	Carabidae													x						
A ground beetle	<i>Polystichus connexus</i>	Carabidae	Nationally Scarce	NT	x																
A ground beetle	<i>Pterostichus madidus</i>	Carabidae	Widespread	LC		x									x						
A ground beetle	<i>Syntomus obscuroguttatus</i>	Carabidae	Local	LC			x		x												
A ground beetle	<i>Trechus quadristriatus</i>	Carabidae	Widespread	LC	x		x		x	x	x				x	x					
Pear Shortwing Beetle	<i>Glaphyra umbellatarum</i>	Cerambycidae	Nationally Scarce	LC								x									
Common Grammotera	<i>Grammotera ruficornis</i>	Cerambycidae	Widespread	LC																	x
White-banded Longhorn Beetle	<i>Poecilium alni</i>	Cerambycidae	Nationally Scarce	LC												x					
A flea beetle	<i>Altica lythri</i>	Chrysomelidae	Widespread	LC												x					
A flea beetle	<i>Aphthona euphorbiae</i>	Chrysomelidae	Widespread	LC											x	x					
A pea and bean beetle	<i>Bruchus rufimanus</i>	Chrysomelidae	Local	LC											x						x
A pea and been beetle	<i>Bruchus rufipes</i>	Chrysomelidae	Local							x											
A tortoise beetle	<i>Cassida rubiginosa</i>	Chrysomelidae	Widespread	LC										x							
A flea beetle	<i>Chaetocnema arida</i>	Chrysomelidae	Local	LC											x						
A flea beetle	<i>Chaetocnema concinna</i>	Chrysomelidae	Widespread	LC						x						x					
A flea beetle	<i>Chaetocnema hortensis</i>	Chrysomelidae	Widespread	LC						x					x						
A flea beetle	<i>Chaetocnema picipes</i>	Chrysomelidae	Local	LC											x						
A flea beetle	<i>Crepidodera plutus</i>	Chrysomelidae	Local	LC						x					x						
A flea beetle	<i>Epitrix pubescens</i>	Chrysomelidae	Widespread	LC												x					
A flea beetle	<i>Longitarsus atricillus</i>	Chrysomelidae	Widespread	LC					x												
A flea beetle	<i>Longitarsus fowleri</i>	Chrysomelidae	Nationally Scarce	LC										x							

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A click beetle	<i>Athous haemorrhoidalis</i>	Elateridae	Widespread	LC							x										x
A riffle beetle	<i>Elmis sp.</i>	Elmidae	Unknown	n/a												x					
An Errirhinid weevil	<i>Notaris acridulus</i>	Errirhinidae	Widespread	LC									x								
A grooved water-scavenger beetle	<i>Helophorus brevipalpis</i>	Helophoridae	Widespread	LC			x							x							
A grooved water-scavenger beetle	<i>Helophorus grandis</i>	Helophoridae	Widespread	LC			x				x			x							
A grooved water-scavenger beetle	<i>Helophorus granularis</i>	Helophoridae	Nationally scarce	LC			x				x										
A water beetle	<i>Anacaena limbata</i>	Hydrophilidae	Widespread	LC			x				x		x	x							
A water scavenger beetle	<i>Enochrus quadripunctatus</i>	Hydrophilidae	Nationally Scarce	LC			x														
A water-scavenger beetle	<i>Hydrobius fuscipes</i>	Hydrophilidae	Widespread	LC			x							x							
A water scavenger beetle	<i>Megasternum concinnum</i>	Hydrophilidae	Widespread	LC					x						x						
A kateretid beetle	<i>Brachypterus glaber</i>	Kateretidae	Widespread	LC												x					
A latridiid beetle	<i>Corticaria impressa</i>	Latridiidae	Widespread	LC												x					
A latridiid beetle	<i>Corticarina similata</i>	Latridiidae	Local	LC											x	x					
A malachite beetle	<i>Cordylepherus viridis</i>	Malachiidae	Local	LC						x		x	x		x						
A malachite beetle	<i>Malachius bipustulatus</i>	Malachiidae	Widespread	LC			x					x	x			x					x
A pollen beetle	<i>Epuraea aestiva</i>	Nitidulidae	Widespread	LC																	x
A pollen beetle	<i>Meligethes aeneus</i>	Nitidulidae	Widespread	LC			x			x		x	x		x	x					x
A pollen beetle	<i>Meligethes atratus</i>	Nitidulidae	Widespread	LC																	x
A pollen beetle	<i>Meligethes flavimanus</i>	Nitidulidae	Local	LC																	x
A pollen beetle	<i>Meligethes nigrescens</i>	Nitidulidae	Widespread	LC										x	x						x
Lurid Flower Beetle	<i>Oedemera lurida</i>	Oedemeridae	Widespread	LC			x		x	x	x				x	x					
Thick-kneed Flower Beetle	<i>Oedemera nobilis</i>	Oedemeridae	Widespread	LC			x			x		x	x		x	x					x
A phalacrid beetle	<i>Olibrus aeneus</i>	Phalacridae	Widespread							x											
A rhynchitid weevil	<i>Involvulus caeruleus</i>	Rhynchitidae	Local	LC																	x
Apple Fruit Rhynchites	<i>Neocoenorrhinus aequatus</i>	Rhynchitidae	Widespread	LC				x													x
A rhynchitid weevil	<i>Temnocerus longiceps</i>	Rhynchitidae	Nationally Scarce	LC									x								
A scirtid beetle	<i>Microcara testacea</i>	Scirtidae	Widespread	LC			x						x			x					x
A scaptiid beetle	<i>Anaspis frontalis</i>	Scaptiidae	Widespread	LC																	x
A scaptiid beetle	<i>Anaspis garneysi</i>	Scaptiidae	Widespread	LC																	x
A scaptiid beetle	<i>Anaspis maculata</i>	Scaptiidae	Widespread	LC								x									x
A scaptiid beetle	<i>Anaspis pulicaria</i>	Scaptiidae	Local	LC								x									
A rove beetle	<i>Amischa analis</i>	Staphylinidae	Widespread	LC											x						
A rove beetle	<i>Anotylus inustus</i>	Staphylinidae	Local	LC							x										
A rove beetle	<i>Anotylus rugosus</i>	Staphylinidae	Widespread	LC	x																
A rove beetle	<i>Drusilla canaliculata</i>	Staphylinidae	Widespread	LC								x	x	x	x						
A rove beetle	<i>Mocyta fungi agg.</i>	Staphylinidae	Widespread	LC							x	x				x					
A rove beetle	<i>Oxypoda acuminata</i>	Staphylinidae	Local	LC							x										
A rove beetle	<i>Philonthus carbonarius</i>	Staphylinidae	Widespread	LC						x											
A rove beetle	<i>Philonthus cognatus</i>	Staphylinidae	Widespread	LC											x						
A rove beetle	<i>Quedius curtipennis</i>	Staphylinidae	Widespread	LC			x														
A rove beetle	<i>Quedius semiobscurus</i>	Staphylinidae	Widespread	LC			x		x												
A rove beetle	<i>Rugilus erichsonii</i>	Staphylinidae	Local	LC									x	x							
A rove beetle	<i>Sepedophilus nigripennis</i>	Staphylinidae	Widespread	LC											x						
A rove beetle	<i>Sepedophilus pedicularius</i>	Staphylinidae	Nationally Scarce	LC										x							
A rove beetle	<i>Stenus aceris</i>	Staphylinidae	Local	LC										x							x
A rove beetle	<i>Stenus brunnipes</i>	Staphylinidae	Widespread	LC					x	x			x	x							
A rove beetle	<i>Stenus flavipes</i>	Staphylinidae	Widespread	LC												x					
A rove beetle	<i>Stenus fulvicornis</i>	Staphylinidae	Widespread	LC			x														
A rove beetle	<i>Stenus impressus</i>	Staphylinidae	Widespread	LC										x							x

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A Long-legged fly	<i>Medetera jacula</i>	<i>Dolichopodidae</i>	Widespread	LC		x				x		x	x		x	x					
A Long-legged fly	<i>Sciapus platypterus</i>	<i>Dolichopodidae</i>	Widespread	LC									x								
A fruit fly	<i>Scaptomyza pallida</i>	<i>Drosophilidae</i>	Widespread						x		x				x						
A Daggerfly	<i>Empis albinervis</i>	<i>Empididae</i>	Widespread	LC							x	x		x		x					
A Daggerfly	<i>Empis nigripes</i>	<i>Empididae</i>	Widespread	LC									x		x						
A Daggerfly	<i>Empis tessellata</i>	<i>Empididae</i>	Widespread	LC		x								x							
A Daggerfly	<i>Empis trigramma</i>	<i>Empididae</i>	Widespread	LC							x										
A Daggerfly	<i>Rhamphomyia crassirostris</i>	<i>Empididae</i>	Widespread	LC		x															
A Shorefly	<i>Hydrellia griseola</i>	<i>Ephydriidae</i>	Widespread	LC		x				x											
An ephydrid fly	<i>Hydrellia maura</i>	<i>Ephydriidae</i>	Widespread		x										x	x					
An ephydrid fly	<i>Psilopa nitidula</i>	<i>Ephydriidae</i>	Local						x						x						
A fanniid fly	<i>Fannia armata</i>	<i>Fanniidae</i>	Widespread	LC							x										
A fanniid fly	<i>Fannia serena</i>	<i>Fanniidae</i>	Widespread		x						x										
A fanniid fly	<i>Fannia umbrosa</i>	<i>Fanniidae</i>	Local								x										
A Dancefly	<i>Bicellaria nigra</i>	<i>Hybotidae</i>	Widespread	LC								x			x						
A Dancefly	<i>Oedalea holmgreni</i>	<i>Hybotidae</i>	Widespread	LC							x										
A Dancefly	<i>Platypalpus agilis</i>	<i>Hybotidae</i>	Widespread	LC		x					x										
A Dancefly	<i>Platypalpus longiseta</i>	<i>Hybotidae</i>	Widespread	LC					x	x		x									
A lauxaniid fly	<i>Calliopum aeneum</i>	<i>Lauxaniidae</i>	Widespread																		
A lauxaniid fly	<i>Meiosimyza decempunctata</i>	<i>Lauxaniidae</i>	Local						x												
A lauxaniid fly	<i>Meiosimyza decipiens</i>	<i>Lauxaniidae</i>	Widespread								x										
A lauxaniid fly	<i>Minettia fasciata</i>	<i>Lauxaniidae</i>	Widespread	LC								x	x								
A lauxaniid fly	<i>Minettia tabidiventris</i>	<i>Lauxaniidae</i>	Widespread		x				x	x					x	x					
A lauxaniid fly	<i>Sapromyza quadripunctata</i>	<i>Lauxaniidae</i>	Widespread	LC					x	x		x			x						
A Spear-winged fly	<i>Lonchoptera furcata</i>	<i>Lonchopteridae</i>	Widespread							x											
A Spear-winged fly	<i>Lonchoptera lutea</i>	<i>Lonchopteridae</i>	Widespread	LC		x							x	x							
A muscid fly	<i>Coenosia pumila</i>	<i>Muscidae</i>	Local		x				x	x					x						
A muscid fly	<i>Helina depuncta</i>	<i>Muscidae</i>	Widespread	LC											x						
A muscid fly	<i>Helina evecta</i>	<i>Muscidae</i>	Widespread	LC		x					x			x	x						
A muscid fly	<i>Helina impuncta</i>	<i>Muscidae</i>	Widespread	LC								x									
A muscid fly	<i>Helina reversio</i>	<i>Muscidae</i>	Widespread													x					
A muscid fly	<i>Morellia simplex</i>	<i>Muscidae</i>	Widespread												x						
A muscid fly	<i>Musca domestica</i>	<i>Muscidae</i>	Widespread								x										
A muscid fly	<i>Phaonia palpata</i>	<i>Muscidae</i>	Widespread	LC										x							
A muscid fly	<i>Phaonia subventa</i>	<i>Muscidae</i>	Widespread	LC							x										
A muscid fly	<i>Phaonia tuguriorum</i>	<i>Muscidae</i>	Widespread	LC											x	x					
A muscid fly	<i>Polietes lardarius</i>	<i>Muscidae</i>	Widespread	LC							x										
An opomyzid fly	<i>Geomyza apicalis</i>	<i>Opomyzidae</i>	Provisionally Nationally Scarce												x						
An opomyzid fly	<i>Geomyza tripunctata</i>	<i>Opomyzidae</i>	Widespread	LC		x						x	x								
An opomyzid fly	<i>Opomyza germinationis</i>	<i>Opomyzidae</i>	Widespread	LC		x			x	x	x		x		x						
An opomyzid fly	<i>Opomyza petrei</i>	<i>Opomyzidae</i>	Widespread	LC		x			x	x		x	x								
A flutter fly	<i>Palloptera modesta</i>	<i>Pallopteridae</i>	Local						x												
Downlooker Snipefly	<i>Rhagio scolopaceus</i>	<i>Rhagionidae</i>	Widespread	LC						x											
Smoky-winged Woodlouse Fly	<i>Melanophora roralis</i>	<i>Rhinophoridae</i>	Local						x												
Pouting Woodlouse Fly	<i>Rhinophora lepida</i>	<i>Rhinophoridae</i>	Widespread						x												
A fleshfly	<i>Blaesoxipha plumicornis</i>	<i>Sarcophagidae</i>	Provisionally Near Threatened	NT		x				x					x	x					
A fleshfly	<i>Nyctia halterata</i>	<i>Sarcophagidae</i>	Widespread												x	x					

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A fleshfly	<i>Sarcophaga aratrix</i>	Sarcophagidae	Widespread	LC											x	x					
A fleshfly	<i>Sarcophaga carnaria</i>	Sarcophagidae	Widespread	LC		x									x	x					
A fleshfly	<i>Sarcophaga crassimargo</i>	Sarcophagidae	Widespread	LC											x	x					
A fleshfly	<i>Sarcophaga haemorrhhoa</i>	Sarcophagidae	Widespread	LC											x	x					
A fleshfly	<i>Sarcophaga incisilobata</i>	Sarcophagidae	Widespread	LC		x									x	x					
A fleshfly	<i>Sarcophaga nigriventris</i>	Sarcophagidae	Widespread	LC						x					x	x					
A fleshfly	<i>Sarcophaga pumila</i>	Sarcophagidae	Widespread	LC						x											
A fleshfly	<i>Sarcophaga rosellei</i>	Sarcophagidae	Local						x						x	x					
A fleshfly	<i>Sarcophaga setipennis</i>	Sarcophagidae	Widespread	LC						x											
A fleshfly	<i>Sarcophaga subulata</i>	Sarcophagidae	Provisionally Nationally Scarce													x					
A fleshfly	<i>Sarcophaga subvicina</i>	Sarcophagidae	Widespread	LC		x			x						x	x					
A fleshfly	<i>Sarcophaga vagans</i>	Sarcophagidae	Widespread												x	x					
A fleshfly	<i>Sarcophaga variegata</i>	Sarcophagidae	Widespread	LC		x									x	x					
A dung fly	<i>Cordilura albipes</i>	Scathophagidae	Widespread								x										
A dung fly	<i>Norellisoma spinimanum</i>	Scathophagidae	Widespread													x					
A dung fly	<i>Scathophaga stercoraria</i>	Scathophagidae	Widespread	LC		x						x									
A sciomyzid fly	<i>Coremacera marginata</i>	Sciomyzidae	Widespread							x					x						
A sciomyzid fly	<i>Limnia unguicornis</i>	Sciomyzidae	Local		x					x											
A sciomyzid fly	<i>Pherbellia cinerella</i>	Sciomyzidae	Widespread						x	x											
A sciomyzid fly	<i>Tetanocera ferruginea</i>	Sciomyzidae	Widespread																		
A lesser dung fly	<i>Saltella sphondylii</i>	Sepsidae	Widespread												x						
A lesser dung fly	<i>Sepsis fulgens</i>	Sepsidae	Widespread	LC	x										x						
A lesser dung fly	<i>Sepsis punctum</i>	Sepsidae	Widespread	LC		x						x									
A blackfly	<i>Simulium angustitarse</i>	Simuliidae	Widespread	LC												x					
A sphaerocerid fly	<i>Lotophila atra</i>	Sphaeroceridae	Widespread						x												
Common Orange Legionnaire	<i>Beris vallata</i>	Stratiomyidae	Widespread	LC								x									
Broad Centurion	<i>Chloromyia formosa</i>	Stratiomyidae	Widespread													x					
Green Gem	<i>Microchrysa flavicornis</i>	Stratiomyidae	Widespread	LC												x					
Dark-winged Black	<i>Pachygaster atra</i>	Stratiomyidae	Widespread	LC						x											
Marmalade Hoverfly	<i>Episyrphus balteatus</i>	Syrphidae	Widespread	LC								x									
A hoverfly	<i>Eristalis arbustorum</i>	Syrphidae	Widespread	LC						x		x			x						
A hoverfly	<i>Eristalis tenax</i>	Syrphidae	Widespread	LC						x											
A hoverfly	<i>Helophilus hybridus</i>	Syrphidae	Local													x					
A hoverfly	<i>Helophilus pendulus</i>	Syrphidae	Widespread	LC					x	x		x		x	x						
A hoverfly	<i>Melanostoma mellinum</i>	Syrphidae	Widespread	LC		x			x												
A hoverfly	<i>Melanostoma scalare</i>	Syrphidae	Widespread	LC		x			x		x				x						
A hoverfly	<i>Pipizella viduata</i>	Syrphidae	Widespread	LC					x				x								
Heineken Hoverfly	<i>Rhingia campestris</i>	Syrphidae	Widespread	LC				x													
A hoverfly	<i>Sphaerophoria rueppellii</i>	Syrphidae	Local							x											
A hoverfly	<i>Sphaerophoria scripta</i>	Syrphidae	Widespread							x											
A hoverfly	<i>Syritta pipiens</i>	Syrphidae	Widespread												x						
A hoverfly	<i>syrphus ribesii</i>	Syrphidae	Widespread													x					
A hoverfly	<i>Triglyphus primus</i>	Syrphidae	Nationally Scarce							x											
A hoverfly	<i>Volucella bombylans</i>	Syrphidae	Widespread	LC											x						
A hoverfly	<i>Volucella inanis</i>	Syrphidae	Local	LC							x	x									
A hoverfly	<i>Volucella pellucens</i>	Syrphidae	Widespread	LC										x							
Hornet Hoverfly	<i>Volucella zonaria</i>	Syrphidae	Local	LC							x										
A tachinid fly	<i>Eriothrix rufomaculata</i>	Tachinidae	Widespread						x	x	x				x	x					

Common Name	Scientific Name	Family	UK Rarity Status	Threat Status	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14	F15	General	BS01/2.2
A tachinid fly	<i>Exorista rustica</i>	Tachinidae	Widespread												x						
A tachinid fly	<i>Phania funesta</i>	Tachinidae	Widespread	LC							x					x					
A tachinid fly	<i>Phasia pusilla</i>	Tachinidae	Widespread	LC							x				x						
A tachinid fly	<i>Siphona geniculata</i>	Tachinidae	Widespread						x												
A tephritid fly	<i>Campiglossa malaris</i>	Tephritidae	RDBK 'unknown'												x						
A tephritid fly	<i>Merzomyia westermanni</i>	Tephritidae	Nationally Scarce							x											
A tephritid fly	<i>Sphenella marginata</i>	Tephritidae	Local							x					x						
A tephritid fly	<i>Tephritis formosa</i>	Tephritidae	Widespread						x	x											
A tephritid fly	<i>Terellia ruficauda</i>	Tephritidae	Local												x						
A cranefly	<i>Limonia nigropunctata</i>	Tipulidae	Widespread	LC							x										
A cranefly	<i>Nephrotoma appendiculata</i>	Tipulidae	Widespread	LC							x					x					
A cranefly	<i>Tipula paludosa</i>	Tipulidae	Widespread						x	x					x	x					
A cranefly	<i>Tipula vernalis</i>	Tipulidae	Widespread	LC		x															
A ulidiid fly	<i>Herina lugubris</i>	Ulidiidae	Widespread						x												
A ulidiid fly	<i>Melieria crassipennis</i>	Ulidiidae	Local													x					
Mayflies (Ephemeroptera)																					
Large Dark Olive	<i>Baetis rhodani</i>	Baetidae	Widespread	LC										x		x					
True bugs (Hemiptera)																					
A flowerbug	<i>Anthocoris confusus</i>	Anthocoridae	Widespread	LC								x			x	x					x
A flower bug	<i>Anthocoris nemoralis</i>	Anthocoridae	Widespread	LC																	x
A flower bug	<i>Orius laevigatus</i>	Anthocoridae	Widespread						x												
A flower bug	<i>Orius vicinus</i>	Anthocoridae	Widespread												x						
A flower bug	<i>Temnostethus gracilis</i>	Anthocoridae	Local	LC											x	x					
A froghopper	<i>Neophilaenus lineatus</i>	Aphrophoridae	Widespread	LC							x										
Common Froghopper	<i>Philaenus spumarius</i>	Aphrophoridae	Widespread	LC	x		x		x	x	x			x	x	x					
A leafhopper	<i>Adarrus ocellaris</i>	Cicadellidae	Widespread	LC			x					x									
A leafhopper	<i>Agallia venosa</i>	Cicadellidae	Widespread	LC					x												
A leafhopper	<i>Alebra albostriella</i>	Cicadellidae	Widespread	LC	x										x	x					
A leafhopper	<i>Anaceratagallia ribauti</i>	Cicadellidae	Local	LC	x					x					x						
A leafhopper	<i>Anoscopus albifrons</i>	Cicadellidae	Widespread						x												
A leafhopper	<i>Anoscopus flavostriatus</i>	Cicadellidae	Widespread												x						
A leafhopper	<i>Aphrodes makarovi</i>	Cicadellidae	Widespread		x				x	x						x					
A leafhopper	<i>Arthaldeus pascuellus</i>	Cicadellidae	Widespread	LC			x			x		x			x	x					
A leafhopper	<i>Athysanus argentarius</i>	Cicadellidae	Widespread	LC	x					x		x			x	x					
A leafhopper	<i>Cicadella viridis</i>	Cicadellidae	Widespread	LC	x	x	x			x	x					x					
A leafhopper	<i>Cicadula quadrinotata</i>	Cicadellidae	Widespread	LC			x									x					
A leafhopper	<i>Deltocephalus pulicaris</i>	Cicadellidae	Widespread	LC			x				x				x	x					
A leafhopper	<i>Elymana sulphurella</i>	Cicadellidae	Widespread												x	x					
A leafhopper	<i>Eupelix cuspidata</i>	Cicadellidae	Local	LC	x					x											
A leafhopper	<i>Eupteryx vittata</i>	Cicadellidae	Widespread	LC						x	x										
A leafhopper	<i>Euscelis incisus</i>	Cicadellidae	Widespread	LC	x		x			x	x				x	x					
A leafhopper	<i>lassus lanio</i>	Cicadellidae	Widespread	LC	x		x			x	x				x	x					
A planthopper	<i>Macrosteles sardus</i>	Cicadellidae	New to Britain												x						
A leafhopper	<i>Macustus grisescens</i>	Cicadellidae	Widespread	LC			x				x			x	x	x					
A leafhopper	<i>Megophthalmus scanicus</i>	Cicadellidae	Widespread	LC	x					x						x					
A leafhopper	<i>Mocydiopsis attenuata</i>	Cicadellidae	Widespread							x											
A leafhopper	<i>Psammotettix confinis</i>	Cicadellidae	Widespread	LC			x					x				x					
A leafhopper	<i>Rhopalopyx elongata</i>	Cicadellidae	Uknown	LC						x		x									
A leafhopper	<i>Streptanus sordidus</i>	Cicadellidae	Widespread	LC			x					x				x					

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A mirid bug	<i>Phytocoris ulmi</i>	Miridae	Widespread	LC	x																x	
A mirid bug	<i>Phytocoris varipes</i>	Miridae	Widespread	LC	x				x	x	x											
A mirid bug	<i>Pithanus maerkeli</i>	Miridae	Widespread	LC					x													
A mirid bug	<i>Plagiognathus arbustorum</i>	Miridae	Widespread	LC							x					x						
A mirid bug	<i>Plagiognathus chrysanthemi</i>	Miridae	Widespread	LC							x					x						
A mirid bug	<i>Psallus perrisi</i>	Miridae	Widespread	LC																	x	
A mirid bug	<i>Psallus varians</i>	Miridae	Widespread	LC								x									x	
A mirid bug	<i>Rhabdomiris striatellus</i>	Miridae	Widespread	LC								x									x	
A grass bug	<i>Stenodema laevigata</i>	Miridae	Widespread	LC						x	x											
Tree Damselbug	<i>Himacerus apterus</i>	Nabidae	Widespread	LC											x	x						
Grey Damselbug	<i>Himacerus major</i>	Nabidae	Widespread	LC											x							
Ant Damselbug	<i>Himacerus mirmicoides</i>	Nabidae	Widespread	LC	x				x	x		x		x								
Field Damselbug	<i>Nabis ferus</i>	Nabidae	Widespread	LC											x	x						
Common Damselbug	<i>Nabis rugosus</i>	Nabidae	Widespread	LC						x				x								
A saucer bug	<i>Ilyocoris cimicoides</i>	Naucoridae	Widespread	LC			x															
Bishop's Mitre Shieldbug	<i>Aelia acuminata</i>	Pentatomidae	Widespread	LC					x	x	x	x			x	x						
Hairy Shieldbug	<i>Dolycoris baccarum</i>	Pentatomidae	Widespread	LC	x				x	x	x				x	x						
Red-legged Shieldbug	<i>Pentatoma rufipes</i>	Pentatomidae	Widespread	LC	x	x	x					x	x		x	x						
Turtle Shieldbug	<i>Podops inuncta</i>	Pentatomidae	Local	LC					x													
A rhopalid bug	<i>Corizus hyoscyami</i>	Rhopalidae	Local	LC											x							
A rhopalid bug	<i>Rhopalus subrufus</i>	Rhopalidae	Widespread	LC					x	x	x					x						
A rhopalid bug	<i>Stictopleurus punctatonervosus</i>	Rhopalidae	Not Assessed (formerly extinct - recent UK recoloniser)							x												
A shore bug	<i>Saldula saltatoria</i>	Saldidae	Widespread	LC			x															
Tortoise Shieldbug	<i>Eurygaster testudinaria</i>	Scutelleridae	Widespread	LC								x			x							
A lace bug	<i>Physatocheila dumetorum</i>	Tingidae	Widespread	LC																	x	
Bees, ants and wasps (Aculeate Hymenoptera)																						
Gwynne's Mining Bee	<i>Andrena bicolor</i>	Andrenidae	Widespread	LC						x												
Ashy Mining Bee	<i>Andrena cineraria</i>	Andrenidae	Widespread	LC				x														
Short-fringed Mining Bee	<i>Andrena dorsata</i>	Andrenidae	Local	LC											x							
Yellow-legged Mining Bee	<i>Andrena flavipes</i>	Andrenidae	Local	LC												x						
Common Mini-miner	<i>Andrena minutula</i>	Andrenidae	Widespread	LC						x						x						
Buffish Mining Bee	<i>Andrena nigroaenea</i>	Andrenidae	Widespread	LC		x																
Grey-patched Mining Bee	<i>Andrena nitida</i>	Andrenidae	Widespread	LC										x								
Chocolate Mining Bee	<i>Andrena scotica</i>	Andrenidae	Widespread	LC																	x	
Impunctate Mining Bee	<i>Andrena subopaca</i>	Andrenidae	Local	LC																	x	
Hairy-footed Flower Bee	<i>Anthophora plumipes</i>	Apidae	Widespread	LC			x															
Honey Bee	<i>Apis mellifera</i>	Apidae	Widespread	LC	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Tree Bumblebee	<i>Bombus hypnorum</i>	Apidae	Recent UK colonist (Widespread)	LC	x								x		x					x		
Large Red-tailed Bumblebee	<i>Bombus lapidarius</i>	Apidae	Widespread	LC	x		x		x	x		x	x		x	x						
White-tailed Bumblebee	<i>Bombus lucorum</i>	Apidae	Widespread	LC	x		x			x		x	x		x	x						
Common Carder Bee	<i>Bombus pascuorum</i>	Apidae	Widespread	LC	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x		
Early Bumblebee	<i>Bombus pratorum</i>	Apidae	Widespread	LC	x		x			x		x	x		x	x						
Buff-tailed Bumblebee	<i>Bombus terrestris (agg.)</i>	Apidae	Widespread	LC			x			x		x	x		x	x						
Fabricius' Nomad Bee	<i>Nomada fabriciana</i>	Apidae	Local	LC						x						x						
Flavous Nomad Bee	<i>Nomada flava</i>	Apidae	Widespread	LC			x														x	
Little Nomad Bee	<i>Nomada flavoguttata</i>	Apidae	Widespread	LC		x				x						x					x	

Common Name	Scientific Name	Family	UK Rarity Status	Threat Status	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14	F15	General	BS01/2.2
Painted Nomad Bee	<i>Nomada fucata</i>	Apidae	Nationally Scarce	LC											x						
A bethylid wasp	<i>Bethylus cephalotes</i>	Bethylidae	Local												x						
Short-horned Yellow-faced Bee	<i>Hylaeus brevicornis</i>	Colletidae	Local								x					x					
Chalk Yellow-faced Bee	<i>Hylaeus dilatatus</i>	Colletidae	Local												x						
A solitary wasp	<i>Ectemnius continuus</i>	Crabronidae	Widespread													x					
A solitary wasp	<i>Pemphredon lugubris</i>	Crabronidae	Widespread	LC												x					
A crabronid wasp	<i>Rhopalum coarctatum</i>	Crabronidae	Widespread	LC	x						x										
A solitary wasp	<i>Trypoxylon attenuatum</i>	Crabronidae	Widespread	LC			x		x	x	x				x	x					
A formicine ant	<i>Formica fusca</i>	Formicidae	Widespread	LC					x												x
A formicine ant	<i>Lasius niger</i>	Formicidae	Widespread	LC	x				x	x		x	x		x						
A myrmicine ant	<i>Leptothorax acervorum</i>	Formicidae	Local	LC	x																
A myrmicine ant	<i>Myrmica rubra</i>	Formicidae	Widespread	LC	x	x	x		x	x	x	x		x		x				x	x
A myrmicine ant	<i>Myrmica ruginodis</i>	Formicidae	Widespread	LC			x		x	x		x			x	x					
A myrmicine ant	<i>Myrmica scabrinodis</i>	Formicidae	Widespread	LC			x			x		x	x		x						
A myrmicine ant	<i>Myrmica sulcinodis</i>	Formicidae	Widespread	LC						x					x						
Bronze Furrow Bee	<i>Halictus tumulorum</i>	Halictidae	Widespread	LC	x				x		x				x	x					
Common Furrow Bee	<i>Lasioglossum calceatum</i>	Halictidae	Widespread							x					x	x					
Chalk furrow-bee	<i>Lasioglossum fulvicorne</i>	Halictidae	Widespread	LC					x												
Furry-claspered Furrow Bee	<i>Lasioglossum lativentre</i>	Halictidae	Local						x												
Sharp-collared Furrow Bee	<i>Lasioglossum malachurum</i>	Halictidae	Widespread				x			x											
Green Furrow Bee	<i>Lasioglossum morio</i>	Halictidae	Widespread							x											
Lobe-spurred Furrow Bee	<i>Lasioglossum pauxillum</i>	Halictidae	Nationally Scarce						x	x						x					
Long-faced Furrow Bee	<i>Lasioglossum punctatissimum</i>	Halictidae	Local													x					
Ridge-cheeked Furrow Bee	<i>Lasioglossum puncticolle</i>	Halictidae	Nationally Scarce	LC			x								x						
Bare-saddled Blood Bee	<i>Sphecodes ephippius</i>	Halictidae	Widespread	LC						x											
Red-tailed Blood Bee	<i>Sphecodes rubicundus</i>	Halictidae	Nationally Scarce							x											
Red Mason Bee	<i>Osmia bicornis</i>	Megachilidae	Widespread	LC		x															
Spined Mason Bee	<i>Osmia spinulosa</i>	Megachilidae	Local	LC						x											
A spider-hunting wasp	<i>Agenioideus cincitellus</i>	Pompilidae	Local	LC						x											
A spider-hunting wasp	<i>Anoplius caviventris</i>	Pompilidae	Nationally Scarce												x	x					
A spider-hunting wasp	<i>Anoplius nigerrimus</i>	Pompilidae	Widespread						x	x						x					
A spider-hunting wasp	<i>Arachnospila anceps</i>	Pompilidae	Widespread							x											
A spider-hunting wasp	<i>Arachnospila spissa</i>	Pompilidae	Local							x											
A spider-hunting wasp	<i>Auplopus carbonarius</i>	Pompilidae	Nationally Scarce												x						
A spider-hunting wasp	<i>Priocnemis exaltata</i>	Pompilidae	Local	LC					x		x										
A spider-hunting wasp	<i>Priocnemis hyalinata</i>	Pompilidae	Nationally Scarce													x					
A solitary wasp	<i>Tiphia minuta</i>	Tiphidae	Nationally Scarce																		x
A social wasp	<i>Dolichovespula saxonica</i>	Vespidae	pRDBK												x						
A mason wasp	<i>Odynerus melanocephalus</i>	Vespidae	Nationally Scarce							x											
German Wasp	<i>Vespula germanica</i>	Vespidae	Widespread						x						x	x					
Common Wasp	<i>Vespula vulgaris</i>	Vespidae	Widespread	LC	x		x					x			x	x					
Woodlice, hoglice and slaters (Isopoda)																					
Common Pill Woodlouse	<i>Armadillidium vulgare</i>	Armadillidiidae	Widespread	LC					x	x		x	x	x		x					
A water hog-louse	<i>Asellus aquaticus</i>	Asellidae	Widespread	LC										x		x					
Common Striped Woodlouse	<i>Philoscia muscorum</i>	Philoscidae	Widespread	LC	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Butterflies and moths (Lepidoptera)																					
Cherry Fruit Moth	<i>Argyresthia pruniella</i>	Argyresthiidae	Widespread	LC			x														
A moth	<i>Batrachedra praeangusta</i>	Batrachedridae	Local	LC	x		x									x					
A moth	<i>Blastobasis adustella</i>	Blastobasidae	Introduced (widespread)		x		x					x				x					

Common Name	Scientific Name	Family	UK Rarity Status	Threat Status	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14	F15	General	BS01/2.2
A moth	<i>Blastobasis lacticolella</i>	<i>Blastobasidae</i>	Introduced		x																
Bulruwsh Cosmet	<i>Limnaecia phragmitella</i>	<i>Cosmopterigidae</i>	Local	LC			x					x			x	x					
Leopard Moth	<i>Zeuzera pyrina</i>	<i>Cossidae</i>	Widespread	LC			x														
Water Veneer	<i>Acentria ephemerella</i>	<i>Crambidae</i>	Widespread	LC	x																
A moth	<i>Agriphila selasella</i>	<i>Crambidae</i>	Local	LC	x		x					x			x	x					
A moth	<i>Agriphila straminella</i>	<i>Crambidae</i>	Widespread	LC	x		x					x			x	x					
A moth	<i>Agriphila tristella</i>	<i>Crambidae</i>	Widespread	LC			x					x				x					
A moth	<i>Anania coronata</i>	<i>Crambidae</i>	Widespread	LC												x					
Small Magpie	<i>Anania hortulata</i>	<i>Crambidae</i>	Widespread	LC	x		x														
A moth	<i>Calamotropha paludella</i>	<i>Crambidae</i>	Local	LC			x									x					
Small China-mark	<i>Cataclysta lemnata</i>	<i>Crambidae</i>	Widespread	LC	x		x														
Garden Grass-veneer	<i>Chrysoteuchia culmella</i>	<i>Crambidae</i>	Widespread	LC	x		x		x			x			x	x					
A moth	<i>Crambus perlella</i>	<i>Crambidae</i>	Widespread	LC			x														
Box-tree Moth	<i>Cydalima perspectalis</i>	<i>Crambidae</i>	Introduced (widespread)		x		x									x					
A moth	<i>Eudonia angustea</i>	<i>Crambidae</i>	Local	LC			x														
A moth	<i>Eudonia lacustrata</i>	<i>Crambidae</i>	Widespread	LC	x		x					x			x	x					
A moth	<i>Eudonia mercurella</i>	<i>Crambidae</i>	Widespread	LC	x		x					x			x	x					
A moth	<i>Eudonia pallida</i>	<i>Crambidae</i>	Widespread	LC			x														
Mother of Pearl	<i>Pleuroptya ruralis</i>	<i>Crambidae</i>	Widespread	LC	x		x					x				x					
A moth	<i>Pyrausta aurata</i>	<i>Crambidae</i>	Local	LC												x					
A moth	<i>Pyrausta purpuralis</i>	<i>Crambidae</i>	Widespread	LC			x									x					
A moth	<i>Scoparia ambigualis</i>	<i>Crambidae</i>	Widespread	LC	x		x									x					
A moth	<i>Scoparia pyralella</i>	<i>Crambidae</i>	Widespread	LC	x		x								x	x					
Rusty-dot Pearl	<i>Udea ferrugalis</i>	<i>Crambidae</i>	Migrant													x					
A moth	<i>Udea lutealis</i>	<i>Crambidae</i>	Widespread	LC			x					x				x					
A moth	<i>Udea prunalis</i>	<i>Crambidae</i>	Widespread	LC	x		x									x					
Oak Hook-tip	<i>Watsonalla binaria</i>	<i>Drepanidae</i>	s41 research only	LC			x														
A moth	<i>Elachista canapennella</i>	<i>Elachistidae</i>	Widespread	LC	x		x					x				x					
A moth	<i>Elachista maculicerusella</i>	<i>Elachistidae</i>	Widespread	LC												x					
A moth	<i>Epermenia falciformis</i>	<i>Epermeniidae</i>	Widespread	LC								x				x					
Pale Tussock	<i>Calliteara pudibunda</i>	<i>Erebidae</i>	Widespread	LC								x									
Four-dotted Footman	<i>Cybosia mesomella</i>	<i>Erebidae</i>	Local	LC			x														
Muslin Moth	<i>Diaphora mendica</i>	<i>Erebidae</i>	Widespread	LC	x		x									x					
Scarce Footman	<i>Eilema complana</i>	<i>Erebidae</i>	Local	LC	x		x					x			x	x					
Dingy Footman	<i>Eilema griseola</i>	<i>Erebidae</i>	Widespread	LC	x		x					x			x	x					
Common Footman	<i>Eilema lurideola</i>	<i>Erebidae</i>	Widespread	LC	x		x									x					
Yellow-tail	<i>Euproctis similis</i>	<i>Erebidae</i>	Widespread	LC	x		x								x	x					
Fan-foot	<i>Herminia tarsipennalis</i>	<i>Erebidae</i>	Widespread	LC	x											x					
Beautiful Hook-tip	<i>Laspeyria flexula</i>	<i>Erebidae</i>	Local	LC	x										x	x					
Blackneck	<i>Lygephila pastinum</i>	<i>Erebidae</i>	Local	LC												x					
Muslin Footman	<i>Nudaria mundana</i>	<i>Erebidae</i>	Local	LC												x					
Ruby Tiger	<i>Phragmatobia fuliginosa</i>	<i>Erebidae</i>	Widespread	LC	x		x									x					
Straw Dot	<i>Rivula sericealis</i>	<i>Erebidae</i>	Widespread	LC	x		x					x			x	x					
Herald	<i>Scoliopteryx libatrix</i>	<i>Erebidae</i>	Widespread	LC												x					
White Ermine	<i>Spilosoma lubricipeda</i>	<i>Erebidae</i>	s41 research only	LC												x					
A moth	<i>Anarsia innoxia</i>	<i>Gelechiidae</i>	Local	LC			x														
A moth	<i>Brachmia blandella</i>	<i>Gelechiidae</i>	Widespread	LC			x									x					
A moth	<i>Bryotropha domestica</i>	<i>Gelechiidae</i>	Widespread	LC	x																
A moth	<i>Bryotropha terrella</i>	<i>Gelechiidae</i>	Widespread	LC	x		x					x			x	x					

Common Name	Scientific Name	Family	UK Rarity Status	Threat Status	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14	F15	General	BS01/2.2
Lichen Sober	<i>Dichomeris alacella</i>	Gelechiidae	Nationally scarce	LC			x														
A moth	<i>Gelechia sororculella</i>	Gelechiidae	Widespread	LC												x					
A moth	<i>Helcystogramma rufescens</i>	Gelechiidae	Widespread	LC								x				x					
A moth	<i>Psoricoptera gibbosella</i>	Gelechiidae	Local	LC								x									
A moth	<i>Recurvaria leucatella</i>	Gelechiidae	Widespread	LC	x							x				x					
A moth	<i>Scrobipalpa costella</i>	Gelechiidae	Widespread	LC			x					x				x					
A moth	<i>Syncopacma larseniella/cinctella</i>	Gelechiidae	Unknown		x																
A moth	<i>Teleiodes luculella</i>	Gelechiidae	Widespread	LC												x					
A moth	<i>Teleiodes vulgella</i>	Gelechiidae	Widespread	LC			x														
Mottled Beauty	<i>Alcis repandata</i>	Geometridae	Widespread	LC			x									x					
Lesser Treble-bar	<i>Aplocera efformata</i>	Geometridae	Local	LC												x					
Peppered Moth	<i>Biston betularia</i>	Geometridae	Widespread	LC	x		x														
Common Wave	<i>Cabera exanthemata</i>	Geometridae	Widespread	LC	x		x								x	x					
Light Emerald	<i>Campaea margaritaria</i>	Geometridae	Widespread	LC			x														
Yellow Shell	<i>Camptogramma bilineata</i>	Geometridae	Widespread	LC	x		x					x				x					
V-Pug	<i>Chloroclystis v-ata</i>	Geometridae	Widespread	LC			x									x					
Barred Yellow	<i>Cidaria fulvata</i>	Geometridae	Local	LC	x																
Scalloped Oak	<i>Crocallis elinguaris</i>	Geometridae	Widespread	LC	x		x								x	x					
Maiden's Blush	<i>Cyclophora punctaria</i>	Geometridae	Local	LC	x		x					x			x	x					
Common Marbled Carpet	<i>Dysstroma truncata</i>	Geometridae	Widespread	LC												x					
Small Phoenix	<i>Ecliptopera silaceata</i>	Geometridae	s41 research only	LC			x									x					
Engrailed	<i>Ectropis crepuscularia</i>	Geometridae	Widespread	LC												x					
Common Heath	<i>Ematurga atomaria</i>	Geometridae	Widespread	LC											x						
Canary-shouldered Thorn	<i>Ennomos alniaria</i>	Geometridae	Widespread	LC								x				x					
Dusky Thorn	<i>Ennomos fuscantaria</i>	Geometridae	s41 research only	LC												x					
August Thorn	<i>Ennomos quercinaria</i>	Geometridae	s41 research only	LC	x		x														
Bordered Beauty	<i>Epione repandaria</i>	Geometridae	Widespread	LC			x														
Common Carpet	<i>Epirrhoe alternata</i>	Geometridae	Widespread	LC	x		x					x				x					
Brindled Pug	<i>Eupithecia abbreviata</i>	Geometridae	Widespread	LC	x																
Wormwood Pug	<i>Eupithecia absinthiata</i>	Geometridae	Widespread	LC	x		x														
Currant Pug	<i>Eupithecia assimilata</i>	Geometridae	Widespread	LC											x	x					
Lime-speck Pug	<i>Eupithecia centaureata</i>	Geometridae	Widespread	LC	x		x								x	x					
Haworth's Pug	<i>Eupithecia haworthiata</i>	Geometridae	Local	LC			x					x				x					
Foxglove Pug	<i>Eupithecia pulchellata</i>	Geometridae	Widespread	LC								x									
Grey Pug	<i>Eupithecia subfuscata</i>	Geometridae	Widespread	LC							x										
Barred Straw	<i>Gandaritis pyraliata</i>	Geometridae	Widespread	LC			x														
Double-striped Pug	<i>Gymnoscelis rufifasciata</i>	Geometridae	Widespread	LC								x				x					
Common Emerald	<i>Hemithea aestivaria</i>	Geometridae	Widespread	LC	x		x									x					
July Highflier	<i>Hydriomena furcata</i>	Geometridae	Widespread	LC			x								x	x					
Riband Wave	<i>Idaea aversata</i>	Geometridae	Widespread	LC	x		x					x			x	x					
Small Fan-footed Wave	<i>Idaea biselata</i>	Geometridae	Widespread	LC	x		x									x					
Single-dotted Wave	<i>Idaea dimidiata</i>	Geometridae	Widespread	LC			x									x					
Small Scallop	<i>Idaea emarginata</i>	Geometridae	Local	LC	x		x								x	x					
Least Carpet	<i>Idaea rusticata</i>	Geometridae	Local	LC	x		x									x					
Treble Brown Spot	<i>Idaea trigeminata</i>	Geometridae	Local	LC												x					
Scorched Carpet	<i>Ligdia adustata</i>	Geometridae	Widespread	LC			x														
Clouded Border	<i>Lomaspilis marginata</i>	Geometridae	Widespread	LC			x					x				x					
Clouded Silver	<i>Lomographa temerata</i>	Geometridae	Widespread	LC	x																
Brimstone Moth	<i>Opisthograptis luteolata</i>	Geometridae	Widespread	LC	x		x					x				x					

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Swallow-tailed Moth	<i>Ourapteryx sambucaria</i>	Geometridae	Widespread	LC	x		x														
Green Pug	<i>Pasiphila rectangulata</i>	Geometridae	Widespread	LC			x									x					
Willow Beauty	<i>Peribatodes rhomboidaria</i>	Geometridae	Widespread	LC	x		x					x				x					
Grass Rivulet	<i>Perizoma albulata</i>	Geometridae	Local	LC					x												
Dark Umber	<i>Philereme transversata</i>	Geometridae	Local	LC	x		x									x					
Lesser Cream Wave	<i>Scopula immutata</i>	Geometridae	Local	LC												x					
Shaded Broad-bar	<i>Scotopteryx chenopodiata</i>	Geometridae	s41 research only	LC	x		x								x	x					
Early Thorn	<i>Selenia dentaria</i>	Geometridae	Widespread	LC	x																
Blood-Vein	<i>Timandra comae</i>	Geometridae	s41 research only	LC	x		x					x				x					
Flame Carpet	<i>Xanthorhoe designata</i>	Geometridae	Widespread	LC											x	x					
Garden Carpet	<i>Xanthorhoe fluctuata</i>	Geometridae	Widespread	LC											x						
Red Twin-spot Carpet	<i>Xanthorhoe spadicearia</i>	Geometridae	Widespread	LC			x					x			x	x					
Leek Moth	<i>Acrolepiopsis assectella</i>	Glyphipterigidae	Local	LC	x																
A moth	<i>Acrocercops brongniardella</i>	Gracillariidae	Local	LC	x																
A moth	<i>Caloptilia alchimiella/robustella</i>	Gracillariidae	Unknown		x		x					x			x	x					
A moth	<i>Caloptilia semifascia</i>	Gracillariidae	Local	LC	x		x														
A moth	<i>Calybites phasianipennella</i>	Gracillariidae	Local	LC												x					
A moth	<i>Cameraria ohridella</i>	Gracillariidae	Recent UK colonist (Widespread)				x														
Orange Swift	<i>Triodia sylvina</i>	Hepialidae	Widespread	LC			x					x			x	x					
Large Skipper	<i>Ochlodes sylvanus</i>	Hesperiidae	Widespread	LC	x		x			x			x		x						
Small Skipper	<i>Thymelicus sylvestris</i>	Hesperiidae	Widespread	LC	x										x	x					
Drinker	<i>Euthrix potatoria</i>	Lasiocampidae	Widespread	LC	x		x														
Lackey	<i>Malacosoma neustria</i>	Lasiocampidae	s41 research only	LC	x		x					x				x					
Holly Blue	<i>Celastrina argiolus</i>	Lycaenidae	Widespread	LC	x									x		x					
Purple Hairstreak	<i>Favonius quercus</i>	Lycaenidae	Widespread	LC	x										x						
Small Copper	<i>Lycaena phlaeas</i>	Lycaenidae	Widespread	LC	x				x	x	x				x	x					
Common Blue	<i>Polyommatus icarus</i>	Lycaenidae	Widespread	LC					x	x	x				x	x					
Black Hairstreak	<i>Satyrium pruni</i>	Lycaenidae	Endangered (Post-2001 IUCN)	Endangered (Post-2001 IUCN)							x		x		x	x					
White-letter Hairstreak	<i>Satyrium w-album</i>	Lycaenidae	S41 Priority species; Endangered (Post-2001 IUCN criteria)	Endangered (Post-2001 IUCN)			x	x				x									
Brown Hairstreak	<i>Thecla betulae</i>	Lycaenidae	S41 Priority species; Vulnerable (Post-2001 IUCN criteria)	VU									x		x	x					
Apple Leaf Miner	<i>Lyonetia clerkella</i>	Lyonetiidae	Widespread	LC	x		x					x									
A moth	<i>Mompha ochraceella</i>	Momphidae	Widespread	LC												x					
A moth	<i>Mompha subbistrigella</i>	Momphidae	Widespread	LC												x					
Spectacle	<i>Abrostola tripartita</i>	Noctuidae	Widespread	LC	x		x					x			x	x					
Knot Grass	<i>Acronicta rumicis</i>	Noctuidae	s41 research only	LC	x		x					x									
Dark Dagger / Grey Dagger	<i>Acronicta tridens/psi</i>	Noctuidae	unknown		x							x				x					
Heart and Dart	<i>Agrotis exclamationis</i>	Noctuidae	Widespread	LC	x		x				x	x			x	x					
Dark Sword-grass	<i>Agrotis ipsilon</i>	Noctuidae	Migrant		x																
Shuttle-shaped Dart	<i>Agrotis puta</i>	Noctuidae	Widespread	LC	x		x					x				x					
Turnip Moth	<i>Agrotis segetum</i>	Noctuidae	Widespread	LC												x					
Copper Underwing agg.	<i>Amphipyra pyramidea</i>	Noctuidae	s41 research only	LC	x		x					x				x					
Mouse Moth	<i>Amphipyra tragopoginis</i>	Noctuidae	Widespread	LC											x	x					

Common Name	Scientific Name	Family	UK Rarity Status	Threat Status	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14	F15	General	BS01/2.2
Light Arches	<i>Apamea lithoxyloa</i>	Noctuidae	Widespread	LC	x		x									x					
Dark Arches	<i>Apamea monoglypha</i>	Noctuidae	Widespread	LC	x		x					x			x	x					
Dingy Shears	<i>Apterogenum ypsilon</i>	Noctuidae	Widespread	LC											x	x					
Silver Y	<i>Autographa gamma</i>	Noctuidae	Regular migrant	LC	x		x									x					
Flame	<i>Axylia putris</i>	Noctuidae	Widespread	LC			x														
Scarce Silver-lines	<i>Bena bicolorana</i>	Noctuidae	Local	LC	x		x									x					
Marbled Beauty	<i>Bryophila domestica</i>	Noctuidae	Widespread	LC			x														
Pale Mottled Willow	<i>Caradrina clavipalpis</i>	Noctuidae	Widespread	LC												x					
Mottled Rustic	<i>Caradrina morpheus</i>	Noctuidae	s41 research only	LC	x		x								x	x					
Small Rufous	<i>Coenobia rufa</i>	Noctuidae	Local	LC								x				x					
Lesser-spotted Pinion	<i>Cosmia affinis</i>	Noctuidae	Local	LC			x					x				x					
Lunar-spotted Pinion	<i>Cosmia pyralina</i>	Noctuidae	Local	LC	x		x									x					
Dun-bar	<i>Cosmia trapezina</i>	Noctuidae	Widespread	LC	x		x					x			x	x					
Coronet	<i>Craniophora ligustri</i>	Noctuidae	Widespread	LC	x		x									x					
Tree-lichen Beauty	<i>Cryphia algae</i>	Noctuidae	Migrant		x		x					x				x					
Marbled White Spot	<i>Deltote pygarga</i>	Noctuidae	Local	LC	x																
Burnished Brass	<i>Diachrysis chrysitis</i>	Noctuidae	Widespread	LC			x									x					
Vine's Rustic	<i>Hoplodrina ambigua</i>	Noctuidae	Widespread	LC			x									x					
Rustic	<i>Hoplodrina blanda</i>	Noctuidae	s41 research only	LC			x									x					
Uncertain	<i>Hoplodrina octogenaria</i>	Noctuidae	Widespread	LC	x		x					x			x	x					
Rosy Rustic	<i>Hydraecia micacea</i>	Noctuidae	s41 research only	LC			x									x					
Bright-line Brown-eye	<i>Lacanobia oleracea</i>	Noctuidae	Widespread	LC			x					x				x					
Double Lobed	<i>Lateroligia ophiogramma</i>	Noctuidae	Local	LC												x					
Shoulder-striped Wainscot	<i>Leucania comma</i>	Noctuidae	s41 research only	LC			x														
Flounced Rustic	<i>Luperina testacea</i>	Noctuidae	Widespread	LC	x											x					
Kent Black Arches	<i>Meganola albula</i>	Noctuidae	Nationally scarce	LC												x					
Common Rustic agg.	<i>Mesapamea secalis</i>	Noctuidae	Widespread	LC	x		x					x			x	x					
Cloaked Minor	<i>Mesoligia furuncula</i>	Noctuidae	Widespread	LC	x		x					x				x					
White-point	<i>Mythimna albipuncta</i>	Noctuidae	Migrant													x					
Brown-line Bright-eye	<i>Mythimna conigera</i>	Noctuidae	Widespread	LC	x		x								x	x					
Clay	<i>Mythimna ferrago</i>	Noctuidae	Widespread	LC	x		x								x	x					
Smoky Wainscot	<i>Mythimna impura</i>	Noctuidae	Widespread	LC	x		x								x	x					
Common Wainscot	<i>Mythimna pallens</i>	Noctuidae	Widespread	LC	x		x					x				x					
Lesser Yellow Underwing	<i>Noctua comes</i>	Noctuidae	Widespread	LC	x		x					x				x					
Broad-bordered Yellow Underwing	<i>Noctua fimbriata</i>	Noctuidae	Widespread	LC	x		x									x					
Least Yellow Underwing	<i>Noctua interjecta</i>	Noctuidae	Widespread	LC	x											x					
Lesser Broad-bordered Yellow Underwing	<i>Noctua janthe</i>	Noctuidae	Widespread	LC	x		x					x			x	x					
Large Yellow Underwing	<i>Noctua pronuba</i>	Noctuidae	Widespread	LC	x		x					x			x	x					
Flame Shoulder	<i>Ochropleura plecta</i>	Noctuidae	Widespread	LC	x		x				x	x			x	x					
Marbled Minor agg.	<i>Oligia strigilis</i>	Noctuidae	Widespread	LC	x		x				x				x	x					
Hebrew Character	<i>Orthosia gothica</i>	Noctuidae	Widespread	LC	x		x					x									
Powdered Quaker	<i>Orthosia gracilis</i>	Noctuidae	s41 research only	LC	x																
Angle Shades	<i>Phlogophora meticulosa</i>	Noctuidae	Widespread	LC												x					
Small Dotted Buff	<i>Photodes minima</i>	Noctuidae	Widespread	LC	x		x		x							x					
Brown Rustic	<i>Rusina ferruginea</i>	Noctuidae	Widespread	LC			x									x					
Poplar Grey	<i>Subacronicta megacephala</i>	Noctuidae	Local	LC			x									x					
Straw Underwing	<i>Thalpophila matura</i>	Noctuidae	Local	LC	x							x				x					
Setaceous Hebrew Character	<i>Xestia c-nigrum</i>	Noctuidae	Widespread	LC												x					

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Double Square-spot	<i>Xestia triangulum</i>	Noctuidae	Widespread	LC	x		x								x	x					
Square-spot Rustic	<i>Xestia xanthographa</i>	Noctuidae	Widespread	LC												x					
Short-cloaked Moth	<i>Nola cucullatella</i>	Nolidae	Widespread	LC	x		x								x	x					
Chocolate-tip	<i>Clostera curtula</i>	Notodontidae	Local	LC			x														
Poplar Kitten	<i>Furcula bifida</i>	Notodontidae	Local	LC	x																
Iron Prominent	<i>Notodonta dromedarius</i>	Notodontidae	Widespread	LC	x		x									x					
Pebble Prominent	<i>Notodonta ziczac</i>	Notodontidae	Widespread	LC	x		x					x				x					
Buff-tip	<i>Phalera bucephala</i>	Notodontidae	Widespread	LC												x					
Swallow Prominent	<i>Pheosia tremula</i>	Notodontidae	Widespread	LC	x											x					
Pale Prominent	<i>Pterostoma palpina</i>	Notodontidae	Widespread	LC	x		x					x			x	x					
Coxcomb Prominent	<i>Ptilodon capucina</i>	Notodontidae	Widespread	LC								x									
Peacock	<i>Aglais io</i>	Nymphalidae	Widespread	LC				x												x	
Small Tortoiseshell	<i>Aglais urticae</i>	Nymphalidae	Widespread	LC						x			x								
Ringlet	<i>Aphantopus hyperantus</i>	Nymphalidae	Widespread	LC	x						x	x									
Small Heath	<i>Coenonympha pamphilus</i>	Nymphalidae	S41 Priority species; Near Threatened (Post-2001 IUCN criteria)	NT			x			x		x	x								
Meadow Brown	<i>Maniola jurtina</i>	Nymphalidae	Widespread	LC	x		x	x	x	x	x	x	x		x	x					
Marbled White	<i>Melanargia galathea</i>	Nymphalidae	Widespread	LC	x					x											
Speckled Wood	<i>Pararge aegeria</i>	Nymphalidae	Widespread	LC	x			x			x			x					x	x	
Comma	<i>Polygonia c-album</i>	Nymphalidae	Widespread	LC	x					x	x										
Gatekeeper	<i>Pyronia tithonus</i>	Nymphalidae	Widespread	LC	x	x	x	x	x	x	x	x	x	x	x	x					
Red Admiral	<i>Vanessa atalanta</i>	Nymphalidae	Widespread migrant	LC							x				x						
A moth	<i>Batia lunaris</i>	Oecophoridae	Widespread	LC	x		x									x					
A moth	<i>Borkhausenia fuscescens</i>	Oecophoridae	Widespread	LC			x														
A moth	<i>Crassa unitella</i>	Oecophoridae	Local	LC	x		x					x			x	x					
Brown House-moth	<i>Hofmannophila pseudospretella</i>	Oecophoridae	Widespread	LC			x														
A moth	<i>Metalampra italica</i>	Oecophoridae	Recent UK colonist				x														
A moth	<i>Carcina quercana</i>	Peleopodidae	Widespread	LC	x		x					x				x					
Orange Tip	<i>Anthocharis cardamines</i>	Pieridae	Widespread	LC																	x
Brimstone	<i>Gonepteryx rhamni</i>	Pieridae	Widespread	LC	x			x			x										x
Large White	<i>Pieris brassicae</i>	Pieridae	Widespread	LC											x	x					x
Green-veined White	<i>Pieris napi</i>	Pieridae	Widespread	LC																	x
Small White	<i>Pieris rapae</i>	Pieridae	Widespread	LC																	x
Diamond-back Moth	<i>Plutella xylostella</i>	Plutellidae	Regular migrant									x									
Ash Bud Moth	<i>Prays fraxinella</i>	Praydidae	Widespread	LC												x					
Beautiful Plume	<i>Amblyptilia acanthadactyla</i>	Pterophoridae	Widespread	LC												x					
Common Plume	<i>Emmelina monodactyla</i>	Pterophoridae	Widespread	LC			x														
A moth	<i>Acrobasis advenella</i>	Pyralidae	Widespread	LC	x		x					x			x	x					
A moth	<i>Acrobasis consociella</i>	Pyralidae	Widespread	LC	x		x								x	x					
A moth	<i>Acrobasis repandana</i>	Pyralidae	Widespread	LC												x					
A moth	<i>Cryptoblabes bistriga</i>	Pyralidae	Local	LC												x					
A moth	<i>Endotricha flammealis</i>	Pyralidae	Local	LC	x		x					x			x	x					
A moth	<i>Ephestia unicolorella</i>	Pyralidae	Local	LC												x					
A moth	<i>Euzophera pinguis</i>	Pyralidae	Local	LC			x					x				x					
Wax Moth	<i>Galleria mellonella</i>	Pyralidae	Widespread	LC	x																
A moth	<i>Homoeosoma sinuella</i>	Pyralidae	Local	LC	x																
Gold Triangle	<i>Hypsopygia costalis</i>	Pyralidae	Widespread	LC			x														
A moth	<i>Nephoterix angustella</i>	Pyralidae	Local	LC			x									x					

Common Name	Scientific Name	Family	UK Rarity Status	Threat Status	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14	F15	General	BS01/2.2
A moth	<i>Phycita roborella</i>	<i>Pyralidae</i>	Widespread	LC	x		x					x			x	x					
Elephant Hawk-moth	<i>Deilephila elpenor</i>	<i>Sphingidae</i>	Widespread	LC	x		x														
Poplar Hawk-moth	<i>Laothoe populi</i>	<i>Sphingidae</i>	Widespread	LC	x		x									x					
A moth	<i>Monopis weaverella</i>	<i>Tineidae</i>	Widespread	LC			x					x			x	x					
A moth	<i>Coptotriche marginea</i>	<i>Tischeriidae</i>	Widespread	LC			x									x					
A moth	<i>Acleris ferrugana/notana</i>	<i>Tortricidae</i>	Unknown		x											x					
A moth	<i>Acleris forsskaleana</i>	<i>Tortricidae</i>	Widespread	LC	x		x									x					
A moth	<i>Acleris holmiana</i>	<i>Tortricidae</i>	Widespread	LC	x		x														
A moth	<i>Acleris laterana/comariana</i>	<i>Tortricidae</i>	Unknown		x		x								x	x					
A moth	<i>Acleris literana</i>	<i>Tortricidae</i>	Local	LC			x														
A moth	<i>Acleris notana</i>	<i>Tortricidae</i>	Widespread	LC			x														
Rhomboid Tortrix	<i>Acleris rhombana</i>	<i>Tortricidae</i>	Widespread	LC			x					x				x					
A moth	<i>Aethes smeathmanniana</i>	<i>Tortricidae</i>	Local	LC			x									x					
A moth	<i>Agapeta hamana</i>	<i>Tortricidae</i>	Widespread	LC	x		x					x			x	x					
A moth	<i>Aleimma loeflingiana</i>	<i>Tortricidae</i>	Widespread	LC	x		x									x					
A moth	<i>Ancylis achatana</i>	<i>Tortricidae</i>	Local	LC	x		x								x	x					
Timothy Tortrix	<i>Aphelia paleana</i>	<i>Tortricidae</i>	Widespread	LC			x									x					
A moth	<i>Apotomis betuletana</i>	<i>Tortricidae</i>	Widespread	LC			x														
Large Fruit-tree Tortrix	<i>Archips podana</i>	<i>Tortricidae</i>	Widespread	LC												x					
Variegated Golden Tortrix	<i>Archips xylosteana</i>	<i>Tortricidae</i>	Widespread	LC	x		x									x					
A moth	<i>Bactra lancealana/lacteana</i>	<i>Tortricidae</i>	Unknown				x														
A moth	<i>Celypha lacunana</i>	<i>Tortricidae</i>	Widespread	LC	x		x		x			x			x	x					
A moth	<i>Celypha striana</i>	<i>Tortricidae</i>	Widespread	LC			x					x				x					
A moth	<i>Cochylimorpha straminea</i>	<i>Tortricidae</i>	Widespread	LC			x					x				x					
A moth	<i>Cochylis atricapitana</i>	<i>Tortricidae</i>	Widespread	LC	x		x														
A moth	<i>Cochylis dubitana</i>	<i>Tortricidae</i>	Widespread	LC			x														
A moth	<i>Cochylis hybridella</i>	<i>Tortricidae</i>	Local	LC												x					
A moth	<i>Cochylis molliculana</i>	<i>Tortricidae</i>	Local	LC			x									x					
A moth	<i>Cydia splendana</i>	<i>Tortricidae</i>	Local	LC	x		x					x			x	x					
Red-barred Tortrix	<i>Ditula angustiorana</i>	<i>Tortricidae</i>	Widespread	LC	x		x					x				x					
A moth	<i>Epinotia cinereana</i>	<i>Tortricidae</i>	Widespread	LC								x									
A moth	<i>Epinotia nisella</i>	<i>Tortricidae</i>	Widespread	LC	x		x					x				x					
Nut Bud Moth	<i>Epinotia tenerana</i>	<i>Tortricidae</i>	Widespread	LC	x											x					
Light Brown Apple Moth	<i>Epiphyas postvittana</i>	<i>Tortricidae</i>	Widespread	LC								x				x					
A moth	<i>Eucosma campoliliana</i>	<i>Tortricidae</i>	Widespread	LC												x					
A moth	<i>Eucosma cana</i>	<i>Tortricidae</i>	Widespread	LC	x											x					
A moth	<i>Eudemis profundana</i>	<i>Tortricidae</i>	Widespread	LC	x		x					x			x	x					
A moth	<i>Grapholita janthinana</i>	<i>Tortricidae</i>	Widespread	LC												x					
A moth	<i>Gypsonoma dealbana</i>	<i>Tortricidae</i>	Widespread	LC			x								x	x					
A moth	<i>Gypsonoma sociana</i>	<i>Tortricidae</i>	Local	LC	x		x									x					
Marbled Orchard Tortrix	<i>Hedya nubiferana</i>	<i>Tortricidae</i>	Widespread	LC	x		x									x					
A moth	<i>Hedya ochroleucana</i>	<i>Tortricidae</i>	Widespread	LC	x										x	x					
Plum Tortrix	<i>Hedya pruniana</i>	<i>Tortricidae</i>	Widespread	LC	x		x		x							x					
A moth	<i>Hedya salicella</i>	<i>Tortricidae</i>	Widespread	LC	x		x									x					
A moth	<i>Lathronympha strigana</i>	<i>Tortricidae</i>	Local	LC	x		x														
A moth	<i>Lobesia abscisana</i>	<i>Tortricidae</i>	Local	LC			x								x	x					
A moth	<i>Notocelia roborana</i>	<i>Tortricidae</i>	Widespread	LC			x														
A moth	<i>Notocelia trimaculana</i>	<i>Tortricidae</i>	Widespread	LC												x					
Bramble Shoot Moth	<i>Notocelia uddmanniana</i>	<i>Tortricidae</i>	Widespread	LC	x		x								x	x					

Common Name	Scientific Name	Family	UK Rarity Status	Threat Status	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14	F15	General	BS01/2.2
A moth	<i>Pammene fasciana</i>	Tortricidae	Widespread	LC			x								x						
Barred Fruit-tree Tortrix	<i>Pandemis cerasana</i>	Tortricidae	Widespread	LC	x		x					x			x						
Chequered Fruit-tree Tortrix	<i>Pandemis corylana</i>	Tortricidae	Widespread	LC	x		x					x			x	x					
Dark Fruit-tree Tortrix	<i>Pandemis heparana</i>	Tortricidae	Widespread	LC	x		x								x						
Holly Tortrix	<i>Rhopobota naevana</i>	Tortricidae	Widespread	LC	x		x					x			x						
Bud Moth	<i>Spilonota ocellana</i>	Tortricidae	Widespread	LC	x		x					x			x	x					
Green Oak Tortrix	<i>Tortrix viridana</i>	Tortricidae	Widespread	LC	x		x				x				x						
A moth	<i>Zeiraphera isertana</i>	Tortricidae	Widespread	LC	x		x					x			x	x					
A moth	<i>Paraswammerdamia albicapitella</i>	Yponomeutidae	Widespread	LC	x		x									x					
A moth	<i>Paraswammerdamia nebulella</i>	Yponomeutidae	Widespread	LC	x		x								x	x					
A moth	<i>Pseudoswammerdamia combinella</i>	Yponomeutidae	Widespread	LC	x																
A moth	<i>Swammerdamia caesiella</i>	Yponomeutidae	Widespread	LC								x				x					
Bird-cherry Ermine	<i>Yponomeuta evonymella</i>	Yponomeutidae	Widespread	LC			x														
A moth	<i>Yponomeuta plumbella</i>	Yponomeutidae	Widespread	LC								x									
A moth	<i>Ypsolopha alpella</i>	Ypsolophidae	Widespread	LC			x														
A moth	<i>Ypsolopha horridella</i>	Ypsolophidae	Local	LC	x																
A moth	<i>Ypsolopha sylvella</i>	Ypsolophidae	Local	LC								x									
A moth	<i>Ypsolopha ustella</i>	Ypsolophidae	Widespread	LC			x														
Forester Moth	<i>Adscita statures</i>	Zygaenidae	S41 Priority species				x					x	x								
Dragonflies and damselflies (Odonata)																					
Southern Hawker	<i>Aeshna cyanea</i>	Aeshnidae	Widespread	LC				x			x										
Brown Hawker	<i>Aeshna grandis</i>	Aeshnidae	Widespread	LC			x								x	x					
Migrant Hawker	<i>Aeshna mixta</i>	Aeshnidae	Widespread	LC										x		x					
Ruddy Darter	<i>Sympetrum sanguineum</i>	Libellulidae	Local	LC											x	x					
Common Darter	<i>Sympetrum striolatum</i>	Libellulidae	Widespread	LC	x				x	x	x				x	x					
Harvestmen (Opiliones)																					
A harvestman	<i>Dicranopalpus ramosus</i>	Phalangiiidae	Widespread	LC							x				x	x					
A harvestman	<i>Paroligolophus agrestis</i>	Phalangiiidae	Widespread	LC											x	x					
A harvestman	<i>Phalangium opilio</i>	Phalangiiidae	Widespread	LC					x	x					x	x					
A harvestman	<i>Platybunus triangularis</i>	Phalangiiidae	Widespread	LC										x							
Grasshoppers, crickets, groundhoppers and allies (i)																					
Common Earwig	<i>Forficula auricularia</i>	Forficulidae	Widespread	LC	x				x	x	x										x
Lesne's Earwig	<i>Forficula lesnei</i>	Forficulidae	Nationally Scarce	LC																	x
Lesser Earwig	<i>Labia minor</i>	Labiidae	Local	LC	x																
Lesser Marsh Grasshopper	<i>Chorthippus albomarginatus</i>	Acrididae	Widespread	LC	x				x	x					x	x					
Field Grasshopper	<i>Chorthippus brunneus</i>	Acrididae	Widespread	LC	x				x	x	x	x	x		x	x					
Meadow Grasshopper	<i>Chorthippus parallelus</i>	Acrididae	Widespread	LC	x	x	x		x	x	x	x	x		x	x					
Common Green Grasshopper	<i>Omocestus viridulus</i>	Acrididae	Widespread	LC	x				x	x	x	x	x	x	x	x					
Short-winged Conehead	<i>Conocephalus dorsalis</i>	Conocephalidae	Local	LC											x	x					
Long-winged Conehead	<i>Conocephalus fuscus</i>	Conocephalidae	Widespread	LC	x		x		x	x	x	x	x		x	x					
Oak Bush-cricket	<i>Meconema thalassinum</i>	Meconematidae	Widespread	LC	x		x						x								
Speckled Bush-cricket	<i>Leptophyes punctatissima</i>	Phaneropteridae	Widespread	LC								x	x								
Slender Groundhopper	<i>Tetrix subulata</i>	Tetrigidae	Widespread	LC			x			x						x					
Common Groundhopper	<i>Tetrix undulata</i>	Tetrigidae	Widespread	LC			x														
Roesel's Bush-cricket	<i>Metrioptera roeselii</i>	Tettigoniidae	Widespread	LC	x		x		x	x					x	x					
Stoneflies (Neuroptera)																					
A stonefly	<i>Amphinemura standfussi</i>	Nemouridae	Nationally scarce	LC											x						

Table EDP A11.1.5: Species listed as having a conservation designation in the UK/England includes Nationally Scarce and S41 – Species recorded during the survey

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
A linyphiid spider	<i>Porrhomma convexum</i>	Araneidae	Araneae	Nationally Scarce	F8	Not assigned	<i>Porrhomma convexum</i> is a scarce species of money spider (Linyphiidae), which has been recorded from thinly scattered sites throughout the UK. The spider has been recorded historically from Oxfordshire. According to Harvey <i>et al</i> (2002), <i>P. convexum</i> “is found within deep mines and caves where it constructs a small web in recesses in the rock.” but it has also been recorded from “damp culverts” in cellars, beneath rock piles, amongst thick undergrowth and within sewage filter beds'. During the 2020 survey the spider was either swept, vacuumed or beaten from grassland or hedgerow scrub in Field 8.
A lycosid spider	<i>Alopecosa cuneata</i>	Lycosidae	Araneae	Nationally Scarce	F3	Open habitats - Short sward and bare ground - Bare sand and chalk	<i>Alopecosa cuneata</i> is a locally distributed species of wolf spider (Lycosidae) which has a mainly southern distribution in the UK, occurring both inland and on the coast. The species has been historically recorded from Oxfordshire within a few kilometres of the survey area. According to Harvey <i>et al</i> (2002), the spider is associated mainly with old unimproved grassland and coastal dune habitats. During the 2020 survey, <i>A. cuneata</i> was recorded from Field 3 in the Application Site.
A ground beetle	<i>Acupalpus exiguus</i>	Carabidae	Coleoptera	Nationally Scarce	F12	Wetland - Marshland - Undisturbed fluctuating marsh	<i>Acupalpus exiguus</i> is a small, scarce species of ground beetle which has been recorded from widely scattered localities in the southern half of the UK. The species is most widely recorded from southeast and central southern England and there are several Oxfordshire records including a record from within close proximity of the survey area. According to Hyman and Parsons (1991), the beetle is often recorded from coastal localities

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
							such as seashores and saltmarshes, but is also recorded from inland river margins and grasslands on clay soils, where it is found in mud or silt at the margins of freshwater. During the 2020 survey <i>A.exiguus</i> was recorded from samples collected in the wet grassland/fen meadow habitat of Area 12.
A ground beetle	<i>Polystichus connexus</i>	<i>Carabidae</i>	<i>Coleoptera</i>	Nationally Scarce; Near Threatened (Post-2001 IUCN criteria)	F1	Wetland - Running water - W122 Riparian sand	<i>Polystichus connexus</i> is generally a scarce species of ground beetle, which is mainly known from coastal sites in southeast England and East Anglia. However, there are records from inland sites including Leighton Buzzard and Princes Risborough, each a few kilometres east of Bicester. During the 2020 survey, the beetle was recorded from a moth trap located in Field 1, during a prolonged period of exceptionally warm weather. Interestingly, the same species was noted on coleoptera forums, as having been recorded from a number of moth traps operated at that time, some of which were also from inland sites. The species was previously classed as RDB2 'Vulnerable', but has been reassessed as Nationally Scarce and 'Near Threatened' in a review by Telfer (2016). Luff (2007) states that <i>Polystichus connexus</i> occurs "In cracks and crevices, usually in clay soils or cliff bases but also on sandy or gravelly soils". It is difficult to assess whether the species was incidentally recorded due to an inland migration within the period of hot weather, or whether there is a viable population on site. The clay substrate of the site may provide suitable habitat, though not in the typical coastal location.

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
Pear Shortwing Beetle	<i>Glaphyra umbellatarum</i>	Cerambycidae	Coleoptera	Nationally Scarce	F8	Tree associated - Decaying wood; A212 Bark and sapwood decay	Pear shortwing beetle (<i>Glaphyra umbellatarum</i>) is a distinctive species of longhorn beetle which is recorded mainly in the UK from central southern England, the Midlands and parts of Wales, with outlying records from the far north of England. The beetle has been recorded from a number of sites in the Oxford area and around Evesham and Cambridgeshire, but not from the survey area. According to Hyman and Parsons (1992), Pear shortwing is associated with 'broad-leaved woodland, scrub and hedgerows', where the larvae are thought to 'develop in deadwood, in the stems of old, wild rose bushes'. The adult beetles have been recorded from crab apple (<i>Malus sylvestris</i>), privet (<i>Ligustrum vulgare</i>) and hawthorn (<i>Crataegus monogyna</i>) amongst others. The one adult recorded during the 2020 survey was beaten from the mature hedgerow in Area 8, probably from Hawthorn blossom.
White-banded Longhorn Beetle	<i>Poecilium alni</i>	Cerambycidae	Coleoptera	Nationally Scarce	F12	Tree associated - Decaying wood; A212 Bark and sapwood decay	White-banded longhorn beetle is a very local beetle in the UK, which is recorded in scattered locations across southern and central England, there being relatively few records in the west. The species is considered to be in decline in the UK. The closest historic records for the insect, to the Application Site, are from north of Oxford and around Buckingham. White-banded longhorn develop under the bark of recently dead and dying twigs of broadleaved trees such as oak (Duff, 2016).

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
A flea beetle	<i>Longitarsus fowleri</i>	Chrysomelidae	Coleoptera	Nationally Scarce	F10	Open habitats; Short sward and bare ground; F112 Open short sward	<i>Longitarsus fowleri</i> is a scarce species of flea beetle which was recognised as a distinct species for the first time in 1967. The species is known from a few scattered records, mainly in the south and southeast, but there is also a group of records from sites south of Coventry, the nearest to Bicester being from around Southam, with another from south of Alcester, Warwickshire. Hyman and Parsons (1992) describe the favoured habitat for <i>L. fowleri</i> as “Short-turf calcareous grassland, disturbed ground and coastal landslips”, and that the species “favours warm, south-facing slopes.” Hyman and Parson (1992) refer plant associations being mainly teasel (<i>Dipsacus fullonum</i>), but also mention possible associations with thyme (<i>Thymus</i> spp.) and also ground ivy (<i>Glechoma hederacea</i>). The beetle is considered to be associated with “young teasel plants in early spring, dispersing as plants grow larger”. During the 2020 survey, <i>L. fowleri</i> was recorded only from samples collected from Field 10. Both teasel and ground ivy were relatively abundant in this area.
A flea beetle	<i>Longitarsus lycopi</i>	Chrysomelidae	Coleoptera	Nationally Scarce	F6	Open habitats; Short sward and bare ground; F112 Open short sward	<i>Longitarsus lycopi</i> is a scarce species of flea beetle which is mainly confined to southern England in the UK. The species appears not to have been previously recorded from the Bicester area, though there are records from Oxford to the south and a cluster of records around Stratford-upon-Avon to the northwest. According to Hyman and Parsons (1992), <i>L. lycopi</i> occurs in “Calcareous grassland and occasionally in open woodland and wetland”. Hyman and Parson (1992) state that the beetle is “Associated with

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
							<i>common calamint</i> (<i>Calamintha ascendens</i>) in grassland, <i>selfheal</i> (<i>Prunella vulgaris</i>) in open woodland and <i>gipsywort</i> (<i>Lycopus europaeus</i>) in wetland habitats". During the 2020 survey, the beetle was recorded from the OMH/flower-rich grassland habitat of Field 6. This area supported reasonably abundant selfheal (<i>Prunella vulgaris</i>); although common calamint was not recorded, this species could have been overlooked, although the habitat was unsuitable for Gipsywort, which was not recorded from this part of the site.
A flea beetle	<i>Psylliodes luteola</i>	Chrysomelidae	Coleoptera	Nationally Scarce	F11, 12	Open habitats - Tall sward and scrub	<i>Psylliodes luteola</i> is a species of flea beetle which has been recorded in the UK mainly from central southern England and the south Midlands, with records as far north as Mansfield. The largest group of records extends from Oxford in the south to around Daventry in the north, and whilst the species does not appear to have been formerly recorded from Bicester, the town lies in the centre of this area within which the beetle has been relatively well recorded. <i>P. luteola</i> , which was formerly listed as RDBK 'unknown' in Hyman and Parsons (1992) in the UK was revised to Nationally Scarce in a review by Hubble (2014) who stated that there had been "A possible expansion since the 1980s" but that "the majority of records are from Oxfordshire". The beetle has been variously associated with grassland, wetland, hedgerows, woodland and disturbed ground. Hyman and Parsons (1992) cite bittersweet (<i>Solanum dulcamara</i>) as being a foodplant, whereas the beetle has also been associated with various cereals and wild grasses as well as trees and

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
							shrubs. During the 2020 survey, the beetle was recorded from Fields 11 and 12, which supported a range of wet grassland and scrub habitat. Bittersweet was present within this area.
A broad-nosed weevil	<i>Polydrusus flavipes</i>	Curculionidae	Coleoptera	Nationally Scarce	F11, 12	Tree associated; Arboreal	<i>Polydrusus flavipes</i> is a scarce weevil in the UK with records widely scattered as far as the extreme north of England. However, most records are from southeast and central southern England and the south Midlands. There are historic Oxfordshire records from either side of Banbury, including from near Banbury (north) and Oxford (south). According to Hyman and Parsons (1992), the weevil is primarily associated with “young oak and aspen”, being also possibly occurring on “hazel, beech, birch and hawthorn”, although Hyman and Parsons (1992) also state that the beetle “has also been noted from mature oaks in parkland”. The Gavray Meadows survey area included a range of suitable broadleaved trees occurring in different age classes from saplings to veteran standards. During the 2020 survey, <i>P. flavipes</i> was beaten from the broadleaved wooded boundary between Fields 11 and 12. This area supported Pedunculate Oak of a variety of age-classes.
A diving beetle	<i>Agabus labiatus</i>	Dytiscidae	Coleoptera	Near Threatened	F12	Wetland - Marshland	<i>Agabus labiatus</i> is a species of diving beetle which has been recorded throughout the UK, with the majority of records being from southern and eastern England. Historically, the beetle has been recorded from a site immediately north of Bicester and there are additional records from the Oxford area. Foster (2009) states that <i>A. labiatus</i> has been recorded from “exposed, still waters,

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
							including acid pools such as in the New Forest, alkaline temporary water such as turloughs of the Burren and dune-slack pools in the north of the Isle of Man". Foster suggests that the beetle is not usually associated with man-made waterbodies and that it may avoid ponds supporting fish, due to predation. During the 2020 survey, the beetle was recorded only from the seasonally inundated swamp habitat in Field 12.
A diving beetle	<i>Agabus uliginosus var dispar</i>	Dytiscidae	Coleoptera	Near Threatened	F3,F10	Wetland - Peatland	<i>Agabus uliginosus</i> is a species of diving beetle with a scattered distribution from the south coast of England to the north of Scotland. However, the largest aggregations of records are from East Anglia and eastern Yorkshire. There are several records from Oxfordshire including from the Bicester area and the beetle was also recorded from Gavray Meadows during the 2013 survey. According to Foster (2010), <i>A. uliginosus</i> is "primarily confined to highly temporary still waters on low ground". Foster (2010) also refers to an account that unlike most other Dytiscid larvae, the larvae of <i>A uliginosus</i> was unable to swim to the surface of water bodies to breath and therefore, could only exist in very shallow water. Although the species is mainly associated with temporary waterbodies, it can also occur in some primary fen sites which have permanent water. During the 2020 survey, <i>A. uliginosus</i> was recorded from the seasonally inundated furrows in Field 3 as well as the wet ditch end in Field 10, which was also dried out later in the summer.

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
A grooved water-scavenger beetle	<i>Helophorus granularis</i>	<i>Helophoridae</i>	<i>Coleoptera</i>	Nationally Scarce	F7	Wetland - Marshland	<i>Helophorus granularis</i> is a species of grooved water-scavenger beetle which has a scattered distribution throughout the UK. There are several records of the beetle from a few kilometres south of Bicester and from other areas within a twenty kilometre radius of the site. According to Foster <i>et al</i> (2014), the typical habitat of <i>H. granularis</i> is “ <i>in hard-bottomed pools with fluctuating margins</i> ”. During the survey, the beetle was recorded from the pond (P2) in Field 7. This pond was partially shaded and the water-level fluctuated to some extent over the field season.
A water scavenger beetle	<i>Eochrus quadripunctatus</i>	<i>Hydrophilidae</i>	<i>Coleoptera</i>	Nationally Scarce	F3	Wetland - Peatland; W313 Moss and tussock fen	<i>Eochrus quadripunctatus</i> is a distinctive member of the water scavenger beetle genus <i>Eochrus</i> . The beetle has been recorded from widely scattered localities throughout the UK; however, the majority of records are from the southeast and East Anglia. The closest record to Bicester is from around Aylesbury, a few kilometres south-east. According to Foster <i>et al</i> (2014), <i>E. quadripunctatus</i> is “ <i>a mobile species, readily taking flight, and occurring in lowland, base-rich stagnant water with some exposed mineral substratum</i> ”. But also occurs in 'mesotrophic fens'. During the 2020 survey, the beetle was recorded from the seasonally inundated furrows of Field 3.

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
A rhynchitid weevil	<i>Temnocerus longiceps</i>	<i>Rhynchitidae</i>	<i>Coleoptera</i>	Nationally Scarce	F9	Tree associated - Arboreal	<i>Temnocerus longiceps</i> is a scarce species of rhynchitid weevil which has a scattered distribution throughout much of the southern half of the UK as far north as Carlisle, though the western and northern records are mainly coastal. The beetle does not appear to have been recorded within close proximity of the survey area, the nearest records being from around Birmingham in the north and Bracknell in the south. Like other rhynchitid weevils, <i>T. longiceps</i> is associated with wooded habitats and according to Hyman and Parsons (1992), the beetle favours broadleaved woodland and scrub habitats, primarily in damp situations. Carr and Fen habitats are also cited as are hostplants including goat willow (<i>Salix cinerea</i>), birch (<i>Betula</i> spp.) and other willows (<i>Salix</i> spp.) The larvae are found in the leafbuds. During the 2020 survey, <i>T. longiceps</i> was recorded from the hedgerow habitat at the edge of the damp meadow Field 9. The field margin supported Goat and Grey Willow and a pond was located midway along the hedge boundary.
A rove beetle	<i>Sepedophilus pedicularius</i>	<i>Staphylinidae</i>	<i>Coleoptera</i>	Nationally Scarce	F10	Wetland - Peatland	<i>Sepedophilus pedicularius</i> is a scarce species of rove beetle which has been recorded from relatively few, widely scattered sites throughout the southern half of the UK. The beetle has been historically recorded from within close proximity to the Application Site from which it was also recorded during the 2013/14 survey. The biology of this species is uncertain; however other members of the genus <i>Sepedophilus</i> are associated with mildew and fungus infested habitats, such as decaying leaves etc. S.

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
							<i>pedicularius</i> is attributed to the 'Peatland' assemblage in Pantheon. During the 2020 survey, the beetle was recorded only from the marshy habitat at the southeast corner of F10.
A rove beetle	<i>Tachyporus formosus</i>	Staphylinidae	Coleoptera	Nationally Scarce	F6,12	Open habitats - Short sward and bare ground	<i>Tachyporus formosus</i> is a scarce species of rove beetle which has been associated primarily with marsh and sea cliff habitats. The beetle has been recorded from widely scattered sites across England and Wales and it has been recorded from sites just north of Oxford and to the west of Bicester. In addition, <i>T. formosus</i> was also recorded in previous surveys of Gavray Meadows in 2014. A number of commoner species of the genus <i>Tachyporus</i> were recorded during the survey, several such species being ubiquitous throughout the different survey areas. In 2020, <i>T. formosus</i> was recorded from predominately dry grassland/OMH in Field 6, but also from the wet meadow habitat of Field 12.
A false click beetle	<i>Trixagus gracilis</i>	Throscidae	Coleoptera	RDB3 (pre-1994 criteria)	F6	Open habitats - Tall sward and scrub	<i>Trixagus gracilis</i> is a very rare species of false click beetle which has been recorded historically from very few sites in the southern half of the UK. The majority of records are from coastal sites from southern England and Welwyn Garden City (Herts.), near the Welney Marshes (Norfolk) and west of Hereford (Herefordshire). There are, however, no known previous records from Oxfordshire. Hyman and Parsons (1992) described the most frequently recorded habitats as including "coastal shingle and saltmarsh", but also refer to records from inland pasture woodlands. The species occurring in 'moss and litter' (Duff, 2020)

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
							and 'grass tussocks' Hyman and Parsons (1992). During the 2020 survey, <i>Trixagus gracilis</i> was recorded from samples collected from Field 6, which comprises herb-rich OMH/ grassland habitat. This area was predominately free-draining, with localised damper areas. The adjacent Field 7 supports habitat elements similar to wood pasture, and the wet meadows of Field 12, also support potentially suitable tussocky grassland over fluctuating wetland.
Lesne's Earwig	<i>Forficula lesnei</i>	<i>Forficulidae</i>	<i>Dermaptera</i>	Nationally Scarce	F3,8,9	Tree associated - Shaded woodland floor	Lesne's Earwig <i>Forficula lesnei</i> is a smallish earwig on the northern edge of its range in the UK. The insect is a habitat generalist, having been historically recorded from a range of habitats including trees and shrubs, hedges amongst nettles and in rough vegetation, predominately on base-rich soils (Haes and Harding (1997). The insect has been recorded from scattered locations in southern England and on the Gower Peninsula, South Wales. There are several records of the insect from just south of Bicester and Lesne's Earwig was also recorded during the 2014 survey of Gavray Meadows. During the 2020 survey it was recorded mainly from scrub in Fields 3, 8 and 9.
An opomyzid fly	<i>Geomyza apicalis</i>	<i>Opomyzidae</i>	<i>Diptera</i>	Provisionally Nationally Scarce	F11	Open habitats - Tall sward and scrub	<i>Geomyza apicalis</i> is an uncommon species in the UK, with records distributed thinly as far north as Scotland. Although a number of historic records are from coastal sites, there are scattered records inland, especially from Cambridgeshire. The fly has also been tentatively recorded from a site south of Oxford. Whilst in Europe the species is associated with dry habitats, in the UK it appears to have an affinity with wetlands including grazing marsh,

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
							reedbeds and similar habitat. The larvae develop in the stems and middle shoots of grasses. In 2020, <i>G. apicalis</i> was recorded only from damp grassland and scrub mosaic habitat in Field 11.
A Fleshfly	<i>Blaesoxipha plumicornis</i>	Sarcophagidae	Diptera	Provisionally Near Threatened	F2,6,11,12	Open habitats; tall sward and scrub	<i>Blaesoxipha plumicornis</i> is a flesh fly which, according to Falk and Pont (2017) is a “rather poorly-known species, although possibly overlooked because of the relatively low level of recording in this group”. In the UK, the species is mainly known from Dorset, but has been recorded from several other southern English counties and the closest records to the survey site are from just northeast of Oxford. It is mainly associated with calcareous grassland and heathland habitats and the larvae are known to be parasitoids of grasshoppers including <i>Chorthippus parallelus</i> , <i>C. brunneus</i> and <i>Omocestus viridulus</i> , all of which were plentiful on site. Adult <i>B. plumicornis</i> are attracted to flowers of plants including wild carrot (<i>Daucus carota</i>) and wood spurge (<i>Euphorbia amygdalioides</i>). During the survey, <i>B. plumicornis</i> was recorded from Areas F2, 6, 11 and 12.
A fleshfly	<i>Sarcophaga subulata</i>	Sarcophagidae	Diptera	Provisionally Nationally Scarce	F12	Tree associated - Shaded woodland floor	<i>Sarcophaga subulata</i> is a species of flesh fly which was classed as Nationally Scarce in a review by Falk and Pont (2017). In the UK, the species has been recorded from widely scattered sites in southern and central England and Wales. There are records from near Oxford and also from sites to the north of Banbury near Evesham and Stratford-upon-Avon. Falk and Pont (2017) cite recorded habitats of <i>S. subulata</i> as including “Calcareous grassland, sandy heaths, and broad-

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
							leaved woodland”, with “one record from a suburban garden.” In terms of biology, Falk and Pont (2017) state that “ <i>This species has been reared in mainland Europe from the gypsy moth Lymantria dispar (Lepidoptera, Lymantriidae) and in England from the Kentish snail Monacha cantiana (Helicidae).</i> ” During the 2020 survey, the fly was recorded from the damp meadow and scrub mosaic habitat of Field 12.
A hoverfly	<i>Triglyphus primus</i>	Syrphidae	Diptera	Nationally Scarce	F6	Open habitats - Short sward and bare ground	<i>Triglyphus primus</i> is a scarce species of hoverfly, which according to Stubbs and Falk (2002) is “now known to be fairly widespread in eastern England as far north as south Yorkshire”. There are a number of records from north, east and south of Bicester, including several historic records from the Oxford area. Stubbs and Falk (2002) state that <i>T. primus</i> “can be encountered in a variety of habitats including heathland edge and rank grasslands of various sort”. Stubbs and Falk (2002) also refer to “a clear association with brownfield sites and other disturbed sites with plentiful mugwort”. The association with mugwort (<i>Artemisia vulgaris</i>) relates to the larvae of <i>T. primus</i> developing specifically “in galls induced by the aphid <i>Cryptosiphum artemisiae</i> on mugwort” (Stubbs and Falk, 2002). During the 2020 survey, <i>T. primus</i> was recorded only from OMH and herb-rich grassland in Field 6. some of the tall herb stands within this area supported mugwort, which was also recorded occasionally elsewhere on the site.

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
A tephritid fly	<i>Campiglossa malaris</i>	Tephritidae	Diptera	RDBK 'unknown'	F11	Open habitats; Short sward and bare ground; Open short sward	<i>Campiglossa malaris</i> is a scarce species of picture-winged fly of the family Tephritidae. The fly has a widespread, but thinly scattered distribution across the southern UK and the midlands, with records from as far north as Merseyside. Whilst there are a number of records in the Birmingham area and around Coventry, the species does not appear to have been recorded from Oxfordshire. Most species of the genus induce galls in the flowerheads of composites and <i>C. malaris</i> is strongly associated with ragworts <i>Senecio</i> spp. The fly was recorded from Field 11 during the 2020 survey, Common Ragwort <i>Senecio jacobaea</i> was well recorded in this area.
A tephritid fly	<i>Merzomyia westermanni</i>	Tephritidae	Diptera	Nationally Scarce	F6	Open habitats - Short sward and bare ground; Tall sward and scrub	<i>Merzomyia westermanni</i> has been recorded from widely scattered sites across the southern UK. There are few concentrations of records, however the fly has been recorded historically from a few kilometres south of Bicester. According to White (1988), the species is associated with hoary ragwort (<i>Senecio erucifolius</i>) and common ragwort (<i>S. jacobaea</i>), the larvae developing within the flower/seedheads. It is often recorded from OMH and grasslands. During the survey the fly was recorded from the OMH/herb-rich grassland of Field 6. Both hoary and common ragwort were recorded from the site and common ragwort was abundant within Field 6. <i>M. westermanni</i> was also recorded during the 2016 survey of Gavray Drive.

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
A planthopper	<i>Macrosteles sardus</i>	Cicadellidae	Hemiptera	New to Britain	F11	Not assigned	<i>Macrosteles sardus</i> is a species of leafhopper which according to Tristan Bantock (pers com) has not been recorded in Britain prior to the specimen(s) collected for the purpose of the current survey. Interestingly, however, the species was also recorded from another study site in southeast England during 2020, suggesting that it may have been overlooked. <i>Macrosteles</i> are difficult to identify to species-level and there are relatively few taxonomists with sufficient knowledge to identify the species within a sample. The species has been reported from various wetland habitats in Europe, including river flood plains and lake shores. Host plants unclear but may include <i>Epilobium hirsutum</i> . During the 2020 survey, <i>M. sardus</i> was recorded from Field 11. Within the site, the most abundant willowherb recorded was greater willowherb (<i>Epilobium hirsutum</i>), a common species of drier ditches and marginal wetland habitats.
Slender-horned Leatherbug	<i>Ceraleptus lividus</i>	Coreidae	Hemiptera	Nationally Scarce	F6	Open habitats - Short sward and bare ground	Slender-horned leatherbug (<i>Ceraleptus lividus</i>) is restricted to the southern half of the UK. There are scattered records both from coastal and inland sites; however, the majority of records are from sites in Kent and East Anglia. Whilst the species does not appear to have been recorded particularly close to Bicester, there are records further north in the Midlands and just south of Oxford in the south. Slender-horned leatherbug is mainly a ground-dwelling species, which occurs on sparsely-vegetated soils on sand or chalk where it is associated with various legumes. During the 2020 survey, the insect was recorded only from

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
							drier OMH/herb-rich grassland in Area 6.
A planthopper	<i>Criomorphus williamsi</i>	<i>Delphacidae</i>	<i>Hemiptera</i>	Nationally Scarce Nb	F9	Open habitats - Tall sward and scrub	<i>Criomorphus williamsi</i> is a relatively distinctive, albeit scarce species of planthopper which is more or less restricted to central England; where most UK records are from Buckinghamshire and Oxfordshire. According to Tristan Bantock (pers com.) the insect occurs “on grasses, usually in damp places”. During the 2020 survey, <i>C. williamsi</i> was recorded only from ridge and furrow grassland in Field 9, this site supporting seasonally wet grassland in the furrows.
A ground bug	<i>Megalonotus antennatus</i>	<i>Lygaeidae</i>	<i>Hemiptera</i>	Nationally Scarce	F5,11	Open habitats - Tall sward and scrub	In the UK, the ground bug <i>Megalonotus antennatus</i> is classed as nationally scarce. The insect has been recorded mainly from the southern half of England, south of the Wash, with most records being from the Midlands and the southeast. There is an unconfirmed historic record from a few kilometres south of Bicester. Kirby (1992) describes the recorded habitat for this ground bug as “woodland rides and clearings, from limestone quarries, disused clay workings, dry grassland near the coast and on earth banks”. More specifically the species can “occur in moss, amongst grass or other low vegetation and amongst stones and litter on partly bare ground” (Kirby, 1992) and the species is considered to be exclusively ground dwelling. During the survey <i>M. antennatus</i> was recorded both from the relatively dry, flower-rich grassland of Area 5 and from damp grassland and scrub mosaic habitat.

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
A mirid bug	<i>Lygus pratensis</i>	Miridae	Hemiptera	Nationally Rare (RDB3 - pre 1994)	F1	Open habitats; F003 Scrub heath and moorland	<i>Lygus pratensis</i> is one of a group of very similar species in the same genus, which can only reliably separated by microscopic examination. This mirid bug was formerly regarded as rare in the UK, but has undergone a significant range expansion in recent years. According to Kirby (1992), <i>L. pratensis</i> was most frequently recorded from ancient forest rides, although there are also records of the species being recorded from low-growing more open situations and also from open heathland. However, the insect has now been recorded from a much wider range of habitats. Many of the records for this species are from south-east England including the Thames Gateway, however, there are records from around Leighton Buzzard, a few kilometres east of Bicester. During the survey <i>L. pratensis</i> specimens were swept from grassland, and scrub habitat in Field 1.
Painted Nomad Bee	<i>Nomada fucata</i>	Apidae	Hymenoptera	Nationally Scarce	F11	Open habitats; Short sward and bare ground; Rich flower resource	<i>Nomada fucata</i> is a cuckoo bee which lays its eggs in the nest of its host the yellow-legged mining bee (<i>Andrena flavipes</i>). The insect, like its host is associated with a range of habitats including, according to Falk (2015), "soft rock cliffs, chalk downland and brownfield sites such as quarries and sandpits". The bee nectars as an adult on various shrubs, yellow composites, buttercups and cinquefoils. <i>N. fucata</i> is largely found in the southern half of the UK where it occurs most commonly in coastal habitats. However, the range has expanded in recent decades, reflecting the recorded increase in records of the host. There are a number of confirmed and unconfirmed records from sites north, east, south and west of Bicester,

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
							the closest records being from a few kilometres south around Stanton St John. During the 2020 survey, the bee was recorded from F11, its host <i>Andrena flavipes</i> was recorded, was recorded from the adjacent F12.
Lobe-spurred Furrow Bee	<i>Lasioglossum pauxillum</i>	Halictidae	Hymenoptera	Nationally Scarce	F5,6,12	Open habitats - Short sward and bare ground - Rich flower resource	Formerly a rare species in the UK, lobe-spurred furrow bee has increased its UK range in recent years and has now been recorded over much of southern England and therefore its conservation status is likely to be revised. There are a number of records from central southern England, including from within a few kilometres of Bicester. The species is associated with a range of habitats including chalk grassland and open woodland. It nests in bare ground forming small to large nesting aggregations. The bee is polylectic, nectaring on various flowering herbs. The species was recorded from OMH and grassland habitat in Fields 5 and 6 during the 2020 survey, as well as from grassland and scrub mosaic in F12. (sources: Else and Edwards (2018) and Edwards and Broad (2005).
Ridge-cheeked Furrow Bee	<i>Lasioglossum puncticolle</i>	Halictidae	Hymenoptera	Nationally Scarce	F3,11	Open habitats - Short sward and bare ground - Rich flower resource	Falk (2015) describes the ridge-cheeked furrow bee <i>Lasioglossum puncticolle</i> as “A scarce and localised species, with most records in southeast England between Dorset and Essex.” However, there are records from central southern England including Oxfordshire. The species is said to nest on steep slopes in various habitats including “soft rock cliffs, sea walls, vegetated shingle and saltmarsh”. Though it also occurs inland in “chalk downland, heathland, open woodland, old quarries and pits and arable margins”. <i>L. puncticolle</i> is polylectic. During the 2020 survey ridge-cheeked

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
							furrow bee was recorded from grassland habitat in Fields 3 and 11.
Red-tailed Blood Bee	<i>Sphecodes rubicundus</i>	<i>Halictidae</i>	<i>Hymenoptera</i>	Nationally Scarce	F6	Open habitats - Short sward and bare ground	Red-tailed blood bee (<i>Sphecodes rubicundus</i>) has been recorded mainly from the southern UK, with scattered records from both coastal and inland sites in England and to a lesser extent, Wales. The closest historic record from the survey area was from a few kilometres east of the site between Bicester and Winslow. According to Edwards and Broad (2006), the bee is found in “old, herb-rich meadowland, and soft-rock coastal cliffs and landslips”. Like other members of the genus <i>Sphecodes</i> , red-tailed blood bee is a cleptoparasite of mining bees. Edwards and Broad (2006) cite large meadow mining bee (<i>Andrena labialis</i>) as being the main recorded host, but also mention the yellow-legged mining bee (<i>Andrena flavipes</i>) and state that “the parasitic behaviour has not been well documented”. The bee has been recorded nectaring on wild angelica (<i>Angelica sylvestris</i>), wild carrot (<i>Daucus carota</i>) and spurges (<i>Epilobium</i> spp.). During the 2020 survey, yellow-legged mining bee was recorded from the site, but not large meadow mining bee. Red-tailed blood bee was recorded only from Field 6.
A spider-hunting wasp	<i>Anoplius caviventris</i>	<i>Pompilidae</i>	<i>Hymenoptera</i>	Nationally Scarce	F11,F12	Wetland - Peatland; W314 Reedfen and pools; F001 Scrub edge	<i>Anoplius caviventris</i> is a scarce species of spider-hunting wasp, which has been recorded in the UK from scattered localities as far north as Carlisle; however, the majority of records are from around the south coast and in the Midlands. The species has been recorded from sites south of Bicester and north of Oxford. According to Day (1988),

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
							<i>Anoplius caviventris</i> is “a species of bushy, vegetated places, particularly riversides and reed marsh.” In relation to the wasp's conservation biology, Day (1988) states that “It stores spiders in serial cells in hollow plant stems (<i>Carduus</i> and <i>Phragmites</i>) and deserted aculeate burrows.’ and the prey species are spiders of the genus Clubionidae. During 2020, <i>A. caviventris</i> was recorded from both Fields 11 and 12. Both fields supported an abundance of hollow plant stems, there was some common reed (<i>Phragmites australis</i>) as well as thistles of the genus <i>Cirsium</i> (not <i>Carduus</i>) and a range of other tall herb species with dead, hollow woody stems. Clubionid spiders including <i>Clubiona brevipes</i> and <i>C. lutescens</i> as well as the closely related <i>Cheiracanthium erraticum</i> were recorded from these fields.
A spider-hunting wasp	<i>Auplopus carbonarius</i>	<i>Pompilidae</i>	<i>Hymenoptera</i>	Nationally Scarce	F11	Tree associated - Shaded woodland floor	<i>Auplopus carbonarius</i> is a scarce species of spider-hunting wasp in the UK, found throughout southern England and south Wales, but very sparsely distributed. Whilst the insect does not seem to have been recorded from within close proximity to the site, there are a scattered records from within approximately 20 miles. <i>A. carbonarius</i> is a relatively distinctive all-black species with clear wings, the males with a distinctively white lower face. It can be found in a variety of habitats, where it builds multiple nest cavities for its larvae from wet mud (Day, 1988). It provisions these larvae with paralysed spiders from a variety of families, most frequently Clubionids (Day, 1988). During the 2020 survey, <i>A. carbonarius</i> was

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
							recorded only Area 11.
A spider-hunting wasp	<i>Priocnemis hyalinata</i>	<i>Pompilidae</i>	<i>Hymenoptera</i>	Nationally Scarce	F12	Wetland - Peatland; W314 Reedfen and pools	<i>Priocnemis hyalinata</i> is a scarce species of spider-hunting wasp, which has been recorded in the UK mainly in southern England and the Midlands, with most records being from the London area and East Anglia. There is a cluster of historic records in the Leighton Buzzard area, about 30km east of Bicester and from around Evesham to the northwest. Collins and Roy (2016) describe the favoured habitat of <i>P. hyalinata</i> as being “fairly open habitats such as heathland, acid grassland and chalk downs” and also suggest “open areas in woods” as probable habitat. Collins and Roy (2016) cite spiders of the family <i>Lycosidae</i> (wolf spiders) as being the principal prey species, but also mention <i>Thomisidae</i> (crab spiders) and <i>Salticidae</i> (jumping spiders). During the 2020 survey, <i>P. hyalinata</i> was recorded from damp grassland/fen meadow habitat in Field 12. This habitat has greater affinity to the W314 Reedfen and pools habitat to which the wasp is attributed to in Pantheon, than to that described in Collins and Roy (2016).
Small Tiphia	<i>Tiphia minuta</i>	<i>Tiphiidae</i>	<i>Hymenoptera</i>	Nationally Scarce Nb	F8	Open habitats - Short sward and bare ground	The small tiphia (<i>Tiphia minuta</i>) is a small species of solitary wasp, which has been increasingly recorded from English and Welsh sites throughout the southern half of the UK. There are several records from within close proximity to the survey area. Despite its nationally scarce status, small tiphia is considered to have been under-recorded due to its small size and elusive nature. Recorded habitats include heathland, downland, other types

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
							of grassland, open woodland and coastal dunes and the wasp is according to Baldock (2010) sometimes seen on the flowers of upright hedge parsley (<i>Torilis japonica</i>). The small tiphia is a parasite of the larvae of dung beetles (<i>Scarabaeidae</i>), adult wasps locate the larvae in underground burrows and oviposit on them. During 2020, small tiphia was recorded only from Field 8. It is possible that the insect was swept from upright hedge parsley, which was abundant in the field margins of Fields 8 and 9.
Saxon Wasp	<i>Dolichovespula saxonica</i>	Vespidae	Hymenoptera	pRDBK	F11	Tree associated - Arboreal	The Saxon wasp (<i>Dolichovespula saxonica</i>) is a recent UK colonist, which was first recorded in Surrey in 1987. Since that time, the species has colonised much of the southern half of the UK and there are additional records from as far north as Scotland. There are several records of Saxon Wasp from Oxfordshire and the species has been recorded from a few kilometres to the north and south of Bicester. Saxon wasp is a social species which according to Baldock (2010), “nests above ground under the eaves of houses, in roofs in barns and sheds, bushes etc. and is most commonly found in heathland and woodland”. During the 2020 survey, Saxon wasp was recorded from Field 11. The species is currently listed as RDBK 'unknown' category, but the increase in records suggests that the species status is in need of review.

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
Black-headed Mason Wasp	<i>Odynerus melanocephalus</i>	Vespidae	Hymenoptera	s41 'priority species'; Nationally Scarce	F6	Open habitats - Short sward and bare ground	The black-headed mason wasp (<i>Odynerus melanocephalus</i>) is a scarce and locally distributed species in the UK, which has been included as a 'Species of principal importance' under section 41 of the NERC Act (2006). Whilst most records of the wasp are from the central south coast and Thames corridor, the insect has been recorded from an increasing number of sites in the south Midlands in recent years, including from Oxfordshire. Black-headed mason wasp is found in a variety of open habitats on light, clayey soils, including grasslands, saltmarshes and brownfield sites. It excavates multi-celled nests on level, exposed areas of soil, which it provisions with weevil larvae and smaller butterfly and moth caterpillars. During the 2020 survey, <i>O. melanocephalus</i> was recorded only in Field 6, this area comprising herb-rich grassland/OMH. This area supported abundant weevils typical of such habitat and the site as a whole was on clay soil suitable for supporting the species.
Oak Hook-tip	<i>Watsonalla binaria</i>	Drepanidae	Lepidoptera	s41 research only	F3	Tree associated - Arboreal	Oak hook-tip is one of a number of moths which were added as s41 'Priority species' in the for 'research only' category, in 2006. Most species were included as s41 species due to having significantly declined in the UK in recent years, despite still being widespread and common in the UK. The Oak hook-tip was also recorded during the 2016 survey of Gavray Drive.

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
White Ermine	<i>Spilosoma lubricipeda</i>	<i>Erebidae</i>	<i>Lepidoptera</i>	s41 research only	F12	Open habitats - Tall sward and scrub	White ermine is one of a number of moths which were added as s41 'Priority species' in the for 'research only' category, in 2006. Most species were included as s41 species due to having significantly declined in the UK in recent years, despite still being widespread and common in the UK. Waring and Townsend (2003) state that White Ermine occurs in “most rural and urban habitats, including gardens, hedgerows, wet and dry grassland, heathland, moorland and coastal situations”. Larval foodplants include a wide range of herbaceous plants, including common nettle (<i>Urtica dioica</i>) and docks (<i>Rumex</i> spp.).
Lichen Sober	<i>Dichomeris alacella</i>	<i>Gelechiidae</i>	<i>Lepidoptera</i>	Nationally scarce	F3	Tree associated - Arboreal	The lichen sober (<i>Dichomeris alacella</i>) is a scarce species of micromoth. The moth has been recorded from widely scattered sites across south and central England and it has been historically recorded from around Oxford. The biology of the lichen sober is poorly known, however, the larvae are known to feed on lichens on tree trunks. During the 2020 survey, lichen sober was recorded from moth traps operated adjacent to the hedgerow in the damp, ridge and furrow meadowland of Field 3.
Small Phoenix	<i>Ecliptopera silaceata</i>	<i>Geometridae</i>	<i>Lepidoptera</i>	s41 research only	F3,F12	Open habitats - Tall sward and scrub	Small phoenix is one of a number of moths which were added as s41 'Priority species' in the for 'research only' category, in 2006. Most species were included as s41 species due to having significantly declined in the UK in recent years, despite still being widespread and common in the UK. Waring and Townsend (2003) state that the Small Phoenix is “most numerous in woodland rides and glades, but found wherever the

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
							<i>foodplants occur</i> ". Cited larval foodplants cited by Waring and Townsend (2003) include "Various species of willowherbs, including Rosebay Willowherb and the related Enchanter's Nightshade". Small phoenix was also recorded during the 2016 survey of Gavray Drive.
Dusky Thorn	<i>Ennomos fuscantaria</i>	Geometridae	Lepidoptera	s41 research only	F3	Tree associated - Arboreal	Dusky thorn is one of a number of moths which were added as s41 'Priority species' in the for 'research only' category, in 2006. Most species were included as s41 species due to having significantly declined in the UK in recent years, despite still being widespread and common in the UK.
August Thorn	<i>Ennomos quercinaria</i>	Geometridae	Lepidoptera	s41 research only	F1,F3	Tree associated - Arboreal	August thorn is one of a number of moths which were added as s41 'Priority species' in the for 'research only' category, in 2006. Most species were included as s41 species due to having significantly declined in the UK in recent years, despite still being widespread and common in the UK.
Shaded Broad-bar	<i>Scotopteryx chenopodiata</i>	Geometridae	Lepidoptera	s41 research only	F1,F3,F11,F12	Open habitats - Tall sward and scrub	Shaded broad-bar is one of a number of moths which were added as s41 'Priority species' in the for 'research only' category, in 2006. Most species were included as s41 species due to having significantly declined in the UK in recent years, despite still being widespread and common in the UK. Waring and Townsend (2003) state that Shaded broad-bar inhabits "a wide range of open grassy places including hedgerows, calcareous grasslands, neutral meadows, acid heathland, woodland rides" etc. where 'clovers and vetches' are cited as the larval foodplants. Shaded broad-bar was also recorded during the 2016 survey of

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
							Gavray Drive.
Blood-Vein	<i>Timandra comae</i>	<i>Geometridae</i>	<i>Lepidoptera</i>	s41 research only	F1,F3,F8,F12	Open habitats - Tall sward and scrub	Blood-vein is one of a number of moths which were added as s41 'Priority species' in the for 'research only' category, in 2006. Most species were included as s41 species due to having significantly declined in the UK in recent years, despite still being widespread and common in the UK. Blood-vein is associated primarily with "damp places with rank, herb-rich vegetation including hedgerow ditches, woodland rides, wet meadows and gardens." (Waring and Townsend, 2003). Larval foodplants include docks (<i>Rumex</i> spp.), knotgrass (<i>Polygonum</i> spp).. Blood-vein was also recorded during the 2016 survey of Gavray Drive.
Lackey	<i>Malacosoma neustria</i>	<i>Lasiocampidae</i>	<i>Lepidoptera</i>	s41 research only	F1,F3,F8,F12	Tree associated - Arboreal	The Lackey is one of a number of moths which were added as s41 'Priority species' in the for 'research only' category, in 2006. Most species were included as s41 species due to having significantly declined in the UK in recent years, despite still being widespread and common in the UK. The Lackey was also recorded during the 2016 survey of Gavray Drive.

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
Black Hairstreak	<i>Satyrrium pruni</i>	<i>Lycaenidae</i>	<i>Lepidoptera</i>	Endangered (Post-2001 IUCN)	F7,9,11,12	Tree associated - Arboreal	Black Hairstreak (<i>Satyrrium pruni</i>) is currently classed as 'Endangered' in the UK based on post-2001 IUCN criteria, due to a steady recorded decline beginning in the 20th century. The butterfly is more or less restricted in the UK to an area stretching from Oxford in the south, to around Peterborough in Cambridgeshire to the north. Gavray Meadows is known to support a population of black hairstreak and the butterfly has been recorded during previous surveys as well as during transects in 2020. In terms of habitat, black hairstreak is restricted to sites supporting blackthorn (<i>Prunus spinosa</i>) thickets in wooded areas with heavy clay soils. Larvae develop on blackthorn, usually eggs are laid usually on the bark of young growth of mature blackthorn, but also on young suckering growth. The adult butterflies often feed on honeydew on leaves in the upper parts of trees such as ash <i>Fraxinus excelsior</i> and field maple (<i>Acer campestre</i>), but also feed on lower growing on privet (<i>Ligustrum vulgare</i>), dog rose (<i>Rosa canina</i> (agg.)) and bramble (<i>Rubus fruticosus</i> agg.). The butterfly is short-lived as an adult, flying for a short period between early June and mid-July. During the 2020 survey, two black hairstreak individuals were recorded nectaring on bramble blossom on the boundary of Field 7 and 9 and also Field 11 and 12. Butterfly Conservation recommend that any major clearance of blackthorn from sites supporting black hairstreak should be avoided.

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
White-letter Hairstreak	<i>Satyrrium w-album</i>	<i>Lycaenidae</i>	<i>Lepidoptera</i>	Endangered (Post-2001 IUCN)	F3,4,8 (tentative recordings only)	Tree associated - Arboreal	White-letter hairstreak (<i>Satyrrium w-album</i>) is still a relatively well recorded species throughout England and much of Wales; however, a serious and continued decline has been recorded in the UK, since the 1970s. Consequently, White-letter Hairstreak is included under the NERC Act (2006) as a s41 and s42 'Species of principal importance' and has been classed under post-2001 IUCN criteria as 'Endangered'. In Oxfordshire, there are a number of post-1990 records of the butterfly which has been recorded within the Application Site during earlier surveys. White-letter Hairstreak is associated with elms including both English (<i>Ulmus procera</i>) and wych elm (<i>U. glabra</i>). The larvae feed on elm occurring in hedgerows, scrub edges, woodland margins etc and the adults are often associated with the tops of mature oaks (<i>Quercus</i> spp.) and larger elms. Over-management of hedgerows is detrimental to the species, which favours an uneven edge habitat and succession to lower scrub layers in sunny situations, where adults frequently nectar on bramble (<i>Rubus fruticosus</i> agg.) scrub. During the 2020 survey, white-letter hairstreak was tentatively recorded from hedgerows of Fields 3, 4 and 8. In all instances, the habitat supported abundant English elm as well as mature pedunculate oak (<i>Quercus robur</i>) standards and scrub succession. In all three sightings the butterflies were seen to fly over the hedgerows and whilst the insects were clearly hairstreaks, identification was tentative. However, the butterflies were recorded on the 17/7/20, over a month after the black hairstreak sightings in

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
							June. This is also too early for brown hairstreak and whilst purple hairstreak was recorded at the same time, white-letter hairstreak is unlikely to have been confused with this species, owing to the general colour of the underwing.
Brown Hairstreak	<i>Thecla betulae</i>	<i>Lycaenidae</i>	<i>Lepidoptera</i>	S41 Priority species; Vulnerable (Post-2001 IUCN criteria)	F9,11,12	Tree associated; Arboreal	Brown hairstreak (<i>Thecla betulae</i>) is a local species of butterfly occurring in southern Britain. Due to a significant recorded decline in recent decades due to hedgerow removal and changes in management including mechanised flailing of hedgerows, the species has been included as a 'Species of principal importance' under section 41 of the NERC Act (2006). The species is also listed as 'Vulnerable' under post 2001 IUCN criteria. Brown Hairstreak is associated with hedgerows, shrub and woodland edge where the larval foodplant blackthorn (<i>Prunus spinosa</i>) is a prominent component. Management is important and in particular, hedgerows and it is important that structurally diverse scrub edge habitat is allowed to develop. The butterfly also favours habitat with mature standard trees such as ash (<i>Fraxinus excelsior</i>) and hedgerows with a good structural succession, where bramble (<i>Rubus fruticosus</i> agg.), and tall herbs such as hemp agrimony (<i>Eupatoria cannabinum</i>) and fleabane (<i>Pulicaria dysenterica</i>) are present. Historically, both eggs and adults of brown hairstreak adults have been well recorded at Gavray Meadows. During the current survey, the butterfly was recorded during a transect from hedgerow habitat in F9 and from mature blackthorn and bramble scrub at the boundary between F11 and F12.

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
Knot Grass	<i>Acronicta rumicis</i>	Noctuidae	Lepidoptera	s41 research only	F1, F3, F8	Not assigned	Knot grass is one of a number of moths which were added as s41 'Priority species' in the for 'research only' category, in 2006. Most species were included as s41 species due to having significantly declined in the UK in recent years, despite still being widespread and common in the UK, knot grass is associated with a variety of habitats and the larvae feed on a range of herbaceous plants.
Copper Underwing agg.	<i>Amphipyra pyramidea</i>	Noctuidae	Lepidoptera	s41 research only	F1, F3, F8, F12	Not assigned	Copper underwing is one of a number of moths which were added as s41 'Priority species' in the for 'research only' category, in 2006. Most species were included as s41 species due to having significantly declined in the UK in recent years, despite still being widespread and common in the UK. Copper underwing (agg.) was also recorded during 2016 surveys of Gavray Meadows.
Mottled Rustic	<i>Caradrina morpheus</i>	Noctuidae	Lepidoptera	s41 research only	F1, F3, F11, F12	Open habitats - Tall sward and scrub	Mottled rustic is one of a number of moths which were added as s41 'Priority species' in the for 'research only' category, in 2006. Most species were included as s41 species due to having significantly declined in the UK in recent years, despite still being widespread and common in the UK. According to Waring and Townsend (2003) the Mottled Rustic is "Found in most lowland situations, including gardens, farmland, grassland, heathland, scrub, woodland and many coastal habitats". The larvae feed on a "wide range of herbaceous and woody plants including common nettle, docks, goosefoots, teasels and hedge bedstraw." (Waring and Townsend, 2003). Mottled Rustic was also recorded during the 2016 Gavray Meadows survey. Mottled rustic was also recorded

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
							during 2016 surveys of Gavray Meadows.
Rustic	<i>Hoplodrina blanda</i>	Noctuidae	Lepidoptera	s41 research only	F3, F12	Open habitats - Tall sward and scrub	The Rustic is one of a number of moths which were added as s41 'Priority species' in the for 'research only' category, in 2006. Most species were included as s41 species due to having significantly declined in the UK in recent years, despite still being widespread and common in the UK. The Rustic was also recorded during the 2016 survey of Gavray Drive.
Rosy Rustic	<i>Hydraecia micacea</i>	Noctuidae	Lepidoptera	s41 research only	F3, F12	Open habitats - Tall sward and scrub	Rosy rustic is one of a number of moths which were added as s41 'Priority species' in the for 'research only' category, in 2006. Most species were included as s41 species due to having significantly declined in the UK in recent years, despite still being widespread and common in the UK. It occurs in a wide range of habitats including, according to Waring and Townsend (2003), "gardens, disturbed weedy places, hedgerow-bases, pasture, fens, marshes and woodland rides." Larval foodplants cited by Waring and Townsend (2003) include "A range of low-growing plants including Broad-leaved Dock, Ribwort Plantain, Field Woundwort, sea lavenders" and various others. The rosy rustic was also recorded during the 2016 survey of Gavray Drive.
Shoulder-striped Wainscot	<i>Leucania comma</i>	Noctuidae	Lepidoptera	s41 research only	F3	Open habitats - Tall sward and scrub	Shoulder-striped wainscot is one of a number of moths which were added as s41 'Priority species' in the for 'research only' category, in 2006. Most species were included as s41 species due to having significantly declined in the UK in recent years, despite still being widespread and common in the UK.

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
Kent Black Arches	<i>Meganola albula</i>	Noctuidae	Lepidoptera	Nationally scarce	F12	Not assigned	Kent black arches (<i>Meganola Albula</i>) is a nationally scarce moth species, which has a mainly coastal distribution in the UK, being most commonly recorded from southern England and East Anglia. However, there are a number of inland records in central southern England. The nearest record to the survey area was from Oxford, there being a number of inland records just south of this point. According to Waring and Townsend (2004), the inland habitats include "chalk downland and open areas in woodland". Foodplants listed include "Dewberry, Bramble, Raspberry and Wild Strawberry". (Waring and Townsend, 2004). during the 2020 survey, Kent Black Arches was recorded from moth traps operated in Field 12.
Powdered Quaker	<i>Orthosia gracilis</i>	Noctuidae	Lepidoptera	s41 research only	F1	Tree associated - Arboreal	Powdered quaker is one of a number of moths which were added as s41 'Priority species' in the for 'research only' category, in 2006. Most species were included as s41 species due to having significantly declined in the UK in recent years, despite still being widespread and common in the UK.
Small Heath	<i>Coenonympha pamphilus</i>	Nymphalidae	Lepidoptera	S41 Priority species; Near Threatened (Post-2001 IUCN criteria)	F3,8,9	Open habitats; Short sward and bare ground; Open short sward	Small heath (<i>Coenonympha pamphilus</i>) is a small butterfly which is still widespread and common over the whole of the UK; however, a dramatic recorded decline within recent decades has led to the species being included as a s41 and s42 'Species of principal importance' in England and Wales respectively. The species has also been classed under post-2001 IUCN criteria as 'Near Threatened'. The butterfly is found in open, sunny habitats including grassland, heaths, meadows, sand dunes etc. Adults favour areas with short

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
							sward. Larvae feed on various grasses including bent grasses (<i>Agrostis</i> spp.), fescues <i>Festuca</i> spp. and meadow grasses (<i>Poa</i> spp.). During the survey Small Heath was recorded only from grassland habitat subject to current management. These included the three contiguous fields 3, 8 and 9. Small heath was also recorded during the previous 2016 Gavray Drive survey.
Forester Moth	<i>Adscita statices</i>	<i>Zygaenidae</i>	<i>Lepidoptera</i>	S41 Priority species	F3,8,9	Open habitats - Tall sward and scrub	The forester (<i>Adscita statices</i>) is species of day-flying moth which is currently listed as a 'Species of principal importance' under section 41 of the NERC Act (2006). The moth is associated with traditionally managed grasslands and the larvae feed on common sorrel (<i>Rumex acetosa</i>), sheep's sorrel (<i>R. acetosella</i>) and possibly other <i>Rumex</i> species. The moth is considered to be sensitive to loss through agricultural intensification (Waring and Townsend, 2003). On site, forester was recorded from the Application Site in previous surveys including during 2016, when it was recorded from Fields 8 and 9. During the 2020 survey, several individuals of the Forester were again recorded from these fields (through sweep sampling), but was also recorded from similarly managed Field 3. Sorrel (<i>Rumex acetosa</i>) is abundant within all these ridge and furrow fields which are managed for hay and in the case of F3, also by seasonal cattle grazing.

Common name	Scientific name	Family	Order	UK status	Recorded habitat	Pantheon affinities	Description
A stonefly	<i>Amphinemura standfussi</i>	Nemouridae	Plecoptera	Nationally Scarce	F12 (stream)	Wetland - Running water	<i>Amphinemura standfussi</i> is a scarce species of stonefly which has been recorded from scattered sites between southern England to the north of Scotland. The species has been well recorded in Wales and in central southern England and the Midlands. The closest historic record to Bicester, is from around Winslow, a few kilometres to the east of the survey area. According to Hynes (1993), <i>A. standfussi</i> larvae occur in "small stony streams: apparently associated with large amounts of vegetable matter". During the 2020, survey larvae were recorded from the Langford Brook, which formed the eastern boundary of Area 12. The habitat can be described as a 'small, stony stream', but the waterbody was very sparsely vegetated at the time of survey.
Button Ramshorn	<i>Anisus spirorbis</i>	Planorbidae	Pulmonata	DD	F7, F10	Not assigned	<i>Anisus spirorbis</i> is a species of ramshorn snail (<i>Planorbidae</i>). The species is poorly recorded in the UK, possibly due to difficulty in separation from the commoner <i>A. leucostoma</i> and due to uncertainty, the species is classed in the DD 'Data Deficient' category. In common with <i>A. leucostoma</i> , the species is associated with temporary waterbodies, but appears to have a more southerly distribution. During the 2020 survey, <i>A. spirorbis</i> was recorded from the seasonally inundated wetland in Field 10 and the more permanent, albeit fluctuating waterbody (P2) in Field 7. The records should be treated as tentative as the species is difficult to separate from the much commoner <i>A. leucostoma</i> .

Table EDP A11.1.6: 2020 sightings of Black/Brown/White-letter and Purple Hairstreak butterflies

Date recorded	Common name	Scientific name	Location (field number)	Location (grid reference)	Habitat	Notes
05/06/2020	Black Hairstreak	<i>Satyrrium pruni</i>	Field 11/12 boundary	SP 59652 22324	On <i>Rubus fruticosus</i> (agg.) below mature <i>Prunus spinosa</i> at the boundary between F11 and F12.	Definite sighting
05/06/2020	Black Hairstreak	<i>Satyrrium pruni</i>	Field 9/F7 boundary	SP 59847 22253	On <i>Rubus fruticosus</i> (agg.) in corner of F9 hedgerow with <i>Prunus spinosa</i> .	Definite sighting
17/07/2020	White-letter Hairstreak	<i>Satyrrium w-album</i>	Field 3	SP60009 22177	Seen flying over hedge with <i>Ulmus procera</i> and <i>Rubus fruticosus</i> (agg.)	Tentative sighting
17/07/2020	White-letter Hairstreak	<i>Satyrrium w-album</i>	Field 4	SP60008 22217	Seen flying from <i>Rubus fruticosus</i> (agg.)	Tentative sighting
17/07/2020	White-letter Hairstreak	<i>Satyrrium w-album</i>	Field 8	SP59924 22210	Seen flying over hedge in field corner	Tentative sighting
17/07/2020	Purple Hairstreak	<i>Favonius quercus</i>	Field 1	SP59937 22009	In corner of F1 adjacent to boundary with F10. Habitat with extensive Bramble scrub, below mature Pedunculate Oak <i>Quercus robur</i>	Definite sighting
26/08/2020	Brown Hairstreak	<i>Thecla betulae</i>	Field 9	SP59815 22232	On <i>Rubus fruticosus</i> (agg.) in hedgerow with <i>Prunus spinosa</i> and mature <i>Fraxinus excelsior</i> standard	Definite sighting (female)
26/08/2020	Brown Hairstreak	<i>Thecla betulae</i>	Field 11/12 boundary	SP59638 22332	Seen flying over in-field <i>Prunus spinosa</i>	Definite sighting (female)

Table EDP A11.1.7: Pantheon/ISIS Output Tables from Analysis of 2020 Invertebrate Samples (Combined sites all data)

Table EDP A11.1.7a: Habitats and Resources: Broad Biotoxes


Broad Biotope <i>i</i>	No. of Species	% Representation	SQI	Conservation Status <i>i</i>	Species with Conservation Status
Open habitats <i>i</i>	448	10	117	3 [Nb]; 8 Section 41 Priority Species - research only; 4 [Na]; 1 [RDB 3]; 3 Nbi; 6 NSi; 3 Section 41 Priority Species; 2 RDB 3i; 2 pNS; 1 NTi; 1 [Notable]; 1 Notablei; 1 [RDB 1]; 1 pNT	33
Tree-associated <i>i</i>	212	6	124	4 Nbi; 5 Section 41 Priority Species - research only; 1 NSi; 2 ENi; 3 Legal Protectioni; 1 [NS]; 1 [RDB K]; 1 Nai; 1 pNS; 2 Section 41 Priority Species; 1 [Notable]; 1 VUi; 1 DDi	18
Wetland <i>i</i>	92	3	146	8 NSi; 1 Nbi; 3 NTi; 1 [Nb]; 1 Notablei	11
Coastal <i>i</i>	3	<1	 100		

Table EDP A11.1.7b: Habitats and Resources: Habitats

Broad Biotope <i>i</i>	Habitat <i>i</i>	No. of Species	% Representation	Conservation Status <i>i</i>	SQI	Species with Conservation Status
Open habitats <i>i</i>	Tall sward & scrub <i>i</i>	362	14	2 RDB 3i; 8 Section 41 Priority Species - research only; 2 pNS; 2 Nbi; 1 Section 41 Priority Species; 1 NSi; 1 [RDB 1]; 1 [Notable]; 1 Notablei; 1 pNT	113	18
Tree-associated <i>i</i>	Arboreal <i>i</i>	144	11	5 Section 41 Priority Species - research only; 1 NSi; 2 ENi; 3 Legal Protectioni; 1 [RDB K]; 2 Nbi; 2 Section 41 Priority Species; 1 [Notable]; 1 VUi	125	12
Open habitats <i>i</i>	Short sward & bare ground <i>i</i>	81	6	5 NSi; 1 [RDB 1]; 2 [Nb]; 1 Notablei; 4 [Na]; 2 Section 41 Priority Species; 1 NTi; 1 RDB 3i; 1 Nbi; 1 [Notable]	160	16
Tree-associated <i>i</i>	Shaded woodland floor <i>i</i>	50	4	1 Nbi; 1 pNS	116	2
Wetland <i>i</i>	Marshland <i>i</i>	48	6	1 NTi; 4 NSi	137	4

















Broad Biotope <i>i</i>	Habitat <i>i</i>	No. of Species	% Representation	Conservation Status <i>i</i>	SQI	Species with Conservation Status
Wetland <i>i</i>	Peatland <i>i</i>	32	3	1 Nbi ; 2 NSi; 1 NTi; 1 [Nb]; 1 Notable <i>i</i>	158	5
Tree-associated <i>i</i>	Decaying wood <i>i</i>	20	2	1 DDi ; 1 Nbi; 1 Nai	132	3
Wetland <i>i</i>	Wet woodland <i>i</i>	9	3		 100	
Wetland <i>i</i>	Running water <i>i</i>	8	<1	3 NSi ; 1 NTi	 213	3
Tree-associated <i>i</i>	Wet woodland <i>i</i>	7	3		 100	
Open habitats <i>i</i>	Upland <i>i</i>	2	1		 100	
Coastal <i>i</i>	Saltmarsh <i>i</i>	1	<1		 100	
Coastal <i>i</i>	Sea cliff <i>i</i>	1	2		 100	

Table EDP A11.1.7c: Habitats and Resources: ISIS Specific Assemblage Types

Broad Biotope <i>i</i>	Habitat <i>i</i>	SAT	No. of Species	% Representation	SQI	Conservation Status <i>i</i>	Species with Conservation Status	Code	Reported Condition <i>i</i>
Open habitats <i>i</i>		Rich flower resource <i>i</i>	34	14	109	1 RDB 3i ; 1 Nbi; 2 [Na]; 1 [Nb]	5	F002	Favourable

Broad Biotope<i>i</i>	Habitat<i>i</i>	SAT	No. of Species	% Representation	SQI	Conservation Status<i>i</i>	Species with Conservation Status	Code	Reported Condition<i>i</i>
Open habitats <i>i</i>		Scrub edge <i>i</i>	14	6	 121	1 [Nb]	1	F001	Favourable
Tree-associated <i>i</i>	decaying wood <i>i</i>	Bark & sapwood decay <i>i</i>	14	3	 143	1 Nbi ; 1 Nai	2	A212	Unfavourable (14 of 19 species)
Open habitats <i>i</i>	short sward & bare ground <i>i</i>	Open short sward <i>i</i>	8	4	 363	1 [RDB 1]; 2 NSi ; 1 Section 41 Priority Species; 1 NT <i>i</i>	4	F112	Unfavourable (8 of 13 species)
Open habitats <i>i</i>	short sward & bare ground <i>i</i>	Bare sand & chalk <i>i</i>	7	2	 150	1 NSi	1	F111	Unfavourable (7 of 19 species)
Open habitats <i>i</i>		Scrub-heath & moorland <i>i</i>	7	2	 100	1 [RDB 3]	1	F003	Unfavourable (7 of 9 species)
		Epiphyte fauna <i>i</i>	2	10	 100			A215	Unfavourable (2 of 3 species)
Wetland <i>i</i>	marshland <i>i</i>	Undisturbed fluctuating marsh <i>i</i>	2	5	 400	1 NSi	1	W221	Unfavourable (2 of 4 species)
Wetland <i>i</i>	peatland <i>i</i>	Moss & tussock fen <i>i</i>	2	4	 250	1 NSi	1	W313	Unfavourable (2 of 6 species)
Wetland <i>i</i>	peatland <i>i</i>	Reed-fen & pools <i>i</i>	2	2	 400	1 Nbi ; 1 [Nb]	2	W314	Unfavourable (2 of 11 species)
Wetland <i>i</i>	running water <i>i</i>	Riparian sand <i>i</i>	1	2	 400	1 NSi ; 1 NT <i>i</i>	1	W122	Unfavourable (1 of 5 species)





Broad Biotope <i>i</i>	Habitat <i>i</i>	SAT	No. of Species	% Representation	SQI	Conservation Status <i>i</i>	Species with Conservation Status	Code	Reported Condition <i>i</i>
Wetland <i>i</i>	peatland <i>i</i>	Sphagnum bog <i>i</i>	1	<1	 100			W312	Unfavourable (1 of 8 species)
Tree-associated <i>i</i>	decaying wood <i>i</i>	Epiphyte fauna <i>i</i>	1	5	 100			A215	Unfavourable (1 of 3 species)
Open habitats <i>i</i>	short sward & bare ground <i>i</i>	Exposed sea-cliff <i>i</i>	1	2	 100			F113	
Coastal <i>i</i>	saltmarsh <i>i</i>	Saltmarsh & transitional brackish marsh <i>i</i>	1	<1	 100			M311	Unfavourable (1 of 9 species)

Table EDP A11.1.8: Pantheon/ISIS output tables from analysis of 2020 invertebrate samples - Zone A (Fields 11 and 12 combined)

Table EDP A11.1.8a: Habitats and resources: Broad Biotopes


Broad Biotope <i>i</i>	No. of Species	% Representation	SQI	Conservation Status <i>i</i>	Species with Conservation Status
Open habitats <i>i</i>	258	6	118	1 [RDB 3]; 7 Section 41 Priority Species - research only; 1 [Nb]; 2 [Na]; 1 [RDB 1]; 2 pNS; 1 pNT; 3 Nb; 1 NSi; 1 RDB 3i	19
Tree-associated <i>i</i>	109	3	135	1 VU; 1 Section 41 Priority Species; 2 Legal Protection <i>i</i> ; 1 NSi; 2 Section 41 Priority Species - research only; 3 Nb; 1 [RDB K]; 1 EN; 1 pNS; 1 DD <i>i</i>	10
Wetland <i>i</i>	47	2	144	3 NSi; 1 NTi; 1 [Nb]; 1 Nbi	5
Coastal <i>i</i>	2	<1	 100		

Table EDP A11.1.8b: Habitats and Resources: Habitats






Broad Biotope<i>i</i>	Habitat<i>i</i>	No. of Species	% Representation	Conservation Status<i>i</i>	SQI	Species with Conservation Status
Open habitats <i>i</i>	Tall sward & scrub <i>i</i>	222	8	1 [RDB 1]; 2 pNS; 1 pNT; 7 Section 41 Priority Species - research only; 1 NS<i>i</i>; 2 Nb<i>i</i>; 1 RDB 3<i>i</i>	116	14
Tree-associated <i>i</i>	Arboreali	83	6	2 Section 41 Priority Species - research only; 1 Nb<i>i</i>; 1 NS<i>i</i>; 1 EN<i>i</i>; 2 Legal Protection<i>i</i>; 1 [RDB K]; 1 VU<i>i</i>; 1 Section 41 Priority Species	130	6
Open habitats <i>i</i>	Short sward & bare ground <i>i</i>	32	2	1 RDB 3<i>i</i>; 2 [Na]; 1 [RDB 1]; 1 Nb<i>i</i>	172	5
Wetland <i>i</i>	Marshland <i>i</i>	23	3	2 NS<i>i</i>; 1 NT<i>i</i>	150	2
Tree-associated <i>i</i>	Shaded woodland floor <i>i</i>	20	2	1 Nb<i>i</i>; 1 pNS	150	2
Wetland <i>i</i>	Peatland <i>i</i>	18	2	1 Nb<i>i</i>; 1 [Nb]	133	2
Tree-associated <i>i</i>	Decaying wood <i>i</i>	6	<1	1 DD<i>i</i>; 1 Nb<i>i</i>	 160	2
Wetland <i>i</i>	Running water <i>i</i>	4	<1	1 NS<i>i</i>	 175	1
Wetland <i>i</i>	Wet woodland <i>i</i>	3	1		 100	
Tree-associated <i>i</i>	Wet woodland <i>i</i>	2	<1		 100	
Coastal <i>i</i>	Saltmarsh <i>i</i>	1	<1		 100	

Table EDP A11.1.8c: Habitats and Resources: ISIS Specific Assemblage Types











Broad Biotope <i>i</i>	Habitat/ <i>i</i>	SAT	No. of Species	% Representation	SQI	Conservation Status <i>i</i>	Species with Conservation Status	Code	Reported Condition <i>i</i>
Open habitats <i>i</i>		Rich flower resource <i>i</i>	20	8	115	1 RDB 3<i>i</i> ; 2 [Na]; 1 Nbi	4	F002	Favourable
Open habitats <i>i</i>		Scrub edge <i>i</i>	9	4	 133	1 [Nb]	1	F001	Unfavourable (9 of 11 species)
Open habitats <i>i</i>		Scrub-heath and moorland <i>i</i>	5	1	 100	1 [RDB 3]	1	F003	Unfavourable (5 of 9 species)
Tree-associated <i>i</i>	Decaying wood <i>i</i>	Bark and sapwood decay <i>i</i>	4	<1	 175	1 Nbi	1	A212	Unfavourable (4 of 19 species)
Wetland <i>i</i>	Peatland <i>i</i>	Reed-fen and pools <i>i</i>	2	2	 400	1 Nbi ; 1 [Nb]	2	W314	Unfavourable (2 of 11 species)
		Epiphyte fauna <i>i</i>	2	10	 100			A215	Unfavourable (2 of 3 species)
Open habitats <i>i</i>	Short sward and bare ground <i>i</i>	Open short sward <i>i</i>	2	1	 850	1 [RDB 1]	1	F112	Unfavourable (2 of 13 species)
Wetland <i>i</i>	Marshland <i>i</i>	Undisturbed fluctuating marsh <i>i</i>	2	5	 400	1 NSi	1	W221	Unfavourable (2 of 4 species)
Open habitats <i>i</i>	Short sward & bare ground <i>i</i>	Bare sand & chalk <i>i</i>	1	<1	 100			F111	Unfavourable (1 of 19 species)
Wetland <i>i</i>	Peatland <i>i</i>	Sphagnum bog <i>i</i>	1	<1	 100			W312	Unfavourable (1 of 8 species)
Coastal <i>i</i>	Saltmarsh <i>i</i>	Saltmarsh and transitional brackish marsh <i>i</i>	1	<1	 100			M311	Unfavourable (1 of 9 species)

Table EDP A11.1.9: Pantheon/ISIS output tables from analysis of 2020 invertebrate samples - Zone B (Fields 5 and 6 combined)

Table EDP A11.1.9a: Habitats and Resources: Broad Biotoxes






Broad Biotope <i>i</i>	No. of Species	% Representation	SQL	Conservation Status <i>i</i>	Species with Conservation Status
Open habitats <i>i</i>	182	4	119	3 NSi ; 1 [Notable]; 1 Notable <i>i</i> ; 1 [RDB 3]; 3 [Na]; 1 NT <i>i</i> ; 2 Section 41 Priority Species; 1 RDB 3 <i>i</i> ; 1 pNS; 1 pNT; 1 [Nb]; 1 Nbi	13
Wetland <i>i</i>	16	<1	133		
Tree-associated <i>i</i>	10	<1	 100	1 DDi	1
Coastal <i>i</i>	2	<1	 100		

Table EDP A11.1.9b: Habitats and Resources: Habitats

Broad Biotope <i>i</i>	Habitat <i>i</i>	No. of Species	% Representation	Conservation Status <i>i</i>	SQL	Species with Conservation Status
Open habitats <i>i</i>	Tall sward and scrub <i>i</i>	135	5	1 [Notable]; 1 Notable <i>i</i> ; 1 Nbi; 1 RDB 3 <i>i</i> ; 1 pNS; 1 pNT	112	4
Open habitats <i>i</i>	Short sward and bare ground <i>i</i>	43	3	1 [Notable]; 1 [Nb]; 3 NSi ; 3 [Na]; 2 Section 41 Priority Species; 1 NT <i>i</i> ; 1 Notable <i>i</i>	150	9
Wetland <i>i</i>	Peatland <i>i</i>	8	<1		 100	
Tree-associated <i>i</i>	Shaded woodland floor <i>i</i>	6	<1		 100	
Wetland <i>i</i>	Marshland <i>i</i>	6	<1		 167	









Broad Biotope <i>i</i>	Habitat <i>i</i>	No. of Species	% Representation	Conservation Status <i>i</i>	SQI	Species with Conservation Status
Tree-associated <i>i</i>	Arboreali	3	<1		 100	
Wetland <i>i</i>	Running water <i>i</i>	2	<1		 100	
Tree-associated <i>i</i>	Decaying wood <i>i</i>	1	<1	1 DD <i>i</i>	 100	1
Open habitats <i>i</i>	Upland <i>i</i>	1	<1		 100	
Coastal <i>i</i>	Saltmarsh <i>i</i>	1	<1		 100	

Table EDP A11.1.9c: Habitats and Resources: ISIS Specific Assemblage Types

Broad Biotope <i>i</i>	Habitat <i>i</i>	SAT	No. of Species	% Representation	SQI	Conservation Status <i>i</i>	Species with Conservation Status	Code	Reported Condition <i>i</i>
Open habitats <i>i</i>		Rich flower resource <i>i</i>	18	7	100	1 [Na]; 1 [Nb]	2	F002	Favourable
Open habitats <i>i</i>	Short sward & bare ground <i>i</i>	Open short sward <i>i</i>	6	3	 150	1 NS <i>i</i> ; 1 NT <i>i</i> ; 1 Section 41 Priority Species	2	F112	Unfavourable (6 of 13 species)
Open habitats <i>i</i>		Scrub edge <i>i</i>	6	3	 100			F001	Unfavourable (6 of 11 species)
Open habitats <i>i</i>		Scrub-heath & moorland <i>i</i>	4	1	 100	1 [RDB 3]	1	F003	Unfavourable (4 of 9 species)




Broad Biotope <i>i</i>	Habitat <i>i</i>	SAT	No. of Species	% Representation	SQI	Conservation Status <i>i</i>	Species with Conservation Status	Code	Reported Condition <i>i</i>
Open habitats <i>i</i>	Short sward & bare ground <i>i</i>	Bare sand & chalk <i>i</i>	3	<1	 100			F111	Unfavourable (3 of 19 species)
Coastal <i>i</i>	Saltmarsh <i>i</i>	Saltmarsh and transitional brackish marsh <i>i</i>	1	<1	 100			M311	Unfavourable (1 of 9 species)
Wetland <i>i</i>	Peatland <i>i</i>	Sphagnum bog <i>i</i>	1	<1	 100			W312	Unfavourable (1 of 8 species)

Table EDP A11.1.10: Pantheon/ISIS output tables from analysis of 2020 invertebrate samples - Zone C (Fields 1, 2, 3, 7, 8, 9, 10 combined)

Table EDP A11.1.10a: Habitats and Resources: Broad Biotopes


Broad Biotope <i>i</i>	No. of Species	% Representation	SQI	Conservation Status <i>i</i>	Species with Conservation Status
Open habitats <i>i</i>	254	6	105	1 pNS; 1 pNT; 1 [Nb]; 7 Section 41 Priority Species - research only; 2 Nbi; 2 Section 41 Priority Species; 1 NSi; 1 [RDB 3]; 1 NTi	15
Tree-associated <i>i</i>	152	4	125	4 Section 41 Priority Species - research only; 1 NSi; 2 ENi; 3 Legal Protectioni; 1 Nai; 2 Section 41 Priority Species; 1 [Notable]; 1 VUi; 1 DDi; 1 Nbi	11
Wetland <i>i</i>	55	2	138	4 NSi; 2 NTi	4
Coastal <i>i</i>	2	<1	 100		

Table EDP A11.1.10b: Habitats and Resources: Habitats
















Broad Biotope<i>i</i>	Habitat<i>i</i>	No. of Species	% Representation	Conservation Status<i>i</i>	SQI	Species with Conservation Status
Open habitats <i>i</i>	Tall sward and scrub <i>i</i>	220	8	7 Section 41 Priority Species - research only; 1 Nbi; 1 Section 41 Priority Species; 1 pNS; 1 pNT	103	10
Tree-associated <i>i</i>	Arboreali	106	8	3 Legal Protection<i>i</i>; 2 Section 41 Priority Species; 1 VUi; 4 Section 41 Priority Species - research only; 1 [Notable]; 1 Nbi; 1 NSi; 2 ENi	133	9
Tree-associated <i>i</i>	Shaded woodland floor <i>i</i>	36	3		100	
Wetland <i>i</i>	Marshland <i>i</i>	31	4	1 NSi	127	1
Open habitats <i>i</i>	Short sward and bare ground <i>i</i>	31	2	1 NTi; 1 Section 41 Priority Species; 1 NSi; 1 [Nb]; 1 Nbi	122	4
Wetland <i>i</i>	Peatland <i>i</i>	18	2	2 NSi; 1 NTi	153	2
Tree-associated <i>i</i>	Decaying wood <i>i</i>	12	1	1 DDi; 1 Nai	 127	2
Wetland <i>i</i>	Wet woodland <i>i</i>	6	2		 100	
Tree-associated <i>i</i>	Wet woodland <i>i</i>	5	2		 100	
Wetland <i>i</i>	Running water <i>i</i>	5	<1	1 NSi; 1 NTi	 160	1
Open habitats <i>i</i>	Upland <i>i</i>	2	1		 100	
Coastal <i>i</i>	Sea cliff <i>i</i>	1	2		 100	

Table EDP A11.1.10c: Habitats and Resources: ISIS Specific Assemblage Types

Broad Biotope <i>i</i>	Habitat/ <i>i</i>	SAT	No. of Species	% Representation	SQI	Conservation Status <i>i</i>	Species with Conservation status	Code	Reported Condition <i>i</i>
Open habitats <i>i</i>		Rich flower resource <i>i</i>	16	7	119	1 [Nb]; 1 Nbi	2	F002	Favourable
Open habitats <i>i</i>		Scrub edge <i>i</i>	9	4	 100			F001	Unfavourable (9 of 11 species)
Tree-associated <i>i</i>	Decaying wood <i>i</i>	Bark & sapwood decay <i>i</i>	7	1	 143	1 Nai	1	A212	Unfavourable (7 of 19 species)
Open habitats <i>i</i>		Scrub-heath and moorland <i>i</i>	4	1	 100	1 [RDB 3]	1	F003	Unfavourable (4 of 9 species)
Open habitats <i>i</i>	Short sward & bare ground <i>i</i>	Bare sand and chalk <i>i</i>	3	<1	 250	1 NSi	1	F111	Unfavourable (3 of 19 species)
		Epiphyte faunai	2	10	 100			A215	Unfavourable (2 of 3 species)
Open habitats <i>i</i>	Short sward and bare ground <i>i</i>	Open short sward <i>i</i>	2	1	 100	1 Section 41 Priority Species; 1 NTi	1	F112	Unfavourable (2 of 13 species)
Wetland <i>i</i>	Peatland <i>i</i>	Moss and tussock fen <i>i</i>	2	4	 250	1 NSi	1	W313	Unfavourable (2 of 6 species)
Open habitats <i>i</i>	Short sward and bare ground <i>i</i>	Exposed sea-cliff <i>i</i>	1	2	 100			F113	
Wetland <i>i</i>	Running water <i>i</i>	Riparian sand <i>i</i>	1	2	 400	1 NSi; 1 NTi	1	W122	Unfavourable (1 of 5 species)

Appendix EDP A11.2
Figures

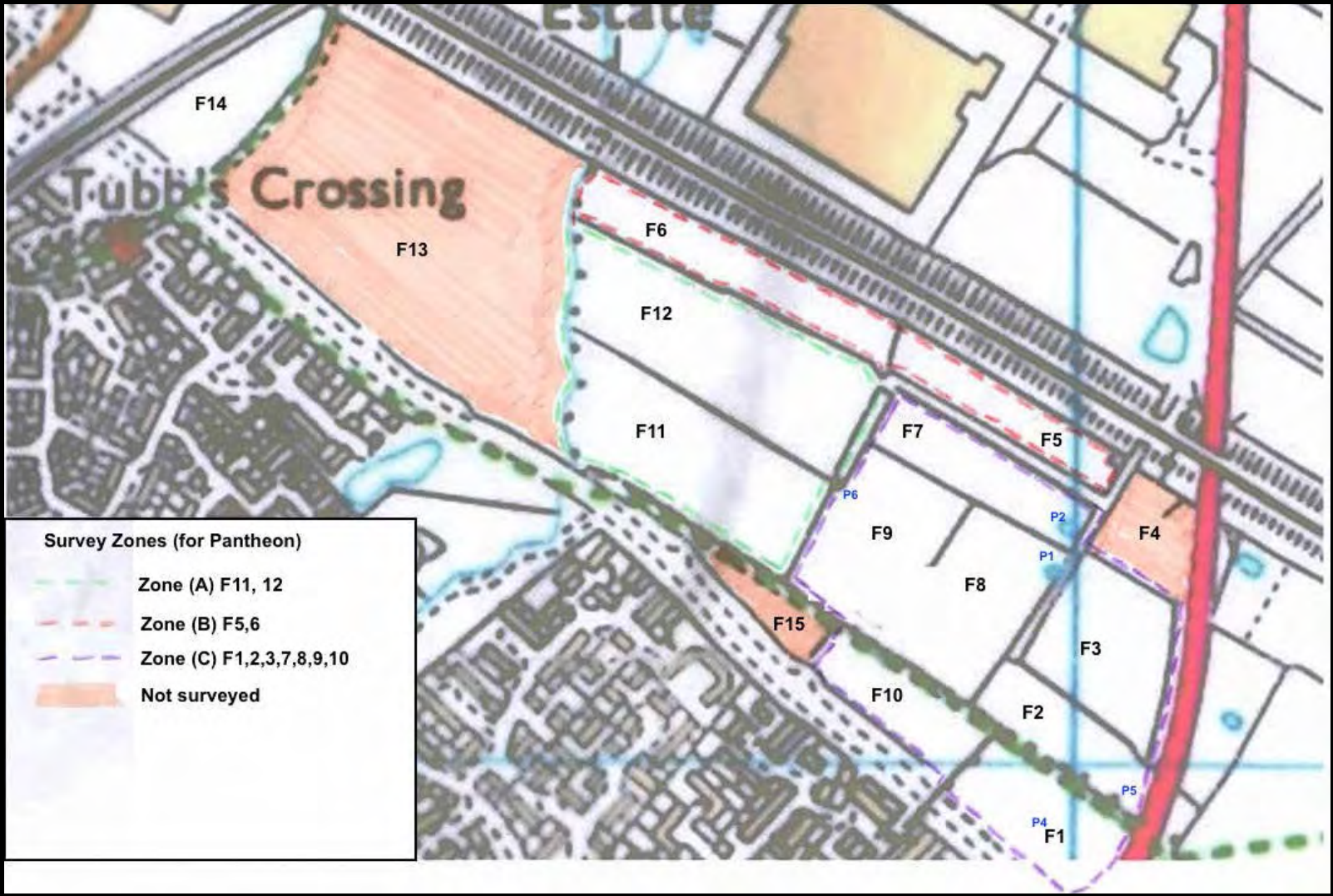


Figure EDP A11.2.1: Gavray Meadows 2020 field numbers and Pantheon survey zones

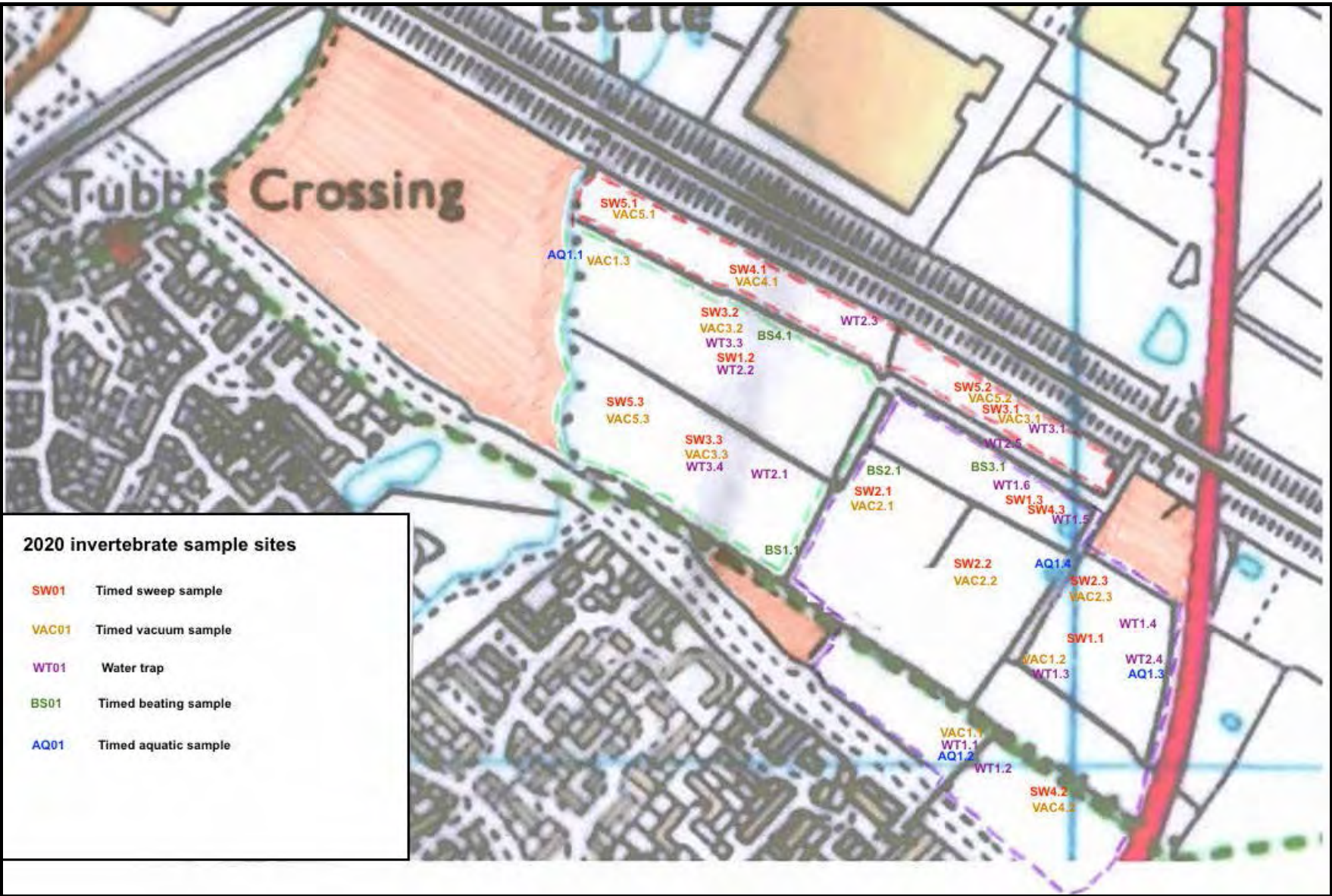


Figure EDP A.11.2.2: Gavray Meadows 2020 terrestrial and aquatic sampling locations

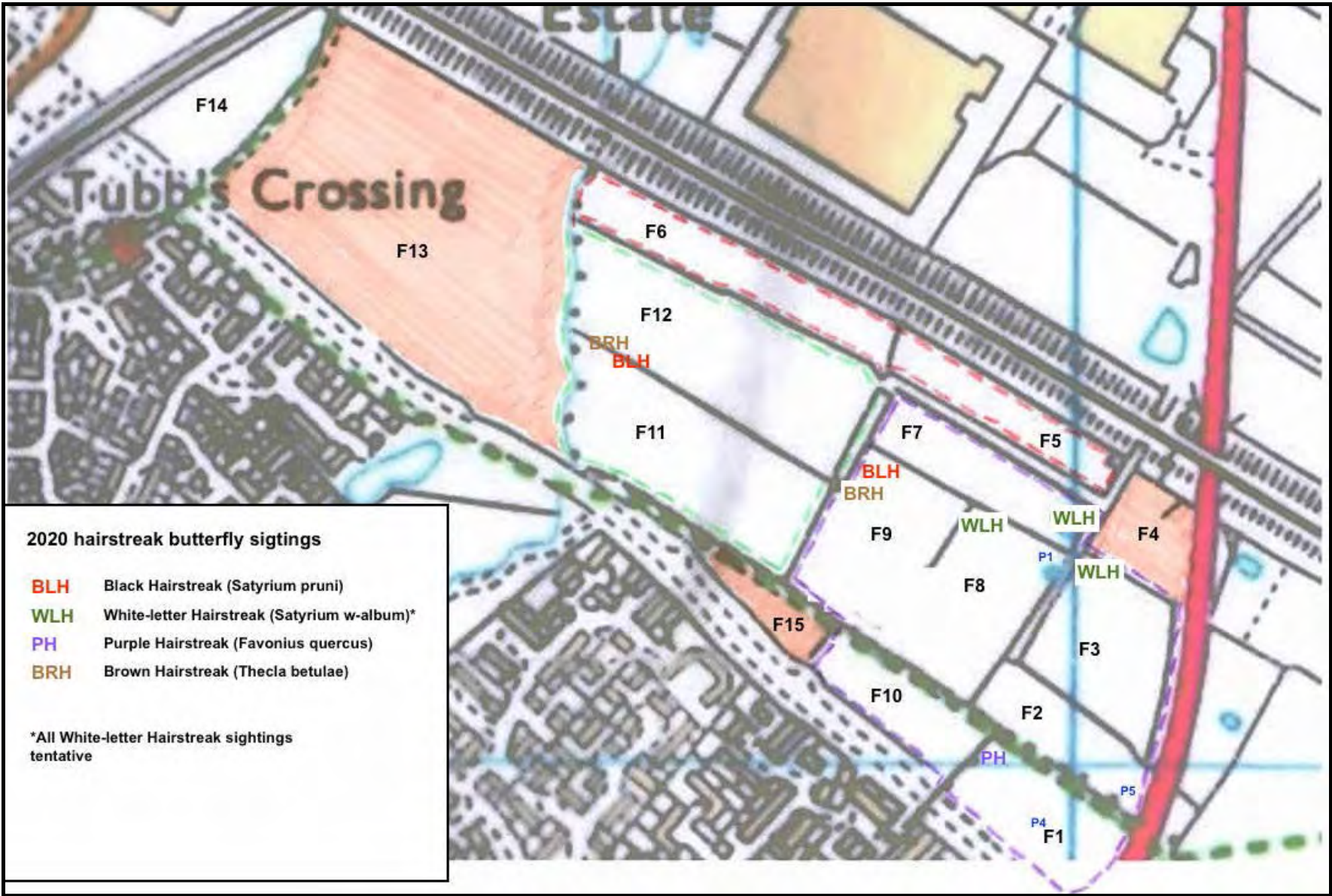


Figure EDP A11.2.3: Gavray Meadows 2020 Black, Brown, White-letter and Purple Hairstreak sightings.

Appendix EDP A11.3 Photographs



Photograph 1 – F3 -wet ridge and furrow meadow



Photograph 2 – F8 – ridge and furrow meadow



Photograph 3 – F1 Grassland clearing showing scrub edge



Photograph 4 – F7 – Grassland and scrub mosaic



Photograph 5– F11 – Tall-herb and scrub



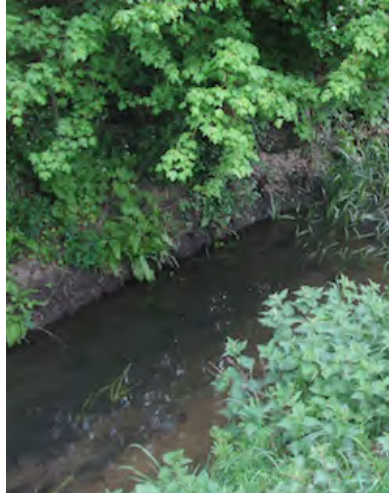
Photograph 6– F12 - Brown Hairstreak habitat



Photograph 7 – F6 – early successional habitat



Photograph 8 – F7 – Pond 7 margin



Photograph 9 – F10 – AQ1.2 sample site



Photograph 10 – Langford Brook (AQ1.1 location)

Photograph 11 – Langford Brook (AQ1.1 sample location)

Photograph 12 – Brown hairstreak (*Thecla betulae*)

Annex EDP 12

White-letter Hairstreak Surveys

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**Butterfly
Conservation**

**Survey for the eggs and adults of the White-letter Hairstreak
Butterfly (*Satyrus w-album*) on land north of Gavray Drive,
Bicester, Oxfordshire**

S. Wheatley, C. Temple

March 2020

Butterfly Conservation Report to L&Q Estates Ltd.

Butterfly Conservation
Company limited by guarantee, registered in England (2206468)
Registered Office: Manor Yard, East Lulworth, Wareham, Dorset. BH20 5QP
Charity registered in England and Wales (254937) and in Scotland (SCO39268)

www.butterfly-conservation.org

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1.2. Background and Objectives	2
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3. Results.....	3
4. Discussion	5
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Appendix A: Locations of all White-letter Hairstreak eggs from surveys 2011, 2013, 2020....	7
Appendix B – White-letter Hairstreak Records since 2000 in the wider Bicester area.....	8

Wheatley, S., Temple, C., (2020), Survey for the eggs and adults of the White-letter Hairstreak (*Satyrrium w-album*) Butterfly on land north of Gavray Drive, Bicester, Oxfordshire. Butterfly Conservation, Wareham.

Summary

- White-letter Hairstreak is included as a Species of Principal Importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006). It is also listed in the latest GB Red Data List as IUCN criteria Endangered. Section 41 of the NERC Act which gives public bodies a duty to conserve Species of Principal Importance for the purpose of conserving biodiversity.
- Surveys followed the methodology used at the site for White-letter Hairstreak egg searches in 2011 and 2013.
- The survey was undertaken in late February and early March 2020 and at the instruction of L&Q Estates.
- Three White-letter Hairstreak eggs were recorded on the site, confirming the continued presence of a breeding population.
- The elms where the eggs were found were assessed to be immature but of good or moderate quality. It was noted that many elms on the site are dead or in poor condition, likely as a result of Dutch Elm Disease (DED).
- A Brown Hairstreak egg was also spotted on a low Blackthorn sucker. Brown Hairstreak (like White-letter Hairstreak) is also included as a Species of Principal Importance under Section 41 of the NERC Act.
- It is recommended that a survey of adult White-letter Hairstreak is undertaken in the summer.
- The presence of White-letter Hairstreak (and Brown Hairstreak) on the site must be taken into consideration by any proposed development and must be taken into account by the planning authority.
- Any development on or near the site should seek to retain and enhance elms of good/moderate quality. Research suggests that new, planted elms have (from the age of 10 years) the potential to contribute to supporting a White-letter Hairstreak colony. However, ongoing maintenance of these trees is needed in order to minimise the potential for DED infection.
- The butterfly records produced by this survey will be added to the national dataset – the Butterflies for the New Millennium (BNM) database.

1. Introduction

1.1. White-letter Hairstreak Status and Ecology in the UK

The White-letter Hairstreak is listed as a Species of Principal Importance in Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 and listed in the latest GB Red Data list as Endangered under the new IUCN criteria (Fox *et al.* 2010). There are four Actions Identified By Experts listed in the [JNCC Priority species pages](#).

Analysis of monitoring data by Butterfly Conservation and the Centre for Ecology and Hydrology showed that populations of the White-letter Hairstreak suffered a 41% decline in distribution and a 77% decline in abundance between 2005 and 2014 (Fox *et al.* 2015).

The White-letter Hairstreak breeds on various elm species, requiring those at an age to flower. At the site north of Gavray Drive the White-letter Hairstreak utilises elms occurring in sheltered hedgerows. All five species of the British Hairstreak butterflies have been recorded at the site. There are only a small number of sites in the UK where this assemblage is known to occur.

1.2. Background and Objectives

The site has been subject to planning proposals and applications.

L&Q Estates, working with The Environmental Dimension Partnership (EDP), contracted Butterfly Conservation to undertake a 2020 White-letter Hairstreak egg search.

In 2011 a survey for White-letter Hairstreak eggs was undertaken in accordance with Condition 26, from the response of Cherwell District Council in re-approving the outline planning consent of the proposed development north of Gavray Drive, Bicester.

The 2011 survey was conducted across the entire development site including a 50m buffer zone. The survey involved a sample survey of White-letter Hairstreak eggs to assess number and distribution. The survey identified suitable and potential breeding habitat (elm trees of a sufficient quality) and the number and species of elm trees (Goodyear *et al.* 2011). 25 White-letter Hairstreak eggs were recorded in 2011.

Requests by Cherwell District Council in 2013 to update the information lead to a second series of surveys, which were undertaken in spring/summer 2013 and included White-letter Hairstreak egg surveys, elm quality assessments and adult butterfly surveys (Goodyear *et al.* 2013). Eight White-letter Hairstreak eggs were recorded in 2013. All eggs were recorded on elms of good or moderate quality.

2. Methodology

In 2011 the proposed development site and buffer area were divided into field numbers and sample areas (Figure 1). The 2020 egg survey visited each of the sample areas identified in the 2011 report.

Any eggs found would have been laid in summer 2019.

Eggs searches were conducted over four days (27th and 28th February, 2nd and 3rd March) using the sample areas identified in the 2011 report.

Searches were undertaken by a Butterfly Conservation staff member and by Butterfly Conservation volunteers with previous experience of searching for Hairstreak eggs. The total accumulated search time was 4 days by Butterfly Conservation staff and volunteer 5 days.