

Your Name <input style="width: 90%;" type="text"/>	Date <input style="width: 90%;" type="text"/>	Pond name (if known) <input style="width: 90%;" type="text"/>	
Square: 4 fig grid reference e.g. SP1243 <input style="width: 90%;" type="text"/>		Pond: 8 fig grid ref e.g. SP 1235 4325 <input style="width: 90%;" type="text"/>	
Determiner name (optional) <input style="width: 90%;" type="text"/>		Voucher material (optional) <input style="width: 90%;" type="text"/>	

METHOD (complete one survey form per pond) **Aim:** To assess pond quality and conservation value, by recording wetland plants.

How: Identify the outer boundary of the pond. This is the 'line' marking the pond's highest yearly water levels (*usually in early spring*). It will probably *not* be the current water level of the pond, but should be evident from wetland vegetation like rushes at the pond's outer edge, or other clues such as water-line marks on tree trunks or stones. Within the outer boundary, search all the dry and shallow areas of the pond that are accessible. Survey deeper areas with a net or grapnel hook.

Record wetland plants found by crossing through the names on this sheet. You don't need to record terrestrial species. For each species record its *approximate* abundance as a percentage of the pond's surface area. Where few plants are present, record as '<1%'. If you are not completely confident in your species identification put '?' by the species name. If you are really unsure put '??'.

Enter the results online: www.freshwaterhabitats.org.uk/projects/waternet/ or send your results to Freshwater Habitats Trust.

Aquatic plants (submerged-leaved species)

Apium inundatum (Lesser Marshwort)
 Aponogeton distachyos (Cape-pondweed)
 Cabomba caroliniana (Fanwort)
 Callitriche sp. (undet. Water-starwort species)
 Callitriche hamulata (Intermediate Water-starwort)
 Callitriche hermaphrodita (Autumnal Water-starwort)
 Callitriche obtusangula (Blunt-fruited Water-starwort)
 Callitriche palustris (Starwort with no english name)
 Callitriche platycarpa (Various-leaved Water-starwort)
 Callitriche stagnalis (Common Water-starwort)
 Callitriche truncata (Short-leaved Water-starwort)
 Ceratophyllum demersum (Rigid Hornwort)
 Ceratophyllum submersum (Soft Hornwort)
 Chara sp. (undet. Stonewort species)
 Chara aspera (Rough Stonewort)
 Chara baltica (Baltic Stonewort)
 Chara canescens (Bearded stonewort)
 Chara connivens (Convergent stonewort)
 Chara contraria (Opposite Stonewort)
 Chara curta (Lesser Bearded Stonewort)
 Chara denudata (Naked Stonewort)
 Chara fragifera (Strawberry Stonewort)
 Chara globularis (Fragile stonewort)
 Chara hispida (Bristly Stonewort)
 Chara intermedia (Intermediate Stonewort)
 Chara muscosa (Mossy Stonewort)
 Chara pedunculata (Hedgehog Stonewort)
 Chara rudis (Rugged Stonewort)
 Chara tomentosa (Coral Stonewort)
 Chara virgata (Delicate stonewort)
 Chara vulgaris (Common Stonewort)
 Crassula helmsii (New Zealand Pigmyweed)
 Egeria densa (Large-flowered Waterweed)
 Elatine hexandra (Six-stamened Waterwort)
 Elatine hydropiper (Eight-stamened Waterwort)
 Eleogiton fluitans (Floating Club-rush)
 Elodea callitrichoides (South American Waterweed)
 Elodea canadensis (Canadian Waterweed)
 Elodea nuttallii (Nuttall's Waterweed)
 Eriocaulon aquaticum (Pipewort)
 Fontinalis antipyretica (Willow Moss)
 Groenlandia densa (Opp-leaved Pondweed)
 Hippuris vulgaris (Mare's-tail)
 Hottonia palustris (Water-violet)
 Hydrilla verticillata (Esthwaite waterweed)
 Isoetes echinospora (Spring Quillwort)
 Isoetes lacustris (Quillwort)
 Lagarosiphon major (Curly Waterweed)
 Lamprothamnium papulosum (Foxtail Stonewort)
 Littorella uniflora (Shoreweed)
 Lobelia dortmanna (Water Lobelia)
 Ludwigia palustris (Hampshire-purslane)
 Myriophyllum alterniflorum (Alternate Water-milfoil)
 Myriophyllum aquaticum (Parrot's-feather)
 Myriophyllum spicatum (Spiked Water-milfoil)
 Myriophyllum verticillatum (Whorled Water-milfoil)
 Najas flexilis (Slender Naiad)
 Najas marina (Holly-leaved Naiad)
 Nitella gracilis (Slender Stonewort)
 Nitella capillaris (Slimy-fruited Stonewort)
 Nitella confervacea (Least stonewort)
 Nitella flexilis (Smooth Stonewort)

Nitella hyalina (Many-branched Stonewort)
 Nitella mucronata (Pointed Stonewort)
 Nitella opaca (Dark Stonewort)
 Nitella spanioclema (Few-branched Stonewort)
 Nitella tenuissima (Dwarf Stonewort)
 Nitella translucens (Translucent Stonewort)
 Nitellopsis obtusa (Starry Stonewort)
 Oenanthe fluviatilis (River Water-dropwort)
 Potamogeton sp. (undet. Pondweed species)
 Potamogeton acutifolius (Sharp-leaved Pondweed)
 Potamogeton alpinus (Red Pondweed)
 Potamogeton bertholdii (Small Pondweed)
 Potamogeton coloratus (Fen Pondweed)
 Potamogeton compressus (Grass-wrack Pondweed)
 Potamogeton crispus (Curled Pondweed)
 Potamogeton epihydrus (American Pondweed)
 Potamogeton filiformis (Slender-leaved Pondweed)
 Potamogeton friesii (Flat-stalked Pondweed)
 Potamogeton gramineus (Various-leaved Pondweed)
 Potamogeton lucens (Shining Pondweed)
 Potamogeton nodosus (Loddon Pondweed)
 Potamogeton obtusifolius (Blunt-leaved Pondweed)
 Potamogeton pectinatus (Fennel Pondweed)
 Potamogeton perfoliatus (Perfoliate Pondweed)
 Potamogeton praelongus (Long-stalked Pondweed)
 Potamogeton pusillus (Lesser Pondweed)
 Potamogeton rutilus (Shetland Pondweed)
 Potamogeton trichoides (Hairlike Pondweed)
 Ranunculus sp. (undet. Water-crowfoot species)
 R. penicillatus subsp. Penicillatus (Stream Crowfoot)
 Ranunculus aquatilis (Common Water-crowfoot)
 Ranunculus baudotii (Brackish Water-crowfoot)
 Ranunculus circinatus (Fan-leaved Water-crowfoot)
 Ranunculus fluitans (River Water-crowfoot)
 Ranunculus peltatus (Pond Water-crowfoot)
 Ranunculus penicillatus (Stream Water-crowfoot)
 Ranunculus trichophyllus (Thread-leaved Crowfoot)
 Ranunculus tripartitus (Three-lobed Crowfoot)
 Sagittaria latifolia (Duck-potato)
 Sagittaria rigida (Canadian Arrowhead)
 Sagittaria sagittifolia (Arrowhead)
 Sagittaria subulata (Narrow-leaved Arrowhead)
 Sparganium angustifolium (Floating Bur-reed)
 Sparganium emersum (Unbranched Bur-reed)
 Sparganium natans (Least Bur-reed)
 Sphagnum sp. (Bog-moss (list species if possible))
 Stratiotes aloides (Water Soldier)
 Subularia aquatica (Awlwort)
 Tolypella glomerata (Clustered Stonewort)
 Tolypella intricata (Tassel Stonewort)
 Tolypella nidiflora (Bird's-nest Stonewort)
 Tolypella prolifera (Great Tassel Stonewort)
 Utricularia australis (Bladderwort)
 U. intermedia (s.l.) (Intermed Bladderwort grp)
 U. intermedia (s.s.) (Intermediate Bladderwort)
 Utricularia minor (Lesser Bladderwort)
 Utricularia ochroleuca (Pale Bladderwort)
 Utricularia stygia (Nordic Bladderwort)
 Utricularia vulgaris (s.l.) (Greater Bladderwort group)
 Utricularia vulgaris (s.s.) (Greater Bladderwort)
 Vallisneria spiralis (Tapegrass)
 Zannichellia palustris (Horned Pondweed)

Floating-leaved species

Azolla filiculoides (Water Fern)
 Hydrocharis morsus-ranae (Frogbit)
 Hydrocotyle ranunculoides (Floating Pennywort)
 Lemna aequinoctialis (non-native Duckweed sp)
 Lemna gibba (Fat Duckweed)
 Lemna minor (Common Duckweed)
 Lemna minuta (Least Duckweed)
 Lemna trisulca (Ivy-leaved Duckweed)
 Lemna turionifera (Red Duckweed)
 Lemna valdiviana (non-native Duckweed sp)
 Luronium natans (Floating Water-plantain)
 Nuphar advena (Spatter-dock)
 Nuphar lutea (Yellow Water-lily)
 Nuphar pumila (Least Water-lily)
 Nymphaea sp. (Water-lily non native spp)
 Nymphaea alba (White Water-lily)
 Nymphoides peltata (Fringed Water-lily)
 Persicaria amphibia (Amphibious Bistort)
 Potamogeton natans (Broad-leaved Pondweed)
 Potamogeton polygonifolius (Bog Pondweed)
 Riccia bifurca (Lizard Crystalwort)
 Riccia canaliculata (Channelled Crystalwort)
 Riccia fluitans (A floating liverwort)
 Ricciochara natans (A floating liverwort)
 Spirodela oligorrhiza (a non-native Duckweed sp.)
 Spirodela polyrhiza (Greater Duckweed)
 Wolffia arrhiza (Rootless Duckweed)

Emergent plant species

Achillea ptarmica (Sneezewort)
 Acorus calamus (Sweet-flag)
 Agrostis canina (Velvet Bent)
 Agrostis stolonifera (Creeping Bent)
 Alisma gramineum (Ribbon-leaved Water-plantain)
 Alisma lanceolatum (Narrow-leaved Water-plantain)
 Alisma plantago-aquatica (Water-plantain)
 Alopecurus aequalis (Orange Foxtail)
 Alopecurus borealis (Alpine Foxtail)
 Alopecurus geniculatus (Marsh Foxtail)
 Anagallis tenella (Bog Pimpernel)
 Andromeda polifolia (Bog-rosemary)
 Angelica archangelica (Garden Angelica)
 Angelica sylvestris (Wild Angelica)
 Apium graveolens (Wild Celery)
 Apium nodiflorum (Fool's-water-cress)
 Apium repens (Creeping Marshwort)
 Baldellia ranunculoides (Lesser Water-plantain)
 Berula erecta (Lesser Water-parsnip)
 Bidens cernua (Nodding Bur-marigold)
 Bidens connata (London Bur-marigold)
 Bidens frondosa (Beggarticks)
 Bidens tripartita (Trifid Bur-marigold)
 Blysmus compressus (Flat-sedge)
 Bolboschoenus maritimus (Sea Club-rush)
 Butomus umbellatus (Flowering-rush)
 Bryum calophyllum (Matted bryum)
 Bryum knowltonii (Knowlton's Thread-moss)
 Bryum warnum (Sea bryum)
 Calamagrostis canescens (Purple Small-reed)
 Calamagrostis epigejos (Wood Small-reed)
 Calamagrostis purpurea (Scandinavian Small-reed)
 Calamagrostis scotica (Scottish Small-reed)
 Calamagrostis stricta (Narrow Small-reed)

<i>Calla palustris</i> (Bog Arum)	<i>Equisetum fluviatile</i> (Water Horsetail)	<i>Osmunda regalis</i> (Royal Fern)
<i>Caltha palustris</i> (Marsh-marigold)	<i>Equisetum palustre</i> (Marsh Horsetail)	<i>Parnassia palustris</i> (Grass-of-Parnassus)
<i>Cardamine amara</i> (Large Bitter-cress)	<i>Erica tetralix</i> (Cross-leaved Heath)	<i>Pedicularis palustris</i> (Marsh Lousewort)
<i>Cardamine pratensis</i> (Cuckooflower)	<i>Eriophorum angustifolium</i> (Common Cottongrass)	<i>Persicaria hydropiper</i> (Water-pepper)
<i>Carex acuta</i> (Slender Tufted-sedge)	<i>Eriophorum gracile</i> (Slender Cottongrass)	<i>Persicaria lapathifolia</i> (Pale Persicaria)
<i>Carex acutiformis</i> (Lesser Pond-sedge)	<i>Eriophorum latifolium</i> (Broad-lvd Cottongrass)	<i>Persicaria minor</i> (Small Water-pepper)
<i>Carex appropinquata</i> (Fibrous Tussock-sedge)	<i>Eriophorum vaginatum</i> (Hare's-tail Cottongrass)	<i>Persicaria mitis</i> (Tasteless Water-pepper)
<i>Carex aquatilis</i> (Water Sedge)	<i>Eupatorium cannabinum</i> (Hemp-agrimony)	<i>Petalophyllum ralfsii</i> (Petalwort)
<i>Carex curta</i> (White Sedge)	<i>Filipendula ulmaria</i> (Meadowsweet)	<i>Petasites hybridus</i> (Butterbur)
<i>Carex diandra</i> (Lesser Tussock-sedge)	<i>Frangula alnus</i> (Alder Buckthorn)	<i>Petasites japonicus</i> (Greater Butterbur)
<i>Carex dioica</i> (Dioecious Sedge)	<i>Galium boreale</i> (Northern Bedstraw)	<i>Peucedanum palustre</i> (Milk-parsley)
<i>Carex disticha</i> (Brown Sedge)	<i>Galium constrictum</i> (Slender Marsh Bedstraw)	<i>Phalaris arundinacea</i> (Reed Canary-grass)
<i>Carex echinata</i> (Star Sedge)	<i>Galium palustre</i> (Common Marsh-bedstraw)	<i>Phragmites australis</i> (Common Reed)
<i>Carex elata</i> (Tufted Sedge)	<i>Galium uliginosum</i> (Fen Bedstraw)	<i>Physcomitrium eurystomum</i> (Norfolk Bladder-moss)
<i>Carex elongata</i> (Elongated Sedge)	<i>Geum rivale</i> (Water Avens)	<i>Pilularia globulifera</i> (Pillwort)
<i>Carex flacca</i> (Glaucous Sedge)	<i>Glyceria declinata</i> (Small Sweet-grass)	<i>Pinguicula alpina</i> (Alpine Butterwort)
<i>Carex hostiana</i> (Tawny Sedge)	<i>Glyceria fluitans</i> (Floating Sweet-grass)	<i>Pinguicula lusitanica</i> (Pale Butterwort)
<i>Carex laevigata</i> (Smooth-stalked Sedge)	<i>Glyceria maxima</i> (Reed Sweet-grass)	<i>Pinguicula vulgaris</i> (Common Butterwort)
<i>Carex lasiocarpa</i> (Slender Sedge)	<i>Glyceria notata</i> (Plicate Sweet-grass)	<i>Populus</i> spp. (Poplar list if known)
<i>Carex limosa</i> (Bog Sedge)	<i>Glyceria</i> sp. (Sweet-grass species)	<i>Potentilla erecta</i> (Tormentil)
<i>Carex magellanica</i> (Tall Bog-sedge)	<i>Gnaphalium uliginosum</i> (Marsh Cudweed)	<i>Potentilla palustris</i> (Marsh Cinquefoil)
<i>Carex maritima</i> (Curved Sedge)	<i>Hammarbya paludosa</i> (Bog Orchid)	<i>Pulicaria dysenterica</i> (Common Fleabane)
<i>Carex nigra</i> (Common Sedge)	<i>Hydrocotyle vulgaris</i> (Marsh Pennywort)	<i>Pulicaria vulgaris</i> (Small Fleabane)
<i>Carex otrubae</i> (False Fox-sedge)	<i>Hypericum elodes</i> (Marsh St Johns-wort)	<i>Pyrola rotundifolia</i> (Round-leaved Wintergreen)
<i>Carex panicea</i> (Carnation Sedge)	<i>Hypericum tetrapterum</i> (Square-stalked Johns-wort)	<i>Ranunculus hederaceus</i> (Ivy-leaved Crowfoot)
<i>Carex paniculata</i> (Greater Tussock- sedge)	<i>Hypericum undulatum</i> (Wavy St Johns-wort)	<i>Ranunculus omeophyllum</i> (Round-leaved Crowfoot)
<i>Carex pendula</i> (Pendulous Sedge)	<i>Illecebrum verticillatum</i> (Coral-necklace)	<i>Ranunculus ficaria</i> (Lesser Celendine)
<i>Carex pseudocyperus</i> (Cyperus Sedge)	<i>Impatiens capensis</i> (Orange Balsam)	<i>Ranunculus flammula</i> (Lesser Spearwort)
<i>Carex pulcaris</i> (Flea Sedge)	<i>Impatiens glandulifera</i> (Indian Balsam)	<i>Ranunculus lingua</i> (Greater Spearwort)
<i>Carex riparia</i> (Greater Pond-sedge)	<i>Impatiens noli-tangere</i> (Touch-me-not Balsam)	<i>R. ophioglossifolius</i> (Adder's-tongue Spearwort)
<i>Carex rostrata</i> (Bottle Sedge)	<i>Iris pseudacorus</i> (Yellow Iris)	<i>Ranunculus sceleratus</i> (Celery-leaved Buttercup)
<i>Carex spicata</i> (Spiked Sedge)	<i>Isolepis cernua</i> (Tufted Club-rush)	<i>Rhynchospora alba</i> (White Beak-sedge)
<i>Carex</i> spp. (Sedge species)	<i>Isolepis setacea</i> (Bristle Club-rush)	<i>Rhynchospora fusca</i> (Brown Beak-sedge)
<i>Carex vesicaria</i> (Bladder Sedge)	<i>Juncus acutiflorus</i> (Sharp-flowered Rush)	<i>Rorippa amphibia</i> (Great Yellow-cress)
<i>C. viridula</i> (Yellow-sedge ssp.) ssp. brachyrrhyncha	<i>Juncus ambiguus</i> (Frog Rush)	<i>Rorippa microphylla</i> (Narrow-fruited Water-cress)
ssp. oedocarpa	<i>Juncus articulatus</i> (Jointed Rush)	<i>Rorippa nasturtium-aquaticum</i> (s.l.) (Water-cress sp)
ssp. viridula	<i>Juncus bufonius</i> (s.l.) (Toad & Frog Rush gp)	<i>Rorippa nasturtium-aquaticum</i> (s.s.) (Water-cress)
<i>Carex vulpina</i> (True Fox-sedge)	<i>Juncus bufonius</i> (s.s.) (Toad Rush)	<i>Rorippa palustris</i> (Marsh Yellow-cress)
<i>Catabrosa aquatica</i> (Whorl-grass)	<i>Juncus bulbosus</i> (Culbous Rush)	<i>Rorippa islandica</i> (Northern Yellow-cress)
<i>Cephaloziella dentata</i> (Toothed Threadwort)	<i>Juncus compressus</i> (Round-fruited Rush)	<i>Rumex aquaticus</i> (Scottish Dock)
<i>Chrysosplenium alternifolium</i> (Alt-leaved Golden-sax.)	<i>Juncus conglomeratus</i> (Compact Rush)	<i>Rumex hydrolapathum</i> (Water Dock)
<i>C. oppositifolium</i> (Opposite-leaved Golden-saxifrage)	<i>Juncus effusus</i> (Soft Rush)	<i>Rumex maritimus</i> (Golden Dock)
<i>Cicendia filiformis</i> (Yellow centaury)	<i>Juncus foliosus</i> (Leafy Rush)	<i>Rumex palustris</i> (Marsh Dock)
<i>Cicuta virosa</i> (Cowbane)	<i>Juncus inflexus</i> (Hard Rush)	<i>Ruppia cirrhosa</i> (Spiral Tasselweed)
<i>Cirsium dissectum</i> (Meadow Thistle)	<i>Juncus pygmaeus</i> (Pigmy Rush)	<i>Ruppia maritima</i> (Beaked Tasselweed)
<i>Cirsium palustre</i> (Marsh Thistle)	<i>Juncus subnodulosus</i> (Blunt-flowered Rush)	<i>Sagina procumbens</i> (Procumbent Pearlwort)
<i>Cladium mariscus</i> (Great Fen-sedge)	<i>Lathyrus palustris</i> (Marsh Pea)	<i>Samolus valerandi</i> (Brookweed)
<i>Conium maculatum</i> (Hemlock)	<i>Leersia oryzoides</i> (Cut-grass)	<i>Scheuchzeria palustris</i> (Rannoch-rush)
<i>Corrigiola litoralis</i> (Strapwort)	<i>Limosella aquatica</i> (Mudwort)	<i>Schoenoplectus lacustris</i> (Common Club-rush)
<i>Crassula aquatica</i> (Pigmyweed) (=rare native)	<i>Liparis loeselii</i> (Fen Orchid)	<i>Schoenoplectus pungens</i> (Sharp Club-rush)
<i>Crepis paludosa</i> (Marsh Hawk's-beard)	<i>Lobelia urens</i> (Heath Lobelia)	<i>Schoenoplectus tabernaemontani</i> (Grey Club-rush)
<i>Cyperus eragrostis</i> (Pale Galingale)	<i>Lotus pedunculatus</i> (Greater Bird's-foot-trefoil)	<i>Schoenoplectus triquetrum</i> (Triangular Club-rush)
<i>Cyperus fuscus</i> (Brown Galingale)	<i>Luzula luzuloides</i> (White Wood Rush)	<i>Schoenus ferrugineus</i> (Brown Bog-rush)
<i>Cyperus longus</i> (Galingale)	<i>Luzula sylvatica</i> (Great Wood Rush)	<i>Schoenus nigricans</i> (Black Bog-rush)
<i>Dactylorhiza fuchsii</i> (Common Spotted-orchid)	<i>Lychnis flos-cuculi</i> (Ragged-Robin)	<i>Scirpoides holoschoenus</i> (Round-headed Club-rush)
<i>Dactylorhiza incarnata</i> (Early Marsh-orchid)	<i>Lycopodiella inundata</i> (Marsh Clubmoss)	<i>Scorzonera humilis</i> (Viper's-grass)
<i>Dactylorhiza lapponica</i> (Lapland Marsh-orchid)	<i>Lycopus europaeus</i> (Gipsywort)	<i>Scrophularia auriculata</i> (Water Figwort)
<i>Dactylorhiza maculata</i> (Heath Spotted-orchid)	<i>Lysimachia nummularia</i> (Creeping-Jenny)	<i>Scrophularia umbrosa</i> (Green Figwort)
<i>Dactylorhiza majalis</i> (Western Marsh-orchid)	<i>Lysimachia terrestris</i> (Lake Loosestrife)	<i>Scutellaria galericulata</i> (Skullcap)
<i>Dactylorhiza praetermissa</i> (Southern Marsh-orchid)	<i>Lysimachia thyrsoiflora</i> (Tufted Loosestrife)	<i>Scutellaria minor</i> (Lesser Skullcap)
<i>Dactylorhiza purpurella</i> (Northern Marsh-orchid)	<i>Lysimachia vulgaris</i> (Yellow Loosestrife)	<i>Senecio aquaticus</i> (Marsh Skallwort)
<i>Dactylorhiza traunsteinerioides</i> (Narrow-lvd M-orchid)	<i>Lythrum hyssopifolia</i> (Grass-poly)	<i>Senecio fluviatilis</i> (Broad-leaved Ragwort)
<i>Damasonium alisma</i> (Starfruit)	<i>Lythrum portula</i> (Water-purslane)	<i>Senecio paludosus</i> (Fen Ragwort)
<i>Deschampsia caespitosa</i> (Tufted Hair-grass)	<i>Lythrum salicaria</i> (Purple-loosestrife)	<i>Sium latifolium</i> (Greater Water-parsnip)
<i>Drosera anglica</i> (Great Sundew)	<i>Mentha aquatica</i> (Water Mint)	<i>Solanum dulcamara</i> (Bittersweet)
<i>Drosera binata</i> (a non-native sundew species)	<i>Mentha pulegium</i> (Pennyroyal)	<i>Sonchus palustris</i> (Marsh Sow-thistle)
<i>Drosera capensis</i> (a non-native sundew species)	<i>Mentha suaveolens</i> (Round-leaved mint)	<i>Sparganium erectum</i> (Branched Bur-reed)
<i>Drosera intermedia</i> (Oblong-leaved Sundew)	<i>Menyanthes trifoliata</i> (Bogbean)	<i>Stachys palustris</i> (Marsh Woundwort)
<i>Drosera rotundifolia</i> (Round-leaved Sundew)	<i>Mimulus guttatus</i> (Monkeyflower)	<i>Stellaria palustris</i> (Marsh Stitchwort)
<i>Dryopteris cristata</i> (Crested Buckler-fern)	<i>Mimulus luteus</i> (Blood-drop-emlets)	<i>Stellaria uliginosa</i> (Bog Stitchwort)
<i>Eleocharis acicularis</i> (Needle Spike-rush)	<i>Mimulus moschatus</i> (Musk)	<i>Symphytum officinale</i> (Common Comfrey)
<i>Eleocharis mamillata</i> (Northern spike rush)	<i>Minuartia stricta</i> (Teesdale Sandwort)	<i>Trichophorum cespitosum</i> (Deergrass)
<i>Eleocharis multicaulis</i> (Many-stalked Spike-rush)	<i>Molinia caerulea</i> (Purple Moor-grass)	<i>Teucrium scordium</i> (Water Germander)
<i>Eleocharis palustris</i> (Common Spike-rush)	<i>Montia fontana</i> (Blinks)	<i>Thalictrum flavum</i> (Common Meadow-ruie)
<i>Eleocharis quinqueflora</i> (Few-flowered Spike-rush)	<i>Myosotis laxa</i> (Tufted Forget-me-not)	<i>Thelypteris palustris</i> (Marsh Fern)
<i>Eleocharis uniglumis</i> (Slender Spike-rush)	<i>Myosotis scorpioides</i> (Water Forget-me-not)	<i>Tofieldia pusilla</i> (Scottish Asphodel)
<i>Epilobium alsinifolium</i> (Chickweed Willowherb)	<i>Myosotis secunda</i> (Creeping Forget-me-not)	<i>Trichophorum cespitosum</i> (Deergrass)
<i>Epilobium anagallidifolium</i> (Alpine Willowherb)	<i>Myosotis stolonifera</i> (Pale Forget-me-not)	<i>Triglochin palustre</i> (Marsh Arrowgrass)
<i>Epilobium brunnescens</i> (New Zealand Willowherb)	<i>Myosoton aquaticum</i> (Water Chickweed)	<i>Typha angustifolia</i> (Lesser Bulrush)
<i>Epilobium ciliatum</i> (American Willowherb)	<i>Myrica gale</i> (Bog Myrtle)	<i>Typha latifolia</i> (Bulrush)
<i>Epilobium hirsutum</i> (Great Willowherb)	<i>Narthecium ossifragum</i> (Bog Asphodel)	<i>Valeriana dioica</i> (Marsh Valerian)
<i>Epilobium obscurum</i> (Short-fruited Willowherb)	<i>Oenanthe aquatica</i> (Fine-leaved Water-dropwort)	<i>Veronica anagallis-aquatica</i> (Blue Water-Speedwell)
<i>Epilobium palustre</i> (Marsh Willowherb)	<i>Oenanthe crocata</i> (Hemlock Water-dropwort)	<i>Veronica beccabunga</i> (Brooklime)
<i>Epilobium parviflorum</i> (Hoary Willowherb)	<i>Oenanthe fistulosa</i> (Tubular Water-dropwort)	<i>Veronica catenata</i> (Pink Water-Speedwell)
<i>Epilobium sp.</i> (Willowherb species)	<i>Oenanthe lachenalii</i> (Parsley Water-dropwort)	<i>Veronica scutellata</i> (Marsh Speedwell)
<i>Epilobium tetragonum</i> (Square-stalked Willowherb)	<i>Oenanthe pimpinelloides</i> (Corky-fruited Dropwort)	<i>Viola palustris</i> (Marsh Violet)
<i>Epipactis palustris</i> (Marsh Helleborine)	<i>Oenanthe silaifolia</i> (Narrow-leaved Water-dropwort)	<i>Viola persicifolia</i> (Fen Violet)

Please complete a POND HABITAT SURVEY sheet at each pond surveyed.

This is a really important part of the survey at your pond. PSYM environmental variables are used to calculate pond quality. Critical PSYM metrics are indicated by a shaded box – we cannot calculate a PSYM score for the pond unless these have been submitted. Other metrics will give us a full picture of pond quality (including calculating an HSI score for Great Crested Newts).

Go to: www.freshwaterhabitats.org.uk/projects/pondnet/survey-options/habitats for survey guides and more information.

Is the pond new? (less than 10 yrs old)
yes, no, unknown

Year of creation?
date, decade, unknown

Pond Altitude
(m)

Area
 m²

Note: This is the *surface area of the pond when the water is at its highest level (usually in early spring)*. It will probably *not* be the current water level of the pond. The high water level line should be evident from wetland vegetation like rushes at the pond's outer edge. Measure by pacing (single pace = 0.8-1m) or use online maps.

Pond dries?

1 = never dries
2 = rarely dries
3 = sometimes
4 = annually

1 = Never dries, 2 = Rarely dries: no more than two years in any ten year period, or only in drought, **3 = Sometimes dries:** dries between three years in ten to most years, **4 = Dries annually.** Deduce pond permanence from local knowledge (e.g. landowner) and personal judgement e.g. water level at the time of the survey. Ponds that dry out annually usually have a hard base.

Overhanging trees & shrubs

% of pond overhung by trees and shrubs

% pond margin overhung to at least 1m from the pond margin

This is an estimate of how much of the pond is *directly* overhung by trees and shrubs, i.e. that would be shaded if the sun was overhead (use the diagram (below) as a guide).

Waterfowl impact

1 = major
2 = minor
3 = none

Major = severe impact of waterfowl e.g. few or no submerged plants, water turbid, pond banks have patches where vegetation removed, feed put down; **Minor** = waterfowl present, but little impact on pond vegetation, pond still supports submerged plants and banks are not denuded of vegetation; **None** = no evidence of waterfowl impact (moorhens may be present).

Fish presence

1 = major
2 = minor
3 = possible
4 = absent

Major = dense populations of fish known to be present; **Minor** = small numbers of Crucian Carp, goldfish or stickleback known to be present; **Possible** = no evidence of fish, but local conditions suggest that they may be present; **Absent** = no records of fish stocking and no fish revealed during survey.

Disturbance by dogs

1 = major
2 = minor
3 = none

Major = dogs repeatedly use the pond, compacted edges with little vegetation, water very turbid; **Minor** = dogs use the pond, but little impact on pond vegetation, pond still supports submerged plants and banks are not denuded of vegetation; **None** = no evidence that dogs are using the pond.

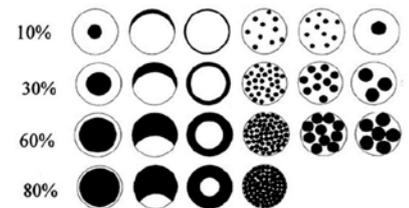
Aquatic vegetation: includes emergent, floating and submerged plants

 %

% of the whole pond (wet and dry) occupied by emergent vegetation – incl. plants like grasses, water mint and rushes, but not floating (e.g. pondweed) or submerged (e.g. water-crowfoot) species.

 %

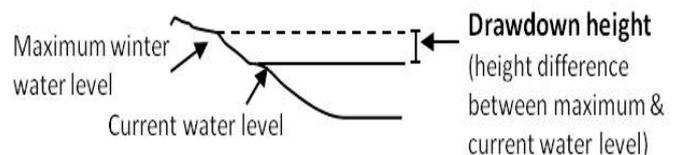
% of pond water surface area covered by all vegetation (emergent, floating (excl. duckweed) and submerged).


Water left in the pond
 %

% of water area in pond relative to maximum water level. This can be 0% if the pond has dried out.

 cm

Drawdown. The height drop from the maximum winter water level to current level (see diagram).


Grazing

Tick if there is evidence the pond is grazed by livestock. If **yes**, complete the following boxes:

 %

% of whole pond grazed (note: stock can wade into shallow ponds to graze).

 %

% of pond perimeter grazed (note: stock can wade into shallow ponds to graze otherwise inaccessible edges).

Grazing intensity: rank 1-5 (1=infrequent or low intensity to 5 = margins heavily poached and almost bare).

Pond management (tick): use tick boxes to list management within the last 12 months. Use 'other' box for any extra info.

 Fully dredged

 Partly dredged

 >5% vegetation removed

 <5% vegetation removed

 Trees planted

 Trees clear-felled

 Trees cut back / coppiced

 Pond changed shape / size

 Plants introduced

 Bank plants mown

 Structural work e.g. to dam

 Straw added

Add other or more detail

Water quality:

Turbidity / water clarity: Estimate turbidity looking down into c.20cm depth of water in the pond.

1 = clear; 2 = moderately clear; 3 = moderately turbid; 4 = turbid

Inflows and outflows: (tick if inflow or outflow present or leave blank)

Inflow present

Outflow present

Water chemistry: If suitable kits and meters are available (or leave blank)

pH

Conductivity ($\mu\text{S cm}^{-1}$)

Nitrate ($\text{NO}_3\text{-N ppm}$): PPW kits provided by FHT

(tick one from the following range categories)

<0.2 0.2-0.5 0.5-1 1-2 2-5 5-10 10 +

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Phosphate ($\text{PO}_4\text{-P ppm}$): PPW kits provided by FHT

(tick one from the following range categories)

<0.02 0.02-0.05 0.05-0.1 0.1-0.2 0.2-0.5 0.5-1 1 +

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Pond base:

This refers to the *geology* (i.e. rock-type) that immediately underlies the pond. You may know, or be able to see the underlying geology in the base or banks of the pond, especially in new ponds. If not, check a geology map or leave this section blank.

Choose one of the following to categorise the % composition of **each** of pond base: 1= 0-32%, 2= 33-66%, 3= 67-100%

Silt/ clay

Sand, gravel, cobbles

Hard rock

Peat

Other (please specify)

Surrounding land use:

Estimate the percentage of surrounding land-use in distance zones from the pond perimeter (i.e. the maximum winter water level) used to assess pond area. In many ponds the 0-5m zone will include surrounding trees/scrub.

Habitat	0-5m	0-100m	Examples
Trees, woodland & scrub	%	%	Deciduous and coniferous woodland, individual trees, scrub and hedgerows.
Heath & moorland			Lowland and upland heathland, moorland and mountain; includes bracken.
Rank vegetation			Unmanaged grass, neglected and abandoned land, set-aside, verges and buffer strips.
Unimproved grassland			Herb-rich, calcareous and acid grassland (good quality plant indicators usually present). Low percentage of agricultural grasses. Not fertilised, little or no drainage.
Semi-improved grassland			A transition category. Grasslands modified by fertilisers, drainage, herbicides or intensive grazing, but retaining elements of natural grassland types in the area.
Improved grassland			Fertile agricultural grass, often bright green and lush; including parks and golf greens.
Arable			All crops. Includes flower and fruit crops (e.g. strawberries) and ploughed land.
Urban buildings & gardens			Areas in curtilage (associated with buildings); including glass-houses and farm yards.
Roads, tracks & paths			Including car-parks and footpaths.
Rock, stone & gravel			Cliffs, rock-outcrops, gravel-pits, quarries, areas of sand and gravel or stone.
Bog, fen, marsh & flush			Wetland vegetation and blanket bog.
Ponds & lakes			Permanent and seasonal waterbodies; including trackway pools.
Streams & ditches			Rivers, streams, ditches, springs and canals.
Other (state)			E.g. maritime vegetation, saltmarsh, sand-dune, orchards and railways.

Is the pond in a protected area? (e.g. nature reserve, SSSI, etc.)

(choose one option - yes, no, unknown)

Invasive non-native species: Record any non-native invasive species you know to be present in the pond, or leave blank if you are unsure. Visit <https://freshwaterhabitats.org.uk/projects/pondnet/survey-options> for tips on identification (please tick all that apply).

New Zealand Pigmyweed
Crassula helmsii

Floating Pennywort
Hydrocotyle ranunculoides

Non-native Pondweed, e.g.:
Canadian Pondweed *Elodea canadensis*,
Nuttall's Pondweed *Elodea nutallii*,
Curly Waterweed *Lagarosiphon major*

Parrot's Feather
Myriophyllum aquaticum

Water Fern
Azolla filiculoides

Location score for Great Crested Newts (select pond location based on map to right)

A (optimal), B (marginal) or C (unsuitable)



Number of ponds: Note: ponds are <2ha in size - to help you calculate the total use the PondNet map, an OS map, Google maps, or other mapping tool):

Number of *other* ponds (exclude the survey pond) in a *1km radius circle* centred on the pond centre. Omit ponds separated by amphibian barriers e.g. large rivers or roads.

If there are more than 12 ponds present in the 1km radius, you can just tick this box.

Habitat quality for amphibians: (choose one option - **1 = none, 2 = poor, 3 = moderate, 4 = good**)

None = clearly no suitable habitat within immediate pond locale; **Poor** = habitat with poor structure that offers limited opportunities for foraging and shelter (e.g. amenity grassland); **Moderate** = offers opportunities for foraging and shelter, but may not be extensive; **Good** = extensive habitat that offers good opportunities for foraging and shelter completely surrounds pond e.g. rough grassland, scrub or woodland.

Water quality for amphibians: (choose one option - **1 = bad, 2 = poor, 3 = moderate, 4 = good**)

Bad = clearly polluted, only pollution-tolerant invertebrates, no submerged plants; **Poor** = low invertebrate diversity, few submerged plants; **Moderate** = moderate invertebrate diversity; **Good** = abundant and diverse invertebrate community, often surrounded by semi-natural land e.g. grassland, heath, woodland.

How much of pond perimeter could be surveyed? Note areas of the pond which were not accessible.

Comments box: e.g. new ownership, changes since previous visit, any other information about the pond.

Pond sketch map: Make a sketch map of your pond, marking on variables such as amount of shade and patches of emergent vegetation. These will help you to calculate percentage cover and provide a record of the pond which you or others can use on future visits.

You can also take a photo of your pond or your maps (or scan them if you have a scanner) and upload them with the record www.freshwaterhabitats.org.uk/projects/waternet.