

# UK Technical Advisory Group on the Water Framework Directive

## Revised classification of aquatic alien species according to their level of impact

The changes made to the table are set in context in the UKTAG paper entitled *Aquatic alien species and the WFD: proposed amendments to the impact classification in the UKTAG alien species guidance*.

*This Guidance Paper is a working draft defined by the UKTAG. It documents the principles to be adopted by agencies responsible for implementing the Water Framework Directive (WFD) in the UK. This method will evolve as it is tested, with the working draft amended accordingly.*

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**WFD Requirement:** Review role of alien species

**Status:** Public Working Draft  
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June 09, January 13, November 13 (to include  
Waiting List)

**Classification of aquatic alien species found in the UK in terms of their impact on native habitats and biota.**

Habitat classification: R, rivers; L, lakes; T, transitional waters; C, coastal waters

	Common Name	Species	Plant/ Animal	Habitat	Species with updated risk assessments by GBNNS
<b>HIGH IMPACT</b>	Australian swamp stonecrop	<i>Crassula helmsii</i>	P	L	Yes
	Floating pennywort	<i>Hydrocotyle ranunculoides</i>	P	R	Yes
	Water fern	<i>Azolla filiculoides</i>	P	R/L	Yes
	Parrot's feather	<i>Myriophyllum aquaticum</i>	P	L	Yes
	Curly water-thyme	<i>Lagarosiphon major</i>	P	L	Yes
	Water primrose	<i>Ludwigia grandiflora</i>	P	L	Yes
	Canadian pondweed	<i>Elodea canadensis</i>	P	R/L	Pending
	Nuttall's pondweed	<i>Elodea nuttallii</i>	P	R/L	Pending
	Japanese knotweed	<i>Fallopia japonica</i>	P	R	Yes
	Giant knotweed	<i>Fallopia sachalinensis</i>	P	R	Yes
	Japanese knotweed/ Giant knotweed hybrid	<i>Fallopia x bohemica</i>	P	R	No
	Himalayan balsam	<i>Impatiens glandulifera</i>	P	R	Pending
	Giant hogweed	<i>Heracleum mantegazzianum</i>	P	R	Pending
	Rhododendron	<i>Rhododendron ponticum</i> (+ hybrids)	P	R	No
	Common cord-grass, Townsend's grass or rice grass	<i>Spartina anglica</i>	P	T/C	Pending
	North American signal crayfish	<i>Pacifastacus leniusculus</i>	A	R/L	Yes
	Red swamp crayfish	<i>Procambarus clarkii</i>	A	R/L	Yes
	Virile crayfish	<i>Orconectes virilis</i>	A	R/L	Yes
	Freshwater amphipod	<i>Dikerogammarus villosus</i>	A	R/L	Yes
	Freshwater amphipod	<i>Dikerogammarus haemobaphes</i>	A	R/L	Yes
	Mysid crustacean	<i>Hemimysis anomala</i>	A	R/L	No
Chinese mitten crab	<i>Eriocheir sinensis</i>	A	R/T/C	Yes	
Slipper limpet	<i>Crepidula fornicata</i>	A	T/C	Pending	
Zebra mussel	<i>Dreissena polymorpha</i>	A	R/L	Yes	

	Common Name	Species	Plant/ Animal	Habitat	Species with updated risk assessments by GBNNS
	Asiatic clam	<i>Corbicula fluminea</i>	A	R/L	Yes
	Leathery sea squirt	<i>Styela clava</i>	A	T/C	No
	American oyster drill	<i>Urosalpinx cinerea</i>	A	T/C	No
	Colonial tunicate	Non-native <i>Didemnum</i> spp.	A	C	Yes
	Marine tubeworm	<i>Ficopomatus enigmaticus</i>	A	Brackish Lagoons only	No
	Topmouth gudgeon	<i>Pseudorasbora parva</i>	A	L	Yes
	Goldfish	<i>Carassius auratus</i>	A	R/L	No
<b>MODERATE IMPACT</b>	Carolina water-shield	<i>Cabomba caroliniana</i>	P	R/L	Yes
	Large-flowered water-thyme	<i>Egeria densa</i>	P	L	Yes
	Pacific oyster	<i>Crassostrea gigas</i>	A	T/C	Yes
	Marbled crayfish	<i>Procambarus</i> spp.	A	R/L	Yes
	Spiny cheeked crayfish	<i>Orconectes limosus</i>	A	R/L	Yes
	Pikeperch (zander)	<i>Sander lucioperca</i>	A	R/L	Yes
	Jenkins' spire shell	<i>Potamopyrgus antipodarum</i>	A	R/L/T/C	Yes
	Japanese skeleton shrimp	<i>Caprella mutica</i>	A	T	Yes
<b>LOW IMPACT</b>	Sweetflag	<i>Acorus calamus</i>	P	R	No
	Montbretia	<i>Crocsmia x crocosmiiflora</i>	P	R	No
	Orange balsam	<i>Impatiens capensis</i>	P	R	No
	Lupin	<i>Lupinus nootkatensis</i>	P	R	No
	Pink purslane	<i>Montia sibirica</i>	P	R	No
	Cape pondweed	<i>Aponogeton distachyos</i>	P	L	No
	Water hyacinth	<i>Eichhornia crassipes</i>	P	L	Yes
	Giant butterbur	<i>Petasites japonicus</i>	P	R/L	Pending
	Tapegrass	<i>Vallisneria spiralis</i>	P	R	No
	Captain pike's weed	<i>Pikea californica</i>	P	T/C	No
	Japanese weed	<i>Sargassum muticum</i>	P	T/C	Yes
	Orfe	<i>Leuciscus idus</i>	A	R/L	No

Common Name	Species	Plant/ Animal	Habitat	Species with updated risk assessments by GBNNS	
Freshwater amphipod	<i>Crangonyx pseudogracilis</i>	A	R/L	Yes	
Noble crayfish	<i>Astacus astacus</i>	A	R/L	Yes	
Narrow-clawed (Turkish) crayfish	<i>Astacus leptodactylus</i>	A	R/L	Yes	
Pumpkinseed	<i>Lepomis gibbosus</i>	A	R/L	Pending	
Rainbow trout	<i>Oncorhynchus mykiss</i>	A	R/L	No	
Grass carp	<i>Ctenopharyngodon idella</i>			No	
Marine amphipod	<i>Corophium sextonae</i>	A	T/C	No	
Bamboo worm	<i>Clymenella torquata</i>	A	T/C	No	
Marine polychaete	<i>Marenzelleria viridis</i>	A	T/C	No	
New Zealand flat oyster	<i>Tiostrea lutaria</i>	A	T/C	No	
Magellan mussel	<i>Aulacomya ater</i>	A	C	No	
American hard-shell clam	<i>Mercenaria mercenaria</i>	A	T/C	No	
Barnacle species	<i>Elminius modestus</i>	A	T/C	No	
UNKNOWN IMPACT	Least duckweed	<i>Lemna minuta (minuscula)</i>	P	R/L	Pending
	Monkey-flower	<i>Mimulus cupreus</i> , <i>M. guttatus</i> and hybrids	P	R	Pending
	Other non-native <i>Myriophyllum</i> species		P	L	Pending
	Freshwater coelenterate	<i>Craspedacusta sowerbyi</i>	A	R/L	No
	Freshwater triclads	<i>Dugesia tigrina</i> <i>Phagocata woodworthi</i> <i>Planaria torva</i>	A	R/L	No
	Freshwater mollusc - Asiatic clam	<i>Corbicula fluminea</i>			Pending
	Freshwater molluscs	<i>Ferissia wautieri</i> <i>Marstoniopsis scholtzi</i> <i>Menetus dilatatus</i> <i>Musculium transversum</i> <i>Physa acuta</i> <i>Physa gyrina</i> <i>Physa heterostropha</i>	A	R/L	No
	Freshwater oligochaetes	<i>Branchiura sowerbyi</i> <i>Limnodrilus cervix</i>	A	R/L	No

Common Name	Species	Plant/ Animal	Habitat	Species with updated risk assessments by GBNNS
Polychaete	<i>Hypania invalida</i>	A	R/L/T	No
Freshwater copepods	<i>Achtheres percarum</i> <i>Ergasilus briani</i> <i>Ergasilus sieboldi</i> <i>Neoergasilus japonicus</i> <i>Tracheliastes polycolpus</i>	A	R/L	No
Other freshwater malacostracans	<i>Asellus communis</i> <i>Corophium curvispinum</i>	A	R/L	No
Brook charr	<i>Salvelinus fontinalis</i>	A	R/L	No
Black bullhead	<i>Ameiurus melas</i>	A	R/L	Pending
Sunbleak	<i>Leucaspis delineatus</i>	A	L	Pending
Bitterling	<i>Rhodeus amarus</i>	A	R/L	No
Sterlet/Sturgeons	All species except <i>A. sturio</i> , which is protected on Schedule 5 of the Wildlife & Countryside Act	A	R/T/C	Pending
European (wels) catfish	<i>Silurus glanis</i>	A	R/L	Pending
Diatoms	<i>Odontella sinensis</i> <i>Pleurosigma simonsensii</i> <i>Thalassiosira punctigera</i> <i>Thalassiosira tealata</i> <i>Coscinodiscus wailesii</i>	P	C	No
Red seaweeds	<i>Asparagopsis armata</i> <i>Bonnemaisonia hamifera</i> <i>Grateloupia doryphora</i> <i>Grateloupia filicina</i> var. <i>luxurians</i> <i>Agardhiella subulata</i> <i>Solieria chordalis</i> <i>Antithamnionella spirographidis</i> <i>Antithamnionella ternifolia</i> <i>Polysiphonia harveyi</i>	P	T/C	No

Common Name	Species	Plant/ Animal	Habitat	Species with updated risk assessments by GBNNS
Japanese kelp	<i>Undaria pinnatifida</i>	P	T/C	No
Green seaweeds	<i>Codium fragile</i> subsp. <i>atlanticum</i> and <i>tomentosoides</i>	P	T/C	No
American piddock	<i>Petricola pholadiformis</i>	A	T/C	No
Soft-shelled clam	<i>Mya arenaria</i>	A	T/C	No
American jack knife clam	<i>Ensis americanus</i>	A	T/C	No
Oyster thief	<i>Colpomenia peregrina</i>	A	T/C	No
Zebra mussel sp.	<i>Mytilopsis leucophaeta</i>	A	C	No
Barnacle sp.	<i>Balanus amphitrite</i>	A	T/C	No
Marine copepod	<i>Acartia tonsa</i>	A	T	No
Marine ostracod	<i>Eusarsiella zostericola</i>	A	T	No
Zuiderzee or dwarf crab	<i>Rhithropanopeus harrisi</i>	A	T	No
Marine hydrozoan	<i>Gonionemus vertens</i>	A	T/C	No
Orange-striped sea anemone	<i>Haliplanella lineata</i>	A	T/C	No
Marine polychaete	<i>Goniadella gracilis</i>	A	C	No
Marine hydroid	<i>Clavopsella navis</i>	A	T	No
Marine tubeworms	<i>Hydroides ezoensis</i> , <i>Hydroides dianthus</i> , <i>Janua brasiliensis</i> , <i>Pileolaria berkeleyana</i>	A A A A	T/C	No
Sea spider	<i>Ammothea hilgendorfi</i>	A	T	No
Marine alga	<i>Gracilaria vermiculophylla</i>	P	T/C	No
Dark false mussel	<i>Mytilopsis leucophaeata</i>	A	T/C	No
Marine mollusc	<i>Pinctada imbricata radiata</i>	A	T/C	No
Kuruma prawn	<i>Marsupenaeus japonicus</i>	A	C	No
South American waterweed	<i>Elodea callitrichoides</i> / <i>Hydrocharis callitrichoides</i>	P	R/L	No
Swordleaf rush	<i>Juncus ensifolius</i>	P	R/L	No
Floating primrose willow	<i>Ludwigia peploides</i>	P	R/L	No
Freshwater amphipod	<i>Echinogammarus ischnus</i>	P	R/L/T	No
Freshwater amphipod	<i>Echinogammarus trichiatus</i>	P	R/L/T	No

Common Name		Species	Plant/ Animal	Habitat	Species with updated risk assessments by GBNNS
	White river crayfish	<i>Procambarus acutus</i>	P	R/L	Pending
	Freshwater cnidarian	<i>Cordylophora caspia</i>	P	R/L/T/C	No
Waiting List <sup>1</sup>	Water Fern – high impact	<i>Azolla caroliniana</i>	P	R/L	Pending
	American skunk-cabbage – high impact	<i>Lysichiton americanus</i>	P	R/L	Yes
	Common Carp – high impact	<i>Cyprinus carpio</i>	A	R/L	Pending
	Quagga mussel – high impact	<i>Dreissena rostriformis bugensis</i>	A	R/L	Yes
	Asian shore crab – high impact	<i>Hemigrapsus sanguineus</i> <i>Hemigrapsus takanoi</i>	A	T/C	Pending
	American lobster – high impact	<i>Homarus americanus</i>	A	T/C	Yes

<sup>1</sup> Invasive alien species waiting to be added to the UKTAG list in preparation for the next RBMP cycle. The main lists are ‘frozen’ before the start of each river basin planning cycle to enable regulations and directions to be put in place for classification. The waiting list contains species that will be added to the main lists in time for the next river basin planning cycle (following consultation in the case of high impact species).

## Appendix A

### \*Provisional Invasive alien list for Ecoregion 17<sup>2</sup>

\*Note that the list does not include invasive species that have not been recorded in the Ecoregion and the list will be updated if additional species arrive.

	Species	Common Name
Aquatic Plants	<i>Lagarosiphon major</i>	Curly waterweed
	<i>Elodea nuttallii</i>	Nuttall's waterweed
	<i>Myriophyllum aquaticum</i>	Parrots feather
	<i>Crassula helmsii</i>	New Zealand pigmyweed
	<i>Azolla filiculoides</i>	Water fern
	<i>Nymphoides peltata</i>	Fringed waterlily
	<i>Hydrocotyle ranunculoides</i>	Floating pennywort
	<i>Egeria densa</i>	Brazilian waterweed
	<i>Ludwigia grandiflora</i>	Water primrose
Riparian species	<i>Heracleum mantegazzianum</i>	Giant hogweed
	<i>Impatiens glandulifera</i>	Indian balsam
	<i>Fallopia japonica</i>	Japanese knotweed
	<i>Persicaria wallichii</i>	Himalayan knotweed
	<i>Fallopia sachalinensis</i>	Giant knotweed
	<i>Fallopia x bohmica</i>	Hybrid knotweed
Invertebrate	<i>Dreissena polymorpha</i>	Zebra mussel
	<i>Corbicula fluminea</i>	Asian Clam
	<i>Eriocheir sinensis</i>	Chinese mitten crab
	<i>Hemimysis anomala</i>	Bloody red shrimp
Fish	<i>Leuciscus cephalus</i>	Chub
	<i>Leuciscus leuciscus</i>	Dace
Marine Species	<i>Didemnum spp.</i>	Ascidian species
	<i>Spartina anglica</i>	Smooth cord-grass
	<i>Sargassum muticum</i>	Wire weed
	<i>Eriocheir sinensis</i>	Chinese mitten crab
	<i>Crassostrea gigas</i>	Pacific oyster
	<i>Styela clava</i>	Leathery sea squirt
	<i>Crepidula fornicata</i>	Common slipper shell

<sup>2</sup> Ecoregion 17 list is for the island of Ireland