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Consultation on:

(1) The Review of Schedule 9 to the Wildlife and Countryside Act 1981

and

(2) The Ban on Sale of Certain Non-native Species

November 2007





Department for Environment, Food and Rural Affairs Nobel House 17 Smith Square London SW1P 3JR Telephone 020 7238 6000

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Impact Assessment: Review of schedule 9 to the Wildlife and Countryside Act 1981

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Consultation Response Form

List of Consultees

Part I: Introduction

1.1 Background

Review of schedule 9

Sections 14 – 14ZB of the 1981 Act are the principal provisions that deal with nonnative species. Section 14 prohibits the introduction into the wild of any animal (including birds, reptiles, fish, invertebrates etc.) of a kind which is not ordinarily resident in and is not a regular visitor to Great Britain in a wild state, or any species of animal or plant listed on schedule 9. In the main, schedule 9 lists non-native species that are already established in the wild, but which continue to pose a conservation threat to native biodiversity and habitats, such that further releases should be regulated.

Responses to the consultation on non-native species carried out in 2003/04 generally supported a broad prohibition as currently found under section 14, and the retention of a schedule identifying those established non-native species that should be subject to continued control. However, it was recognised that the current schedule is out of date and should be subject to an early review.

There are two options:

- (i) Do nothing. This will leave schedule 9 unchanged; or
- (ii) Revise schedule 9 in line with the proposals set out below, and in the light of comments received from this consultation.

Proposals for additions, removals and alterations to the listings on schedule 9 are set out below and your comments are sought. A total of thirty six animal species, thirty six plant species and two algae species are proposed for addition; seven animal species are proposed for removal; and one case is made for amending the scientific name of a listed species (Japanese knotweed). Some of the proposals for addition to schedule 9 are for offshore islands only and your views on the practicality of these proposals and which offshore islands should be in scope would be welcomed. In addition, we propose to include a provision making all hybrids of species listed on schedule 9, not just hybrids of those species proposed for addition, subject to the provisions of section 14. The government is also seeking views on whether certain native species should be added to schedule 9 to control their release into the wild.

There are also proposals concerning some species that are present but have not yet become widely prevalent in the wild in Great Britain. These have been proposed for listing based on the precautionary principle, for example, because they have become invasive or damaging in other countries or they have the capacity to become so if they spread further into the wild in Great Britain. Your views on implementing this precautionary approach are sought.

Annex B sets out a framework suggested by our scientific advisors, the Joint Nature Conservation Committee (JNCC), to aid consideration of whether a species should be listed on schedule 9. If you think that additional amendments to the schedule are

appropriate, the checklist and guidance at Annex B can be used to put forward any proposed additions or removals for consideration. Use of the checklist is not compulsory but full supporting arguments as to why the species meets the criteria, or does not meet it, should accompany any proposal.

Comments are also welcomed on how the framework might be improved / enhanced.

Ban on sale Order

We are seeking your comments on our proposals for a prohibition within England and Wales on the sale of certain non-native species. The prohibition will be achieved by an Order made under section 14ZA of the Wildlife and Countryside Act 1981.

The Order may list any live animals or plants to which section 14 of the 1981 Act applies (i.e. those that it is an offence to release or allow to escape into, or to plant or cause to grow in, the wild). For animals this includes any species which is not ordinarily resident in, and is not a regular visitor to, Great Britain in a wild state, plus those listed on part I of schedule 9 to that Act; and for plants, the Order may only contain species listed on part II of schedule 9. The Order may be made in relation to a particular area or a particular time of year.

There are two options:

- (i) Do nothing. This means making no order under the provisions of section 14ZA of the Wildlife and Countryside Act 1981 at this time.
- (ii) Make an order banning the sale of certain species in line with the proposals set out below, and in the light of comments received from this consultation.

Certain non-native species are so strongly invasive if introduced into the wild (either deliberately or inadvertently) that it makes good conservation and economic sense to prohibit them from sale. This assists in the prevention of the problems they can cause for biodiversity, economic interests and the environment in general.

In determining which species should be proposed, regard has been given to the impact each of the proposed species has had on native ecosystems, and also the extent to which it is traded within England and Wales. The intention is to apply the prohibition to those species which are known to be particularly invasive.

Impact Assessments

This consultation seeks views on two connected but distinct issues, each of which will impact differently on those businesses and individuals concerned with them. Attached to this consultation paper are separate Impact Assessments for each issue, on which your comments are also sought.

It will be particularly important to understand the potential impact that any ban on sale will have on businesses which trade in the proposed species because it will also be necessary to give consideration to relevant international trade provisions. Those aspects will be taken forward in close consultation with the Department for Business, Enterprise and Regulatory Reform.

1.2 The aim of the review

The aim of this review and consultation is to ensure that the effectiveness of section 14 and the licensing provisions concerning non-native species are up to date.

1.3 Scope of the review

Responsibility for environmental issues is a devolved matter. This review covers the list of species that should be included on schedule 9 to the Wildlife and Countryside Act 1981 concerning its application to England and Wales and those that could be subject to a ban on sale. In Scotland, amendments to schedule 9 and proposals to ban the sale of certain species are being taken forward separately under the Nature Conservation (Scotland) Act 2004, following recent consultation.

This review has involved dialogue between all of the UK administrations, as our aim is to ensure consistency of approach, whilst also ensuring that use of the provisions takes into account any differing circumstances in each country.

1.4 Implementation of changes

Any amendments arising from this review will be introduced by means of an Order under section 22(5) of the 1981 Act (amendment of schedule so as to amend schedule 9) or by listing species in an Order made under section 14ZA of the 1981 Act 2006 (so as make them subject to a ban on sale).

1.5 Next steps

The consultation period ends twelve weeks after the publication date. Once all the responses have been received and analysed, we will review the species proposed for addition to or removal from schedule 9 and those proposed for a ban on sale.

1.6 How to respond

This consultation paper lists the species that are being proposed for addition or removal from schedule 9 along with reasoning for the proposal. Similarly, it lists those species proposed for a ban on sale. Please send your views on these proposals and the points raised in the associated Impact Assessments using the response form provided to:-

The Protected Species and Non-native Species Team, Wildlife Species Conservation, Defra, 1/09 Temple Quay House, 2 The Square, Bristol, BS1 6PN or e-mail Error! Hyperlink reference not valid.

Responses from residents of Wales will be copied to the Welsh Assembly Government.

Part 2: Species proposed for addition to, or removal from, schedule 9

2.1 Animal species proposed for addition to schedule 9, part I

Some of the proposals for addition to schedule 9 are for offshore islands only and we welcome your views on the practicality of these proposals.

In addition, some of the proposed species have not yet become widely prevalent in the wild in Great Britain. The proposed listing of these species is based on their potential impact and invasiveness if wider spread were to occur and this is made clear on a species-by-species basis in the rationale column of the table below. We would value your views on this precautionary approach

Also, we welcome your views on whether certain native species should be listed or continue to be listed (e.g. barn owl) to control the release of rehabilitated or reared specimens into the wild where there are possible animal health or welfare issues.

Scientific name	English name	Rationale
Mammals		
1. Mustelo furo	Ferret	Although probably widespread in Britain, this species causes major damage to groundnesting birds and seabird colonies on islands. It is therefore proposed for addition for offshore islands only.
2. Hybrid: Mustelo furo x putorius	Polecat Ferret	Although probably widespread in Britain, this species causes major damage to groundnesting birds and seabird colonies on islands. It is therefore proposed for addition for offshore islands only. Would not require specific listing if the proposal to include hybrids of listed species is taken forward.
3. Rattus norvegicus	Common (Brown) Rat	Although already widespread in Great Britain, this species causes major damage to seabird colonies on islands. It is therefore proposed for addition for offshore islands only.
4. Sus scrofa	Wild Boar	Once native to Britain, this species became extinct in the wild in the 17 th Century, but has become re-established in small feral populations in some areas. It can cause damage to seminatural habitats and crops, and may be a vector of livestock disease, as well as potentially posing a danger to the public. Listing is proposed to prevent its increase in the wild where problems are most likely to occur.

Scientific name	English name	Rationale
5. Hydropotes inermis	Chinese Water Deer	This species is threatened in its native range, but is established in the wild in England, mainly Bedfordshire, Cambridgeshire and the Norfolk Broads. It has not increased significantly in numbers and range in recent years, but could do so if individuals were released outside these areas. In a recent Defra consultation on the Sustainable Management of Deer In England more than 90% of respondents supported the addition of this species to schedule 9.
Birds		
1. Accipiter gentilis	Northern Goshawk	The British population has been supplemented by genetically distinct foreign stock. Listing in schedule 9 is intended to prevent further introductions and consequent hybridisation between native and introduced birds, which leads to genetic changes.
2. Agapornis roseicollis	Rosy-faced Lovebird	This species is a fruit pest abroad and present in Britain. After releases in Britain there have been some attempts at breeding by birds in the wild, but so far without establishing self-sustaining populations. Listing is proposed to prevent increases to wild populations and establishment of breeding colonies.
3. Anser caerulescens	Snow Goose	As with other naturalised goose species, if a resident population becomes established in an area it can have a localised impact on the habitat by destroying vegetation. It can also compete with other wildfowl for food and resources such as nest sites and may pose a health risk to other animals and humans through deposit of faeces.
4. Anser canagicus	Emperor Goose	As with other naturalised goose species, if a resident population becomes established in an area, it can have a localised impact on the habitat by destroying vegetation. It can also compete with other wildfowl for food and resources such as nest sites and may pose a health risk to other animals and humans through deposit of faeces.
5. Anser indicus	Bar-headed Goose	As with other naturalised goose species, if a resident population becomes established in an area, it can have a localised impact on the habitat by destroying vegetation. It can also compete with other wildfowl for food and resources such as nest sites and may pose a health risk to other animals and humans through deposit of faeces.
6. Aratinga acuticaudata	Blue-crowned Parakeet	Present in the wild, but not yet forming self- sustaining populations. Listing is proposed because this species has the potential to compete with native birds in Britain and affect their populations adversely.
7. Branta leucopsis	Barnacle Goose	As with other naturalised goose species, if a resident population becomes established in an area, it can have a localised impact on the habitat by destroying vegetation. It can also compete with other wildfowl for food and resources such as nest sites and may pose a health risk to other animals and humans through deposit of faeces.

Scientific name	English name	Rationale
8. Bubo bubo	Eagle Owl	A large predator of birds and mammals with the potential to adversely to affect native species.
9. Crex crex	Corn Crake	Released birds have bred in Britain, but so far without forming self-sustaining populations. This species has been proposed for re-
		establishment within its former range. It is important that further releases for conservation purposes are only carried out under the auspices of approved projects, hence its proposed listing.
10. Cygnus atratus	Black Swan	Released individuals have bred and can also hybridise with the native Mute Swan. Listing is proposed as it is important to prevent the establishment of this species as self-sustaining populations.
11. Grus grus	Common Crane	It is important that releases for conservation purposes are carried out under the auspices of approved projects only. Hybrids with captive stock are likely to have reduced viability, hence the proposal for listing.
12. Milvus milvus	Red Kite	This species has been re-established within part of its former range by a species recovery programme. It is important that further releases for conservation purposes are carried out under the auspices of approved projects only. Hybrids with captive stock are likely to have reduced viability.
13. Myiopsitta monachus	Monk Parakeet	Known as an agricultural pest in some parts of continental Europe where it has become established in recent decades, there is now also at least one small colony within Britain. This species has the potential to compete with native birds in Britain and affect their populations adversely. Listing is proposed to prevent the wider establishment of this species in Britain.
14. Netta rufina	Red-crested Pochard	A rare migrant to Britain, listing is proposed as it is necessary to prevent the release of captive specimens that may interbreed with wild birds.
15. Numida meleagris	Helmeted Guineafowl	A species that has bred sporadically in Britain after being released. It is important to prevent its further establishment as a breeding species in Britain.
16. Phasanius versicolor	Green Pheasant	There have been many recent releases of this species in Britain, with sporadic breeding reported. It is important to prevent its further establishment as a breeding species in Britain.
17. Pyrrhocorax pyrrhocorax	Red-billed Chough	A rare breeding species that has disappeared from part of its former range in Britain. Listing is proposed as it is necessary to prevent the release of captive birds with reduced fitness and viability, which could reduce the strength of the wild population and potentially lead to its further decline.
18. Tadorna ferruginea	Ruddy Shelduck	A species that has been released and has bred. It has the potential to affect adversely other waterbirds in Britain.
Freshwater fish		
1. Ameiurus melas	Black Bullhead	Listing is proposed as this species preys on native invertebrates and vertebrates and can be damaging to native freshwater ecosystems.

Scientific name	English name	Rationale
2. Ctenopharyngodon idella	Grass Carp	Although non-breeding in Britain in the wild, introduced specimens feed on macrophytes and are damaging to native freshwater ecosystems.
3. Leucaspius delineatus	Sunbleak	The sunbleak feeds on zooplankton and insects, and it is abundant where introduced. It is also damaging to native freshwater ecosystems.
4. Pseudorasbora parva	Topmouth Gudgeon	This species is an opportunistic feeder on a wide range of food, including eggs and larvae of other fish, as well as being damaging to native freshwater ecosystems.
Invertebrates		
1. Australoplana sanguinea	Australian Flatworm	This species feeds on earthworms and, in combination with the New Zealand Flatworm (which is already listed in Schedule 9), poses a serious threat to these beneficial invertebrates, particularly in suburban areas.
2. Kontikia andersoni	Flatworm species	The genus Kontikia is principally Indo-Pacific in distribution. K. andersoni was originally described from four specimens collected from the shore of Lough Neagh, Co. Antrim, Northern Ireland; other records from the Isle of Man, Cornwall, The Scilly Isles and Republic of Ireland. Feeding largely unknown but may prey on Collembola.
3. Kontikia ventrolineata	Flatworm species	K. ventrolineata has been found at about six sites – allotments and domestic gardens – in Devon and Cornwall, and there are also records from Liverpool and Guernsey. Thought to be of Australasian origin, a recent record from Scotland indicates that it may be increasing in numbers and could be more widespread than current findings indicate. K. ventrolineata is reputedly able to feed on any small invertebrates that it can catch, including molluscs, and possibly slugs.
4. Crepidula fornicata	Slipper Limpet	The Slipper Limpets has been recorded at densities of up to 1,700 per square metre and it is considered a pest on commercial oyster beds, competing for space and food, depositing mud and rendering the substrate unsuitable for spat settlement.
5. Eriocheir sinensis	Chinese Mitten Crab	This species causes considerable damage to estuarine river banks through burrowing, thereby damaging riverine habitats and flood defences. It can also damage fishing nets as well as being an intermediate host for human lung-fluke.
6. Mercenaria mercenaria	American Hard-shelled Clam	This species has displaced smaller native species of bivalve mollusc. After populations of <i>Mya arenaria</i> were eliminated by cold winters, the American hard-shelled clam prevented its re-establishment.
7. Orconectes limosus	Spiny-cheek Crayfish	This crayfish causes damage by burrowing, by feeding on aquatic plants and invertebrates and by acting as a host for Crayfish Plague - a major pathogen of the native White-clawed Crayfish.
8. Procambarus clarkii	Red Swamp Crayfish	This crayfish causes damage by burrowing, by feeding on aquatic plants and invertebrates and by acting as a host for Crayfish Plague - a major pathogen of the native White-clawed Crayfish.
9. Urosalpinx cinerea	American Oyster Drill	This species devastates commercial oyster beds.

QUESTION 1: Do you agree with the proposal to add these animal species proposed for addition to schedule 9, part I to the Wildlife and Countryside Act 1981?

QUESTION 2: Are there any species in the list above that you think should not be added? Please give your reasons in detail.

QUESTION 3: Are there any species missing from the list above that you think should be added? Please refer to the JNCC checklist and guidance at Annex B for assistance in proposing additional species.

QUESTION 4: Do you have any comments on the checklist and guidance provided?

QUESTION 5: Do you have any other comments about the addition of animal species to schedule 9?

2.2 Animal species proposed for removal from schedule 9, part 1

Part 1 of schedule 9 lists animals which are established in the wild. The following species have been proposed for removal from the schedule, mainly because they have now been removed from the wild in Great Britain, or escapees have not been able to establish self-sustaining populations. Any future release of such animals would still be caught by the prohibition on release under section 14(1)(a) of the 1981 Act as they would be of a kind which is not ordinarily resident in and is not a regular visitor to Great Britain in a wild state. Listing on the schedule so that section 14(1)(b) is operative is therefore unnecessary.

Scientific name	English name	Rationale
Mammals		
1. Hystrix cristata	Crested (European) Porcupine	This species is no longer present in the wild. This means its release is prohibited by section 14(1)(a) of the Wildlife & Countryside Act 1981, as it cannot be considered to be "ordinarily resident". Listing on schedule 9 so that release is also prohibited by section 14(1)(b) is therefore unnecessary.
2. Hystrix hodgsonii	Himalayan Porcupine	This species is no longer present in the wild. This means its release is prohibited by section 14(1)(a) of the Wildlife & Countryside Act 1981, as it cannot be considered to be "ordinarily resident". Listing on schedule 9 so that release is also prohibited by section 14(1)(b) is therefore unnecessary.
3. Meriones unguiculatus	Mongolian Gerbil	This species is no longer present in the wild. This means its release is prohibited by section 14(1)(a) of the Wildlife & Countryside Act 1981, as it cannot be considered to be "ordinarily resident". Listing on schedule 9 so that release is also prohibited by section 14(1)(b) is therefore unnecessary.

Scientific name	English name	Rationale
4. Myocaster coypus	Coypu	This species is no longer present in the wild. This means its release is prohibited by section 14(1)(a) of the Wildlife & Countryside Act 1981, as it cannot be considered to be "ordinarily resident". Listing on schedule 9 so that release is also prohibited by section 14(1)(b) is therefore unnecessary.
5. Cervus and hydrids thereof (with respect to the Outer Hebrides and the islands of Arran, Islay, Jura and Rum)	Cervus deer and hybrids thereof (with respect to the Outer Hebrides and the islands of Arran, Islay, Jura and Rum)	This listing is applicable only to Scotland, which, as a devolved administration, now has responsibility for this legislation as applied in Scotland. Therefore, to avoid confusion it is proposed that this listing is removed from schedule 9 as it applies to England and Wales.
Birds		
Diras		
1. Colinus viginianus	Bobwhite Quail	This species is not thought to be currently present in the wild, despite former releases. This means its release is prohibited by section 14(1)(a) of the Wildlife & Countryside Act 1981, as it cannot be considered to be "ordinarily resident. Therefore, listing on schedule 9 is unnecessary.
2. Melopsittacus undulatus	Budgerigar	Escaped captive specimens are unable to breed in the wild in Britain so there are no self-sustaining populations. Release into the wild is prohibited by section 14(1)(a) of the Wildlife & Countryside Act 1981, as the species cannot be considered to be "ordinarily resident". Listing on schedule 9 so that release is also prohibited by section 14(1)(b) is therefore unnecessary.

QUESTION 6: Do you agree with the proposal to remove these animal species from schedule 9 to the Wildlife and Countryside Act 1981? If not, please explain in detail.

QUESTION 7: Are there any other species that you think should be removed from schedule 9 to the Wildlife and Countryside Act 1981? Please refer to the JNCC checklist and guidance at Annex B for assistance in proposing species for removal from schedule 9 and use the form supplied.

QUESTION 8: Do you have any other comments about the removal of animal species from schedule 9?

2.3 Plant species proposed for addition to schedule 9, part II

As with some of the animal species proposed for listing on schedule 9, some of the plant species listed below have not yet become widely prevalent in the wild in Great Britain. The proposed listing of these species is based on their potential impact and

invasiveness if wider spread were to occur and this is made clear on a species-byspecies basis in the rationale column of the table below.

Some species, as indicated, have already been listed in Scotland's version of schedule 9 by SSI 2005/308.

Scientific name	English name	Rationale
Plants		
1. Allium paradoxum	Few-flowered Leek	This species was introduced as a garden plant and is spread by cars, fishermen and walkers, as well as being deliberately transplanted. It causes damage via direct competition with native species. On schedule 9 in Scotland.
2. Allium triquetrum	Three-cornered Garlic	Introduced in cultivation and now widely escaped and increasing in abundance and range, this species causes damage via direct competition with native species.
3. Azolla filiculoides	Water Fern	Widely cultivated and frequently disposed of into the wild, this species causes damage via direct competition with native species. On schedule 9 in Scotland.
4. Cabomba caroliniana	Carolina Water-shield (or Fanwort)	This species was introduced into the wild from discarded material in aquaria, being a popular aquarium plant. It is currently known to be present in only one site, but may be increasing. It is spread by vegetative fragments, so has the potential for rapid colonisation, as already shown in other countries. On schedule 9 in Scotland (as Fanwort).
5. Carpobrotus edulis	Hottentot Fig	This plant was introduced as a garden plant, as well as being planted in the wild for ornamental purposes and to stabilise earth and dunes. It is also discarded in garden rubbish and causes damage via direct competition with native species. On schedule 9 in Scotland.
6. Cotoneaster: all species and hybrids ¹ . Cotoneaster integerrimus (also known as Cotoneaster cambrica) is not to be considered for inclusion on schedule 9.	Cotoneasters	This plant is very widely planted in gardens and is popular in garden centres. It has established itself in the wild from garden escapes and throw-outs and is spread by birds. It causes damage via direct competition with native species.
7. Crassula helmsii	New Zealand Pygmyweed (or Australian Swamp Stonecrop)	Introduced as an oxygenating plant and widely available in garden centres, as well as deliberate planting in the wild occurring, this species causes damage via direct competition with native species. On schedule 9 in Scotland (as Stonecrop, Australian swamp).
8. <i>Crocosmia</i> : all species and hybrids ²	Montbretias	This species is very widely planted in gardens and has escaped, as well as being introduced as discards. It causes damage via direct competition with native species.

Widespread species include: Cotoneaster bullatus, C. dielsianus, C. divaricatus, C. franchetii, C. frigidus, hybrid C. frigidus x C. salicifolius, C. horizontalis, C. lacteus, C. microphyllus agg., C. rehderi, C. salicifolius, C. simonsii, C. sternianus.

² Widespread species include: Crocosmia paniculata, C. masoniorum, C. pottsii, C. x crocosmiiflora

Onlandifia mana	Franksk mans	Dationale
Scientific name	English name	Rationale
9. Disphyma crassifolium	Purple Dewplant	This species is often grown in gardens in mild, coastal areas and has become well naturalised on walls, cliffs and sandy places near the sea. Reproduction from stem fragments gives an invasive potential and it causes damage via direct competition with native species.
10. Eichhornia crassipes	Water Hyacinth	Currently not present in the wild, but cultivated widely, this species is very invasive in other countries. On schedule 9 in Scotland.
11. Elodea species ³	Waterweeds (or Pondweeds)	Kept widely as oxygenating plants, this species has spread through being present in water discarded from aquaria. It causes damage via direct competition with native species.
12. Hybrid: Fallopia japonica x F. sachalinensis	Hybrid Knotweed	Introduced as a garden plant but also arising spontaneously from the parent taxa. This species is spreading from garden escapes and as the parents spread. It causes damage via direct competition with native species. Would not require specific listing if the proposal to include hybrids of listed species is taken forward.
13. Fallopia sachalinensis	Giant Knotweed	Introduced as a garden plant and spreading from garden escapes, this species causes damage via direct competition with native species.
14. Gaultheria shallon	Shallon	This species was deliberately introduced as cover and food for game birds. It causes damage to natural habitat and competes directly with native species. On schedule 9 in Scotland.
15. Gunnera tinctoria	Giant-rhubarb	This species was introduced and is increasingly popular as a garden plant, from where it is often discarded because of its large size and rapid spread. It causes damage via direct competition with native species.
16. Hippophae rhamnoides⁴	Sea Buckthorn	Sea Buckthorn is planted widely as an amenity shrub both within and outside its native range (which is predominantly down the East coast from Northumberland to Kent in GB in sand dunes) and its invasive spread poses a major threat to native vegetation in some areas. It is not a non-native species but its spread outside its natural range causes damage via direct competition with other native species. As well as swamping low-growing species and shading them out, it produces a deep litter layer which alters the soil chemistry by enrichment. This means that once the dense scrub is cleared nettles and thistles can appear. Listing on schedule 9 would only apply to areas outside of its natural range.
17. Hydrocotyle ranunculoides	Floating Pennywort	This species is widely sold in garden centres and subsequently released into the wild. It causes damage via direct competition with native species. On schedule 9 in Scotland.

³ Three species are established: *Elodea callitrichoides*, *E. canadensis*, *E. nuttallii*.

⁴ *Hippophae rhamnoides* is also a native species; hence its listing on Schedule 9 would need to be for defined areas where it is non-native and causing ecological damage to native biodiversity.

Scientific name	English name	Rationale
18. Impatiens glandulifera	Himalayan Balsam	This species was introduced as a garden plant. It has mostly established through garden escapes and natural spread, but sometimes through seeding onto river banks because of its attractive appearance. It causes damage via direct competition with native species.
19. Lagarosiphon major	Curly Waterweed	Deliberate introductions and discarding of unwanted material from aquaria, this species causes damage to natural habitat, plus direct competition with native species. On schedule 9 in Scotland.
20. Lamiastrum galeobdolon subspecies argentatum	Variegated Yellow Archangel	Introduced and increasing rapidly, often originating from where plants are dumped as garden rubbish, it causes damage via direct competition with native species.
21. Ludwigia grandiflora	Water Primrose	Originating from South America, this is a highly invasive species that is spreading in continental Europe, including France. The Centre for Ecology and Hydrology has trialled methods for eradicating it in England and is inviting reports of sightings of this species.
22. Ludwigia peploides	Floating Primrose Willow	Originating from South America, this is a highly invasive species that is spreading in continental Europe, including France. Its status in Britain is not confirmed.
23. Myriophyllum aquaticum	Parrot's-Feather	Commercially available as an oxygenating plant, introductions have probably occurred as a result of the use of the plant in garden ponds, as well as via the disposal of unwanted material from aquaria. This species causes damage via direct competition with native species. On schedule 9 in Scotland.
24. Pistia stratiotes	Water Lettuce	This species is currently not present in the wild, but it is cultivated and is very invasive in other countries. On schedule 9 in Scotland.
25. Parthenocissus inserta	False Virginia-creeper	Introduced and now found on rubbish tips and waste ground, where it has been discarded from gardens, this species causes damage via direct competition with native species.
26. Parthenocissus quinquefolia	Virginia-creeper	This species has been introduced and can now be widely found in hedges and verges. It causes damage via direct competition with native species.
27. Quercus cerris	Turkey Oak	Very widely planted and invasive in consequence, this species causes damage via direct competition with native species.
28. Quercus ilex	Evergreen Oak	Planted in parks, large gardens, churchyards and cemeteries, and becoming wellestablished in copses, woodland and on sand dunes. This species prefers light, warm soils, and is frequently planted near coasts. It causes damage via direct competition with native species.
29. Rhododendron luteum	Yellow Azalea	This species has been introduced and has spread from gardens particularly into woods, but also onto heathland and moorland. It causes damage to natural habitat, as well as competing directly with native species.
30. Rhododendron ponticum	Rhododendron	Planted extensively in the wild for ornament and game cover, this species causes significant damage to natural habitat, as well as competing directly with native species.

Scientific name	English name	Rationale
31. Hybrid: Rhododendron ponticum x Rhododendron maximum	Rhododendron	This hybrid has been confused with Rhododendron ponticum and has similar properties, being damaging to natural habitats and competing directly with native plants. Other Rhododendron hybrids and cultivars also occur in the wild and can be at least locally invasive. Would not require specific listing if the proposal to include hybrids of listed species is taken forward.
32. Robinia pseudoacacia	False-acacia	Extensively planted and spreads by suckering; particularly along roadsides and in urban areas. On schedule 9 in Scotland.
33. Rosa rugosa	Japanese Rose	Very common in gardens, parks and amenity plantings, this plant causes damage to natural habitat, as well as competing directly with native species, since it forms large thickets.
34. Sagittaria latifolia	Duck-Potato	Planted in lakes, ponds, streams, canals, ditches and rivers, this species is spreading in some rivers by seed and vegetative means.
35. Salvinia molesta	Giant Salvinia	This plant is not present in the wild in Britain, but is cultivated. It is very invasive in other countries. On schedule 9 in Scotland.
36. Smyrnium perfoliatum	Perfoliate Alexanders	This is a garden escape species that is increasing in the wild. It causes damage via direct competition with native species.
Algae		
1. Codium fragile	Green Seafingers	Initial introduction of this species into the region was by man and there has since been significant natural dispersion around the British coast. It causes damage via direct competition with native seaweeds. Two subspecies occur in Britain, both originating from the seas around Japan: Codium fragile subspecies tomentosoides (already listed on schedule 9 since 1992) and Codium fragile subspecies atlanticum (not currently listed on schedule 9). Codium fragile subspecies scandinavicum originates from the Pacific, but has not yet been found around the British coast (it is known from Denmark and Norway). Listing the species Codium fragile without reference to subspecies will enable the provisions of Schedule 9 to apply to all these non-native seaweeds.
2. Grateloupia luxurians⁵	Red Algae	Probably introduced with oysters to the Solent area where it has become established, this plant causes damage to natural habitat. Direct competition with native species is possible, although views differ on this.

QUESTION 9: Do you agree with the proposal to add these plant species to schedule 9, part II to the Wildlife and Countryside Act 1981?

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⁵ Regarded as a distinct species, *Grateloupia luxurians*, by Wilkes *et al.* (2005); formerly known as *Grateloupia filicina* var. *luxurians*

QUESTION 10: Are there any species on the list above that you think should not be added? Please give your reasons in detail.

QUESTION 11: Are there any species missing from the list above that you think should be added? Please refer to the JNCC checklist and guidance at Annex B for assistance in proposing additional species.

QUESTION 12: Do you have any comments on the checklist and guidance provided?

QUESTION 13: In scheduling Sea Buckthorn, it is proposed that the prohibition in section 14 should apply only in defined areas where it is outside its natural range and capable of causing ecological damage to native biodiversity. Do you agree with this approach? How should these areas be defined?

QUESTION 14: Do you have any other comments about the addition of plant species to schedule 9?

There are no proposals to remove any plant species from schedule 9.

2.4 Costs and benefits of adding species to, or removing species from, schedule 9

The Impact Assessment discusses the economic, environmental and social costs and benefits. Having considered the Impact Assessment, we would be grateful for your views on the following questions.

QUESTION 15: What costs or benefits might there be to your sector or business from prohibiting introduction of these species to the wild?

QUESTION 16: If adding certain species to schedule 9 will have an impact on your business, what alternative action might you take or what alternative species might you use?

QUESTION 17: Would the addition to, or removal from, schedule 9 of any of the proposed species have beneficial or detrimental environmental impacts other than those identified in the tables above?

QUESTION 18: Would the addition to, or removal from, schedule 9 of any of the proposed species have beneficial or detrimental social impacts?

QUESTION 19: Are there any relevant business areas not yet identified in this consultation paper or the Impact Assessment?

QUESTION 20: Do you have any other comments about the costs and benefits?

Part 3: Amendments to the existing listings on schedule 9 and hybrids

3.1 Japanese knotweed

Japanese knotweed is currently listed on part II of schedule 9 using the scientific name of *Polygonum cuspidatum*. However, *Fallopia japonica* is now more widely used and accepted as the scientific name for Japanese knotweed. We therefore propose to include the more widely used and accepted *Fallopia japonica* as an alternative scientific name for the sake of consistency and to avoid confusion.

QUESTION 21: Do you agree that in respect of Japanese knotweed, which is currently listed on part II of schedule 9, *Fallopia japonica*, should be included under the scientific names as a synonym for *Polygonum cuspidatum*?

3.2 Hybrids of schedule 9, part I species (animals)

The review of part I of the Wildlife and Countryside Act 1981 sought views on whether to extend the prohibition on the release or causing to escape of an animal listed on schedule 9 to include all hybrids of those animals so listed. There was overwhelming support for this proposal, with only one respondent being opposed for unspecified reasons.

Defra and the Welsh Assembly Government believe that animal hybrids can already fall within the scope of section 14(1) in certain circumstances, namely:

- by being an animal of a kind that is not ordinarily resident in and is not regular visitor to Great Britain in a wild state;
- by being listed in schedule 9 in their own right; or
- where it is a subspecies hybrid of an animal already listed on part I of schedule 9.

However, Defra and the Welsh Assembly Government propose to introduce a provision that makes it clear that all hybrids of those animals listed on part I of schedule 9 are caught within the scope of section 14(1).

QUESTION 22: Do you agree to the introduction of a provision that makes it clear that all hybrids of those animals listed on part I of schedule 9 are caught within the scope of section 14(1)?

QUESTION 23: Do you have any other comments about the issue of including animal hybrids in schedule 9?

3.3 Hybrids of schedule 9, part II species (plants)

In addition to the responses received concerning animal hybrid species (as mentioned above), a number of respondents to the consultation expressed the view that this could also be extended to include hybrids of those plant species listed on part II of schedule 9.

Defra and the Welsh Assembly Government believe that hybrid plants can already fall within the scope of section 14(2) in certain circumstances, namely:

- by being listed on schedule 9 in their own right; or
- where it is a subspecies hybrid of a plant already listed on part II of schedule 9.

However, Defra and the Welsh Assembly Government propose to introduce a provision that makes it clear that all hybrids of those plants listed on part II of schedule 9 are caught within the scope of section 14(2).

QUESTION 24: Do you agree to the introduction of a provision that makes it clear that all hybrids of those plants listed on part II of schedule 9 are caught within the scope of section 14(2)?

QUESTION 25: Do you have any other comments about the issue of including plant hybrids in schedule 9?

Part 4: Non-native species proposed for a ban on sale

4.1 Background

History

The working group report of the Review of Non-native Species Policy (published in March 2003) recommended that legislation relating to non-native species should be revised and updated. It further recommended that such revision should include a ban on the sale of relevant species.

In December 2004 Defra published a consultation paper on the review of part I of the Wildlife and Countryside Act 1981, the principal legislation covering the conservation of birds, animals and plants within Great Britain. Part 3 of that paper contained consideration of the legislation controlling the introduction of non-native species, and made several detailed proposals. Two of these were subsequently included as amendments to the 1981 Act (by way of the NERC Act 2006), namely a power for the Secretary of State to prohibit by Order the sale of certain non-native species (under new section 14ZA), and a power for the Secretary of State to issue or approve Codes of Practice relating to non-native species (under new section 14ZB). These two sections came into force in England and Wales on 1 October 2006. The Nature Conservation (Scotland) Act 2004 introduced similar provisions in Scotland (in new sections 14A and 14B to the 1981 Act).

Certain non-native species are so invasive that it makes good conservation and economic sense to prohibit them from sale, in order to assist in the prevention of the problems that such species can cause for landowners and the environment.

Almost certainly, no non-native species are brought into Great Britain or traded with the deliberate intention of causing harm to native wildlife or other interests. Despite this, invasive species have escaped, been released into the wider environment or have been planted or caused to grow in the wild where they pose one of the primary threats to our native plants, animals and their habitats. They cause damage to economic interests, such as agriculture, forestry and infrastructure, and can threaten public health. Our intention is not to completely prevent the use of non-native species. Our intention is to take robust steps to reduce the potentially devastating impact of a limited number of non-native species which are known to be particularly invasive, by banning their sale.

Defra has published a Code of Practice on non-native species for the horticultural sector, and one aimed at keepers and traders of companion animals is planned. Other codes will be produced in response to identified need, very probably aimed at each sector which might act as a pathway of introduction for non-native species.

However, an OECD paper published in 2003⁶ found that "there is limited evidence as to the environmental effectiveness of voluntary approaches which seem to provide

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⁶ "Voluntary Approaches for Environmental Policy: Effectiveness, efficiency and usage in policy mixes", Working Party on National Environmental Policies, OECD Environment Policy Committee (2003)

little incentive to innovate and can be weakened by a lack of credibility." There is a view that they work best as a means of awareness-raising, backed up by legislative underpinning.

It would go against the international principle of free trade to introduce a blanket prohibition, however it is possible (subject to free trade clearance) to introduce a prohibition on the sale of a restricted number of species that are known to cause economic and ecological damage.

Legal framework

Global

The Convention on Biological Diversity (CBD) provides an overarching international framework for action, including the development of a set of guiding principles. Article 8(h) of the Convention requires contracting parties as far as possible and appropriate to prevent the introduction of, and to control or eradicate, alien (i.e. non-native) species which threaten ecosystems, habitats or species.

Europe

The principal relevant European legislation is the EC Habitats Directive (92/43/EEC), which requires Member States to regulate deliberate introductions of non-native species so as not to prejudice natural habitats or wild native fauna or flora, and where necessary to prohibit such introductions.

In December 2003, the Bern Convention produced its strategy on invasive alien species within the Convention area. One of the appropriate activities it suggests as a means of preventing unintentional introductions is prohibition of trade in species assessed to be capable of becoming invasive in the event of a release or escape to the wild.

Great Britain

The Wildlife and Countryside Act 1981 is the principal legislation which regulates the release of non-native species to the wild. Section 14(1) prohibits the release or allowing to escape into the wild of any animal which is not ordinarily resident in or a regular visitor to Great Britain in a wild state, or which is listed on schedule 9 to the Act; section 14(2) prohibits the planting or otherwise causing to grow in the wild of any plant included on part II of schedule 9.

Section 50 of the Natural Environment and Rural Communities (NERC) Act 2006 inserted a new section 14ZA into the Wildlife and Countryside Act 1981, which introduces a new offence of selling, offering or exposing for sale, or having in one's possession or transporting for the purpose of sale, certain animals or plants listed in an Order made by the Secretary of State, or anything from which such an animal or plant can be propagated, such as eggs or seeds.

This new offence will apply to live animals and plants to which section 14 of the Wildlife and Countryside Act 1981 applies (i.e. those that it is an offence to release or allow to escape, plant, or cause to grow in the wild).

Consequences of species being listed on an order

- Under new section 14ZA(1), it is an offence to sell, offer or expose for sale, or to have in one's possession or to transport for the purpose of sale, any animal or plant to which the section applies or anything from which such an animal or plant can be reproduced or propagated (such as an egg or a seed).
- Under section 14ZA(2) it is also an offence to publish or cause to be published any advertisement for the purchase or sale of these animals and plants.
- Section 14ZA(3) describes the animals and plants to which the offences in section 14ZA(1) and (2) apply. These are live animals and plants which are included within section 14(1) or (2) of the 1981 Act (animals and plants which must not be released etc. into the wild) and which have been prescribed as coming within section 14ZA in an Order made by the Secretary of State.
- Under section 14ZA(4) it will be possible for the prohibition to be restricted in relation to a particular area or a particular time of the year.
- Under section 14ZA(5) there is a defence available to these new offences where the accused took all reasonable steps and exercised all due diligence to avoid committing the offence.

A prohibition on trade will have the effect of eliminating (or at least reducing) commercial imports without the need to ban importation separately. However, this does not prevent the importation of such species for private, non-commercial use.

Penalties for committing the new offence

Anyone who is convicted of an offence under the new provisions will face the same penalty as they would upon conviction for any other offence under section 14. The maximum penalty is as follows:

- on summary conviction (i.e. at Magistrates' Court) a £5,000 fine and/or 6 months imprisonment
- on indictment (i.e. at Crown Court) an unlimited fine and/or 2 years imprisonment.

Possession for private use will not be prohibited

- It is not an offence to be in possession of any specimen of a species which has been prohibited from trade, unless the possession is for the purpose of sale.
- It is also not an offence to buy a specimen of a species listed by Order, although it is an offence to publish an advertisement saying that you would like to buy such a specimen.

It is expected that introducing a ban on the sale of certain species will offset any need to ban possession.

Species eligible for a prohibition on sale

An Order under section 14ZA(3) may only contain any animals or plants to which section 14 of the Wildlife and Countryside Act 1981 applies. For animals this includes any species which is not ordinarily resident in and is not a regular visitor to Great Britain in a wild state, plus those listed in part I of schedule 9. For plants, this includes only those species listed in part II of schedule 9. Schedule 9 itself is subject to review through Part 2 of this consultation.

Criteria for listing

- The species proposed must be covered by the provisions of section 14 of the Wildlife and Countryside Act 1981. That is any animal of a kind that is either not ordinarily resident in and is not a regular visitor to Great Britain in a wild state, or which is listed in schedule 9, part I to the Act; and any plant included in schedule 9, part II to the Act. In addition, that -
- The species is known to be in trade;
- The species is likely to escape or spread from captivity and establish itself in the wild; and
- The establishment of the species in the wild is likely to have a serious detrimental effect in some way.

4.2 Non-native animal species proposed for listing on an Order to ban their sale

English and Scientific Name	Rationale
Birds	
Duck, ruddy Oxyura jamaicensis	This species escaped from captivity in the south of England following introduction from North America into wildfowl collections in the 1940s. It has since spread throughout the UK. Although it is thought to cause no problems for our native wildlife, it is subject to an eradication programme in the UK in support of international efforts to protect the endangered white-headed duck in Spain, with which it hybridises. The ruddy duck is already subject to a ban on import into the EU under CITES Regulations but its movement and sale within the EU is not prohibited. Banning the sale of
	captive held specimens is proposed in support of the programme to eradicate the wild UK population.
Fish	
7.1011	
Gudgeon, Topmouth Pseudrasbora parva	This Asian species is often a contaminant of fish stock fry. It has caused the severe decline of Sunbleak in its native areas of the European mainland. Feeds on a wide range of food including other fish. Occasionally in trade but low in value. A serious pest in the wild where it out-competes natives and is vector for disease. The Environment Agency has undertaken control work at sites in England where it occurs. It is not at any protected sites in Wales as yet. Ratherheath lake provides a good example of the problems it can cause. There was no juvenile recruitment, particularly in carp, and sampling the lake showed that 98% of the fish below 70mm were this species, with only 1 roach and 2 native gudgeon found. After the Topmouth Gudgeon were removed, further sampling showed approx 75% carp and 25% common bream – all spawned in the tarn.
Amphibians	
Bullfrog, American	Bullfrogs are vectors for the pathogen which causes the disease chytridiomycosis, which has been implicated in
Rana catesbeiana	serious amphibian population declines. There is also evidence they may pose threats through predation and competition. All native amphibian species could be affected and serious detrimental effects are likely. This species is recognised as one of the most invasive

English and Scientific Name	Rationale
	amphibian species worldwide. An eradication programme is taking place in southern England and is proving time-consuming and complex to achieve; around £60,000 has been spent at one site in Kent, involving the removal of around 11,000 frogs over 5 years. The species was commonly traded in the UK until recently and remains in trade to a much lesser degree. Tadpoles are accidentally brought into the UK via the goldfish trade. Escapes into the wild were recorded, though population establishment was rare as only single animals were normally purchased and released in a given area. Escapes or releases of multiple animals can lead to population establishment very quickly, as is demonstrated at sites in England and many other countries. The American bullfrog is already subject to a ban on import into the EU under CITES Regulations but its movement and sale within the EU is not prohibited.
Frog, Edible Rana esculenta	This species is in trade and has the potential to hybridise with the recently introduced northern clade pool frog. There is also a potential disease risk, as it has been found to carry both ranavirus and chytrid fungus on the continent. Escapes and releases are likely, and population establishment can happen rapidly. There are established populations at many sites in south-east England.
Frog, Marsh Rana ridibunda	This species has the potential to hybridise with the recently re-introduced native northern clade pool frog. There is also a potential disease risk, as this species has been found to carry both ranavirus and chytrid fungus on the continent. It may also pose a risk through predation and competition with native amphibians. The species is in trade. Escapes and releases are likely, and population establishment can happen rapidly. There are established populations at many sites in south-east England.
Newt, Italian Crested Triturus carnifex	This species is in trade and known to hybridise freely with native great crested newts <i>Triturus cristatus</i> , with the resulting progeny having high viability but low fertility. While low fertility may at first appear to be a good thing it would still result in losses of the great crested newt. It is also a habitat competitor. Native <i>T. cristatus</i> populations are therefore at risk from introductions of <i>T. carnifex</i> , and indeed hybridisation has been confirmed at one site in Surrey. The species is likely to escape from outdoor vivaria and can easily establish wild populations
Terrapin, Red-eared Trachemys scripta elegans	Commonly traded until recently, and often released into the wild (new releases are still reported). The species is long-lived. There are now large numbers (tens of animals) in some suburban parks and nature reserves; there are probably at least 100 sites across the UK where they have been released. There is no evidence yet of successful

English and Scientific Name	Rationale
	breeding, though females have been found laying eggs which have failed to hatch. Climate change may make successful hatching more likely in the future. It is subject to a ban on import into the EU under CITES Regulations but movement and sale within the EU is not prohibited.
Toad, African Clawed Xenopus laevis	Known to be a vector for the pathogen which causes the disease chytridiomycosis, which has been implicated in serious amphibian population declines. Escape from captivity is likely (and has been documented in many countries). It can establish large populations in certain conditions. Several hundred were removed from one site in Lincolnshire in recent years. Diet is primarily invertebrates but it can also be cannibalistic and would prey on other amphibians such as great crested newts. The main possibility of detrimental effect is through spread of disease though competition effect may also be possible with native amphibians. This species is in trade, much of which is for research purposes.
Invertebrates	
Invertebrates	
Crayfish, Marbled Procambarus sp Crayfish, Noble Astacus astacus Crayfish, Red Swamp Procambarus clarkia Crayfish, Spiny-cheek Orconectes limosus Crayfish, Turkish/Narrow-clawed Astacus leptodactylus	Through predation, direct competition and introduction of disease (crayfish plague), non-native crayfish have already eliminated the native species from about 20% of river catchments in England and Wales, with replacement currently happening in another 30%. The native white-clawed crayfish has been eradicated from huge areas of lowland England by signal crayfish. The latter spread crayfish plague and out-compete natives. Attempts to control/eradicate signal crayfish are costly given the extent of its establishment. A Countryside Council for Wales control programme on the Wye has already cost several thousand pounds. The other non-native species have much more restricted distributions at this time - none in Wales - but have the capacity to spread into new catchments as a relatively new threat. The marbled crayfish for example has only recently been found in trade. The spiny-cheeked crayfish also carries crayfish plague and the red swamp crayfish is very aggressive. Some evidence of deliberate seeding of populations, especially signal crayfish, for harvesting and sale for consumption which is spreading these species further through England. The signal crayfish, <i>Pacifastacus lenusculus</i> , the keeping and trade of which is subject to control under the Prohibition of Keeping of Live Fish (Crayfish) Order 1996, is not proposed for inclusion in this ban on sale because plans are in hand to review the Order and to improve legal protection against its spread through existing legislation.

QUESTION 26: Do you agree with the proposal to ban the sale of these animal species under section 14ZA of the Wildlife and Countryside Act 1981?

QUESTION 27: Are there any species on the list above that you think should not be included? Please refer to the 'criteria for listing' and give your reasons in detail.

QUESTION 28: Are there any species missing from the list above that you think should be included? Please give your reasons in detail.

QUESTION 29: Do you have any other comments about the proposed ban on sale of certain non-native species?

4.3 Non-native plant species proposed for listing on an Order to ban their sale

English and Scientific Name	Rationale
Plants	
Balsam, Himalayan	Particularly associated with riparian habitats, but also damp/wet woodland & verges, this species shades out
Impatiens glandulifera	native species. Occasionally found for sale as seed. The impact is probably as much on river geomorphology as on riparian ecology where it does seem to replace native species. Dieback of extensive stands leaves bare patches of river bank during winter which are highly susceptible to scouring flows. This has the potential to increase flood risk, exacerbate erosion and increase silt loads to rivers. It is a cause of unfavourable condition on a number of river Sites of Special Scientific Interest (SSSI) units e.g. the River Eden Special Area of Conservation (SAC).
Fern, Water	Also known as fairy fern, this is a popular pond plant. This
Azolla filiculoides	floating fern is able to survive British winters and can invade a region very rapidly, excluding all competitors. This species is occasionally sold (often as a weed in with other waterplants) but is more frequently distributed as a contaminant of tanks in garden centres. The species is of greatest concern in ditches, ponds and canals where it is able to form dense floating mats that shade out all other aquatic plants. Low oxygen levels that develop under these dense mats can affect fish and invertebrates. It has been an issue on the river Lambourn SSSI and in Woodwalton Fen SSSI. Recently there has been some success with a weevil biocontrol agent but applications to release this weevil are an issue within SSSIs. It has been recorded in ponds in Wales which support great crested

English and Scientific Name	Rationale			
	newts. Sites: Montgomery Canal. It has also been found intermittently on ditch sites e.g. Malltraeth and there is concern about it getting into Bosherston.			
Fig, Hottentot	This species impacts on coastal habitat and species due to dense mats of leaves and shoots and is a problem on a			
Carpobrotus edulis	number of coastal sites. On the Lizard cliffs, the National Trust has spent a considerable sum trying to control it. It is also a problem on other cliff sites in the south-west, such as Dawlish and Budleigh Salterton. It may have an adverse impact on invertebrates associated with soft cliffs. The extent of trade in this species in uncertain and it is included in this consultation as a precautionary measure.			
Knotweed, Japanese Fallopia japonica (syn. Polygonum cuspidatum)	The problems caused by the introduction of this species into the wild are enormous. Japanese knotweed is one of the most pernicious weeds in Britain. It can colonise most habitats, including river banks, woodlands, grasslands and coastal habitats. It grows through walls, tarmac and concrete and causes very significant problems wherever it grows. Earth contaminated with this species must be treated as 'controlled waste', with significant cost implications for infrastructure development. Trade in this species is thought to be almost non-existent and it is included in this consultation as a precautionary measure.			
Leek, Few flowered Allium paradoxum (excluding Allium paradoxum var.	This perennial spreads easily alongside riverbanks and roadsides. It can be very invasive and is increasing in range. It competes with native species, particularly in damp grassland and river banks. The extent of trade in this species in uncertain and is included in this			
normale)	consultation as a precautionary measure.			
Parrot's-feather Myriophyllum aquaticum	This popular pond plant is for sale in many UK outlets. The vigorous plant can choke ponds and waterways and is now adapting to the UK winters by becoming more frost resistant. This will allow it to spread even more widely in the wild. It has been a major problem in some ditches in the Pevensey Levels SSSI/Ramsar site and a pond adjacent to Loe Pool SSSI in Cornwall. It is also causing problems in respect of aquatic habitat management in SACs where the great crested newts is the protected feature. More a problem in England than in Wales, but it may also be a problem in the Gwent Levels.			
Pennywort, Floating Hydrocotyle ranunculoides	This plant forms dense mats that float across the water surface. It causes a range of problems including deoxygenating the water, killing fish and invertebrates, choking drainage systems and crowding out native water plants. It is sometimes sold mislabelled as Marsh pennywort, a non-invasive native species. The Environment Agency (EA) spends £25,000 - £30,000 per annum, (with the overall cost to date estimated at			

English and Scientific Name	Rationale
	£100,000) in Pevensey to deal with the flood risk arising from dense growths of this species. It is also an issue on the Exminster Marshes SSSI where the EA has spent £120,000, with ongoing annual costs of £10,000 - £15,000. It is now present at several sites on the River Tone and likely to have got from there into Curry and Hay Moor SSSI. It is also a serious pest in the Gwent Levels where it costs thousands per year to control.
Shallon Gaultheria shallon	This plant is invasive, particularly in heathland, causing dense strands of vegetation which remove open, sandy habitats required by many rare and scarce invertebrates and sand lizard. It is traded and readily available through plant nurseries for underplanting in woodland to provide game cover etc. A particular problem on heathlands in S. Hants and Dorset.
Stonecrop, Australian swamp Crassula helmsii	This plant is also mislabelled as <i>Tillaea recurva</i> or <i>Tillaea helmsii</i> . Just a tiny fragment can re-grow and multiply into a vast mat of vegetation, and it is now spreading to sites right across the UK. It is frost resistant and once introduced to a site takes between 3 and 5 years to dominate it. The cost of removing <i>Crassula</i> from ponds in the New Forest in 2002 was estimated to be between £60,000 and £110,000. Also a major issue in N.E. Wales.
Rhododendron Rhododendron ponticum	This is causing problems in the wild across the UK in acid woodland and heathland. It shades out native plants and is causing particular problems in the internationally important oak and hazel woodlands of the west coast, where rare lichen and moss communities are under threat. The costs of eradication are very high; eg. in Snowdonia National Park over £45 million has been spent trying to eradicate it. Variants of this species are currently being sold by many nurseries. Some hybrids may also be problematic.
Water hyacinth Eichornia crassipes	This has been demonstrated to be extremely invasive in other countries, especially in the tropics. Rapidly expanding floating mats remove oxygen from water and increase its acidity. It is not frost hardy but with warming winters the potential for this to invade is increasing. It is regularly sold for domestic ponds. It is not a species that would be dispersed from domestic ponds by birds or other animals and would have to be deliberately put into the wild to spread. A hardy variety has been produced in the Netherlands so this, in combination with climate change may cause serious problems.
Water Primrose Ludwigia peploides Ludwigia uruguayensis (= L grandiflora	Water primroses are perennial aquatic plants which form very dense (almost impenetrable) mats, growing up to 3m deep in water and up to 80 cm above water level. One hectare of infested waters could produce at least 250 tons

English and Scientific Name	Rationale
	of plant material. Not thought to be widespread in trade but this species is causing huge problems in the Landes region of SW France and Defra recently funded a precautionary eradication programme in respect of known populations in England.
Waterweed, Canadian	Elodea spp form dense growth in waterways, ponds and lakes, where they swamp native species. Both Elodea
Elodea Canadensis	species are now widespread and have caused significant local and temporary problems across the UK. There are <i>Elodea</i> management issues in some of the great crested
Waterweed, Nuttall's	newt SAC ponds in NE Wales. Widespread in trade though often mislabelled / confused for <i>Lagarosiphon</i> (see
Elodea nuttallii	below). There are lots of sites where it is problematic e.g. Tal-y-Llyn, Malham Tarn, Llyn Maelog.
Waterweed, Curly	This forms dense growth in waterways, ponds and lakes, where it swamps native species, although generally less
Lagarosiphon major	invasive than <i>Elodea</i> . Widely sold and some accounts of <i>Elodea</i> are likely to be this species.

QUESTION 30: Do you agree with the proposal to ban the sale of these plant species under section 14ZA of the Wildlife and Countryside Act 1981?

QUESTION 31: Are there any species on the list above that you think should not be included? Please refer to the 'criteria for listing' and give your reasons in detail.

QUESTION 32: Are there any species missing from the list above that you think should be included? Please give your reasons in detail.

QUESTION 33: Do you have any other comments about the proposed ban on sale of certain non-native plant species?

4.4 Costs and benefits of a ban on the sale of the proposed species

The Impact Assessment discusses the economic, environmental and social costs and benefits. Having considered the Impact Assessment, we would be grateful for your views on the following questions.

QUESTION 34: What costs or benefits might there be to your sector or business from banning the sale of these species? How much of an impact might there be in terms of cost to your business and those you employ?

QUESTION 35: If banning the sale of certain species will have an impact on your business, what alternative action might you take or what alternative species might you use?

QUESTION 36: If alternative species are available, what would be the cost to your business in making the adjustment?

QUESTION 37: Would a ban on sale of any of the proposed species have beneficial or detrimental environmental impacts other than those identified in the tables above?

QUESTION 38: Would a ban on sale of any of the proposed species have beneficial or detrimental social impacts other than those identified in the tables above?

QUESTION 39: How might a ban on sale of one or more of the proposed species impact on keepers and collectors?

QUESTION 40: Do you have any other comments about the costs and benefits of a ban on sale of certain non-native species?

4.5 Proposed timetable for prohibiting the sale of species in England and Wales

The first step is to consider all the responses to this consultation paper and, taking into account the relative merits between the positive conservation and negative trade impacts, to reach final decisions as to which species will be made subject to an Order. It will then be necessary to give consideration to relevant international trade provisions both in the European context and that of the World Trade Organisation. Those aspects will be taken forward in close consultation with the Department for Business, Enterprise and Regulatory Reform. Once we have resolved any issues arising from these notifications, an Order will be laid before Parliament. It is difficult to know in advance how long this process will take, however there is likely to be a sufficient lead-in time to allow existing stocks to be wound down before any ban comes into place.

Annex A

Schedule 9 showing the proposed amendments

Entries in **bold** – proposed additions Entries struck through – proposed deletions

SCHEDULE 9 ANIMALS AND PLANTS TO WHICH SECTION 14 APPLIES

Part I Animals which are established in the wild

Common name Scientific name Micropterus salmoides Bass, Large-mouthed Black Bass, Rock Ambloplites rupestris Bitterling Rhodeus sericeus Boar, Wild Sus scrofa **Budgerigar** Melopsittacus undulatus Bullhead, Black **Ameiurus melas** Capercaillie Tetrao urogallus Ctenopharyngodon idella Carp, Grass Chough, Red-billed Pyrrhocorax pyrrhocorax Corncrake Crex crex Coypu Myocastor coypus Crane, Common Grus grus Eriocheir sinensis Crab. Chinese mitten Clam, American hard-shelled Mercenaria mercenaria Crayfish, Noble Astacus astacus Cravfish, Red Swamp Procambarus clarkii Crayfish, Signal Pacifastacus leniusculus Crayfish, Spiny-cheek Orconectes limosus Crayfish, Turkish Astacus leptodactylus Deer, any hybrid one of whose parents or other lineal ancestor was a Sika Deer Any hybrid of Cervus nippon With respect to the Outer Hebrides and the islands of Arran, Islay, Jura and Rum-(a) Deer, Cervus (all species) -Cervus (b) Deer, any hybrid one of whose parents Any hybrid of the genus Cervus or other lineal ancestor was a species of Cervus Deer Deer, Chinese water **Hydropotes inermis** Muntiacus reevesi Deer, Muntjac Deer, Sika Cervus nippon Dormouse, Fat Glis glis Drill, American oyster Urosalpinx cinerea Duck, Carolina Wood Aix sponsa Aix galericulata

Dormouse, Fat

Drill, American oyster

Duck, Carolina Wood

Duck, Mandarin

Duck, Ruddy

Eagle, White-tailed

Ferret (offshore islands only)

Ferret, Polecat (offshore islands only)

Flatworm, Australian

Flatworm, New Zealand Flatworm
Flatworm

Frog, Edible Frog, European Tree (Common tree frog) Frog, Marsh

Rana ridibunda

Oxyura jamaicensis Haliaetus albicilla

Mustelo furo x putorius

Artiposthia triangulate Kontikia andersoni

Kontikia ventrolineata

Rana esculenta

Hyla arborea

Austarloplana sanguinea var.

Mustelo furo

Meriones unquiculatus Gerbil, Mongolian Goose, Bar-headed Anser indicus Goose, **Barnacle** Branta leucopsis Goose, Canada Branta canadensis Goose. Egyptian Alopochen aegyptiacus Goose, **Emperor** Anser canagicus Goose, **Snow** Anser caerulescens Goshawk, Northern **Accipiter gentiles** Gudgeon, Topmouth Pseudorasbora parva Guineafowl, Helmeted Numida meleagris Heron, Night Nycticorax nycticorax Kite, Red Milvus milvus Limpet, Slipper Crepidula fornicata Lizard, Common Wall Podarcis muralis Lovebird, Rosy-faced Agapornis roseicollis Cynomys Marmot, Prairie (Prairie Dog) Mink. American Mustela vison Newt. Alpine Triturus alpestris Newt, Italian Crested Triturus carnifex Owl, Barn Tyto alba Owl, Eagle **Bubo bubo** Parakeet, Blue-crowned Aratinga acuticaudata Parakeet, Monk Myiopsitta monachus Parakeet, Ring-necked Psittacula krameri Partridge, Chukar Alextoris chukar Partridge, Rock Alextoris graeca Pheasant, Golden Chrysolophus pictus Pheasant, Green Phasanius versicolor Pheasant, Lady Amherst's Chrysolophus amherstiae Pheasant, Reeves' Syrmaticus reevesii Pheasant, Silver Lophura nycthemera Pochard, Red-crested Netta rufina Porcupine, Crested Hystrix cristata Porcupine, Himalayan Hystrix hodgsonii Pumpkinseed (Sun-fish or Pond-perch) Lepomis gibbosus Quail, Bobwhite Colinus virginianus Rat, Black Rattus rattus Rat, Common brown (offshore islands only) Rattus norvegicus Shellduck, Ruddy Tadorna ferruginea Snake, Aesculapian Elaphe longissima Sciurus carolinensis

Squirrel, Grev Sunbleak Swan, Black

Terrapin, European Pond Toad. African Clawed

Midwife Yellow-bellied Red-necked

(European catfish)

Zander

Leucaspius delineatus Cygnus atratus Emys orbicularis Xenopus laevis Toad, Alytes obstetricans Toad. Bombina variegata Wallaby. Macropus rufogriseus Wels

Silurus glanis

Stizostedion lucioperca

Part II **Plants**

Scientific name Common name

Alexanders, Perfoliate

Algae, Red

Archangel, Variegated Yellow

Azalea, Yellow

Smyrnium perfoliatum **Grateloupia luxurians** Lamiastrum galeobdolon

Argentatum

Rhododendron luteum

Balsam, Himalayan Buckthorn, Sea

Cotoneasters (except Wild Cotoneaster)

Dewplant, Purple Duck-potato False-acacia Fern, Water Fig, Hottentot

Garlic, Three-cornered

Hogweed, Giant Hyacinth, Water Kelp, Giant Kelp, Giant Kelp, Giant Kelp, Giant Kelp, Japanese

Giant Japanese

Knotweed, Giant x Japanese hybrid*

Leek, Few-flowered Lettuce, Water Montbretias Oak, Evergreen Oak, Turkey

Parrot's-feather (or Brazilian Water-milfoil)

Pennywort, Floating Primrose, Water

Primrose Willow, Floating

Pygmyweed, New Zealand (or Australian Swamp

Stonecrop)
Rhododendron
Rhododendron hybrid*

Rhubarb, Giant Rose, Japanese Salvinia, Giant Seafingers, Green

Seaweed, Californian Red Seaweed, Hooked Asparagus

Seaweed, Japanese

Seaweeds, Laver (except native species)

Impatiens glandulifera Hippophae rhamnoides Cotoneaster spp (except Cotoneaster integerrimus (or

cambrica))

Dysphyma crassifolium Sagittaria latifolia Robinia pseudoacacia Azolla filiculoides Carpobrotus edulis Allium triquetrum

Heracleum mantegazzianum
Eichhornia crassipes
Macrocystis pyrifera
Macrocystis angustifolia
Macrocystis integrifolia
Macrocystis laevis

Laminaria japonica Knotweed,

Fallopia sachalinensis Knotweed, Polygonum cuspidatum/Fallopia

Japonica

F. sachalinensis x Japonica

hybrid

Allium paradoxum Pistia stratiotes Crocosmia spp Quercus ilex Quercus cerris

Myriophyllum aquaticum Hydrocotyle ranunculoides Ludwigia grandiflora Ludwigia peploides

Crassula helmsii

Rhododendron ponticum R. ponticum x maximum Gunnera tinctoria

Rosa rugosa Salvinia molesta

Codium fragile tomentosoides

Pikea californica Asparagopsis armata Sargassum muticum Porphyra spp except:

- p. amethystea

- p. leucosticta

- p. linearis

- p.miniata

- p. purpurea

- p. umbilicalis Shallon

Gaultheria shallon Virginia-creeper, False

Parthenocissus inserta Virginia-creeper

Wakame

Watershield, Carolina (or Fanwort)

Waterweed, Curly

Waterweeds (or Pondweeds)

Parthenocissus quinquefolia

Undaria pinnatifida Cabomba caroliniana Lagarosiphon major

Elodea spp.

^{*} These knotweed and rhododendron hybrids will not require specific listing if the proposal to include all hybrids of listed species is taken forward.

JNCC framework for considering and recommending and recommending taxa for listing on schedule 9

Range of taxa eligible for consideration

- 1. Any animal taxon, native or non-native, that is established in the wild or is known to be invasive in other countries and has the potential to be invasive and damaging if it becomes established in the wild in Britain.
- 2. Any plant taxon, native or non-native, established, or not, in the wild or is known to be invasive in other countries and has the potential to be invasive and damaging if released into the wild in Britain.

Decision criteria based on conservation of biodiversity in Great Britain

- 1. There must be evidence that human activity results in, or is likely to result in, the intentional or accidental introduction of the organism to the wild.
- 2. The taxon must be thought to pose an actual or potential threat to wildlife or natural biodiversity when introduced to the wild. Examples of types of threat are:
 - damage to or degradation of natural or semi-natural habitat;
 - direct competition with one or more native species;
 - predation on one or more native species;
 - threat to the genetic integrity of native wild populations of plants or animals; or,
 - introduction of disease organisms, parasites or other associated species.
- 3. AND/OR, the taxon must be subject to cultivation, captive breeding or holding in captivity (or there must be likelihood that this will occur) and there must be a need to regulate or monitor release to the wild, in order to further the conservation or to improve the understanding of this taxon.

Other considerations

- 1. For mobile species, deliberate introductions to Great Britain could have deleterious effects on natural habitats and wild native flora and fauna beyond the confines of this country and this factor must be taken into account when assessing threat.
- 2. Other factors might include socio-economic and aesthetic considerations.

Working definitions

- 1. Native not known to be introduced to the wild solely by human agency.
- 2. Established in the wild breeding in the wild and producing offspring which reach maturity.

3.	Taxon - a recognised kind of organism, for example a species, genus, family, sub-species, variety.				

JNCC Checklist of reasons for recommending an animal or plant for scheduling

Name organ						
	e click on boxe	es to insert	symbol.			
Anima	al	Plant		Yes	No	Not known
1.	Is it establishe	ed in the wi	ld in GB?			
2.	Is human activity resulting in or likely to result in release to the wild?		t			
3.		ersity in Gr	a threat to wildlife or eat Britain? If so, - habitat - competition - predation - genetic integrity - disease/parasite - other factor(s)?	r		
4.	Could release country?	e in GB harı	m wildlife outside this	5		
5.6.	captivity or lik If so, should r to help conse	ely to be? elease be r rve the orga other reasor	d, bred or held in regulated or monitore anism itself?	ed		
Propo	sal: add to sc	hedule 9	remove from sche	edule 9		
Pleas	e tick the app	ropriate bo	oxes.			
Name	of proposer			Organis	ation	Date
	ffice use ked by			Organis	ation	Date
Comn	nent					

JNCC guidance on producing a case for adding an animal or plant to schedule 9

Please use the following headings in your proposals, providing the relevant information for each heading or entering 'none', 'not known' or 'not applicable'. The sort of information required under each heading is listed.

1. Plant or animal under consideration

- a. Scientific name of plant or animal taxon (could be species, genus, sub-species, variety, genetically modified organism etc).
- b. Common name (if any).
- c. Taxonomic group to which the animal or plant belongs (eg class, order, family).

2. Status in Great Britain

- a. Give native or non-native status in Great Britain
 (Working definition of 'native' not known to be introduced to the wild solely by human agency).
- b. If an animal, state the evidence for it being established in the wild.

 (Working definition of 'established' breeding and producing offspring which reach maturity).
- c. If the animal or plant is the subject of cultivation, captive breeding or holding for conservation or rehabilitation purposes, give details.

3. Natural distribution and origin

- a. Give the countries, continents or seas in which the organism occurs as a native.
- b. If non-native and already introduced to Britain, give the place from which the organism came.

4. Introduction, distribution and spread in Great Britain

- a. Give the date or dates of arrival in Britain, or the first record, if the species is non-native.
- b. State the place or places of introduction to Britain.
- c. Give the extent of current distribution in Britain (attach a map if possible).
- d. Give the reason for introduction or release to the wild (eg. commerce, farming, biological control, species recovery programme).
- e. Explain the means of introduction, translocation or spread (deliberate or unintentional).
- f. Give the likely or actual pattern of spread and reasons for this (eg. lack of predators, rapid growth rate, successful competitor, acclimation, limiting factors).

5. Actual or likely effects on wildlife or natural biodiversity

- a. Explain any adverse effects, such as:
 - damage to or degradation of natural or semi-natural habitat in Britain;

- direct competition with one or more native species;
- predation on one or more native species;
 - threat to the genetic integrity of native wild populations of plants or animals;
- introduction of disease organisms, parasites or other associated species; and,
- effects of release within Britain on areas of the world outside this country.
- b. State whether adverse effects are observed, suspected as occurring or likely to occur as a result of release of the organism to the wild.
- c. If release is occurring or is likely to occur because of conservation or rehabilitation programmes for the species under consideration, explain why regulation of release is necessary (eg for monitoring or increasing knowledge of the species).

6. Actual or likely effects on other interests

Explain any likely or actual effects of the organism on interests other than wildlife conservation (eg commercial activities).

7. Other relevant observations or information

Please give full details of any other factors which would support your case.

8. Reference(s)

List any publications or other references to support your case.

9. **Proposer**

Please supply

- a. your name
- b. your organisation (agency and office)
- c. date of submission to your agency's Schedule 9 co-ordinator

Note:

Before producing this detailed case, complete the attached checklist of reasons for recommending an animal or plant for scheduling. Append the completed form to your submission. Please produce a separate case for each taxon under consideration.

Annex C

Cabinet Office Code of Practice on Written Consultations

- 1. Timing of consultation should be built into the planning process for a policy (including legislation) or service from the start, so that it has the best prospect of improving the proposals concerned, and so that sufficient time is left for it at each stage.
- 2. It should be clear who is being consulted, about what questions, in what timescale and for what purpose.
- 3. A consultation document should be as simple and concise as possible. It should include a summary, in two pages at most, of the main questions it seeks views on. It should make it as easy as possible for readers to respond, make contact or complain.
- 4. Documents should be made widely available, with the fullest use of electronic means (though not to the exclusion of others), and effectively drawn to the attention of all interested groups and individuals.
- 5. Sufficient time should be allowed for considered responses from all groups with an interest. Twelve weeks should be the standard minimum period for a consultation.
- 6. Responses should be carefully and open-mindedly analysed, and the results made widely available, with an account of the views expressed, and reasons for decisions finally taken.
- 7. Departments should monitor and evaluate consultations, designating a consultation co-ordinator who will ensure the lessons are disseminated.