



2016

Contractor Maintenance Species Awareness Guide



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1. Introduction

This document has been prepared by Woking Borough Council for the Council's contractors and subcontractors. The aim of this guide is to bring awareness of protective and invasive species of plants and/or animals in Surrey and the legislation around these species.

This paper also consists of the guidance on the expected behaviour from the Council's contractors and subcontractors when in contact with protective or invasive species of plants or animals.

2. Wildlife Law

What does 'protected species' mean?

It means that these species are protected by law. There are several legislations outlining protected species:

- Wildlife & Countryside Act 1981;
- UK Biodiversity Action Plan;
- Conservation (of Habitats & Species) Regulations 2010;
- Natural Environment Rural Communities Act 2006;
- Protection of Badgers Act 1992;
- Countryside and Rights of Way Act 2000.

It is therefore an offence to disturb, touch or handle the **fully** protected species and their nesting places. In addition, it is an offence to disturb the animal species with **partial** protection (for example – birds) as well as their nests.



3. Check, Clean & Dry Initiative*

Invasive species of plants and animals damage the environment and can destroy waterways and other habitats. All Woking Borough Council's contractors and their subcontractors are obliged to act responsibly and help to stop a potential spread of invasive species. This can be done by following these 3 rules – **check**, **clean** and **dry**. Following a completion of a job (for example – ditch maintenance) contractors/subcontractors are required to:

- ✓ **CHECK:** inspect all their equipment and clothing for plants and animals. Any visible debris (mud, plant or animal matter) must be removed and left where found. Particular focus needs to be paid to the seams and seals of boots and waders. Any pockets of water should be emptied.

- ✓ **CLEAN:** wipe and wash all equipment, boots and clothing thoroughly and on site, if possible with a hose or a pressure washer. Washings must be left where found. If cleaning facilities are not available the equipment must be carefully contained in plastic bags until transported to the washing amenities. **IMPORTANT:** if washing off site, please remember that the debris isn't allowed to enter any other watercourse or drainage system.

- ✓ **DRY:** remember to dry all your equipment, boots and clothing as some invasive species can survive for many days in damp conditions. All equipment must be dry for at least 48 hours before it is used again.

*The Check Clean Dry campaign was launched in 2011 by the Non-native Species Secretariat (NNSS) following the discovery of the Killer Shrimp in 2010.

4. Protected Animal Species

All Council's contractors are obliged to report a viewing of any of the following species. In addition, all works must be stopped immediately until further notice and permission from the Council's designated employee.

4.1 Water Vole

- Fully protected under Schedule 5 of the Wildlife and Countryside Act 1981;
- Very rare in Surrey with latest records of viewings in 2008;
- A high priority conservation species;
- ILLEGAL to capture, harm or kill this animal;
- ILLEGAL to damage or destroy their nests;
- If you are found guilty of an offence you could face up to 6 months in prison and a £5,000 fine per offence.



Figure 1: Water Vole Image source: greenerbexley.org

4.1.1 Features

- ✓ Up to 350g in weight;
- ✓ Brown colour thick fur;
- ✓ Seen swimming high-up in the water;
- ✓ Seen chewing plants on water banksides;
- ✓ Short, furry tail;
- ✓ Blunt nose;
- ✓ Hidden by fur ears.

4.1.2 Similar Animal Species and Differences

❖ Brown Rat

- ✓ Rat is larger and heavier;
- ✓ Rat has a pointed face and nose;
- ✓ Rat has large, pink and more apparent ears;
- ✓ Rat has a long, hairless tail.



Figure 2: Brown Rat, Image source: batconsultancy.co.uk



4.1.3 Contractor Awareness

Water voles are very rare in Surrey but it is possible for you to come across this species when working around ditches, rivers and other watercourses.

It is therefore essential to check the banks and ditch borders for burrows and signs of small, tic-tac shaped droppings before works begin.

Where possible,

- **Do not** use heavy equipment on the top of the banks as this may damage any existing water vole's burrows;
- **Do not** drag tools (for example – buckets) up the margins of the banks as this may block entries to the burrows;
- **Do not** leave soil on the top of the banks as this may also block entries to the burrows.

4.2 Dormouse

- Fully protected under Schedule 5 of the Wildlife and Countryside Act 1981;
- A priority conservation species;
- ILLEGAL to capture, harm or kill this animal;
- ILLEGAL to damage or destroy their nests;
- If you are found guilty of an offence you could face up to 6 months in prison and a £5,000 fine per offence.

4.2.1 Features

- ✓ Up to 40g in weight;
- ✓ Body length of up to 6cm + tail;
- ✓ Ginger-brown colour fur;
- ✓ Large black eyes;
- ✓ Long, furry tail;
- ✓ Can spend the entire life up in the branches.



Figure 3: Dormouse, Image source: uniprot.org

4.2.2 Contractor Awareness

Dormice are mainly nocturnal and are very rarely seen. They live in grasslands, woodlands, heathlands and farmlands. This species hibernates in the winter months. They can be found in Surrey so it is possible for you to come across this species when working around water bodies and on land.

If spotted, any works must be stopped immediately and this must be reported to your contact at Woking Borough Council.

4.3 Great Crested Newt

- Fully protected in UK under the Wildlife and Countryside Act 1981 and European laws;
- ILLEGAL to capture, harm or kill this animal;
- ILLEGAL to damage or destroy their nests;
- If you are found guilty of an offence you could face up to 6 months in prison and a £5,000 fine per offence;
- Found throughout UK but with numbers declining rapidly due to a loss of habitat.



Figure 4: Great Crested Newt, Image Source: warrenphotographic.co.uk

4.3.1 Features

- ✓ Body length of up to 17cm;
- ✓ Granular skin;
- ✓ Dark brown or black in colour with dark spots;
- ✓ Male newts have a characteristic crest which shrinks outside of a breeding season;
- ✓ A vibrant orange or yellow belly with unequal spots;
- ✓ Seen largely in fish-free, medium sized ponds and on land but can be found in ditches;



Figure 5: Palmate Newt, Image source: ecologist.co.uk

4.3.2 Similar Animal Species and Differences

- **Palmate Newt**
- **Smooth Newt**
- ✓ Similar in appearance but much smaller species, up to 10cm.

3.3 Contractor Awareness

Great crested newts live mostly on land but rely on water bodies to breed. They can be found in Surrey so it is possible for you to come across this species when working around ditches and ponds.

If a great crested newt is spotted, any works must be stopped immediately and this must be reported to your contact at Woking Borough Council.

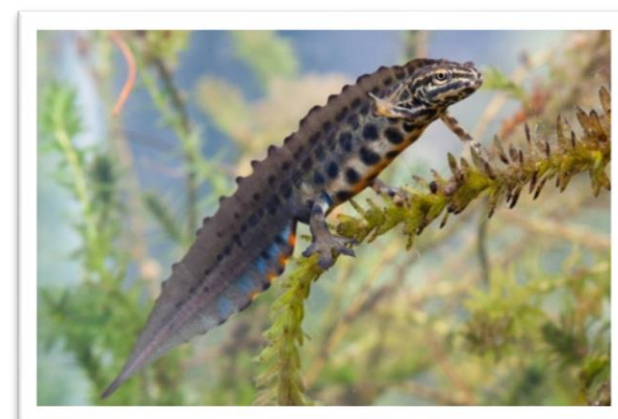


Figure 6: Smooth Newt, Image source: devonwildlifetrust.org

4.4 Common Toad

- Partly protected species under Section 9(5) of the Wildlife and Countryside Act 1981 and in England under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006;
- Woking Borough Council as a local authority is also being encouraged to protect the habitats of toads (part of the Planning Policy Statement 9);
- Listed as a Priority Species of a Conservation Concern;
- Found throughout UK but with numbers declining due to a loss of habitats;

4.4.1 Features

- ✓ Body length of up to 8cm;
- ✓ Dry and warty skin;
- ✓ Short legs;
- ✓ Dark brown to brick red in colour with a pale spotty belly;
- ✓ Golden eyes;
- ✓ Seen largely in woodlands or wetlands but can be seen also in gardens and wet meadows;
- ✓ Live on land but use ponds, lakes and ditches for breeding.



Figure 7: Common Toad, Image source: wild-scotland.org.uk

4.4.2 Contractor Awareness

Common toads live mostly on land but rely on water bodies to breed. They can be found in Surrey so it is possible for you to come across this species when working around ditches and ponds.

If spotted, any works must be stopped immediately and this must be reported to your contact at Woking Borough Council.

4.5 Natterjack Toad

- Fully protected under Schedule 5 of the Wildlife and Countryside Act 1981;
- Very rare in UK, used to be common in Surrey but currently only one or two colonies remain;
- A high priority conservation species;
- ILLEGAL to capture, harm or kill this animal;
- ILLEGAL to damage or destroy their nests;
- ILLEGAL to possess, sell or transport this species;
- Above applies to all life-stages;
- If you are found guilty of an offence you could face up to 6 months in prison and a £5,000 fine per offence.

4.5.1 Features

- ✓ Body length of up to 8cm;
- ✓ Dry and warty skin, often with yellow or red tips;
- ✓ Short legs;
- ✓ Green, brown or red in colour;
- ✓ Characteristic yellow strip on the back;
- ✓ Green eyes;
- ✓ Poor swimmers;
- ✓ Seen in sandy heaths;
- ✓ Live on land but use shallow ponds for breeding;



Figure 8: Natterjack Toad, Image source: froglife.org

4.5.2 Contractor Awareness

Natterjack Toads live mostly on land but rely on water bodies to breed. They can be found in Surrey so it is possible for you to come across this species when working around ditches and ponds.

If spotted, any works must be stopped immediately and this must be reported to your contact at Woking Borough Council.

4.6 Otter

- Fully protected under Schedule 5 of the Wildlife and Countryside Act 1981;
- Very rare in Surrey but there have been recently records of viewings on the River Wey;
- A high priority conservation species;
- ILLEGAL to capture, harm or kill this animal;
- ILLEGAL to damage or destroy their nests;
- ILLEGAL to possess, sell or transport this species, live OR dead and its parts;
- If you are found guilty of an offence you could face up to 6 months in prison and a £5,000 fine per offence.

4.6.1 Features

- ✓ Large species, with body length of up to 1.5m;
- ✓ Long powerful tail;
- ✓ Brown colour thick fur, with a pale underside;
- ✓ Seen swimming in the water with mainly just head and back visible;
- ✓ Small ears;
- ✓ Webbed feet.

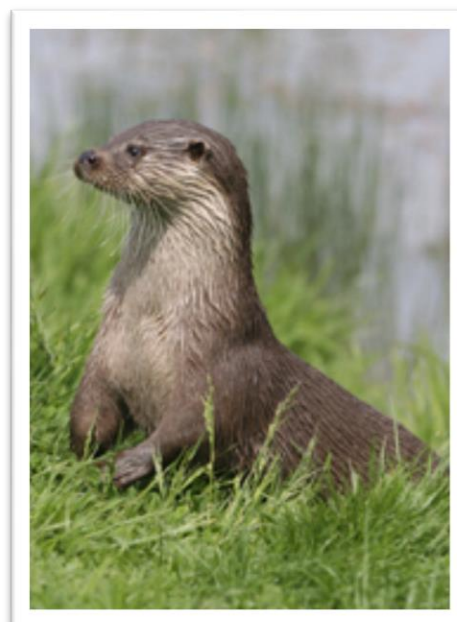


Figure 9: Otter, Image source: britishwildlifecentre.co.uk

4.6.2 Similar Animal Species and Differences

- ❖ **American Mink**
- ✓ Similar in appearance but much smaller species, up to 70cm and with darker fur. For more details please see non-native invasive species section.



Figure 10: American Mink, Image source: bioweb.uwlax.edu

4.6.3 Contractor Awareness

Otters live along rivers, lakes, marshy areas as well as sea coasts. They are generally nocturnal but can be seen during the day. They can be found in Surrey so it is possible for you to come across this species when working around rivers and lakes.

If spotted, any works must be stopped immediately and this must be reported to your contact at Woking Borough Council.

4.7 Grass Snake

- Partially protected under Schedule 5 of the Wildlife and Countryside Act 1981;
- ILLEGAL to harm or kill this animal;
- ILLEGAL to possess, sell or transport this species.

4.7.1 Features

- ✓ The longest snake species in UK with body length of 1m and more;
- ✓ Green and grey in colour with black markings on the sides of the body;
- ✓ Characteristic yellow and black neck collar;
- ✓ Seen swimming in ponds and ditches.

4.7.2 Similar Animal Species and Differences

- ❖ **Adder**
- ❖ **Slow Worm**
- ✓ Similar in appearance but smaller species.

4.7.3 Contractor Awareness

Grass Snakes live on land in grasslands and woodlands and can be seen in rivers, ditches and ponds. They can be found in Surrey so it is possible for you to come across this species when working around water bodies and on land.

If spotted, any works must be stopped immediately and this must be reported to your contact at Woking Borough Council.



Figure 11: Grass Snake, Image source: nerjarob.com



Figure 12: Slow Worm, Image source: rspb.org.uk



Figure 13: Adder, Image source: surrey-arg.org.uk

4.8 Slow Worm

- Partially protected under Schedule 5 of the Wildlife and Countryside Act 1981;
- ILLEGAL to harm or kill this animal;
- ILLEGAL to possess, sell or transport this species.



Figure 14: Slow Worm, image source: rspb.org.uk

4.8.1 Features

- ✓ A legless lizard with body length of up to 45cm;
- ✓ Brown and light brown in colour;
- ✓ Very glossy skin;
- ✓ Can be seen in variety of habitats;
- ✓ Favours damp places.

4.8.2 Contractor Awareness

Slow Worms live on land in grasslands, woodlands and heathlands but can be also seen in gardens or allotments. They can be found in Surrey so it is possible for you to come across this species when working around water bodies and on land.

If spotted, any works must be stopped immediately and this must be reported to your contact at Woking Borough Council.

4.9 Adder

- Partially protected under Schedule 5 of the Wildlife and Countryside Act 1981;
- ILLEGAL to harm or kill this animal;
- ILLEGAL to possess, sell or transport this species.



Figure 15: Adder Image source: surrey-arg.org.uk

4.9.1 Features

- ✓ **Venomous;**
- ✓ A stocky snake species with body length of up to 1m;
- ✓ Varied in colour, can be cream to orange and dark brown to black;
- ✓ Characteristic central zig-zag pattern running down the back;
- ✓ Red eye with a vertical pupil;
- ✓ Can be seen in variety of habitats.

4.9.2 Contractor Awareness

Adders live on land in grasslands, woodlands and heathlands but don't favour damp environments as much as grass snakes and slow worms. They can be found in Surrey so it is possible for you to come across this species when working around water bodies and on land, especially as adders use ditches as their dispersal routes if in danger.

Adders are venomous, and their bites can cause swelling and inflammation as well as dizziness, fainting and vomiting. If bitten, please remain calm, remove any jewellery or watches and keep the bitten area as still as possible, and then call 999.

If spotted, any works must be stopped immediately and this must be reported to your contact at Woking Borough Council.

4.10 Sand Lizard

- Fully protected under Schedule 5 of the Wildlife and Countryside Act 1981;
- Very rare in UK but can be found in Surrey;
- ILLEGAL to capture, harm or kill this animal;
- ILLEGAL to damage or destroy their nests;
- ILLEGAL to possess, sell or transport this species;
- If you are found guilty of an offence you could face up to 6 months in prison and a £5,000 fine per offence.

4.10.1 Features

- ✓ Body length of up to 20cm;
- ✓ Stockier and longer than a common lizard;
- ✓ Light brown in colour with dark brown/black pattern and pale-centred spots;
- ✓ Males are a characteristic bright green colour in a breeding season;
- ✓ Rounded head;
- ✓ Mostly seen in sand dunes and heathlands.



Figure 16: Sand Lizard, Image source: newforestvrs.org.uk

4.10.2 Contractor Awareness

Sand Lizards live on land in heathlands and dune habitats. They can be found in the south of England, including the county of Surrey so it is possible for you to come across this species when working around water bodies and on land.

If spotted, any works must be stopped immediately and this must be reported to your contact at Woking Borough Council.

4.11 Smooth Snake

- Fully protected under Schedule 5 of the Wildlife and Countryside Act 1981;
- Very rare in UK but can be found in Surrey;
- ILLEGAL to capture, harm or kill this animal;
- ILLEGAL to damage or destroy their nests;
- ILLEGAL to possess, sell or transport this species;
- If you are found guilty of an offence you could face up to months in prison and a £5,000 fine per offence.



Figure 17: Smooth Snake, Image source: herpetofauna.co.uk

4.11.1 Features

- ✓ Body length of up to 72cm;
- ✓ Smallest of all UK snakes;
- ✓ Grey to light brown in colour with dark brown patterns;
- ✓ Head has a characteristic heart shaped mark;
- ✓ Mostly seen in sand dunes and heathlands.

4.11.2 Contractor Awareness

Smooth Snakes live on land in heathlands and dune habitats. They can be found in the south of England, including the county of Surrey so it is possible for you to come across this species when working around water bodies and on land.

If spotted, any works must be stopped immediately and this must be reported to your contact at Woking Borough Council.

4.12 White-clawed Crayfish

- Partially protected under Schedule 5 of the Wildlife and Countryside Act 1981;
- ILLEGAL to harm or kill this animal;
- ILLEGAL to possess, sell or transport this species.



Figure 18: White-clawed Crayfish, Image source: jprenvironmental.co.uk

4.12.1 Features

- ✓ UK's only native freshwater crayfish;
- ✓ In decline due to a changing habitat, decreasing water quality and the introduction of a non-native crayfish species;
- ✓ Body length of up to 12cm;
- ✓ Much smaller than the non-native species of a Signal Crayfish;
- ✓ Has a single pair of behind the eyes ridges;
- ✓ Smooth body;
- ✓ Brown to olive in colour with a pitted appearance;
- ✓ Claws are rough on top sides and white to pink colour on the underneath;
- ✓ Mostly seen in small freshwater streams and rivers.

4.12.2 Similar Animal Species and Differences

❖ Signal Crayfish

- ✓ Similar in appearance but much bigger species, up to 30cm;
- ✓ Has two pairs of behind the eyes ridges unlike our native white-clawed crayfish;
- ✓ More reddish-brown in colour;
- ✓ Claws of a signal crayfish are smooth, much larger and red underneath with a white-turquoise patch on the top of a junction of a claw;
- ✓ For more details please see non-native invasive species section.



Figure 19: Signal Crayfish, Image source: scottishmink.org.uk



4.12.3 Contractor Awareness

White-clawed Crayfish live in small streams, lakes and rivers. They prefer clean, well oxygenated waters and like an environment with stones, rocks and tree routes where they can hide if required.

They can be found in the south east of England, including the county of Surrey so it is possible for you to come across this species when working around water bodies.

If spotted, any works must be stopped immediately and this must be reported to your contact at Woking Borough Council.

4.13 Bats

- ALL bat species are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981;
- ILLEGAL to capture, harm or kill this animal;
- ILLEGAL to damage or destroy their nests;
- ILLEGAL to possess, sell or transport these species;
- If you are found guilty of an offence you could face up to 6 months in prison and a £5,000 fine per offence.



Figure 20: Bats, Image source: ecologyco-op.co.uk

4.13.1 Contractor Awareness

It is very unlikely for the contractors to come across and disturb bats when working around ditches and watercourses. However, it is worth remembering that ditches and streams are great foraging passages for bats, particularly when lined by trees.

If spotted, any works that affect the roost must be stopped immediately and this must be reported to your contact at Woking Borough Council.



4.14 Nesting Birds

- ALL wild birds species in a breeding season are protected under Schedule 5 of the Wildlife and Countryside Act 1981;
- Birds' breeding season takes place from the beginning of April till the end of August;
- ILLEGAL to capture, take, harm or kill wild birds;
- ILLEGAL to damage or destroy their nests including when nests are being built;
- ILLEGAL to take or destroy a wild bird's egg;
- ILLEGAL to possess, sell or transport wild birds, live or dead or their parts or their eggs;
- If you are found guilty of an offence you could face up to 6 months in prison and a £5,000 fine per offence.

4.14.1 Contractor Awareness

It is important to be aware of near-by hedges, shrubs, bushes and trees when working in ditches, ponds or on land. If clearance of bushes or trees is necessary to complete the works, this should be done outside of the breeding season if possible.

If you spotted a bird's nest, empty or with eggs/birds while carrying out works, you must stop immediately and this must be reported to your contact at Woking Borough Council for further advice.

5. Non-native Invasive Species

All Council's contractors are obliged to report a viewing of any of the following species. In addition, all works must be stopped immediately until further notice and permission from the Council's designated employee.

Animal Species

5.1 Signal Crayfish

- Listed under Schedule 9 of the Wildlife and Countryside Act 1981;
- Human transfer is ILLEGAL;
- ILLEGAL to keep without a licence;
- Native to North America;
- Introduced in UK for food in 1970s and now established across UK;
- Essential to identify against UK's native white-clawed crayfish;
- Carries a fungal disease to which a white-clawed crayfish has no defence.



5.1.1 Features

- ✓ Body length of up to 30cm;
- ✓ Has two pairs of behind the eyes ridges;
- ✓ Reddish-brown in colour;
- ✓ Smooth, large and red underneath claws with a white-turquoise patch on the top of a junction of a claw.

Figure 21: Signal Crayfish Image source: scottishmink.org.uk

5.1.2 Contractor Awareness

Signal Crayfish are least active during the summer and unlike UK's native species are active during daylight hours. When out in a field, lookout for burrows in the banks of a water body. Another sign of a signal crayfish presence in a ditch or a pond may be parts of dead crayfish either on shore and stream edge or in animals' nests.

If spotted, this must be reported to your contact at Woking Borough Council.

5.2 American Mink

- Listed under Schedule 9 of the Wildlife and Countryside Act 1981;
- ILLEGAL to release or allow the escape of this mink into the wild;
- Native to North America;
- Introduced in UK for fur farming in 1920s and now established throughout the UK as a result of escapes and deliberate introductions;
- Essential to identify against UK's native species of a mink and an otter (see section 4.6).



Figure 22: American Mink, Image source: bioweb.uwlax.edu

5.2.1 Features

- ✓ Mostly a nocturnal species;
- ✓ Body length of up to 70cm;
- ✓ Glossy, dark brown to black fur;
- ✓ White patch on the chin (but not always present);

5.2.2 Contractor Awareness

American Minks favour rivers and lakes but can also be found in a coastal habitat. They are generally nocturnal but can be seen during the day. They can be found in Surrey so it is possible for you to come across this species when working around rivers and lakes.

If you spotted an American Mink, please report this immediately to your contact at Woking Borough Council.

Plant Species

5.3 New Zealand Pigmyweed

- Listed under Schedule 9 of the Wildlife and Countryside Act 1981;
- Native to Australia and New Zealand;
- ILLEGAL to plant or otherwise contribute to this plant's species growth in the wild;
- Introduced in UK in 1911 as an oxygenating plant for ponds and is now well established throughout the UK.



Figure 23: New Zealand Pigmyweed, Image source: canalrivertrust.org.uk

5.3.1 Features

- ✓ Forms dense mats within the water body;
- ✓ Reduces light levels in water bodies and displaces native plants;
- ✓ Can block drainage and cause flooding;
- ✓ Can be submerged, emerged and terrestrial;
- ✓ Reproduces from very small pieces but not from seeds (in UK);
- ✓ Leaves up to 2cm long in opposite pairs;
- ✓ Round stem;
- ✓ Fleshy leaves (more so when submerged);
- ✓ Very small white to light pink flowers with four petals.

5.3.2 Similar Plant Species and Differences

❖ Water Starwort

- ✓ Non-fleshy leaves;
- ✓ No collar at leaf base.



Figure 24: Water starwort, Image source:
rochdalefieldnaturalistsociety.co.uk

5.3.3 Contractor Awareness

New Zealand Pigmyweed grows in still or slow flowing waters up to 3m deep. It can be also found around pond or lake margins. It does grow in Surrey so it is possible for you to come across this invasive plant species when working around ditches, ponds and lakes.

If spotted, please report this immediately to your contact at Woking Borough Council, and review removal process as this will spread from a small section of the stalk if not removed correctly.

5.4 Water Fern

- Listed under Schedule 9 of the Wildlife and Countryside Act 1981;
- Native to North and Central America;
- ILLEGAL to plant or otherwise contribute to this plant's species growth in the wild;
- Introduced in UK in 1883 as an ornamental plant for ponds and aquaria;
- Well established throughout the UK.



Figure 25: Water Fern, Image source: wildlifeinfo.co.uk

5.4.1 Features

- ✓ Forms dense mats within the water body;
- ✓ Reduces light levels in water bodies and displaces native plants;
- ✓ Can block drainage and cause flooding;
- ✓ Reproduction is mainly vegetative but can also produce minute spores;
- ✓ Green or red in colour;
- ✓ Very small scale-like leaves up to 2.5mm long;
- ✓ Brown to black roots hang beneath floating leaves;
- ✓ Often dies back in winter.

5.4.2 Similar Plant Species and Differences

❖ Duckweeds

- ✓ Light green colour;
- ✓ Smaller than water fern;
- ✓ Single, round leaves;
- ✓ White to light green roots;
- ✓ Can grow together with a water fern.



Figure 26: Duckweed, Image source: rhs.org.uk

5.4.3 Contractor Awareness

Water Fern grows in still or slow flowing water bodies, like ponds, ditches and canals. It can be found in Surrey so it is possible for you to come across this invasive plant species when working around ditches, ponds and canals.

If spotted, please report this immediately to your contact at Woking Borough Council.

5.5 Floating Pennywort

- Listed under Schedule 9 of the Wildlife and Countryside Act 1981;
- May also be known as water pennywort or pennywort;
- Native to North America;
- ILLEGAL to plant or otherwise contribute to this plant's species growth in the wild;
- First identified in the wild in 1990 as a result of thrown away plants from the garden ponds;
- Found mostly in the south-east of England, including the county of Surrey;
- Spreading rapidly.



Figure 27: Floating Pennywort, Image source: theguardian.com

5.5.1 Features

- ✓ Forms dense mats within the water body;
- ✓ Reduces light levels in water bodies and displaces native plants;
- ✓ Can block drainage and cause flooding;
- ✓ Shiny, kidney-shaped leaves with crinkled edges, up to 7cm wide;
- ✓ Fleshy stalks;
- ✓ Tiny white flowers (rare) may appear between July and August.

5.5.2 Similar Plant Species and Differences

❖ Marsh Pennywort

- ✓ Always rooted, never free floating;
- ✓ Smaller, round leaves, NOT kidney-shaped;
- ✓ Stalk attached to the centre of the leaf, like an umbrella.



Figure 28: Marsh Pennywort, Image source: naturespot.org.uk

5.5.3 Contractor Awareness

Floating Pennywort grows in still or slow flowing water bodies. It can be found in Surrey so it is possible for you to come across this invasive plant species when working around ditches and other water bodies.

If spotted, please report this immediately to your contact at Woking Borough Council.

5.6 Parrot's Feather

- Listed under Schedule 9 of the Wildlife and Countryside Act 1981;
- May be also known as Brazilian water-milfoil or 'oxygenator';
- Native to Central and South America;
- ILLEGAL to plant or otherwise contribute to this plant's species growth in the wild;
- Introduced in UK in 1878 in water gardens and first recorded in the wild in 1960 as a result of inadequate disposal of water gardens plants;
- Well established in the south of England.



Figure 29: Parrot's Feather, Image source: bbc.co.uk

5.6.1 Features

- ✓ Forms dense mats within the water body;
- ✓ Reduces light levels in water bodies and displaces native plants;
- ✓ Can block drainage and cause flooding;
- ✓ Feather-like, finely divided leaves;
- ✓ Bright to blue-green in colour;
- ✓ Stems can grow up to 2m high;
- ✓ Flowers are very discrete and may appear between May and August;
- ✓ Dies down in winter;

5.6.2 Similar Plant Species and Differences

- ❖ **Spiked Water-milfoil**
- ❖ **Alternate Water-milfoil**
- ❖ **Whorled Water-milfoil**
- ❖ **Hornwort**
- ❖ **Mares Tail**
- ✓ Never emergent;
- ✓ Can be found in fast-flowing water unlike Parrot's Feather.



Figure 30: Rigid Hornwort Image source: plantlife.org.uk

5.6.3 Contractor Awareness

Parrot's Feather grows in still or slow flowing, nutrient rich water bodies. It can be found in Surrey so it is possible for you to come across this invasive plant species when working around ditches and other water bodies.

If spotted, please report this immediately to your contact at Woking Borough Council.



Figure 31: Mares Tail Image source: pondplantsdirect.co.uk

5.7 Himalayan Balsam

- Listed under Schedule 9 of the Wildlife and Countryside Act 1981;
- May be also known as Policeman's Helmet or Indian Balsam;
- Native to West and Central Himalayas;
- ILLEGAL to plant or otherwise contribute to this plant's species growth in the wild;
- Introduced in UK in the early 19th century as a garden plant and first recorded in the wild in 1855;
- Well established in UK along river banks.



Figure 32: Himalayan Balsam Image source: thebadgerseye.com

5.7.1 Features

- ✓ Annual plant;
- ✓ Grows in dense stands along river banks which can increase the chances of flooding;
- ✓ Trumpet shape, pink, scented flowers;
- ✓ Seed capsules are up to 2.5cm long and hanging on red sticks (see the above image);
- ✓ Seeds are small and brown;
- ✓ Stems can grow up to 2m high;
- ✓ Stems are hollow and fleshy;
- ✓ Dies down in winter which can increase the likelihood of river bank's erosion;
- ✓ Look for hay like remains to identify this plant species in winter.

5.7.2 Contractor Awareness

Himalayan Balsam grows along river banks or in damp woodlands. It can be found in Surrey so it is possible for you to come across this invasive plant species when working around ditches and other water bodies.

5.8 Japanese Knotweed

- Listed under Schedule 9 of the Wildlife and Countryside Act 1981;
- May be also known as Japanese Bamboo;
- Native to Japan, Taiwan and northern China;
- ILLEGAL to plant or otherwise contribute to this plant's species growth in the wild;
- Introduced in UK in the early 19th century as an ornamental plant;
- Well established in UK.

Japanese



Figure 33: Knotweed Image source: hoa.org.uk

5.8.1 Features

- ✓ Perennial plant with bamboo like stems;
- ✓ Tall reddish or purple dotted stems with regular nodes;
- ✓ Doesn't produce seeds in UK;
- ✓ Stems are hollow and fleshy;
- ✓ Spreads through fragments of rhizome or stem;
- ✓ Zig-zag stems;
- ✓ Leaves are shield shaped, flat based and lush green.

5.8.2 Contractor Awareness

Japanese Knotweed favours urban areas, including waste land, railways and road sides as well as river banks. It can be found in Surrey so it is possible for you to come across this invasive plant species when working around ditches and on land.

If spotted, please report this immediately to your contact at Woking Borough Council.

6. Habitats Occupied by Species

Species	Habitat								
	Pond	River	Lakes	Ditches	Woodland	Grassland	Heathland	Hedgerows	Buildings
Water Vole	X	X	X	X					
Dormouse					X	X	X		
Great Crested Newt	X			X	X	X		X	
Common Toad	X		X	X	X	X		X	X
Natterjack Toad	X					X			X
Otter	X	X	X		X	X			
Grass Snake	X			X		X	X	X	
Slow Worm					X	X	X	X	X
Adder					X	X	X	X	
Sand Lizard							X		
Smooth Snake							X		
White-clawed Crayfish	X	X	X	X					
Bats									X
Nesting Birds	X	X	X	X	X	X	X	X	X
Signal Crayfish	X	X	X	X					
American Mink		X	X						
New Zealand Pigmyweed	X		X	X					
Water Fern	X		X	X					
Floating Pennywort	X		X	X					
Parrot's Feather	X		X	X					
Himalayan Balsam		X (river banks)			X				X
Japanese Knotweed		X (river banks)			X				X

7. Survey Calendar for Protected Species

Habitats/ Vegetation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
	Phase 1 (sub-Optimal) No other detailed plant surveys Mosses and Lichens Only			Detailed habitat assessment surveys National Vegetation Classification Surveys for higher plants and ferns Mosses and Lichens in April, May and Sept only						Phase 1 (sub-Optimal) No other detailed plant surveys Mosses and Lichens Only			
Badgers	Limited sett/bait surveys	Limited Activity			Limited bait marking and sett surveys				Sett surveys			Limited sett/bait survey	
Bats	Inspection of hibernation, tree and building roosts			Limited activity	Summer roosts emergence and activity surveys (Maternity roosts start to form in May, females give birth in June)				Limited activity	Inspection of hibernation, trees and building roosts			
Birds	Winter Species		Breeding birds/migrants species		Breeding birds		Low activity		Migrant species		Winter Species		
Dormice	Gnawed hazelnut search (sub-optimal)		Nest tubes/cage trap survey from April to November Nest searches (optimal time September to March)						Gnawed hazelnut search (optimal November to December)				
Great Crested Newts	Newts hibernating		Pond Surveys for adults/Terrestrial surveys/egg surveys April to mid June/Larvae surveys from mid-May				Terrestrial habitat and Larvae surveys		Terrestrial habitat survey		Newts hibernating		
Freshwater Pearl Mussel	Survey not Possible			Optimal survey period							Survey not Possible		
Fish	River and Stream dwelling species, the timing of the survey will depend on the migration pattern of the species concerned. Where surveys require information on breeding the timing of the surveys will need to coincide with the breeding period, which may be summer or winter months, depending on the species.												
Natterjack Toad	Hibernating			Surveys of breeding ponds for adults. Survey for tadpoles from May onwards Surveys for Adults on land.					Surveys for Adults on Land		Hibernating		
Otters	Limited by vegetation cover and weather conditions rather than seasons.												
Reptiles	Reptiles hibernating		Peak survey months are April and May				Reduced basking time reduces effectiveness of refugia survey		Peak survey month	Limited activity	Reptiles Hibernating		
Water Voles	Low Activity	Initial habitat survey	Habitat and field signs/activity surveys May be limited by vegetation cover and weather.								Initial habitat survey	Low Activity	
White Clawed Crayfish	Reduced Activity			Searching Torching Trapping		Breeding torchlight survey only (no handling due to females releasing their young)		Substrate search by hand Torchlight and trapping surveys				Reduced activity	

Surveys Not Possible

Limited Survey Period

Optimal Survey Period