Persimmon

Health, Safety
& Environment
Department

Ecology & Biodiversity Standards

Contents

1. Introduction

The purpose of these ecology and bio-diversity standards is to set out the requirements for effectively managing our work activities to limit damage or harm to wildlife and ecology.

It is the responsibility of the Land & Planning Team to commission relevant ecological surveys at the pre-construction stage. Where applicable, the Technical Department should obtain the relevant licences e.g. EPS Licence, hedgerow removal licence etc. and plan works to ensure they take place at the right time of the year, minimalising impact on local ecology. This must be recorded through the pre-start meeting process.

Technical Department must also pay particular attention to any BNG monitoring requirements and that of any relevant wildlife licences (see section 10).

Construction teams should ensure adequate provision is made, where applicable, to protect ecologically sensitive areas and ensure its ongoing suitability e.g. BNG habitats and trees are protected.

Also, where EPS Licences are in place, it is both the responsibility of the Technical Department and Construction teams to ensure its conditions are followed and discharged in a timely manner. All relevant information / licences etc. must be filed in the Project Environmental Plan (green folder) and kept on site.

The Group Health, Safety and Environment Advisors will support constructions teams throughout the build process, through regular site visits.

2. Definitions

Ecology	The study of living organisms and their interactions with each other and thesurrounding environments.		
Designated site	There are a variety of European, National, and local designations for protection of wildlife:		
	Ramsar	The Ramsar List of Wetlands of InternationalImportance	**International**
	SAC	Special Area of Conservation	**European**
	SPA	Special Protection Area	**European**
	SSSI	Site of Special Scientific Interest	**UK**
	LNR	Local Nature Reserve	**UK**
	NNR	National Nature Reserve	**UK**
	LWS	Local Wildlife Site	**Local authority**
	SINC	Site of Importance for Nature Conservation	**Local authority**
	SNCI	Site of Nature Conservation Importance	**Local authority**
	COWS	County Wildlife Site	**Local authority**
EPS	European Protected Species		
Protected Species	Wildlife species given partial or full legal protection in the UK		
Invasive Species	A plant or animal species (generally non-native) found within the UK and which can cause environmental harm.		

2. Definitions

ECoW	An Ecological Clerk of Works (ECoW) or Environmental Clerk of Works (EnvCoW) provides advice about ecological and environmental and issues during the construction of a development.
SQE	An individual achieving all the following can be considered a suitably qualified ecologist (SQE): ▪ Holds a degree or equivalent qualification in ecology ora related subject ▪ A practising ecologist, with a minimum of 3 years relevant experience (withinthe last 5 years). Such experience must clearly demonstrate a practical understanding of factors affecting ecology in relation to construction and the build environment; including acting in an advisory capacity to provide recommendations for ecological protection, enhancement, and mitigation measures. Examples of relevant experience are: Ecological impact assessment, Phase 1 and 2 Habitat Surveys and habitat restoration ▪ Is covered by a professional code of conduct and subject to peer review (e.g., CIEEM)
TPO & TPP	Tree Preservation Order - legal protection given to individual or groups of trees by a local authority. Tree Protection Plan - agreed by a Local Planning Authority which identify trees and or hedges requiring protection during development.
Conservation Area (Planning ConservationArea)	Areas of special architectural or historic interest, the character or appearance of which is desirable to preserve or enhance. Designated by Local Authorities. Not to be confused with a nature conservation area. Works to trees in Planning Conservation Areas require Local Authority permission.
Biodiversity	Biological diversity is the variety of plant and animal life in one area (the world or in a particular habitat). Biodiversity supports everything in nature that we need to survive: food, clean water, medicine, and shelter.

2. Definitions

Conservation Bodies	Regional government bodies responsible for promoting the conservation of wildlife & natural features: ▪ Natural England ▪ Natural Resources Wales ▪ Nature Scot ▪ Northern Ireland Environment Agency
Environmental Impact Assessment (EIA)	This is a statutory assessment required for particular types of development under the Town & Country Planning Act. An EIA may require long-term environmental monitoring prior to planning consent being obtained (e.g., noise, traffic, ecology etc.). An Environmental Statement is produced that compiles and summarises theenvironmental information relating to the development, including: ▪ A description of the development ▪ Outline of alternatives and reasons for the choice made ▪ A description of the aspects of the environment likely to be affected, e.g. population, ecology, soil, water, air, climatic factors, archaeology & heritage, landscape and their interrelation ▪ A description of the likely impacts on the environment ▪ Measures to prevent or reduce environmental impacts The development must comply with the measures set out in the Environmental Statement. The EIA is a different process to the internal environmental aspect & impact assessment process and is not normally under the control or direction of Persimmon.

3. Ecological Assessment

Prior to any works commencing, the potential impacts on ecology by our work activities must be assessed by referring to relevant pre-construction information i.e. surveys and completion of the environmental aspect & impact assessment form. This initial assessment must identify any control measures required to reduce the impact of our activities on site ecology.

Refer to:
EMS form 002 – Environmental Aspect and Impact Assessment

The presence of protected or invasive species or habitats can have significant impacts on costs and programme and must be considered as early as possible to mitigate potential impact.

Reference should be made to any ecological surveys that have been undertaken and included in the pre- construction information.

The assessment should identify any specific protected species (including bats, badgers, nesting birds, reptiles, amphibians etc.) and the presence of any invasive species, even if managed (e.g., Japanese Knotweed, Himalayan Balsam, Giant Hogweed etc.). Initial surveys are usually referred to as the Preliminary Ecological Appraisal.

3. Ecological Assessment Cont.

The pre-construction information should also refer to any Tree Preservation Orders, Tree Protection Plans, impacts on hedgerows or other project specific restrictions, such as retained BNG habitats.

The environmental aspect and impact assessment should consider, and where necessary, record:

- Specific areas to be protected / cordoned (e.g., trees, hedgerows, watercourses, areas of Japanese Knotweed) and the protection measures required (fencing, barriers, signage, settlement tanks, interceptors etc.). Details should be marked on a site plan and displayed on the Environmental Noticeboard and included in site inductions.

- Seasonal timings for survey and mitigation measures (e.g. vegetation clearance, demolition, trapping & translocation). Trees and shrubs should only be removed outside bird breeding season and should be checked for nesting birds prior to removal (further details below). Consideration must also be given to ground nesting birds.

- Seasonal timings for specific activities e.g., roofing removal affecting bat roosts or vegetation clearance affecting reptiles and amphibians (such as slow-worms and GCN).

- Whether the site is in the vicinity of designated sites such as Sites of Special Scientific Interest (SSSI), Local and National Nature Reserves (LNR & NNRs), Biodiversity Action Plan priority habitats, Special Areas of Conservation etc. Ecology reports and or the MAGIC website should be used to check whether the site is in the vicinity of any designated sites.

All relevant documentation e.g. licences, tree protection plans etc. should be compiled into the Project Environmental Plan with a copy held on site.

3. Ecological Assessment cont.

If works are likely to impact on ecology and wildlife and insufficient is available prior to start, Persimmon should commission an ecological survey undertaken by a suitably qualified ecologist.

Many ecological surveys are restricted to specific times of year, therefore must be considered as early as possible at the design and planning stage. Mitigation activities (e.g., trapping and relocation of animals) can also be restricted to specific times of year.

Some large developments may require an Environmental Impact Assessment (EIA) under the Town & Country Planning Act. This is an extensive survey and is usually undertaken by developers for the purposes of planning. If an EIA exists, it should be reviewed and any recommendations that follow through into the planning consent must be implemented.

Any project that may affect a Special Protection Area (SPA) or Special Area of Conservation (SAC) will require a Habitats Regulations Appraisal. This should be identified during the planning consent process.

It may be necessary to engage the services of an ecological consultant to provide a ‘watching brief’, or to attend site as required to undertake activities; such as nesting bird checks, vegetation clearance, badger sett closures, bat roost closures etc. This is particularly important when wildlife licences (EPS licences) are in place/required.

3. Ecological Assessment cont.

3.1 Biodiversity Net Gain

In England, Biodiversity Net Gain (BNG) is a new legislative requirement that aims to leave biodiversity in a measurably better state than we found it, contributing to natures recovery. It is essential that experienced ecological consultants are instructed early in the planning process to undertake BNG calculations, review constraints and opportunities and optimise BNG.

It is essential that recognised ecology consultants are instructed to undertake BNG calculations, and the site seeks to maximise on-site BNG before seeking offsite locations or the purchase of BNG credits.

BNG requirements should have been dealt with at the planning stage. However, the agreed outcome could affect site work, specifically where habitats are retained and enhanced as part of this new legislation. It's important that your BNG consultant/ecologist provides the necessary details for which habitats are to be retained and protected.

3. Ecological Assessment cont.

3.2 Ecological Controls

Everyone on site has a role to play in ensuring the ongoing protection of ecology. However, the Site Manager should ensure any necessary activities are undertaken such as: making sure artificial lighting is turned off to ensure dark periods, that watercourses are not lit up, adequate protection of retained habitats is in place, trees and hedgerows are protected etc.

Potential impacts and control measures must be communicated to all relevant staff and contractors through the site induction process. Control measures should be included in relevant contractor method statements and risk assessments. Control measures must be monitored to ensure they are in place when required, effective and maintained throughout the works.

Where ecological restrictions are in place, these should be communicated via the site-specific induction and supported by appropriate Toolbox Talks and Posters to raise awareness of their presence on site.

4. Protected species and plants

Most native UK animal species are protected to some extent by UK legislation. All UK wild mammals are protected from unnecessary suffering and cruelty under the Wild Mammals (Protection) Act 1996 including foxes, squirrels, hedgehogs etc., while some species such as badgers are covered by specific legislation.

Any bird nest is protected while it is in use or being built and some bird species (and their young) are protected, even having left the nest.

European protected species (EPS), some plants and their habitats have full protection under The Conservation of Habitats and Species Regulations 2017.

European Protected Species (EPS) include, but are not limited to:

- All bat species
- Great crested newt
- Dormouse
- Otter
- Natterjack toad

4. Protected species and plants cont.

4.1 Nesting Birds

All wild birds, their nests and their eggs are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended). Breeding season is usually considered to be February/March to August/September, but on occasion birds may nest outside of this season.

Clearance works

Seasonal timing for vegetation or building clearance (including clearance of arable cropland and trees/hedgerows) should ideally be undertaken outside of the nesting bird season.

Clearance can take place during the nesting season, providing an Ecologist has confirmed that no nesting birds are present. Ensure that timings don't conflict with other protected species timings such as bats, badgers and GCN.

Preventing nesting birds

In the case of buildings that may be used for nesting, advice should be sought from an Ecologist as to suitable deterrents. This will be based on the structure and risk.

Discovery of birds

If nesting birds are discovered all work in the immediate area must be stopped. Suspected nesting sites must be inspected by an Ecologist and an appropriate exclusion zone (with signage) established with the agreement of the Ecologist.

4. Protected species and plants cont.

4.2 Bats

All bat species, their breeding sites and resting places are fully protected by law as they are European protected species.

Bats often inhabit old buildings, roof and wall voids and trees where there are small access holes or crevices. Bats are not however, limited to these types of structures.

People undertaking bat surveys and some conservation activities on behalf of ecological consultancies must hold the relevant bat licence.

If bats or their breeding / resting places are likely to be disturbed by work activities this should be identified prior to starting and a mitigation licence must be issued to an appropriately qualified persons for any works affecting bats and their roosts. The conditions may impact on our work activities by limiting the periods during which certain activities (such as demolition) may be undertaken.

In some circumstances following relevant surveys, a bat low impact class licence can be obtained where disturbance / capture and roost destruction is limited. Only a registered consultant meeting specific criteria can obtain bat low impact class licences. These licences are subject to a reduced application process and faster application turnaround timescale.

The conditions of any licence issued in relation to works affecting bats must be taken into account when planning the works.

4. Protected species and plants cont.

4.3 Badgers

Badgers and their setts are protected by UK law and it is an offence to directly disturb a badger sett or to carry out works close to a sett without a licence.

The presence of badger setts on or near to the works should be identified prior to starting. If a licence has been issued in relation to works affecting badger setts, then this may mean that certain activities are restricted in some areas of the site. For example, excavation in some areas may only be allowed using hand- tools. The conditions of any licence issued in relation to works affecting badgers must be taken into account when planning the works.

Closing setts

Where a badger sett(s) are to be closed, this must be done under licence (including class licences) and can only take place between July and November, or July and October if you have GCN considerations. Further restrictions may be applicable if you have certain nesting bird species etc. So it's important to ensure that the ecologist has provided you with detail of what is needed and when.

4. Protected species and plants cont.

4.4 Hedgehogs

Hedgehogs are protected by UK law, making it an offence to kill / injure or capture using certain methods.

They are listed as a Species of Principle Importance in England, Scotland and Wales and are categorised as ‘vulnerable to extinction’, appearing on the red list of Britain’s mammals.

Planning

Surveys for hedgehogs are not essential under planning regulations, however LPAs may sometimes require surveys to be conducted, particularly where hedgehogs are considered a local conservation priority, or the proposed development could have significant impacts at the population level.

In Scotland hedgehogs are on the Scottish Biodiversity list as ‘Watching Brief Only’ requiring monitoring to prevent decline. These laws make hedgehogs a material consideration for Local Planning Authorities (LPAs) during the planning process.

4. Protected species and plants cont.

4.4 Hedgehogs cont.

Habitats

Hedgehog habitat includes:

- dense scrub to build hibernation nests in during the winter
- short grass to forage in for invertebrate prey
- longer grass to forage in and to make nests in during the summer
- areas of leaf litter to collect and use for hibernation nests
- log piles and decaying vegetation to forage in and hibernate in
- hedgerows and boundary vegetation are important corridors for travel and nesting sites

If a hedgehog is found during construction works, it can be moved to a safe area providing it is safe to do so. Hand protection should be worn, with hands thoroughly washed after handling.

Alternatively, and if there are welfare concerns, The British Hedgehog Preservation Society can be contacted for advice and guidance on 01584 890 801.

4. Protected species and plants cont.

4.5 Reptiles and Amphibians

The presence or likelihood of reptiles and amphibians on site should be identified by ecological surveys. The recommendations of any surveys undertaken may relate to pre-start or on-site mitigation, such as trapping and translocation, and / or exclusion fencing.

There are six species of reptile in the UK and all are protected by UK law. These include Smooth snakes and Sand lizards, which are European protected species, and these species which are protected by UK law:

- adder
- grass snake
- common lizard
- slow worm

Great crested newts, smooth snake and Sand lizard (and their habitats) are classed as European Protected Species (EPS) under The Conservation of Habitats and Species Regulations 2017.

4. Protected species and plants cont.

4.5 Reptiles and Amphibians

A licence must be issued to an appropriately qualified persons for any works affecting protected species and/or vegetation clearance works (including rubble, brash or log piles) will need to follow a specific method statement and conditions outlined within the licence. All works (including drain-down of waterbodies) must be considered against the EPS licence. Ensure that you have a briefing and working methods from your ecologist.

Other amphibians such as frogs and toads are also offered protection and may require specific working methods when clearing vegetation and waterbodies.

4.6 Licencing and conditions

Licence determination times are a minimum of 30 working days, but often take longer – it will often take around 60 working days.

Licences issued for works involving habitat removal of protected species will require both mitigation measures and enhancements to be installed as part of the licence conditions. These must be discharged in a timely fashion and in accordance with the licence.

Any newly installed enhancements e.g. newt ponds, saplings etc. must be highlighted, with appropriate signage put in place to alert contractors of their presence. In some circumstances areas may be required to be fenced off to prevent unauthorised access / damage. Furthermore, contractors must be made aware of their presence through relevant Toolbox talks.

5. Invasive species

There are a number of invasive or controlled plant and animal species in the UK. The Wildlife and Countryside Act 1981 (WCA) provides the primary controls on the release of non-native species into the wild in Great Britain and it is an offence under the act to ‘plant’ or ‘otherwise cause to grow in the wild’ a number of non-native plant species.

Those that are most likely to impact on our work activities are: Japanese Knotweed, Himalayan Balsam and Giant Hogweed.

The presence of invasive species should be identified prior to works commencing but may be discovered during the works. Guidance for identifying many invasive species is available on the Non-Native Species Website.

The measures for managing invasive species must be recorded in the environmental aspect and impact assessment and communicated, as necessary. This may include a combination of herbicide spraying, excavation and disposal or containment.

Awareness

Measures for preventing the spread of all invasive species and for protecting workers and others from harm must be implemented. These should be communicated via site specific induction, Toolbox Talks, and included in relevant risk assessment and method statements.

5. Invasive species

Bio-controls

Contractors should identify adequate bio-controls relevant to the species undergoing treatment. Site hygiene measures to prevent the spread of invasive species should be installed e.g. fencing, signage, boot wash etc. prior to starting works.

The use of any herbicide near water will require permission from the relevant environmental regulator (Control of Pesticides Regulations 1986). Management of invasive species should be discussed with the Group Health, Safety & Environment Advisor. Any plant or soil arising's (containing plant matter/seeds) which is required to be discarded is waste and must be managed in accordance with the Waste Management standard.

Refer to:

EMS form 002 – Environmental Aspect and Impact Assessment
EMS standards – Waste Management
EMS guidance – Invasive Plants

5. Invasive species cont.

5.1 Japanese Knotweed

Japanese knotweed can cause damage to road and pavement surfaces and to below-ground structures such as drainage via penetration of the roots or stems. Japanese knotweed is easily spread by mechanical means as both the rhizome / root and crowns at the stem bases can regenerate rapidly.

Where present, a Japanese Knotweed Management Plan must be developed for the site. Appropriate barriers and signage must be displayed. Relevant subcontractor method statements must include details of restrictions and site hygiene measures (e.g., cleaning of vehicles, machinery and footwear, haulage route protection and barriers).

Note – JKW dies back during winter and looks different to the picture on the right.

5. Invasive species cont.

5.1 Japanese Knotweed cont.

Treatment options

Spraying with chemicals can be an effective treatment to stop invasive plants from spreading. Only approved herbicides can be used. Suitably qualified individuals who hold the necessary National Proficiency Test Council certificates of competence must only use professional herbicide products.

It usually takes 3 years to treat Japanese knotweed until the underground rhizomes become dormant.

5. Invasive species cont.

5.1 Japanese Knotweed cont.

You may need to do any or all of the following when using chemicals:

- Make sure anyone spraying holds a certificate of competence for herbicide use or works under direct supervision of a certificate holder.
- Carry out a COSHH assessment.
- Get permission from the Regulator if the area is protected, for example sites of special scientific interest.
- Get permission from the Environment Agency, Natural Resources Wales or Scottish Environment Protection Agency if chemicals/herbicides are to be used. (note the rules are different in each country and will need checking prior to any activities).

To achieve control of Japanese Knotweed, glyphosate must be applied in late summer/autumn after the plant has flowered. Applying glyphosate earlier in the year may stunt growth, but it will not kill the plant. Large mature stands of Japanese knotweed will need to be treated for two or three years to achieve eradication (i.e. treat once a year in late summer/autumn).

5. Invasive species cont.

5.1 Japanese Knotweed cont.

Bury it

In England and Wales Japanese Knotweed can be buried at the site it's produced as long as:

- It is buried at a depth of at least 5 (or 2) metres;
- Plant remains are covered with a material that does not allow the plant to grow through (known as a root barrier membrane layer); and
- Other types of waste are not buried with it

Where it is not possible to bury the plant 5 metres deep, wrap a root barrier membrane layer completely around the plant remains and bury them at a depth of at least 2 metres.

You must tell the Environment Agency or Natural Resources Wales a week before you intend to bury the plant waste.

In Scotland Japanese knotweed can be buried at the site it's produced as long as:

- Ideally, at least one application of non-persistent herbicide e.g. Glyphosate will have been performed to reduce the vigour of the knotweed; and
- Soil to a depth of at least 5 m and within a perimeter of 7 m of the plant growth area should be excavated for burial.

Further guidance can be found via the SEPA website.

Removal from site

Waste material from these plants is classed as 'controlled waste' under the Environmental Protection Act 1990 and must be disposed of at a suitably licensed or permitted waste site.

Certain herbicides and plant material containing herbicides may also be considered as hazardous waste (England & Wales) or special waste (Scotland). If using a carrier to move this waste off site you must ensure they are a registered waste carrier.

Refer to EMS standards – Waste Management

5. Invasive species cont.

5.2 Himalayan Balsam

Himalayan Balsam is a non-native annual plant usually found on riverbanks or waste ground and spreads easily, out-competing native plants. Himalayan Balsam requires controls to prevent its spread.

Appropriate barriers and signage must be displayed. Relevant contractor method statements must include details of restrictions and site hygiene measures (e.g., cleaning of vehicles, machinery and footwear, haulage route protection and barriers).

Treatment options

In order of preference, Himalayan Balsam should be controlled by:

- hand pulling;
- cutting;
- herbicide application;
- onsite burial; and
- excavation and off-site disposal (see ‘removal from site above’ for waste disposal requirements).

5. Invasive species cont.

5.2 Himalayan Balsam cont.

Small infestations can be easily controlled by hand pulling plants. The plants have a shallow root system and should be firmly pulled out holding the base of the stem. Care needs to be taken to avoid snapping the stem above the first node as plants can regrow. Plants are pulled in the spring or early summer (April/May) before flowering (June/July).

The site is usually revisited to pull any smaller plants that were missed or any late germinators. Pulled plants can be left on-site to decompose in an open area, buried (see below) or sent for off-site disposal.

If the Himalayan Balsam is on a designated site such as a Site of Special Scientific Interest (SSSI), Special Protection Area (SPA) or Special Area of Conservation (SAC) then written permission will be required before treatment from the Regulator.

5. Invasive species cont.

5.2 Himalayan Balsam cont.

Spraying with chemicals

Herbicides can be applied to the plant foliage in the spring before flowering. Glyphosate is usually used however, it is non-selective so will kill all other vegetation on the site. Permission must be gained from the Regulator for the use of herbicides/chemicals as outlined above.

Onsite burial

Soil containing Himalayan Balsam should be buried at least 1 metre below ground level. You must not bury anything other than plant material and soil containing invasive plants that have originated on site. You must make sure that deep burial does not interfere with the ground water level.

5. Invasive species cont.

5.3 Giant Hogweed

Giant Hogweed colonises many areas of wasteland and riverbank, and its numerous seeds are easily dispersed by water and wind. It can form dense colonies that out-compete native plants.

Contact with the plant can cause skin irritation and should be subject to safety and health risk assessment. Barriers and signage should be used to alert people of the presence of Giant Hogweed, where necessary.

Treatment options

In order of preference, Giant Hogweed should be controlled by either:

- hand pulling;
- herbicide application;
- onsite burial or;
- excavation and off-site disposal (see ‘removal from site’ above for waste disposal requirements).

Soil containing Giant Hogweed should be buried at least 1 metre below ground level. You must not bury anything other than plant material and soil containing invasive plants that have originated on site. You must make sure that deep burial does not interfere with the ground water level.

6. Designated sites

If works are within a protected or designated site such as a SSSI, Nature Reserve etc., specific requirements and permissions will be required before works can commence.

If the works are within 500m of a SSSI, European designated site or Ramsar site, this may have an impact on obtaining the following:

- Environmental Permits issued under standard rules for the crushing, screening and use of construction and demolition waste; and
- Environmental Permits and exemptions for the discharge of groundwater or surface run-off to watercourses or surface water drains.

The implications of any designated sites in the vicinity of the works must be assessed and details recorded in the environmental aspect and impact assessment.

If the site is within or adjacent to a protected area (e.g., SSSI or other designated site) information regarding any associated restrictions must be obtained prior to any work commencing and adhered to during the construction phase.

7. Trees and hedgerows

Tree Preservation Orders (TPOs) are Local Authority designations that can be applied to any type of tree or group of trees assessed as having ecological or other value.

Formal consent must be obtained for any works to a tree that is subject to a TPO. Notification must be made to the relevant local authority at least eight weeks prior to works commencing.

Tree Protection Plans (TPPs) agreed by a Local Planning Authority also identify trees and or hedges requiring protection during development and must be strictly adhered to. The plan should indicate precise location of barriers, type of ground protection etc.

Trees not subject to TPOs may still require protection during works, for example for BNG or habitats in relation to protected species.

7. Trees and hedgerows

Hedgerows

Some hedgerows are protected by legislation and should be subject to suitable protection measures. Protected status usually relates to the age and ecological value of the hedgerow.

When removing hedgerows, a removal notice may be required from the local authority, where the:

- Hedge is older than 30 years; and
- If the section to be removed is longer than 20.

Planning supersedes hedgerow protection legislation, so any hedges which do not form part of the final scheme can be removed.

Arboricultural Method Statement (AMS)

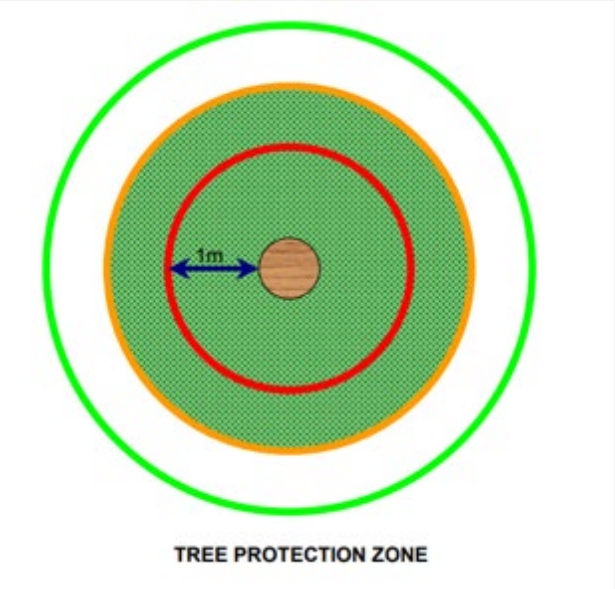
Describes how works must be undertaken within Root Protection Areas (RPA) or Zones (RPZ's) (or crown spread where this is greater), to minimise risk or adverse damage on trees.

The AMS should describe how works will be undertaken for access, removal of existing structures, installation of temporary ground protection, trenching, new hard surfacing, foundations, retaining structures and landscaping. The AMS must be followed to ensure damage does not occur.

7. Trees and hedgerows

Tree Protection Zones

Tree (and hedge) protection must be established at or beyond the canopy to protect roots and branches from damage. The below provides standard areas, however ensure that the sites Arboriculturalist has provided advice on specific RPZ's.



PROHIBITED ZONE – 1m from trunk. Excavations of any kind must not be undertaken within this zone unless full consultation with Local Authority Tree Officer is undertaken. Materials, plant and spoil must not be stored within this zone.

PRECAUTIONARY ZONE – 4 x tree circumference. Where excavations must be undertaken within this zone the use of mechanical excavation plant should be prohibited. Precautions should be undertaken to protect any exposed roots. Materials, plant and spoil should not be stored within this zone. Consult with Local Authority Tree Officer if in any doubt.

PERMITTED ZONE – outside of precautionary zone. Excavation works may be undertaken within this zone however caution must be applied and the use of mechanical plant limited. Any exposed roots should be protected.

7. Trees and hedgerows

Barriers and Tree Protection Fencing

Tree and hedgerow protection must be installed prior to start on site.

All trees or hedges that are being retained on site should be protected by barriers and/or ground protection, that is relatively immovable (e.g. double clipped heras fencing), before any materials or machinery is brought onto the site, and before any demolition, development or stripping of soil commences. Signage must also be installed on fencing to alert contractors of the presence of protected trees / hedgerows. Note that planning conditions may specify tree protection is installed in accordance with BS5837:2012

Where all activity can be excluded from the root protection area (RPA), vertical barriers with signage should be erected to create a construction exclusion zone. Where, due to site constraints, construction activity cannot be fully or permanently excluded in this manner from all or part of a tree's RPA, appropriate ground protection should be installed.

Barriers should be fit for the purpose of excluding construction activity and appropriate to the degree and proximity of work taking place around the retained tree(s). Barriers should be maintained to ensure that they remain rigid and complete with signage in place.

Planning Conservation Areas

Trees located in Planning Conservation Areas require local authority permission prior to any works being undertaken on the tree, whether subject to a TPO or not. The notification period is usually six weeks.

8. Injurious weeds

Five native plant species are designated as injurious weeds:

- Common ragwort.
- Creeping or field thistle.
- Spear thistle.
- Broad-leaved dock.
- Curled dock.

It is not an offence to have these weeds growing on land we occupy and species such as ragwort can have significant conservation benefits. However, they must not be allowed to spread to agricultural land, particularly grazing areas.

9. Unexpected discoveries

In the event of any unexpected discoveries of protected or invasive species that could be impacted by our activities, works must cease, and the discovery must be reported to the local Group Safety, Health and Environment Advisor. Specialist advice from a suitably qualified ecologist may be required.

10. Monitoring

Site management monitors ecology and biodiversity issues via daily site checks. The Group HS&E Department monitors compliance with these standards via regular site HS&E inspections.

BNG (currently only in England) management and monitoring is subject to at least 30 years, with regular reporting and surveys throughout this period. Either the Land & Planning or Technical Department should ensure that adequate arrangements are made to ensure compliance with relevant requirements.

Protected species monitoring may also be required under wildlife licences. This should be undertaken by an Ecologist and should be co-ordinated through either the Land & Planning or Technical Department.

11. Further Reading

Environment Act 2021
The Conservation of Habitats and Species Regulations 2017
Wildlife and Countryside Act 1981
HSE - pesticides
HSE - COSHH
SEPA - on-site management of Japanese Knotweed and associated contaminated soils
National Joint Utilities Group: guidelines in relation to trees

Herbicide approvals:
Environment Agency
Natural Resources Wales
Scottish Environment Protection Agency

Refer to:
EMS guidance – Tree & Hedgerow Protection
EMS guidance – Invasive Plants
EMS guidance – Environment Guide Getting Your Site Right

12. Toolbox Talk

Refer to:
EMS TBT – Badgers
EMS TBT – Bats
EMS TBT – Birds
EMS TBT – Giant Hogweed
EMS TBT – Great Crested Newts
EMS TBT – Himalayan Balsam
EMS TBT – Japanese Knotweed
EMS TBT – Tree & Hedgerow Protection