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Introduction

The aim of this guidance is to prevent and control the spread of **Common ragwort** (*Senecio jacobaea*) where it is a threat to the health and welfare of grazing animals, in particular horses and cattle. It provides information on the biology and identification characteristics of Common ragwort, and other members of the same native species family, which may cause some identification problems. Particular emphasis has been placed on when, where and how to control ragwort, with the aim of educating owners, occupiers and land users as to their responsibilities with regards to ragwort and the other weeds specified in the Weeds Act 1959, i.e., Spear thistle (*Cirsium vulgare*), Creeping or field thistle (*Cirsium arvense*), Curled dock (*Rumex crispus*) and Broad-leaved dock (*Rumex obtusifolius*).

This guidance does not seek to eradicate Common ragwort, as it is a native plant and supports many species of wildlife in the UK. ~~including five 'red data book' and eight 'nationally scarce' species.~~ At least 30 insect species and 14 fungi species are entirely reliant on ragwort, and about a third of these insects are scarce or rare. The majority are confined to common ragwort or the closely similar hoary ragwort (*Senecio erucifolius*). Common ragwort is a natural component of unimproved grassland and more than 200 ~~(170)~~ species, including butterflies, bees, moths, flies, and other invertebrates, have been recorded feeding on ragwort nectar, making it an important source of insects subsequently exploited by birds and mammals. Hence, in the right environment, and where it causes no risk to grazing animals, ragwort greatly contributes to the biodiversity of the flora and fauna in our countryside.

Horses are particularly susceptible to ragwort poisoning and ingestion of it, either in its green or dried state, can cause serious liver damage resulting in tragic consequences. Poisoning by ragwort may be acute due to the rapid intake of a large quantity, and death can occur in a few days. More commonly the effects are chronic and cumulative, and in some cases, it can be months after eating ragwort before symptoms in the animal begin to appear, generally leading to death. Distressing signs include- photosensitivity, jaundice haemorrhage, weight loss, loss of coordination, depression, seizures, and coma, lethargy and yawning. ~~Lethargy and yawning are also characteristic symptoms giving rise to the name 'sleepy staggers'.~~

Complete prevention of poisoning from ragwort is only possible by denying stock access to infested fields or infested feed. Denying access to infested fields is usually impracticable in some cases, and in such cases so removing the weed to levels where it does not create problems and reducing the likelihood of reinfestation should be the aim of management strategies. Hence, this Guidance has been prepared to promote good practice and good neighbourliness and aims to significantly reduce the risk of poisoning to horses and livestock. It is intended for use by all owners of horses and livestock; landowners, land occupiers and stakeholders representing a wide variety of interests. It is particularly relevant for large-scale organisations managing significant land areas, including local authorities and public bodies.

This Guidance provides comprehensive information on how to develop a strategic and cost-effective approach to ragwort control and gives advice on:

- Identification of Common ragwort (*Senecio jacobaea*).
- Risk assessment and priorities for ragwort control.
- Control methods – their suitability and efficacy.
- Environmental considerations.
- Health and safety issues.

The Welsh Government urges all landowners and land managers to work with horse and livestock owners to adopt the recommendations of this Guidance.

How to Prevent the Spread of Ragwort

Scope

1. This Code of Practice to Prevent and Control the Spread of Ragwort applies to Common ragwort (*Senecio jacobaea*) and all subsequent references to 'ragwort' in this code refer to 'Common ragwort'. This code applies to Wales only (although separate documents are available in England and Scotland).

Aim

2. The aim is to define situations where there is a likelihood of ragwort spreading to neighbouring land where it poses a risk of ingestion by vulnerable animals. This Code provides guidance on the most appropriate means of control, taking into account both animal welfare and environmental considerations.

Introduction

3. Ragwort is a native species of the British Isles and is a specified weed under the Weeds Act 1959 (**see photograph 1, page 13**). It contains pyrrolizidine alkaloids (PAs) which are highly toxic to a range of animals, particularly horses and cattle along with pigs and chickens. Sheep, goats, and deer are more tolerant. Ragwort can contain nine or ten different PAs which are metabolised in the liver, leading to severe liver damage and often death.
4. Chronic ragwort poisoning is most common as the effects of the PAs build up in the liver over time and can often take weeks (or even months) for symptoms to become visible. However, if an animal consumes a large quantity of ragwort in a short space of time, poisoning can be acute, and can cause death in a matter of days. Horses and cattle cannot distinguish ragwort once it has withered (as in hay or in silage) as it loses its bitter taste, although it retains all of its toxicity. In silage bales, the toxic PAs can diffuse out of the ragwort and affect the entire mass of silage; thus, a single plant in a bale of silage can be enough to poison several animals (SAC, 2005).
5. There is no substantial evidence there is a health risk to humans from touching ragwort. The amount of PAs, which might be absorbed through the skin is very low and there is no proof these alkaloids are being changed into the toxic form, which can cause liver damage. Ragwort contacting the skin may cause an allergic reaction called Compositae Dermatitis. This is caused by sesquiterpene lactones, which are commonly produced by plants of the daisy family. Ragwort is toxic to humans but only in the unlikely event vast amounts are consumed. ~~Ragwort may also be harmful to humans, particularly where toxic plant juices on hands may contaminate food and snacks. Research undertaken on direct contact of ragwort by hand pulling is limited, but a theoretical risk remains. Research during the 1990s suggested that the risk to human health in the UK through the contamination of staple foods, i.e. grain, milk, eggs and honey, is likely to be insignificant~~

6. This guidance does not seek to eradicate ragwort because as a native plant it is very important for wildlife in the UK. It supports many species of wildlife, including Common broomrape (*Orobanche minor*), 14 species of fungi and many different invertebrates, such as moth caterpillars, thrips, plant bugs, flies, beetles, and mites. With the decline in flowering plant diversity in the countryside, ragwort has assumed an increasing importance as a source of food for generalist nectar feeding insects in the late summer.
7. Ragwort is the food plant of at least 77 species of foliage eating insects, including five 'Red Data Book' and eight 'nationally scarce' species. The most well-known is the cinnabar moth (*Tyria jacobaeae*). At least 30 species of insects are confined to ragwort and some species use the ragwort flowers as territory markers or vantage points to find passing prey or mates. Others are more closely associated with taking ragwort pollen, and more than 170 species have been recorded feeding on ragwort nectar. This important source of insects is exploited by many species of birds and mammals.
8. In many situations ragwort poses a low ~~no~~-threat to horses and other livestock. It is a natural component of many types of unimproved grasslands. It ~~is~~ may be necessary to prevent its spread where it presents a medium to high risk of poisoning horses and livestock or spreading to fields used for the production of forage. A control policy should be put in place where a high and medium risk is identified (see paragraph 17).
9. Ragwort is normally a biennial plant, present as a rosette close to the ground in its first year (see photograph 2, page 13) then growing upwards and flowering during its second year. However, cutting, or topping ragwort may alter the plant's lifecycle and result in it being present as a short-lived perennial. It is a highly successful species and in certain situations it can be difficult to control, particularly where it has not been effectively managed for several years. As a result, it may be necessary to use a variety of control methods to reduce populations over extended periods of time, if the risk is deemed to be problematic.

Legal Framework

10. The Weeds Act 1959 gives Welsh Ministers the statutory powers of enforcement. If satisfied that injurious weeds are growing upon any land, Welsh Ministers may serve a notice requiring the occupier to act in order to prevent the spread of those weeds. Any unreasonable failure to comply with a notice is an offence. The Weeds Act applies to¹:
 - Common ragwort (*Senecio jacobaea*);
 - Spear thistle (*Cirsium vulgare*);
 - Creeping or field thistle (*Cirsium arvense*);
 - Curled dock (*Rumex crispus*);

¹ Welsh Ministers are empowered to add to this list as necessary.

- Broad-leaved dock (*Rumex obtusifolius*).
11. The Rural Inspectorate in Wales (RIW) gives priority to investigating complaints where there is a risk of injurious (harmful) weeds spreading to land used for grazing horses or livestock, land used for forage production and other agricultural activities.
 12. The provisions of the Weeds Act do not apply to other ragwort species. Other species of ragwort, e.g., Marsh ragwort (*Senecio aquaticus*), Hoary ragwort (*Senecio erucifolius*) and Oxford ragwort (*Senecio squalidus*) are less common but may still need to be controlled as they may be equally toxic to horses or other livestock.
 13. Some species of ragwort are relatively rare, such as Fen ragwort (*Senecio paludosus*), which is a protected species and has been reintroduced into several sites in England. Welsh ragwort (*Senecio cambrensis*) (also sometimes known as Welsh groundsel) is restricted entirely to North Wales. Where ragwort is identified on land protected through environmental or ecological designation, or by means of other land management agreements, the required obligations and restrictions must also be fully considered and discussed with the appropriate authorities (**see Appendix 4**) before control action is initiated.

Responsibilities to Control the Spread of Ragwort

14. Responsibility to prevent and control the spread of ragwort rests with the occupier of the land on which the ragwort is growing. This responsibility applies to ragwort and the other weeds specified under the Weeds Act 1959. When seeking to control its spread it is expected all landowners, occupiers and managers will co-operate and take a collective responsibility for ensuring the effective control of its spread is achieved.
15. The most effective way to prevent the spread of ragwort is to preclude its establishment through strategic management rather than last minute control. In managed grasslands, good agricultural management will minimise the chance of ragwort establishing itself. In amenity areas, highway verges, railway land and woodland, any activities causing disturbance to the soil and the loss of ground cover may increase the risk of ragwort establishment as it is a pioneer plant.
16. Occupiers of all land including uncultivated land derelict and waste areas, should be vigilant for the presence of ragwort. Action to prevent its spread ~~must~~ **may** be ~~taken~~ **necessary** where ragwort poses a high risk to land used for grazing, or forage production. Detection at an early stage will enable any potential problems to be more easily, safely, and economically dealt with. The implementation of a control strategy will ensure that persistent problems are dealt with in a timely manner.

Assessing the Risk Posed by Ragwort

17. Where land is affected by ragwort the owner/occupier should make an assessment to determine whether action should be taken to prevent the spread of ragwort to neighbouring land by establishing the risk posed to grazing animals or forage production. The following three risk categories are provided as *guidelines* for assessing risk:

High Risk:

- Ragwort is present ~~and flowering /seeding~~ within 50m of land used for grazing by horses and other animals or land used for feed/forage production.

Medium Risk:

- Ragwort is present within 50m to 100m of land used for grazing by horses and other animals or land used for feed/forage production.

Low Risk:

- Ragwort or the land on which it is present is more than 100m from land used for grazing by horses and other animals or land used for feed/forage production.

18. The distances given above are guidelines *only* and when assessing risk, account should also be taken of particular local circumstances and other relevant factors such as prevailing winds, topography, shelter belts, natural barriers, and vegetation cover of receiving land. Whether or not the density of ragwort is high or low, the risk factor will be determined by the likelihood of it spreading to land used for grazing and/or feed/forage production.

Action to be taken by owners of livestock **and horses**

19. Livestock **and horse** owners are **legally** responsible for the welfare of their animals, and they should satisfy themselves their ~~stock is animals are~~ not exposed to the risk of ragwort poisoning. In particular they should:
- inspect grazing land regularly for ragwort (**see Appendix 1** for identification hints and tips) when animals are present.
 - ensure pastures are maintained in good condition and are not under or overgrazed (**see Appendix 2**).
 - remove ragwort plants where necessary using an appropriate control technique (**see Appendix 3**) taking account of the status of the land (**see Appendix 4**).
 - move stock to ragwort free land where practicable, **and, in the case of livestock, by** taking into account the experience of stockmen on the likelihood that particular animals will ingest ragwort (**see Appendix 4**).
 - dispose of ragwort plants in an approved manner (**see Appendix 5**).

- follow safety guidelines (see **Appendix 6**).

Action to be taken by Producers of Conserved Forage

20. Producers of conserved forage should:

- inspect land regularly for ragwort (see **Appendix 1** for identification hints and tips) in the growing season.
- ensure managed grassland is maintained in good condition (see **Appendix 2**).
- remove ragwort plants using an appropriate control technique (see **Appendix 3**) taking account of the status of the land (see **Appendix 4**).
- dispose of ragwort plants in an approved manner (see **Appendix 5**).
- follow safety guidelines (see **Appendix 6**).

Action to be taken by other Owners/Occupiers of Land

21. Owners/Occupiers should:

- identify land on which ragwort is present (see **Appendix 1** for identification hints and tips).
- notify neighbouring land occupiers where there is a risk of ragwort poisoning.
- review the risk of spread to land used for grazing or conserved forage production on a six-monthly basis.
- ensure managed grassland is maintained in a good condition (see **Appendix 2**).
- where appropriate (and safe to do so) avoid removing ground cover in amenity areas, roadside verges and on railway land unless provisions are made for the appearance of ragwort.
- pay particular attention to areas of bare/disturbed land **as ragwort is a pioneer species**.
- Where a **high risk** is identified:
 - **consider taking ~~take~~ immediate** action to control the spread of ragwort using an appropriate control technique (see **Appendix 3**) taking account of the status of the land (see **Appendix 4**).

- where a **medium risk** is identified:
 - establish a control policy to ensure that where a change from a medium to a high risk of spread can be anticipated, it is identified and dealt with, **where needed**, in a timely and effective manner using appropriate control techniques (**see Appendix 3**) taking account of the status of the land (**see Appendix 4**).
- where a **low risk** is identified:
 - no immediate action is required (**see paragraph 22**);
 - dispose of ragwort plants in an approved manner (**see Appendix 5**);
- follow safety guidelines (**see Appendix 6**);
- monitor the impact of clearance action to ensure its effectiveness for up to six months or to the end of the growing season if sooner.

Control Methods

22. A summary of possible control methods is shown in **Table 1**. In most cases a single control method or single application will not be completely effective, and consideration should be given to combining more than one control/management technique. Effective control may not be achieved in one season, particularly where there is a dense infestation, which has been inappropriately managed in the past. (Cost categories shown in the table do not provide a reliable guide to costs where linear land such as roads and highways is concerned). Control techniques are considered in more detail in **Appendix 3**.

Control Policies

23. Where a medium or high risk has been identified, owners/occupiers and managers of land (including private and public land, roads, waterways, railways, conservation areas, amenity areas and land awaiting development), should put in place and implement a ragwort control policy. Such policies should take account of the need for vegetation management, including weed control, and identify ragwort as a specific weed that **should may need to** be controlled. The nature conservation status and biodiversity attributes of the land, and the contribution to them made by the ragwort, must also be considered when determining a policy.

24. When considering what is practical, owners/occupiers/managers of land should balance the risk against the time and cost of taking the action and consider whether the cost of control is proportionate to that risk. For some categories of land, e.g., railway land and trunk roads, the size and nature of the estate makes frequent inspections difficult. However, the relevant area managers should be encouraged to build up records of ragwort outbreaks

using information gathered from site inspections, ad-hoc visits and public observations; to help formulate a strategy for targeted action with the initial focus on ragwort 'hot-spots' where the potential risk posed to grazing animals or forage production is assessed as being high. Where ragwort is present in areas that will cause a high risk (**see paragraph 17**), ~~during the flowering/seeding season,~~ or a medium risk anticipated to become a high risk, there should be a presumption that action to manage the spread of ragwort will be necessary, even where the cost of control is potentially high.

25. A control policy should encourage collaboration and co-operation with neighbours to achieve effective control of the spread of ragwort. Wherever practicable control action should be taken at early stages of growth in order to reduce the risk of seed dispersal and thereby achieve more effective long-term control.
26. Where a low risk is identified (**see paragraph 17**) but the presence of ragwort is likely to present a risk in the future, contingency plans should be prepared for its control. Where there is no immediate risk the presence of ragwort should be recorded, and the situation should be monitored on a six-monthly basis to ensure that the risk is reassessed should circumstances change.

Local control strategies

27. At local levels, it may be useful for those responsible for the management of the land ~~and of~~ adjacent land, and those with a statutory or advisory remit for nature conservation and animal welfare, to get together to form a Local Ragwort Strategy Group. These groups may be particularly effective in areas where there is a conservation and wildlife interest and where ragwort management is a difficult issue. As well as considering the wider biodiversity interests being sustained by the ragwort, attention will need to be given to maintaining populations of native fauna which feed on the plant, and which may assist in the control process. Such groups could agree a way forward on ragwort control which would be endorsed by all parties.
28. The UK Government have produced a range of guidance on the Weeds Act (**see Appendix 8**), and these are also available online. Technical advice and advice on ragwort control is also available from many organisations (**see Appendix 9**).

Advice

29. Advice may also be available from organisations which are responsible for the management of land in their ownership and/or control i.e., the Welsh Government Transport Directorate, Local Highways Authority, Network Rail, ~~British Waterways, Canal and Rivers Trust, Countryside Council for Wales (CCW),~~ Natural Resources Wales (NRW), Cadw (Welsh Historic Monuments), Ministry of Defence and Local Authorities (**see Appendix 7**).

Enforcement

30. Efforts to control the spread of ragwort should be targeted at sites where there is a medium or high risk that spread will adversely affect horses and other grazing animals, the production of feed and forage or other agricultural activities.

~~Control of ragwort is not only a requirement under the Weeds Act 1959 but is also a requirement under Cross Compliance, which is an EU requirement setting out standards that farmers have to meet in order to receive the Single Farm Payment. In these circumstances, action by the owner or occupier of the land would be enforced under the Weeds Act 1959. It could also be a breach of Cross Compliance which requires that land is kept in Good Agricultural and Environment Condition. The control of ragwort is dealt with in the category 'Under Grazing and Under Management'. Failure to take action may result in a notice being served under the Weeds Act 1959. Additionally, it would be regarded as an intentional breach of Cross Compliance and YOU RISK LOSING SOME OR ALL OF YOUR PAYMENT.~~

31. ~~For land not covered under the Single Farm Payment scheme, enforcement actions can be taken under the Weeds Act 1959.~~ Where a potential problem is identified contact should first be made with the owner/occupier or relevant body responsible for the land on which the ragwort is growing, in an attempt to resolve the matter informally. If this approach fails, a complaint can be made to the Rural Inspectorate in Wales (~~complaint form attached at page 51~~). ~~The complaint form is available on the Welsh Government website (<https://www.gov.wales/common-ragwort-code-practice>).~~ Advice can also be obtained from the Plant Health and Environmental Protection Branch of the Welsh Government (**see appendix 7**). Organisations, which control or own land are listed in **Table 2**.

Table 1. Summary of control methods

Method	Labour required	Cost	Prevention of flowering	Success of control - long term	Grazing removal period (days)	Treatments required per year	Repeat time scale (years)	Optimum time of treatment	Suitable for large areas	Suitable for high ragwort infestations	Remarks
Cutting	*	*	**	*	0(1)	1-2	1	F	***	***	Emergency treatment to prevent seeding. It is essential to cut before seed heads are mature & must be followed with a control technique. Where animals have access to the land cuttings should be removed immediately.
Levering out	***	*	**	**	0(1)	1-2	1	F	*	*	Tools available for digging up plants. Best results when soil is wet. Very dependent on spotting plants, some may be missed requiring further treatment. Where animals have access to the land cuttings should be removed immediately.
Herbicide citronella oil derived product (3)	***	***	***	***	7(2)	1-2	1	R or F	*	*	Very dependent on spotting plants, resulting in some being missed. Large plants may need respraying two weeks later. Will control broad-leaved plants.
Herbicide selective spraying (3)	*	**	***	***	21(2)	1-2	1	R	***	***	Most products will kill other broad-leaved plants sprayed.
Herbicide spot treatment (3)	***	**	***	***	21(2)	1-2	1	R or F	***	*	Very dependent on spotting plants, some may be missed requiring further treatment.
Herbicide weed wipes (3)	*	**	**	**	21(2)	1-2	1	F	***	***	Only taller ragwort plants will be affected.
Pulling by hand	***	*	***	**	0(1)	2	1	F	**	*	Gloves must be worn. Best results when soil is wet. Very dependent on spotting plants, some may be missed requiring further treatment. Where animals have access to the land cuttings should be removed immediately.
Pulling by machine	*	**	***	**	0(1)	2	1	F	***	***	Selects plants for pulling on height difference & leaves shorter plants. Where animals have access to the land cuttings should be removed immediately.

Key: * Low ** Medium *** High: R – When rosettes start growing; F – early summer before flower heads mature;
 (1) – Provided ragwort cuttings are removed; (2) These timings are only a guide – follow the manufacturer’s guidelines; (3) Always follow the manufacturer’s guidelines.

For further advice on grazing removal periods, refer to **paragraph 23** and **24** of **Appendix 3**.

For a list of suitably qualified spray contractors, contact the National Association of Agricultural Contractors (NAAC). Refer to **Appendix 9** for details.

Table 2. Organisations that own and/or control land

Location	Owner/Occupier
Private & commercial property & land & private roads	Owner/Occupier
Agricultural land & land used for livestock other than animals kept for non-agricultural business or recreational purposes	Owner/Occupier
Motorways & Trunk Roads	WG Transport Directorate or relevant Trunk Road Agency
All other public roads	Local Roads Authority
Railway land	Network Rail
Canals & Towpaths	British Waterways Canal and Rivers Trust
Site of Special Scientific Interest (SSSI)	CGW-NRW/Owner/Occupier
National Nature Reserves	CGW-NRW/Owner/Occupier
Local Nature Reserves	Local Authority/Occupier
Common Areas/Common land	Local Authority/Owner/ Occupier
Ministry of Defence land	Ministry of Defence
Development land	Owner/Occupier
Local Authority land	Local Authority
Private Woodland/Forestry	Owner/Occupier
National Trust Land	National Trust
Welsh Government Woodland Estate	Forestry Commission Wales NRW

Where, having been requested to do so, the owner/occupier/relevant body fails to take any action to prevent the spread of ragwort or fails to demonstrate compliance with this Code of Practice, the Rural Inspectorate in Wales should be notified (**see appendix 7**).

Appendix 1

BIOLOGY AND IDENTIFICATION

Introduction



Photograph 1: Common ragwort flowering in August.

1. Common ragwort (*Senecio jacobaea*) is an erect plant usually 30-90cm high but may exceed 100cm. The stems are tough and often tinged purple-red the base, but brighter green and branched above the middle. A rosette of basal leaves usually dies before flowering but the stem leaves persist. They are deeply dissected, with irregular, jagged-edged lobes. All the leaves are dark green and rather tough and may be sparsely hairy on the lower side. The flower head is a conspicuous, large, flat-topped head of densely packed bright yellow flowers. The seeds are borne singly and have a downy appendage (like dandelion seeds) making them readily dispersible, and able to fly easily in the wind. Once in the soil the seeds can lie dormant for several years before germinating.

2. Common ragwort is normally a biennial plant with a basal rosette in the first year, and a tall flowering stem in its second year. However, if flowering is suppressed by annual cutting it can behave as a short-lived perennial (**see paragraph 3**). Ragwort will usually establish a rosette of basal leaves during its first year of growth and will overwinter in this way (**see photograph 2** for typical variability in appearance). During the second year, the rosette sends up a single leafy stem, up to one metre in height, which is unbranched and produces numerous flower heads at the top (**see photograph 1**). Flowering usually occurs from June until late October after which the plant dies. Occasionally, plants can be seen flowering in winter and early spring.



Photograph 2: The variability of ragwort basal rosettes.

3. Common ragwort can also behave as a perennial (flowering every year) after damage to the crown such as cutting, grazing, hoof damage, damage by machinery and following incomplete/ineffective hand pulling in dry weather. It can

also remain in the rosette stage for several years as on amenity grassland where intensive cutting regimes are usual practice.

Distribution



Photograph 3: High density of ragwort on unmanaged land.

4. Common ragwort is widespread throughout the UK and can be found on wasteland, development land, meadows, pastures, sand dunes, roadside verges, railway land, amenity land, conservation areas, set-aside, woodland, and grazing land. Poor quality and poorly managed horse pastures are particularly susceptible to high densities of ragwort.

Habitat

5. Common ragwort can be found over a large range of soil types (although it prefers freely drained soils), climatic conditions, and can be characteristic of badly managed grasslands, where trampling breaks the sward, where patches of turf have died in drought, or in areas of over/under grazing. However, well-managed, dry, acid, or calcareous grasslands may naturally contain ragwort. Disturbances to grass verges, embankments, woodland areas leading to open soil, as well as sand-dunes, are most favourable conditions for seedling establishment as it is a pioneer plant.

Other Species of Ragwort

6. Whilst only the more frequently found Common ragwort is subject to the provisions of the Weeds Act, there are other members of the same native species genus which may cause some identification problems:
 - a. **Hoary ragwort** (*Senecio erucifolius*) occurs mainly on roadsides, semi-natural meadows, and field boundaries.
 - b. **Oxford ragwort** (*Senecio squalidus*) grows widely on roadsides, railway land, old walls, and unmanaged land.
 - c. **Broad-leaved ragwort** (*Senecio fluviatilis*) is similar to Fen Ragwort and is found in fens and by streams.
 - d. **Common groundsel** (*Senecio vulgaris*) is abundant on arable land and wasteland.
 - e. **Narrow leaved ragwort** (*Senecio inaequidens*) is a new alien arrival, looking like a large woody groundsel and recently establishing on local waste ground. Possibly starting to spread.
 - f. **Silver ragwort** (*Senecio cineraria*) is a garden escape occurring on sea cliffs, beaches, and wasteland.

- g. **Sticky groundsel** (*Senecio viscosus*) is locally common on beaches, wastelands and railways.



Photograph 4: Marsh ragwort growing in a wet habitat with rushes.

- h. **Marsh ragwort** (*Senecio aquaticus*) is locally abundant in wet areas of fields, ditches, riverbanks and marshes often with an unkempt appearance. The flowers which emerge in June, July and August are larger and much less densely clustered than those of common ragwort. A further distinguishing feature is the rounded ends to the leaves.

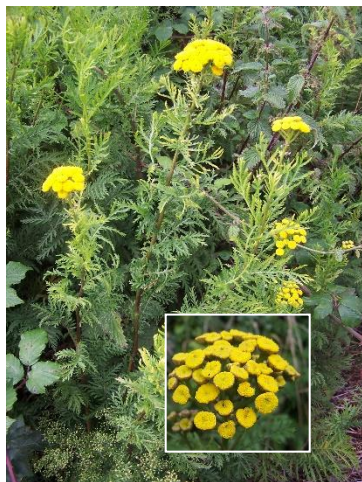
Rare Ragwort Species

7. **Welsh ragwort** (*Senecio cambrensis*) (also sometimes known as Welsh groundsel) is currently restricted entirely to North Wales. It is a recently evolved plant which arose suddenly because of hybridization between two related species.

Fen ragwort (*Senecio paludosus*) is a very rare British native, previously extinct but re-introduced in fen sites in England. It is protected under the Wildlife & Countryside Act 1981.

Ragwort look-alike plants

8. There are some other plant species which may look like Common ragwort:



Photograph 5: Tansy.

Tansy (*Tanacetum vulgare*) is a perennial found widely in hedgerows and waste places, reaching a height of 60-100cm. It has erect, angular, leafy stems, with alternate leaves which are much cut into. Flowering occurs in August and September and has heads of round, flat, dull yellow flowers which grow in clusters and have a peculiar odour.

Yellow Loosestrife (*Lysimachia vulgaris*) is a creeping perennial which can grow up to 100cm and forms large dense patches in moist areas such as ditches, marshes, roadsides, stream banks, pond margins and open woodland. The bright yellow flowers are bunched together in terminal spikes.



Photograph 7: St John's Wort

St John's Wort (*Hypericum maculatum*) is an erect perennial that grows 25-50cm tall, often with black glands on the leaves and petals. It is usually found in grassy moist places, such as hedgerows and wet meadows. The bright yellow flowers emerge from June through to September.



Photograph 6: Yellow Loosestrife.

Goldenrod (*Solidago virgaurea*) is easily recognised by its golden yellow flower heads forming tight cylindrical panicles in late summer/ early autumn. It has slender stems, with alternate linear to lanceolate leaves, and grows between 60 -100cm high.



Photograph 8: Hawkweed spp.



Photograph 8: Goldenrod.

Hawkweed spp. (*Hieracium* spp.) are creeping perennials with fibrous roots, creeping stolons, milky sap and showy yellow dandelion-like flowers. Found mainly on fields, pastures and meadows, roadsides and disturbed areas.

Also:

- Common Cat's Ear (*Hypochaeris radicata*)
- Common Fleabane (*Pulicaria dysenterica*)
- Field Fleawort (*Tephroses integrifolia*)
- Heath Groundsel (*Senecio sylvaticus*)
- Smooth Hawk's Beard (*Crepis capillaris*)

Appendix 2

GRASSLAND MANAGEMENT

Pastures

1. Pasture management plays a crucial role in preventing the establishment and spread of ragwort. It is not possible in guidance of this nature to provide comprehensive information on pasture management. Best practice varies according to specific circumstances, e.g., in relation to managed grassland or unimproved semi-natural grassland.
2. Horses are very selective grazers and will eat down some areas until they are almost bare. Coarser grasses can dominate, particularly in those areas where horses dung or urinate, and the grass is left to seed creating a very uneven sward. Bare patches can develop resulting in ideal conditions for the establishment of ragwort. Horse pastures in particular must be very carefully managed to prevent this. Leaving horses out in wet winter conditions can exacerbate the situation causing the ground to become poached (i.e., churning up of land by animals), damaging the grass sward and providing an opportunity for ragwort to establish in the bare ground.
3. To maintain horse pasture in good condition:
 - stocking densities should be appropriate to the size of grazing area and available herbage;
 - dung should be collected and removed regularly;
 - plants poisonous to livestock should not be allowed to proliferate;
 - prevent poaching by **limiting time spent by keeping horses on off** fields in wet conditions, wherever practicable and maintain drainage;
 - remove **any stale, dry fodder such as hay.**
4. Agriculturally improved grassland should be managed to achieve a dense ground cover of grasses.
 - Nutrient and pH levels should be maintained through the appropriate application of fertilisers and lime (application rates should be determined by a soil analysis);
 - Appropriate stocking levels should be maintained to avoid under and overgrazing;
 - Where pastures deteriorate to such an extent that other methods do little to improve the sward cover, renovation through reseeding may be necessary;
 - Poaching should be minimised to prevent sward damage.

5. Where grassland is being managed for its ecological value, but is also being used for grazing, different constraints will apply. Here it will be necessary to keep the population of weeds designated under the Weeds Act to a minimum level consistent with the ecological requirements of the site, the species of conservation significance living there, and the welfare of the grazing animals.

Semi-natural and uncultivated areas

6. Wherever possible uncultivated land with low levels of ragwort should remain undisturbed. Where an open sward is maintained and ragwort can be expected to be a natural component of grassland, other control methods might be necessary to prevent ragwort becoming a problem.
7. Prior to undertaking any agricultural intensification projects on semi-natural land you must first enquire with Welsh Government as works of this nature need to be considered under the 'Environmental Impact Assessment (Agriculture) (Wales) Regulations 2017'². ~~Land types covered include unimproved grassland, heathland, moorland, scrubland and wetlands. Semi-natural land includes land which contains less than 25% improved agriculture grass species and/ or white clover. Agricultural intensification may projects include, but are not limited to, sward cultivation, direct drilling, soil spreading, new drainage, modification of existing drainage, reclamation, increased application of fertilisers or pesticides and increased grazing by livestock. Anyone planning such work should contact the Environmental Impact Assessment helpline (see Appendix 7). Enquires should be made to the EIA.Unit@gov.wales.~~

² EIA Agriculture a4 document (gov.wales)

Appendix 3

CONTROL TECHNIQUES

Introduction

1. Where the risk ragwort will spread is such that control action is required or where ragwort is present on grazing land/land used for the preparation of conserved forage, three primary control methods are available:
 - cultural
 - chemical
 - biological
2. Each method can be employed in a number of ways depending on the location, the population density, and the extent of control required. In many cases effective control will only be possible if a combination of methods is employed. Repeat treatment over several seasons may also be required to deal with long established populations of ragwort. The decision tree in **Figure 1** will assist with selecting the most appropriate method of control.
3. On managed grassland or other pasture, land management techniques have an important role to play in controlling the spread of ragwort by preventing its establishment (**see Appendix 2**).
4. All grazing animals are susceptible to the toxic effects of ragwort and, therefore, the deliberate control of ragwort by grazing horses, sheep, goats or other livestock is not recommended on animal welfare grounds.

Cultural Control Techniques

5. Several cultural methods can be used to prevent the spread of ragwort including the general avoidance of bare ground areas, pulling/levering, cutting, and the use of burners. **Figure 2** will assist with selecting the most appropriate method of cultural control.

Avoiding bare ground

6. Bare ground areas resulting from heavy poaching and/or overstocking are to be avoided where at all possible. This can be achieved by ~~removing~~ limiting ~~time spent by~~ animals on land ~~ground~~ to prevent poaching (~~i.e. churning up of land by animals~~) of land in wet weather conditions, particularly December to March, and by avoiding over grazing of land at other times. Control of rabbit populations may also be necessary to maintain ground cover.

Pulling and levering

7. Pulling or levering up plants can prevent seed spread and can give long-term control, although any root fragments not removed can produce weak growth. Hand pulling is appropriate for smaller areas but for larger areas the use of machine pulling should be considered. Machine pulling requires a height

difference between the ragwort and other plants and is only suitable on certain soil types and topographies. Various hand tools are available for levering. Best results are achieved when the soil is damp and before ragwort has seeded.

8. Ragwort is an injurious (harmful) weed and consequently all operatives involved in handling the plant must have received the appropriate instruction for the task and must be supplied with the appropriate type of personal protective equipment (**see Appendix 6**).
9. A combination of manual/mechanical pulling or levering and reducing disturbance to soil can be effective against ragwort if repeated over a number of years, without having to resort to herbicide use. Ragwort, which has been either manually or mechanically pulled or levered, should be disposed of safely (**see Appendix 5**) to prevent re-seeding.

Cutting

10. Cutting is a control method of last resort and should only be used to reduce seed production and dispersal where other more effective control methods cannot be used. Cutting stimulates growth and plants subsequently re-flower later in the season. Cutting and stem removal at the early flowering stage reduces seed production but does not destroy the plant, turning it from a biennial into a perennial habit and therefore repeat treatments will be required to prevent the ragwort from seeding.
11. Cut plants left lying in the field are a serious risk to grazing animals, as they remain toxic, are more likely to be eaten as they lose their bitter taste and may still set seed. Plants must be removed and safely disposed of (**see Appendix 5**) before returning grazing animals to the field.

Burners

12. Spot burners (handheld flame guns) can be used for plants at the rosette stage. Success can be variable; ranging from 93% kill of ragwort seeding plants to rapid re-growth occurring. Consideration will need to be given to the potential damage that may be done to surrounding vegetation and the risks of fire. Operator safety will also need to be considered carefully. In most circumstances the use of spot burners is unlikely to be suitable except on hard surfaces and paved areas. Where the use of spot burners is a preferred method of control, a suitable and sufficient risk assessment must be undertaken prior to use.

Figure 1. Decision Tree to Assist Selecting the Most Appropriate Control Method

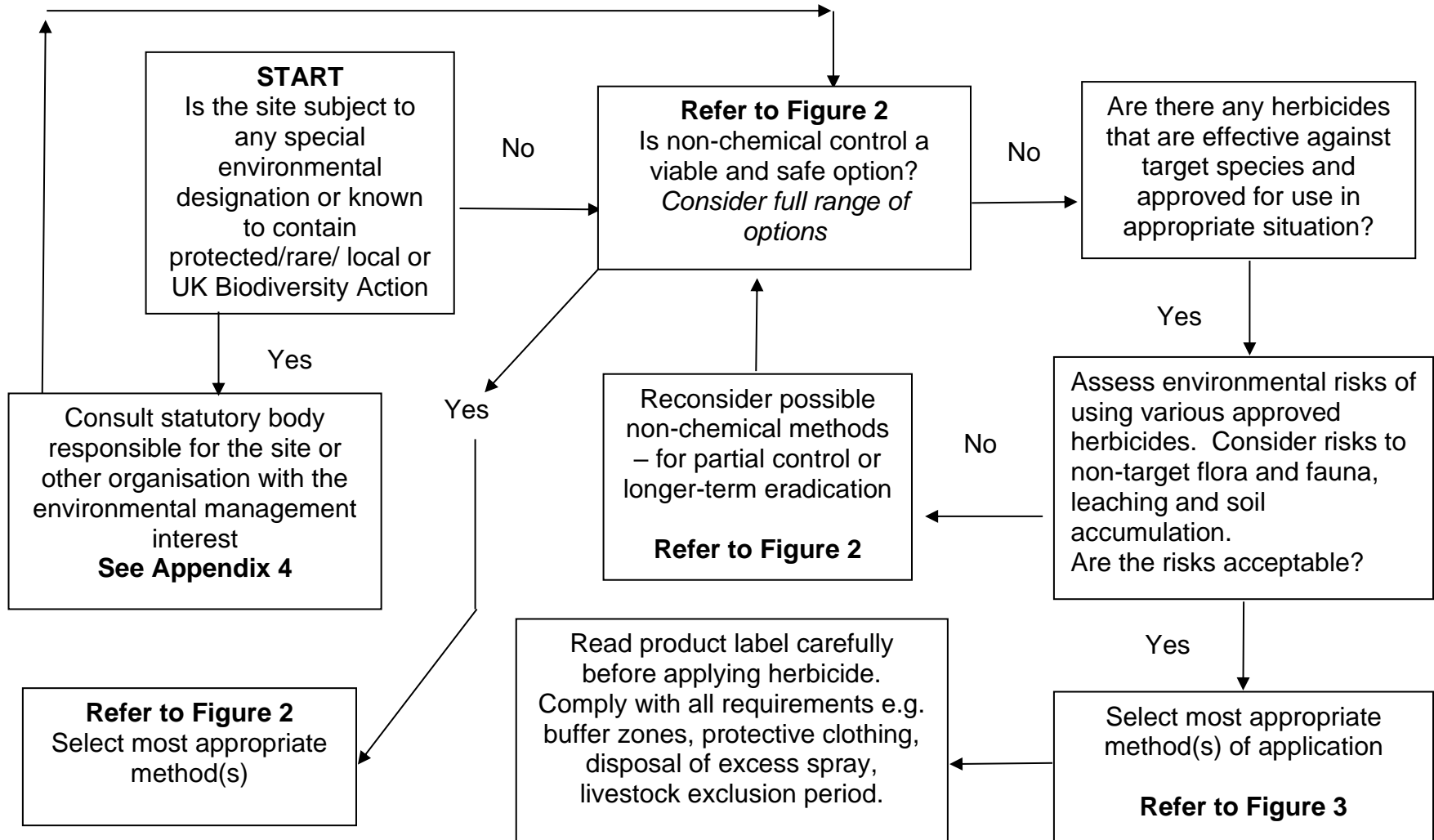
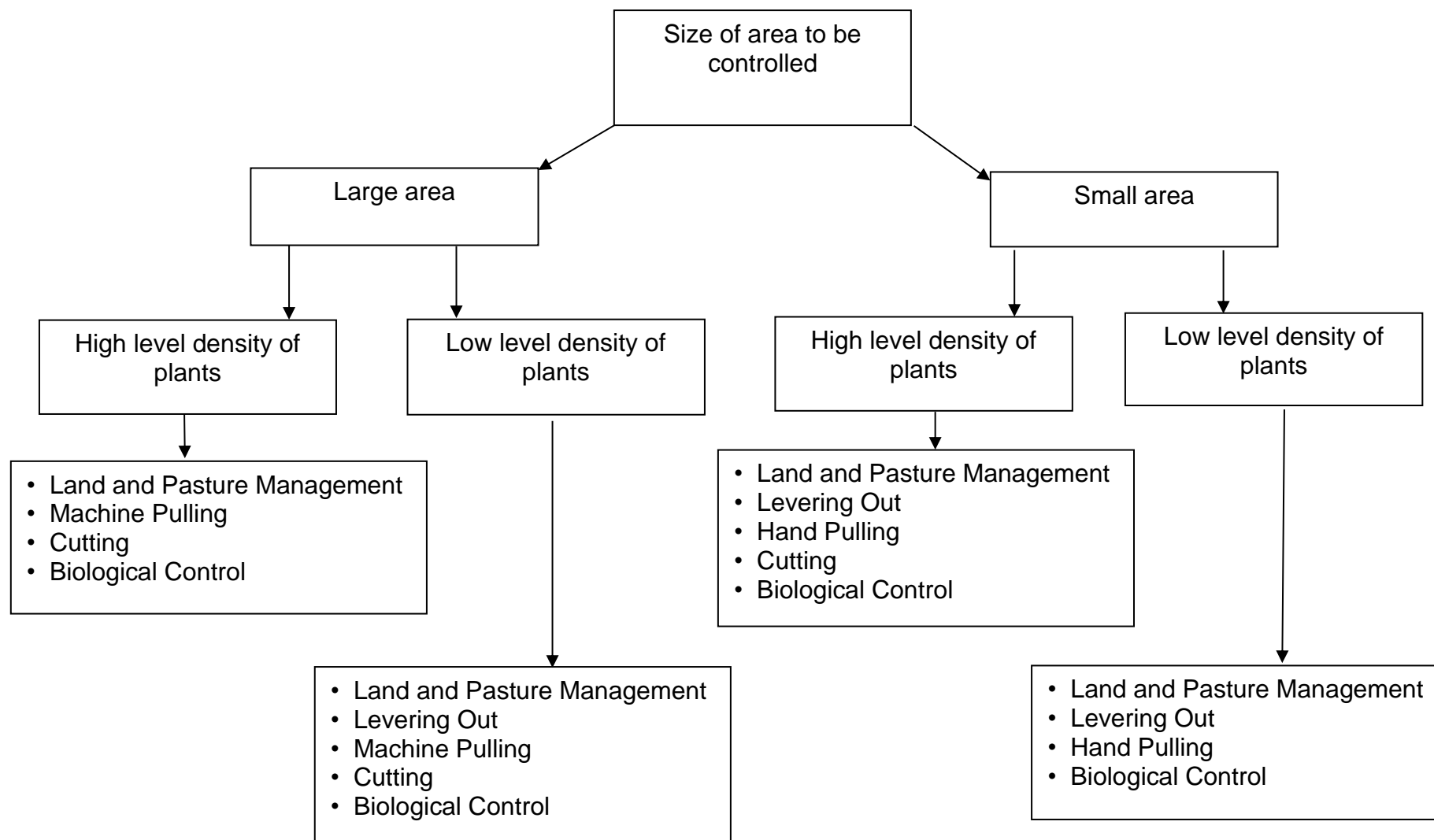


Figure 2. Selecting the Most Appropriate Cultural and Biological Control According to Size of Area and Density of Plants



Chemical Control Techniques

Use of herbicides

13. Those who use, or cause or permit others to apply, professional-use herbicides are subject to a number of legal requirements which includes training, equipment testing, and taking all reasonable precautions to protect human health and the environment in accordance with on-label requirements and following best practice, including Integrated Pest Management (IPM) approaches.
14. Herbicides must only be used after a risk assessment has been completed. This must include consideration of any potential effects on the environment and on human and animal health. Where a herbicide cannot be used safely an alternative control method should be used. Risk assessments should also consider the likely ecological impacts of taking no action, which can sometimes outweigh any negative effects of an herbicide treatment. Widespread spraying with herbicide is not recommended. Use of herbicide should be a last resort and carefully targeted.
15. Herbicides can be a time-efficient and effective method of preventing the spread of ragwort. Total control cannot be guaranteed with one application. However, an annual chemical control programme will generally prevent the spread of ragwort.
16. ~~Only herbicides and uses approved under the Control of Pesticides Regulations 1986 (as amended) or the Plant Protection Products Regulation can legally be sold, supplied, stored, advertised and used.~~ Before any herbicide product can be used, sold, supplied or stored it must be authorised for use. ~~Current lists of approved products can be found on the Chemicals Regulation Directorate (CRD) website at www.pesticides.gov.uk.~~ The pesticide database webpages on the Health and Safety Executive (HSE) webpages can be used to search for information on Plant Protection Products authorised for use in Great Britain (<https://secure.pesticides.gov.uk/pestreg>). All herbicides must have an appropriate standard or ~~Specific~~ Off-Label Approval (~~SOLA~~) (Extension of Authorisation for Minor Use(EAMU)) for use in a relevant situation. It is important to keep records of any herbicide used.
17. Always read the product label before using an herbicide and comply with all statutory conditions. Where a herbicide is to be applied under the terms of an off-label approval (EAMU), users must obtain and read the ~~relevant Notice of Approval (published by CRD)~~ text of the Extension of Authorisation before commencing use (<https://secure.pesticides.gov.uk/offlabels/search.asp>). Users should be aware that pesticides used under an off-label approval are done so at the user's own risk and may not be as effective.
18. Because herbicides are not equally effective at all stages of plant growth, repeated treatments at different times of year ~~are~~ **may be** recommended for optimum control. However, the time of year an herbicide is applied might be constrained by legal requirements stipulated on the product label. Decisions should take into account the efficacy of the herbicide against the target

species (e.g. many herbicides are more effective when applied to actively growing weeds) and any probable impacts of different timings on other non-target species at that site.

- ~~19. In deciding which chemical to use, it will be helpful to refer to the Environmental Information sheets that are being produced for all pesticide products under the Voluntary Initiative, a programme of measures agreed by the pesticide industry with Government to minimise the environmental impact of pesticides. Further details can be found on the Voluntary Initiative website: www.voluntaryinitiative.org.uk. Before buying any pesticide consider whether it is really necessary to control the pest, disease or weed in question and whether there is an alternative to traditional chemical control. In deciding which chemical to use, it will be helpful to refer to the Code of Practice for Using Plant Protection Products.~~

Legal restrictions

20. The Code of Practice for Using Plant Protection Products (produced by DEFRA in 2006 on behalf of England and Wales) is for all professional users of plant protection products in England and Wales in respect of Part III of the Food and Environment Protection Act (FEPA) 1985, and the regulations controlling pesticides, particularly plant protection products, under that part of the Act. The Code of Practice for Suppliers of Pesticides to Agriculture, Horticulture and Forestry (also known as the Yellow Code) gives practical guidance on the storage and transport of pesticides and the obligations on those who sell, supply and store for sale and supply. Both are available from Defra publications (**see Appendix 8**) or online at the ~~CRD HSE~~ website (~~www.hse.gov.uk/pesticides~~) (~~<https://hse.gov.uk/pesticides/using-pesticides/codes-of-practice/index.htm>~~).
- ~~21. The Control of Substances Hazardous to Health (COSHH) Regulations 2002 require that pesticides (including herbicides) should only be used where necessary, and where the benefits significantly outweigh the risks to human health and the environment. The Plant Protection Products (Sustainable Use) Regulations 2012 set out various legal requirements for those who use, supply and advise on Plant Protection Products (PPPs) used for professional use. For users this includes that they have undertaken training and hold a certificate of competence, to take reasonable precautions to protect human health and the environment, an obligation to confine PPP application to the target area, requirements in relation to storage, handling and disposal of PPPs, specific measures to protect water and for the regular inspection of PPP equipment. Non-chemical control options must ~~therefore~~ always be considered, and ~~herbicides~~ PPPs should only be used in situations where alternatives do not exist, or are impractical or likely to be inadequate. (Further information on ~~COSHH~~ the Sustainable Use Regulations is available on the Health and Safety Executive website at www.hse.gov.uk (~~<https://hse.gov.uk/pesticides/using-pesticides/codes-of-practice/guidance-sustainable-use-ppp-regs-2012.htm>~~).~~

Training and certification of spray operators and equipment testing requirements

22. Spraying should only be carried out by a competent person who is suitably trained and qualified, and in accordance with the pesticides and health and safety legislation. No person ~~who was born later than 31 December 1964~~ can use a pesticide approved for agricultural use - unless that person has obtained a recognised Certificate of Competence. **Irrespective of their age, all All** persons who use pesticides as part of a commercial service (i.e., as a contractor on land not in the ownership or occupation of the contractor) must hold a Certificate of Competence, or work under the direct personal supervision of a person who holds such a certificate. Surplus chemicals must be disposed of according to the Code of Practice for using Plant Protection Products and the legislation in force in Wales ~~and England~~ (see **Appendix 8**).
23. **The Sustainable Use Regulations 2012 requires PPP application equipment used for professional products to be tested regularly. This includes all application equipment except knapsacks and hand-held sprayers. The National Sprayer Testing Scheme (NSTS) is the designated as the responsible body for carrying out equipment testing in the UK. More information is available on the NSTS website (<http://www.nsts.org.uk>). Professional users are required to conduct regular calibration and technical checks of PPP application equipment.**

Restrictions on use of pesticides in or near water

24. Regulations made under the Food and Environment Protection Act 1985 control the use of herbicides/pesticides where pollution of water might occur. Further guidance on preventing contamination of surface water and groundwater can be found in the Code of Practice for using Plant Protection Products (see **Appendix 8**).

Livestock and horses

25. Any period of time when animals need to be kept away from the treated area will be specified on the product label. Make sure you follow this instruction.
26. Some poisonous weeds, such as ragwort, can become more attractive to grazing animals after they have been treated with herbicides. It is important to keep horses and livestock out of treated areas until the weeds have died and completely disappeared, **irrespective of** whether ~~or not~~ the product label of the herbicide used says that livestock **and horses** must be kept off the land for a set period.

Environmental restrictions

27. The use of herbicides to control ragwort will affect other plant species within the treated area. Areas protected by legislation, e.g., Sites of Special Scientific Interest (SSSIs), ~~Natura 2000 sites~~ **Special Areas of Conservation, Special Protection Areas** and agri-environment schemes, also restrict the use

of certain chemicals and the relevant authority should be consulted prior to operations (see **Appendix 4**).

Methods of application

28. Efficacy and environmental safety are directly affected by the method of application, which must comply with statutory requirements and the specific conditions of approval set for the pesticide concerned. Effective targeting of herbicides is important, particularly when non-selective herbicides are used. Non-selective, translocated herbicides present the highest risk to non-target plants. The type of herbicide used, and the method of application will be influenced by:

- the extent, distribution, and location of the target species
- height and structure of the target species
- height, structure, and sensitivity of surrounding/adjacent non-target species
- approval and label requirements.

29. Weed wipers provide a method for the targeted treatment of weeds that are taller (at least 10 cm taller) than the associated non-target vegetation. Weed-wipers are available for different scales of operation: from small hand-held wipers to large tractor-mounted equipment.

30. The most widely used type of hand-held sprayer is the knapsack sprayer, which is suitable for spot-treatment of ragwort on small areas and on very rough or steep terrain. Sprayers mounted on tractors or all-terrain vehicles (e.g. quad bikes) may be more suitable for larger areas of relatively even ground but are, by their nature, more indiscriminate in coverage than hand-held sprayers and may not be appropriate for all situations.

Environmental Safety

31. An evaluation of environmental risks is essential wherever herbicides/pesticides are used and should always consider both short and long-term, local and remote effects, impacts on animals as well as plants, and possible indirect effects (e.g., through destruction of nesting sites, deoxygenation of ponds caused by organisms decomposing or dead vegetation).

32. To minimise the effects of herbicides on non-target species;

- use a weed wiper or spot treatment wherever practicable;
- spot treat, if possible, and use a guard on the sprayer lance to target sprays and reduce drift more effectively;

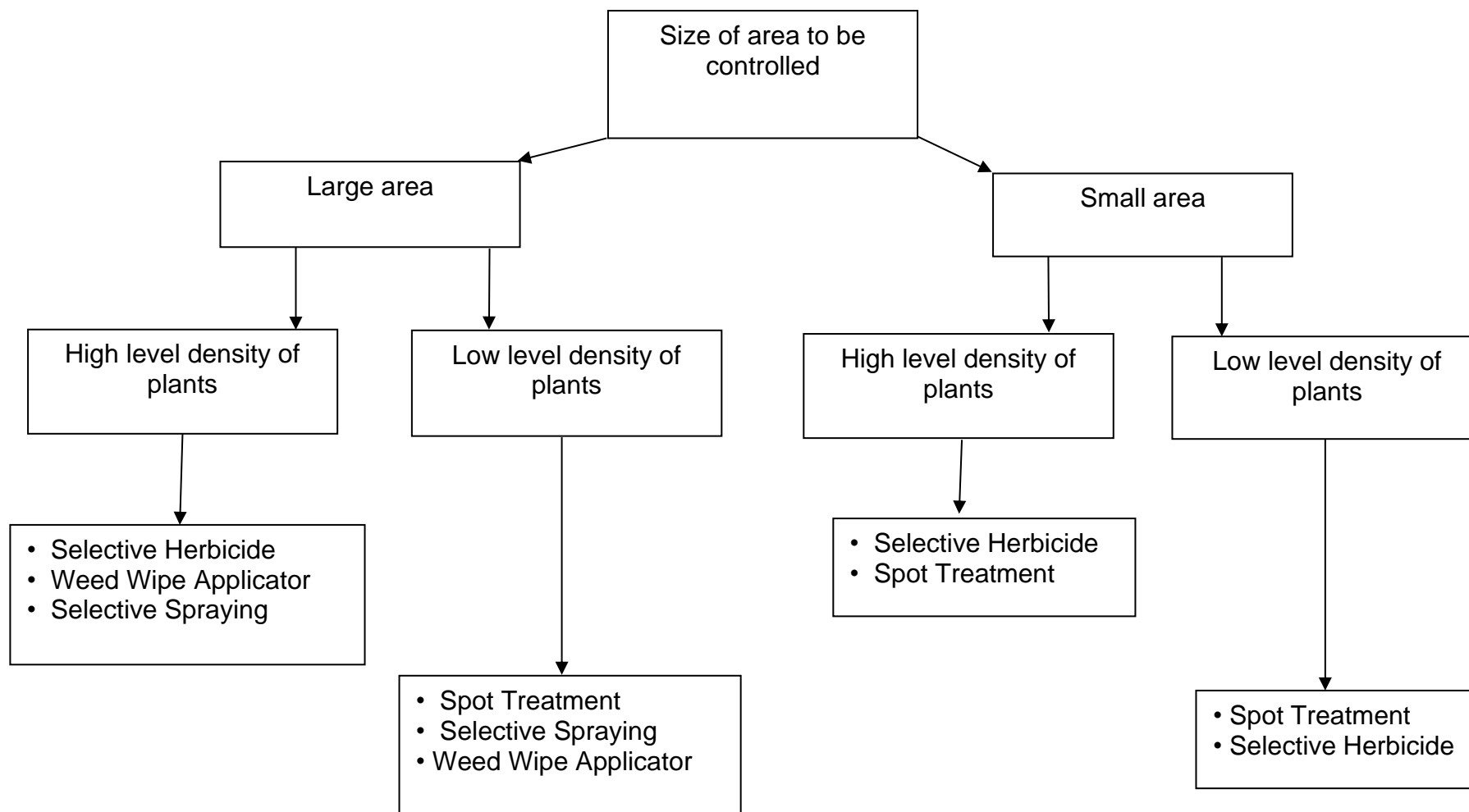
- use a selective herbicide that is less damaging to non-target species;
- leave an unsprayed buffer zone between treated and vulnerable species/habitats;
- ~~avoid fine sprays, use medium-coarse droplet nozzles use appropriately sized droplet nozzles;~~
- keep spray nozzles as close as possible to target plants;
- consider use of low drift nozzles;
- avoid spraying in unsuitable weather, e.g., when wind speed is greater than Beaufort Force 2 or on very calm, warm days.

33. **Figure 3** will assist with selecting the most appropriate method of chemical control.

Biological Control Techniques

34. Biological control is aimed at controlling ragwort by using the plant's natural enemies to lower its density, thereby suppressing ragwort populations, and allowing other plants to re-establish. Many species feed on ragwort including cinnabar moth (*Tyria jacobaea*), ragwort flea beetle (*Longitarsus jacobaea*) and ragwort seedfly (*Pegomya seneciella*). High densities or 'plague levels' of cinnabar moths in particular, can destroy complete ragwort populations. However, the natural spread of these species might not always be as wide-ranging as ragwort. Other potential biological control agents include several fungal pathogens (rust diseases) but none of these significantly reduce ragwort populations, ~~nor have they been widely used in the UK to control ragwort populations to date.~~
35. The introduction of a biological control agent has a potential advantage in areas where chemical/mechanical control is unachievable or undesirable. However, it can be difficult to maintain sufficient predator populations to provide adequate control and may only result in a reduction rather than a control of spread. Biological control is therefore best used as part of a long-term strategy. ~~Biological control by cinnabar moths is not suitable for the control of ragwort on grazing land or land used for forage production.~~ Approval is required from ~~Countryside Council for Wales (CCW)~~ Natural Resources Wales (NRW) before this technique is used within SSSIs, ~~Special Areas of Conservation, Special Protection Areas~~ and other areas protected by environmental or ecological designation. ~~Licenses would be required from NRW before a non-native species was approved for release as a biocontrol agent.~~

Figure 3. Decision Tree to Assist Selecting the Most Appropriate Herbicide Treatment to Size of Area and Level of Density of Plants



Appendix 4

PARTICULAR CATEGORIES OF LAND

Introduction

1. Where land has a special designation and attracts support payments which place conditions on the way the land is managed, or has a specific biodiversity wildlife interest, no action to prevent the spread of ragwort should be taken without the approval of the relevant authority. In the case where an area of land falls within more than one category, broad liaison will be necessary, and all the relevant considerations need to be considered.

Set-aside

2. Land set-aside from agricultural production is a potential source of ragwort and is subject to the provisions of the Weeds Act in the same way as other land. Action may be taken to control ragwort at any time by means of pulling, cutting, spot burning or herbicide.

Organic farming

3. Where land is farmed organically there will be limitations on the control options that can be used. If in any doubt about the standards covering this area farmers should contact their Certification Body. Further advice on practical measures should be obtained from suitably experienced organic consultants.

Agri-environment schemes and agricultural intensification projects

4. ~~Scheme rules for Glastir, Agri-environment schemes include Tir Gofal, Tir Cynnal, the Environmentally Sensitive Areas Scheme, other remnant environmental schemes as well as the forthcoming Glastir scheme~~ Sustainable Farming Scheme and other rural grants and payments should be checked before undertaking any control work. Information is available at <https://www.gov.wales/rural-grants-payments>. ~~Although individual agreements may limit the options for control, control should not be ruled out. Guidance is available from the Rural Payments Divisional Offices (see appendix 7).~~
5. ~~Prior to undertaking any agricultural intensification projects on semi-natural land, you must first enquire with Welsh Government as works of this nature need to be considered under the 'Environmental Impact Assessment (Agriculture) (Wales) Regulations 2017'. Semi-natural land includes land which contains less than 25% improved agriculture grass species and/ or white clover. Agricultural intensification projects include, but are not limited to, cultivation, direct drilling, soil spreading, drainage, modification of existing drainage, reclamation, increased application of fertilisers and increased grazing by livestock. Enquires should be made to the EIA.Unit@gov.wales.~~
6. ~~Injurious weeds are not only considered to be a potentially serious threat to agricultural production but, if allowed to spread into areas of conservation~~

~~interest, may reduce the diversity of species within these sites and cause a deterioration in the value of the landscape.~~

National Nature Reserves, SSSIs, ~~Natura 2000~~, Special Areas of Conservation, Special Protection Areas and other statutorily and non- statutorily designated natural heritage sites

7. Several species of ragwort and closely related species occur as native plants on many statutorily designated natural heritage sites such as National Nature Reserves (NNRs), SSSIs, and ~~Natura 2000 sites, Special Areas of Conservation and Special Protection Areas~~ (including sites that support Red Data Book Listed, Nationally Scarce or ~~Biodiversity Action Plan Priority species-habitats and species listed under section 7 of the Environment (Wales) Act 2016~~). Some species of ragwort are rare. Where management of plant life is crucial to the ecology of designated sites, weed control, including the control of ragwort, may be potentially damaging to the nature conservation interests of the site. In such situations, the ~~Countryside Council for Wales (CCW)-Natural Resources Wales (NRW)~~ **must should** be contacted for further information before proceeding (**see Appendix 7**).
8. It is recommended the approach adopted in the above paragraph should generally apply to non-statutorily designated wildlife sites.

Scheduled monuments

9. Control on or removal from land that is protected as a Scheduled Monument under the Ancient Monuments and Archaeological Areas Act 1979 may also require Scheduled Monument Consent. In such situations, Cadw **must should** be consulted, and advice sought as to the most appropriate method of control (**see Appendix 7**).

Common land and common grazing

10. Common land and common grazing can sometimes be populated by a number of plant species including ragwort. Where ragwort is identified as putting at risk animals grazing on the common or neighbouring land used for grazing and/or feed/forage production, it must be controlled. Responsibility for control lies with the registered owner of the land, grazing committee and/or occupier of the land. As common land and common grazing may also be subject to environmental designation, it may be helpful to refer to **paragraph 6** of this appendix.

Other land used for grazing

11. On land used for grazing horses and other animals, control of ragwort is the responsibility of the occupier (owner or tenant) of the land. The presence of ragwort within a grazing area can pose a high risk to grazing stock, particularly horses, which are highly susceptible to the toxic effects of ingested ragwort.

12. Particular attention must be given to the presence of ragwort seedlings which are less visible than the rosette stage and more likely to be eaten. Where ragwort is identified as posing a **medium or** medium or high risk to animals, suitable control measures should be ~~taken considered~~, or animals removed from the source of risk.

Forage production

13. Grassland conserved for forage production including hay, haylage, silage and crops grown for dried grass can contain ragwort. Ragwort cannot easily or readily be detected once dried. It remains highly toxic and cannot be easily discarded. In its dried form it is more likely to be eaten and poses a higher risk of poisoning to the animal than in the grazing situation. Where ragwort is identified in fields used for feed/forage production suitable control measures **must should** be taken.
14. Any feed or forage that contains ragwort is unsafe to feed to horses and other animals and must be declared 'unfit' as animal feed and be disposed of safely. The Agriculture Act 1970, **and** the Feeding Stuffs Regulations 2000, **the Animal Feed (Hygiene, Sampling etc. and Enforcement) (Wales) Regulations 2016 and The Animal Feed (Composition, Marketing and Use) (Wales) Regulations 2016** govern the sale of animal feed and forage. Regulation 14 **of the 2000 Regulations** makes it an offence to sell any material for use as a feeding stuff that is found, or discovered as a result of analysis, to be unwholesome for or dangerous to any farmed animal, companion animal or human being. Trading Standards should be notified if feedstuffs are found to contain ragwort as an offence may have been committed.

Amenity grassland

15. Amenity grassland, which includes sports grounds, playing fields, village greens and grassed areas around buildings and gardens, are usually **more** intensively managed and would normally pose a low risk of ragwort spreading to grazing land and land used for feed/forage production. However, where land is less intensively managed it can pose a risk if ragwort is allowed to proliferate in areas not frequently cut and/or on the perimeter of the amenity area. In such situations where ragwort poses a high risk of contaminating neighbouring land used for grazing and/or feed/forage production, then effective control measures **must should** be taken to prevent the spread of ragwort. Control methods should take into account public access and safety, and a suitably sufficient risk assessment must be undertaken prior to control.

Highways

16. Ragwort is frequently found growing by the side of roads, whether motorways, trunk roads, other public roads, or private roads. It can pose a serious risk of spreading to grazing land and land used for feed/forage production within the locality. Where ragwort is present on roadside verges and the spread of ragwort poses a high risk to adjacent grazing animals and/or feed/forage production, ~~it must be controlled~~ **appropriate control measures should be**

considered. The nature of a road corridor is such that it can often act as a conduit for the spread of ragwort, regardless of whether the seed source originated within or out with the road boundary.

17. The control of roadside vegetation including ragwort is the responsibility of the Welsh Government Transport Directorate in the case of motorways and trunk roads, and the relevant Local Authority in respect of all other public roads (**see Appendix 7**). Private roads are the responsibility of whoever owns them. Control of ragwort within the boundary of public roads should only be undertaken by appropriately trained and qualified persons. Such persons must have had access to the relevant safety and environmental information to ensure that their specialist work does not compromise the safety of road users or contravene environmental legislation.
18. Particular problems may arise where road improvements or other disturbances of the road verge have occurred, and bare ground is exposed. Where practicable, the existing grass sward can be removed and properly stored before being replaced when the works have been completed, resulting in much less bare ground for ragwort to colonise. Seeding measures should be followed up by several mowings during the first year, promoting the growth of the desired vegetative sward and reducing the growth of ragwort.

Railways

19. Ragwort can be found growing by the side of railway lines and, due to the size and broad spread of the railway network, can pose a risk of contaminating adjacent grazing land and land used for feed/forage production within the locality. Similarly, the number of neighbours surrounding the 30,000-hectare network means that ragwort ~~will undoubtedly can~~ spread on to railway property.
20. The control of vegetation on railway land, including the control of ragwort, is the responsibility of Network Rail and is undertaken to ensure the risks posed to trains, railway personnel and the travelling public are reduced to as low as is reasonably practicable. Ragwort is controlled on a reactive basis, dealing with incidents on a site-specific basis. Weed control on private railway land is the responsibility of whoever owns the land.
21. Where ragwort is present on railway land and the spread of ragwort poses a high risk to grazing animals and/or feed/forage production ~~it must be controlled~~ **appropriate control measures should be considered**. The work is often co-ordinated with other activities to avoid excessive costs and inconvenience to passengers. Due to the potential high risk to personnel working adjacent to railway lines, Network Rail have very strict Health and Safety procedures in place. All operatives must conform to these procedures, to ensure their own safety as well as the safe running of the railway. This may require temporary track closures or other forms of phased working linked with reduced services. Personnel involved must also ensure they do not contravene environmental legislation while undertaking weed clearance works. If there are concerns about ragwort on railway land the first action

should be for discussions to be held with Network Rail to determine what would be a reasonable period for clearance work to be carried out, before making a complaint to the Rural Inspectorate in Wales.

Aquatic areas

22. Land immediately adjacent to water (this includes rivers, streams, brooks, canals, side ponds/side canals, ponds, and reservoirs) can be a source of ragwort, in particular **Marsh ragwort** (*Senecio aquaticus*) which flourishes in damp conditions. Where common ragwort is present on land adjacent to waterways and where its spread poses a high risk to grazing animals including the spread of seeds downstream, and/or feed/forage production, ~~it must be controlled~~ appropriate control measures should be considered. The ~~Food and Environment Protection Act 1985~~ Plant Protection Products (Sustainable Use) Regulations 2012 places a special obligation on all pesticide users to prevent pollution of water. ~~The Environment Agency must be notified prior to use of approved herbicides/ pesticides in or near water.~~ Agreement from Natural Resources Wales is required before using herbicides adjacent (within 5m) to a waterbody or within a waterbody or before using herbicides within a designated site (i.e.: Site of Special Scientific Interest (SSSI), Special Area of Conservation (SAC), Special Protection Area (SPA) or Ramsar site). Downstream and other adjacent riparian owners should also be consulted when pesticides are applied near water.

Woodland and forestry

23. Ragwort in woodland and forestry generally represents a low risk to grazing animals and to feed and forage production. Where ragwort is present, and the spread of ragwort poses a high risk to grazing animals and/or feed/forage production then ~~it should be controlled~~ appropriate control measures should be considered.

Development areas, waste ground, derelict land, and land used for mineral extraction

24. This category includes brown-field sites awaiting development, abandoned land, and land not utilised or managed surrounding development areas. Welsh ragwort (*Senecio cambrensis*), also sometimes referred to as Welsh groundsel (found in a couple of areas of North Wales) is a species of waste ground and waysides. Land within the urban environment generally represents a low risk to grazing animals and to feed and forage production. Where ragwort is present on development, waste and neglected land, and the spread of ragwort poses a high risk to grazing animals and/or feed/forage production, ~~then it must be controlled~~ appropriate control measures should be considered. It is expected that owners, occupiers and managers of such land will have in place policies for the identification, monitoring and control of ragwort on land for which they are responsible. In some circumstances, this type of land can have benefits for biodiversity, and this should be borne in mind when developing a control policy.

Defense land

25. The Defence Estates (an Executive Agency of the Ministry of Defence) administer the defence estate and are responsible for ensuring that the appropriate standards of weed control are maintained on defence land under its jurisdiction. Where ragwort is present on defence land and there is a high risk that it may spread to neighbouring land used for grazing and/or feed/forage production, the Ministry of Defence will ~~take~~ **consider taking** measures to control the ragwort and reduce the risk of it spreading. Some Ministry of Defence land has conservation status and requires grazing. In these circumstances, where a low risk to animal welfare has been assessed (**see paragraph 6 of this Appendix**), animals may graze defence land where ragwort is present. The Ministry of Defence will take action to reduce this risk if it becomes medium or high risk. The Ministry of Defence will not control ragwort where there is unexploded ordnance present.

Bridleways

26. **Action to control** Ragwort should be ~~controlled~~ **considered** on bridleways where the bridleway runs across grazing land or land used for forage production and where grazing animals may be at risk. Where there is no risk, it should not be necessary to control ragwort simply because horses will be ridden along the bridleway. It is the rider or **leader's** responsibility to ensure that a horse when ridden or led on a bridleway does not ingest ragwort.

Appendix 5 DISPOSAL

Introduction

1. The safe and effective disposal of ragwort is an important part of ragwort control. Disposing of ragwort responsibly reduces the risk of further spread by seed dispersal and re-growth from root sections, **and also reduces the risk of horses and other grazing animals consuming wilted ragwort which remains toxic. Early and effective control of ragwort where appropriate will minimise the problems of disposal.**

Disposal options

2. The options for disposal will depend on the amount of ragwort to be disposed of, the type of site, and local resources available. Whenever practicable, ragwort should be disposed of on site. This will reduce the inadvertent spreading of seeds during transport. Options for disposal include rotting down, composting, incineration, controlled burning and landfill. The decision tree shown in **Figure 4** helps to select the most appropriate disposal option.

Legal framework

3. Regulations for agricultural waste³ mean that unwanted agricultural waste (this includes ragwort from all farmland, or from land used for keeping horses and ponies) now comes within the definition of commercial waste.
4. Environmental permits are issued waste **recovery and/or** disposal sites under the ~~Environmental Permitting Regulations 2007~~ Environmental Permitting (England and Wales) Regulations 2016. The permits are issued by ~~the Environment Agency-NRW in Wales~~ **(see Appendix 7)** and work to ensure that the authorised activities do not cause harm to the environment or endanger human health. **If waste material is taken to sites within England, permits there will be issued by the Environment Agency.**

Transporting Ragwort

5. Ragwort can set seed even after being pulled, dug or cut and therefore there is a high risk of seed dispersal to neighbouring land during transportation. To avoid seed dispersal ragwort **should only** be transported in sealed bags or enclosed containers. Where the plants are bulky, they can be cut up to assist packing. To avoid unnecessary seed dispersal, seed heads should be cut off first and packed.

³ The Waste Management (England and Wales) Regulations 2006.

Rotting down (biodegrading) using a compost bin

6. For disposing of small quantities of ragwort on site due to the limited capacity of standard compost bins. The compost bin should be located away from any ditch, watercourse, or area where animals may have access to it. The ground should be levelled where the compost bin is sited; the earth should be loosened so that earthworms, insects and micro-organisms can move into the material, and any liquid can drain and disperse to the soil.
7. This is only suitable for small-scale disposal, and ragwort specific compost bins should be made available.
8. If the material is collected in plastic sacks, these must be emptied into the compost bin directly. If paper sacks are used, these could be loaded into the compost bin and should be sliced and consolidated to increase the rate of biodegradation. The residues should be covered with a layer of grass clippings to help start the biodegradation process and help prevent the material drying out. If the process dries out, then there is the risk that some seeds or root material may not be destroyed and may lie dormant. Sufficient water should be added to keep the residues moist. However, there is still a risk of spreading viable material when the compost bin is emptied. The risks can be reduced by allowing the rotting down to continue for up to 12 months retention in the compost bin, during which time no fresh material should be added. If there are any concerns about the residues, they should be transported to landfill. For advice, please check with your Local Authority (**see Appendix 7**).

Controlled burning and small-scale incineration

9. This option should only be used for disposing of small quantities where ragwort can be safely wilted prior to burning/incineration. The secure storage and controlled burning of less than 10 tonnes per day of plant matter **may** be allowed under an exemption ~~from the Environment Agency under the Waste Management Licensing Regulations or the Agricultural Waste Regulations~~ Exemptions are available from NRW under the Environmental Permitting Regulations here: <https://naturalresources.wales/permits-and-permissions/waste-permitting/register-or-renew-your-waste-exemptions/?lang=en>. **An exemption is not required for domestic sites.** An exemption is allowed under the Regulations above provided waste disposal is undertaken by the owner **or contractor** at the site where it was generated and is from agricultural premises or other relevant land including railway land, forest, woodland, and recreational land.
10. Small scale incineration using a recognised device is preferable to open burning as it provides a greater degree of control and is less likely to cause dark smoke or a public nuisance. It is suitable where ragwort is collected in paper sacks and can be directed sufficiently so that it will burn. It is also suitable for ragwort that has been deflowered and wilted. Weather conditions (especially wind direction) must be taken into account with due consideration for neighbouring ground cover, combustible vegetation, buildings, and housing. Causing nuisance from smoke and deposits from bonfires is an offence.

11. The incinerator should be located away from any ditch, watercourse, or area where animals are kept. It must be well away from any fuel tanks, gas storage cylinders, buildings, domestic property, or road. Due consideration must be taken to avoid nuisance and risk to others.

Domestic refuse collection

12. For a small amount of ragwort arising on domestic premises, sealing the ragwort plant in a double layer plastic sack for collection. To avoid bulk, plants can be cut up to assist packing, and to avoid seed dispersal, seed heads should be cut off first and packed.
13. Where the Local Authority provides a 'Green Waste Collection', ragwort should **not** be mixed with the 'Green Waste', unless the Local Authority permits its inclusion. This is because some composting facilities may not have the necessary resources and procedures in place for handling ragwort. Check with your Local Authority.

Composting using a fully contained system

14. For disposing of ragwort where on-site or off-site facilities and expertise is available to compost ragwort or green waste containing ragwort to the British Standard ~~PAS 100:2005~~ **PAS 100:20018⁴**. This will ensure that all material is composted effectively. All composting sites **in Wales** need to be registered with ~~the Environment Agency NRW~~ for an exemption ~~from Waste Management Licensing and should be sited at least 10 metres from any watercourse and animals under the Environmental Permitting Regulations 2016~~. In Wales you can register an exemption here: <https://naturalresources.wales/permits-and-permissions/check-for-a-permit-licence-or-exemption/?lang=en>
15. Please see British Standard ~~PAS 100:2005~~ **PAS 100: 2018** specification for composted materials which can be obtained from the ~~WRAP (Waste & Resources Action Programme) organisation (helpline@wrap.org.uk)~~ BSI (link above).

Biomass facility or permitted incinerator

16. Some farms, nurseries and rural estates may have their own solid fuel-fired boiler. Such systems are commonly fuelled by straw bales, woodchip, coppiced wood, and other forms of biomass, e.g., *Miscanthus* (elephant grass). Such solid fuel burners may be utilised for ragwort disposal where residues are the property of the boiler owner and is located on the same land. Where ragwort disposal is transferred to a third party, a waste transfer note is required.

⁴ PAS 100:2018 Specification for composted materials (BSI).

Waste Management Company

17. Using a waste management company is ideal when there is a large quantity of ragwort to be disposed of or where other options are not available. Disposing of material this way means that it is removed professionally and disposed of legally. Open skips **should not** be used.
18. It should be noted that where the sole purpose or intent is to dispose of waste, then any such material **should not** be transferred to a third party for disposal unless they are a ~~bona fide~~ registered ~~and licensed~~ waste ~~carrier contractor~~, and the facility is ~~similarly licensed permitted or exempt under the Environmental Permitting Regulations 2016~~.

Key Pointers

Remember ragwort;

- remains toxic when sprayed, cut, dug or pulled;
- once cut, the flower can set seed;
- seeds remain viable and can be easily dispersed;
- in its fresh state (un-wilted) is difficult to burn;
- is bulky to transport;
- can only be composted in controlled conditions;
- should only be transported in sealed bags/containers.

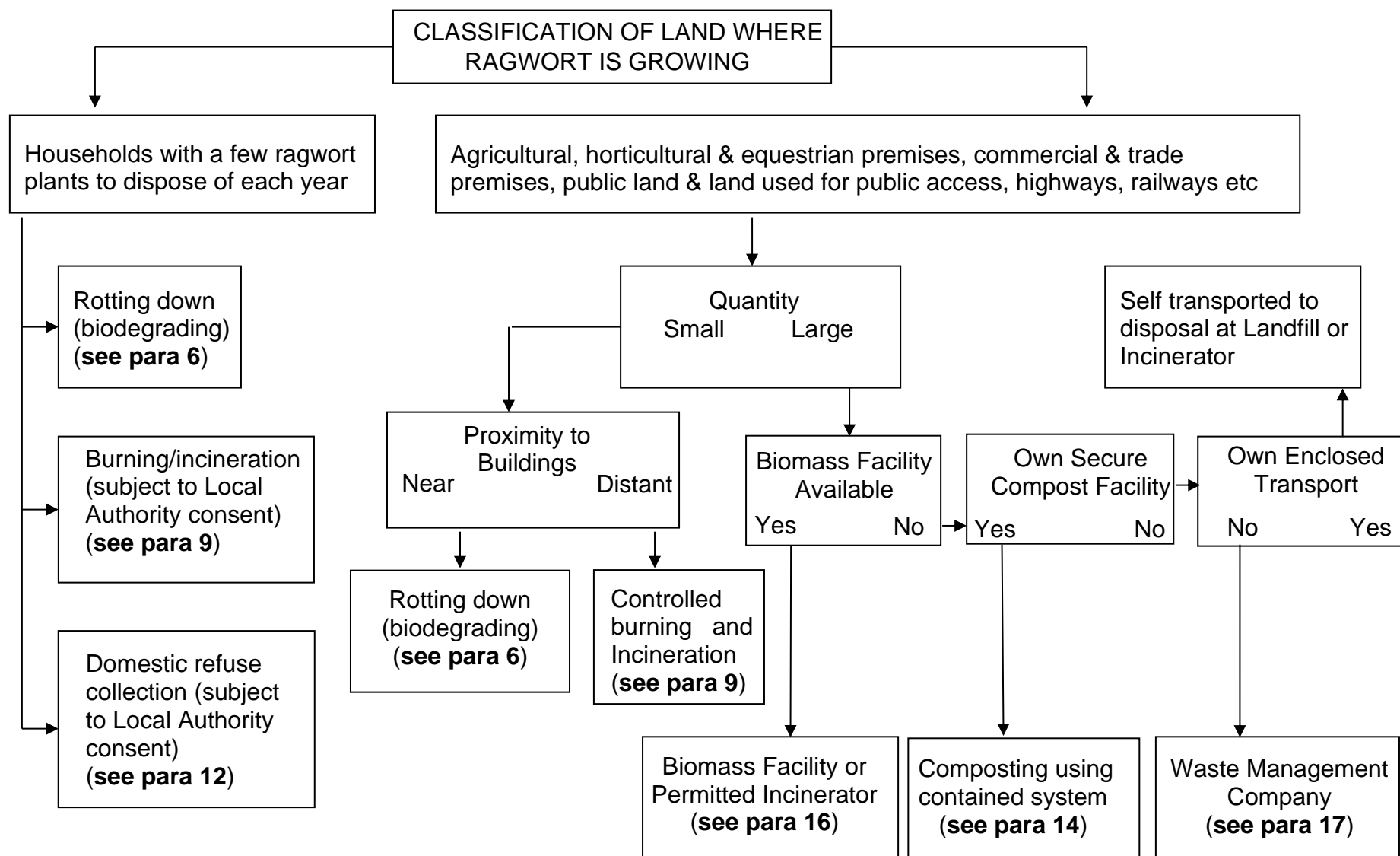
Do

- Think through the options for disposal at the same time as planning the control system.
- Select the most appropriate disposal option.
- Always use gloves and clothing that covers exposed skin, e.g., arms and legs.
- Minimise the risks of exposure to pollen and other airborne particles by wearing a suitable facemask.
- Wash exposed skin thoroughly after handling material and before eating.
- Ensure that any contractors hired for the disposal are ~~properly~~ registered ~~and/or licensed~~ waste carriers and are transferring the waste to a suitably permitted or exempt facility (~~check with the Environment Agency~~). Details of registered waste carriers and permitted or exempt facilities can be checked via Natural Resources Wales' online public register (<https://naturalresources.wales/permits-and-permissions/waste-carriers-brokers-and-dealers-public-register/?lang=en>). If the waste is taken to a facility within England, details should be checked upon the Environment Agency's public register. This process is known as undertaking your Duty of Care (<https://environment.data.gov.uk/public-register/view/search-waste-carriers-brokers>).

Don't

- Bury in manure heaps.
- Use as animal bedding.
- Dig, bury or plough into the ground.
- Attempt to dry ragwort where animals may gain access to it.
- Allow the liquid from decomposing ragwort to drain directly to any ditch, drain or watercourse.
- Cause dark smoke by attempting to burn wet ragwort, or by using other flammable materials that may directly cause dark smoke, (e.g., rubber or plastics).
- Allow seed dispersal from plant residues that are awaiting disposal.
- Transport ragwort unnecessarily.
- Transport ragwort unless it is in sealed bags or containers.
- Pile up the cut ragwort in a corner of the field.

Figure 4 - Decision Tree to Help Select the Most Appropriate Disposal Option



Appendix 6

SAFETY GUIDELINES

Handling Ragwort

1. Ragwort is a toxic plant and suitable precautions ~~must~~ should be taken when handling both live and dead plants. Hands ~~must~~ should be protected by wearing sturdy waterproof gardening type gloves, and arms and legs should also be covered. A facemask⁵ should be used to avoid the inhalation of ragwort pollen or other airborne particles.
2. If ragwort comes into contact with bare skin, the area should be thoroughly washed in warm soapy water, rinsed, and dried.

General Operator Safety

3. Care must also be taken to ensure operator safety when undertaking ragwort clearance. This is particularly important when clearance takes place on road verges and other public areas accessed by motor vehicles.
4. If assistance in removing ragwort is provided by volunteers, they must be competent to undertake the task and have adequate training (including road safety). They should be supervised to ensure they are not a danger to themselves or to others. This is particularly important when clearing ragwort from verges on roads open to the general public. Volunteers are not permitted to operate on land within the trunk road boundary or land managed by Network Rail or other railway operators.
5. Before clearance commences a sufficient and suitable risk assessment should be undertaken which:
 - identifies the hazards.
 - decides who may be harmed by them.
 - evaluates the risk and decides whether the existing precautions are adequate or whether more should be done.
 - records the findings.
 - reviews the assessment and revises it if necessary.

Further guidance on undertaking Risk Assessments is available from the Health & Safety Executive (**see appendix 7**).

6. When digging or pulling ragwort adjacent to a public road, pathway, or cycle track, it is essential that operators can be seen by other users. All operators must wear high visibility clothing and generally work facing the traffic as far as practicable. An appropriate level of road safety training ~~must~~ should be

⁵ The Health and Safety Executive recommends using a half face mask particle respirator conforming to BS EN 149:2001.

provided to all operatives to raise the awareness of road safety hazards. No attempt should be made to dig or pull ragwort in poor visibility or during the hours of darkness on roads. Any vehicles used to transport operators to the location where ragwort is being controlled must be parked safely and must not be parked in such a way as to obstruct the road or other public right of way.

7. Road works signing should be set up in accordance with standard practice governing the type of road. On trunk roads, including motorways, different rules apply and traffic signing needs to be approved by the relevant Trunk Road Authority prior to being erected or works beginning.
8. On high-speed dual carriageways and motorways where the speed limit exceeds 50 mph, special traffic management requirements may be required as determined by the Trunk Road Authorities.

Prior authority for access to land

9. It is essential that prior authority be obtained before clearance of ragwort is undertaken. Access to land without prior authority would amount to trespass and could lead to a charge of criminal damage. Authority should be obtained as follows:
 - **Private land** - authority must be obtained from the owner/occupier of the land
 - **Public land** - prior authority should be obtained from the relevant public body responsible for the management of that land, i.e., community council, town council, local authority or other public body
 - **Public local roads**, i.e., roadside verges - clearance should only be undertaken with the prior notification and authority of the relevant road authority, i.e. normally the Highways Department of the Local Authority
 - **Trunk roads** including motorways - these are the responsibility of Trunk Road Authorities (**see Appendix 7**)
 - **Railway land** - this is the responsibility of the railway undertaker concerned. Unauthorised persons must not under any circumstances enter nor purport to authorise entry by any other person. Only the railway undertaker concerned can authorise entry by persons in possession of appropriate railway safety certification meeting the requirements of undertakers' Railway Safety Cases approved by the Railways (Safety Case) Regulations 2000 (as amended). A failure to comply with this instruction is likely to place the persons concerned in breach of duties under the Health and Safety at Work etc Act 1974. The person(s) authorising entry may in such circumstances also render themselves liable to prosecution in their personal capacity.

Use of herbicides

10. All herbicides are potentially hazardous if not used in accordance with their approval, and where appropriate, environmental risk and COSHH assessments (**see Appendix 3**). Such products should only be used where absolutely necessary. Unnecessary use is uneconomic, can lead to pesticide resistance and, in some cases, may also damage the non-target vegetation and threaten the local environment. A risk assessment must be carried out before application. The risk assessment should determine the risks to operators and other people (including members of the public) and should specify the measures required to adequately control those risks. Any measures deemed appropriate and necessary by risk assessment, e.g., substitution of the product (by a less hazardous one), engineering controls etc, should be implemented, and protective equipment required by and stipulated on the product label should be worn. Information relating to first aid and medical treatment in the event of accidental exposure to the chemical is also given on the product label.

Appendix 7

GOVERNMENT DEPARTMENTS, AGENCIES AND STATUTORY AUTHORITIES

Blaenau Gwent County Borough Council

Municipal Offices, Civic Centre, Ebbw Vale NP23 6XB Tel: 01495 311556

Email: info@blaenau-gwent.gov.uk

<https://www.blaenau-gwent.gov.uk>

Bridgend County Borough Council

Civic Offices, Angel Street, Bridgend CF31 4WB

Tel: 01656 643643

Email: talktous@bridgend.gov.uk

<https://www.bridgend.gov.uk/>

Cadw

Welsh Government, Plas Carew Unit 5/7 Cefn Coed, Parc Nantgarw, Cardiff CF15 7QQ

Tel: 0300 0256000

Email: cadw@gov.wales

<https://cadw.gov.wales/>

Caerphilly County Borough Council

Ty Penalta House, Tredomen Park, Hengoed, Ystrad Mynach CF82 7PG

Tel: 01443 815588

<https://www.caerphilly.gov.uk/>

British Waterways Canal & River Trust

Canal & River Trust Head Office, First Floor North, Station House, 500 Elder Gate, Milton Keynes, MK9 1BB.

Tel: 0303 040 4040

<https://canalrivertrust.org.uk/wales>

Cardiff County Council

County Hall, Atlantic Wharf, Cardiff CF10 4UW

Tel: 029 2087 2087

<https://www.cardiff.gov.uk>

Carmarthenshire County Council

3 Spilman Street, Carmarthen, Carmarthenshire SA31 1LE

Tel: 01267 234567

Email: direct@carmarthenshire.gov.uk

<https://www.carmarthenshire.gov.wales>

Ceredigion County Council

Penmorfa, Aberaeron, Ceredigion SA46 0PA

Tel: 01545 570881

Email: clic@ceredigion.gov.uk

<https://www.ceredigion.gov.uk>

City and County of Swansea

Civic Centre, Oystermouth Road, Swansea SA1 3SN

Tel: 01792 636000

Email: evh@swansea.gov.uk

www.swansea.gov.uk

Conwy County Borough Council

Mochdre Offices, Conway Road, Mochdre LL28 AB

Tel: 01492 575337

<https://www.conwy.gov.uk/en/Resident/Planning-Building-Control-and-Conservation/Trees-and-High-Hedges/Weed-Control.aspx>

Denbighshire County Council

PO Box 62, Ruthin LL15 9AZ

Tel: 01824 706101

www.denbighshire.gov.uk

Environmental Impact Assessment (contacts)

EIA.Unit@gov.wales

North Wales

Victoria Dock, Caernarfon, Gwynedd LL55 1TH

Mid and South East Wales

County Hall, Spa Road East, Llandrindod Wells LD1 5LG

Rhodfa Padarn, Llanbadarn Fawr, Aberystwyth, Ceredigion SY23 3UR

Tel: 0300 062 2006

West Wales

Government Buildings, Picton Terrace, Carmarthen, Carmarthenshire SA31 3BT

Flintshire County Council

County Hall, Mold, Flintshire CH7 6NB

Tel: 01352 703440

<https://www.flintshire.gov.uk/>

Gwynedd County Council,

Council Offices, Shirehall Street, Caernarfon, Gwynedd LL55 1SH

Tel: 01286 672255

<https://www.gwynedd.llyw.cymru/en/Residents/Dogs-and-environmental-health/Invasive-Plants.aspx>

~~Chemicals Regulation Directorate (CRD) Health & Safety Executive (HSE)~~

Enquiries from the general public in relation to PPPs (pesticides) and detergents are handled by the Defra Helpline:

Defra Helpline: Telephone Number: 03459 33 55 77 (International: +44 20 7238 6951)

Telephone Helpline Hours: Monday - Friday 8:30am - 5pm

Postal address: Defra, Nobel House, 17 Smith Square, London, SW1P 3JR

Isle of Anglesey County Council,

Council Offices, Llangefni, Anglesey LL77 7TW

Tel: 01248 750057

<https://www.anglesey.gov.uk/en/Residents/Residents.aspx>

Merthyr Tydfil County Borough Council

Civic Centre, Castle Street, Merthyr Tydfil CF47 8AN

Tel: 01685 725000

Email: customer.care@merthyr.gov.uk

<https://www.merthyr.gov.uk/>

<p>Monmouthshire County Council County Hall, The Rhadyr, Usk, NP15 1GA Tel: 01633 644644 Email: contact@monmouthshire.gov.uk https://www.monmouthshire.gov.uk/</p>
<p>Countryside Council for Wales Natural Resources Wales Maes-y-ffynnon, Penrhosgarnedd, Bangor, Gwynedd LL57 2DW Tel: 0300 065 3000 Email: enquiries@naturalresourceswales.gov.uk https://naturalresources.wales/about-us/contact-us/report-an-environmental-incident/?lang=en</p>
<p>Plant Health and Environment Protection Team Land, Nature and Forestry Division, Welsh Government, Rhodfa Padarn, Llanbadarn Fawr, Aberystwyth, Ceredigion SY23 3UR Email: Plant.Health@gov.wales https://gov.wales/common-ragwort-code-practice</p>
<p>Neath Port Talbot County Borough Council Civic Centre, Port Talbot SA13 1PJ Tel: 01639 763333 Email: contactus@npt.gov.uk https://www.npt.gov.uk/</p>
<p>Network Rail 1 Eversholt Street, London, NW1 2DN Tel: 03457 114141 http://www.networkrail.co.uk/communities/environment</p>
<p>Newport City Council Civic Centre, Godfrey Road, Newport NP20 4UR Tel: 01633 656656 Email: info@newport.gov.uk www.newport.gov.uk</p>
<p>The Office of Rail Regulation (ORR) 25 Cabot Square, London E14 4QZ Tel No: 020 7282 2000 Email: contact.cct@orr.gov.uk http://www.orr.gov.uk</p>
<p>Pembrokeshire County Council County Hall, Haverfordwest, Pembrokeshire SA61 1TP Tel: 01437 764551 Email: enquiries@pembrokeshire.gov.uk www.pembrokeshire.gov.uk/</p>
<p>Powys County Council County Hall, Llandrindod Wells, Powys LD1 5LG Tel: 01597 827460 https://en.powys.gov.uk/article/2471/Wildlife-Advice-Control-of-native-and-non-native-invasive-weeds</p>
<p>Rhondda Cynon Taff County Borough Council</p>

The Pavilions, Cambrian Park, Clydach Vale, Tonypanydy CF40 2XX

Tel: 01443 424000

<https://www.rctcbc.gov.uk/>

Rural Inspectorate in Wales

Field Support Unit, County Hall, Spa Road East, Llandrindod Wells LD1 5HA

Tel: (01597) 823777

riwmailbox@gov.wales

Torfaen County Borough Council

Civic Centre, Pontypool, Torfaen NP4 6YB

Tel: 01633 648256

<https://www.torfaen.gov.uk/intro-splash.aspx>

Trunk Road Agents:

South Wales Trunk Road Agency

12a Llandarcy House, The Courtyard, Llandarcy, Neath SA10 6EJ

Tel: 0300 123 1213

Email: enquiries@southwales-tra.gov.uk

<https://traffic.wales/south-wales-trunk-road-agent-swtra>

North & Mid Wales North and Mid-Wales Trunk Road Agency

Email: management.unit@midwales-tra.gov.uk

<https://traffic.wales/north-and-mid-wales-trunk-road-agent-nmwtra>

<https://traffic.wales/trees-and-vegetation>

Vale of Glamorgan County Council

Civic Offices, Holton Road, Barry, Vale of Glamorgan CF63 4RU

Tel: 01446 700111

<https://www.valeofglamorgan.gov.uk>

Voluntary Initiative

<http://www.voluntaryinitiative.org.uk>

Waste & Resources Action Programme (WRAP),

Second Floor, Blenheim Court, 19 George Street Banbury, Oxon OX16 5BH

Tel: 01295 819900

Email: info@wrap.org.uk

<http://www.wrap.org.uk>

Welsh Association of National Park Authorities National Parks Wales

Plas y Ffynnon, Cambrian Way, Brecon, LD3 7HP

Tel: 01874 624 437

Email: ask@nationalparkswales.gov.uk

Wrexham County Borough Council

16 Lord Street, Wrexham LL11 1LG

Tel: 01978 292000

<https://www.wrexham.gov.uk/>

Appendix 8

USEFUL PUBLICATIONS

Government Publications

- The Weeds Act 1959.
<http://www.legislation.gov.uk/ukpga/Eliz2/7-8/54/contents>
- Guidance on the methods that can be used to control harmful weeds
<https://www.gov.uk/government/publications/guidance-on-the-methods-that-can-be-used-to-control-harmful-weeds>
- Code of Practice on how to prevent the spread of ragwort (Defra 2004)
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/801153/code-of-practice-on-how-to-prevent-the-spread-of-ragwort.pdf
- The Code of Practice for Using Plant Protection Products.
<https://www.hse.gov.uk/pesticides/using-pesticides/codes-of-practice/index.htm#>
- Code of Practice for Suppliers of Pesticides to Agriculture, Horticulture and Forestry (PB3529) (also known as the Yellow Code).
https://www.hse.gov.uk/pesticides/resources/Y/yellow_code.pdf
- Code of Practice for the welfare of horses (Welsh Government 2018)
www.gov.wales/sites/default/files/publications/2020-11/code-of-practice-for-the-welfare-of-horses.pdf
- Protecting our Water, Soil and Air.
A Code of Good Agricultural Practice for farmers, growers and land managers
<https://www.gov.uk/government/publications/protecting-our-water-soil-and-air>

Other publications

- The UK Pesticide Guide
Annual publication of available pesticides and adjuvants in the UK for use in agriculture, horticulture, forestry and amenity situations
<https://www.bcp.org/product/uk-pesticide-guide-2023>
- Information on habit, biology, persistence & spread for Common ragwort
<https://www.gardenorganic.org.uk/expert-advice/garden-management/weeds/weed-datasheets/common-ragwort>
- Information on identifying, removing, and disposing of ragwort, the dangers of ragwort, and who is responsible for its control.

<https://wwwtest.bhs.org.uk/horse-care-and-welfare/health-care-management/pasture-management/the-dangers-of-ragwort/>

- The biology and non-chemical control of Common Ragwort (*Senecio jacobaea* L.) W Bond, G Davies, R Turner
<https://gardenorganic-assets.s3.eu-west-2.amazonaws.com/documents/senecio-jacobaea.pdf>
- Ragwort Poisoning in Livestock: Prevention and Control. Technical note TN570, SAC (Scottish Agricultural College) 2005. TN570.indd (gov.je)

Appendix 9

SOURCES OF TECHNICAL ADVICE ON RAGWORT CONTROL

ADAS Ltd

Provide chargeable consultancy advice

Unit 10D, Cefn Llan Science Park, Aberystwyth, Ceredigion SY23 3AH

Tel: 01974 847000

Email: enquiries@adas.co.uk

<http://www.adas.co.uk>

Agricultural Industries Confederation (AIC)

Member companies supply and distribute agrochemicals

The Forum, Minerva Business Park, Peterborough PE2 6FT

Tel: 01733 385230

Email: enquiries@agindustries.org.uk

<http://www.agindustries.org.uk>

Association of Independent Crop Consultants (AICC)

Provide chargeable consultancy advice

The Courtyard, Shoreham Road, Upper Beeding, Steyning BN44 3TN

Tel: 01730 823881

Email: info@aicc.org.uk

<http://www.aicc.org.uk>

Basis Registration Ltd

Runs the accreditation scheme for advisors of pesticide use

39 Windmill Lane, Ashbourne, Derbyshire DE6 1EY Tel: 01335 343945

Email: help@basis-reg.co.uk

<http://www.basis-reg.co.uk>

BCPC (formerly British Crop Protection Council)

Member companies can supply technical literature

93 Lawrence Weaver Road, Cambridge CB3 0LE

Tel: 01223 342495

<http://www.bcpc.org>

British Horse Society (BHS)

National organisation for horse owners and riders

Abbey Park, Stareton Kenilworth, Warwickshire CV8 2XZ

Tel: 02476 840500

Email: enquiry@bhs.org.uk

<http://www.bhs.org.uk>

British Institute of Agricultural Consultants (BIAC)

Provide chargeable consultancy advice

The Farm Office, Redend Farm, Station Road, Pilning, Bristol BS35 4JW

Tel: 01275 375559

Email: info@biac.co.uk

<http://www.biac.co.uk>

~~Centre for Ecology & Hydrology~~ UK Centre for Ecology and Hydrology

Provide chargeable consultancy advice
School of Biological Sciences, Deiniol Road,
Bangor, Gwynedd LL57 2UW
Tel: 01248 374500
<http://www.ceh.ac.uk>

Crop Protection Association (CPA)

Member companies can supply technical literature
Stuart House, St John's Street, Peterborough PE1 5DD
Tel: 01733 355370
E-mail: info@cropprotection.org.uk
www.cropprotection.org.uk

Farming and Wildlife Advisory Group (FWAG)

Advice on farming and conservation
FWAG Cymru, Ffordd Arran, Dolgellau, Gwynedd LL40 1LW
Tel: 01341 421456
Email: cymru@fwag.org.uk
<http://www.fwag.org.uk>

~~The Henry Doubleday Research Association~~ Garden Organic

Organic gardening, including weed control
Garden Organic, Ryton Gardens, Wolston Lane, Coventry CV8 3LG
Tel: 024 7630 3517
Email: enquiry@gardenorganic.org.uk
<http://www.gardenorganic.org.uk>

National Association of Agricultural Contractors

Member companies can provide contracting services in agriculture amenity and industrial land based areas
Grange Farm, Wittering Grange, Old Oundle Road, Wansford, Peterborough. PE8 6NR
Tel: 01780 784631
Email: info@naac.co.uk
<http://www.naac.co.uk>

The presence of any organisation on this list does not infer that this **Code of Practice to Prevent and Control the Spread of Ragwort** endorses the advice, guidance, information, products or services of any organisation listed.