

Amenity Best Practice **Using pesticides in the community**

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Introduction

- What are 'Amenity Situations'
- The pesticides we use
- Best practice & IPM

What are 'Amenity Situations'

- Local Authority:- parks, shrub beds, pavements, car parks
- Highways:- roads (motorways, urban and rural)
- Railways
- Industrial Sites
- Sports:- golf, football, cricket, tennis, bowls, rugby, horse racing etc
- Forestry
- Aquatic:- lakes, rivers, canals, ponds etc

(Non agricultural, horticultural or home and garden)

Four main types of pesticides:

- **Herbicides** – to control weeds and unwanted vegetation
- **Fungicides** – to combat harmful plant diseases
- **Insecticides** – to control insect pests such as aphids and leatherjackets
- **Plant Growth Regulators** – to control plant growth including grass

Why use pesticides? - Benefits

Pesticides are cost-effective tools for reasons of:-

- safety
- efficiency
- aesthetic value
- public health
- legal requirements
- economy

Safety

Weed growth can:

- Obscure warning and direction signs
- Reduce or completely obstruct visibility for drivers at junctions and corners
- Hide dangerous obstacles and valuable equipment
- Disrupt and raise tarmac, concrete and paved areas, creating trip points
- Clog drainage channels, causing carriageway or footway deterioration and flooding with possible aqua-planeing by cars during heavy rainfall
- Create a fire hazard when dry or dead
- Provide harbourage for rats and mice

Efficiency

The use of herbicides or growth regulators can improve efficiency by:

- Allowing a person to eradicate weeds over a much larger area in one day than someone with a hoe or a mechanical cutter
- Achieving a longer-lasting kill – other methods rarely remove more than the foliage leaving the roots to regenerate
- Reducing the need for maintenance work and costly replacement of fences, walls, roadways, pavements etc
- Avoiding physical damage to trees, shrubs, and other items by mechanical tools
- Eliminating the risk of injury to operators of mechanical cutting and cultivating equipment
- Keeping waterways clear of weed growth which can impede flow, leading to flooding and increased pumping costs

Aesthetic value

The use of herbicides, fungicides and insecticides can:

- Remove unsightly weeds from path edges, around trees and shrubs in pavements, public parks, cemeteries and other open spaces
- Improve the growth of trees and shrubs by removing competition for nutrients and water
- Eradicate unwanted weeds, diseases and pests in turf, especially where good playing surfaces are essential such as golf courses, bowling greens, football and cricket pitches and tennis courts
- Clear weeds from kerbs and other areas where they can trap unsightly rubbish, this can reduce the cost of litter collection
- Improve the appearance of unkempt areas, discouraging vandalism, graffiti and fly-tipping

Public health

- Herbicides can eliminate vegetation in waste areas which harbour vermin
- Insecticides can control disease-bearing pests such as fleas, flies, cockroaches and mosquitoes

Legal requirements

- *The Noxious Weeds Act (1959)* requires landowners to eliminate scheduled weeds such as ragwort , various thistles and docks to prevent their seeds contaminating neighbour's land
- *Wildlife and Countryside Act (1981)* specifies control of certain plants such as giant hogweed and Japanese knotweed

Economy

- a number of local authorities have compared the cost of hand-weeding with that of chemical control. In a borough which has about 600km of footpaths and pavements, estimated cost is –
 - hand-weeding approx £200,000
 - chemical control (two treatments) approx £20,000, which also gave much better results and longer control

Why “Best Practice”?

- EUROPEAN UNION THEMATIC STRATEGY FOR PESTICIDES – “SUD”
- EUROPEAN UNION WATER FRAMEWORK DIRECTIVE
 - To ensure surface & groundwater pollution by herbicides is significantly reduced or eliminated
- UK PESTICIDES STRATEGY
 - Framework for legislation, policies & initiatives to promote sustainable development
- NATIONAL ACTION PLANS
 - Water, biodiversity, AMENITY USE, amateur use, product availability, human health

Best Practice:

- protecting users and workers by minimising exposure to pesticides
- protecting residents and bystanders by minimising exposure from spray operators
- reducing water pollution caused by pesticides
- reducing the impact of pesticides on biodiversity
- minimising the risk to users and the environment
- encouraging the introduction of cost-effective, more sustainable alternative approaches and greater use of Integrated Pest Management (IPM)

Contractors - very important within the 'Amenity' industry

There are three areas where they can provide a service

1 provide advice

2 supply product

3 carry out the application

Consequently they have a responsibility to follow Best Practice procedures throughout a contract – to the customer, the public and the environment

There are several ways for contractors to provide the best service to customers.

Before embarking on a contract ensure advice is from a BASIS qualified practitioner and the specification has a high standard of stewardship

Specification should ensure targeted use of herbicides to minimise runoff into drains and watercourses.

The contractor follows the guidelines laid down in the Code of practice for the safe use of pesticides. (available from DEFRA)

Application is carried out by trained and NPTC certificated staff.

Ensure the equipment is right for the job. All mounted, trailed or self-propelled application equipment should be tested through NSTS. Handheld sprayers should be checked and calibrated regularly using the checklist and may also be tested through NSTS.

Ensure contractor can provide all documentation, certification, insurance, COSHH and risk assessments, Product Safety Data Sheets, etc.

- For those contractors who give advice to customers it is recommended that their BASIS qualified members of staff join the BASIS Professional Register
- Choice of product should be the least hazardous and most appropriate for the job
- Application techniques to be targeted to minimise surface and groundwater pollution
- The best contractors are now also AMENITY ASSURED certificated, which means they have been independently audited three times per year, and they meet the standards and code of practice for BASIS, NAAC and NPTC

- The AMENITY ASSURED scheme was new in 2008 and the contractors in the scheme have been awarded contracts for more than 200 Local Authorities and for the 18,000 miles of Network Rail track
- The scheme is supported and endorsed by the Chemical Registration Directorate, the Environment Agency, the Crop Protection Association and the Amenity Forum
- Encourage operator staff to join NRoSO
- Stress the need for water protection to employees
- Have procedures to manage transport of pesticides, disposal of packaging, left over product and washings in line with the Code of practice for using plant protection products
- Keep records of all spraying operations

Weed control

- Pick the right product for the job
- Understand the label
 - Fields of use – is it definitely approved
- Apply at the right time

All glyphosates are not the same!

Monsanto will continue to steward the proper use of Roundup products, but there are over 50 glyphosate products available in the UK!

**BE AWARE - THERE ARE MANY
DIFFERENT APPROVALS, DOSE RATES
AND HAZARD RATINGS**

Using glyphosate

- To preserve as many uses as possible all users need to be follow Best Practice at all times
- Having decided to spray they should:
 - Choose the safest & most reliable glyphosate formulation
 - Use the minimum rate necessary to do the job (NB This does not mean using sub-lethal doses which can lead to resistance development)
 - Do not contaminate water when mixing, filling, spraying or disposing of Roundup products
 - Calibrate and use equipment properly to ensure no drift on to non-target areas
 - Keep full records.
 - Protect run-off to water by only spraying hard surfaces when rain is not expected within 4 hours
 - Spot treat on hard surfaces, either manually or using weed detection units
 - Do not directly overspray drainage grates

Hard surfaces

- Number one priority is to avoid run-off to water
- Spot or targeted treatment with an amenity herbicide will give optimum acceptable control



Run-off from hard surfaces

- Clean tarmac has few binding sites for glyphosate and up to 50% of the applied dose may run-off with a heavy rain event within a few hours of spraying. A smaller proportion can still run-off even several days later with 2-3mm of rain.
- Run-off direct to drains may be detectable above $0.1\mu\text{g/l}$ in receiving water for 2-4 days after it reaches a biologically active ecosystem in a ditch or river (with sediment), depending on the sampling point and flow rates.
 - Run-off from treated leaf material is much reduced as most of the glyphosate enters the leaf within a few hours and only breaks down gradually as the plant dies and tissue rots
 - Run-off from spot treatment on hard surfaces is just 3% of an overall treatment
 - Run-off from concrete is less than half of that from tarmac due to lock-up by calcium ions in the concrete



Water

- Needs prior approval from –
 - The Environment Agency
 - Scottish Environment Protection Agency
 - Use form WQM1

Guidance notes: Form WQM1 Application to use herbicides in or near water

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WQM1: filling in the application

Water quality

Guidance notes

Please read these notes before you complete the form. They will help you give us the information we need.

Question 1.4
Sample site plan

Question 3.6 - The herbicide you propose to use
List the product name and the active ingredient. The name of the active ingredient can be found on the product label.

Amount of product
List the amount of product (l = litres or kg = kilograms) which is to be used and the corresponding amount of active ingredient (g = grammes). The methodology for calculating these is given below for both liquid and solid herbicide formulations. The product label gives information on how to calculate the amount of product needed to cover the area to be treated.

- how to calculate the amount of product and dilution rate.
- the amount of active ingredient and dilution rate.

Given that 1ha = 10 000m², the calculations are shown in the following two examples for different sized areas.

Example 1: liquid formulation
The active ingredient in Roundup Pro Biactive is glyphosate. If it is a liquid formulation containing glyphosate at a concentration of 360g/l, it is recommended to use 5 l/ha for emergent weeds.

Area m ²	Roundup Pro Biactive at 5 l/ha		Amount of	
	product litres	active ingredient g	product litres	active ingredient g
10 000	5	1800	260g/l x 5 = 1300	260g/l x 17.5 = 4550
35 000	5 x (35 000/10 000) = 17.5	8550	260g/l x 17.5 = 4550	260g/l x 3 = 780
4 000	5 x (4 000/10 000) = 2	900	260g/l x 2 = 520	260g/l x 0.3 = 78
1 000	5 x (1 000/10 000) = 0.5	225	260g/l x 0.5 = 130	260g/l x 0.025 = 6.5
50	5 x (50/10 000) = 0.025	12.75	260g/l x 0.025 = 6.5	260g/l x 0.0025 = 0.65

ENVIRONMENT AGENCY

Form WQM1

Use of herbicides to control weeds in or near water

Application form and guidance notes

Turf

- Integrate management practices including –
 - pH control
 - Fertiliser use
 - Cutting height

Gravelled areas

- If overlying a permeable surface such as soil then use of a residual herbicide will give longer lasting control and may reduce the number of sprays required

Disease control

- Diseases should be correctly identified to ensure appropriate treatment
 - Specialist advice from a fully qualified BASIS adviser is recommended
- Use a resistance management strategy
 - Alternating fungicides with different modes of action within an IPM programme

Plant Growth-Regulators

- Used to reduce the need for mowing
 - Especially useful in areas that are difficult or dangerous to mow
 - Eg. Motorway embankments

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Difficult Weeds

[- Japanese Knotweed](#)[- Bracken](#)[- Horsetail](#)[- Ivy](#)[- Rhododendron](#)[- Brambles](#)[- Giant Hogweed](#)[- Common Ragwort](#)[- Bindweed](#)[- Ground Elder](#)[Aquatic use](#)[Application Information](#)[Waste Disposal](#)[Roundup Pro Biactive](#)

Difficult Weeds

Weed (Click on image
for Control Strategy)

Key Considerations



Japanese Knotweed
(*Fallopia Japonica*)

- Highly invasive, particularly problematic near watercourses.
- Scheduled under the 1981 Wildlife and Countryside Act.
- Classified as a 'controlled waste' requiring licensed landfill disposal.
- Grows through walls, tarmac and concrete and can reach 3m high by June.
- Spreads via rhizomes, does not produce viable seed.
- Rhizomes from one plant can be 2m deep and 7m wide.
- Fragments of rhizome of only 1cm can produce new plants.
- Repeated cutting will weaken rhizomes but is generally ineffective on its own.
- Digging can increase spread unless every piece of root is removed.



Thank you for your attention

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