



SAFE SYSTEM OF WORK:

Herbicide application via spray, injection or other hand-held applicators

Client: Middleton Sheet Metal

Site Address: 1 Hanson Close, Middleton, M24 2HD

CREATED:	05/06/2020	BY: Chris Oliver
LAST REVIEW / UPDATE:	04/01/2024	REVIEWED BY: Simon Prato-Scarlett
NEXT REVIEW BEFORE:	01/05/2025	

INTRODUCTION

Herbicide application must (by law) be carried out by trained operatives using only approved products, approved equipment and suitable PPE. When following the measures in JKSL's risk assessments (RAs) and COSHH assessments, risks to health and safety are low.

JKSL's herbicides can be applied by a variety of methods, depending on the approvals on the product label, including: spraying, stem injection and leaf wiping. Spraying is generally the preferred method. Chemical injection and leaf wiping are mostly used to minimise damage to other desirable plant species or contamination of water.

HEALTH AND SAFETY

This Safe System of Work covers herbicide application and should be read with the relevant RAs, COSHH assessment(s) and other JKSL health and safety documents.

The works may involve significant manual handling, depending on the amount of spray works to be undertaken. Battery-powered spray equipment is available, which can be set on the ground to minimise manual handling. Also see JKSL's manual handling RA.

Other significant areas of concern include:

- Overhead services (particularly when using extendible lance)

EQUIPMENT

The following equipment may be used for the task:

- Manual knapsack sprayer
- Battery powered sprayer
- Short (1m), long (2m) or extendible (e.g. 3.6-5.0m) spray lances
- Herbicide injection gun
- Leaf wiper, disposable wipes, paintbrush

The following potentially-harmful substances may be used (see COSHH for details):

- Any UK-approved herbicide (see site-specific MS for which)
- Any UK-approved adjuvant (see site-specific MS)



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- Line marker spray

The site-specific RAMS will specify what PPE is to be used, but the minimum PPE required for this task is:

- Chemical-resistant wellington boots to ISO 20345 and EN13832-3
- Chemical resistant gloves to EN ISO 374
- Cat III Type 5+6 spray suit to ISO 13982-1 and ISO 13034
- Both goggles and visor to EN166
- In addition, for mixing, an EN 14605 apron is required.

PREPARATION

JKSL site foreman must undertake a visual survey of the area before starting work, to check for slip/trip/fall hazards, watercourses, and overhead power cables as well as other hazards including sharps and asbestos-containing materials. Any significant hazards should be reported to JKSL's Project Manager before starting works.

If appropriate, the areas for application should be marked before starting application.

Clean Site Policy should be implemented if there are invasive species present.

If the areas are accessible to the public, a spotter should be nominated, and signals agreed for stopping and re-starting works and any other important instructions.

Before use, all equipment must be checked, adjusted and (where necessary) calibrated. Separate check-sheets are provided for this.

WATER QUALITY MANAGEMENT

Spraying near to watercourses is not permitted without approval from the local authorising agency (e.g. Environment Agency, SEPA, Natural Resources Wales, etc.). The prohibited distance and conditions for approval vary between agencies and approval will be subject to certain conditions which may vary from site to site and year to year.

In England, spraying may be carried out up to 1m from the top of the bank (the first break in slope) of any watercourse without seeking approval; within 1m, EA approval is required.

In Scotland, mixing must not be carried out within 10m of any watercourse. Additionally, application within 1m of the top of the bank of any watercourse is prohibited during rain; high wind; within 50m of any spring, well or borehole (unless it is capped to prevent such ingress), 250m upstream of any water abstraction intended for human consumption (or 250m from such on a lake or wetland). In line with the above conditions and additional conditions outlined by SEPA, application within 1m of the top of the bank does not need approval if it is for treatment of invasive species using a pesticide approved for use near water and provided no herbicide enters the water. Otherwise, SEPA approval is required.

In Wales, herbicide applications may be made in line with NRW conditions if herbicide is used within 250m of water but not actually on or in water and/or within 1500m but not actually in a designated site and/or not within 1km of a drinking water abstraction point or 500m of any other type of water abstraction point. For other activities, a permit is needed.



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Before application near water, JKSL must request permission in writing. Approval will include a number of conditions and is not guaranteed so there is no guarantee that herbicide application can proceed as planned. If a previously unidentified watercourse is found on site, works in the protected area will not proceed, JKSL may charge for seeking permission and further applications may be required in these areas at a later date.

MIXING AND PREPARATION FOR APPLICATION

JKSL will comply with relevant legislation, any relevant code of practice issued by DEFRA and the conditions outlined on the product label(s) at all times, during applications. Spray operatives (or a person directly supervising them one-to-one) will hold a valid, current sprayer certificate, (e.g. NPTC PA1 and PA6a) including e.g. PA6w for working near water.

Mixing of herbicides must be carried out in a suitable location, away from any watercourses, and in an area where there is no significant risk of any spillage running off into drains or watercourses. Only mix enough herbicide for the job (or mix small batches). Empty containers will be put in the chemical storage as soon as they are used and removed from site for disposal.

Any water taken from a watercourse must be taken out using a clean container which has never been used to carry pesticides or other environmentally harmful materials. The water must be transferred into an intermediate container or spraying equipment in such a way that no herbicide (concentrated or dilute) can come in to contact with it.

SPRAYING

Spraying must only be carried out in appropriate weather conditions. Spraying must not go ahead in excessive wind and/or precipitation, low light levels or other adverse weather conditions. Where wind or precipitation make spray works unsuitable, leaf wiping or stem injection can potentially be used as an alternative for some species but this may not be practical or may require additional costs, particularly if the application areas are large.

Spraying will either be a ground-level blanket spray or will be targeted and directed to specific species only (as per the MS for site). For foliar-acting herbicides, spray must only be applied to active weed growth. JKSL operatives will take measures to minimise spray drift onto other areas of the site, land adjoining the site and any non-target plant species.

Some diluted herbicide is likely to remain in the tank when you finish spraying; spray these residues out over a suitable area of waste ground, then rinse the knapsack with a small volume of water and spray the washings out over a suitable area and repeat twice more.

Any application along a flowing watercourse (whether it is spraying or any other method) must proceed against the direction of flow of the watercourse – that is to say, moving upstream at all times. This approach reduces the concentration of any herbicide which enters the watercourse.

STEM INJECTION



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Injection is approved for limited specific uses (mostly applying glyphosate to mature Japanese knotweed). Injection will be used if it is appropriate and necessary to ensure effective treatment in adverse weather conditions or to protect surrounding plant species.

Once the equipment has been tested and filled with herbicide as per the product label, insert the gun into the stem of the plant (for JK, between the first two internodes) and apply the herbicide with a single press of the trigger. If the herbicide leaks out of either side of the stem after the press of the trigger, then the application should be repeated.

In large stands, paint or marker spray can be applied to each treated stem to prevent stems from being missed or treated more than once.

LEAF WIPING

A dedicated leaf wiper can be filled with (dilute) herbicide as directed on the product label and the wick used to liberally wet the leaves of the target plants.

A dedicated paintbrush (for one product only) can be used to apply dilute herbicide from a suitable container. Care should be taken to avoid over-wetting the brush, causing dripping.

Wipes may be used; a small amount (1-2ml) of concentrated herbicide can be applied to each wipe and the contents transferred to the plant by wiping on to the leaves. Used wipes should be placed into a sealable, water-tight container immediately after use, and should be removed from the site upon leaving the area.

Leaf wiping shall not be carried out adjacent to water unless the equipment can be prepared away from the watercourse and kept in a sealed, water-tight bag before and after use. No concentrated herbicide is to be taken into the watercourse or on to the banks.