

Information Note:



How to conduct a LERAP

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A number of pesticides have requirements for buffer zones to be left unsprayed when being applied next to watercourses. These products will have been deemed to represent a risk to the aquatic environment. The required buffer zones will be shown clearly on the label as well as information as to whether this buffer zone can be reduced in certain circumstances following a LERAP Assessment.

Remember

Operators should only use pesticides as part of an Integrated Pest Management strategy with non-chemical options considered first.

What is a LERAP?

Local Environmental Risk Assessment for Pesticides (LERAP) allow sprayer operators to reduce the buffer zones shown on some product labels. Reading the label is key as no reduction will be possible for some products and others may vary depending on crop type or equipment used and identifying which is which is the starting point.

A LERAP considers the dose rate, the width of the watercourse and also the standard of the sprayer nozzles and equipment. Where it is calculated that the proposed application represents a lower risk, the buffer zone can be reduced. In some cases this can allow buffer zones to be reduced to 1m from the top of bank.

In addition to allowing a reduction in the buffer zone and protecting the environment, the assessment and recording process also demonstrates compliance and the responsible use of pesticides near the water environment, not only to authorities such as SEPA or SGRPID but also to the wider public.

How do I know if I need one?

A LERAP only needs to be completed if applying pesticides next to a watercourse- this can range from a river, a stream or a ditch and whether you want to reduce the buffer zone shown on the label for eligible pesticide products. If you don't want to reduce the buffer zones from that shown on the label, there is no need to complete a LERAP assessment however is a still a requirement to record the buffer zones observed in your records.

It is also important to read and understand the product label and the Buffer Zone scheme that applies. Some products authorised under the LERAP "A" or "B" and the Interim scheme may allow reductions as shown overleaf. Those authorised under the DRT scheme have specific and in many cases more stringent conditions for buffer zone reduction.

Always read the label carefully - buffer zones for LERAP Category "A" and "B" pesticides are product specific, buffer zones for pesticides authorised under the Interim Scheme are crop specific and as such may vary for different crops. Products labelled through the Interim Scheme will list the Buffer Zone requirement and if 5m or below, whether it can be reduced or not following a LERAP assessment.



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For more information about pesticides and protecting water quality, see the FAS website www.fas.scot & www.farmingandwaterScotland.org

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Regulations around LERAPs

Local Environment Risk Assessment for Pesticides (LERAP) Scheme

Buffer Zone scheme shown	Product Buffer Zone on label	Can buffer be reduced with a
LERAP Category "A"	5m	NO
LERAP Category "B"	5m	YES
Interim Scheme	5m or under	YES
Interim Scheme	Greater than 5m	NO

Important

If mixing products always follow the product with the most stringent buffer zone requirements

How do I complete a LERAP?

If you wish to reduce the buffer zone shown on label and the product either has a LERAP category "B" or has a buffer zone of 5m or under through the Interim Scheme, the assessment process is based on the watercourse width, the dose rate and type of nozzle used.

Completing a LERAP assessment is a 3-stage process and requires watercourse size, dose rate and equipment type to be recorded.

How wide is the watercourse?

It is important to know the width of the watercourse at its narrowest point. There are four categories.

Dry ditch	Up to 3m	3-6m	Greater than 6m
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Top tip

Take a farm map and mark on watercourse widths for ease of reference for future LERAPs

What is the dose rate to be applied?

Calculate the proposed dose rate relative to the maximum dose rate with rates categorised as follows:

LERAP rating	$\frac{1}{4}$ rate	$\frac{1}{2}$ rate	$\frac{3}{4}$ rate	Full rate
%age of Full rate	0%-25%	25%-50%	50%-75%	75%-100%

LERAPs continued

What is the drift status of your nozzles?

Nozzles will be rated between 0 and 4 stars in terms of drift reduction.

	Standard	* Star Rated Nozzles	** Star Rated Nozzles	*** Star Nozzles	**** Star Nozzles
Drift Reduction	0%	25%	50%	75%	90%

It is also important to check that nozzles are certified by CRD, equipment which is not on this list should be treated as standard. Equipment can be checked using the following link:

[Equipment Search \(pesticides.gov.uk\)](https://pesticides.gov.uk/EquipmentSearch)

Important: Low drift nozzles are given their rating based on specific operating performance e.g. forward speed and pressure. When using low drift nozzles as part of a LERAP, operators must also adopt the specified operating parameters.

Working out the buffer zone reduction

The information recorded allows operators to work out their minimum buffer zone. A simple table was created by DEFRA and the PSD and is reproduced below:

Nozzle Rating	Standard Equipment (no drift reduction)				* Star				** Star				*** / **** Star			
	Full rate	$\frac{3}{4}$ rate	$\frac{1}{2}$ rate	$\frac{1}{4}$ rate	Full rate	$\frac{3}{4}$ rate	$\frac{1}{2}$ rate	$\frac{1}{4}$ rate	Full rate	$\frac{3}{4}$ rate	$\frac{1}{2}$ rate	$\frac{1}{4}$ rate	Full rate	$\frac{3}{4}$ rate	$\frac{1}{2}$ rate	$\frac{1}{4}$ rate
Dose Rate																
Watercourse width																
Under 3 m	5	4	3	1	4	2	1	1	2	2	1	1	1	1	1	1
3 – 6 m	3	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1
> 6m	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Dry ditch	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

It is important that where buffer zones have been reduced by conducting a LERAP assessment, a record is kept. This can be fairly simple but should show the dose rate, equipment rating and watercourse width and the buffer zone applied. An example is shown below:

Record of LERAP Assessment															
Operator:				Date:				Field:							
Dose rate	Full			$\frac{3}{4}$			$\frac{1}{2}$			$\frac{1}{4}$					
Nozzle rating	Standard			* Star			** Star			*** Star or					
Watercourse width	< 3m			3-6m			> 6m			Dry ditch					
Buffer zone	4m			3 m			2m			1m					

Records of the assessment must be kept for 3 years.

LERAPs continued

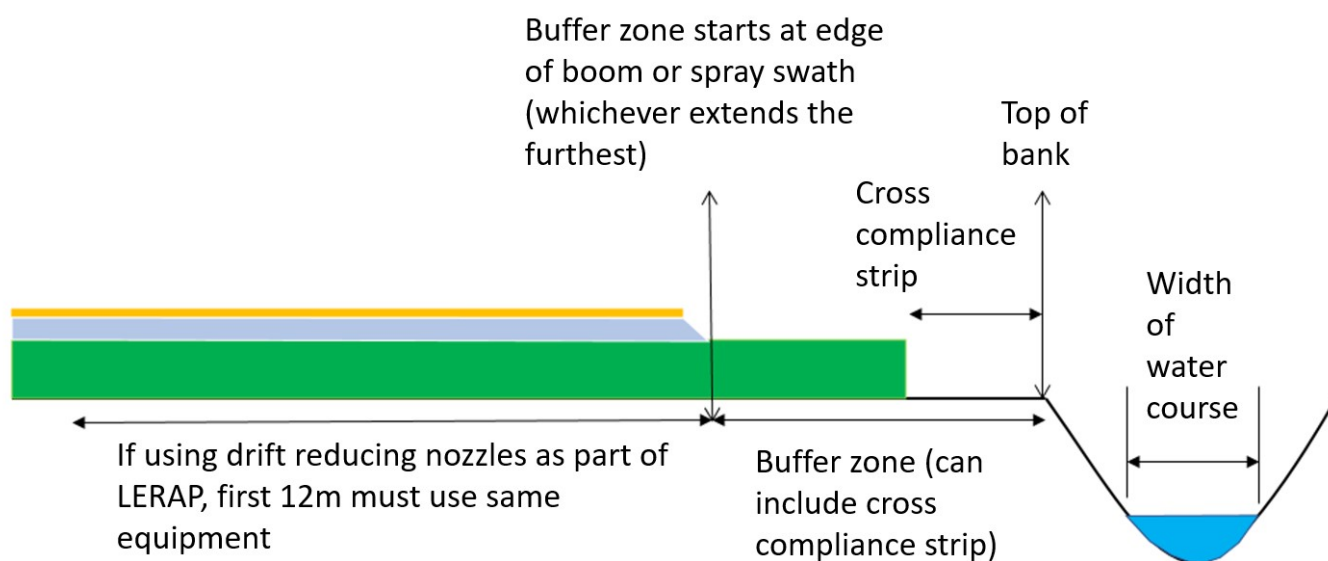
Field application

Once the LERAP has been completed and recorded field application can be undertaken.

Operators should be aware of the following:

- Where drift reducing nozzles have been used as part of a LERAP, the same equipment must be used for at least the first 12m sprayed adjacent to the watercourse.
- Where spray swath exceeds the width of the sprayer boom, the buffer zone starts from the edge of the spray swath.
- Where buffer zones have been reduced by dose reduction, repeat applications cannot be undertaken for at least 24 hours.
- Always read product label and record details of applications fully.
- Cross compliance strips adjacent to watercourses can be included in buffer zones. Extending these further into fields as grass margins helps reduce the risk to the aquatic environment as well as providing a biodiversity habitat.

The following diagram illustrates some of the key measurements required for a LERAP assessment and the implementation of the buffer zone reduction.



Completing and recording LERAP assessments not only helps protect the water environment and quality but also demonstrates compliance and the responsible use of pesticides. Keeping watercourses free from pesticides can also play a key role in protecting these active ingredients from further restrictions or revocation.

Further Reading

- [Health & Safety Executive: LERAP - Horizontal boom sprayers](#)
- [Health & Safety Executive: Interim update to aquatic buffer zone scheme for pesticides](#)
- [The Voluntary Initiative: The LERAP Scheme - operator advice](#)