Information Note:

Buffer Zones

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Making sense of buffer zones

When applying pesticides, Buffer Zones have been used for a number of years to help protect water environments. Their use also helps producers avoid penalties from breaching cross compliance rules and by preventing pesticides entering watercourses, not only helping to protect water quality but also helping protect valuable active ingredients by showing their responsible and safe application.

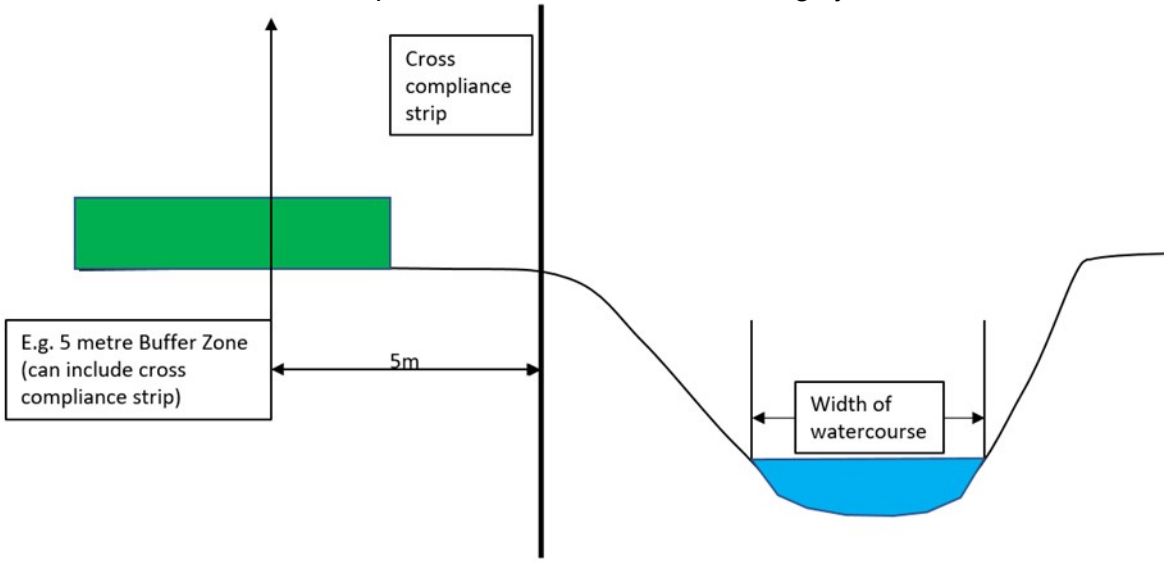
Where a risk to aquatic life, and environments, has been identified when the pesticide has gone through the approval and authorisation process, a Buffer Zone will be required. Most products have a minimum buffer zone that must be observed when being applied next to a watercourse. This will be clearly shown on the label and can vary from 1m up to 30m.

Remember

The Buffer zone requirements shown on the label are legally binding, failure to comply or record applications correctly can result in significant cross compliance penalties or fines as well as potentially damaging the local water environment.

How to measure a Buffer Zone

A Buffer Zone starts from the top of the bank of the watercourse or ditch. In addition there will be a cross compliance strip adjacent to the watercourse which can be included within the Buffer Zone. The width of the watercourse may also the affect the Buffer Zone that needs to be applied. Buffers Zones have mostly been product specific in the past however this is now changing with some products now having crop specific Buffer Zones, it is therefore important to check the label thoroughly.



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

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Regulations around buffer zones

As water quality regulations and application technologies have evolved, so have the rules relating to Buffer Zones with there now being four different schemes:

Local Environment Risk Assessment for Pesticides (LERAP)	**Interim Scheme**
Drift Reducing Technology (DRT)	**Non Target Arthropod Buffer Zones**

The LERAP, Interim and DRT schemes are aimed at protecting the aquatic environment with the Non Target Arthopod Buffer Zones protecting insects and wildlife on uncropped land.

Products will clearly show their Buffer Zone scheme on their label and while the LERAP scheme is still common, in time more pesticides will show either the Interim or DRT scheme on the label. With the move to crop specific buffer zones, individual products may have different buffer zones for different crops highlighting the need to both read the label thoroughly to identify which scheme applies and also what the buffer zone is for that crop.

Mixing products to increase the number of active ingredients to combat resistance issues is common, particularly in grass weed herbicides. Where products have different Buffer Zone requirements always follow the product label with the most stringent Buffer zone requirements (e.g. if one product allows buffer zones to be reduced to 1m and the other doesn't allow a reduction below 5 metres, observe the 5m buffer zone).

Local Environment Risk Assessment for Pesticides (LERAP) Scheme

LERAPs are the most well known and were introduced over 20 years ago and allows the Buffer Zones for some pesticides to be reduced if certain measures are undertaken. Pesticides will be classed as LERAP "A" or LERAP "B" – which will be clearly visible on the label and are summarised in the table below.

Buffer Zone scheme	Product Buffer Zone on label	Can buffer be reduced with a LERAP assessment?
LERAP Category "A"	5m	NO
LERAP Category "B"	5m	YES

LERAP "A"- Category "A" products are not eligible for Buffer Zone reduction under LERAP. The buffer zone advised on the label must be adhered to.

LERAP "B"- Category "B" products with Buffer Zones of 5m only can have their Buffer Zones reduced by conducting a LERAP. Products with Buffer Zones greater than 5m cannot be reduced. This reduction can be achieved through the use of Drift Reduction Technology (e.g. low drift nozzles), reducing the dose rate to 25% of the full dose or the width of the watercourse. These measures can see Buffer Zones reduced to as little as 1m.

Part of this process is the completion of a LERAP assessment prior to the application by the operator. This will take into account the width of the watercourse, the dose rate of the pesticide to be applied and the low drift status of the nozzles being used. If a reduction in Buffer Zone is to be undertaken using a LERAP, full details of the assessment must be recorded that allowed the reduction.

It is still a requirement to record the buffer zone observed next to watercourses whether it has been reduced or not. These records must be retained for three years following application.

Regulations around buffer zones - continued

Interim Scheme

The Interim Scheme was introduced over a decade ago to allow the same level of flexibility as other EU members and also facilitate the authorisation of new and re-registration of older products. This saw a move from the product specific Buffer Zones to crop specific Buffer Zones for each product with the product label clearly stating size of buffer required and whether the Buffer Zone can be reduced.

The Interim Scheme is slightly more straight forward in terms of which products can have their buffers reduced:

Buffer Zone scheme	Product Buffer Zone on label	Can buffer be reduced with a LERAP assessment?
Interim Scheme	5m or under	YES
Interim Scheme	Greater than 5m	No

For products labelled under the Interim scheme that have a Buffer Zone requirement of less than 5m, these can be reduced by conducting a LERAP assessment in the same way as eligible LERAP “B” products. Products with Interim Scheme buffer zones of greater than 5m however cannot have their Buffer zones reduced and the buffer zones shown on the label for each crop must be adhered to.

Drift Reducing Technology (DRT)

The DRT buffer zone scheme has allowed products to be used by UK producers that would have difficulty finding approval and authorisation under either the LERAP or Interim schemes. This does come with much more stricter requirements and requires operators to use low drift application techniques and accredited equipment e.g. nozzles.

Like the Interim scheme the buffer zones shown on the label are crop specific however unlike the Interim scheme these buffer zones will be fixed with no option to use a LERAP to reduce the buffer.

The DRT Buffer zone will apply for up to 30m from the watercourse and within that zone, the label will specify the requirements in terms of both equipment and operating procedure e.g. nozzles and pressure that must be followed. Within this zone there will also be a crop specific no spray zone of 6, 12 or 18m.

Non-Target Arthropod Buffer Zones

While the other schemes focus on protecting the water environment, this scheme looks to protect wildlife and insects in uncropped areas, particularly that adjacent to cropped land. This includes hedgerows and permanent grass margins or even areas taken out of production.

The requirements are found within the “Directions for use” section on the label and are usually product specific. There are two types - Statutory and Advisory and it is important to read the label carefully.

Statutory Arthropod buffer zones cannot be reduced and, unlike the aquatic buffer zone scheme will start from the edge of the crop and typically be 5m. GAEC strips adjacent to hedges edges cannot be counted within the buffer zone. These products are deemed a high risk to non-target insects and key words found on the label will be “respect” and “do not”.

Advisory Arthropod buffer zones recommends the use of buffer zones to protect non-target insects. The buffer zone in this instance will be applied from the field boundary or the edge of the non-cropped land. Key words on the labelling include “avoid” and “precautions”

Key messages:

- Always read the product label thoroughly and follow buffer zones requirements.
- Using buffer zones and low drift technology must be combined with responsible application procedures.
- Always keep detailed records ensuring full details of LERAP assessments are kept and details of application are recorded - e.g. nozzles used, pressure, speed, conditions and buffer zones applied.
- Always follow label instructions relating to types of nozzles, forward speed, pressure etc.