

FARMING & WATER SCOTLAND



Risk Assessment for Manure and Slurry

A Risk Assessment for Manure and Slurry (RAMS) **must** be carried out in respect of any land which receives organic fertiliser such as slurry, manure or digestate.

The RAMS **must** include a map of the land and be provided to the person carrying out the application (e.g. contractor, farm worker etc) (Figure 9.1).

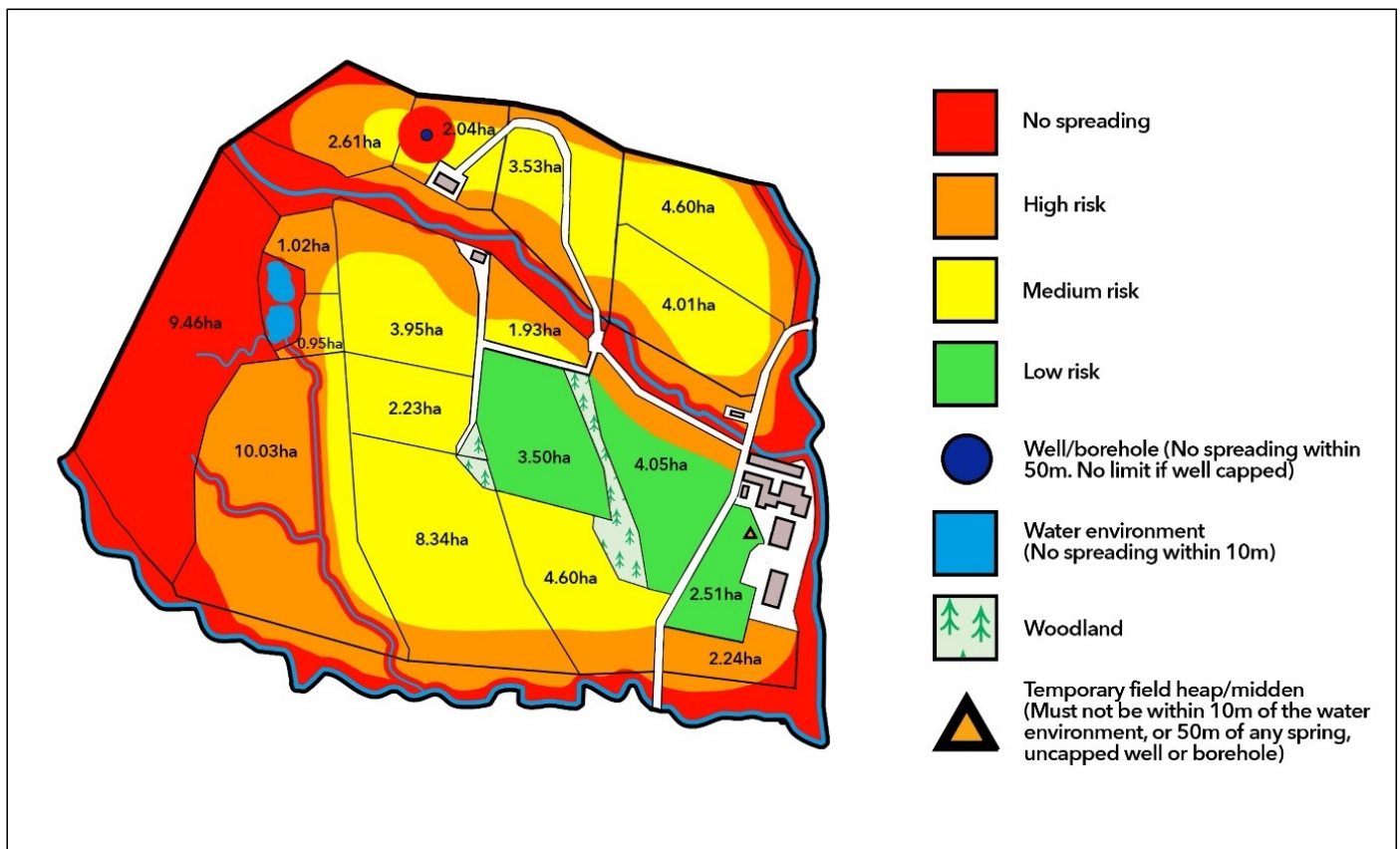


Figure 9.1. Risk Assessment for Manure and Slurry (RAMS) Map.

Guidance on producing a RAMS map is provided on the Farming and Water Scotland website. As a minimum the RAMS map **must** show:

- field boundaries
- area of field in ha
- location of all surface waters, springs, wells, boreholes, underground water tanks
- land with a slope of 12 degrees or more
- location of any field heaps
- no spread zones around surface waters, springs and wells
- no spread areas where the land is too steep or soils too shallow
- any other areas of high risk to the water environment.

Step 1 – Start off with a map of the farm showing:

- the field boundaries and area of each field
- all watercourses (including ditches, ponds, wetland etc) and wells, springs and any storage tanks or similar structures for supplying water (shown in blue in above map)
- location of field heaps (must not be on any area identified as a no spread zone or high-risk area)

Step 2 – identify the no spread zones (shown in red above) including:

- 10m of any surface water, as measured from top of bank (Figure 9.2)
- 50m of any uncapped well or borehole
- 50m of any spring that supplies water for human consumption
- Land with an average soil depth of less than 40cm over gravel or fissured rock.
- Land that is sloping towards a watercourse, unless a suitable buffer can be maintained to adequately intercept any run-off to prevent the fertiliser reaching water.

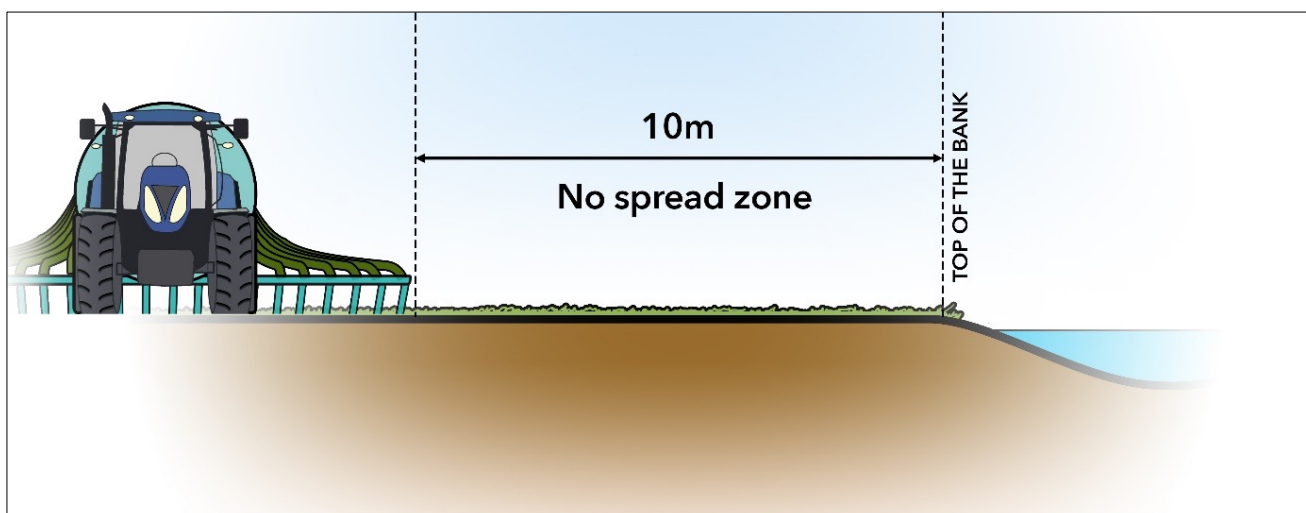


Figure 9.2. Minimum slurry no-spread zone around water courses.

Step 3 – Identify the high-risk areas:

- Any area of land with a slope of 12 degrees or more (if not already highlighted in the no-spread zone)
 - Any other areas of high risk to the water environment, such as:
 - Areas with a risk of flooding more often than one in five years.
 - Fields with drainage installed in previous 12 months.
 - Poorly drained, regularly waterlogged or severely compacted land.

Step 4 – Identify the medium risk areas:

- slopes with a gradient of between 4 and 12 degrees in the vicinity of watercourses.
- land sloping towards watercourses or water supplies
- Imperfectly drained land or areas which can be prone to waterlogging following heavy rain and ground conditions will need to be checked prior to spreading

Step 5 – Identify low risk areas:

- slopes with a gradient up to 4 degrees.
- land with no artificial drainage.
- land that presents a lower pollution risk, but where other factors that could change the spreading risk, such as flooding or frost/snow conditions, will still have to be taken into account.

Definitions:

Anaerobic Digestate or liquid digestate – means whole digestate, the liquid fraction or any run-off from the storage of fibrous residue, resulting from an aerobic digestate process of a consistency that allows it to be pumped or discharged by gravity at any stage in the handling process.

Organic fertilisers – for the purpose of these rules and guidance, organic fertiliser includes bulky organic fertilisers such as manure, slurry and anaerobic digestate

Precision spreading equipment – includes dribble bars, band spreaders, trailing shoe or direct injection systems which apply organic fertilisers close to the growing crop.

RAMS – Risk Assessment for Manures and Slurry map showing no-spread, high, medium and low risk sites for organic fertiliser application

Slurry – excreta, including any liquid fraction, produced by livestock whilst in a yard or building. This includes any mixtures of excreta with bedding, feed residues, rainwater and washings from dungsteads, middens and any buildings or yards used by livestock.

Surface Water – all standing or flowing water on the surface of the land, transitional water and coastal water.