New regulations on farm roadways and waters

Tom Fallon
Farm Buildings and Infrastructure Specialist
Teagasc Rural Economy Development Programme

New requirements to prevent direct run-off of soiled water from farm roadways have been published by the Department of Agriculture, Food and the Marine (DAFM) and come into effect from 1 January 2021. Specification on Farm Roadways are available on www.agriculture.gov.ie, or https://bit.ly/2wMeigQ.

Farmers who have a grassland stocking rate over 170kg N/ha
- Livestock drinking points must be at least 20m from watercourses and animals cannot be given access to streams for drinking. The 20m does not apply if there is a roadway between the trough and the watercourse.
- Fences must be at least 1.5m from edge of the bank, so many farmers may need to move fences. Existing fences alongside roadways that are situated within 1.5m of the watercourse do not have to be moved.
- Livestock will not be allowed to cross (walk through) watercourses. This is not specifically mentioned in the legal documents, but DAFM have confirmed that it is covered under Article 18 of SI No 605 2017. Livestock will be allowed to cross a watercourse to an “isolated land parcel”.
- Farmers who export slurry to bring the overall farm stocking rate under 170kg are also obliged to comply with these new measures.

All farmers must prevent direct run-off of soiled water from farm roadways to waters: The Specification also includes measures to prevent direct run-off from farm roadways to waters, which must be in place from 1 January 2021. Waters are defined in Specification SI99 and include all water bodies, but also ditches that may be dry in the summer but convey water in the winter.

Measures to prevent direct run-off from farm roadways to waters
In most situations, it will be a matter of allowing or directing run-off from the farm roadway at regular intervals on to a field. Care must be taken to avoid directing run-off into paddock entrances.

Creating a crossfall
Roadways near watercourses may be level, or indeed, may have a crossfall towards the watercourse. Consider the feasibility of creating a crossfall away from the watercourse, as shown in Figure 1 below.

The cost of creating this cross fall will be approximately €13.50 per metre run for a 4m wide road. An existing road that is not in good order may need an extra 50mm of stone, which would add €5.50 to the cost per metre. Where roadways have a significant fall to the watercourse, it may make sense to evaluate an alternative solution.

Creating an earthen bank or barrier alongside the stream can be a useful physical barrier to prevent the entry of road run-off. This run-off will need to be piped or channelled back on to the land or, if this is not feasible, into a settlement pond.

Create a sediment trap or settlement pond (Figure 3): A settlement pond will only be needed where it is not feasible to direct road run-off onto a field. This may arise on wet or poorly-drained ground, where extra run-off would make the situation worse.

It will be necessary to channel or pipe the water to these settlement ponds. The bunds in the settlement pond create three chambers, which will ensure that the full contents of the pond are not disturbed when it receives a big influx of liquid.

There could be a lot of leaves and surface debris on these ponds so the ‘T’ on the percolation pipe will prevent this debris clogging up the percolation area. (The percolation pipe has openings to discharge the liquid. An ordinary drainage or perforated pipe could also be used).

It is recommended to line and cover over the percolation trench containing the drainage stone with geotextile. This is a strong synthetic fabric material that is often used on roadways to stop the layers mixing and it also strengthens the soil by spreading the load.

Our experience is that unless very good drainage stone (pea gravel,
These ponds are also likely to be in challenging environments with flooding and mud to contend with. Geotextile is generally sold in 5.5m wide 100m long rolls, so farmers may need to purchase it as a group.

Road run-off, after passing through the percolation area and the adjacent soil, can be discharged through the normal field drainage system. The settlement pond is designed to receive run-off from a 200m by 5m wide road. Bigger ponds will be needed for bigger catchments. Leaving room to install baffles to slow down the movement of liquid into the pond would also be sensible. In many situations, improving land drainage beyond the percolation channel will be necessary. Please consult your local authority.

Figure 3 also details buffer zones, which will be installed where animals enter a paddock adjacent to a stream. Effectively, the gateway into the paddocks will be moved at least 5m from the top of the bank of the stream or ditch.

Where a farm road slopes down towards a public road, and where there are waters running parallel with the public road, provision shall be taken to ensure that run-off from the farm roadway does not enter the watercourse or ditch. Steps will be taken to convey the soiled water to a suitable soakage area. This also applies to roadways that are traversing a watercourse.

**Herd Management:** For some holdings, livestock may have to cross a public road (where there is no underpass). In this case, cows will be retained in the farmyard until milking is complete. The full herd can then be moved to the grazing area.

This will reduce the both the time cows spend on the farm roadway and the consequent soiling. The farm roadway and the public road shall be maintained as clean as possible.

**One farmer’s simple solution to the new regulations** – he has changed the camber on the road so it slopes away from the stream on the right. He has created a depression on the left that receives and allows the run-off to soak away.

---

**Figure 3** - Farm roadway crossing a stream showing work to prevent runoff into the stream.