Flood Management Information:

Cross Drains

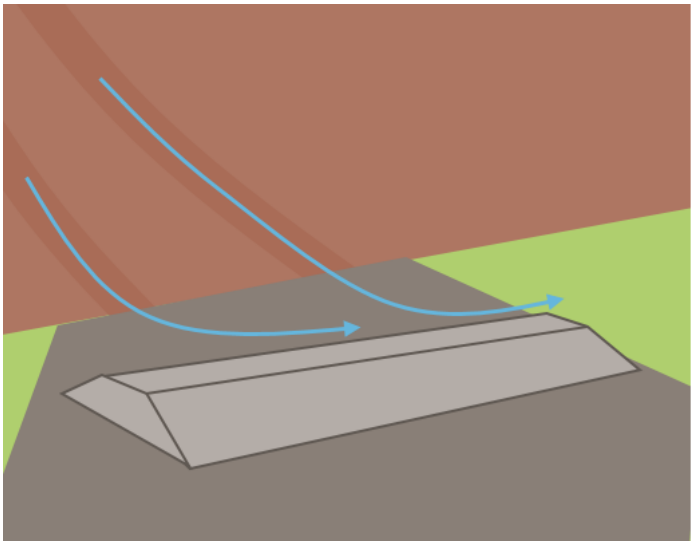
What are cross drains and how do they work?

A cross drain is a system that diverts water from a gateway, a track or farm yard to an area where it will not cause new erosion or runoff issues.

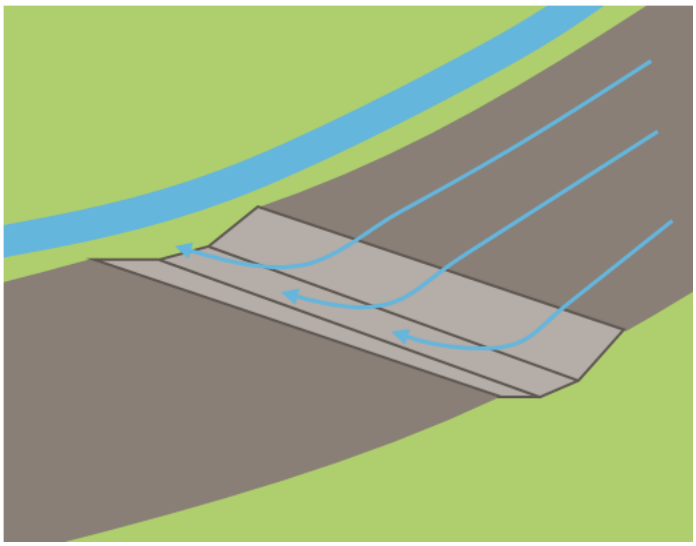
Benefits of cross drains on tracks and in gateways:

- Intercept preferential flow
- Keep tracks and gateways drier and reduce erosion of the track surface
- Trap and divert sediment from tracks and gateways
- Reduce localised flooding

Note that while cross drains are a good solution for reducing run-off and erosion on tracks and in gateways, the source of the run-off may originate in the field, in which case efforts should be made to address this. To reduce run-off and erosion, see *H2L Information sheet on Soil Husbandry Advice* and speak to a FWAG adviser.



Raised cross drain in gateway: Cross drains can be used in gateways with hard surfaces. In this example, the water is diverted from the tramlines away from the gateway and into the field margin or the hedge with filter barriers (or a silt trap. See H2L Information Sheet on Filter Barriers or Silt Traps)



Channel cross drain on track: Run-off can be a problem on tracks and if not addressed can damage the hard surface. By installing cross drains, water can be slowed and moved away, in this case into the adjacent ditch, where it can be filtered and slowed, see the In -ditch Features Information sheet.

Site Selection

The best sites for cross drains are:

- Where run-off pathways can be intercepted on a track or hardstanding
- Where a suitable area is available to divert the water into
- Where vulnerable receptors (e.g. houses/highways/watercourses) are receiving run-off
- Where tracks are contributing to sediment washing into watercourses
- On yards, to divert clean water, dirty water or slurry.

Design and Construction

- Cross drains can take the form of a channel / depression or a hump / sleeping policeman
- Care should be taken to design the feature so it does not cause erosion issues on the track
- Consider further measures to slow the flow and filter run-off at the outfall of the cross drain, see *H2L Information Sheet* on *Strategic Planting, Woody Flow Spreaders, Filter Barriers and Silt Traps.*

Management

- Ensure that sediment or debris does not accumulate around the cross drain. If so, remove to allow the structure to function well.
- Regular checking and emptying of channels, drain outfalls or the areas around a hump by removing sediment build-up or other clogging materials.
- Management of the water outfall area is essential to maintain flow when required

Concrete cross drain with outlet via a pipe into the adjacent field margin.

Cross drains and your farm business

Installing cross drains on tracks or in gateways can keep mud to manageable levels, making these areas more accessible and useable even in wet periods.

Installing cross drains may help reduce the likelihood of pollution incidents and erosion on tracks.

Cross drains are available as capital items through Countryside Stewardship (RP5: Cross Drains) and pay £245 per drain.

Consents and Licences

It is unlikely that consent is required for cross drains, however your FWAG SW adviser can give site specific advice on this.