

Best Practice Information Sheet

Infrastructure management

Sheet 11.0a

Introduction

Why change?

Farm tracks, stream crossings, fences and gates are all examples of farm infrastructure.

Efficient, effective infrastructure is a vital tool in promoting timely, safe and cost effective farm operations. Well maintained infrastructure will save you time and money, improve herd health and help protect farm environments.



Well maintained farm tracks and infrastructure save time and money.

Steps to success

1. **Understanding how infrastructure** can affect your costs, profit and even the capital value of your farm will help to identify and prioritise opportunities for change. Implementing simple practical changes, or those with a rapid payback, is fundamental to the long-term productivity and sustainability of your farm enterprise. Areas which typically provide savings and other benefits include:
 - **creating good farm access** for both machinery and livestock. This can reduce transport and hence land operation costs, protect the productivity of soils, safeguard stock health and welfare, and safeguard water courses from pollution (see Sheet 12)
 - **assessing where fences and gates** could be improved, provided or re-sited is a vital part of ensuring efficient operations, particularly on livestock farms. If they are correctly positioned and designed they will give considerable benefits including reduced running costs and increased capital value (see Sheet 13)
 - **providing culverts for small streams and ditches**, which can be a useful way of reducing the risk of injury or lameness in livestock, reducing dirty water production, improving access in wet weather, and minimising the risk of water pollution. Care must be taken to ensure that the watercourse and the associated flora and fauna are protected. It may be necessary to seek permission from the EA (see Sheet 13)
 - **constructing diversions and settlement areas** for roads, tracks and stock trails can help protect these routes, as well as soils and crops, from serious damage caused by rainfall runoff once the water gains volume and momentum. Settlement areas can reduce the impact of sediment, nutrients and other materials carried by the runoff, which can add to the costs of dealing with dirty water and increase pollution risks (see Sheet 15).
2. **Check opportunities** by making an inspection of the farm infrastructure, including tracks, fences and gateways, and assessment of signs of erosion and runoff a routine activity.
3. **Develop an action plan** that takes account of the priorities you have identified, as well as the availability of labour and funds and the need for access for farm work, before you carry out the improvements.

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Sheet 11.0b

Farm access - Practical examples

Poor management - new access track needed

In this example, a new hardcore track was necessary to improve access for stock and machinery. The cost of providing a 3.2m wide track with stock fencing, is approximately £40/m. Without the improved access there will be ongoing risk of:

- increased accidents
- poor timeliness of access, e.g. for grazing and cultivation
- higher costs of damage to land and crops
- increased time of travel, e.g. for slurry application
- more stock lameness/injury
- heavier wear and tear on equipment
- more time spent cleaning
- increased crop contamination, e.g. of silage
- increased water pollution.



Wise management – watercourse fencing needed to protect animal health

In this worked example, fencing 600m of riverbanks to exclude livestock, including a 100 cow dairy herd and followers, reduced the costs associated with lameness, injury, and infections from waterborne disease, loss and straying of stock.

Using farm labour to provide permanent electric fencing posts and wire at £3.00/m costs £1800.

Reduced injury and lameness costs of £4/cow/year for a herd of 100 animals = £400. Payback is achieved in less than five years.

Excluding livestock also reduced water pollution and damage to watercourse banks, which, if uncontrolled, could lead to loss of land and crops by flood erosion.



Good infrastructure including tracks and runoff settlement areas reduces costs

Remember

- Good farm infrastructure saves money in the longer term and provides a wide range of other benefits.
- Monitoring your infrastructure on a routine basis can highlight any problems early.
- Building soakaways, constructed wetlands and bankside works may require permission from the EA.

For further information: Defra (www.defra.gov.uk), Environment Agency (www.environment-agency.gov.uk), ECSFDI (<http://www.defra.gov.uk/foodfarm/landmanage/water/csf/delivery-initiative.htm>), Natural England (www.naturalengland.org.uk), Cross Compliance Helpline 0845 345 1302 (www.crosscompliance.org.uk) and ART (www.associationofrivertrusts.org.uk)



This information sheet is part of a series providing farmers with advice on land management practices to protect water bodies, produced by Association of Rivers Trusts with support from the England Catchment Sensitive Farming Delivery Initiative. The advice will also enable farmers to use farm resources more efficiently and help meet Nitrate Vulnerable Zone and Soil Protection Review requirements under Cross Compliance and environmental regulation.



Based on Information Sheets originally created by the Westcountry Rivers Trust (www.wrt.org.uk) and developed with EAGGF objective one funding and published under permission by DEFRA and ART