Best Practice

# Infrastructure Management

Sheet 11.0a

## Introduction

### Why change?

Farm buildings, 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
- help protect farm environments.
- reduce your carbon footprint

Well maintained infrastructure saves time and money

## Steps to Success

1. **Understand** how infrastructure can affect your costs, profits and even the capital value of your farm which 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 land operation costs, protect the productivity of soils, safeguard stock health and welfare, and safeguard water courses from pollution (see Information (IS) Sheet 12)

- **assessing** where fences and gates could be improved, erected or re-sited as 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 Environment Agency (see IS 13)

- **constructing** diversions and silt settlement areas for roads, machinery and stock tracks to help protect these routes, soils and crops, from serious damage caused by rainfall run-off once the water gains volume and momentum. Settlement areas can reduce the impact of sediment, nutrients and other materials carried by the run-off, which can add to the costs of dealing with dirty water and increase pollution risks (see IS 15).

2. **Check** opportunities by regularly making an inspection of the farms infrastructure, including tracks, fences and gateways.

3. **Develop** an action plan that takes account of the priorities you have identified, as well as the availability of labour and funds.

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Sheet 11.0b

## Farm Access - practical examples

**New access track**

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, was approximately £40/m. Without the improved access there would be ongoing risk of:

- accidents
- reduced 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
- increased stock lameness/injury
- increased wear and tear on equipment · more time spent cleaning
- increased crop contamination, e.g. of silage
- increased water pollution.

**Watercourse fencing**

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 £4.00/m costs £2400.

Reduced injury and lameness costs of £4.50/cow/year for a herd of 100 animals = £450. Payback is achieved in about 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.

Well maintained farm track

Well fenced riverbank

**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 Environment Agency.

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Channel Payments for Ecosystem Services
European Regional Development Fund
CPES
Pinpoint Rivers Trusts and Farmers working together for water
The Rivers Trust
Westcountry Rivers Trust

This information sheet is part of a series produced by Westcountry Rivers Trust providing farmers with advice on land management practices to protect water bodies. The advice enables farmers to use farm resources more efficiently, helping to meet Nitrate Vulnerable Zone, Cross Compliance, Farming Rules for Water and other regulations while protecting our environment and natural resources.