



Department
for Environment
Food & Rural Affairs

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Update to C759 Livestock Manure and Silage Storage for Agriculture



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andy.moores@ciria.org
07933 181766

About CIRIA

CIRIA is the Construction Industry Research and Information Association, a neutral, independent and not-for-profit member organisation.

Our vision is to be the leading enabler and preferred partner for performance improvement, to drive collaboration across the built environment and construction sectors to research, develop and transfer knowledge.

CIRIA Products

CIRIA delivers robust, authoritative and independent good practice guidance applicable across sectors and designed for a range of users, from policy makers to practitioners.

Our guidance is developed collaboratively with industry and academic experts. Our methods ensure consensus, quality and the latest thinking underpin everything we do. Our work contains case studies to share knowledge and illustrate practice through examples.

We raise awareness of our good practice guidance through training, events, communities of practice, social media, blogs and press releases. Key messages from our projects are widely disseminated to help embed good practice into industry.

CIRIA Research Ambitions

CIRIA's 60+ year history and future purpose are aligned to our ambitions, designed to make a tangible difference to the sectors in which we work. We take a holistic, systems-based approach to critical industry challenges within our 5 core research ambitions.



Embedding Sustainability



Achieving Net Zero Carbon



Increasing Resilience



Improving Delivery



Harnessing Innovation

Livestock Manure and Silage Storage Infrastructure for Agriculture

Justification

The CIRIA guide Livestock Manure and Silage Storage Infrastructure for Agriculture is a 2 part guidance document produced by CIRIA in 2015 (C759 a&b). This guidance has helped to underpin regulatory position and provide good practice methods accessible to designers, contractors and agricultural operators since launch.

Since 2015 there have been a number of regulatory changes across Great Britain, including the Farming Rules for Water (2018) in England, the Water Environment (Controlled Activities) Amendment Regulations (2021) in Scotland and Water Resources (Control of Agricultural Pollution) (2021) in Wales. Recent public interest in water quality, from both foul water discharges from uncontrolled CSO spills, diffuse and point source agricultural pollution from farms has also raised public expectations about control and mitigation. Defra has also committed to a programme of Slurry Infrastructure Grants aimed at making better use of organic nutrients, improving water and air quality and reducing greenhouse gases. Ensuring that storage facilities are resilient to the extremes of weather, intense or prolonged rainfall, fluctuations in temperature, ground conditions is also critical. The drivers of sustainability, lower carbon approaches, circularity principles and whole life asset management approach adds to the need for guidance to be updated.

Since 2015 there has also been significant experience gathered in the use of the guidance, experience in regulation and a range of technologies, products and approaches to agricultural storage. The growth of energy from waste through Anaerobic Digestion (AD) facilities also needs to be factored. There are lessons to be learnt from complementary guidance in other sectors , for example the ongoing update to Ciria C736 Containment Systems for Pollution Control.

Scope

It is intended that this guide will supersede both parts of the C759 guidance document – covering selection, design and construction in a single document. The guide will update the legislative and regulatory context for UK slurry storage. Scope will predominantly follow the content structure of the existing guide with specific new guidance covering:

- Slurry store covers
- Separators
- Aeration and bubblers
- Energy from slurry

In common with many CIRIA documents there will be an increased focus upon whole life asset management of slurry storage options, through selection, design, build, operation and decommissioning elements.

At each stage of the asset lifecycle the following elements will be considered.

- Resilience to hazards
- Nature of risks arising from slurry storage
- Managing health, safety and wellbeing of operators and public
- Sustainability including lower carbon and circularity of materials
- Emergency spill procedures and risk mitigation

The guidance will incorporate lessons learnt from installations that have been successful and from sector failings where the guidance has been ignored or wrongly applied. The guidance will aim to draw from a range of representative case studies to demonstrate what good practice looks like and raise the standard of slurry storage across the industry. The guidance will look to complement upcoming revisions to Eurocodes to ensure longevity.

Indicative Timeline



Approach

CIRIA has received seed funding for this project from Defra - who would like the guidance to reflect the latest thinking in terms of good practice. The intent is to award authorship to a consortium led by ADAS who wrote the 2015 guidance.

Defra would like other beneficiaries of the guidance - either from the agricultural or product supply sector to proportionately contribute to guide. This ensures the guide is balanced to the needs of the industry and ensures that a range of representative case studies can be used to emphasise the key elements of the guidance.

We are thus seeking further funding partners to help shape, steer and assure the outputs. Funding secures a seat at the steering group table and enables the submission of case studies to demonstrate good practice and innovation in the sector.

Potential Further Partners

- Regulators / Policy Makers – Defra, EA, NRW, SEPA. HSE
- Farming bodies – NFU, Agricultural Industries Commission
- Environmental Consultants providing design services
- Product manufacturers – geosynthetics, tanks, bunds
- Insurance industry
- Water utilities

Why invest in a CIRIA project?

The benefits to your company from contributing to our projects

Our reputation

Our reputation in the industry is long established and widely recognised. The principles of quality, sustainability and collaboration have been a foundation for what we do for many years.

Our downloads

Our Guidance is downloaded over 50,000 times per year



Our reach

Our members and downloads span over 50 countries worldwide



The benefits of being involved in a CIRIA project are various:

- Deliver significant corporate value for modest levels of investment.
- Raise awareness of your corporate brand through logo on outputs and submission of case studies and content.
- Network with peers, clients and thought leaders in the sector.
- Get your message heard and influence industry direction.
- Demonstrate tangible leading contribution to improvement in the sector, fulfilling ESG goals
- Provide CPD for your staff, aiding routes to chartership and personal career growth
- Assist future work winning through involvement with industry leading good practice

Want to know more?

CIRIA Research



Dr Andy Moores

DIRECTOR OF RESEARCH

andy.moores@ciria.org

07933 181766

CIRIA Membership



Tam Simmons

HEAD OF MEMBERSHIP

tam.simmons@ciria.org

07933 181780

General Enquiries

Web : www.ciria.org

Email : enquiries@ciria.org

Phone : 07933 181765

Address : 124 City Road, London, EC1V 2NX