Case Study

Caynton House Farm, Shropshire

SDS intelligent rainwater control delivers water self-sufficiency for Shropshire agriculture



SDS Systems

SDS Intellistorm® Rainwater Harvesting System.
SDS SYMBiotIC™ smart water management platform.

SDS Customer

Shropshire Council.

Client

Caynton House Farm.

Project

Rainwater harvesting and smart water management for a mixed-use agricultural holding.

Purpose

To provide a reliable, locally controlled supply of harvested rainwater for farm operations whilst reducing rainwater discharge to the Strine catchment during rainfall periods.

Brief to SDS

As part of the River Severn Partnership Advanced Wireless Innovation Region project, SDS was asked to design, build, install and operate an intelligent rainwater management system capable of capturing roof runoff, storing it securely and distributing it for routine farm use.

Timing

Installation was completed in Spring 2025.

Project Background Information

Shropshire is one of the most significant agricultural counties in England, with more than 3,600 farm holdings recorded in the most recent agricultural census. Its economy, land use and workforce remain deeply connected to farming, with grassland dominating land cover and livestock forming a major part of its rural identity. However, the region faces the same pressures affecting farms nationwide: variable rainfall, growing operational costs, and increasing expectations around sustainability.

SDS Limited, Clearwater House, Castlemills,
Biddisham, Somerset BS26 2RE

T: +44 (0)1934 751303
E: info@sdsinfrastructure.com

Part of SDS Water Group

Company Registered in England & Wales. Registered Number: 04433740

Caynton House Farm is a working mixed-use agricultural holding located in rural Shropshire, supporting livestock and general farm operations that require a dependable year-round water supply. Like many traditional farms in the county, its infrastructure has evolved incrementally over time, with historic water arrangements designed for basic storage rather than proactive management or optimisation.

Project Objectives

To maximise the resource value of captured rainfall, reduce demand on borehole and mains water supplies and support the farm's long-term environmental and operational resilience.

Project Requirements

The solution needed to deliver dependable water storage with minimal footprint, while offering reliable automated control and straightforward monitoring. The client required a setup that could function efficiently with limited manual input and that could be expanded or adapted as the farm's operational demands evolve. Rural communication network limitations meant the system had to operate independently of fixed wired communications, while remaining robust, predictable and simple to manage.

SDS Product Features

SDS installed two separate Intellistorm® systems. The first comprised three interconnected tanks: a 3,000 litre primary tank supported by two additional 1,000 litre units. The second system comprised a single 10,000 litre tank. Together they provide a flexible network of harvested rainwater storage, positioned discreetly alongside key agricultural buildings, including a primary farm structure, with additional capacity concealed within the corner of a walled garden area.

All tanks communicate through the SYMBiotIC™ wireless platform, enabling them to operate as a single smart asset. The system monitors tank levels and local weather conditions, automatically adjusting how water is stored and released. During periods of high demand, the tank network retains stored rainwater to support tasks such as equipment washing, livestock hydration or general farm use. Ahead of predicted storms, the system pre-emptively creates space within the tanks by releasing water at controlled rates to existing on-site drainage infrastructure, reducing surface runoff and minimising the impact of heavy rainfall on surrounding land and downstream catchments. The system's low-maintenance design ensures reliable functionality without the need for ongoing oversight from farm staff.

Issues Overcome

The limited space available around the farm buildings required a compact but coordinated tank arrangement. Intellistorm®'s modular design provides a functional, balanced storage capacity without encroaching on operational areas of the farm. The wireless connectivity ensures that the four tanks — differing in volume — still behave as a unified system, despite their physical separation and size differences.

Managing variable seasonal demand was another challenge. Caynton House Farm required a solution that could supply water consistently through dry spells while also reducing excess runoff during wet periods. The intelligent forecasting and automated balancing within Intellistorm® and SYMBiotIC™ ensure the system adapts to weather and usage patterns without manual intervention.

Rural connectivity can often hinder the deployment of modern monitoring technologies. The SYMBiotIC™ platform's robust wireless architecture allows the installation to bypass these limitations entirely, supporting the wider regional move toward smarter agricultural infrastructure.

Results

The Intellistorm® and SYMBiotIC™ system has significantly improved Caynton House Farm's water management capabilities. The combination system, comprising 15,000 litres, now provides dependable on-site water storage that reduces reliance on external sources and supports the farm's operational rhythm throughout the year. Crucially for the River Severn Partnership Advanced Wireless Innovation Region project, discharge is managed to minimise contribution to the Strine catchment at rainfall time.

Automated control ensures that storage capacity is used efficiently, responding to both rainfall and on-farm demand. The farm has reduced wastage, improved resilience during dry periods, and mitigated localised flooding by regulating runoff during storms. The project highlights how intelligent water systems can directly support agricultural efficiency, enhancing sustainability in a region where farming remains central to local life and the economy.

Caynton House Farm now benefits from a practical, future-focused water management solution that aligns with Shropshire's broader ambitions for innovation across its rural industries.

Neil Furniss, Director, M. E. Furniss & Sons (Farms), said: *"The installation of the Intellistorm® smart rainwater management system has enabled us to reduce the water we abstract from our borehole by capturing and storing rainfall and using that first. The system seamlessly integrates into our existing header tanks which preferentially call for rainwater, then fill from the borehole if that supply is exhausted. At the same time, the system helps us manage heavy rainfall more responsibly, which was a key part of the wider River Severn Partnership project. The fact that it operates automatically, without constant input from us, makes it particularly well suited to a working farm environment."*