



Stormwater Lift Station Sump Level Measurement

School Campus Drainage System | LR80 80-GHz Radar & LI55 Indicator

Overview

A lift station located at the base of a hillside school campus collects and transfers stormwater runoff from the grounds above. During periods of heavy rain, the system must operate reliably to prevent localised flooding and ensure safe site conditions. Accurate sump level measurement is essential for stable pump control and overflow prevention particularly in an environment where incoming media is unpredictable.

The Situation

During storms, the sump receives dirt, silt, and plant debris along with rainwater, creating a contaminated measurement environment. The previous pressure level sensor was in direct contact with the media, leading to clogging, unreliable readings, frequent maintenance, and occasional station failure.

The system integrator also wanted:

- A dependable level signal for the pump controller
- A local level display at the control panel
- Manual override capability for operational flexibility

The municipality needed a solution that would improve reliability without increasing maintenance demands.

For more information on protecting your business from leaks, please get in touch with our Safety Equipment Specialist, Gary Hand, by calling 01 461 4338 or email gary.hand@modernplant.ie



The Approach

Modern Plant recommended the LR80 80-GHz radar level sensor, a non-contact technology designed for wastewater and stormwater applications.

Because the LR80 measures level from above the sump without contacting the liquid, it is unaffected by dirt, silt, or debris accumulation. Its narrow beam and high-frequency radar signal provide stable, accurate readings even in confined wet wells.

To meet the panel requirements, the LR80 was paired with the LI55 level indicator to:

- Powers the radar sensor
- Displays real-time level locally
- Repeats the 4–20 mA signal to the pump controller
- Provides manual override capability

Together, the radar sensor and indicator created a complete measurement and control solution.



Installation & Commissioning

The radar sensor was mounted above the sump, eliminating contact with contaminated stormwater. The LI55 indicator was installed in the existing control panel for simple integration with the pump controller. With no in-sump components required, installation was straightforward and avoided any modifications to the wet well.

Outcome

With the LR80 radar sensor in place, the municipality achieved:

- Reliable, non-contact sump level measurement
- Elimination of clogging issues
- Reduced maintenance intervention
- Improved pump control stability
- Lower overflow risk during heavy rain events

By replacing a contact-based sensor with 80-GHz radar technology, the lift station now operates with greater confidence and long-term reliability.



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