

# TreeMap Kamp-Lintfort

## Collecting Sensor Data with LoRa and MQTT



To monitor the soil moisture content of a few selected trees in the LaGa area in Kamp-Lintfort, we installed some [dragino Lse01](#) LoRa sensors. The sensors send their data via LoRa to an Imst Gateway located on top of the old winding tower, which then forwards the data to a chirpstack server. Since the server has an integrated MQTT-Broker, we can use the MQTT node in node-red to get our data and save it to an influx database. You can find a guide on how to set up the node here: [node-red MQTT setup with TLS](#).

The data is displayed on a [Grafana dashboard](#).



*Fig.: LSE01 LORAWAN SOIL SENSOR ([Antratek](#))*



*Waterproof housing of the LoRa node.*



The sensor is installed in a 30cm deep hole.



The hole is reinforced with a 15cm long pvc pipe and closed with a lid.

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