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.