



SCALGO Live as a dialogue and decision tool

Dialogue with the developer during the site preparation process

The Danish water utility, Aarhus Vand, uses SCALGO Live to visualize whether designated areas are in risk of flooding. The visualization served as a good point of departure when a qualified dialogue with the developer was initiated during the site preparation process.

In connection with a site preparation of a new residential area, Aarhus Vand had the opportunity to contribute to the local development plan with advise on managing surface water, as the area was planned to include WSUD (water sensitive urban design).

Checking the risk of flooding

Aarhus Vand saw several challenges in the development area: it was located in a lowland area and the soil was very clayish which made infiltration of rainwater difficult. It was therefore imperative to consider how the lots were placed in relation to flood risk. A retention basin was already planned, but Aarhus Vand was unsure of whether its capacity would be sufficient.

Visualization of scenarios

By using SCALGO Live, Aarhus Vand was able to investigate how the development area was related to waterways and watersheds, and thereby, they could identify the areas with the greatest risk of flooding. In addition, they added the planned basin in SCALGO Live and scanned the scenario calculated

with a ten-year rain event to ensure that the dimensions of the basin was sufficient.

“It is easier to talk about, when there is something visual to look at”

The analyses were used as a point of departure in a dialogue with the developer and enabled Aarhus Vand to provide concrete suggestions of how to decrease flood risk. This meant that the developer could make a qualified decision of whether to remove two of the most vulnerable lots in the development area.

“Showing the risk of flooding on a map, gives a much better understanding. And it is a good point of departure to a more qualified dialogue”

*Yansi Mary Jesuloganathan,
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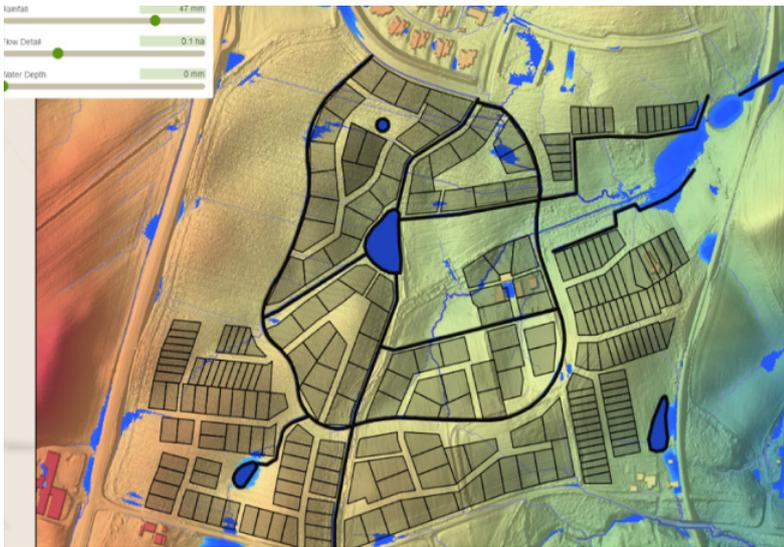
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SCALGO Live helped with

- Visualizing risk areas
- Scenario analyzes
- During a dialogue with the developer

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SCALGO



Flash Flood analyses

Aarhus Vand was able to identify which lots were in risk of flooding by importing the development plan for the residential area into SCALGO Live, and then, selecting different rain events. The analyses in SCALGO Live were used as the point of departure during the dialogue with the developer and made it possible for Aarhus Vand to provide concrete suggestions on how to minimize the flood risk. Due to the dialogue, the plan was adapted and two of the most vulnerable lots where removed.

Scenario analyses of the retention basin

The area in Malling is planned as WSUD, and Aarhus Vand needed to confirm that the planned basin had the sufficient capacity. This was investigated by running scenario analyses in SCALGO Live, where it, via ditch and culverts, was ensured that all the water from the development area was led to the basin. This was quickly investigated by using the watershed tool. The Flash Flood Map was used to analyze a relevant scenario, and by drawing a terrain profile trough the retention basin, it can be concluded that there was a sufficient volume in the retention basin, even in the event of 100% surface runoff.

