

skanderborg
forsyningsvirksomhed a/s

CONSTRUCTING AND OPERATING THE SEWER SYSTEM AND WASTE WATER PLANTS

- Operating company
- No legal authority – Government and Municipality
- No planning that involves implementing legislation
- Participate in designing the plans

REGULATORY FACTORS WASTE WATER

Design and
Construction

Waste water master plan
climate change adaptation
plan

Operation

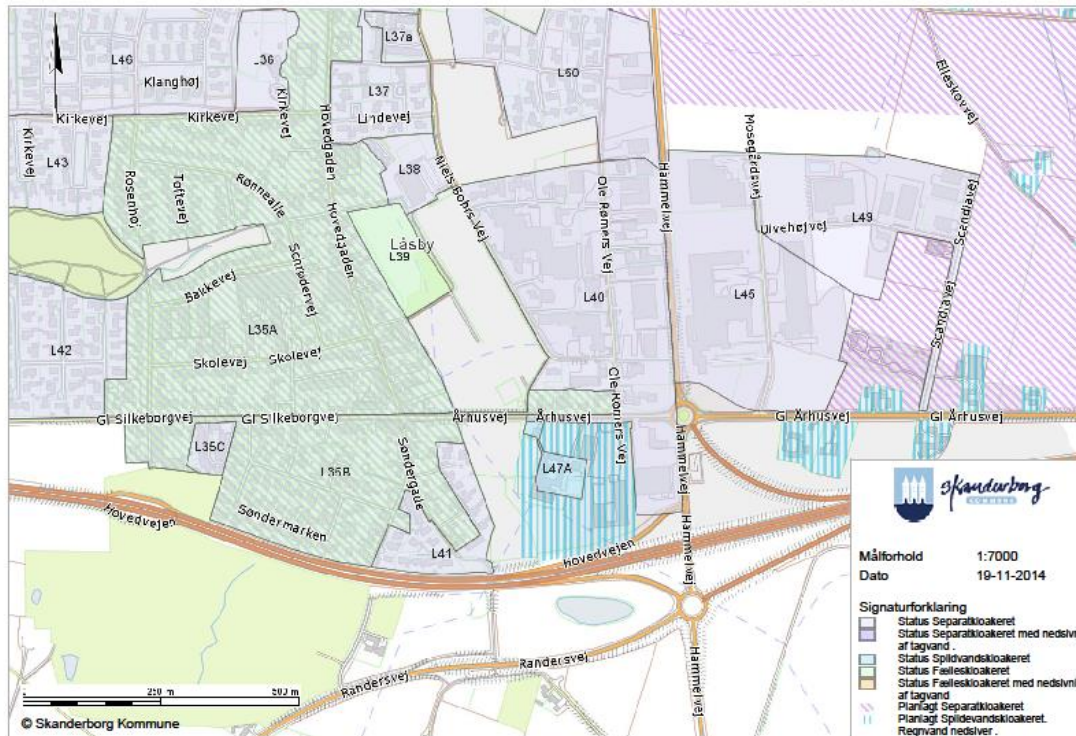
Discharge permits – water and
sludge
Water plan

Owners strategy

Company strategy

WASTE WATER MASTER PLAN

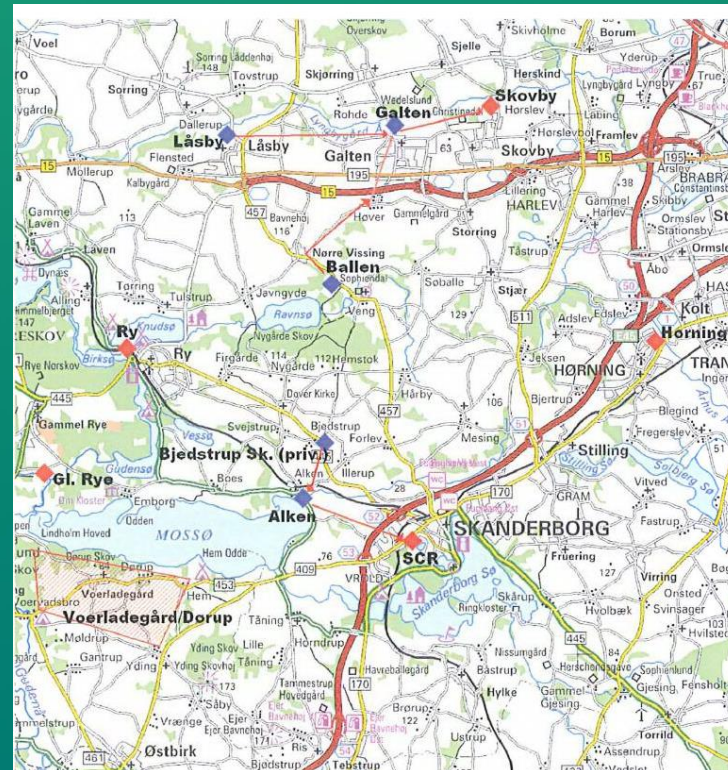
- In accordance with the Environmental protection act
- Skanderborg Municipality
(Skanderborg Forsyningsvirksomhed Ltd)
- Future plans for sewer systems, WWTP
- Includes plans for separation of existing sewers and new catchment areas to be connected to the sewer system
- Strategy for the WWTPs



Billedtekst

STRATEGY FOR WWTP

- Centralization
- 9 WWTP in 2009
- 5 WWTP in 2018



CLIMATE CHANGE ADAPTION PLAN

- After several incidents of flooding from heavy rainfall the Danish Government issued, that all Danish municipalities should make out climate change adaption plans for their area.
- Is based on hydraulic and hydrogeological modelling of all towns , and points out areas with potential flooding.
- Taking into account the economical impact of flooding.



- Has resulted in around 20 projects with a total cost of 50 mill. €

DISCHARGE PERMITS – WASTE WATER

- Discharge limits, waste water in accordance with the Environmental protection act.

COD	< 75 mg/l
BOD	< 15 mg/l
Total Phosphorous P	<1,5 mg/l
Total Nitrogen N	< 8 mg/l.

- Discharge fees to Danish State – an incentive to lower the discharge
- Per kg BOD, P and N

DISCHARGE PERMITS

– SLUDGE

- discharge limits for use as fertilizer
 - Heavy metals
 - Organic pollutants
 - Costs:
 - As fertilizer :30 €/ton
 - Polluted with heavy metals :100 €/ton

WATER PLANS – THE DANISH ENVIRONMENTAL PROTECTION AGENCY

- Implementing the EU "Water framework directive", by setting up demands for the water quality in surface water recipients
- Skanderborg Municipality points out specific areas where water quality must be improved
- Skanderborg Forsyningsvirksomhed:
 - WWTP outlet
 - Storm water overflow from combined sewer systems

STRATEGYS

- Owner strategy/Company strategy
- Energy savings
- Carbon footprint
- Minimizing storm water overflow from combined sewers