


FACTSHEET RISK REDUCTION MEASURES	
Flood protection measures Přední Ptákovice	
Where was it implemented?	
Strakonice, district Přední Ptákovice (South Bohemia Region, Czech Republic)	
Fields of action	
<ul style="list-style-type: none"> • Farmland, forest, settlement area 	
Related to measure from the catalogue of measures	
<ul style="list-style-type: none"> • Smal dikes and pits • Furrows • Linear protection measures • Event and damage documentation, event analysis 	<p>Source: VRV- Company Vodohospodářský rozvoj a výstavba a.s., Prague</p>
Area characterisation	
<ul style="list-style-type: none"> • Area type: non-Developed area • Landscape type: arable land/field 	
Problem	
Heavy rains wash off the arable land and flood the residential area as well as the areas with development potential. The flooded area is 10 ha. During a local heavy rain event in 2014, a 30 cm high layer of mud remained on the streets.	
Description and aim	
Due to the extensive flood damage, a study was carried out for the endangered area. However, this study was not successfully discussed with the landowners, and despite the efforts of the municipality, not enough land could be purchased. Due to this failure, a second study was carried in 2016 with the same task. The resulting concept proposed a set of infiltration furrows with a total length of 500 m and a potential capacity of 1,920 m ³ of water. The furrows are proposed parallel to the contour lines and have a zero gradient. Rainwater is not drained but absorbed. The total depth of the furrow is 1 meter. The overflows of furrows were built as lowered stone barrage. In this way the water will overflow from one furrow to the next during heavy rain events. After completion of the study, the project preparation and the grant application followed. A subsidy of 1,120,000 Kč was received. Realization took place in 2018.	
Effect of measure	
Water retention and movement of large quantities of water to another drainage basin. Erosion control measures should restrain a flood wave occurring in case of a 100-year flood event.	
Description of implementation	
Effect horizon: -	Involved stakeholders: land owners
Implementation: 2016 - 2018 (from study to realization)	Initiator / responsible municipality Strakonice

Lessons-learned	
<p>Main success factor: After the failure of the deal with the landowners, the municipality invested in a new study that proposed different solution.</p>	<p>Main challenge: To propose risk reduction measures that are effective and acceptable to landowners and arrange for the purchase of the necessary land.</p>
<p>Synergies / beneficial aspects: Protection of the part of the urban area, which was threatened by floods during heavy rain events.</p>	<p>Conflicts / Constraints: After the first study, the purchase of the necessary land was not agreed. The process returned to the very beginning after two years.</p>
Key message to others starting with a similar task	
<p>If the measure could not be realized, it may be advisable to start the whole process again. The new study was proposed by another planner, the area required for the realization was reduced and the sale of the necessary land was dealt successfully with the landowners. A high quality project and a suitable supplier can significantly speed up the entire realization process.</p>	
Contact	
<p>The Region of South Bohemia, The Section of Territorial Planning www.kraj-jihocesky.cz Contact list: https://www.kraj-jihocesky.cz/ku_tseznam/os?id_os=94</p>	

Heavy rain event in 2014



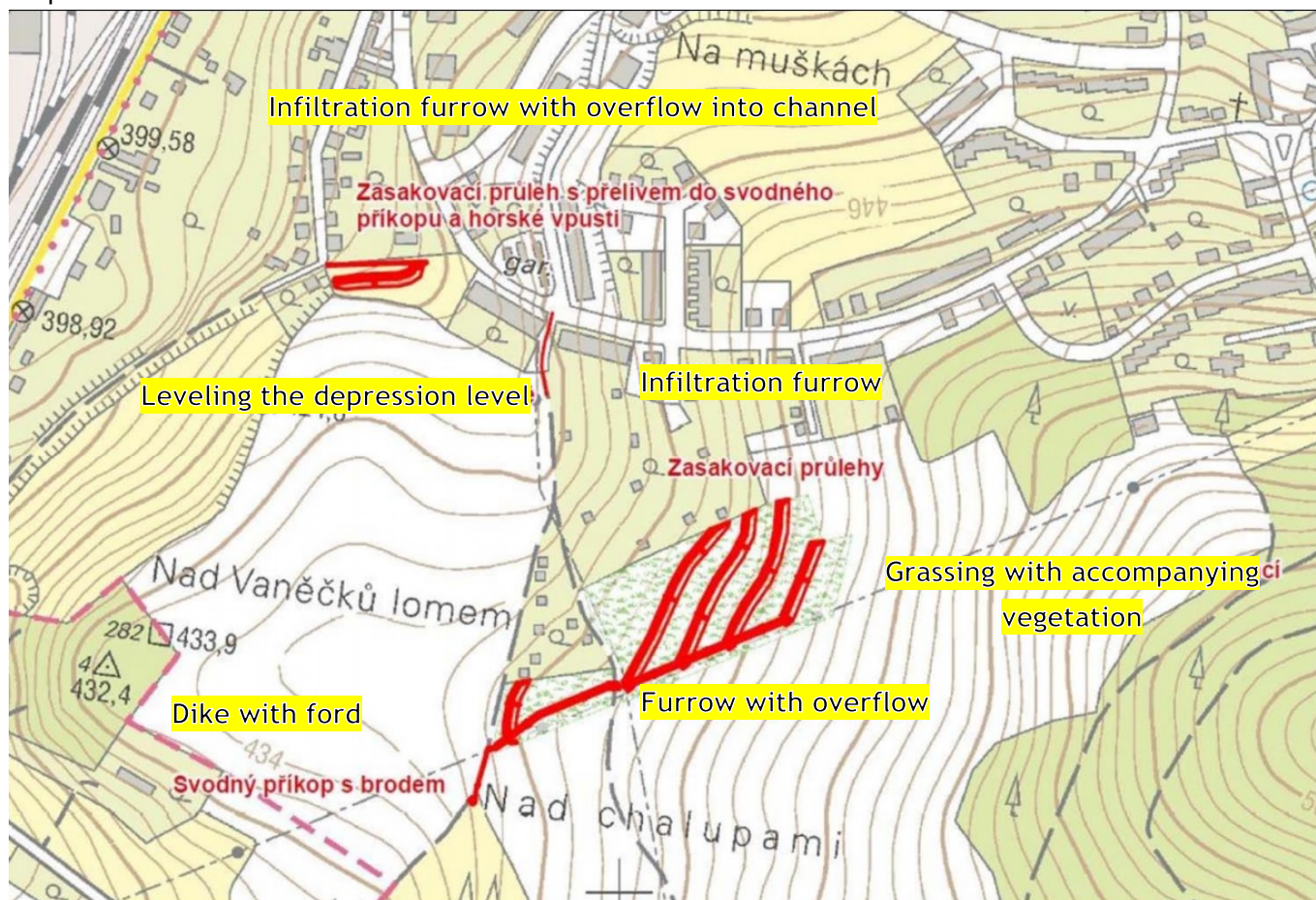
Source: Deník.cz

Vulnerable areas Q5, Q20, Q100



Source: VRV - Company Vodohospodářský rozvoj a výstavba a.s., Prague

Proposed measures



Source: VRV - Company Vodohospodářský rozvoj a výstavba a.s., Prague

State during realization

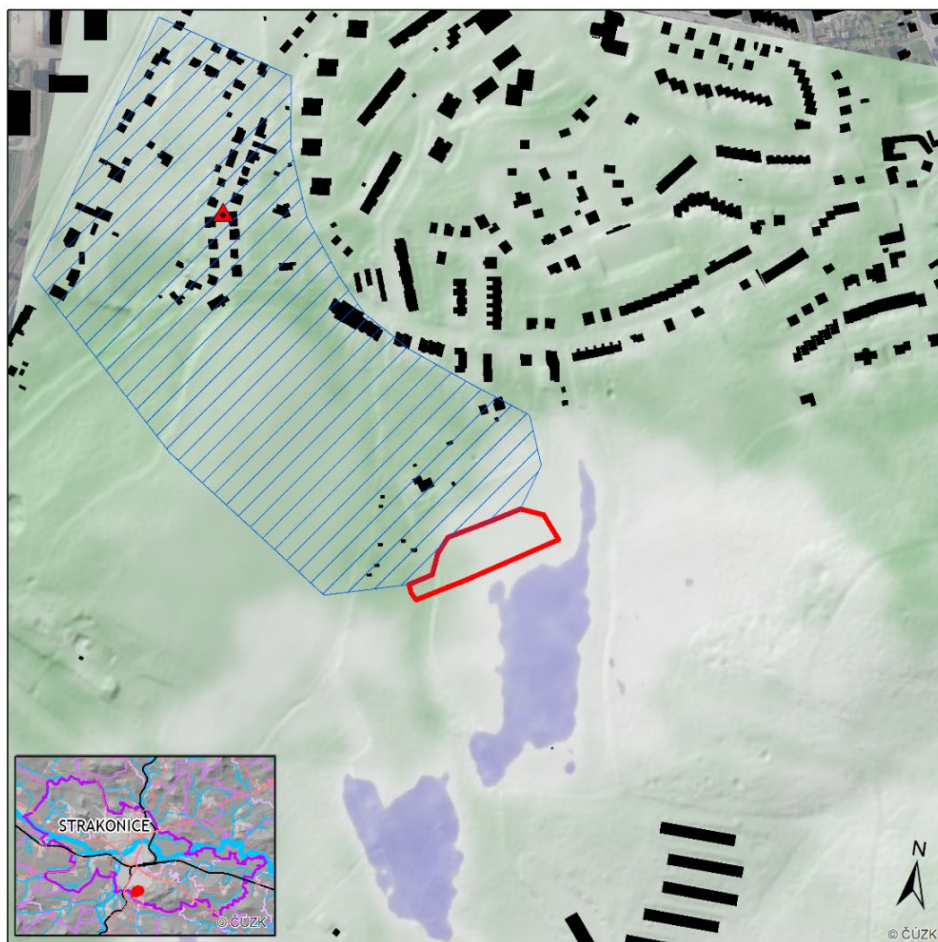


Source: VRV - Company Vodohospodářský rozvoj a výstavba a.s., Prague

Implemented measures



Source: VRV - Company Vodohospodářský rozvoj a výstavba a.s., Prague



SITUATION AFTER HEAVY RAIN

1:5 000



- ▲ Heavy rain event in 2014 (photo)
- Risk reduction measure
- Vulnerable area
- Building (source RUIAN)

Background map:

satellite image Sentinel 15.07.2019 - NDWI

Other background maps:

ortophoto (ČUZK)

hill shading (DMR 5G ČUZK)

00:50	16,3 °C	↗ 5 km/h	99 %	1017,8 hPa	0 mm
01:59	17,4 °C	↙ 2 km/h	98 %	1017,8 hPa	0 mm
11:59	15,3 °C	→ 4 km/h	99 %	1017,5 hPa	1,8 mm
12:29	15,6 °C	← 2 km/h	99 %	1017,5 hPa	5,3 mm
12:59	17,1 °C	↗ 2 km/h	99 %	1017,5 hPa	5,3 mm
13:59	18,5 °C	↙ 2 km/h	85 %	1017,5 hPa	5,3 mm
14:29	17,9 °C	← 4 km/h	86 %	1017,2 hPa	5,3 mm
15:29	19,1 °C	→ 4 km/h	84 %	1016,8 hPa	5,6 mm
15:59	20,7 °C	↑ 4 km/h	79 %	1016,6 hPa	5,6 mm
16:30	21,2 °C	← 2 km/h	79 %	1016,5 hPa	5,6 mm
16:59	16,4 °C	↙ 2 km/h	67 %	1016,6 hPa	5,6 mm
17:30	20,5 °C	↙ 4 km/h	79 %	1016,8 hPa	6,1 mm
18:30	18,2 °C	↑ 0 km/h	83 %	1016,8 hPa	6,1 mm
19:30	19,4 °C	↙ 2 km/h	76 %	1016,8 hPa	6,1 mm
20:29	17,1 °C	↙ 2 km/h	88 %	1017,2 hPa	6,1 mm
21:29	18,7 °C	← 2 km/h	95 %	1017,8 hPa	6,1 mm
21:59	16,4 °C	↙ 2 km/h	99 %	1018,2 hPa	6,1 mm
22:30	16 °C	↓ 0 km/h	99 %	1017,8 hPa	6,1 mm
23:30	15 °C	↙ 0 km/h	99 %	1018,2 hPa	6,1 mm

summary of precipitation from 14.07.2019

Source: The Region of South Bohemia, The Section of Territorial Planning