



Baltic Sea Region
Programme 2007-2013

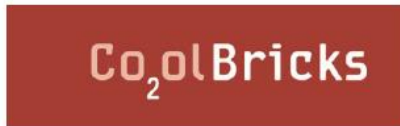
Part-financed by the European Union
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Partnership Instrument)

REPORT

Energy efficiency and sustainability report about the reconstruction in Red brick warehouse district in RIGA

Mārtiņš Menniks

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Energy efficiency and sustainability report about the reconstruction in Red brick warehouse district in Riga

Construction were done by the Ltd. „Merks” and Ltb. „Saldus ceļinieks”, based on the technical Project and technical specification made by the Ltd. „ArPlan” (author: Rolands Bruzgulis).

All the results is evaluated after two main evaluation criteria's:

1. Sustainability and impact on the climate change;
2. Energy efficiency.

The results were divided after the criteria's in two basic parts:

- a) Direct effect on the improvement of the Sustainability (Including climate change mitigations) and direct activities and investment related to the improvement of energy efficiency and cut down of the maintenance costs:
- b) Indirect effect on the improvement of the Sustainability (Including climate change mitigations) and indirect activities and investment related to the improvement of energy efficiency and cut down of the maintenance costs:

Energy efficiency and climate change measures implemented:

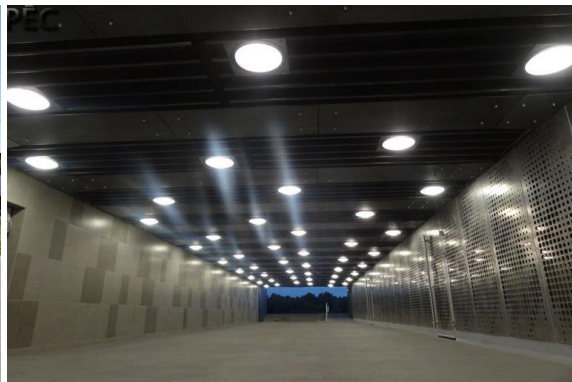
1. Reconstructed (changed) power and lighting cables ~ 6.5 km
2. Installed 94 new energy efficient lighting units, including change of the light pillars
3. Fully reconstructed water supply system ~ 1.2 km;
4. Demolished 3 buildings and 43 former "Night Market" garages;
5. Demolished 2 brick walls and wooden fence;
6. Reconstructed municipal sewerage water system with in the red brick warehouse district ~ 0.9 km;
7. Reconstructed rain water drainage with in the district and along the river Daugava for ~ 2.3 km;
8. Installed low voltage cable pipes ~ 3.5 km ;
9. Set up a children's playground ;
10. Created 75 benches with in the district and system of the benches along the tunnel and river Daugava retaining 93 m in length ;
11. Created 52 flower pots;
12. Created 22 waste bins 4 underground waste containers;
13. Creayed block paving covering with in the district ~ 12300 m² ;
14. Asphalt covering work carried out for tourist bus parking in Krasta street and parking areas along the Turgeneva street - together ~ 1,160 m² ;
15. Created ramps for people with disabilities and young mothers with baby strollers near the stairs, docks, waterfront and pedestrian tunnel - The total length of ramps ~ 260 m;
16. Constructed a crosswalk on Turgeneva and Krasta Streets (Ktasta street crossing) to create traffic lights for pedestrians only;
17. Reconstructed a pedestrian tunnel;
18. Constructed a cycle path - total length of 1.2 km;
19. Daugava Embankment pavement laid in ~ 12,000 m² ;
20. Planted new large-size trees - maple , linden and willow (60 pcs .) Planted 227 different flowering plants 741 m²;

21. Created lawn ~ 5200 m².



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PIRMS



PIRMS



PEC



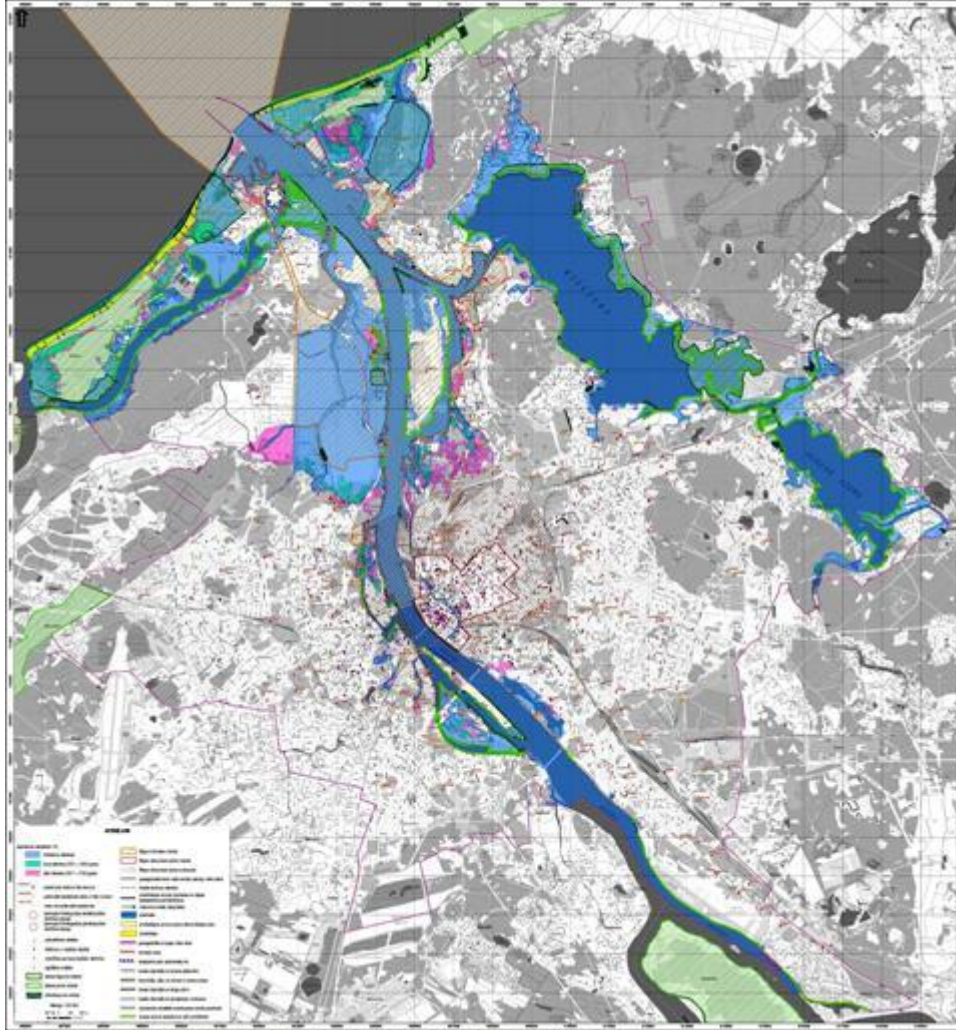
PIRMS



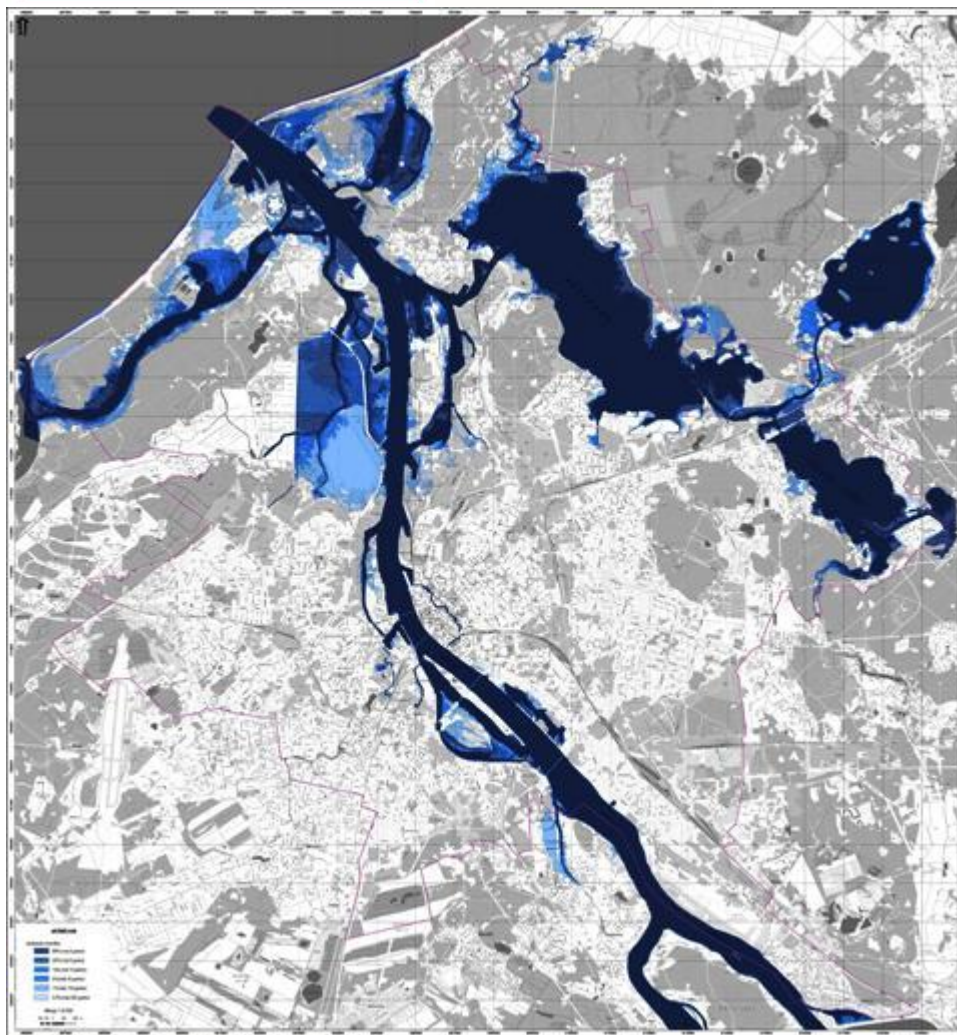
PEC



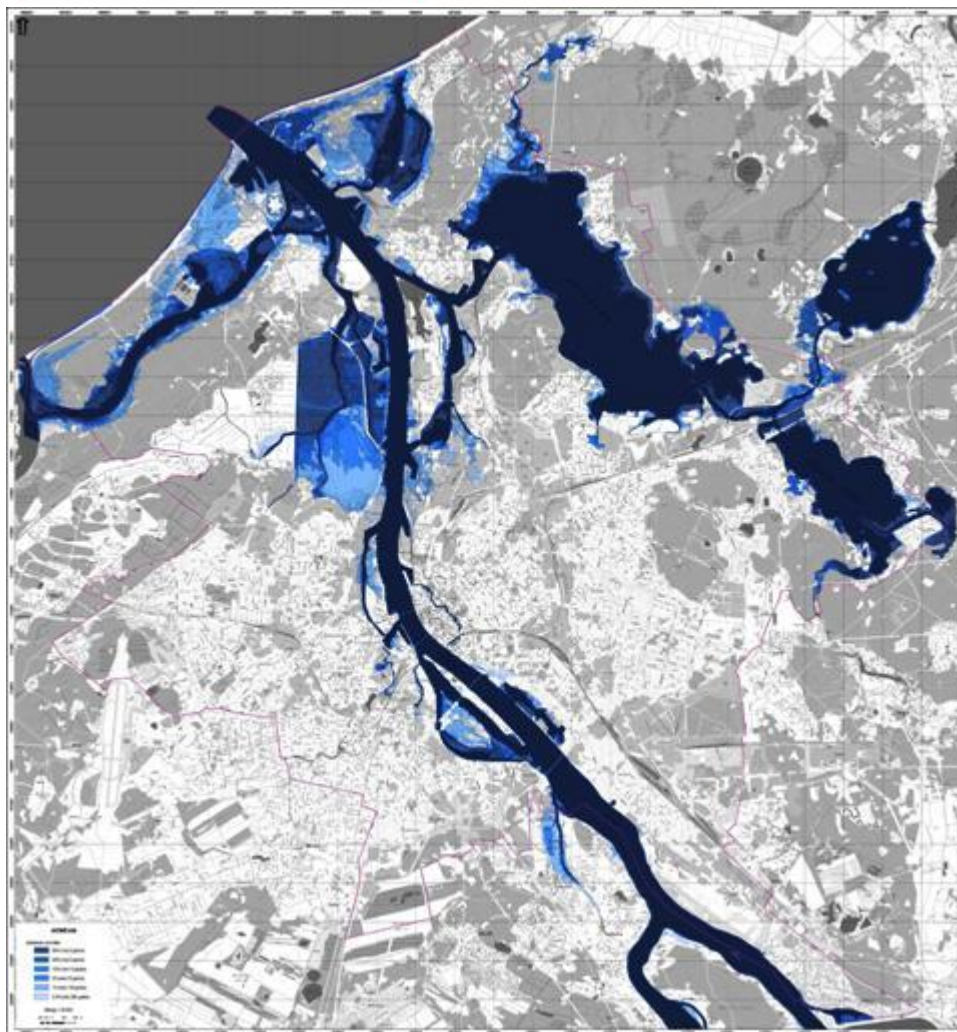
Flooding risk maps were taken in account making plans for reconstruction.



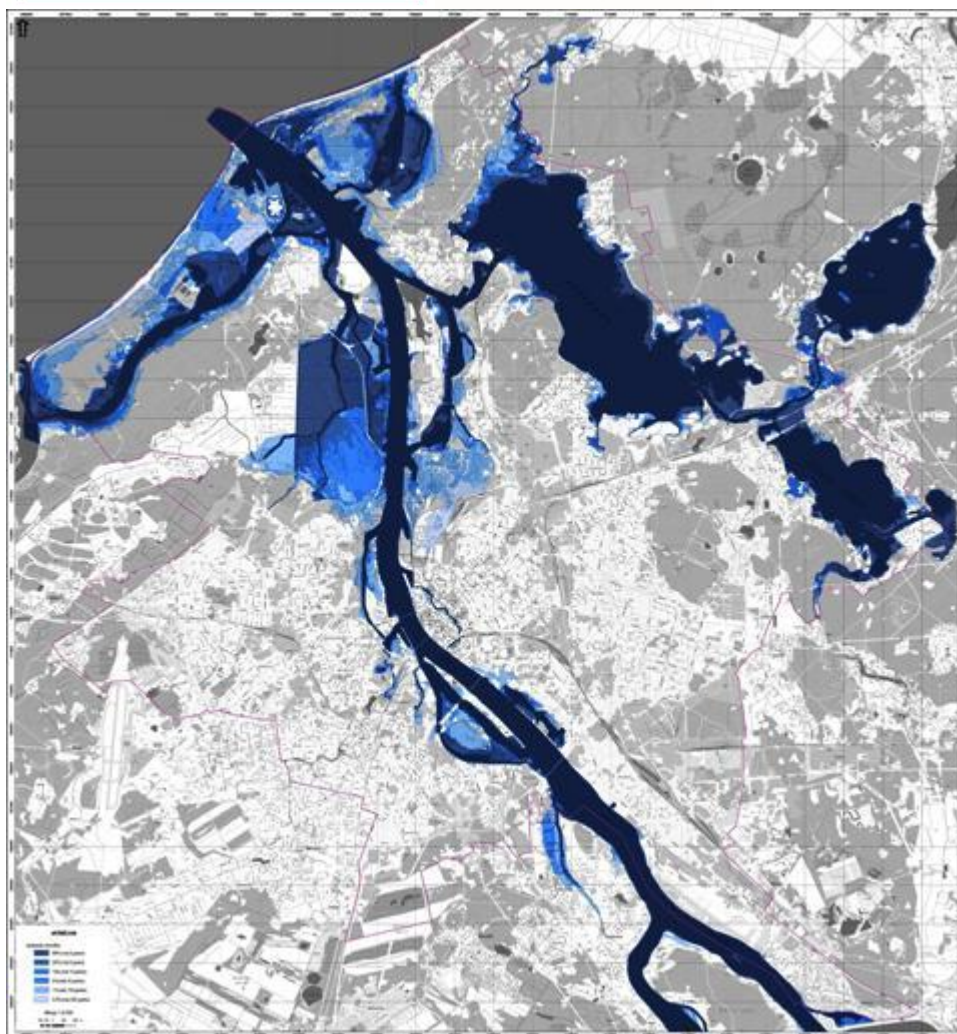
Current situation, Near future (2021 – 2050), Distant future (2071 – 2100) with 0.5% flood likelihood.



Current situation with 0.5%, 1%, 5%, 10%, 20% and 50% flood likelihoods caused by spring spate and wind surges.



Near future (2021 – 2050) with 0.5%, 1%, 5%, 10%, 20% and 50% flood likelihoods.



Distant future (2071 – 2100) with 0.5%, 1%, 5%, 10%, 20% and 50% flood likelihoods.

Additional info:

<http://www.rigapretpludiem.lv/eng/news/73-project-“riga-against-flood”-concludes>

<http://www.rigapretpludiem.lv/data/doc/13523665185010.pdf>

<http://www.rigapretpludiem.lv/data/doc/13061564137607.pdf>