ecoten
urban comfort

Thermal Comfort Assessment for Territorial Study of Bubny-Zatory Prague

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1. INTRODUCTION

Urban Microclimate Simulations

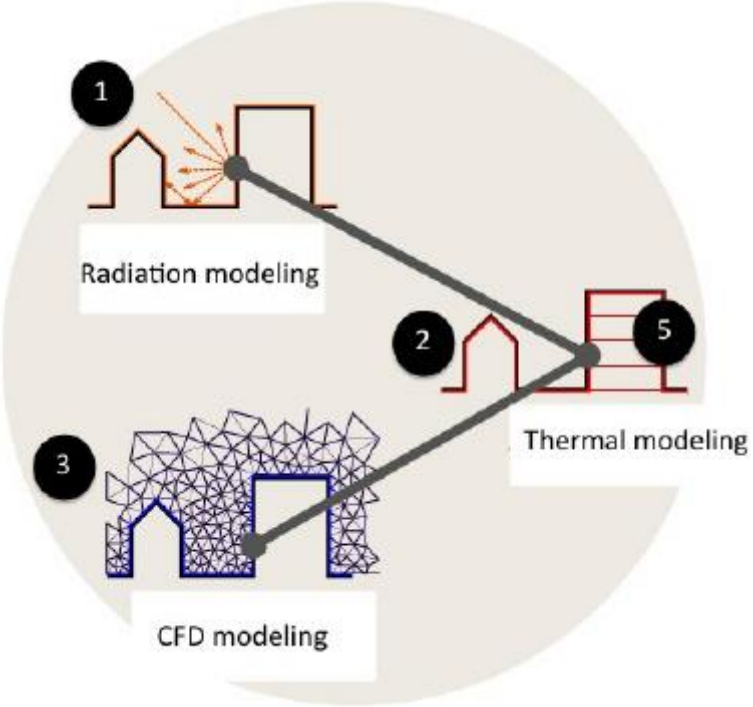
Our Work:

- 3 Case Studies
- 6 Projects in Czech Republic & France
- 1 Scientific Publication
- 2 Potential Research Collaborations

3. Urban Microclimate Simulations

GIVEN:

- Urban Morphology
- Surface Albedo
- Surface Materials
- Local Weather
- Urban Greenry



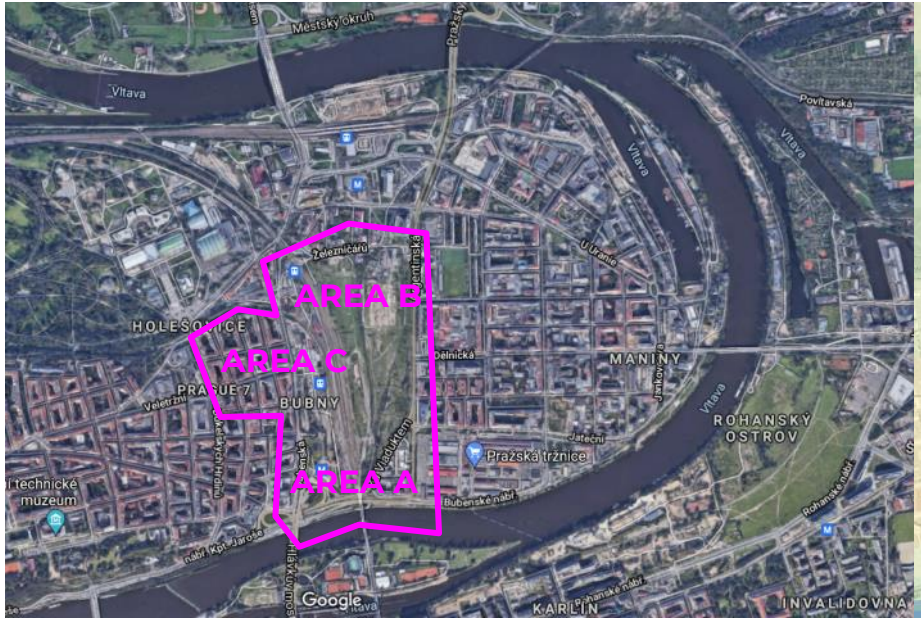
SOLENE MICROCLIMAT

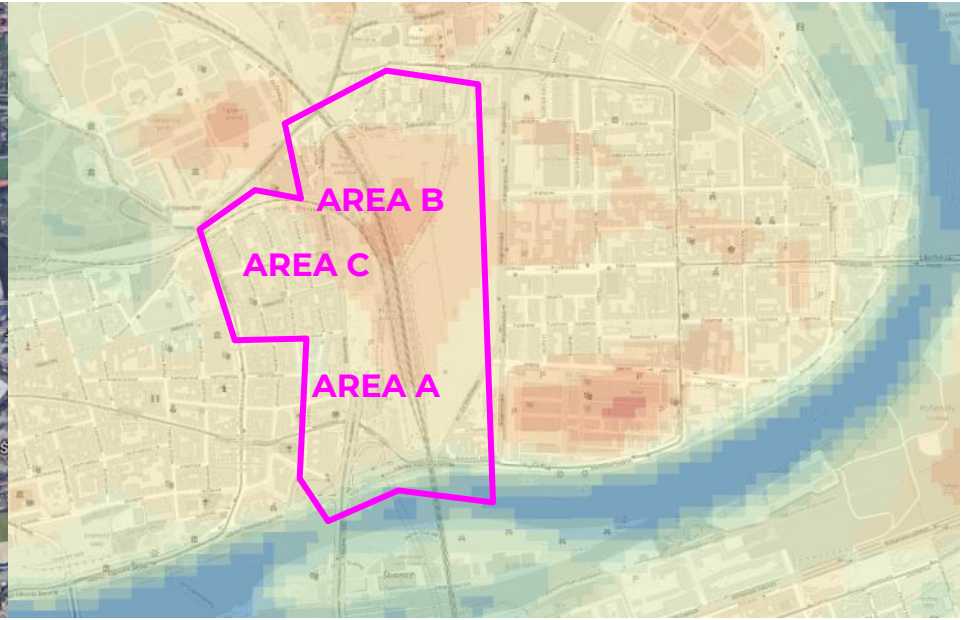
RESULT:

- Air Temperature
- Solar Insolation
- Relative Humidity
- Wind Speed & Direction
- Evapotranspiration
- Comfort Index

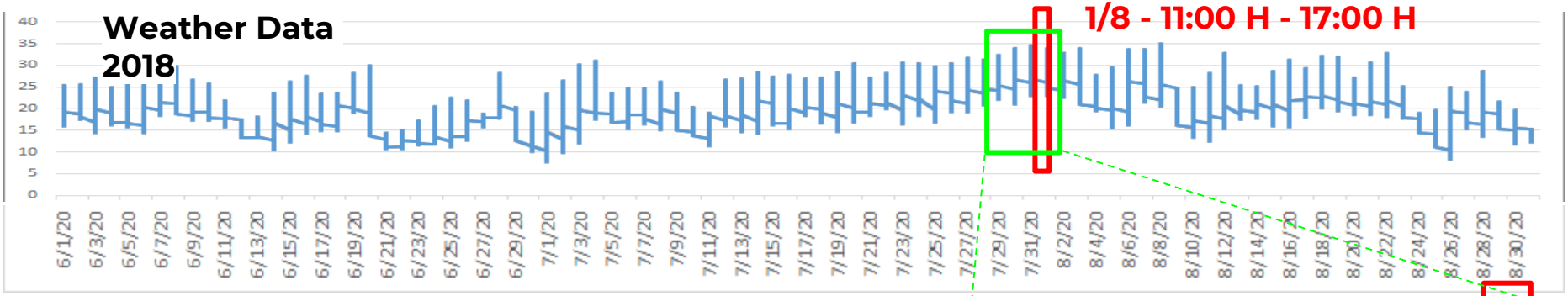
2. BUBNY-ZÁTORY

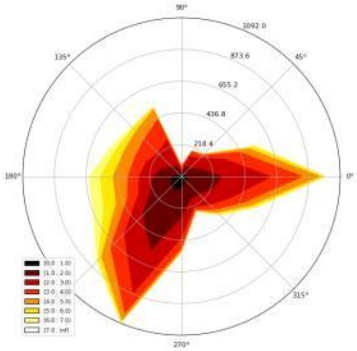
1. Objective of Assessment

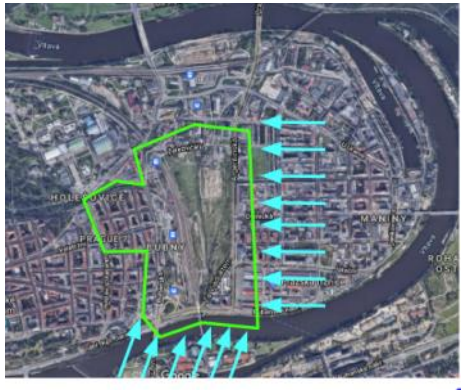


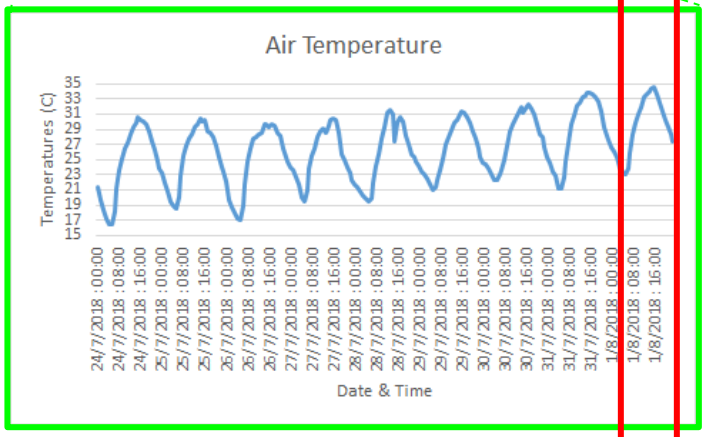


2. Meteorological Assessment - Prague





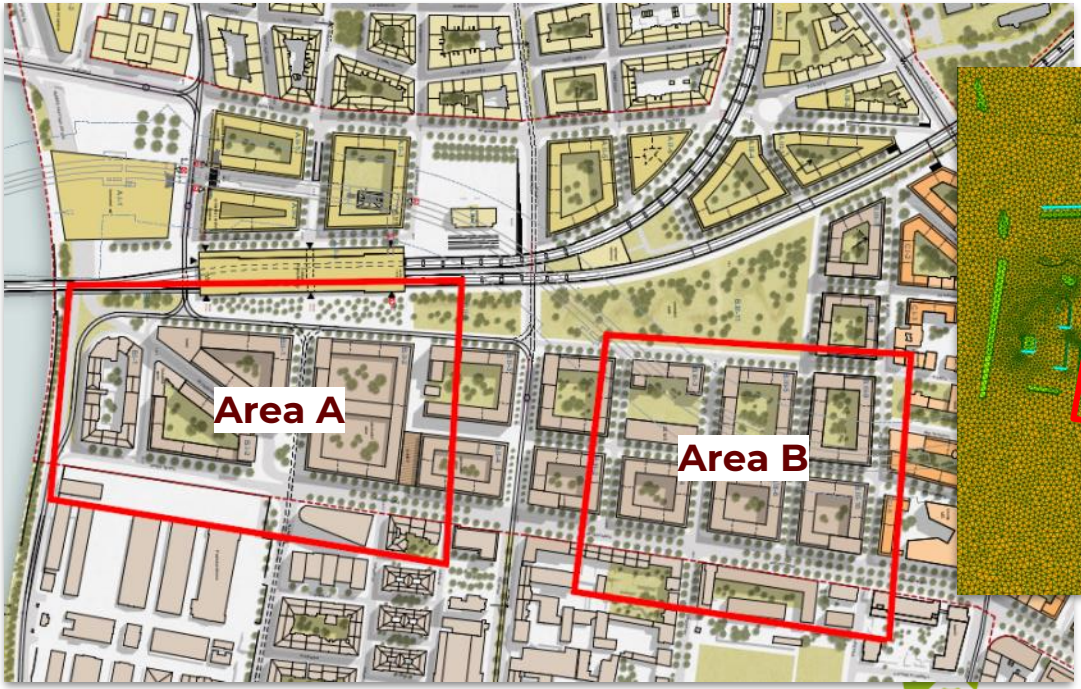




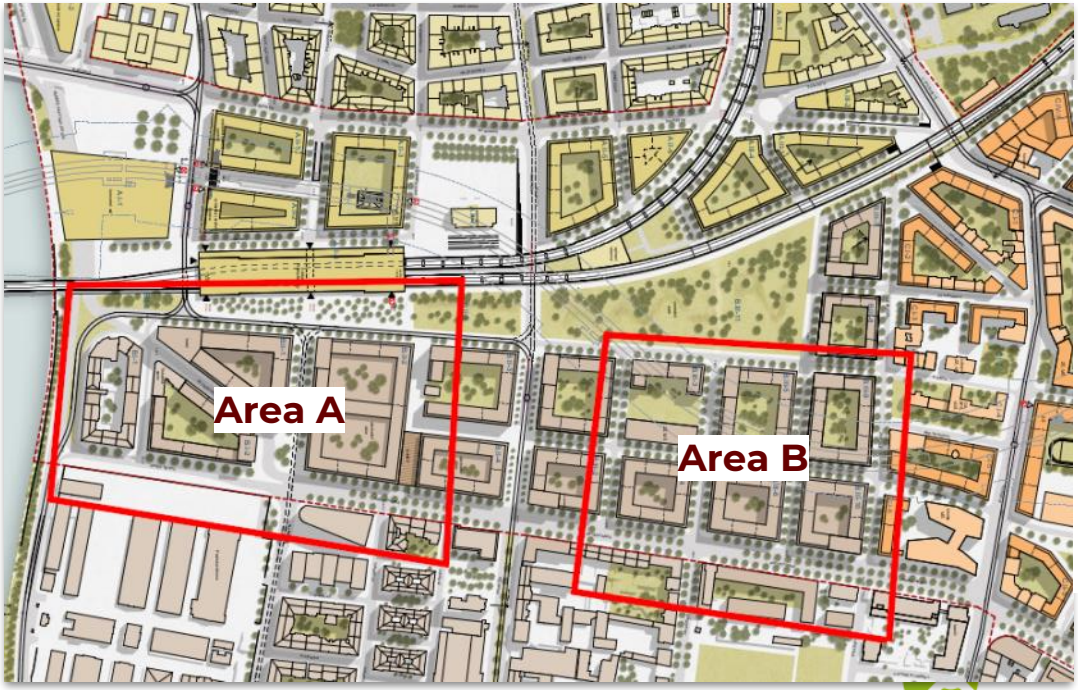
3. SIMULATION RESULT 1:

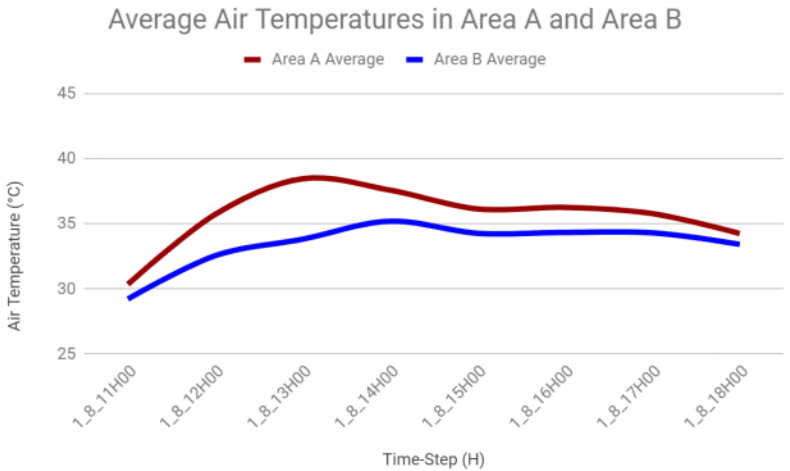
Average Air Temperature Comparison between Area A and Area B of Simulation Area

Simulation Areas



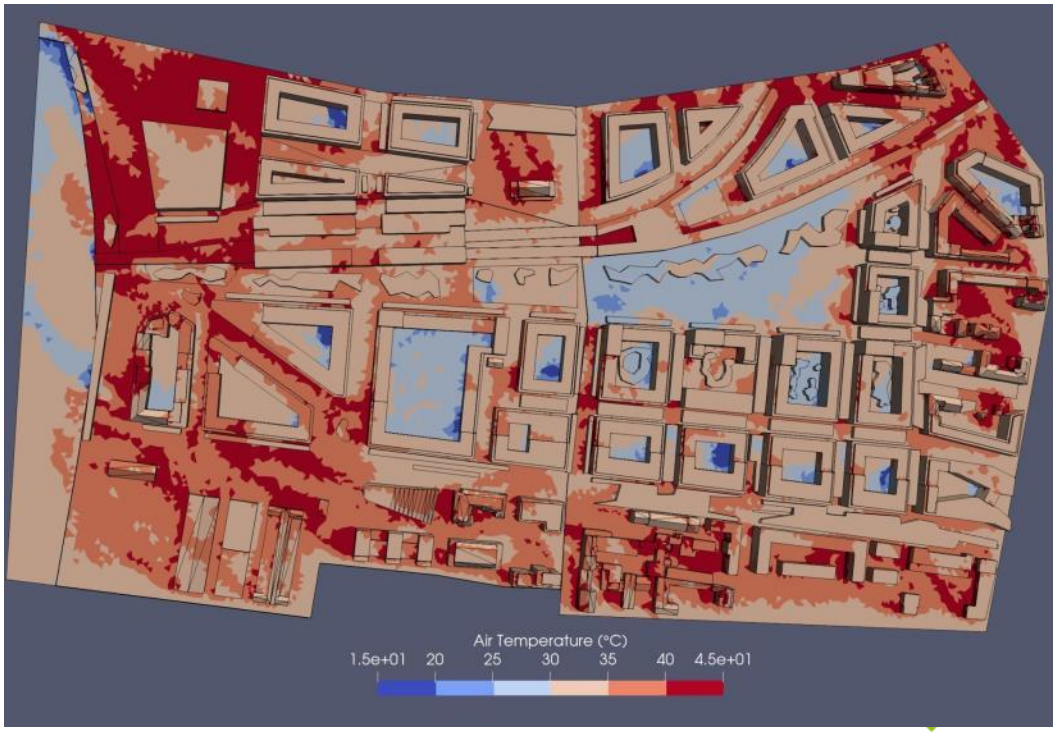
Simulation Areas

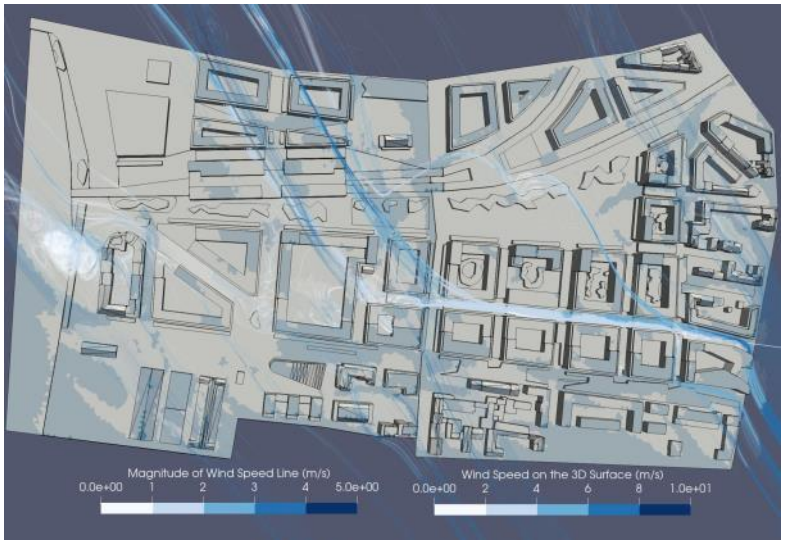




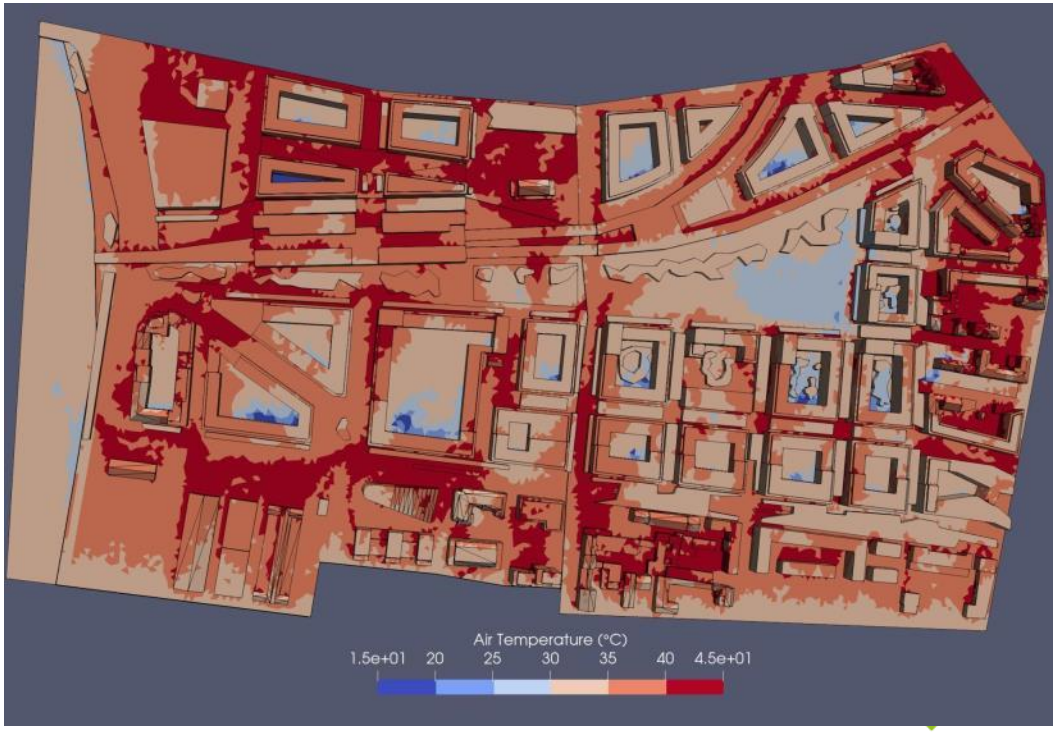
4. SIMULATION RESULT 1:
Air Temperature, Wind Speed and Direction in all Simultion Area

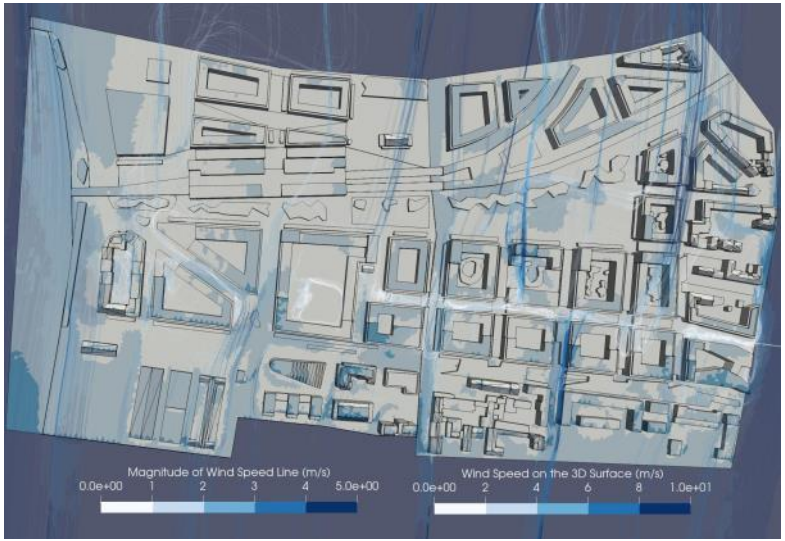
Simulation Time-Step: 01/08 - 11:00 H



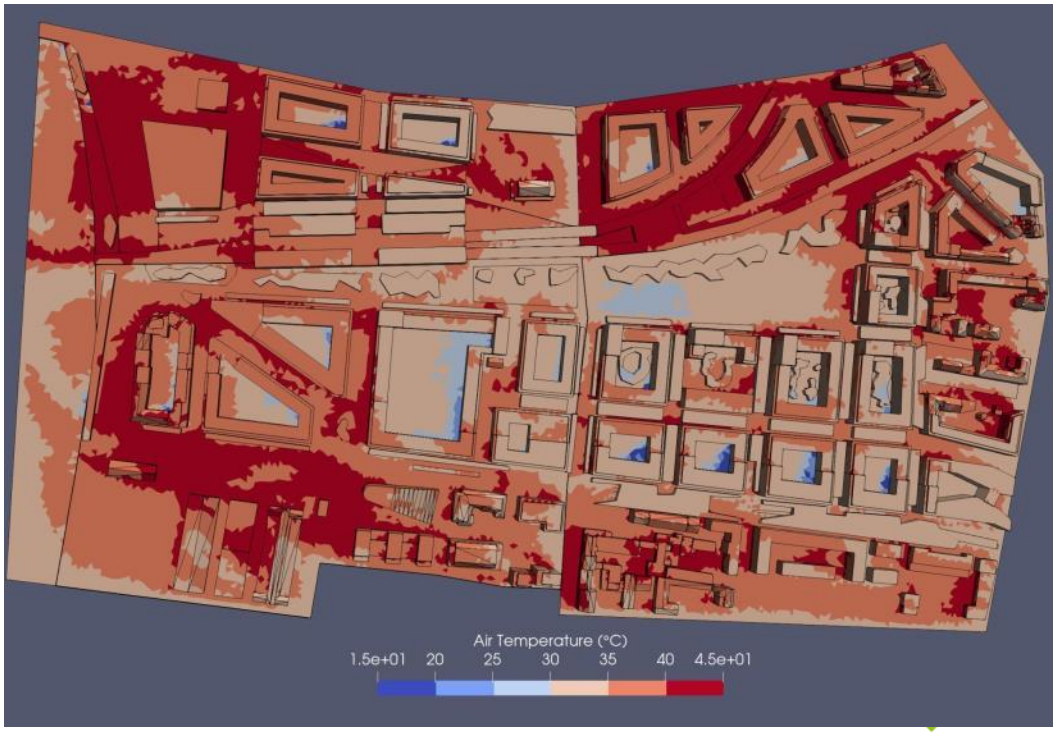


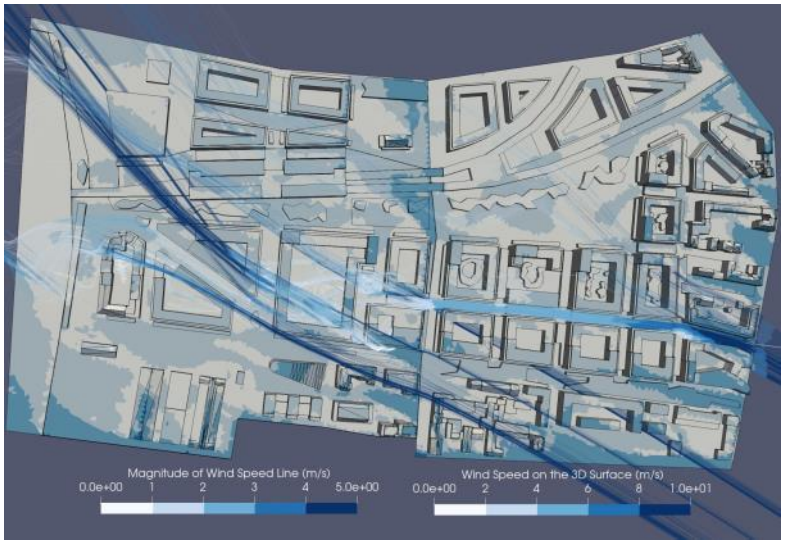
Simulation Time-Step: 01/08 - 12:00 H



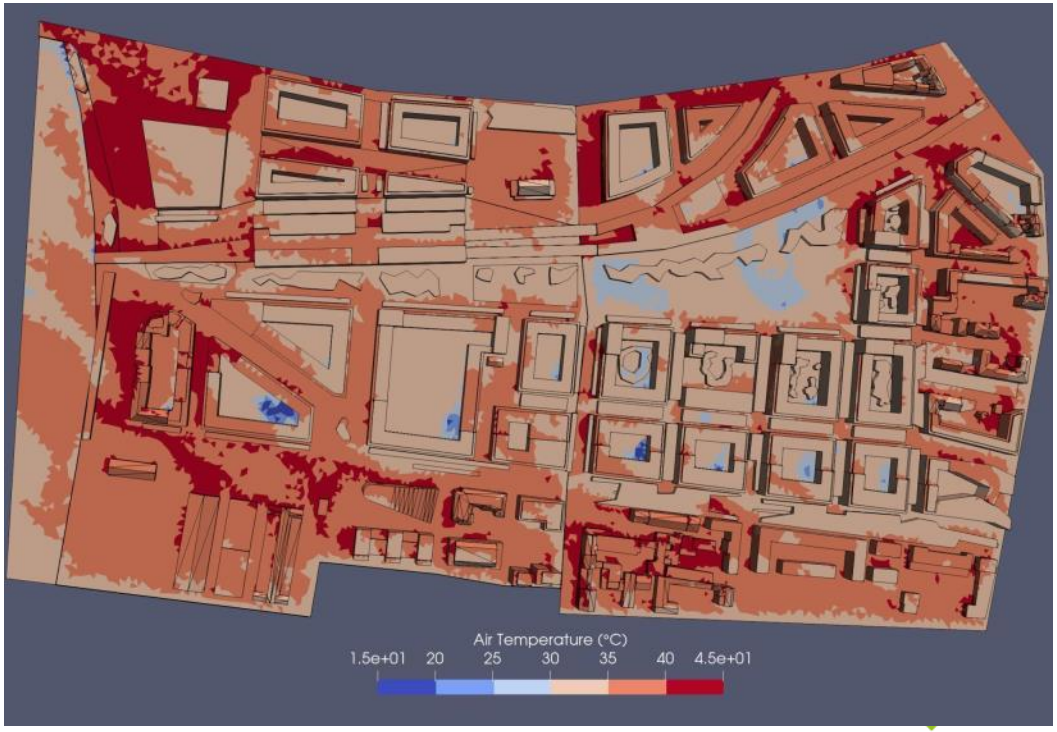


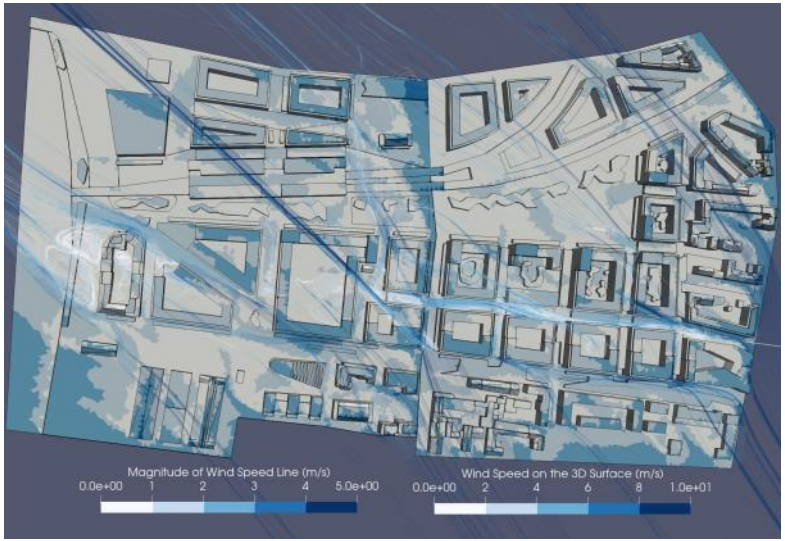
Simulation Time-Step: 01/08 - 13:00 H



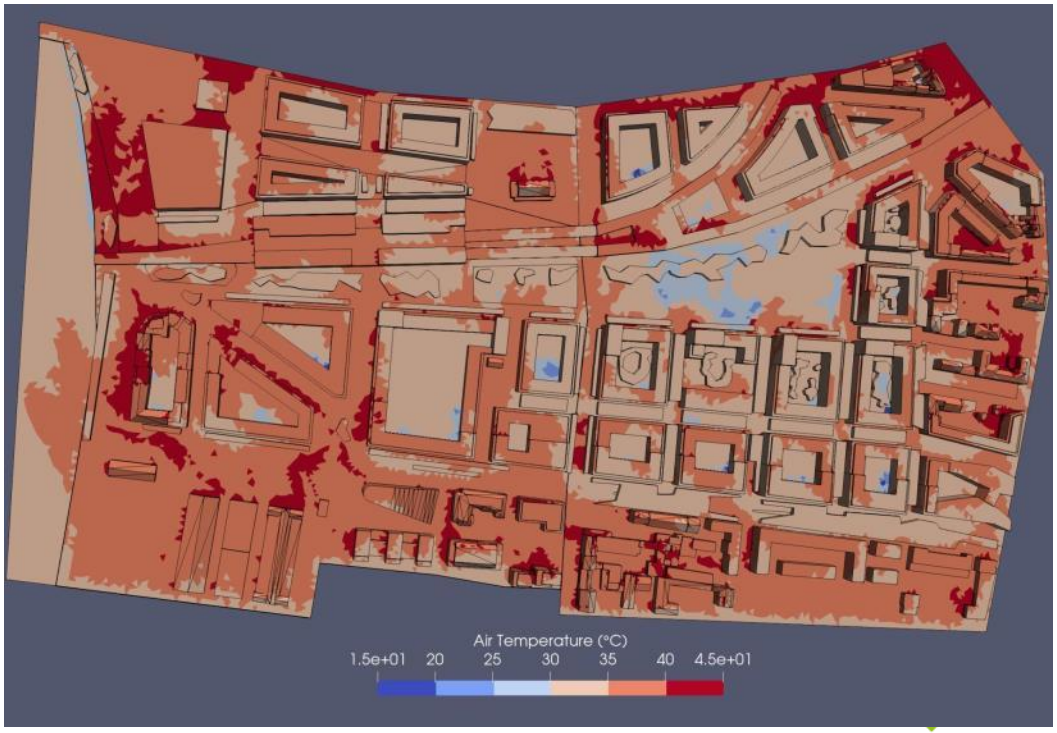


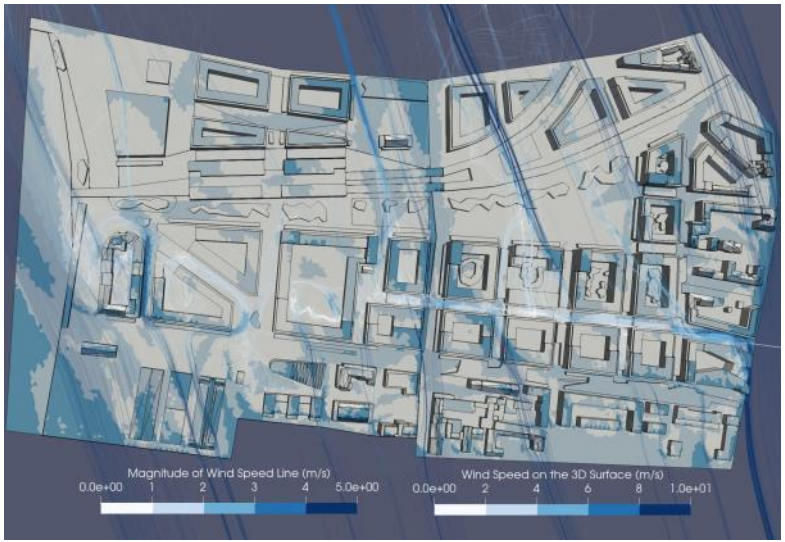
Simulation Time-Step: 01/08 - 14:00 H



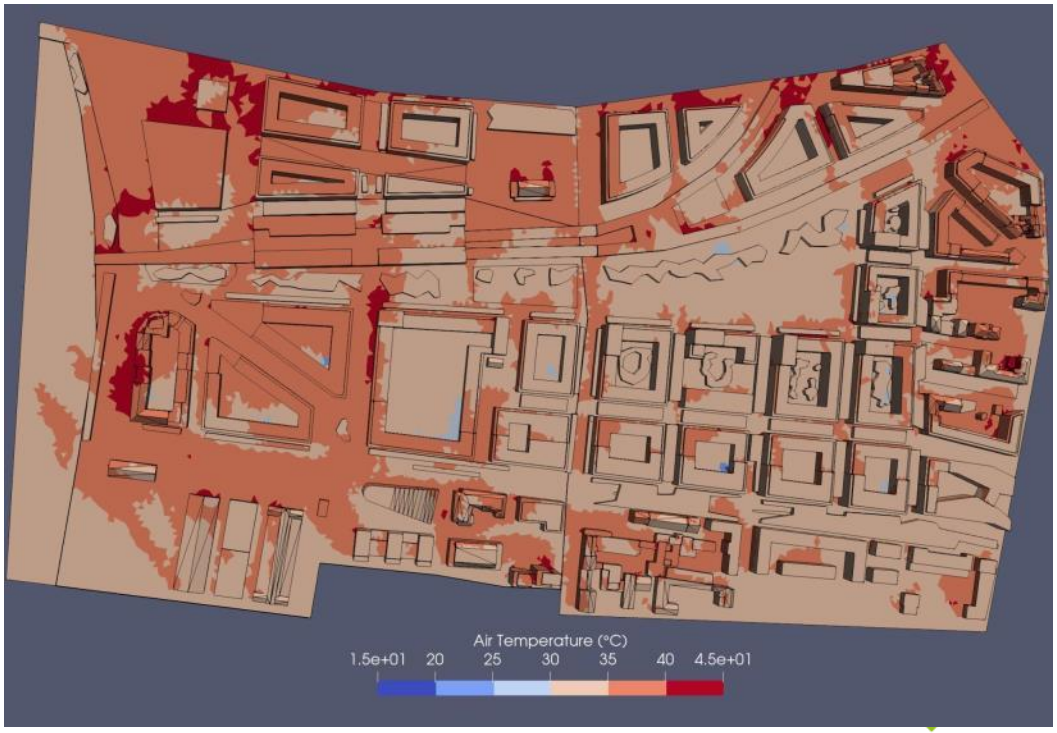


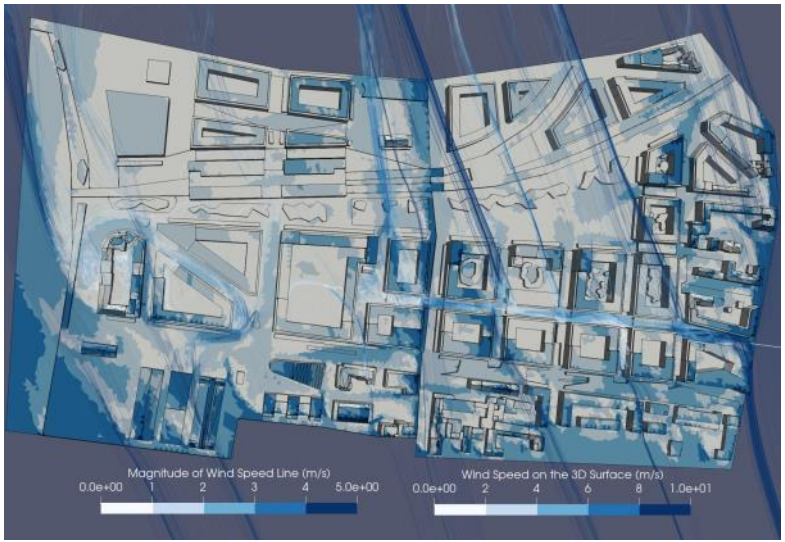
Simulation Time-Step: 01/08 - 15:00 H





Simulation Time-Step: 01/08 - 16:00 H





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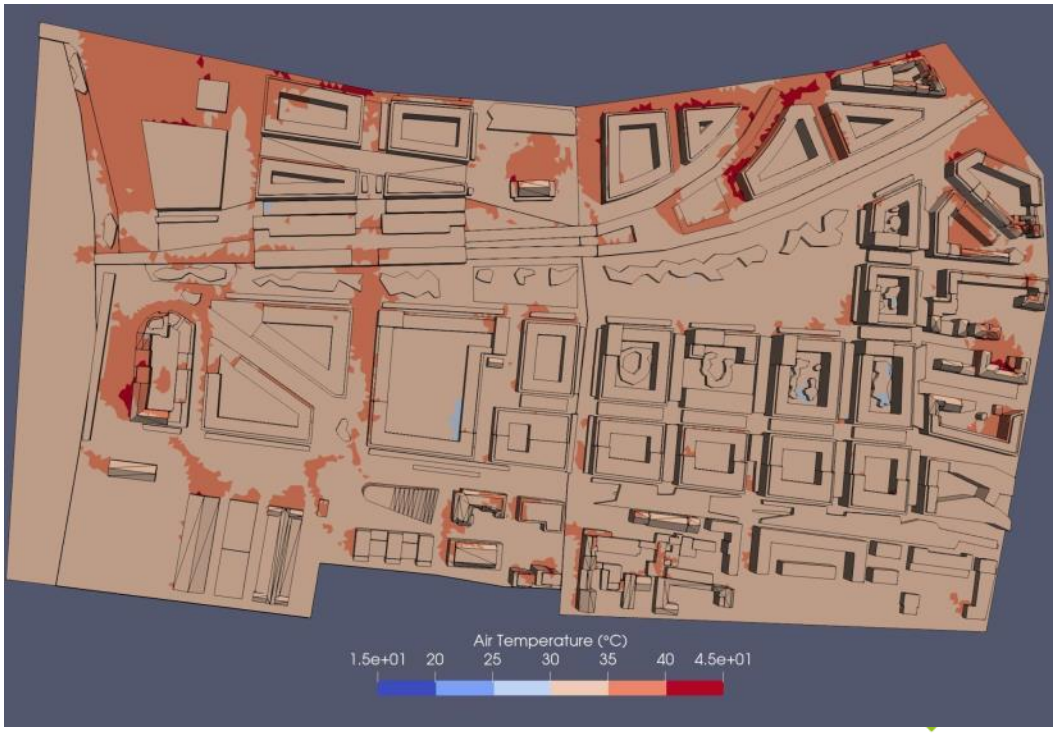
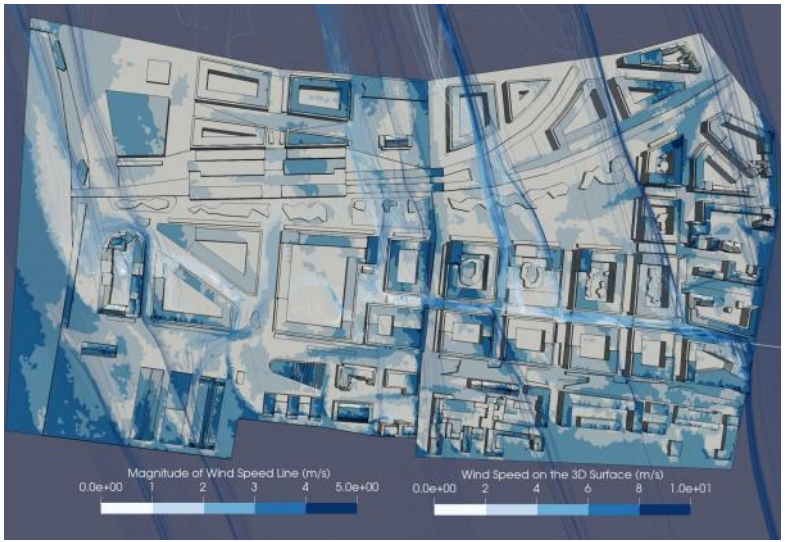
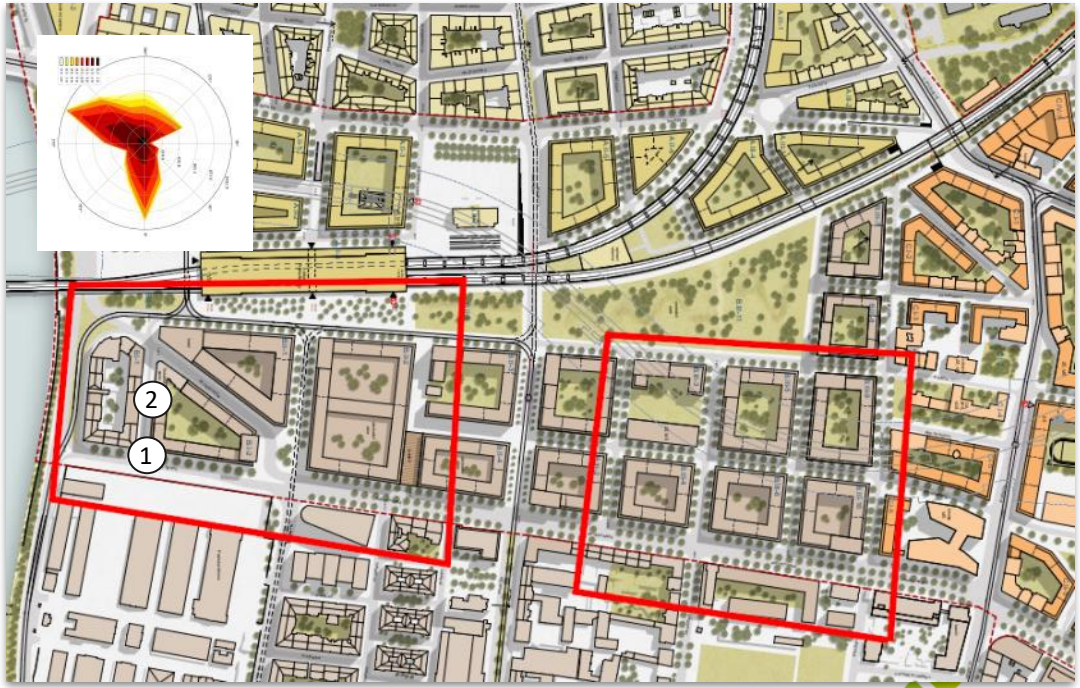
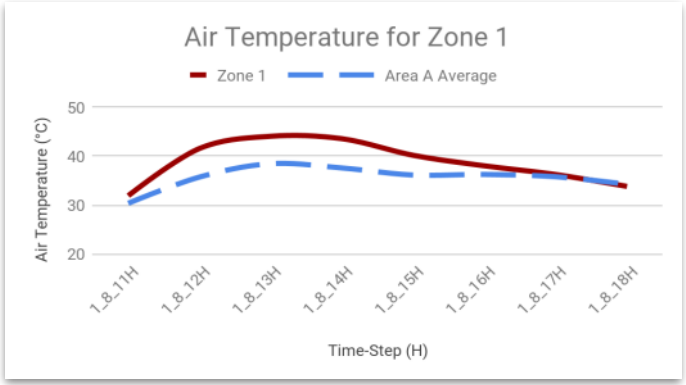


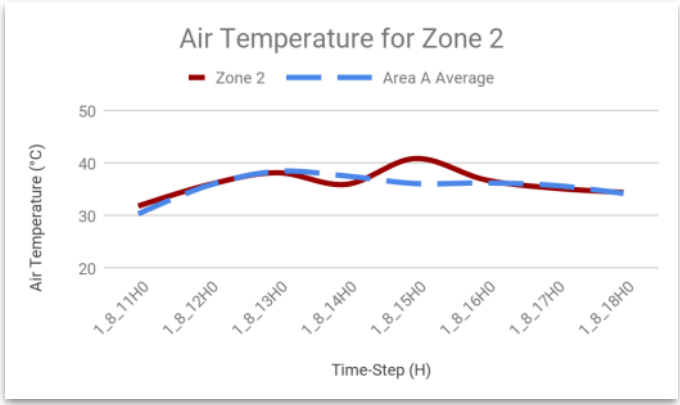


5. SIMULATION RESULT 2:
Evolution of Air Temperature across Zones

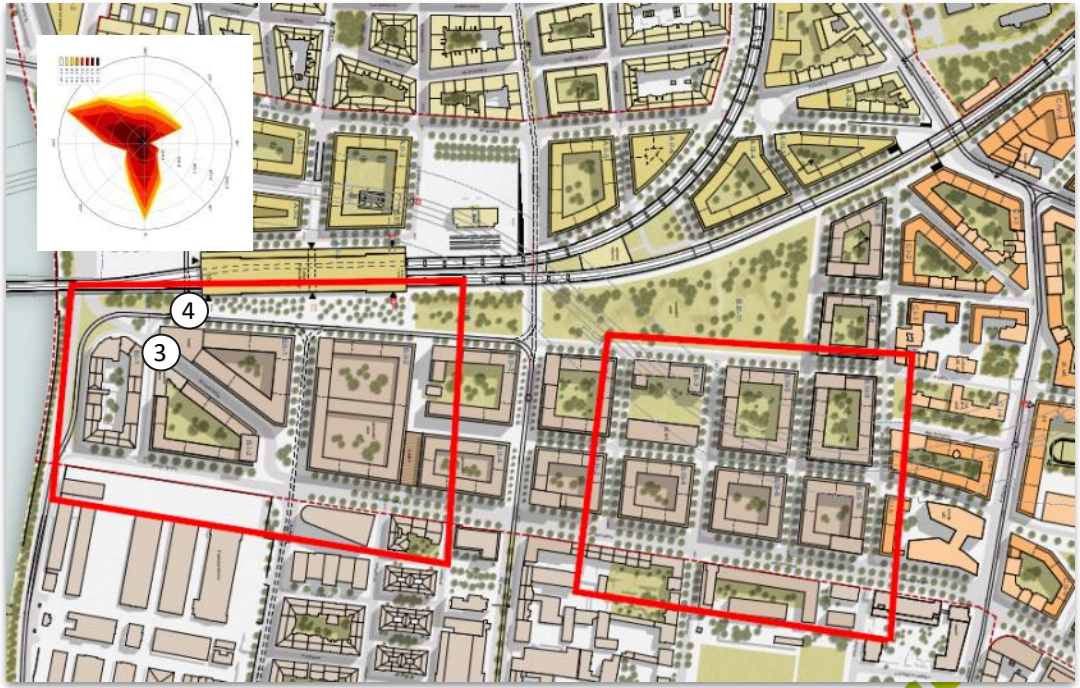
Area A Zone 1 & 2

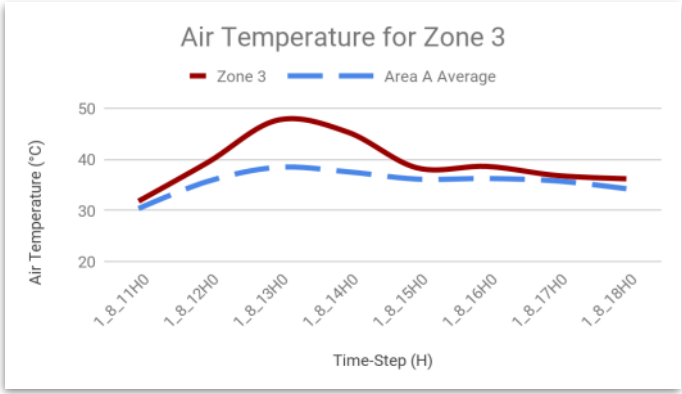


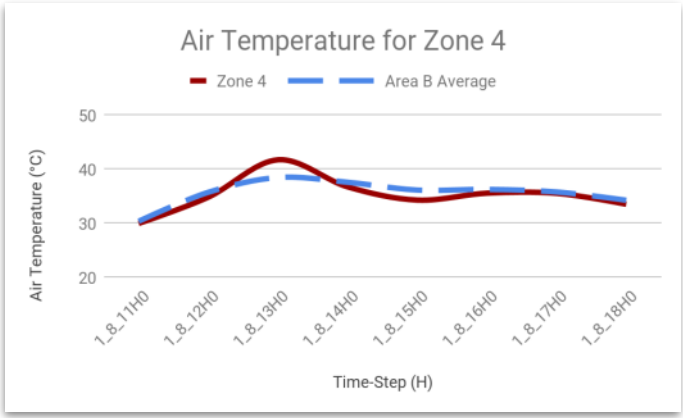




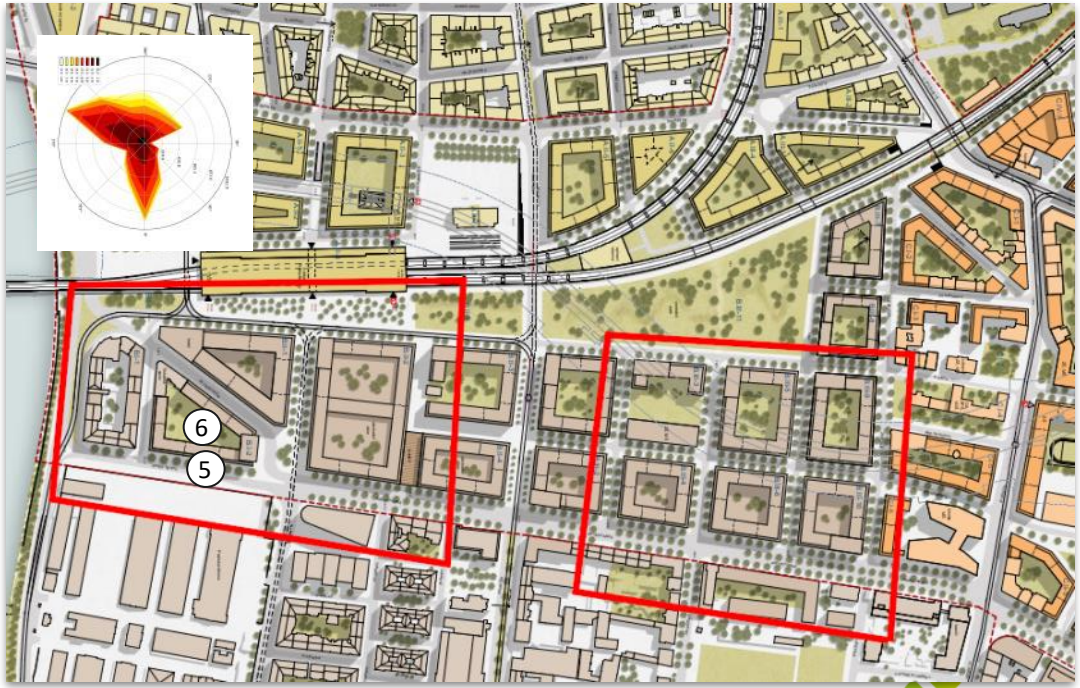
Area A Zone 3 & 4

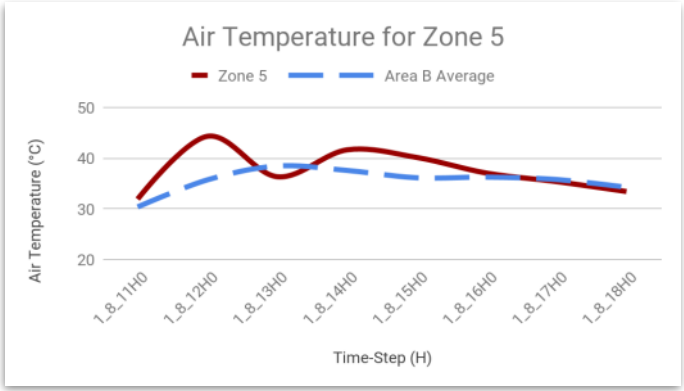


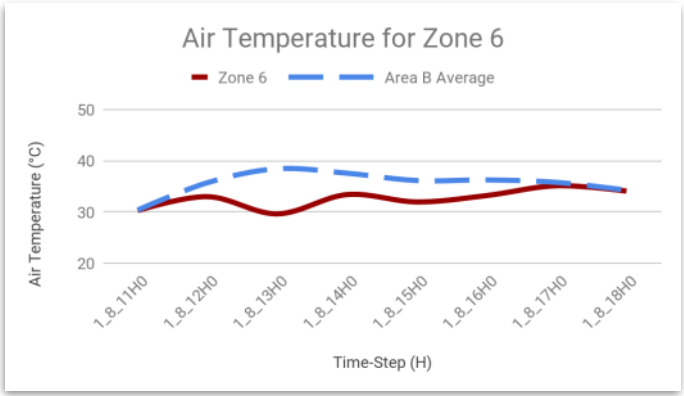




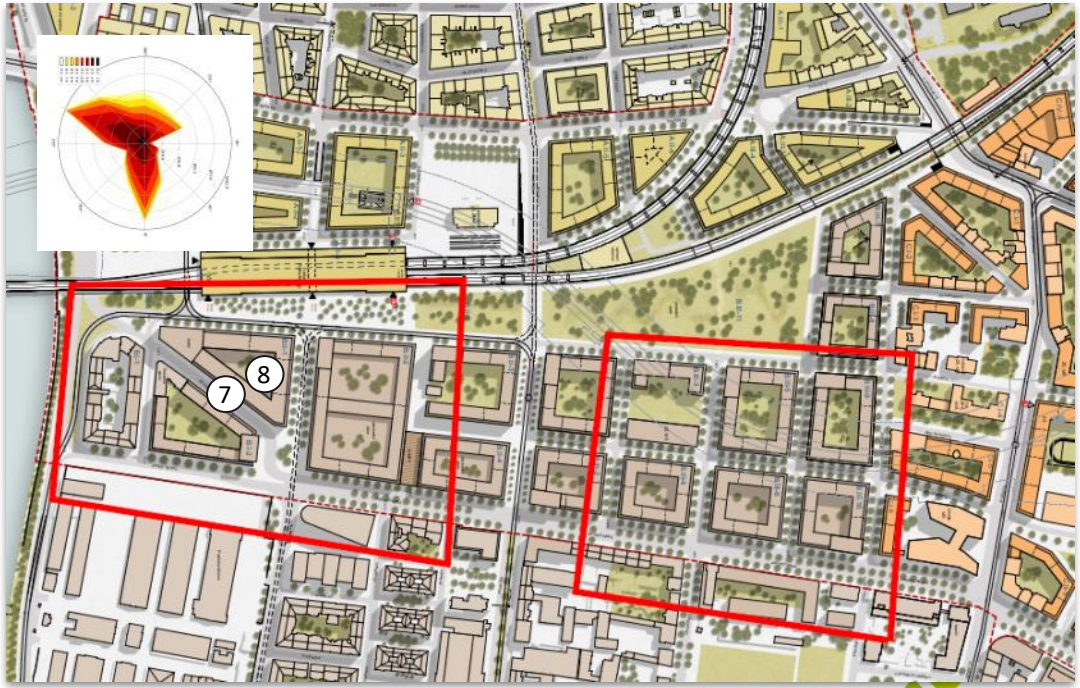
Area A Zone 5 & 6

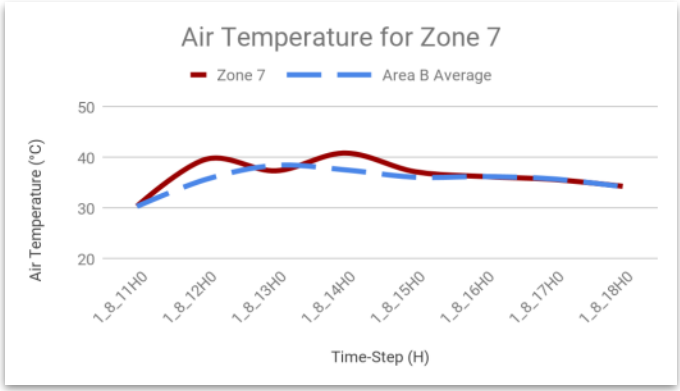


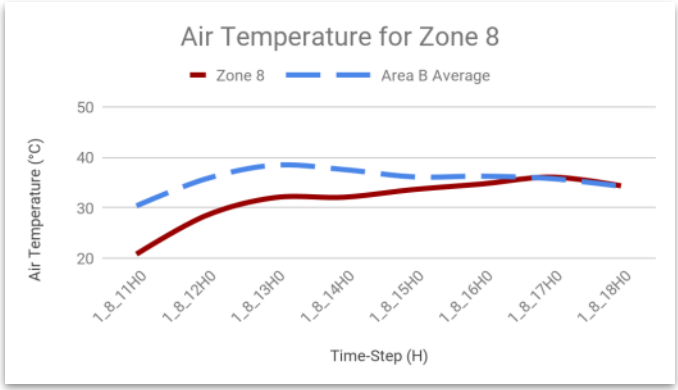




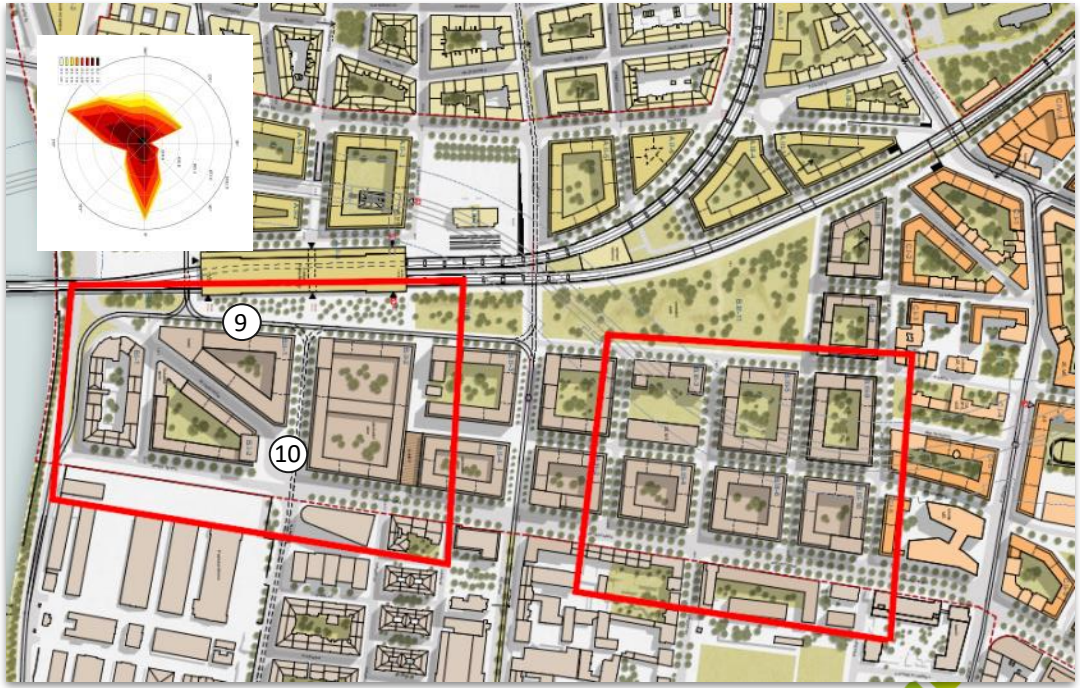
Area A Zone 7 & 8

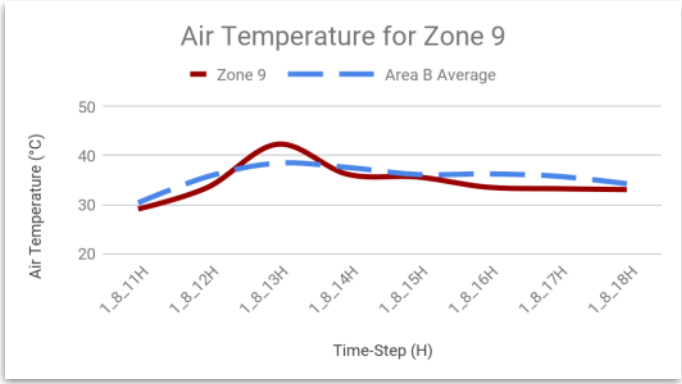


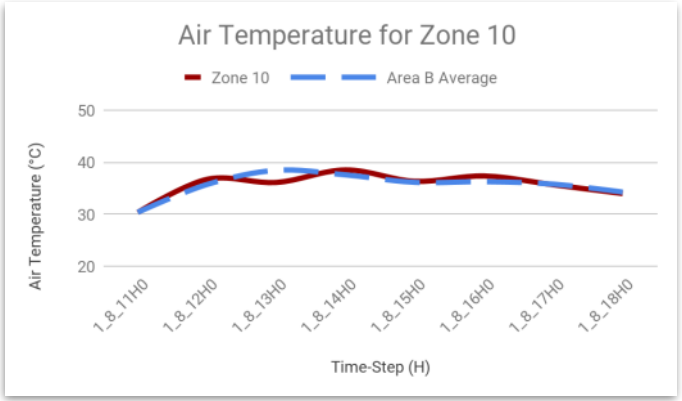




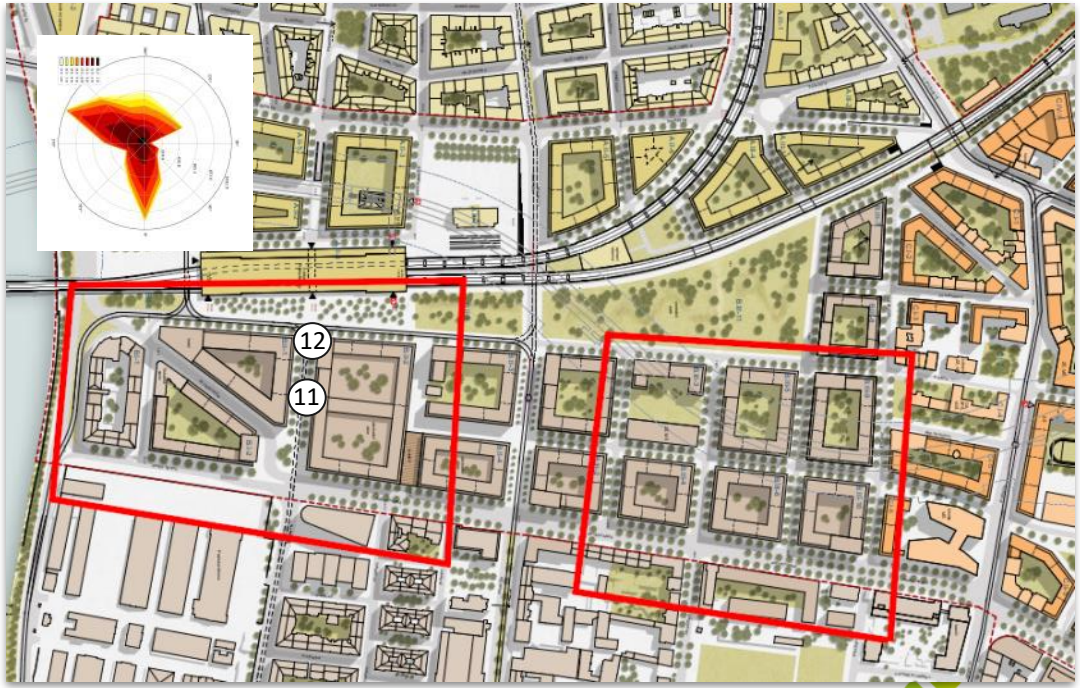
Area A Zone 9 & 10

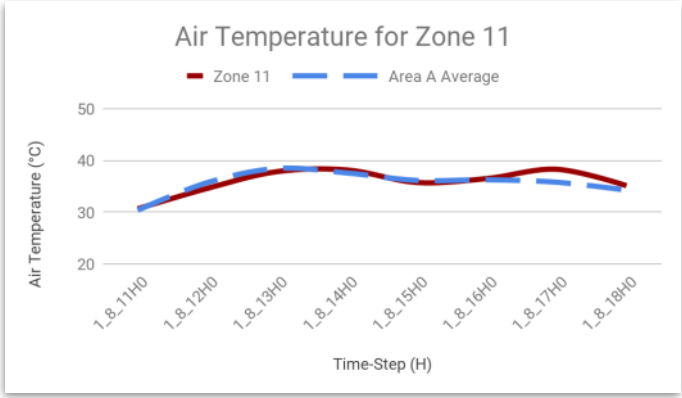


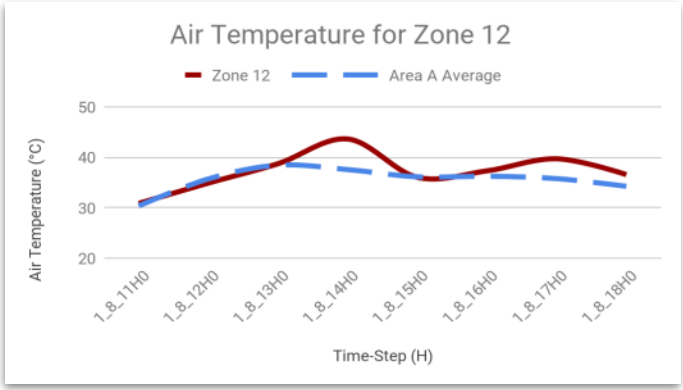




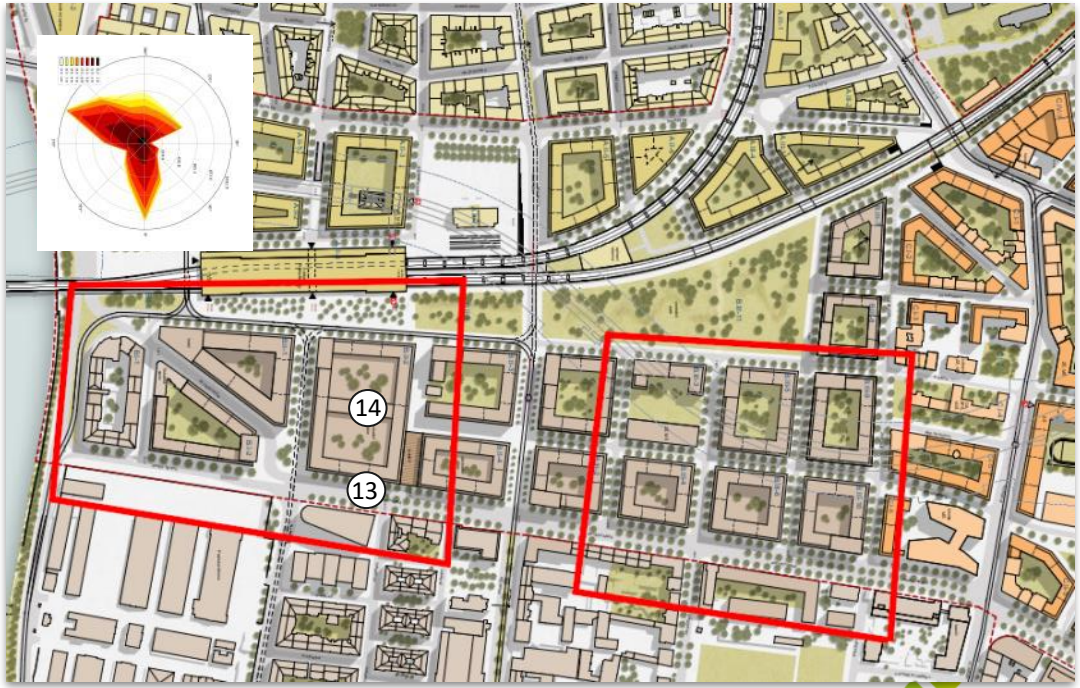
Area A Zone 11 & 12

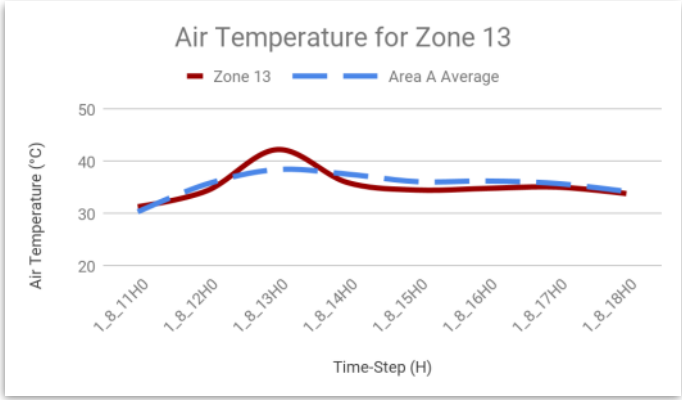


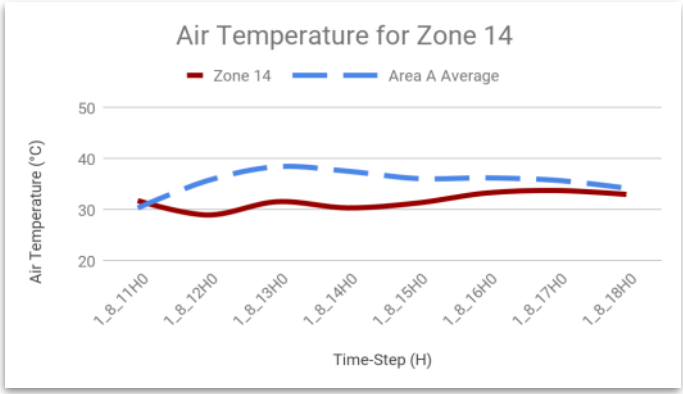




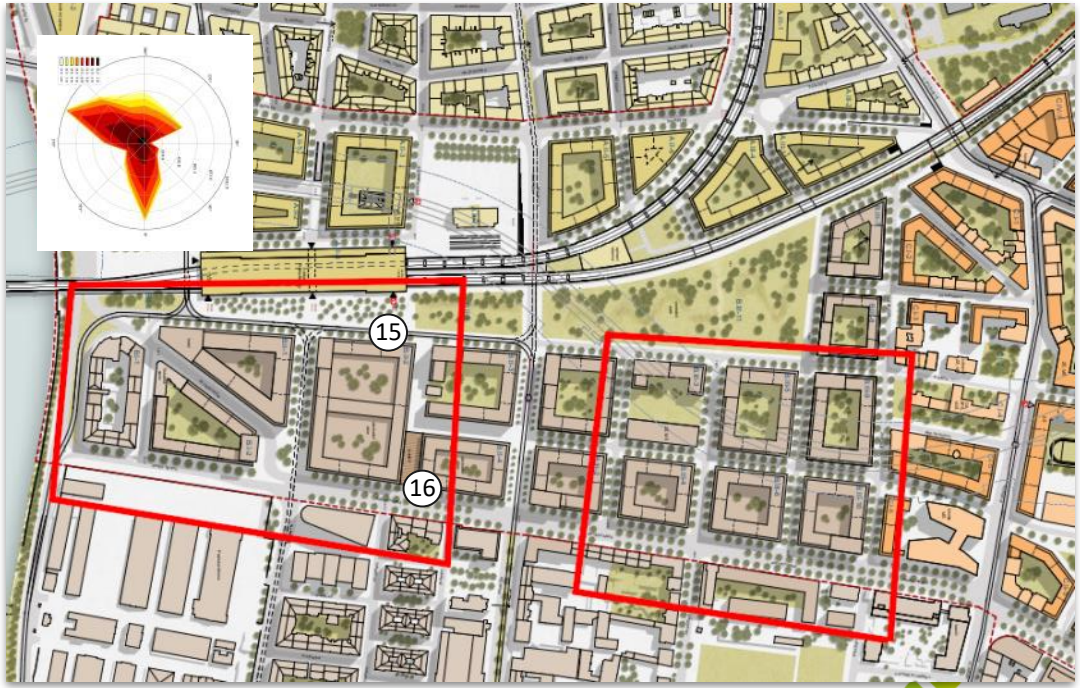
Area A Zone 13 & 14

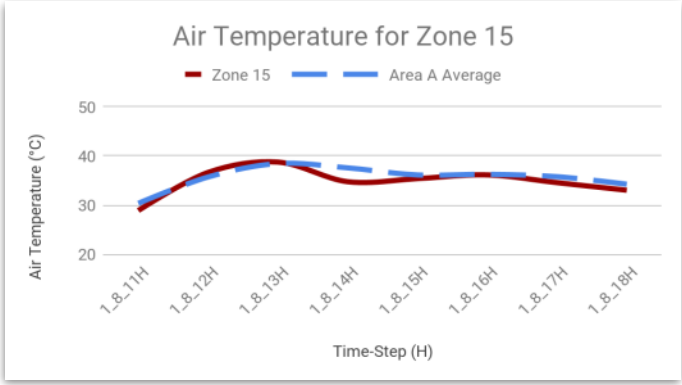


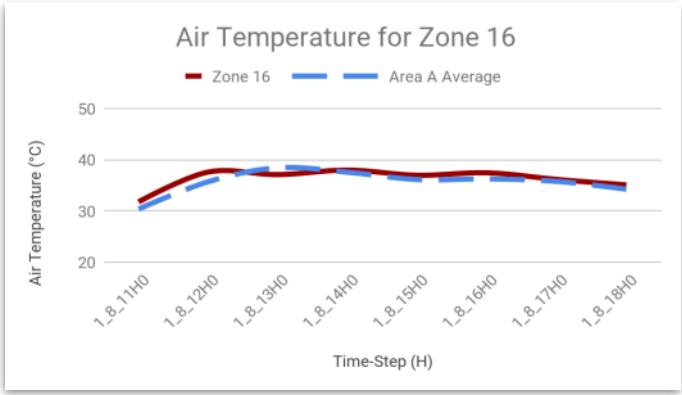




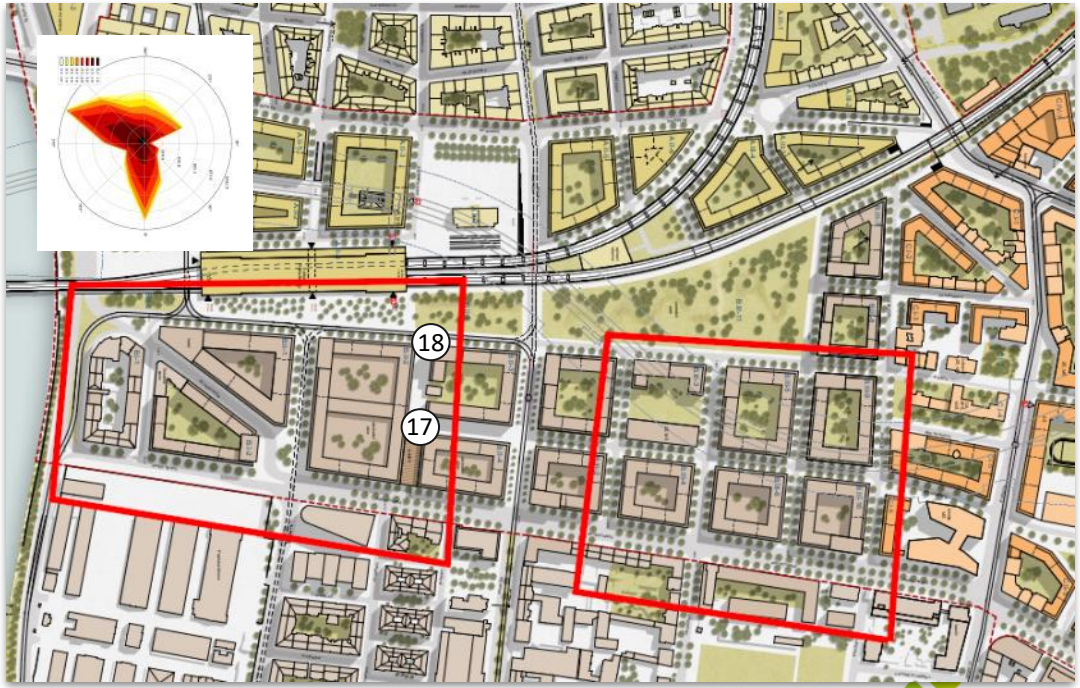
Area A Zone 15 & 16

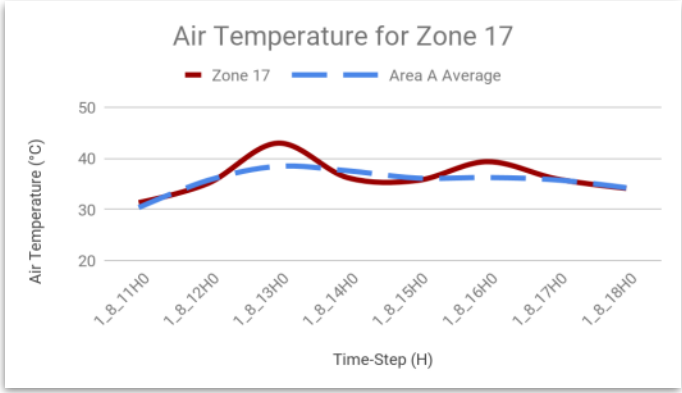


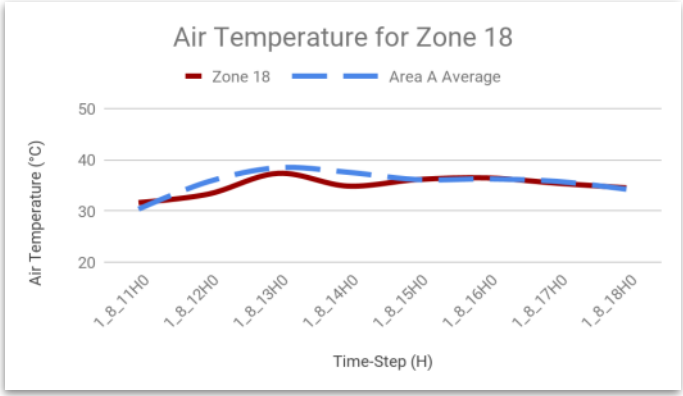




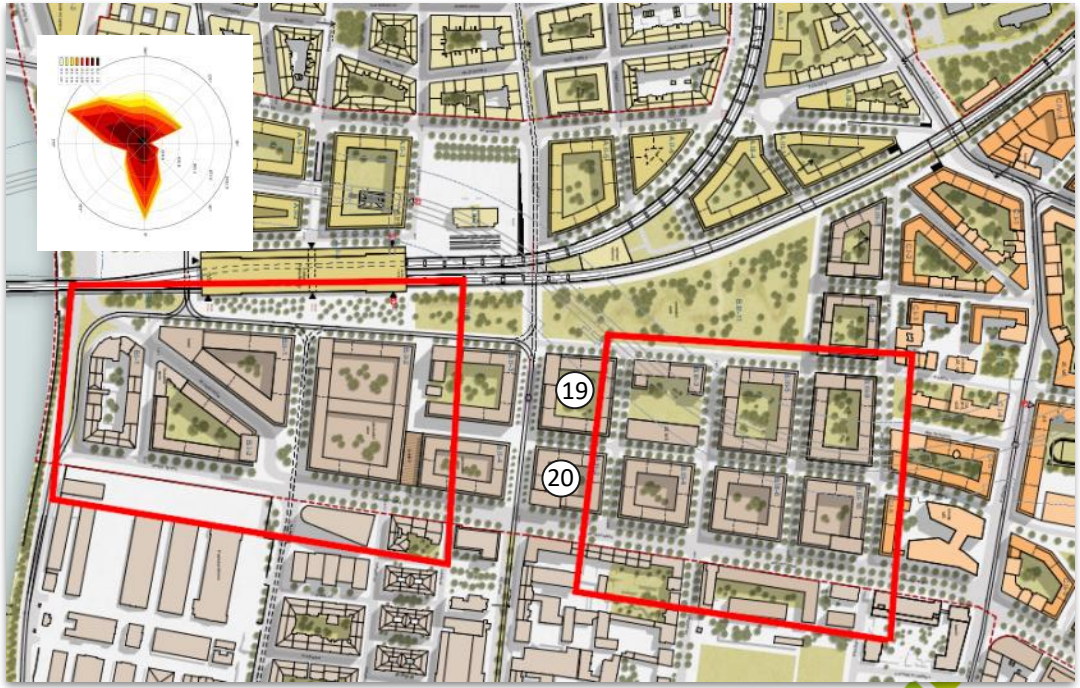
Area A Zone 17 & 18

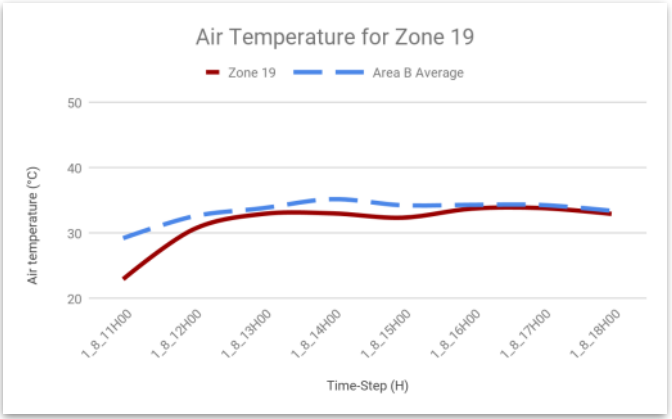


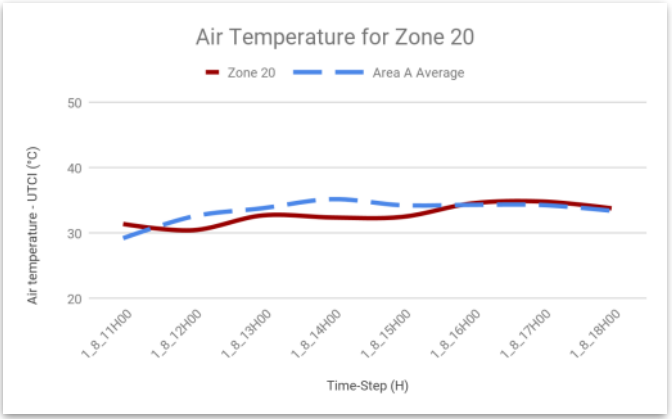




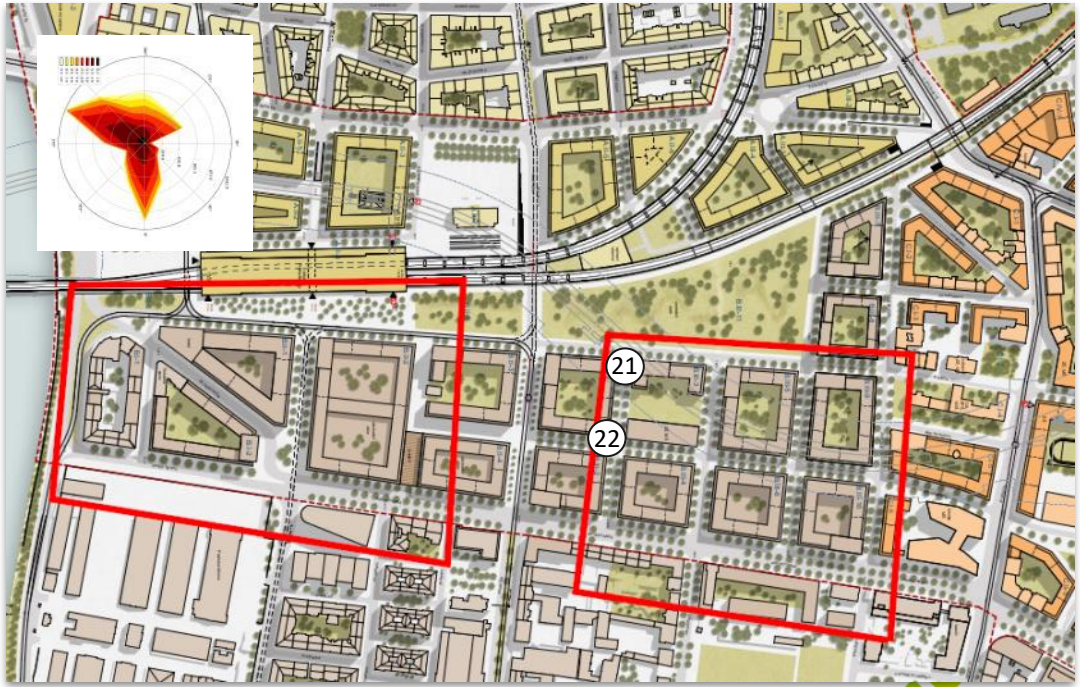
Area B Zone 19 & 20

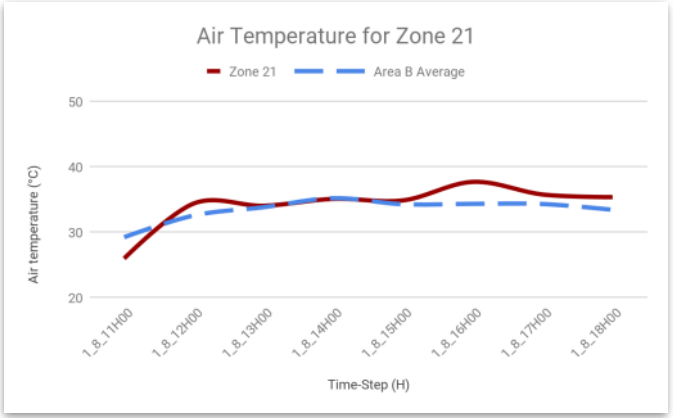


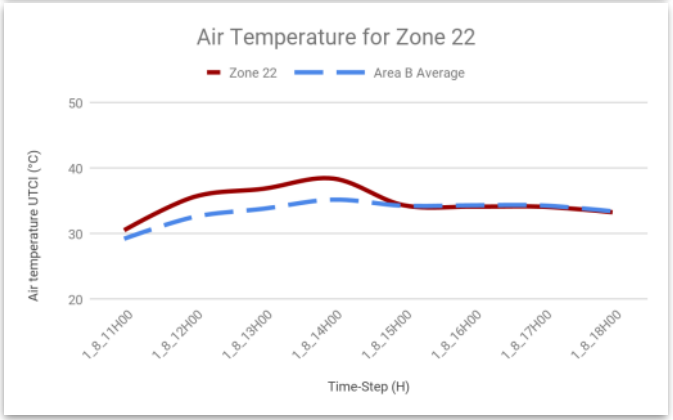




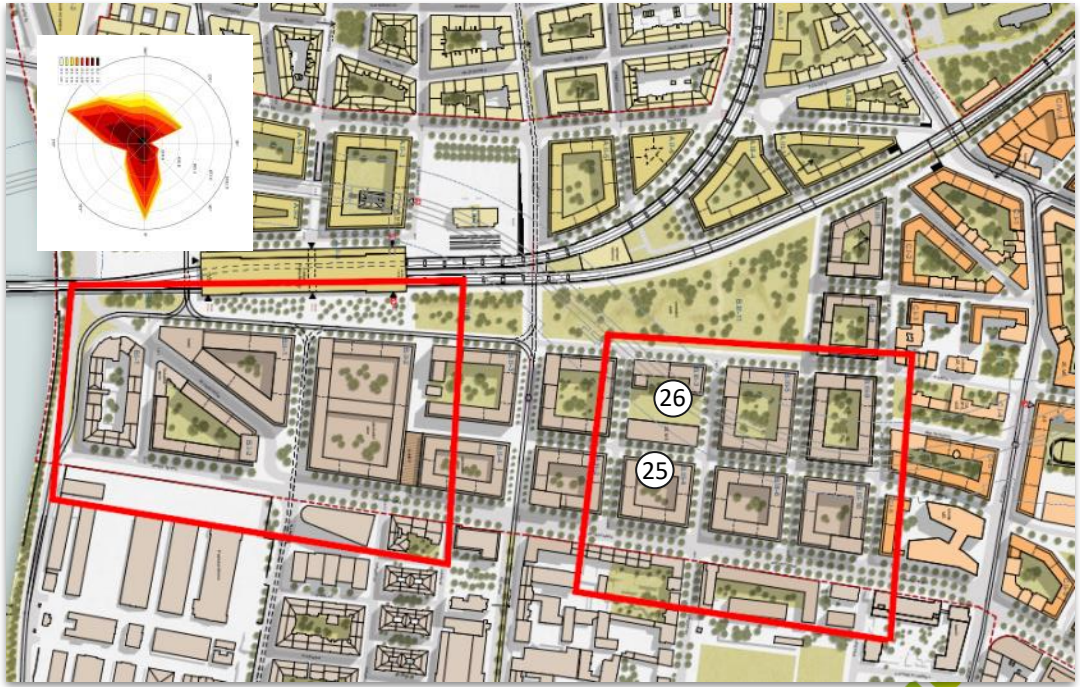
Area B Zone 21 & 22

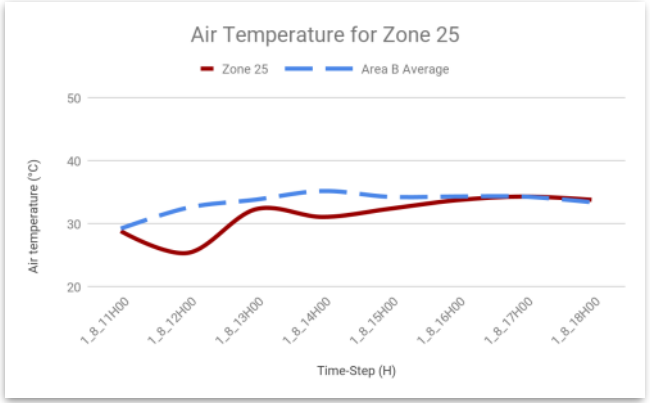


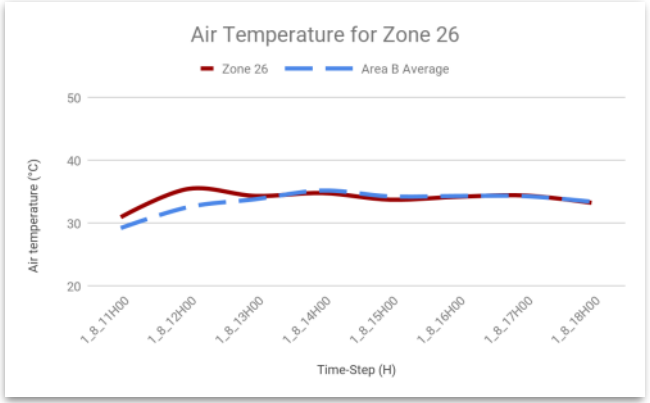




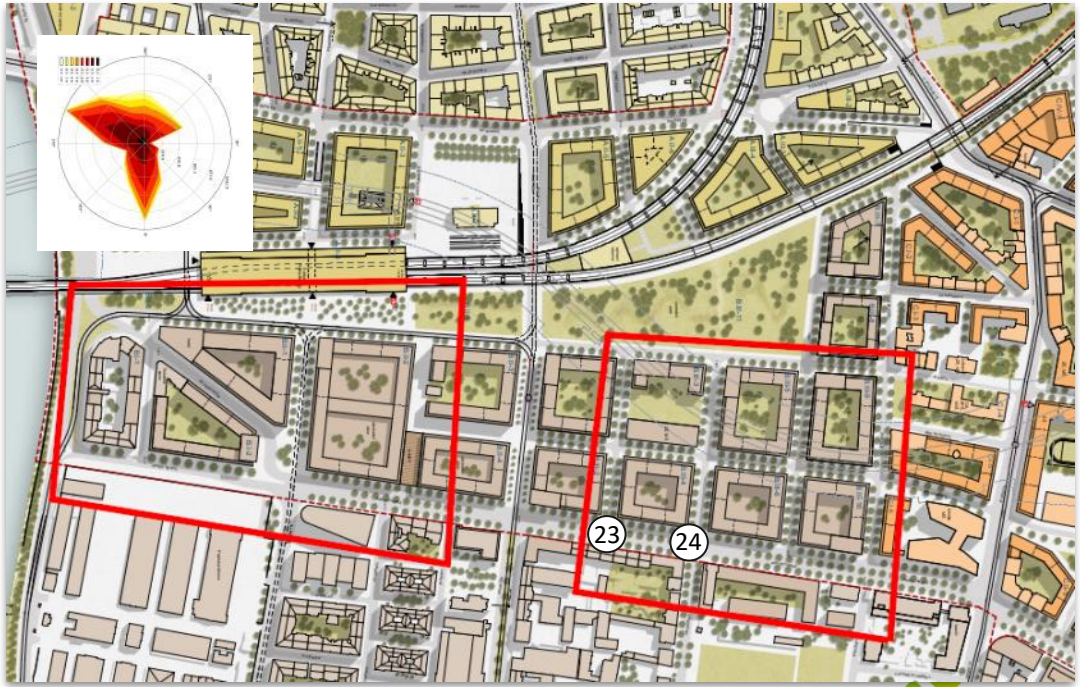
Area B Zone 25 & 26

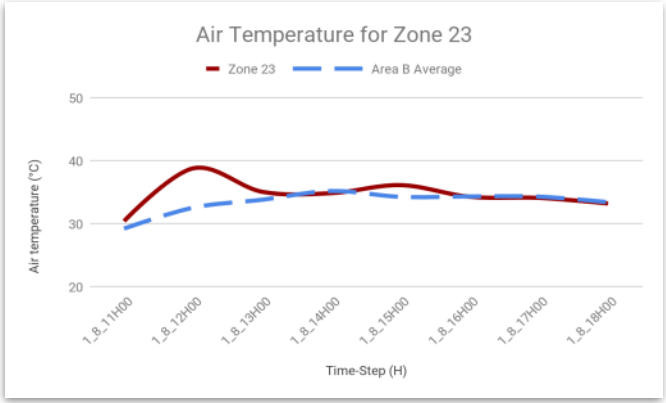


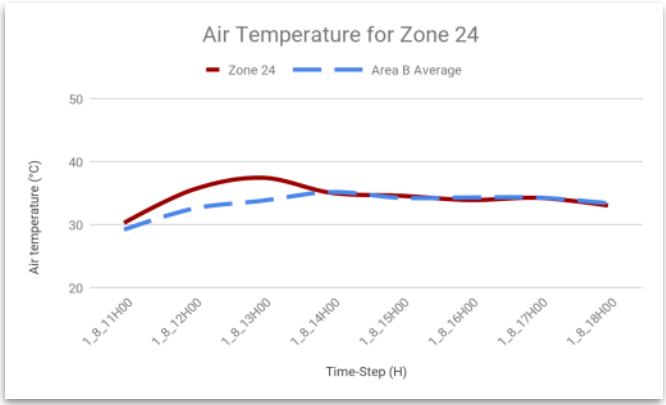




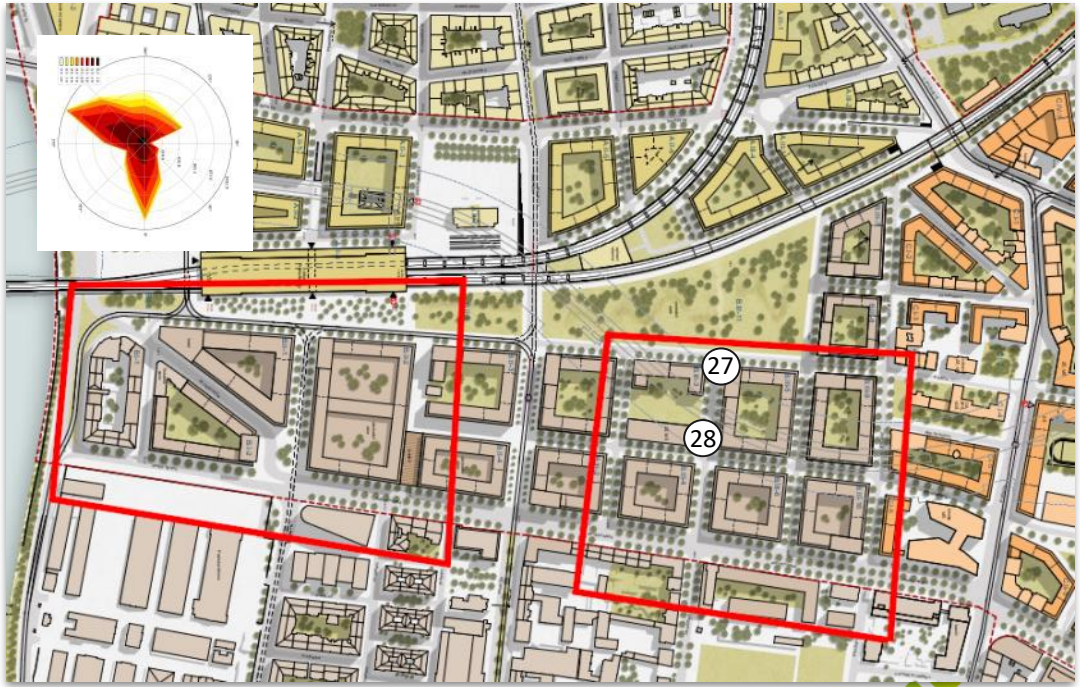
Area B Zone 23 & 24

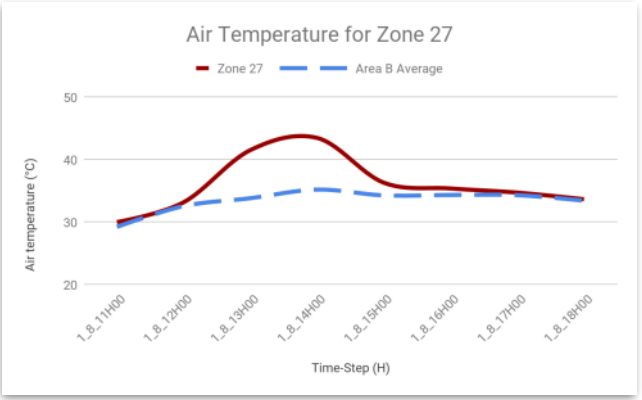


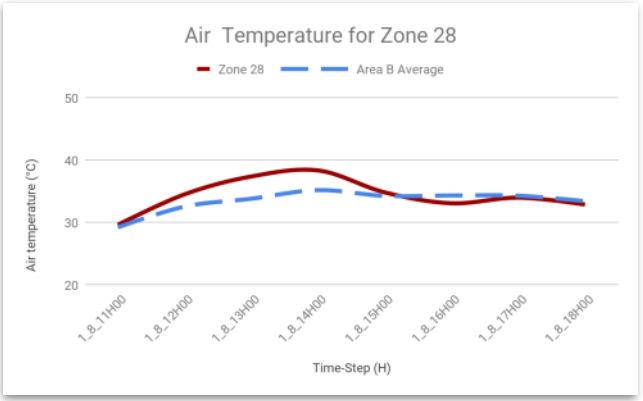




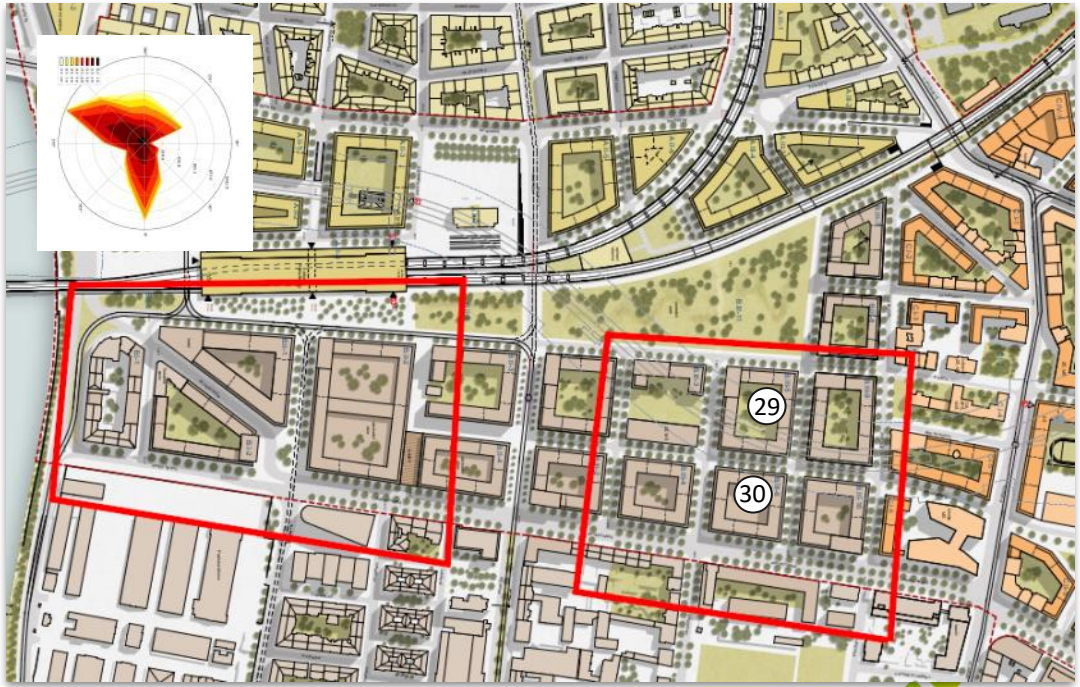
Area B Zone 27 & 28

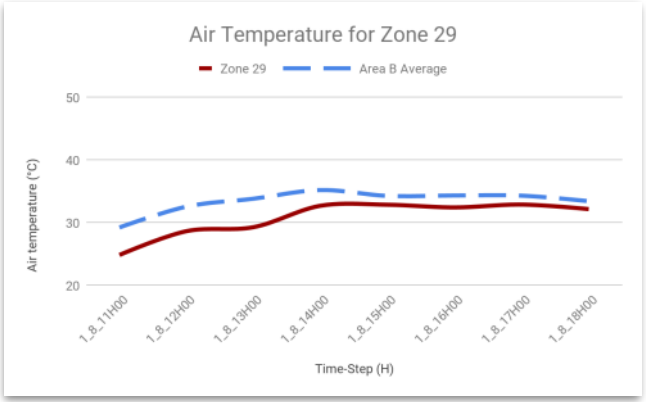


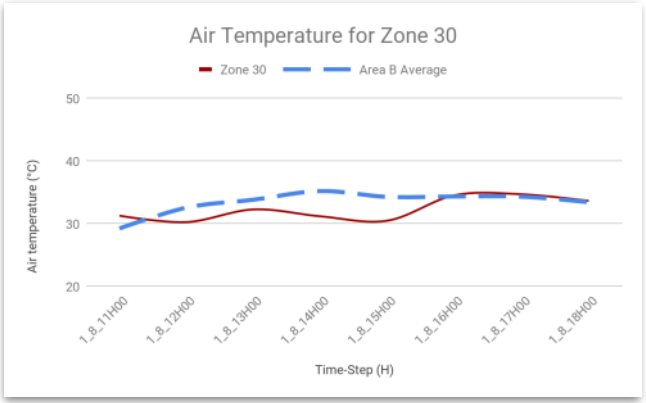




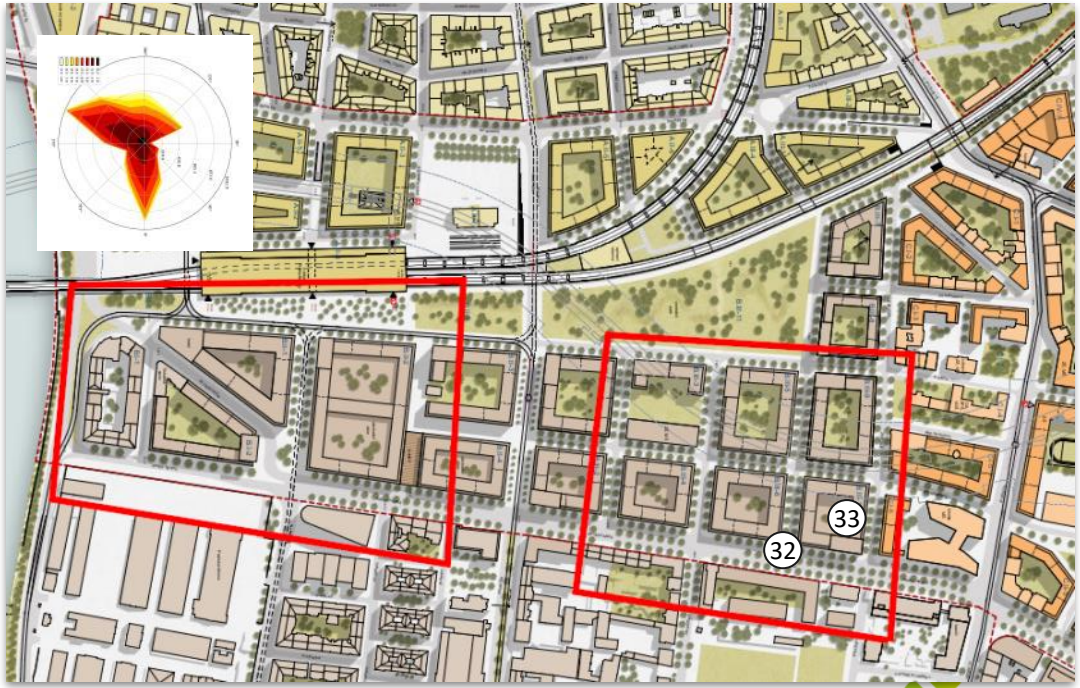
Area B Zone 29 & 30

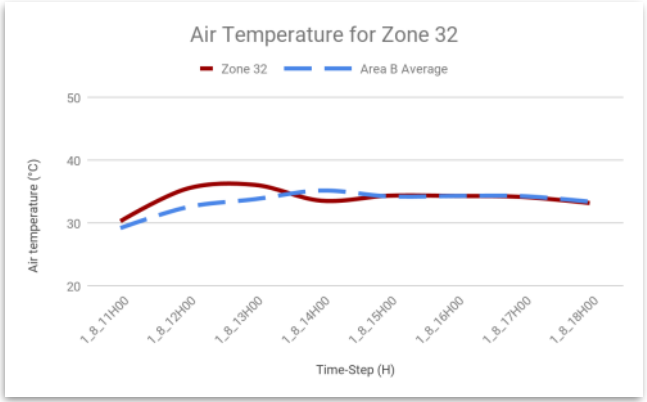


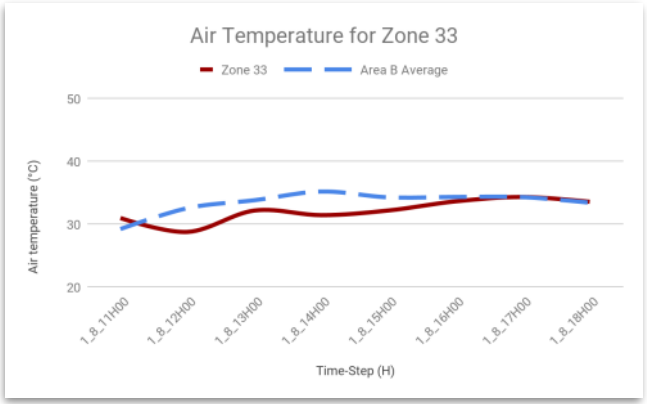




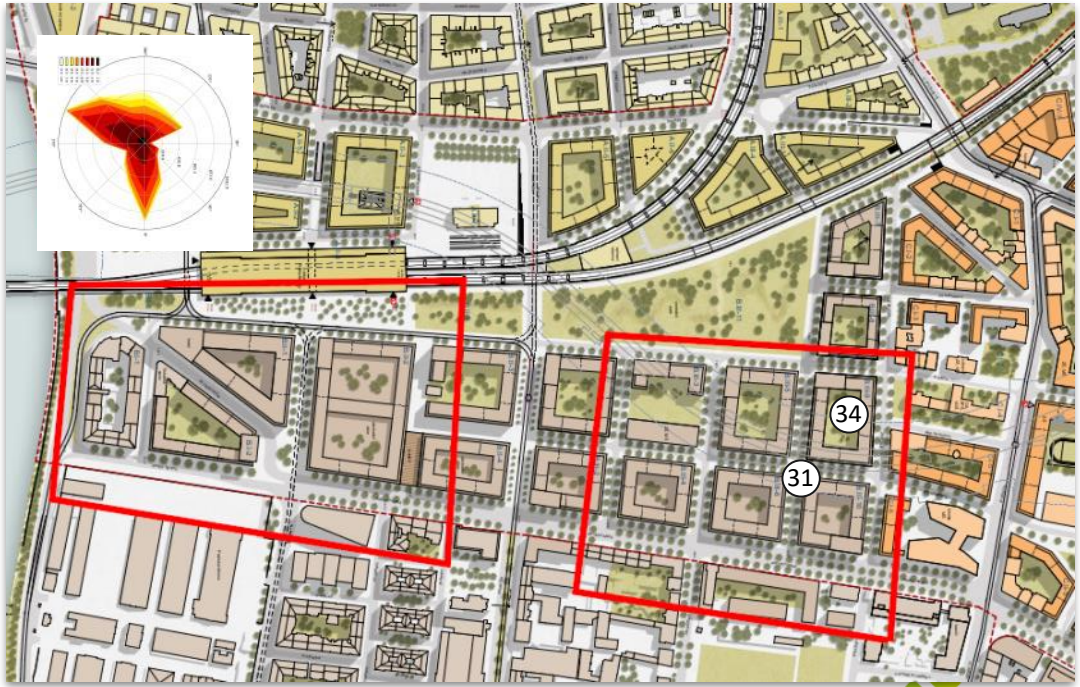
Area B Zone 32 & 33

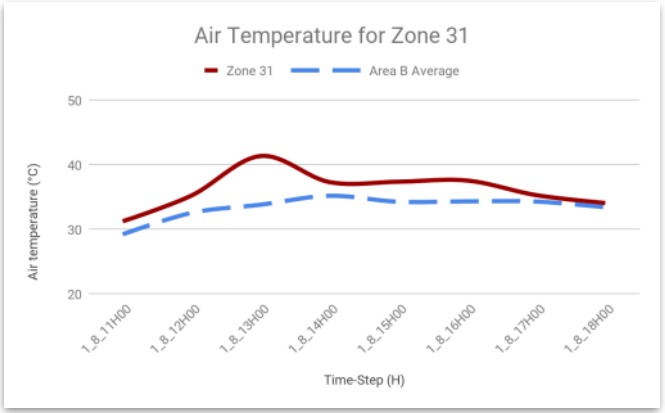


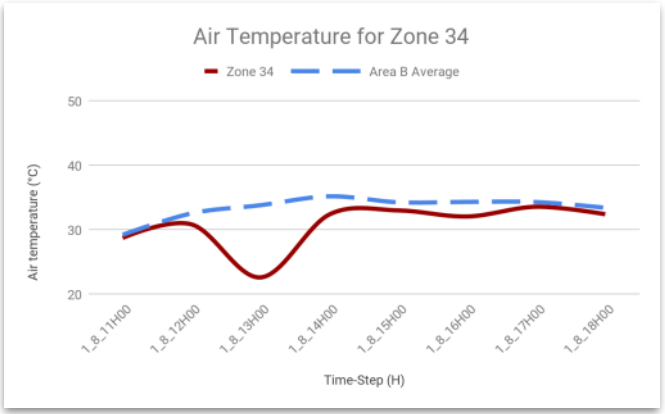




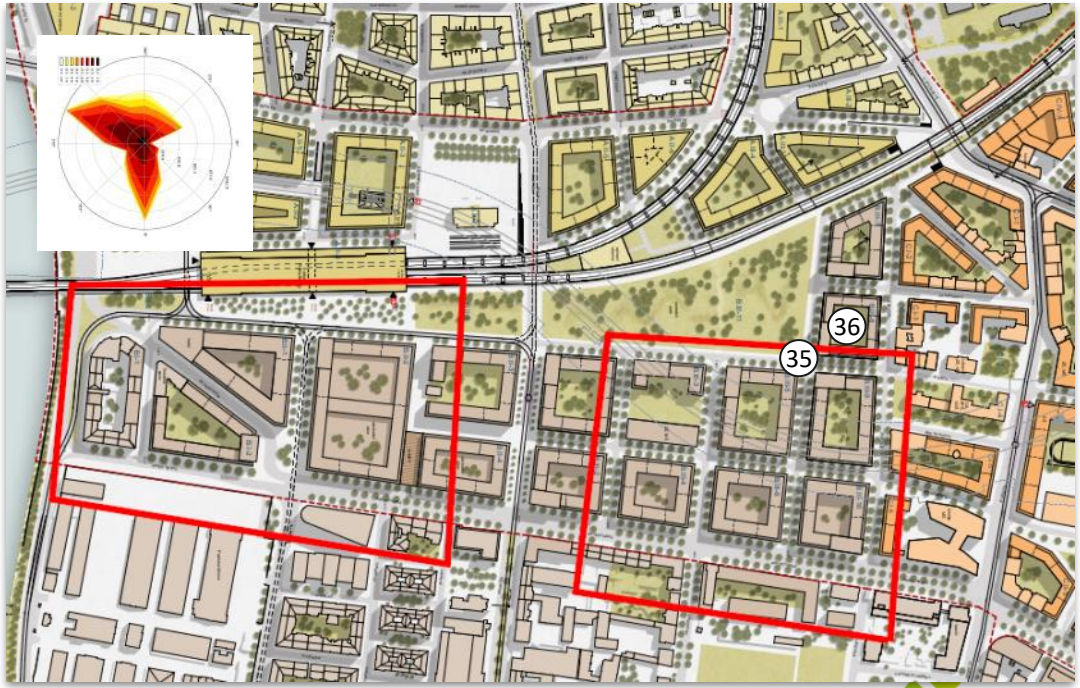
Area B Zone 31 & 34

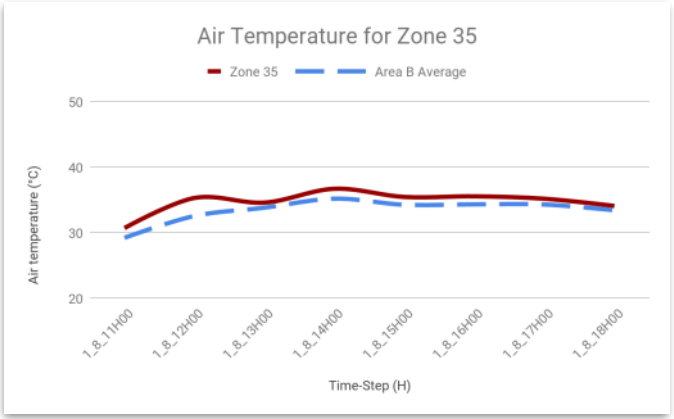


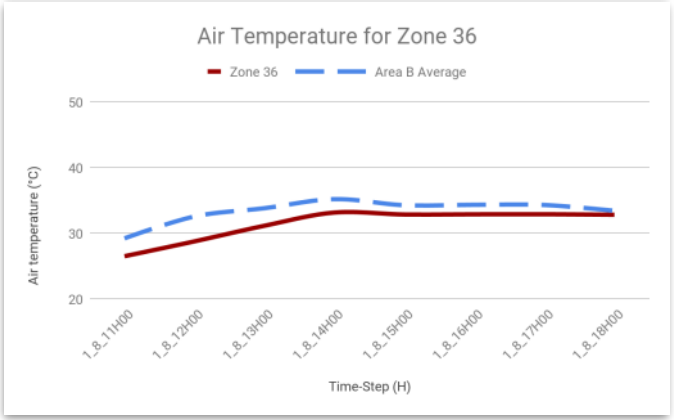




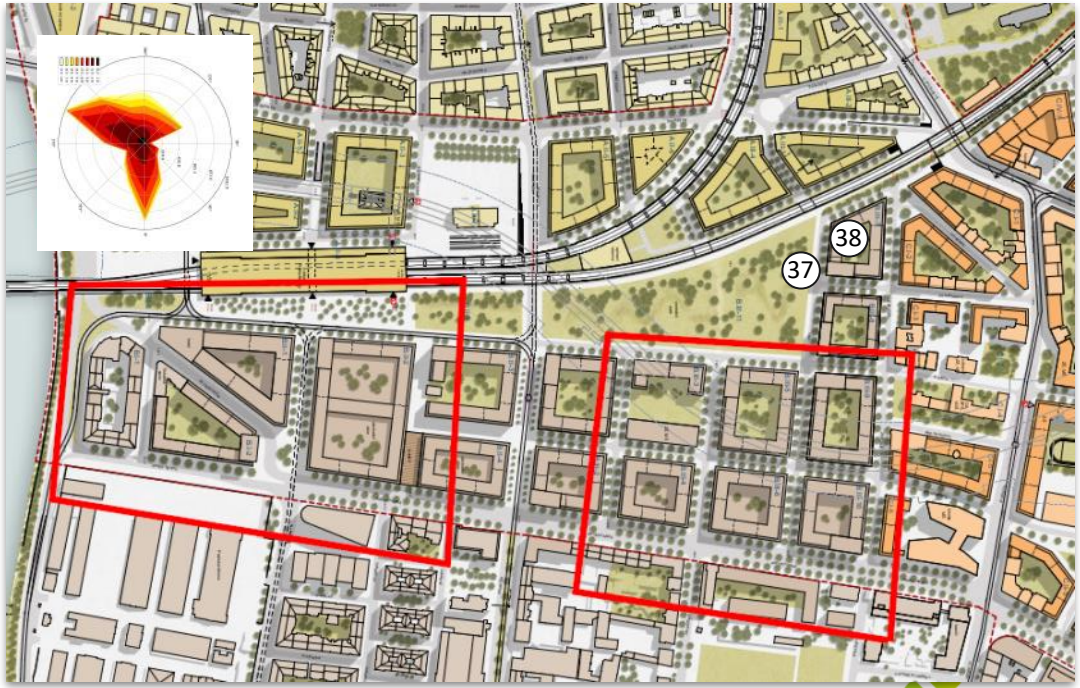
Area B Zone 35 & 36

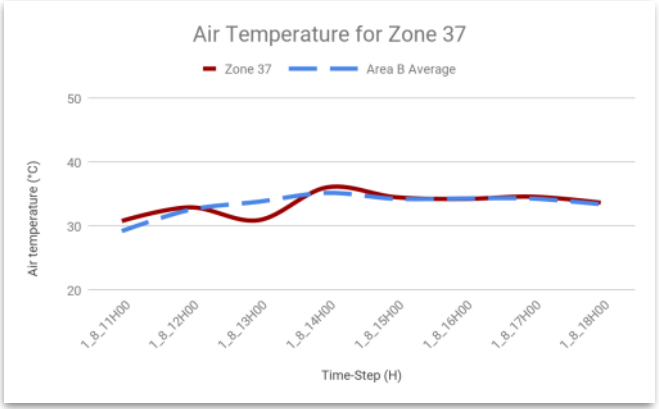


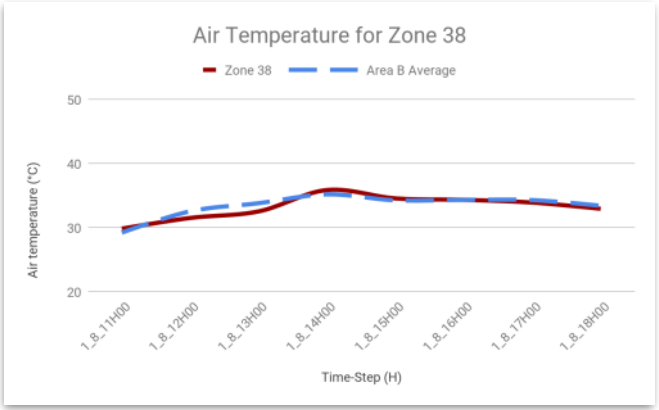




Area B Zone 37 & 38

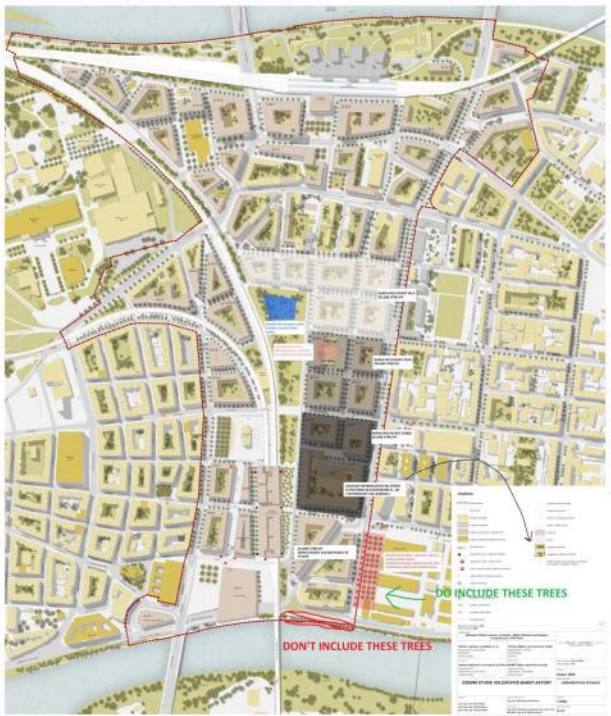


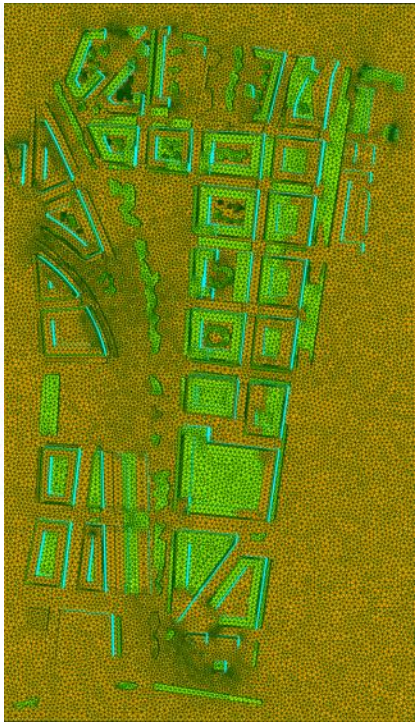




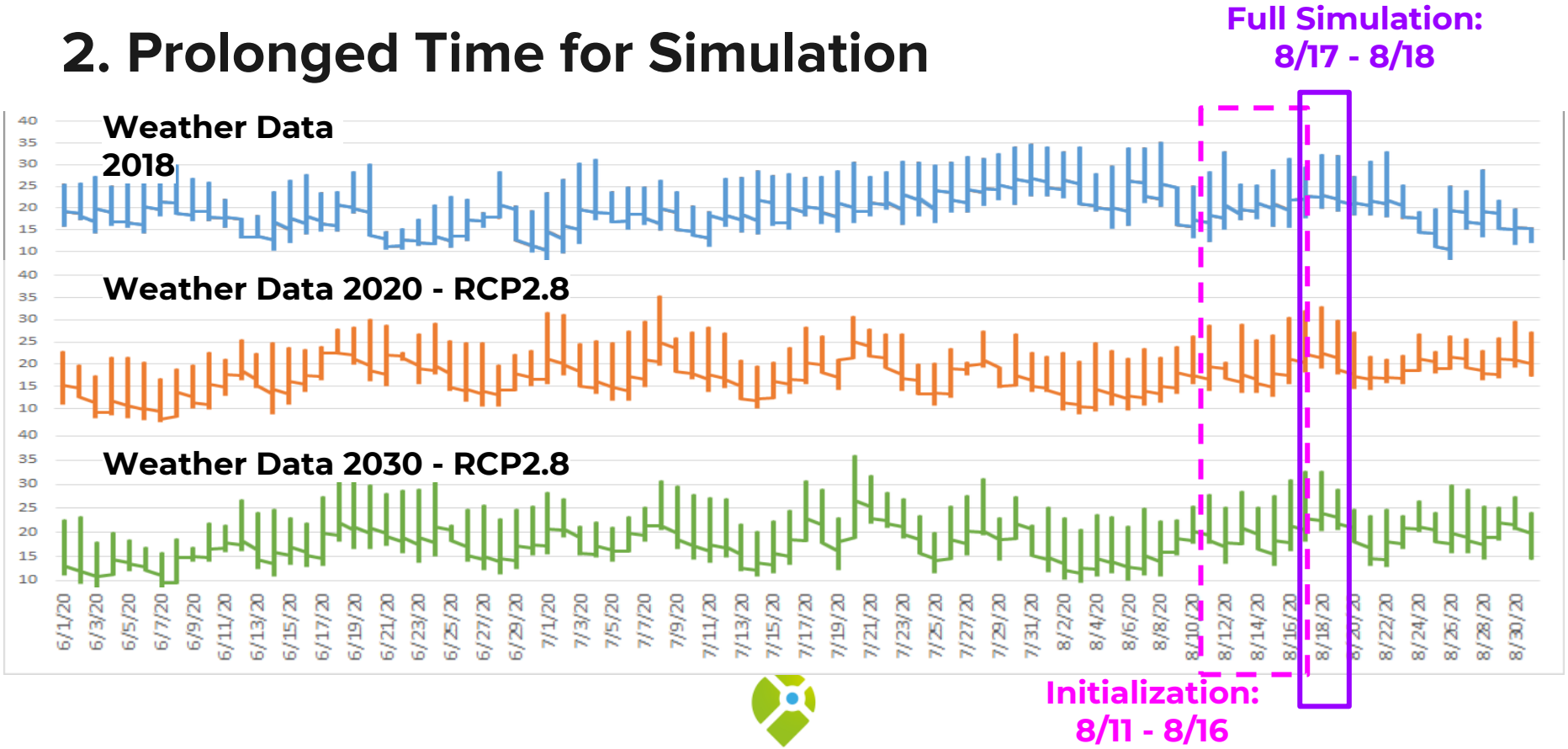
6. FUTURE SIMULATIONS

1. Updated Model & Greenry

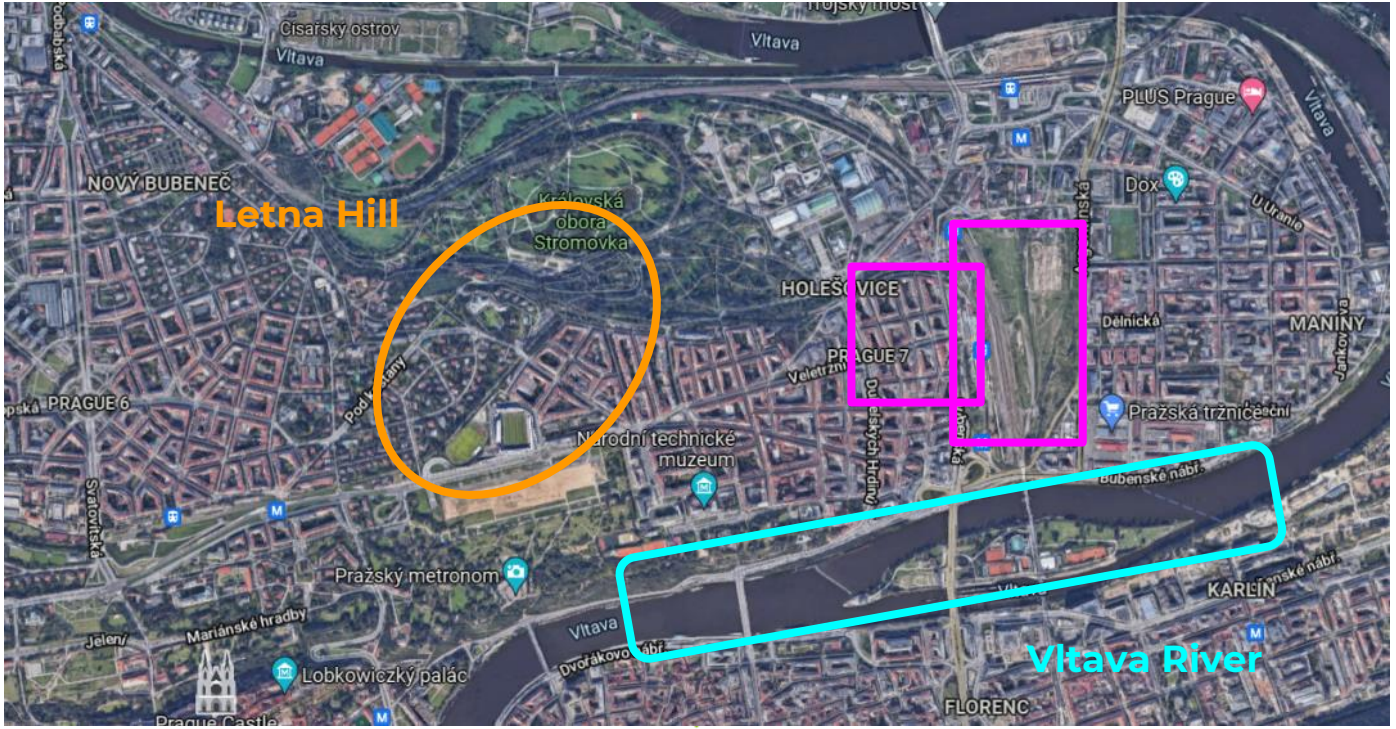




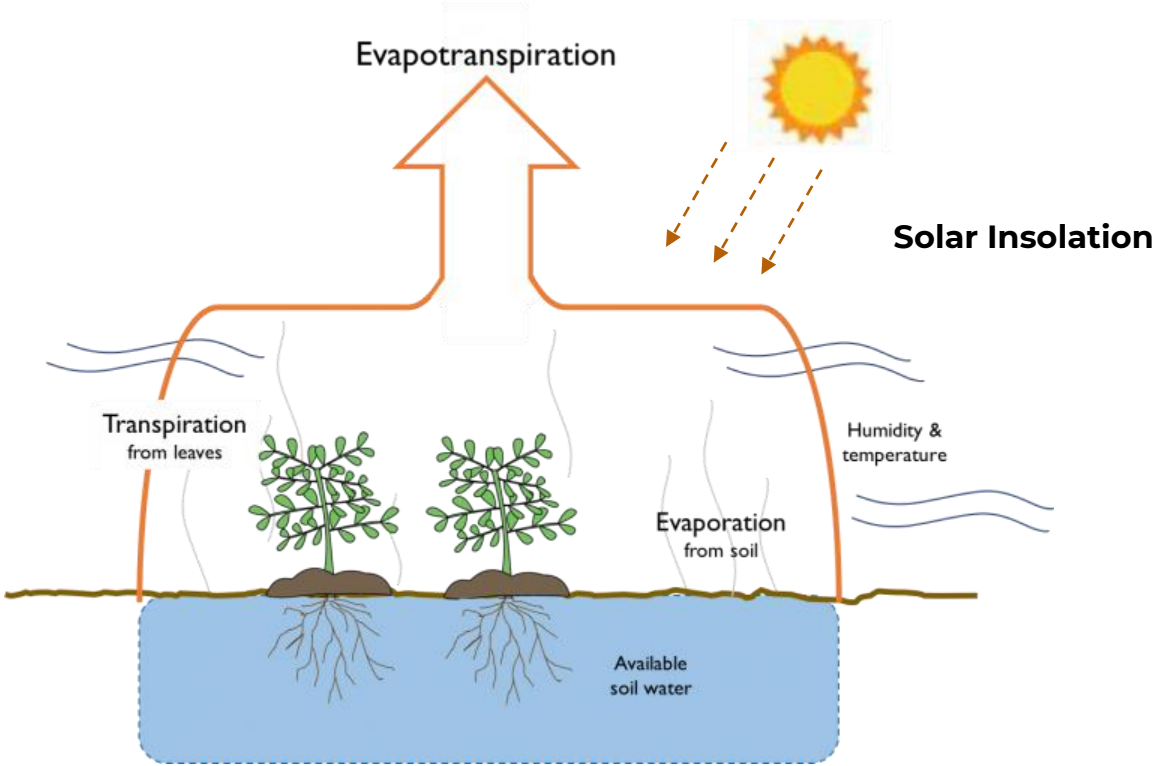
2. Prolonged Time for Simulation



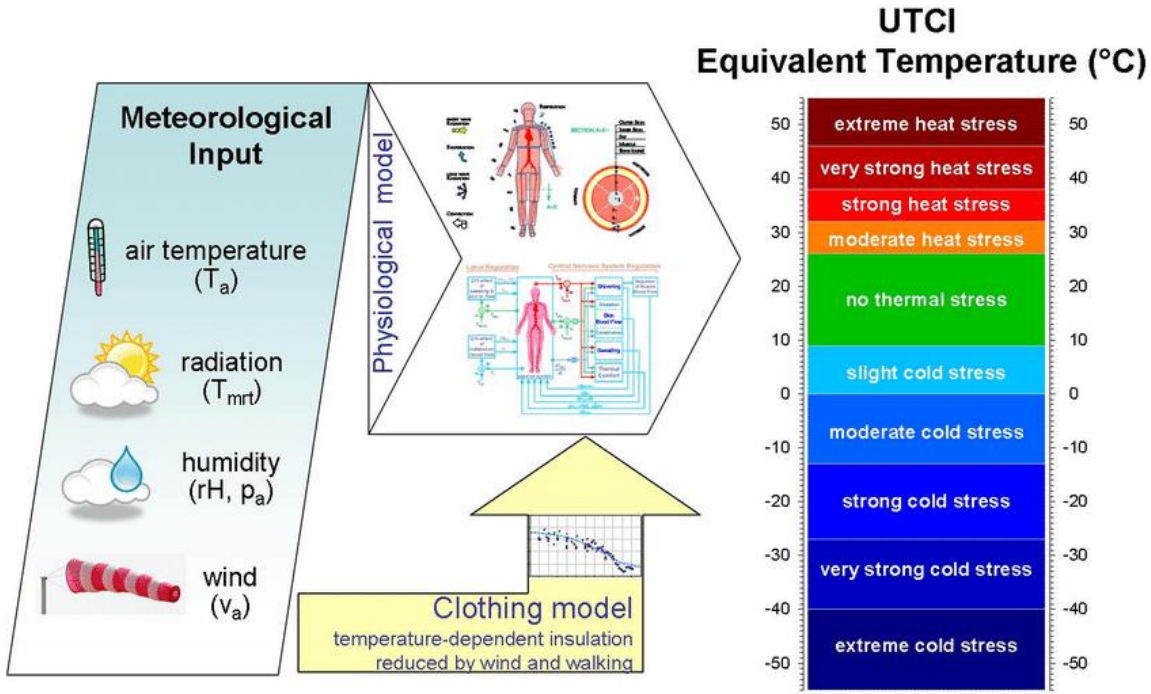
3. Impacts of Physical Features around Simulation Area



4. Solar Insolation and Evapotranspiration



5. Felt Temperature and Outdoor Comfort Assessment



Thank You!