

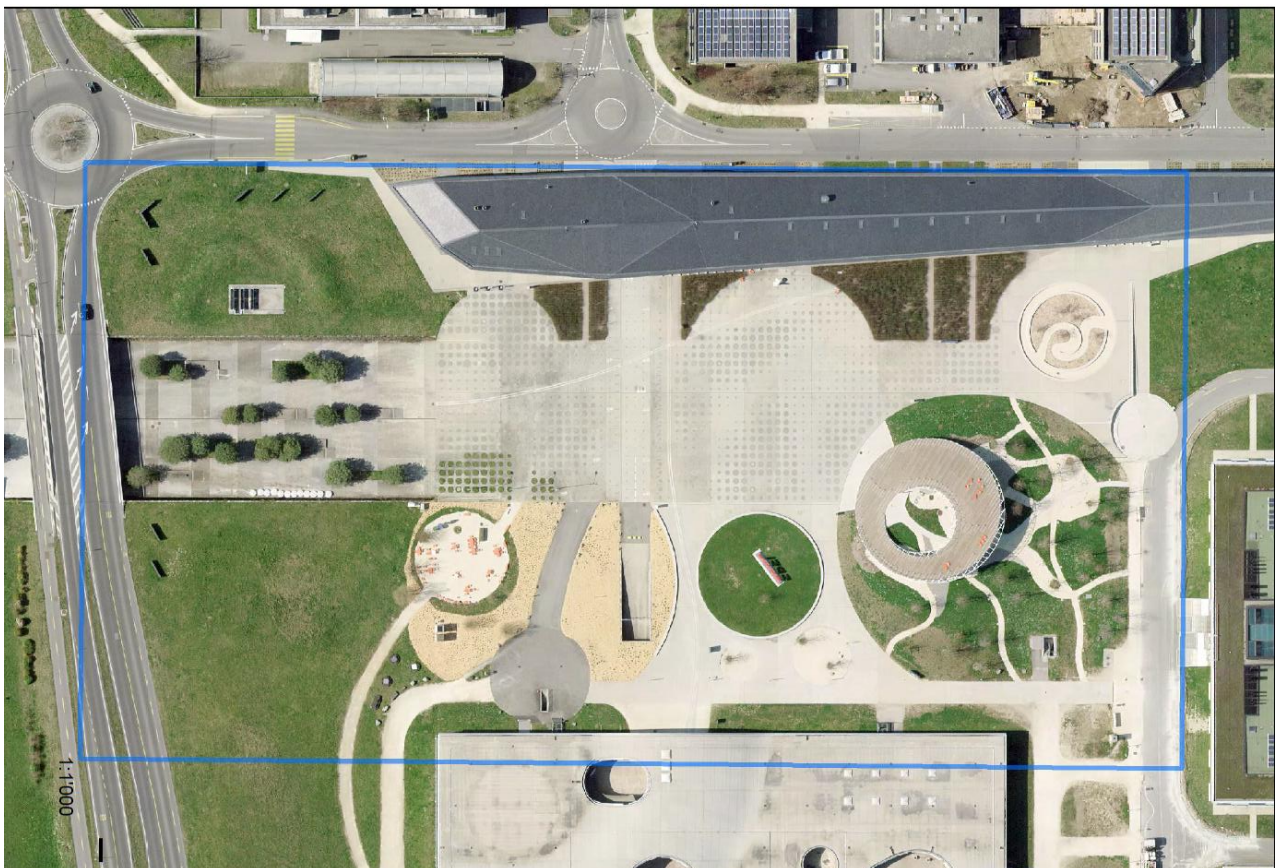
Strategy to mitigate the heat island effect – In-class Exercise

Based on the extracts of OFEV (2018), discuss in your group the advantages and disadvantages of the following measures to reduce the heat island effect on the Place Cosanday (e.g. impact on heat mitigation, connection with existing green and blue infrastructures, compatibility with the uses of the site, implementation issues and challenges, cost/effectiveness, etc.):

- Groupe 1 – Shade open spaces and paths with trees (M 1.6)
- Groupe 1 – Protect, enlarge and develop bodies of water (M 2.1)
- Groupe 2 – Reducing the impermeability of surfaces and integrating rainwater management (M 2.3)
- Groupe 2 - Green roof (M 3.1)
- Groupe 3 - Install an innovative irrigation system (M 2.4)
- Groupe 3 – Design exterior surfaces to optimise thermal performance (M 4.1).

Summarise your discussion in the Word document [2025.03.28_Heat Mitigation_Sub-Project_RENDU]

Figure 1 – EPFL Learning Centre's Esplanade ([project perimeter](#))



1. Annexes

1.1. Ground Cover Assessment and Ratio (also see map A 1.1)

Couverture du sol	Ground Covers	Surface [m2]	Surface [%]
Toitures	Roofs	2 567	9%
Toit incliné	Pitched roof	1 806	6%
Toit plat imperméable	Waterproof flat roof	761	3%
Accès, places et chemins	Accesses, squares and paths	13 775	47%
Route, parking, chemin (asphalte ou béton)	Road, car park, path (asphalt or concrete)	1 238	4%
Trottoir, place piétonnière (asphalte ou béton)	Pavement, pedestrian area (asphalt or concrete)	12 087	42%
Revêtement perméable (gravillon, copeaux)	Permeable surfacing (gravel, shavings)	450	2%
Aménagement extérieurs et divers	Outdoor landscaping and miscellaneous	12 688	44%
Espace vert pleine terre	Open green space	5 228	18%
Espace vert sur dalle (épaisseur 25-50 cm)	Green space on slab (25-50 cm thick)	4 330	15%
Aire de jeu (revêtement semi perméable)	Play area (semi-permeable surfacing)	3 131	11%
Total	Total	29 030	100%
Couverture du sol grise	Grey ground cover	15 892	55%
Couverture du sol verte	Green ground cover	13 139	45%

Figure 1 - Ground Cover Ratio

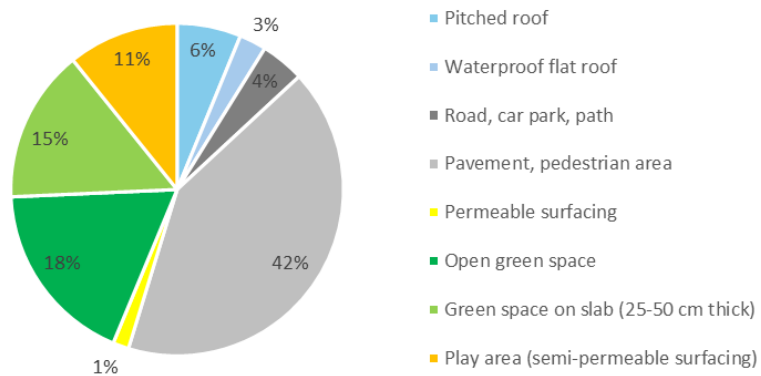
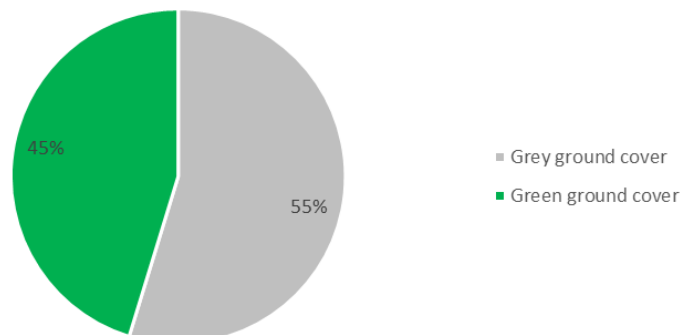
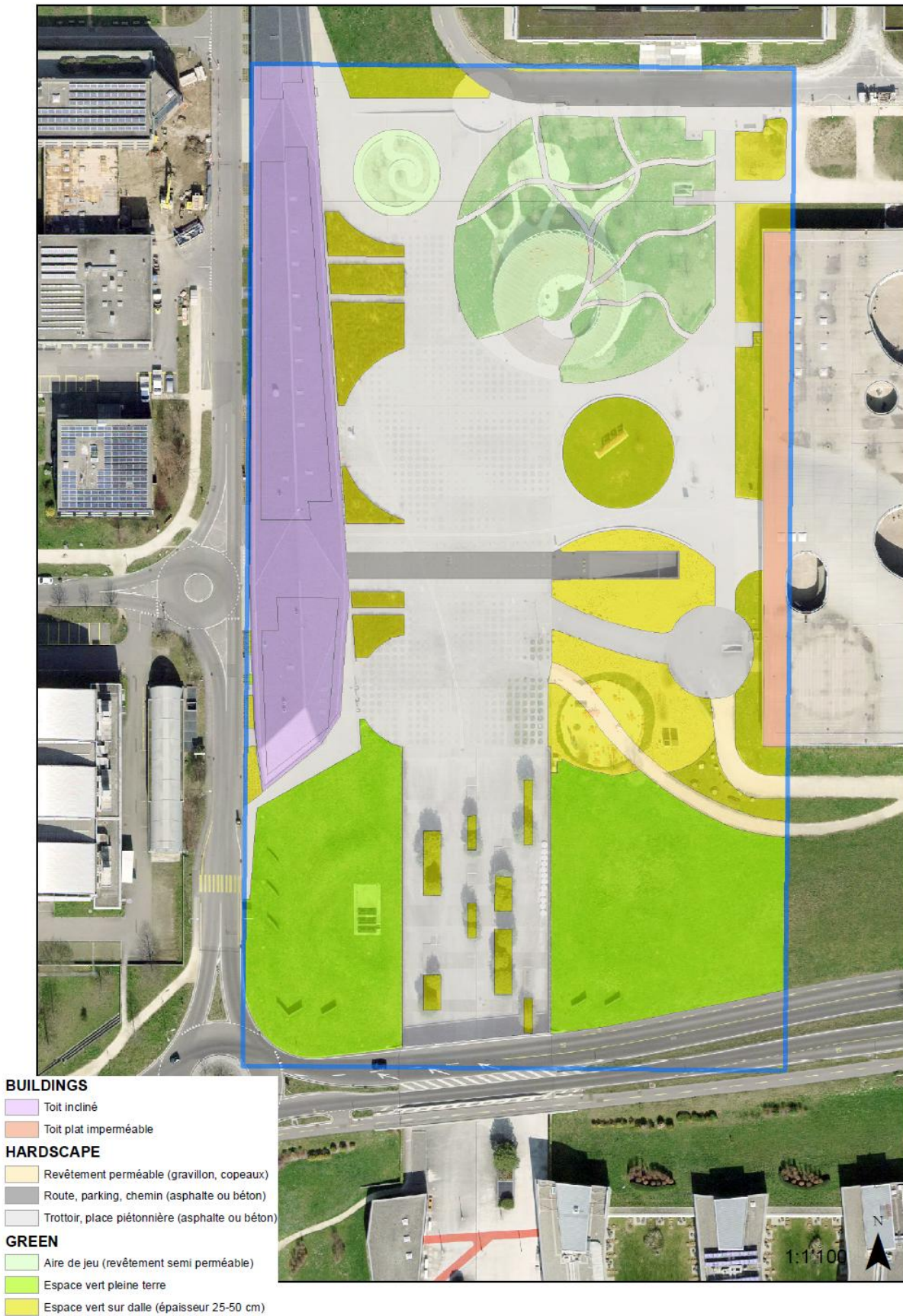


Figure 2 - Grey to Green Ratio



Map A 1.1 - EPFL Learning Centre's Esplanade Ground Cover Assessment



1.2. Other Maps



ECUBLENS_DGE-VD_PET



EPFL_DGE-VD_Effet_Ilot_Chaleur



EPFL_DGE-VD_Température_Aire_2m_Sol_4h



EPFL_DGE-VD_Température_Aire_2m_Sol_14h



EPFL_SDOL_PlanCanopee_PotPlantation



EPFL_TEPF_THERMAL_Surface_1m_27.08.23_1h