

# Underground architecture

20 March 2024

<https://alefgeo.com/>



**Helsinki is considered as a forerunner in the use of underground space.**

**Buildings in Helsinki are mainly quite low with skyscrapers only built in some special areas.**

**Helsinki can be classified by the term 'down-rise city' (using underground resources effectively).**

**The planning of underground spaces located in bedrock gives architects an opportunity to utilise the living and versatile rock surface.**

**Rock engineers need to understand and know how to dimension the underground space as a rock-framed, self-supporting structure.**

**The outcome is not only cheaper than a concrete-framed space but also far more beautiful.**

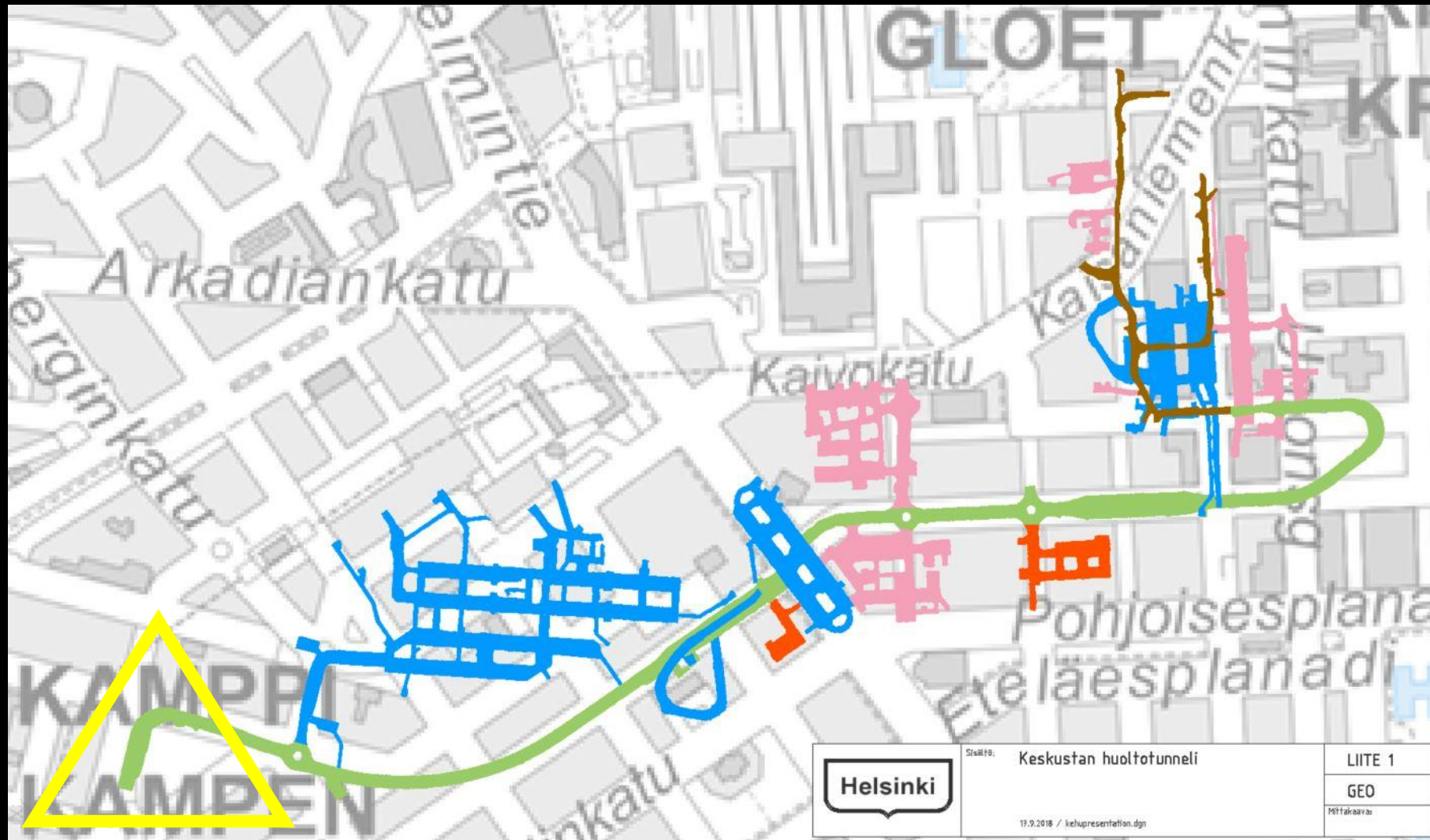


**More and more attention is being paid to the attractiveness of underground spaces these days.**

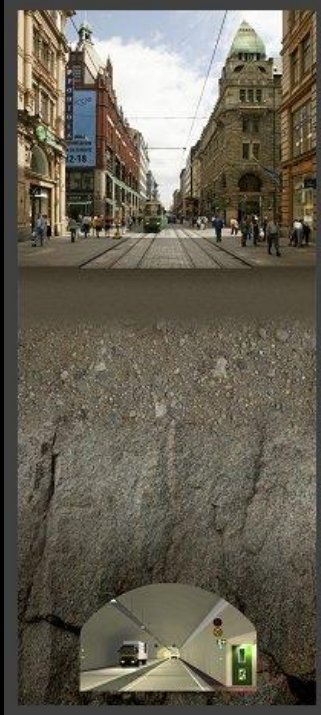
**This is evident, for example, in the interior and other design of parking facilities and the access ways leading to them.**



# Western entrance to the City Service Tunnel



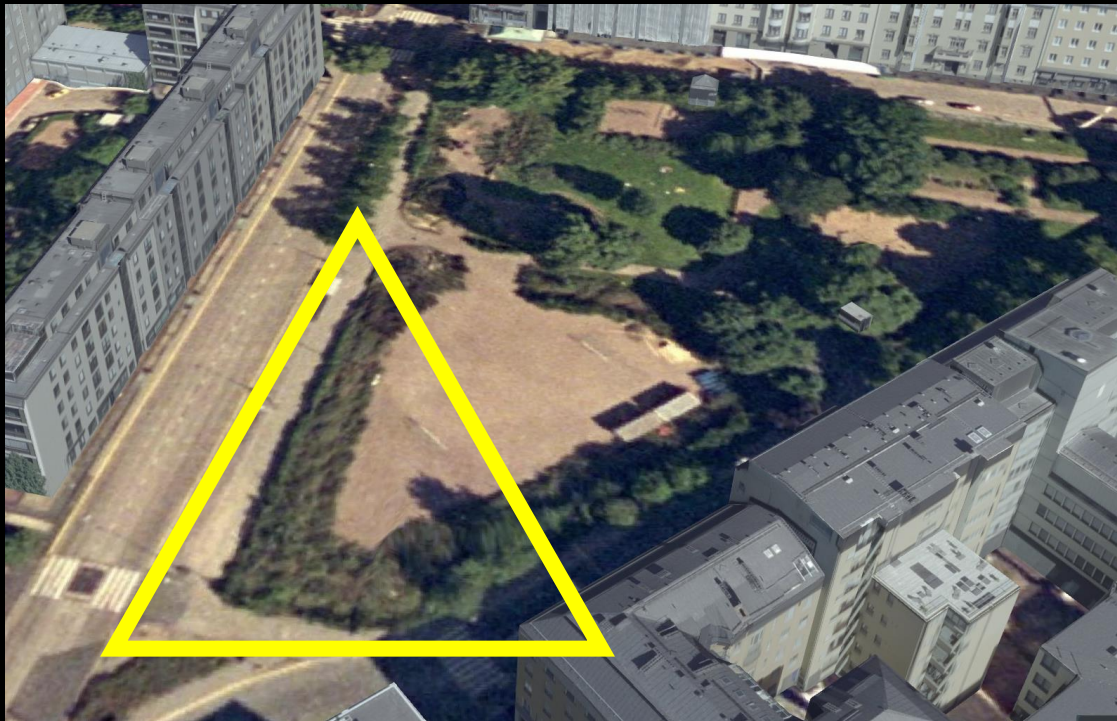
- **New tunnel**
- **Old tunnel**
- **Parking facilities**
- **Service yards**
- **Service yard reservations (pre-mined)**



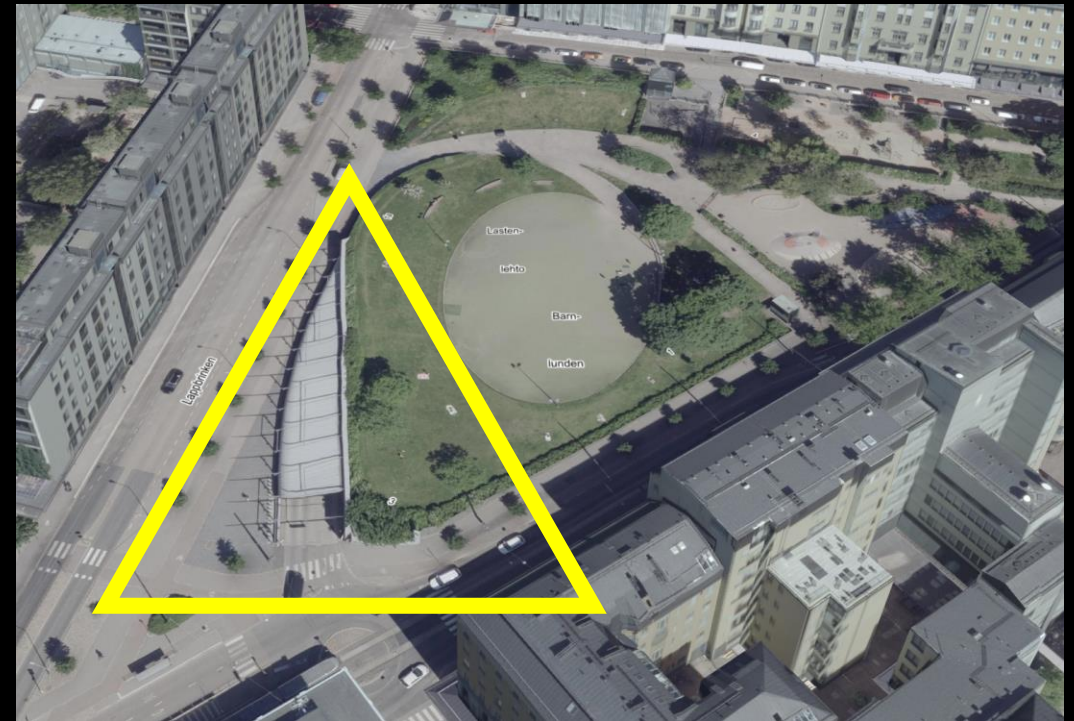
**Placing tunnel entrances into the existing urban structure is one of the most demanding parts of planning.**

**Pictures show the western entrance to the Service Tunnel and the 'Lastenlehto' Park in the background before and after constructing the tunnel.**

<https://kartta.hel.fi/>

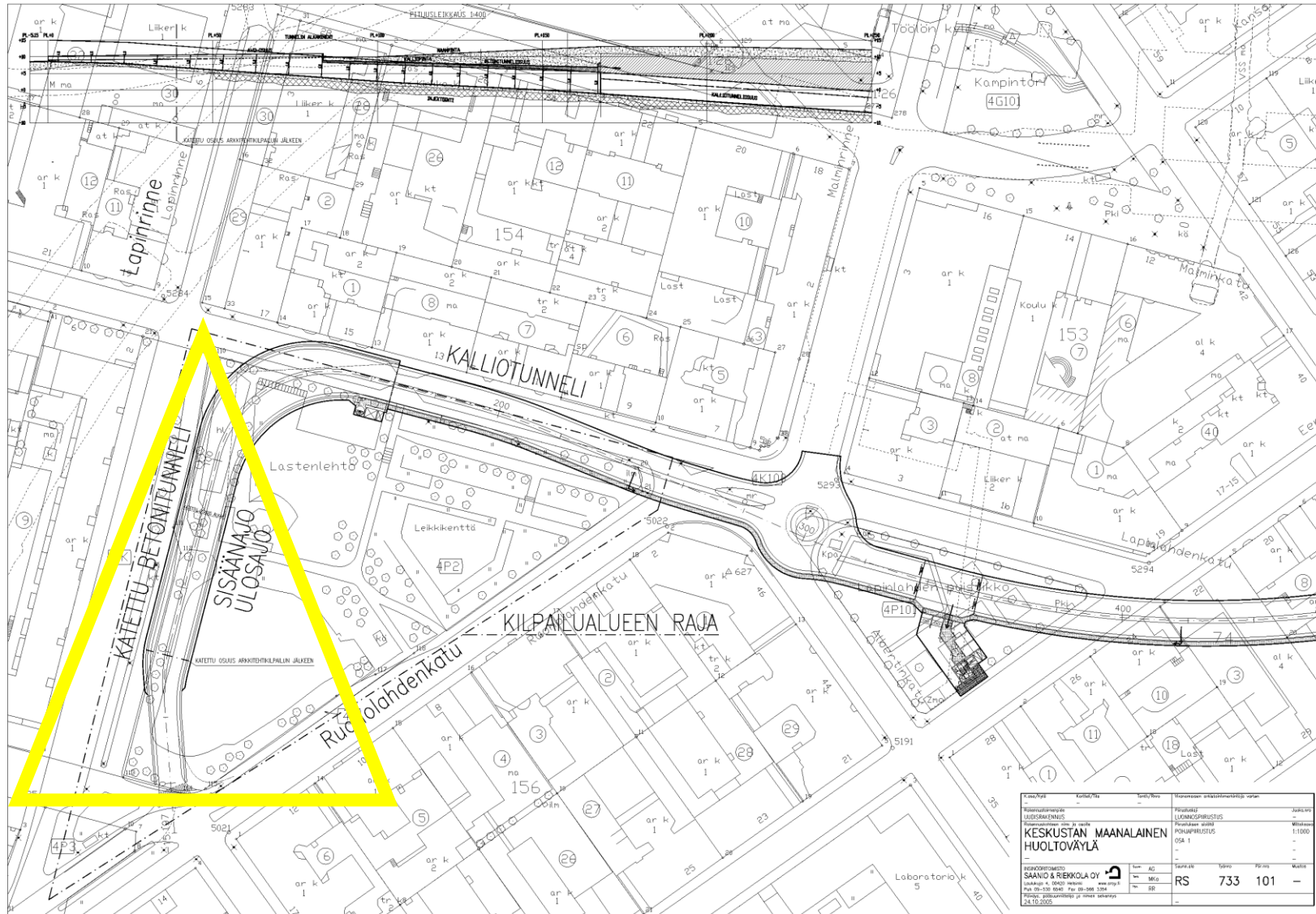


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# Western entrance to the City Service Tunnel

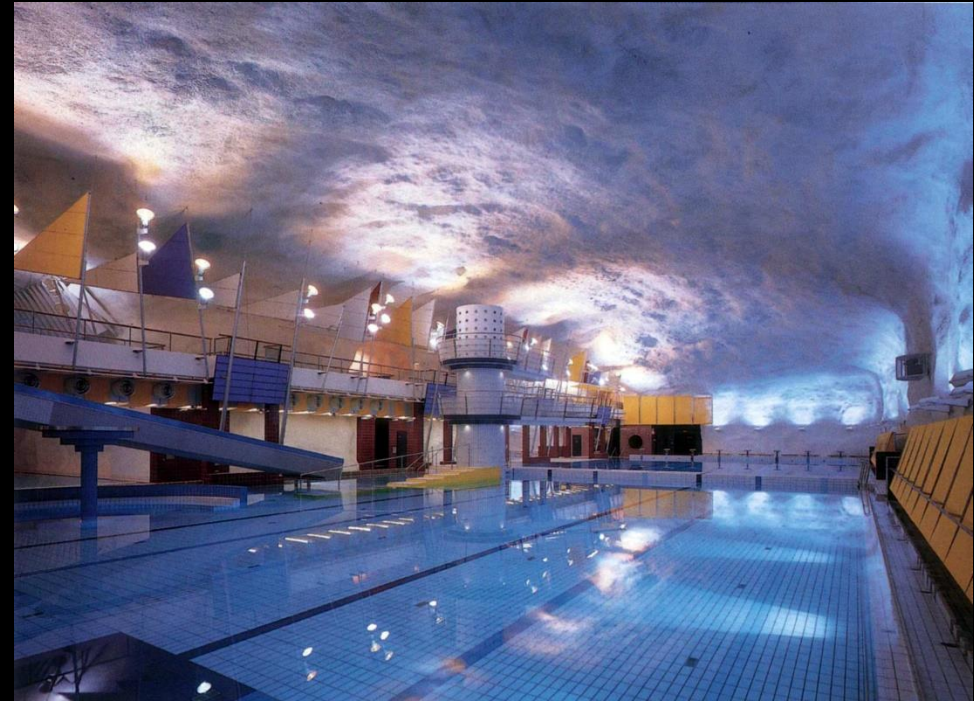


[https://upload.wikimedia.org/wikipedia/commons/0/0a/Tunnel\\_entrance\\_at\\_Lastenlehto\\_in\\_Kamppi%2C\\_Helsinki%2C\\_Finland%2C\\_2022\\_August.jpg](https://upload.wikimedia.org/wikipedia/commons/0/0a/Tunnel_entrance_at_Lastenlehto_in_Kamppi%2C_Helsinki%2C_Finland%2C_2022_August.jpg)

**Itäkeskus underground swimming hall is a recreational centre for the entire family. Facilities include three pools, jacuzzi, two waterslides, cold-water pool, six saunas and fitness centre.**



[https://commons.wikimedia.org/wiki/File:Kuvaaaaa\\_031.jpg](https://commons.wikimedia.org/wiki/File:Kuvaaaaa_031.jpg)



<https://hkp.fi/?project=itakeskuksen-uimahalli>



**Based on the number of visitors, Temppeliaukio Church is the most popular architectural attraction in Finland.**



[https://commons.wikimedia.org/wiki/File:Temppeliaukio\\_Church\\_Helsinki.jpg](https://commons.wikimedia.org/wiki/File:Temppeliaukio_Church_Helsinki.jpg)



HKM Grünberg Constantin Early 1960s.



What's there below 'Lasipalatsi Square'  
(former bus terminal)?

The space in the city centre is getting increasingly cramped and there are not many free spots for building above ground.

The transition from 'Lasipalatsi Square' to underground is unnoticeable.

"We had an extremely tight budget, an extremely tight schedule and extremely high ambition.", said Museum Director Kai Kartio.



Image: Asmo Jaaksi, JKMM Architects

**From the first exhibition at the Amos Rex Art Museum (teamLab 30.8.2018 – 6.1.2019)**

