Analysis challenge
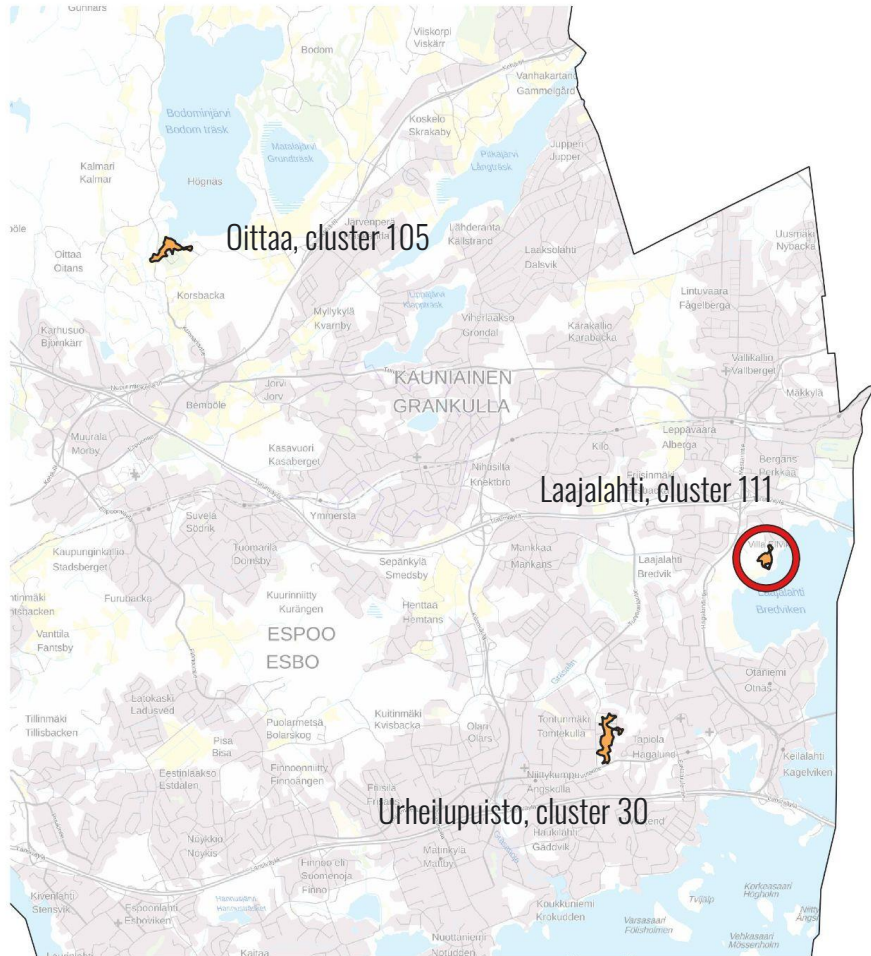## Clusters 111, 105 & 30

Laajalahti (111)

Oittaa (105)

Urheilupuisto (30)

Group 6
Caroline, Liisa, Antônio, Dmitrii, Juho & Timo

Why did we choose these 3?

➔   all three are perceived high quality places, but have differences in soft GIS scores

➔   recreational activities and/or nature

➔   notable differences in transport mode share and the distances people are travelling in order to reach the place

Soft-GIS layer

- Analysis of "Special places" markings

- Places that evoke very strong, positive or negative feelings in us. What places are especially important to you? What places cause negative feelings for some reasons?

- Cluster 105, Cluster 30, Cluster 111, some comparisons

Walkability, Walking Audit

Footpaths

Facilities

Aesthetics
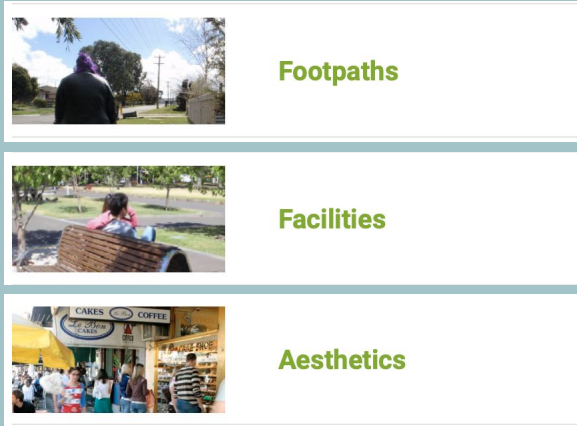
Three features were assessed for each cluster, following Victoria Walks audit list.

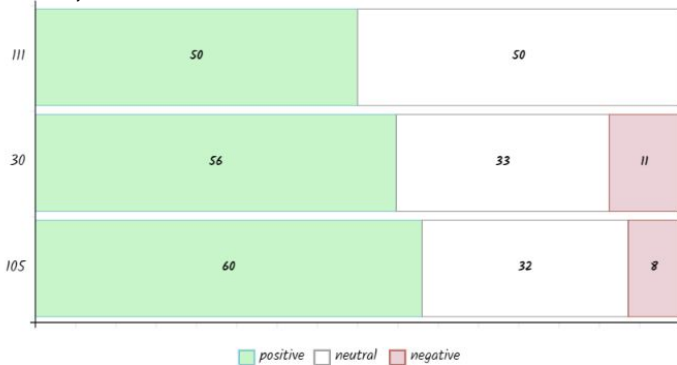https://www.victoriawalks.org.au/Walking_audit/

Hard GIS

Thematic map about home location

- Distances from clusters

    Distance Matrix

- Average and median distances

Comparison of 3 clusters (Positive, neutral or negative views ratios on following categories)

Social environment

e.g. community spirit, liveliness of social life, diversity of population, reputation, safety
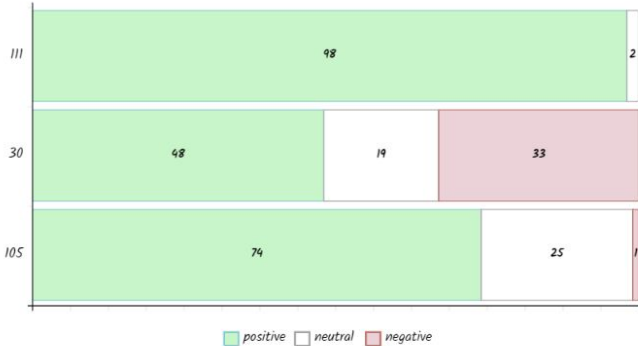
	positive	neutral	negative
111	50	50	
30	56	33	11
105	60	32	8

Active environments

e.g. hobby opportunities, transportation, cultural life, services

	positive	neutral	negative
111	87	13	
30	68	14	18
105	81	17	2

Aesthetic_environment

e.g. tidiness, beauty, density, history, quality-price ratio of housing

	positive	neutral	negative
111	98		2
30	48	19	33
105	74	25	1

Atmosphere

e.g. liveliness, is it inviting, relaxation, closeness to nature, noise level, is it surprising

	positive	neutral	negative
111	95	5	
30	45	25	30
105	74	18	8

Personal significance

The place is associated with a memory or carries other personal impact

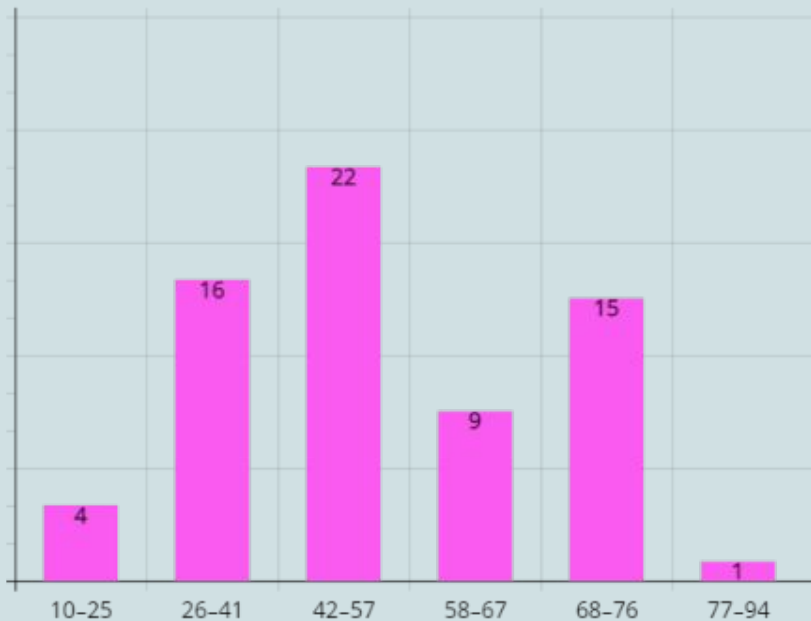|	positive	neutral	negative
111	68	27	5
30	58	38	4
105	55	45	
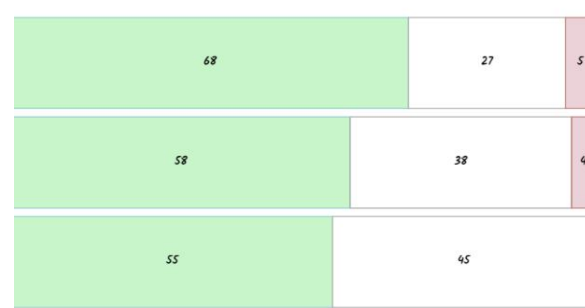
Cluster 111
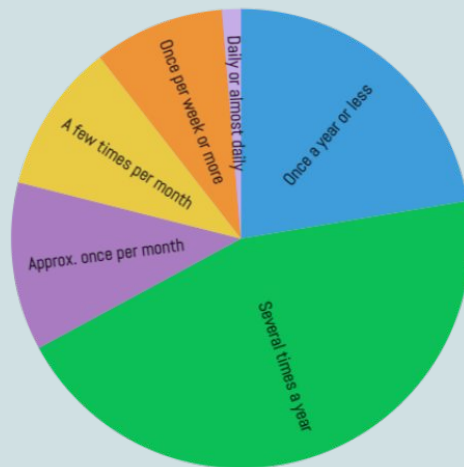Laajalahti,
High scores on
Soft GIS

Cluster 111 **Laajalahti**, 61 responses (54% females & 46% males)
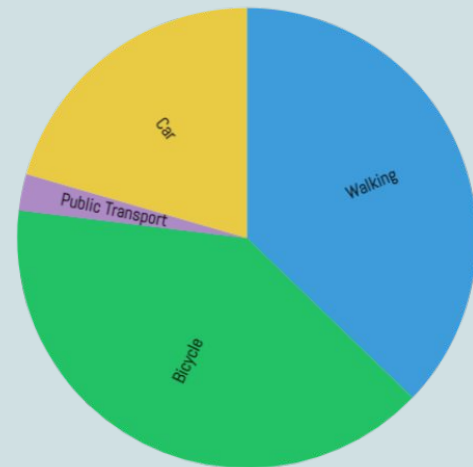## Average place quality **79,23 / 100**

Age distribution

Frequency of visits

Daily or almost daily
Once a year or less
Once per week or more
A few times per month
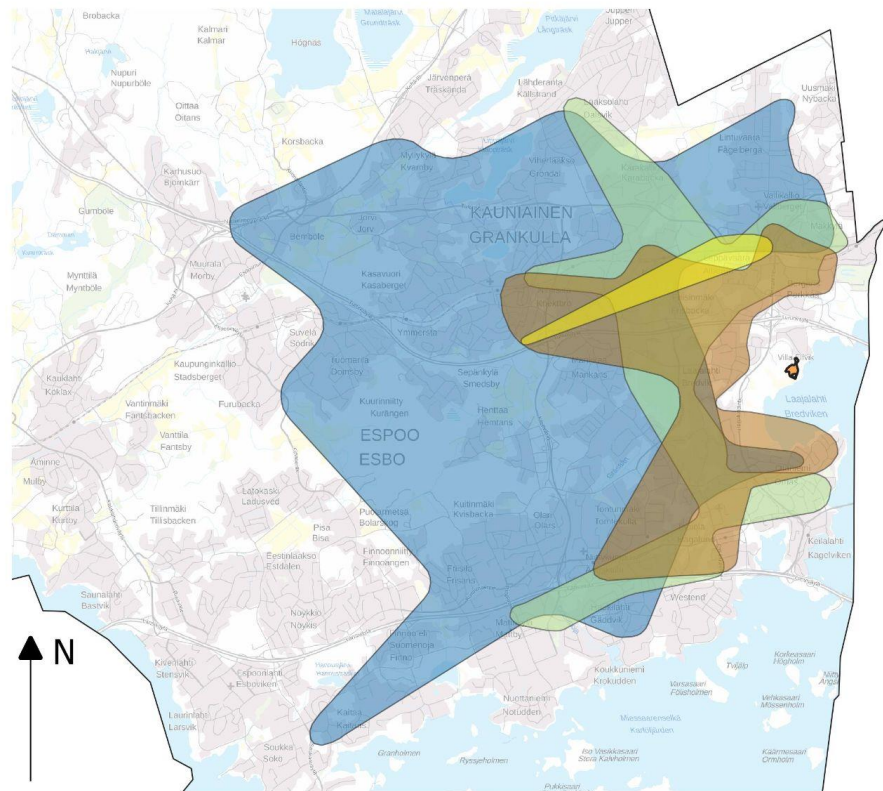Approx. once per month
Several times a year

Transport mode

Car
Public Transport
Walking
Bicycle

Equal distribution of males and females; **42-57, 26-41, 68-76 are** most popular age groups; people predominantly like to visit the area **several times per year**; **walking, bicycle and cars** are the best transport mode.
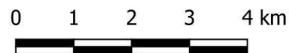
Home locations for users
of different transport modes

- Walk
- Bicycle
- Public transport
- Car
- Laajalahti cluster, 111

NLS Background map

Average home locations

Walk:	2,16 km	1,58 km (Median)
Bicycle:	3,18 km	2,59 km
Public:	3,16 km	2,43 km
Car:	5,07 km	4.20 km

Cluster 111 **Laajalahti**, 61 responses (54% females & 46% males)
Average place quality **79,23 / 100**

Among special places within the area people frequently mentioned whole Laajalahti area, **Villa Elfvik nature house**, **beach and surroundings**; and **bird watching tower**.

Observation map - Field trip

Parking
120m

Road, Elfvikintie

Path

Hiking trail

Information point

Trail signage

Benches/Picnic table

Nature House
Villa Elfvik

Boardwalk

Towards Turvesuontie

Uranus
gazebo

Boathouse

Boardwalk continues
towards Otaniemi

Observation tower

0   50   100m

The base layer of this map is taken from https://kartat.espoo.fi

Nature trails around Villa Elfvik

Together with the hiking trails, there is a possibility to follow nature trails which provide further information on the nature and history of the area. Pdfs are downloadable from Espoo city website.

Garden

The construction of Villa Elfvik was completed in 1904. The houses, the garden and the forest park were all strongly influenced by the Jugend (Art Nouveau) and English country house style of building and rural idealism.

The Elfvik headland is no longer tended as it was in the early 20th century. Today, as part of the Laajalahti nature reserve, the garden is being cleared of its original plants and ornamental shrubs, and moles are allowed to tunnel their way into the once healthy lawns.

Moldy-warp, silky furry, spadefooted, enormous belly, burrowing its way under the ground leaving earth behind in a great big mound.

European mole – Talpa Europaea

Herb-rich Forest

Laajalahti nature reserve was established and put under protection in 1979, but not before a heated public debate on whether this bird sanctuary needed protection in the first place. Ultimately, nature and its protectors won.

The diversity of the protected forest has been left undisturbed. There are millions of known and maybe even unknown plasmodial slime molds, spring-tails, amoebae and bacteria living in the ecosystem of the forest. Densely growing black cherry trees and luxuriant vegetation thrive in the soil enriched by the many burrowing animals and insects.

Climbing nightshade – Solanum dulcamara

Hop plant – Humulus lupulus

Reed Beds

There is a fantastic world lurking around the pontoon bridge. Different sounds intertwine with the song of the rustling reeds. Mud, six metres deep underneath the mat of reeds, exudes its heavy odour. The city lights glow on the horizon at night, and the only shadowed area is the Elfvik headland. The reeds conceal their inhabitants and offer a safe haven for many birds, insects and fish.

Bower

As popular still as it was a hundred years ago, this gazebo called the Temple of Uranus was renovated in 1993.

Although the surroundings of the nature reserve are heavily urbanized, it still offers nesting places, day time cover, food and shelter to birds, mammals and insects alike.

The Elfvik headland is truly a sanctuary for all living creatures.

Tarzan of the Reeds
Light as a stick of candy, no longer than your pinky. Swinging gaily from the reeds, feasting on the fallen seeds. What animal is it?

Siskin – Carduelis spinus

Harvest mouse – Micromys minutus

Common crossbill – Loxia curvirostra

Tasks

Watch your surroundings. Can you find any tree branches where Väinö the Crow and his friends could sleep through the nights, sheltered from predators?

For flocking birds, staying in a group is an important means to evade predators, as some birds can keep watch and warn others if a bird of prey approaches.

The eagle-owl and the crows

One of the players is an eagle-owl. This player wears a beak. The other players are crows, and the eagle-owl hunts them. When the game begins, the eagle-owl leaves their nesting tree (a place the players have agreed on before the game begins) to chase the crows. Whenever the eagle-owl catches a crow, the crow takes the eagle-owl's place, returns to the nesting tree and starts hunting the crows.

In the next stage of the game, the players are allowed to form flocks of three. They may only stay in flock formation (hands on each other's shoulders) for the time it takes them to count to ten. Then the flock must come apart, and the crows need to find a new flock. They may not immediately form a new flock with the same crows. The eagle-owl is only able to catch a crow who is alone, not part of a flock.

Did you know? According to an old belief, crows convene to discuss their matters in a "parliament of crows". The actual reason why crows gather is unknown.

Villa Elfvik's
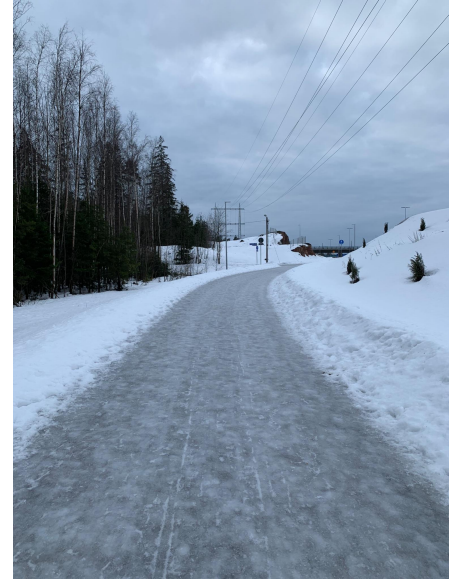## Winter Trail

On a Hare's Trail

Villa Elfvik

Cluster 111
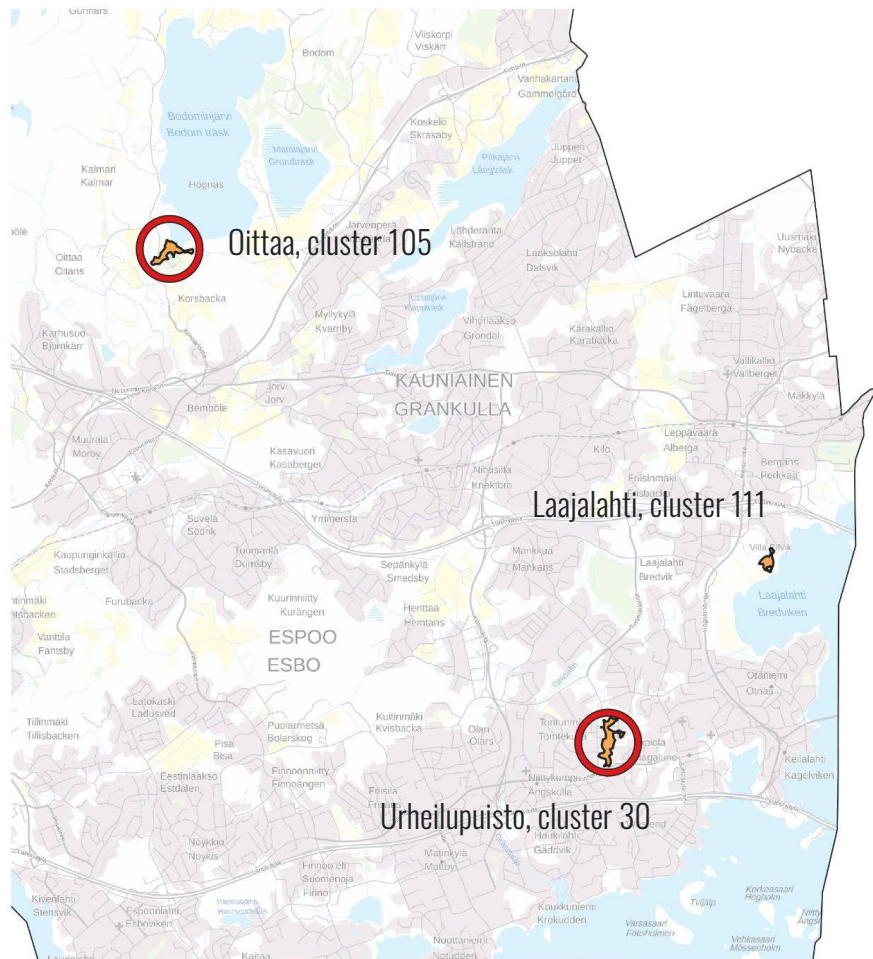## Laajalahti

Cluster 111
Laajalahti - winter observations

The walking paths to get to Laajalahti from the Turvesuontie bus stop were very slippery and not adequately maintained for winter conditions

Nice looking and well conserved furniture. More difficult to access with slippery winter conditions.

How about the other two clusters?

Oittaa, cluster 105

Laajalahti, cluster 111

Urheilupuisto, cluster 30

Other two clusters had lower scores on soft GIS comparison

Examples of issues

Perceived sensory dimensions (PSD), might explain some issues

Dimensions associated with Restorative processes highlighted in Laajalahti

Cluster 30
Urheilupuisto, Sports park-Issues

➔ Area only for sports activities, other users are not thought of
➔ Not very child friendly
➔ No benches or resting places for the elderly

➔ The lack of shade, and wind shield, lack of vegetation, existing vegetation in poor condition
➔ The poor snow ploughing, the snow piles and the very thick ice and the puddles during winter

Cluster 105
Oittaa, Issues

➔ Lack of toilets, long distance to indoor toilets
➔ High car dependency -> large parking area takes space from something more meaningful
➔ No shelter for transit users

➔ In the "field" area there is a lack of shade and wind shield
➔ Poor winter maintenance. Puddles make walking hard and uncomfortable in many places.

Perceived sensory dimensions (PSD)
Stoltz & Grahn 2021

Diverse
Shelter
Social
Natural
Cultural
Serene
Open
Cohesive
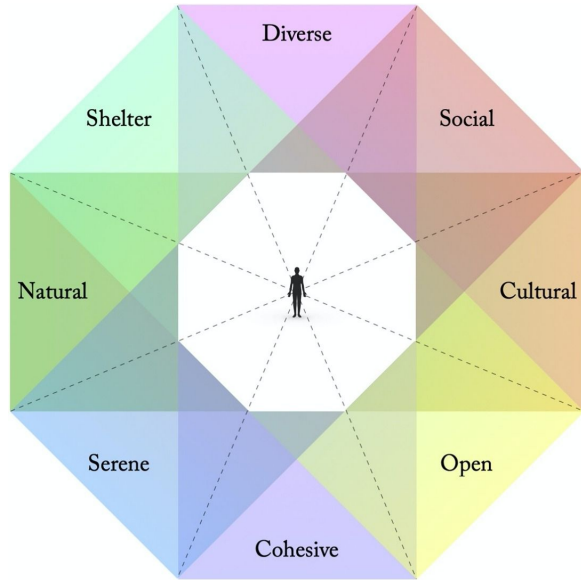
"Eight perceived sensory dimensions supporting complementary needs. All qualities do not need to be supported within one and the same green area, but all should ideally be afforded within 300m from the home."
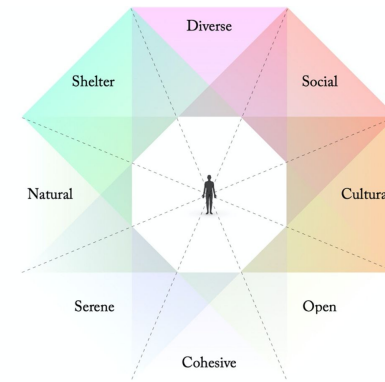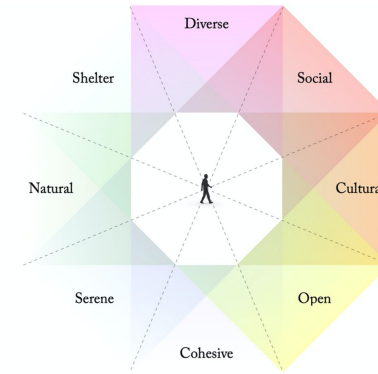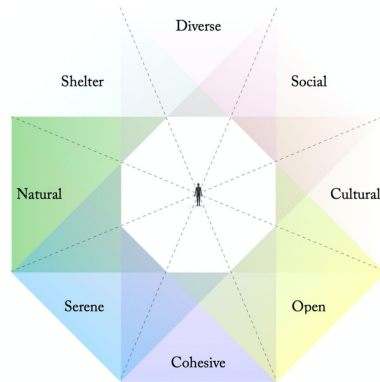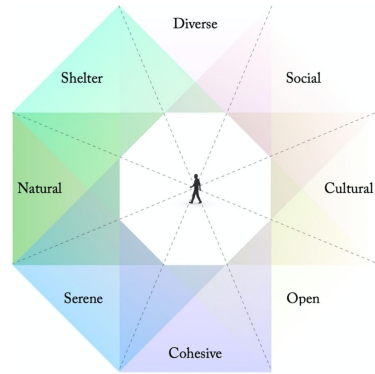
"The model describes opposing dynamics between qualities identified as particularly important for restorative processes (left) and qualities often perceived as stimulating and highly valuable, but less restorative (right)."

"A general distinction can be made between PSDs reinforced by a larger green space area (left), and PSDs often reinforced through a denser planning and design, allowing them to be strongly supported also in smaller green spaces (right)."

Stoltz J, Grahn P. Perceived sensory dimensions: Key aesthetic qualities for health-promoting urban green spaces. J Biomed Res 2021;2(1):22-29.

Comparison of 3 clusters (Positive, neutral or negative views ratios on following categories)
Laajalahti has highest scores in most categories

Social environment

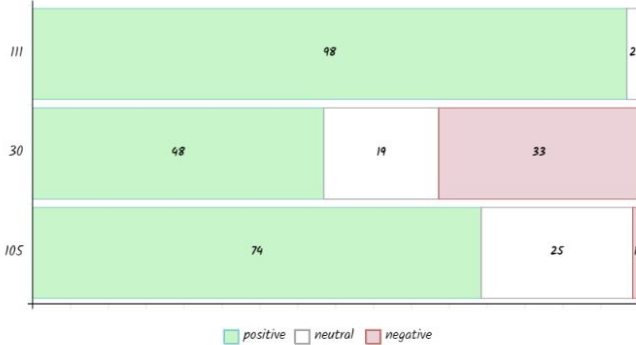e.g. community spirit, liveliness of social life, diversity of population, reputation, safety

	positive	neutral	negative
111	50	50	
30	56	33	11
105	60	32	8

☐ positive ☐ neutral ☐ negative

Active environments

e.g. hobby opportunities, transportation, cultural life, services

	positive	neutral	negative
111	87	13	
30	68	14	18
105	81	17	2

☐ positive ☐ neutral ☐ negative

Aesthetic environment

e.g. tidiness, beauty, density, history, quality-price ratio of housing

	positive	neutral	negative
111	98		2
30	48	19	33
105	74	25	1

☐ positive ☐ neutral ☐ negative

Atmosphere

e.g. liveliness, is it inviting, relaxation, closeness to nature, noise level, is it surprising

	positive	neutral	negative
111	95	5	
30	45	25	30
105	74	18	8

☐ positive ☐ neutral ☐ negative

Personal significance

The place is associated with a memory or carries other personal impact

	positive	neutral	negative
111	68	27	5
30	58	38	4
105	55	45	

graphs made with charts.livegap.com
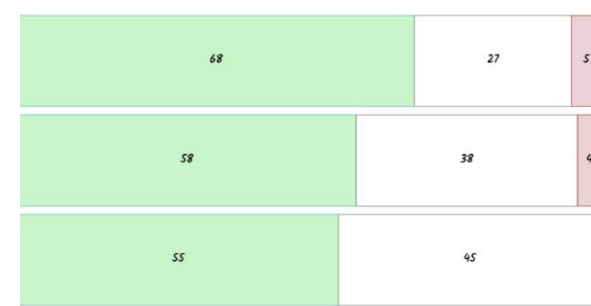
How to improve clusters 110, 30 and 105?

Cluster 110 (Laajalahti)

Functional aspects;
Invest in better winter maintenance in order to make benches and paths accessible also during winter months.

Social environment; when Villa Elfvik and its cafe are closed, there is a lack of places for socializing. For example, few more tables and benches could be added to enable easier socialising and invite visitors to stop and enjoy the views. There is also no covered structures apart from the Uranus gazebo. A shelter or nature pavilion (small scale), could be designed to offer protection from the weather and at the same time provide a resting spot and other activities. The added structures should sustain the essence of the place and materials should be chosen carefully.

Cluster 30 (Urheilupuisto)

Social environment;
Taking other user groups into account, might be improved by facilitating possibilities for social interaction, and by multifunctionality, adding benches and renovating the older side for better accessibility. More connectedness with the surrounding social environment?

Active environment; could be improved through multifunctionality as well.

Aesthetic environment, and **Atmosphere**;
could be improved by renovation of older side, adding vegetation and improving walking routes.

Cluster 105 (Oittaa)

Functional aspects;
Add an outdoor toilet building, as there is a clear lack of toilets in the area (located only in the main building). Add bus stop shelter to improve comfort for transit users.

During winter: walking paths are compromised because of skiing tracks. Add dedicated winter walking trails.

Aesthetic environment, and **Atmosphere**;
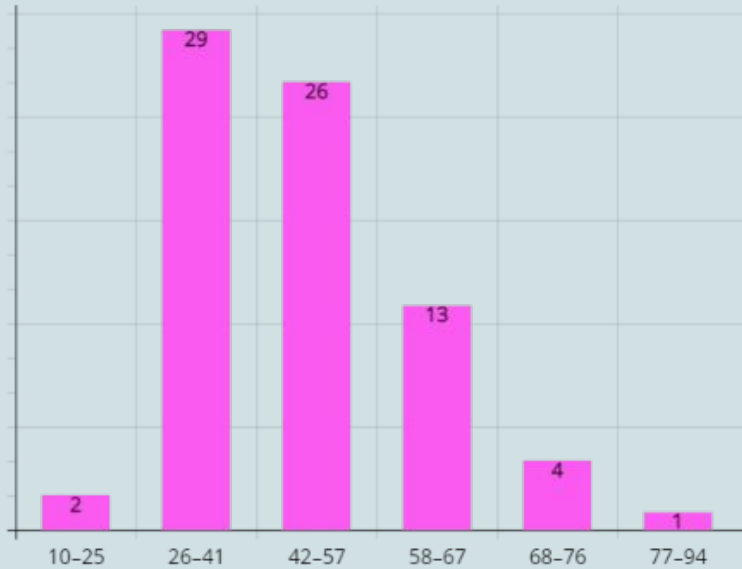A large "field" with no trees, no place to shade from direct sunlight. Could trees be added?

Additional:
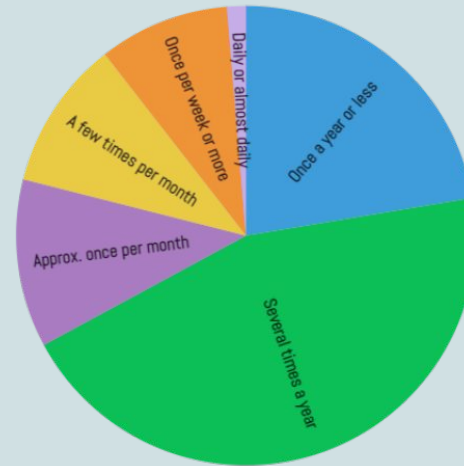Sofh GIS and Hard GIS, Walking audits and issues of Clusters 105 (Oittaa) and 30 (Urheilupuisto)

Cluster 105 **Oittaa**, 95 responses (51% females & 49% males)
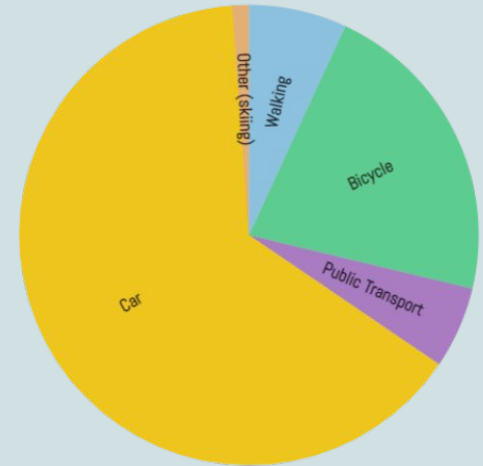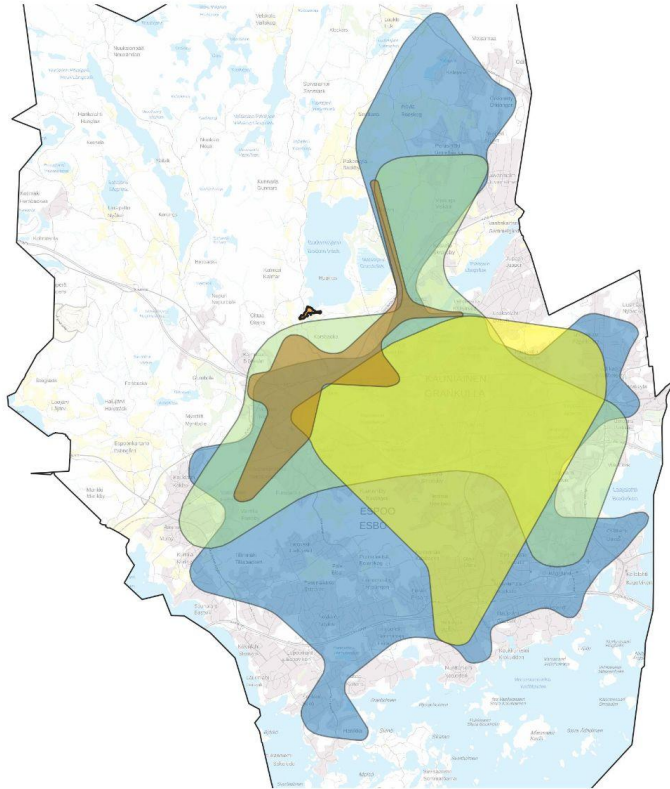## Average place quality **67,43 / 100**

Age distribution

Frequency of visits

Transport mode

Equal distribution of males and females; **26-41 & 42-57** are most popular age groups; people predominantly like to visit the area **once or several time per year**; **cars** are the most used transport mode.

Home locations for users
of different transport modes

- Walk
- Bicycle
- Public transport
- Car
- Oittaa cluster, 105

NLS Background map

Average home locations

Walk:	3,13 km	2,84 km (Median)
Bicycle:	4,73 km	3,87 km
Public:	6,87 km	8,25 km
Car:	7,04 km	6,93 km

0   2   4   6   8 km

Cluster 105 **Oittaa**, 95 responses (51% females & 49% males)
Average place quality **67,43 / 100**

Among special places within the area people frequently mentioned **sport facilities** (e.g. volleyball court, gymnastics track, place for roller skating), **natural trails** for walking, running, skiing and cycling; **recreational area**, and **beach and swimming place.**

Cluster 30 **Urheilupuisto**, 45 responses (50% females & 50% males)
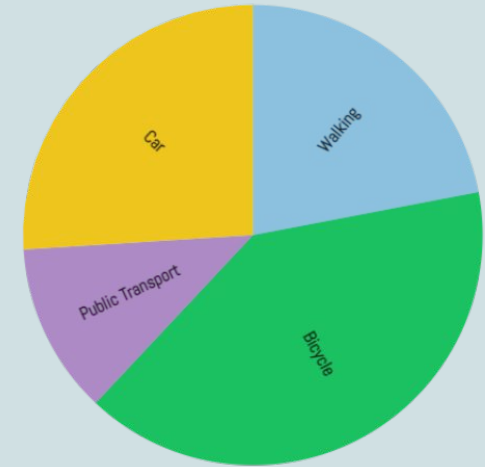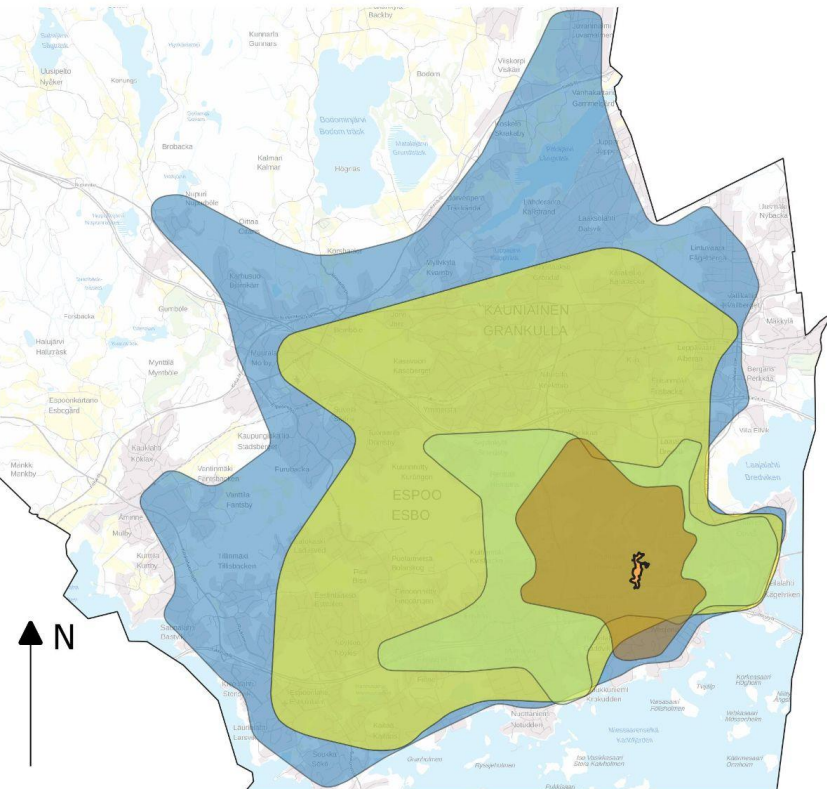## Average place quality **69,62 / 100**

Age distribution
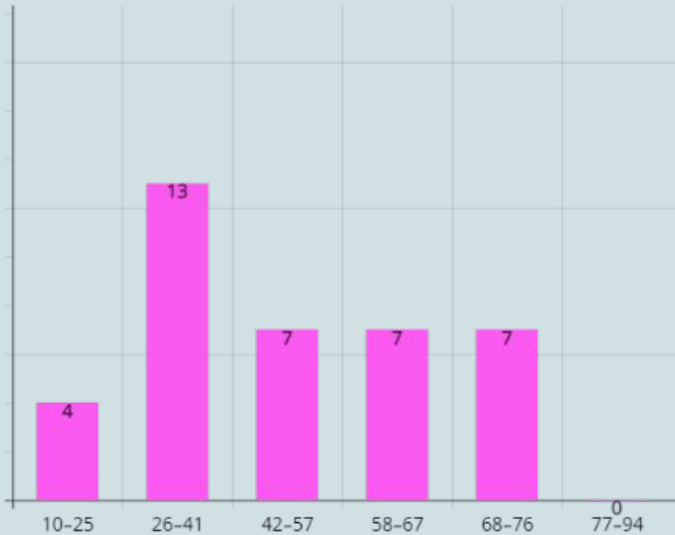
Frequency of visits
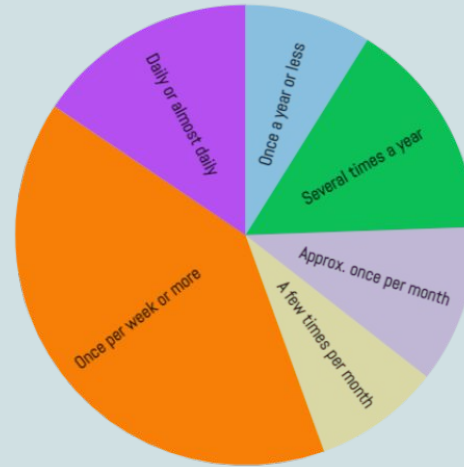
Transport mode

Equal distribution of males and females; **26-41 is the** most popular age groups; people predominantly like to visit the area **once per week or more**; **walking and bicycle** are the best transport mode

graphs made with charts.livegap.com

Home locations for users of different transport modes

- ▨ Walk
- ▨ Bicycle
- ▨ Public transport
- ▨ Car
- ▨ Urheilupuisto cluster, 30

NLS Background map

Average home locations

Walk:	1,21 km	0,99 km (Median)
Bicycle:	1,96 km	1,61 km
Public:	3,96 km	3,22 km
Car:	4,75 km	3,67 km

0   1   2   3   4 km

Cluster 30 **Urheilupuisto**, 45 responses (50% females & 50% males)
Average place quality **69,62 / 100**

Among special places within the area people frequently mentioned **sport facilities and services** (e.g. Sports park, Esport center, football stadium)

Cluster 30,
Urheilupuisto,
near metro station

The recently developed area surrounding the metro station in the south (green circle)
(Public space)
and the older part (orange circle) hosting the various different sports halls and courts
(Club mixed with public space)
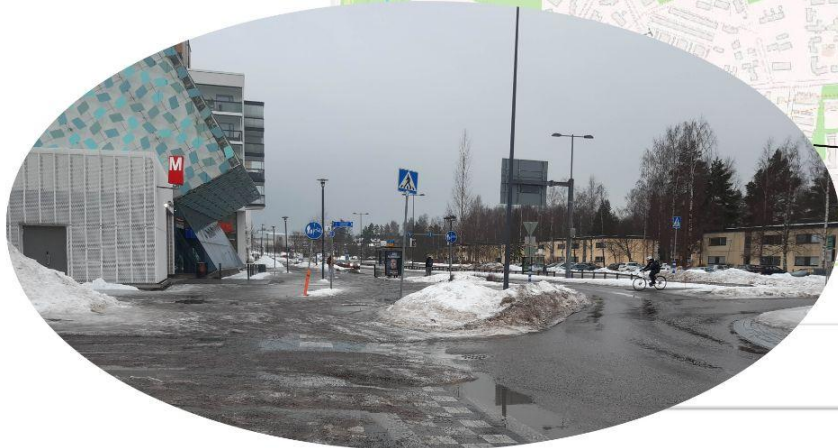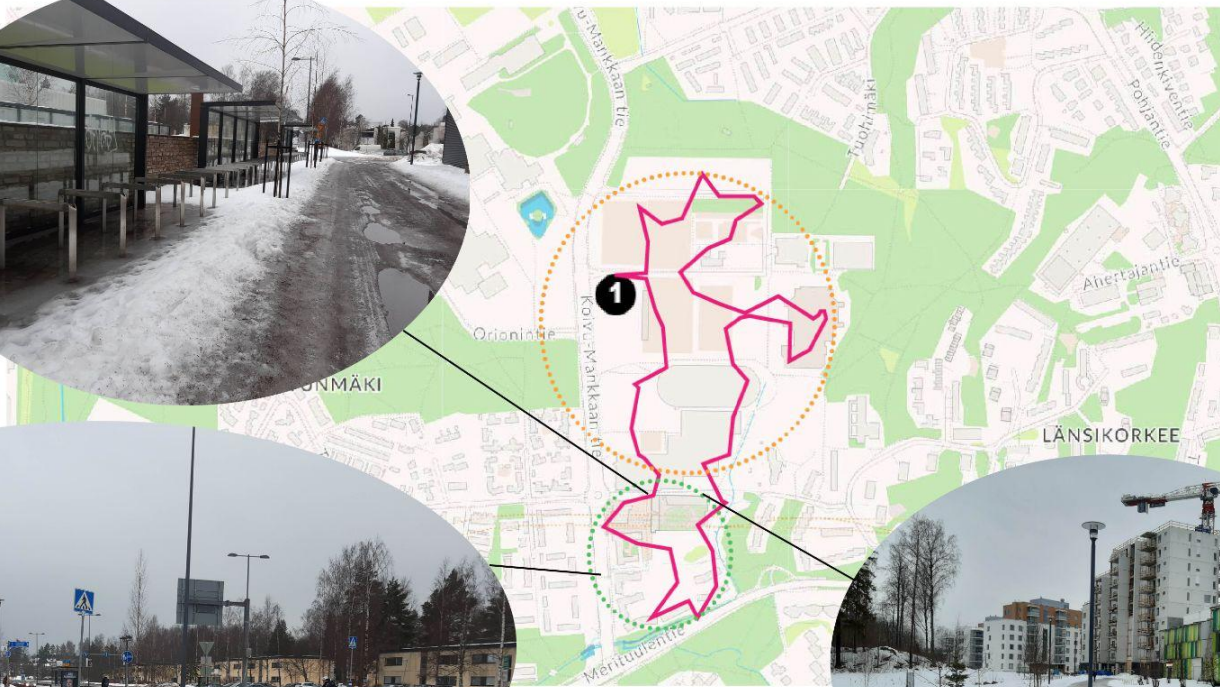
Palvelukartta, Espoo city services map
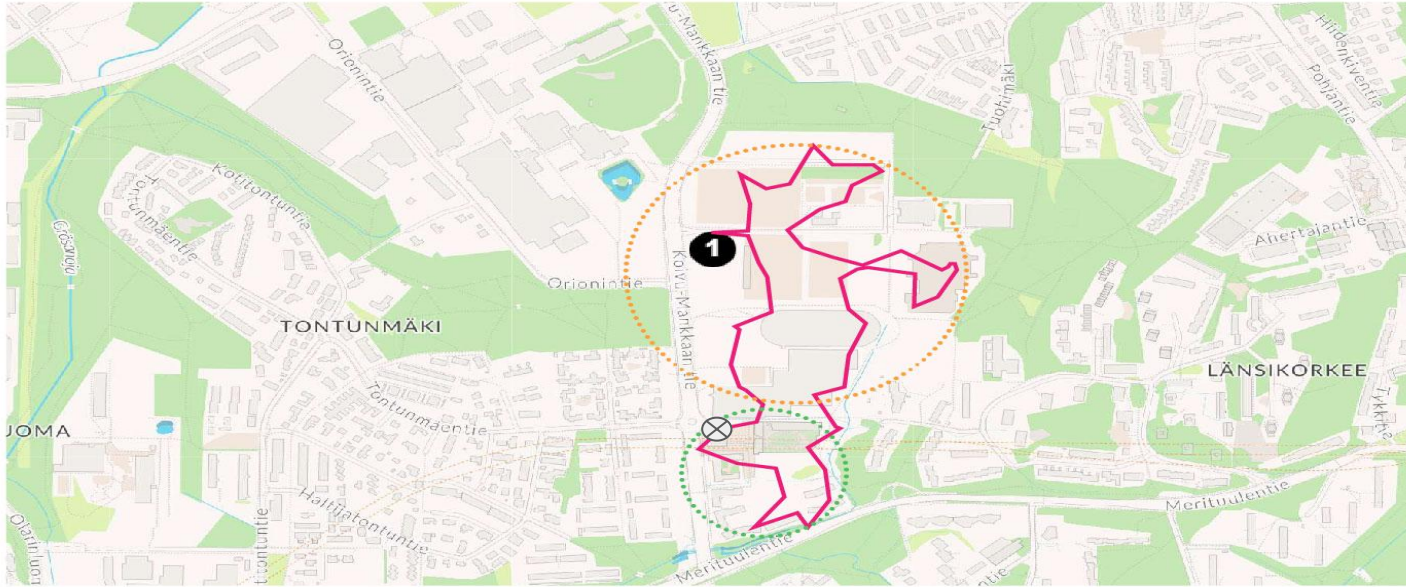
Numero kartalla	Toimipiste
1	**Tapiolan urheilupuisto** Urheilupuistontie 2

Walkability,
Newly built area
around the metro station,
Positive aspects

Toimipiste

Tapiolan urheilupuisto
Urheilupuistontie 2

Cluster 30, How to improve: Social environment; **Active environment**; **Aesthetic environment**, and **Atmosphere**