

# PIHLAJANIEMI STREET DESIGN MANUAL

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**MASU PLANNING** | 31.03.2020

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Vision plan, status 2019



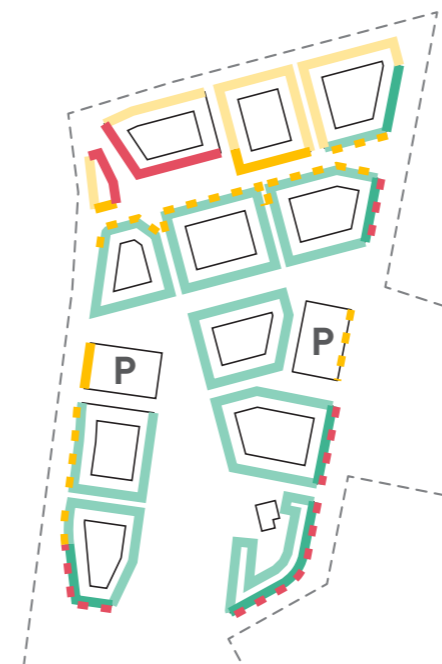
This street design manual is a continuation of the Pihlajaniemi Vision, handbook and architectural guidelines created by Gehl Architects.

The street design manual support the visions described in these extracts from the Vision, Handbook and architectural guide.

**Public spaces:**

- Local meeting place
- The Promenade
- Market square
- Harbour plaza
- Park/green space
- Street network

**Vision plan and public space diagram** From Pihlajaniemi Handbook, version 1.0 2020, page 9. and 12.



**Commercial edge zones:**

- small = less than 1 m
- medium = 1-3 m
- large = more than 3 m
- - - potential edge zones

**Residential edge zones:**

- medium = 1-3 m
- large = more than 3 m

**Edgezone diagram** From Pihlajaniemi Architectural guidelines, version 1.0 2020, page 18 and 19



## MATERIAL HIERARCHY

The material palette and material strategy support the intentions in the masterplan. The neighbourhood square in the corner of Vähäheikkiläntie and Hirvensalon puistotie is the main urban space and important traffic node to and from the neighbourhood.

The importance of the square is made clear with a high-quality granite pavement, that creates a distinct character and identity and sets the tone for the neighbourhood. From here a promenade branches out and connects to the shoreline, as an urban spine throughout the neighbourhood.

The promenade is highlighted with a distinct quality pavement, like brick, and function as a clear wayfinding element, that connects the main attractions of the neighbourhood. Along the promenade, smaller stay areas and important "urban hinges" is defined and highlighted with the granite pavement from the square.

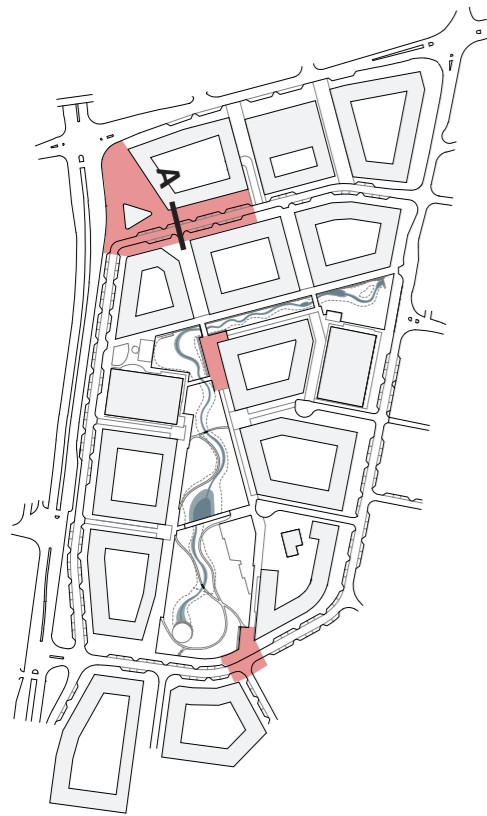
Shared space streets and the areas along the water channel and park is defined by the classic Turku concrete pavement together with rainwater management and large planting beds for a lush and urban street.

The streets with a division between cars, pedestrians and bikes continue the Turku material palette with asphalt roads, concrete pavement and granite details.

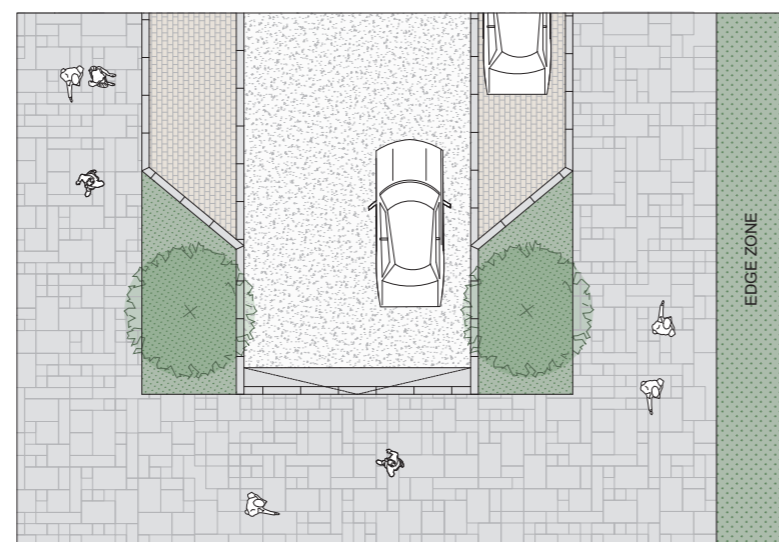
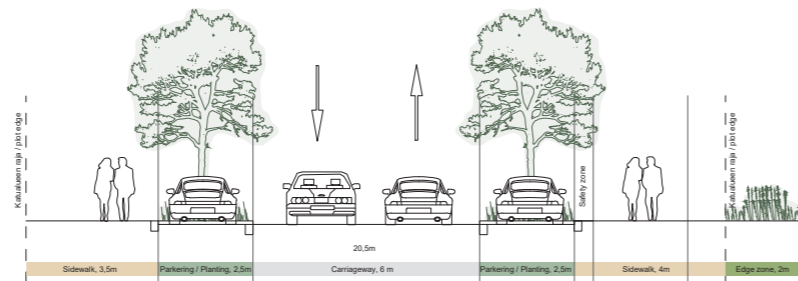
**Note:**

All sections are based on the street sections made by WSP in autocad drawing: Pihlajaniemi\_2020-08-03.dwg





Street profile A, the square and beginning of the promenade  
1:200



Granite continues across road  
Granite curbstone  
Granite pavement  
Edge zone, see the Architectural guideline

## NEIGHBOURHOOD SQUARE / KAUPPAKATU

The importance of the square is made clear with a high-quality granite pavement, that creates a distinct character and identity and sets the tone for the neighbourhood.

The granite pavement is continued across the road to create a clear and safe passing for pedestrians. The pavement connects the more public-orientated base floors in the buildings around the square and stretches the space wall-to-wall.



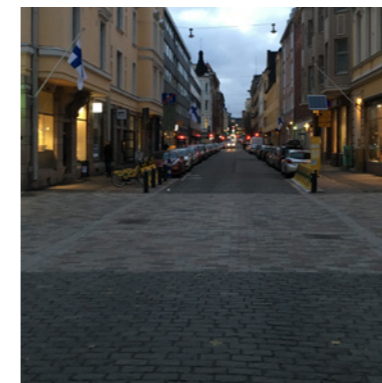
Granite pavement, special format



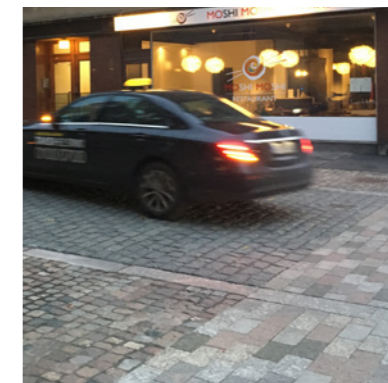
Granite pavement, size variation



Granite pavement, colour variation



Pavement continues across road



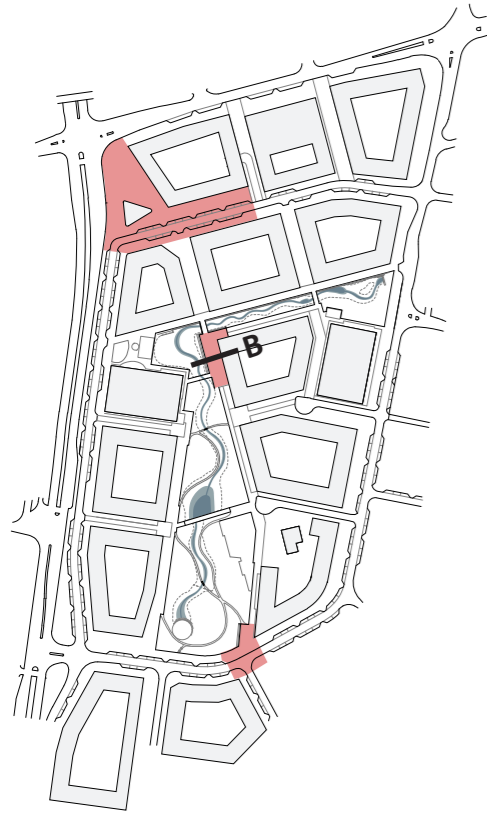
Edge stones to separate pavement material and formats



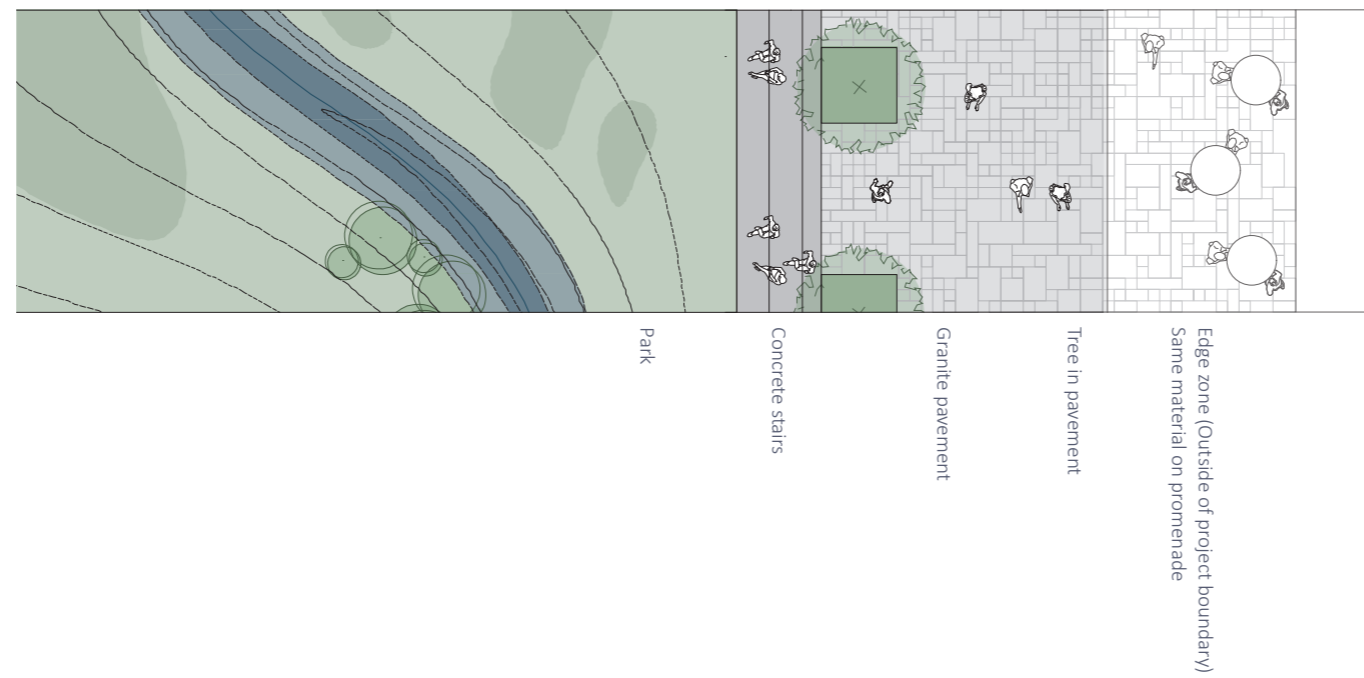
Parking: Cobblestone



Edge stones marking the parking zone



Street profile B, local meeting point at the promenade  
1:200



## POCKET SQUARE IN PARK

Along the promenade, smaller stay areas and important "urban hinges" is defined and highlighted with the granite pavement from the square.

A concrete edge defines and frames the parks and water channel, in some areas it becomes a set of seating stairs

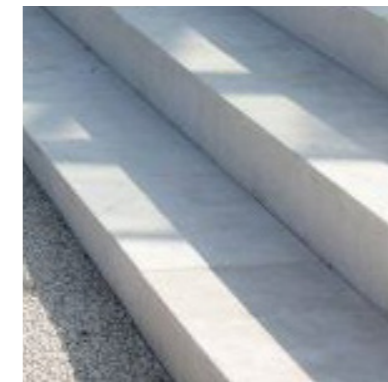
The promenade is wide, and trees help to define the promenade and the potential outdoor serving



Granite, special format



Granite pavement, size variation



Stairs: concrete

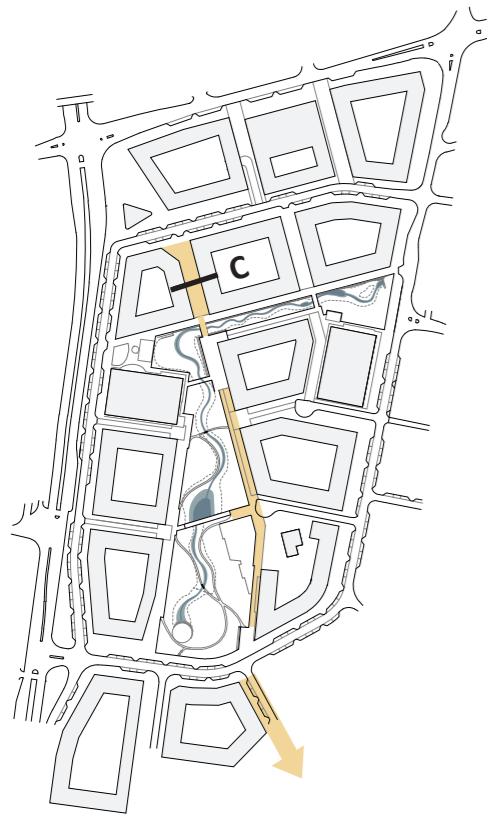


Dark concrete



Planting bed with trees. Planted in groups of 3-5 as free standing or connected with planting bed



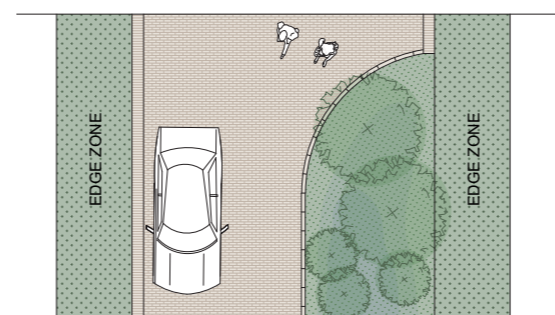


## PROMENADE AND SHARED SPACE STREET

The shared space street connecting the square and the park is paved with brick (maatili). It is the first part of the promenade and the brick pavement functions as wayfinding to establish the promenade as an urban spine throughout the neighbourhood.

In the shared space streets water is lead to large planting beds through subtle water channels in brick that separated to the edge zones. if the ground floor is public the pavement can be extended to the facade.

Street profile C, promenade and shared space street  
1:200



Edge zone, see the Architectural guideline  
Rainwater planting bed  
Granite curbstone  
Brick pavement  
Brick water channel  
Edge zone, see the Architectural guideline

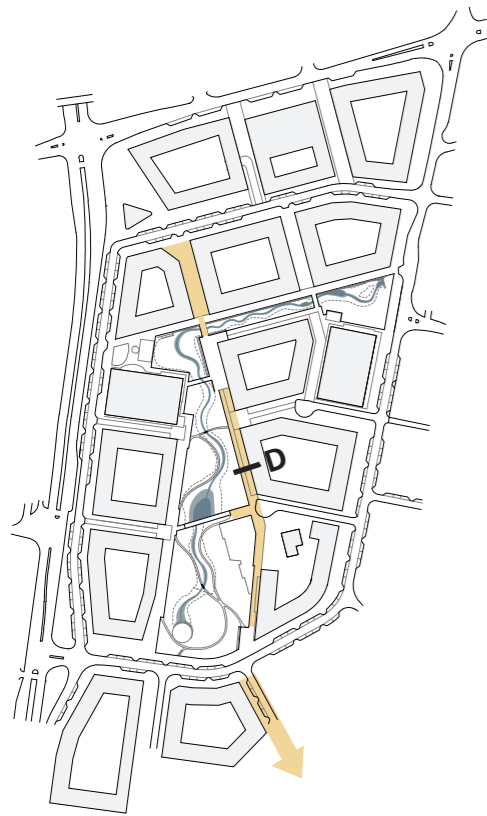


Yellow/grey toned brick



Change of pattern to indicate edgezone





Street profile D, promenade along park  
1:200



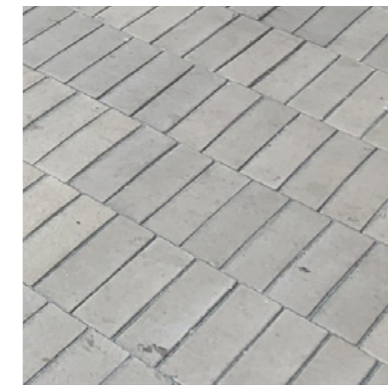
- Trees are planting with 4-8m distance from the trunk to trunk
- The distance varies with either 4, 6 or 8-meter difference, to create a dynamic experience.
- The planting scheme consists of multiple species. All species should be approx. the same height

## PROMENADE ALONG PARK

The promenade is highlighted with a distinct quality pavement, like brick, and function as a clear wayfinding element, that connects the main attractions of the neighbourhood.

A concrete edge defines and frames the parks and water channel, it functions as a seating edge towards the park. Dark toned concrete is to be used both in street area edge elements and park areas to reduce the impact of flood water soiling.

The promenade is wide, and trees divide the promenade and the flexible edge zone together with a subtle change of pattern in the brick pavement.



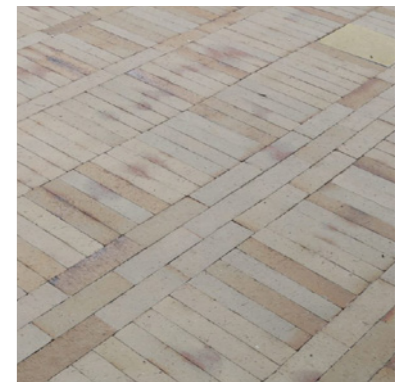
Warm grey / yellow toned brick



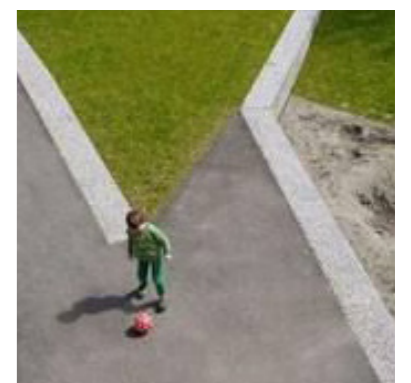
Brick with coal-burned colour variation



Change of pattern indicate edgezone



Dark concrete

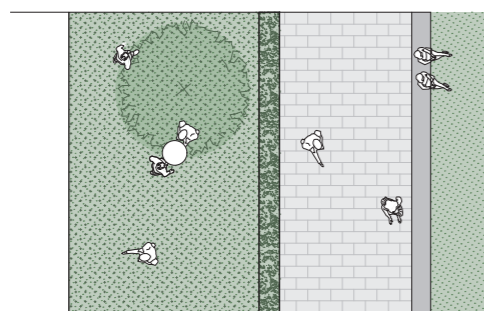
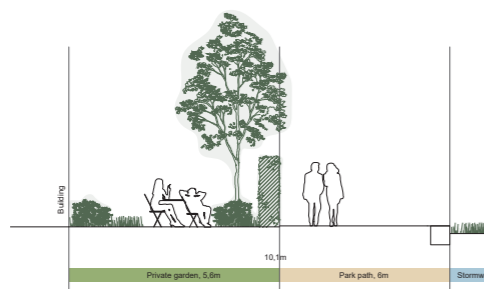


Concrete element around the park form a sitting edge



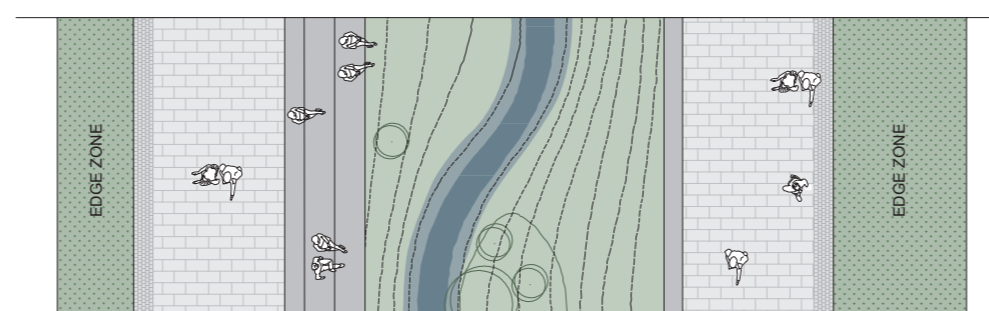
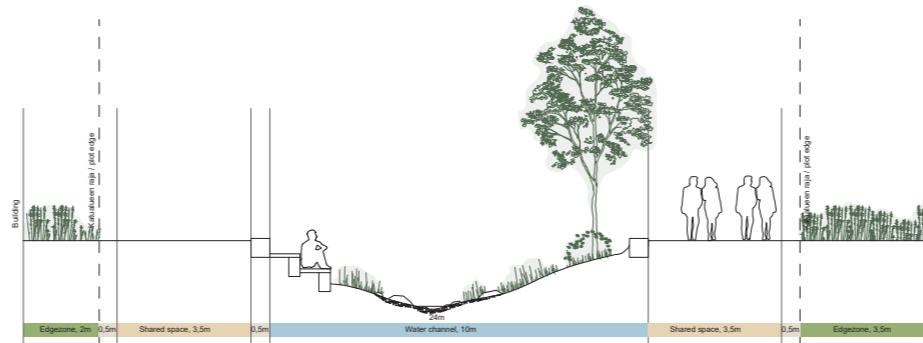


Street profile F, park path  
1:200



private garden  
Concrete pavement  
Concrete stairs  
Park

Street profile E, channel street  
1:200

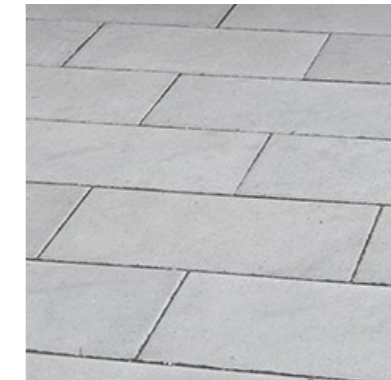


Edge zone, see the  
Architectural guideline  
Cobblestone  
Concrete pavement  
Concrete edge  
Water channel  
Concrete stairs  
Concrete pavement  
Cobblestone  
Edge zone, see the  
Architectural guideline

## STREETS ALONG CHANNEL

The streets along the channel and park are defined by the classic Turku concrete pavement with cobblestone details. A concrete edge defines and frames the parks and water channel. In some areas it becomes a set of seating stairs that utilize the edge as an element for stay/exercise/play.

Dark toned concrete is to be used both in street area edge elements and park areas to reduce the impact of flood water soiling.



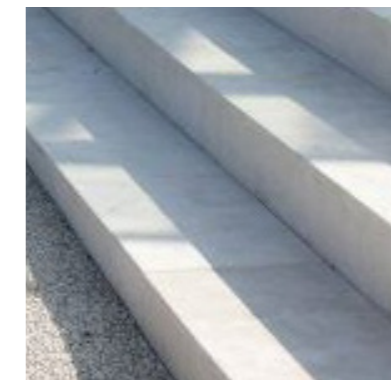
Turku concrete pavers, 30x60cm (new)



Concrete water channel



Granite curbstone



Stairs: concrete



Dark granite

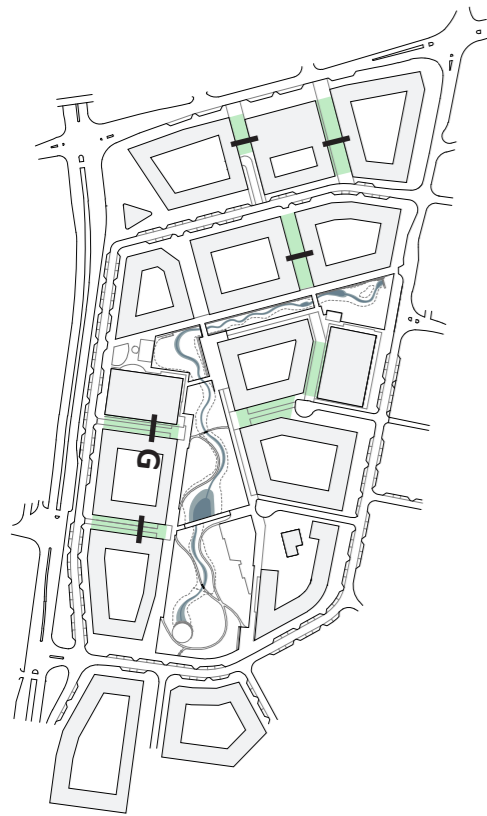
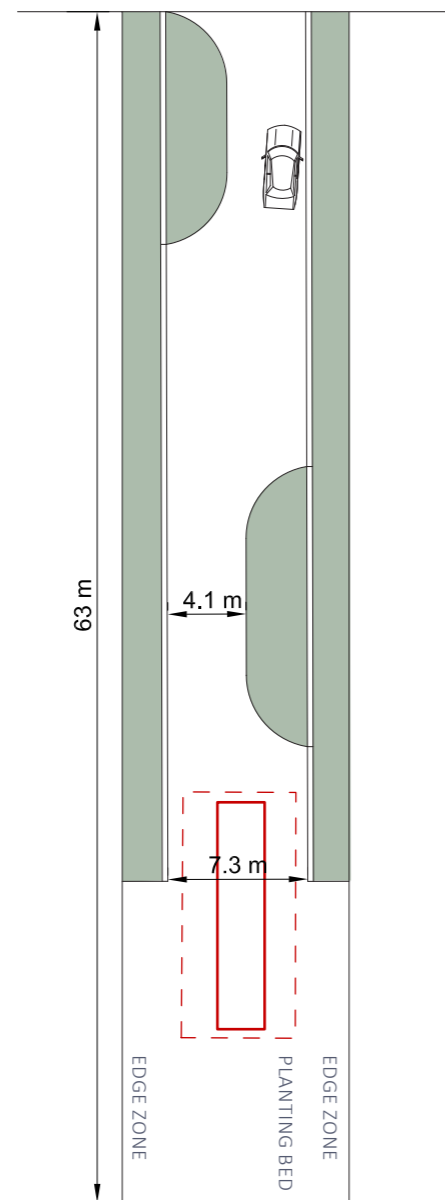
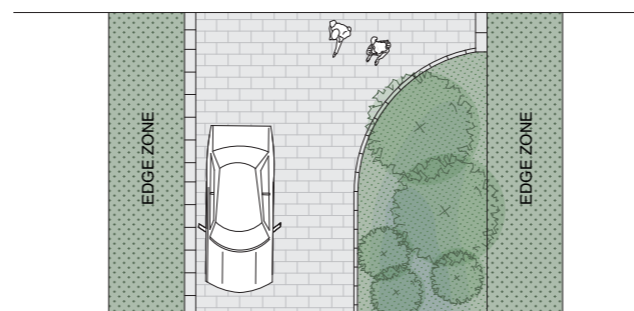


Diagram of planting beds



Street profile G, shared space streets  
1:200

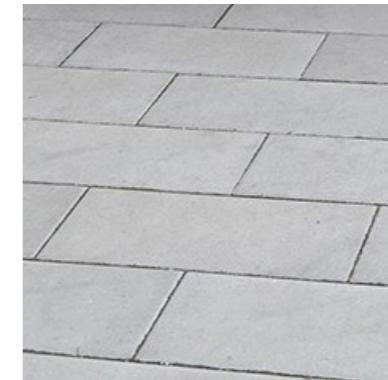


Edge zone, see the Architectural guideline  
Rainwater planting bed  
Granite curbstone  
Concrete pavement  
Concrete water channel  
Edge zone, see the Architectural guideline

## SHARED SPACE STREETS /TONTTIKATU

Shared space streets is defined by the classic Turku concrete pavement together with rainwater management and large planting beds for a lush and urban street.

Water is lead to large planting beds through subtle water channels in concrete that separated to the edge zones. if the ground floor is public the pavement can be extended to the facade.



Turku concrete pavers, 30x60cm



Concrete water channel



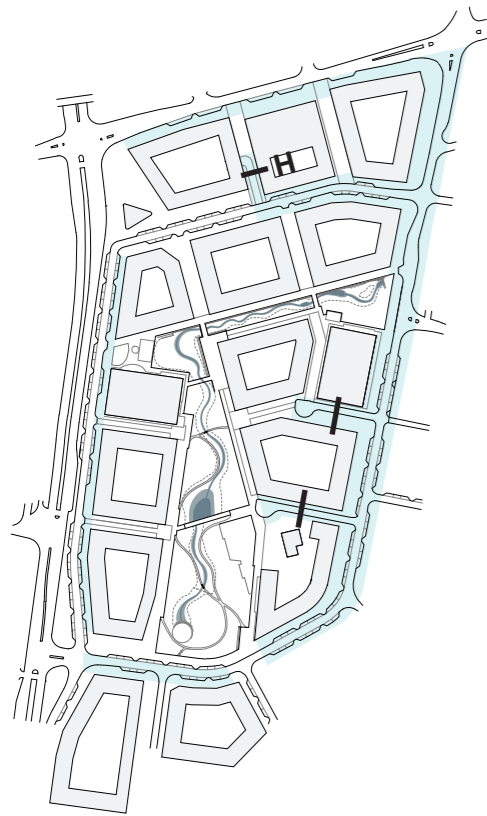
Granite curbstone around planting



Cobblestone details



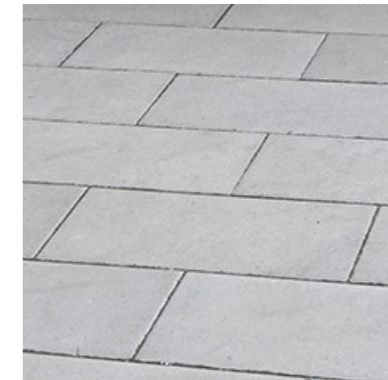
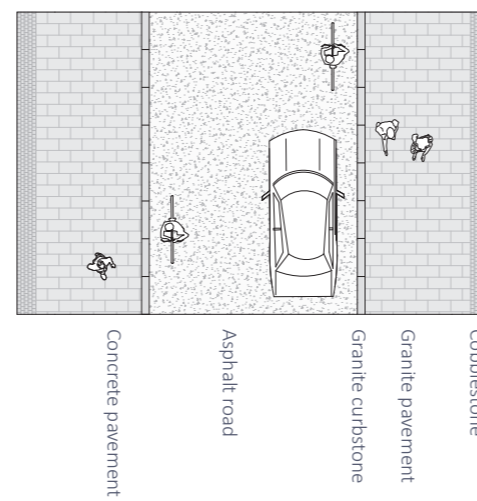
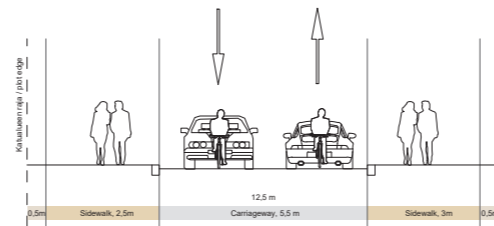
Cobblestone details



## SMALL STREET / TONTTIKATU WITH CAR TRAFFIC

The classic streets with a clear division between cars, pedestrians and bikes continue the Turku material palette with asphalt roads, concrete pavement and granite details.

Street profile H, access to parking garage  
1:200



Turku concrete pavers, 30x60cm (new)



Cobblestone details



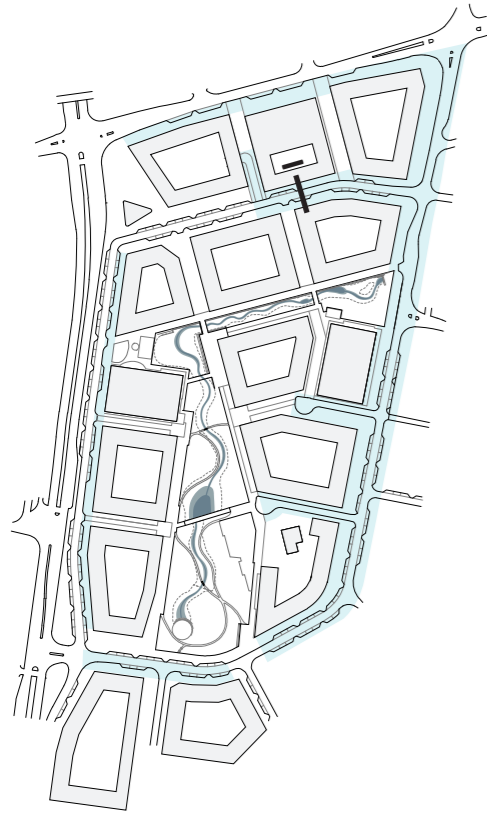
Granite curbstone



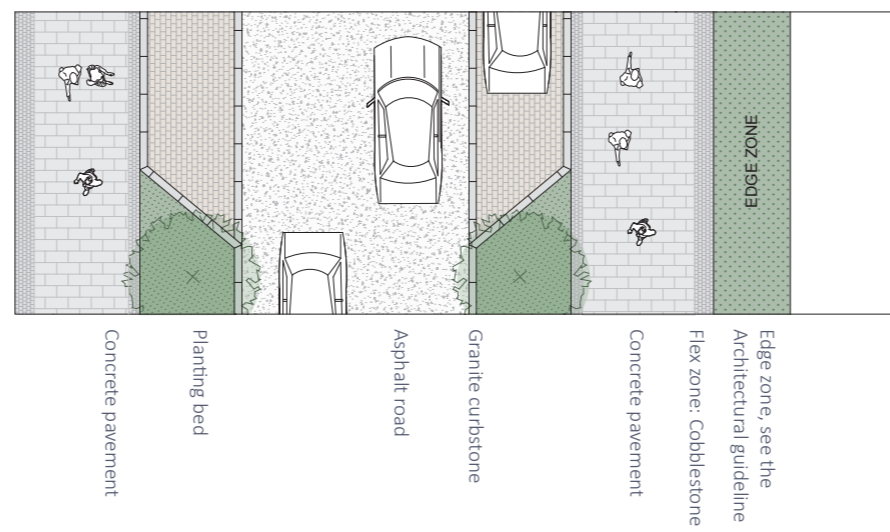
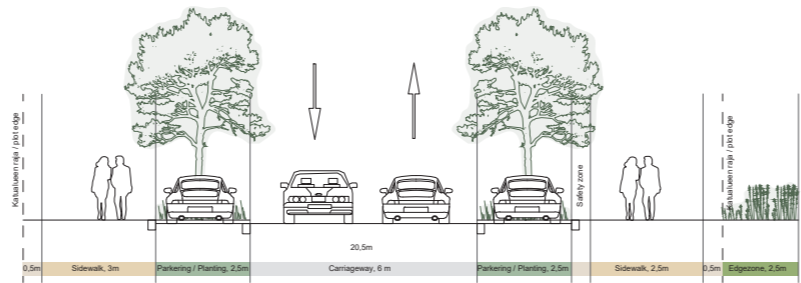
Road: Asphalt



Cobblestone details

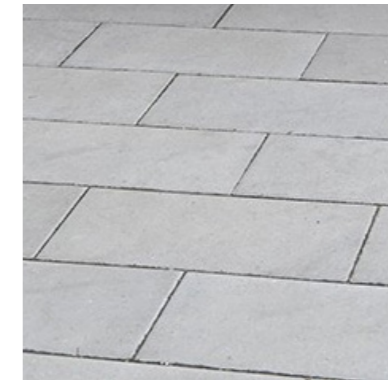


Street profile I, neighbourhood street  
1:200



## KAUPPAKATU

The classic streets with a clear division between cars, pedestrians and bikes continue the Turku material palette with asphalt roads, concrete pavement and granite details.



Turku concrete pavers, 30x60cm



Cobblestone details



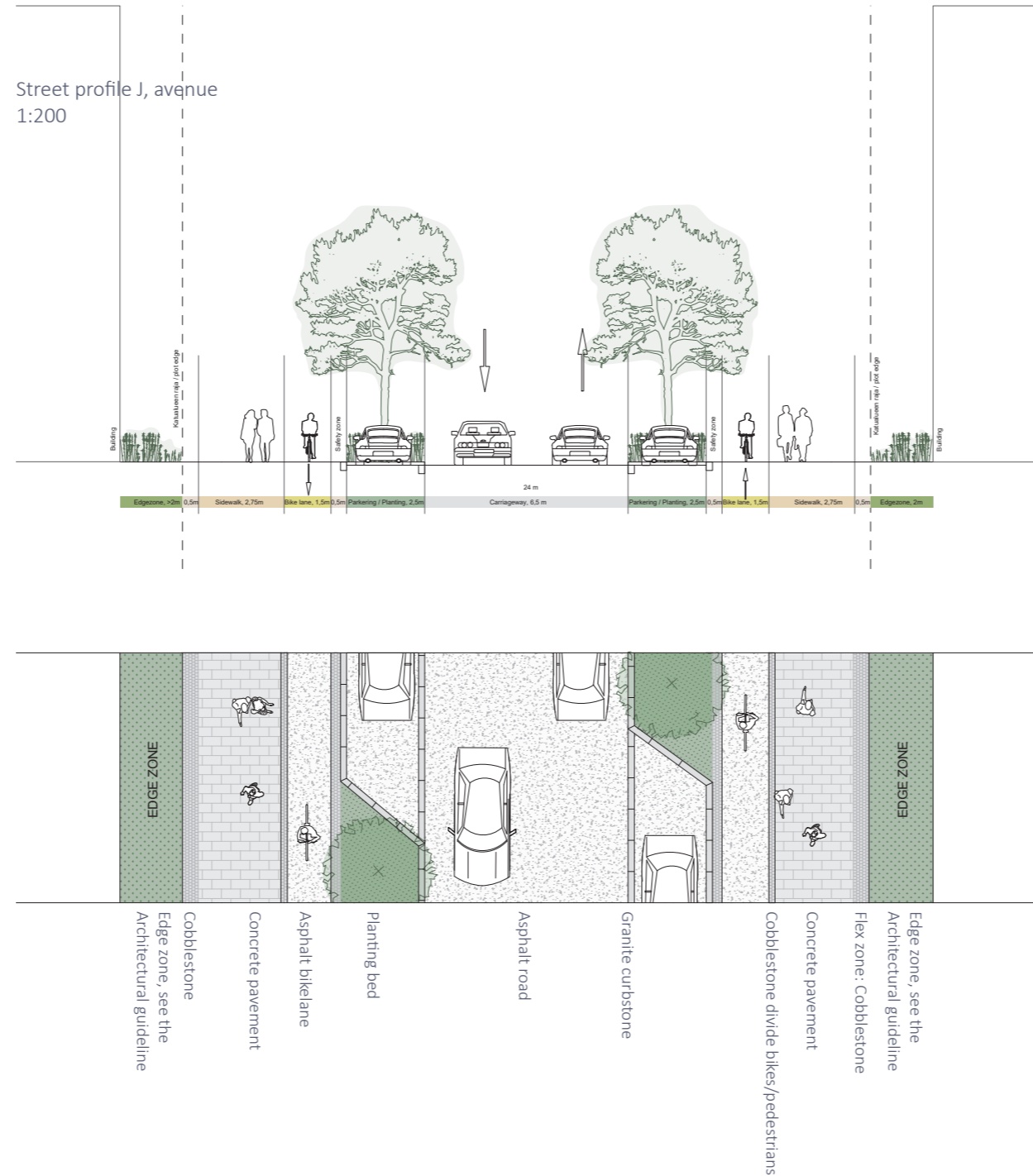
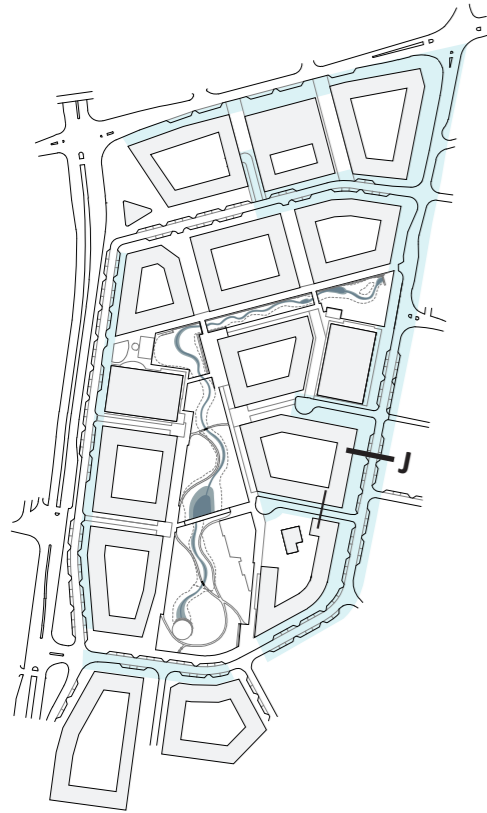
Granite curbstone, 20 cm wide



Road: Asphalt

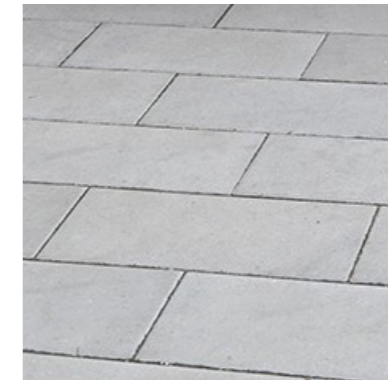


Parking: Cobblestones



## KOKOOJAKATU

The avenue is as a classic street with a clear division between cars, pedestrians and bikes and with tree plantings on both sides to downsize the road and create a pleasant environment for pedestrians and bikes. To create coherence with the city, the Turku material palette is continued. Asphalt paved roads and bike lanes, concrete pavement for sidewalks and granite details.



Turku concrete pavers, 30x60cm



Cobblestone details



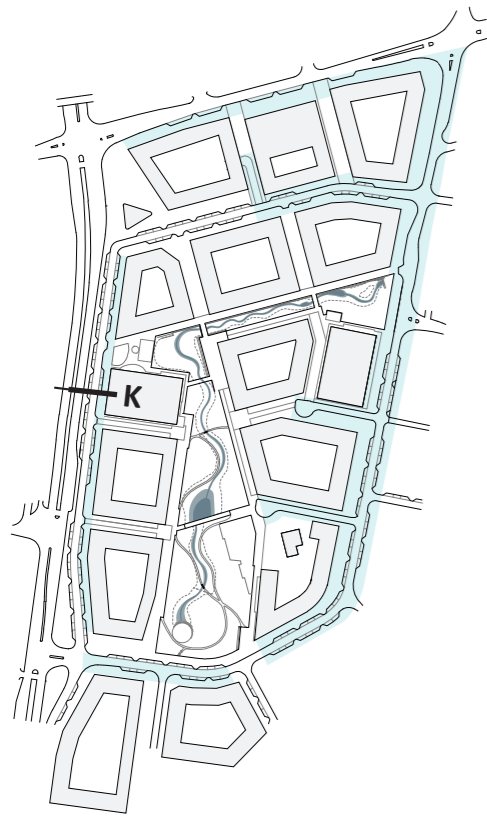
Granite curbstone, 20 cm wide



Road: Asphalt



Cobblestone details

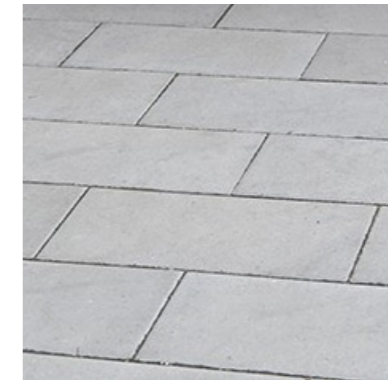


Street profile K, boulevard  
1:200



## HIRVENSALON PUISTOTIE - RINNAKKAISKATU

Along the boulevard of Hirvensalon Puistotie, the Turku material palette with asphalt roads and bike lanes, concrete pavement for sidewalks and granite details is continued along the new housing.



Turku concrete pavers, 30x60cm



Cobblestone details



Granite curbstone, 20 cm wide

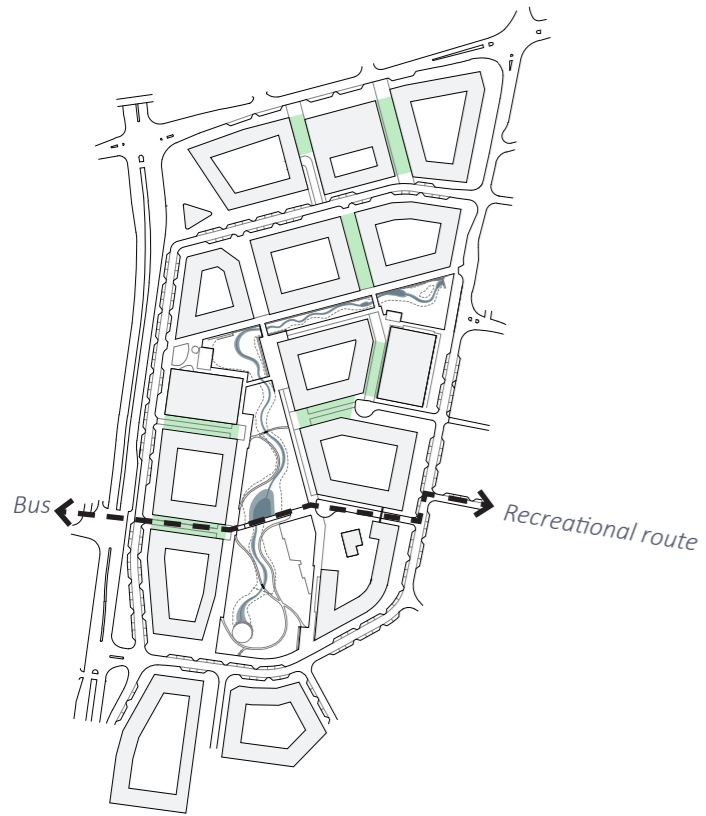


Road: Asphalt



Cobblestone details

## SCHOOL ROAD AND WAYFINDING



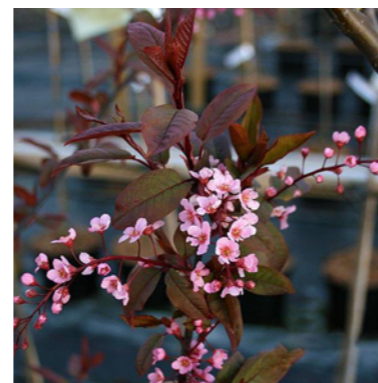
### Wayfinding along the recreational route:

The recreational route crosses the park and the different roads types. It stands out from the road hierarchy and we suggest to mark it differently. Instead of highlighting the route with a change in the pavement, we suggest to mark it with an element that stands out from the material and planting palette.

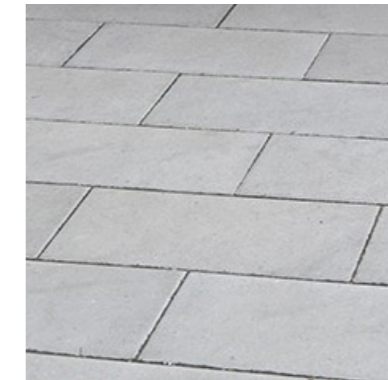
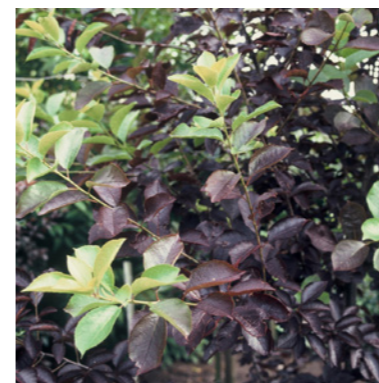
For a subtle but intuitive wayfinding we suggest red-leafed tree species, like *Prunus virginiana 'Shubert'*, it would also give character and identity to the route. Red-leafed trees would clearly stand out during spring and summer, additional distinct lighting features along the route would mark it in the dark season.

We suggest that the school road is designed as a shared space street, with slow traffic and a lush green expression. On the opposite side of the school is the parking lot. By having an additional entrance, ensures a safe walking route to school for the neighbourhood children and for the children walking from the bus.

The materials are the same as for the other shared space street. Classic Turku concrete pavement together with rainwater management and large planting beds for a lush and urban street. Water is lead to large planning beds through subtle water channels in concrete.



*Prunus virginiana 'Shubert'*, virginiantuomi or a similar red-leafed species



Turku concrete pavers, 30x60cm



Concrete water channel



Granite curbstone around planting



Cobblestone details

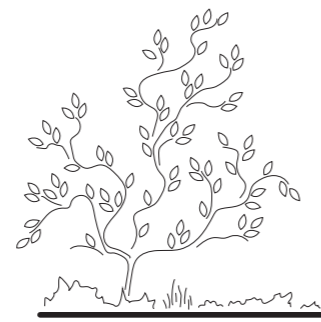
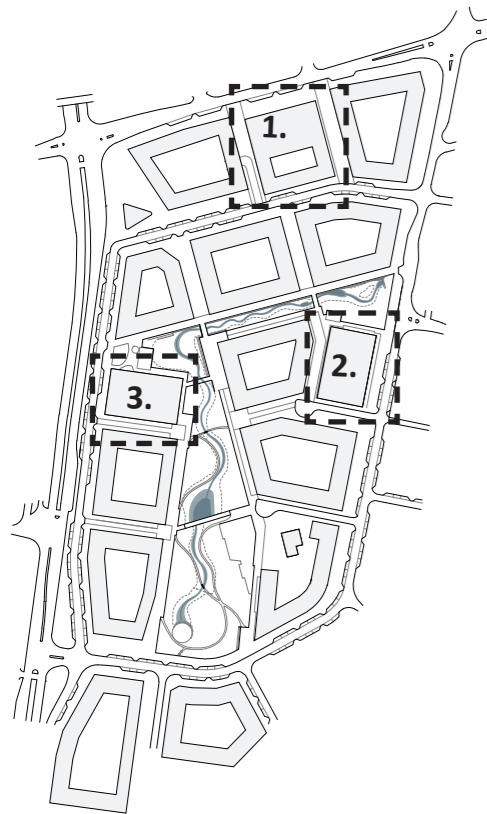


Cobblestone details

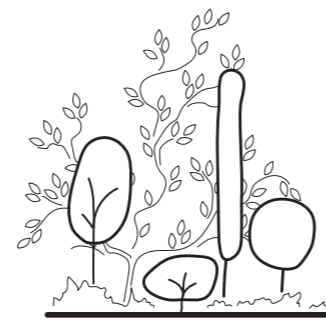
## PLANTINGS AT PARKING HOUSES

Planting beds with trees and perennial plantings together with climbing plants, ensure that the three parking houses add to creating a pleasant urban environment.

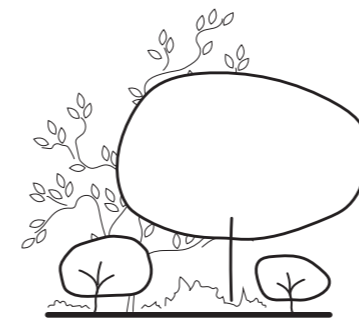
The size of the planting beds is maximized to make room for as many trees as possible. Where there's no room for tree or bush plantings, a variety of climbing plants, including evergreens, are used to create a more pleasant facade. The aim is to break down the closed facades on the parking houses and use plantings to create a more human scale around the large parking buildings.



< 1 m  
Climbing plants, perennials

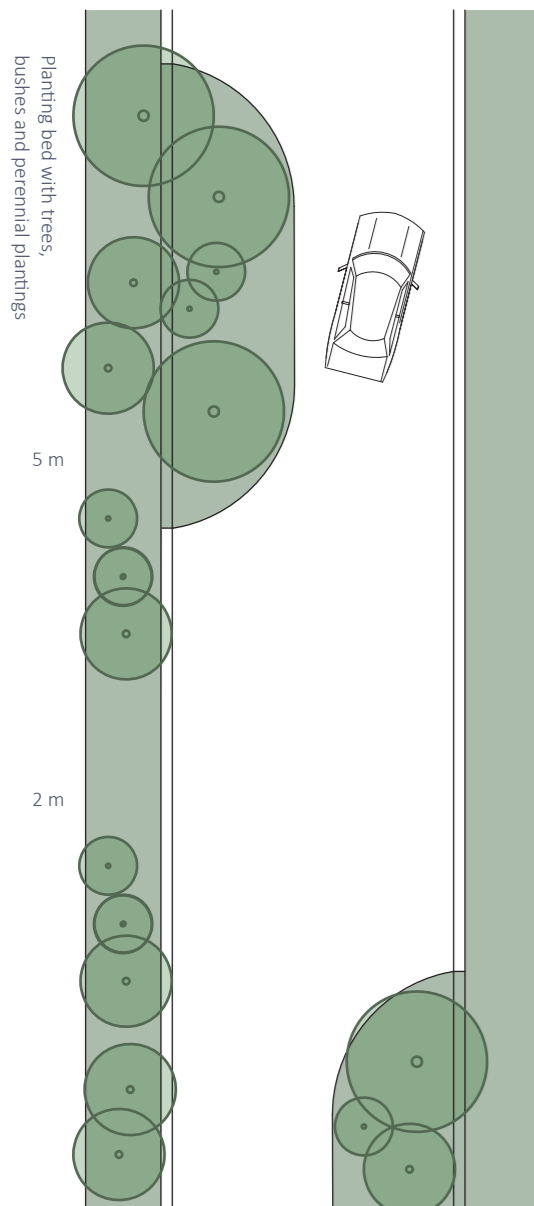


1-2 m  
Climbing plants, perennials,  
bushes and narrow/small  
trees

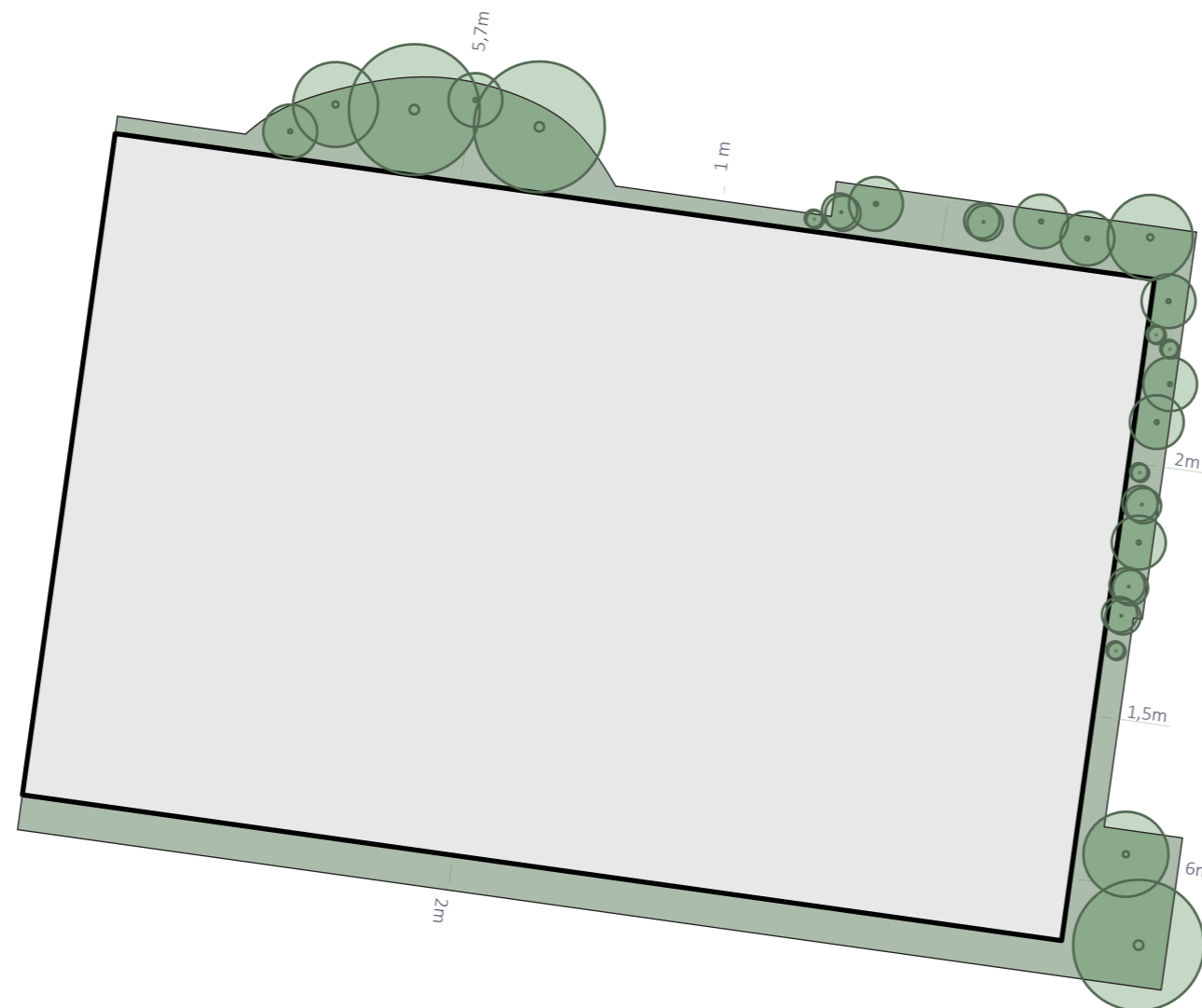


> 2 m  
Climbing plants, perennials,  
bushes and large trees

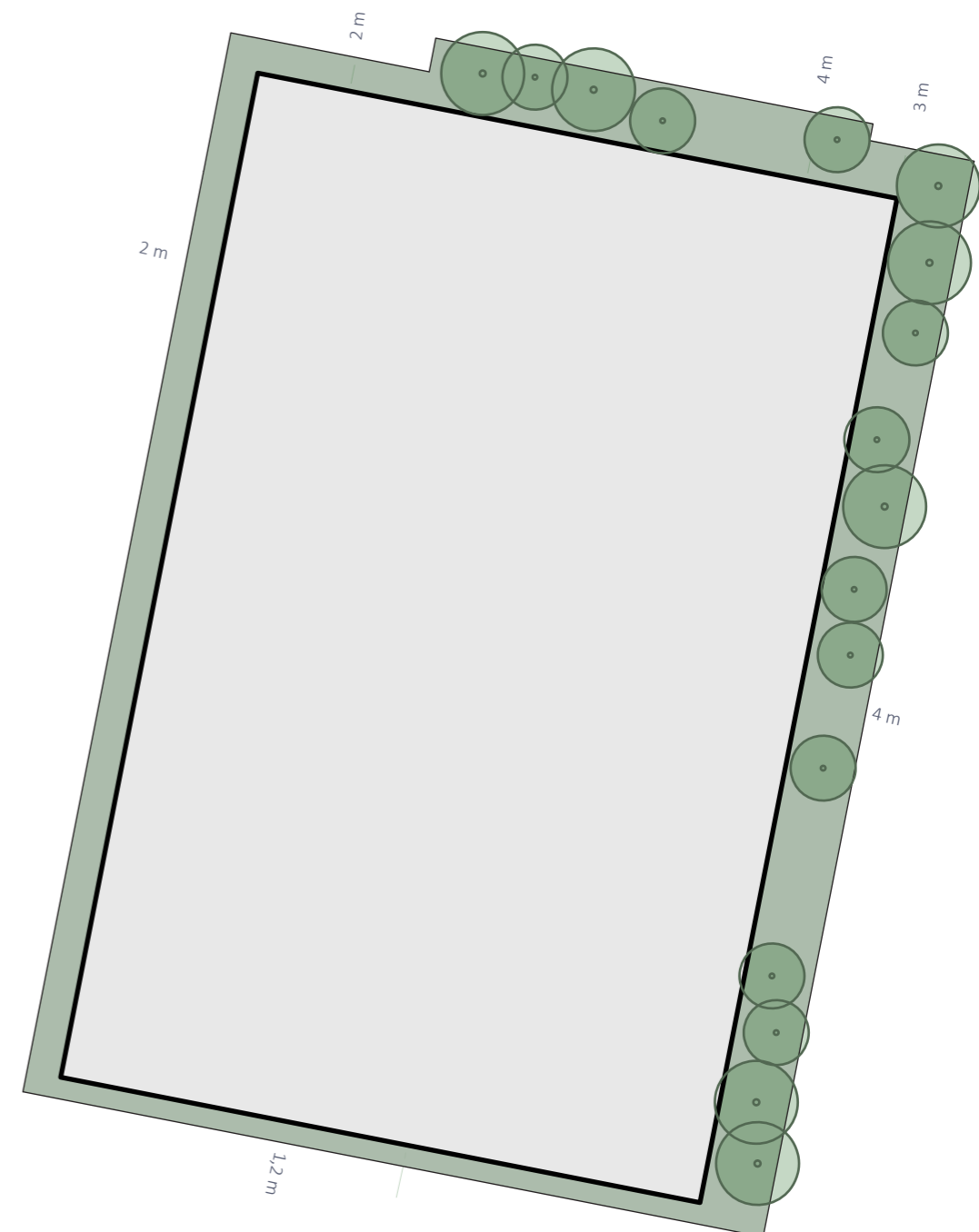
Parking house 1, principle for shared streets



Parking house 3



Parking house 2.





## PLANTING CONCEPT

Today, pioneer species as birch, willow, aspen and pine have populated the area. To that the existing rock hills create special pockets of old culture historical character with oaks, pines and even fruit trees. This combination of self-grown native species creates a lush and varied expression that inspired our planting concept.

In the shared space streets, urban spaces, in the channel and park a diverse planting palette is suggested. The chosen species can withstand flooding and will thrive in the rainwater planting beds and along the stream in the channel and stormwater park. Highpoints are underlined with pine and oak. The combination will create a lush, wild and diverse expression and support a high biodiversity in the neighbourhood.

Along the roads, there will be a more classic monocultural planting scheme with row planting.



**Note**  
The planting scheme and selected tree species have been specified together with Aki Männistö, City of Turku.

★ Oak / Quercus



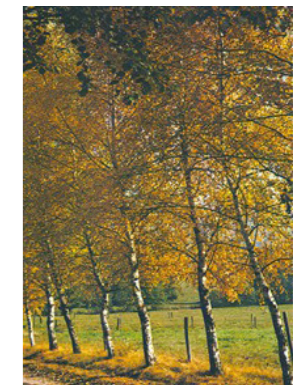
Willow



Hornbeam



Ash



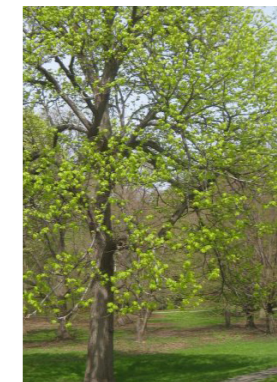
Birch, autumn colours



Pine(hilltop areas)



Aspen



Linden



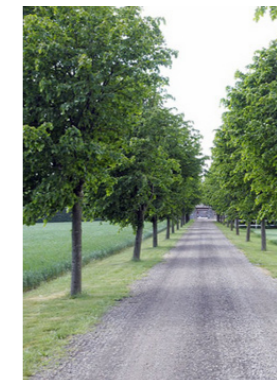
Birch



Birch



Alder



Maple

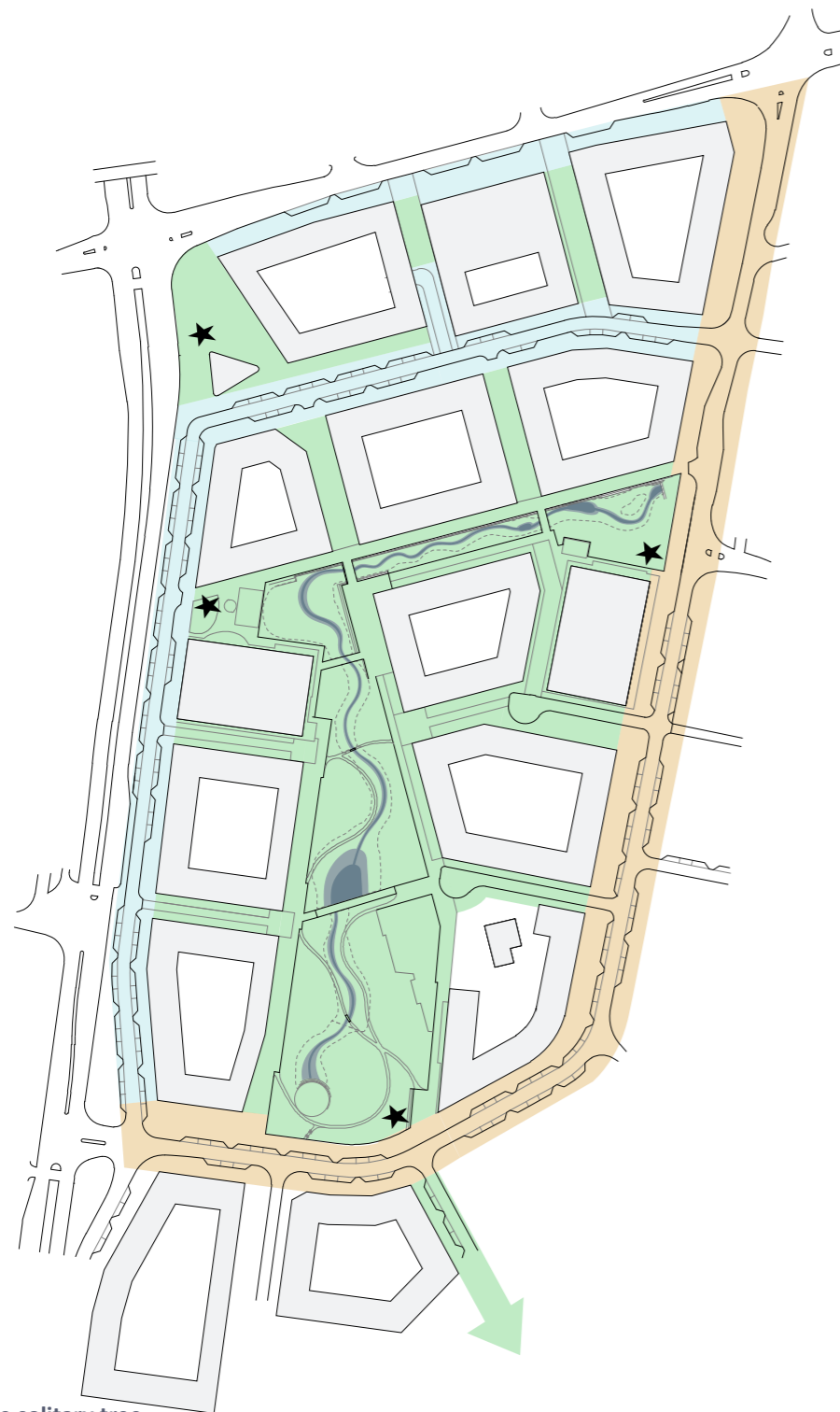


Birch

Mix of species: willow, birch, aspen, hornbeam, hawthorn /-

Maple/Ash/-

Birch / Oak

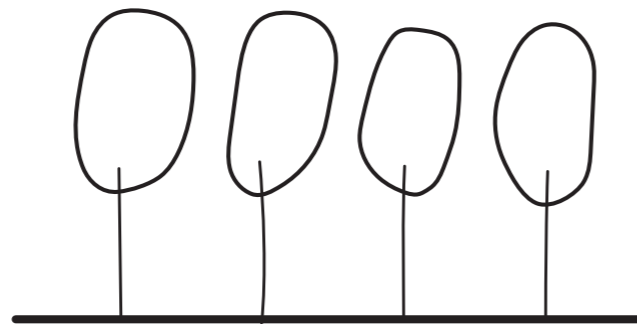
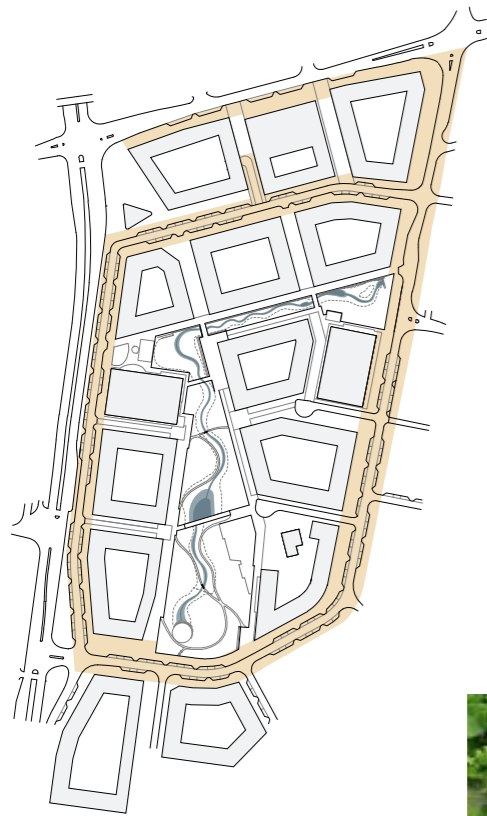


★ **Large solitary tree**  
Characterful oak

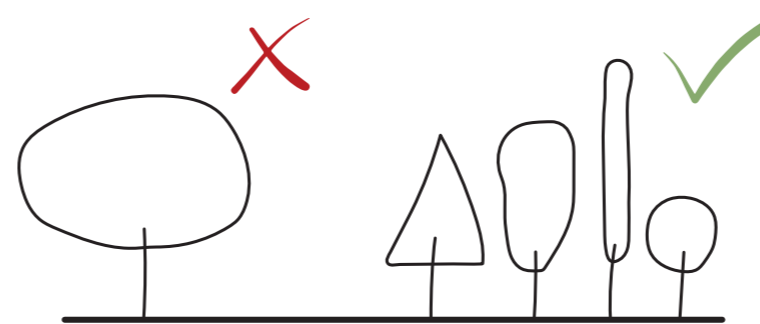
**Road with car traffic**  
Monoculture: Birch or small/narrow Oak subspecies. Row planting

**Main road**  
Monoculture: Maple, Ash, Linden or Hornbeam. Row planting

**Square, promenade and shared streets**  
Mix of pioneer species: willow, birch, aspen, oak, pine, service berry, ash, crabapple, hornbeam, turkish hazel, cherry, english hawthorn.  
Group planting



Row planting. Monoculture



Narrow or small species for road plantings

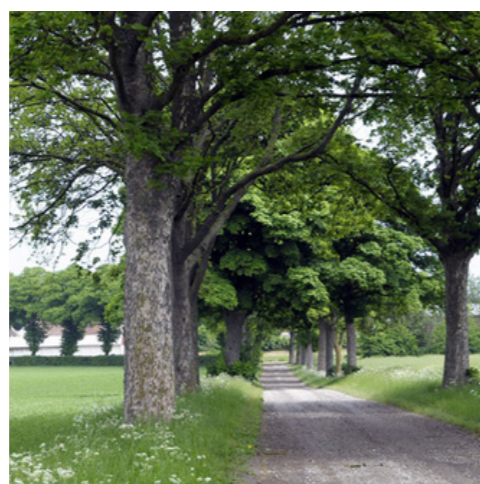
## ROADS

Along the roads, a more classic monocultural planting scheme with row planting of either birch, maple, ash, oak or linden is suggested. Narrow or small subspecies are used.

Trees are planted in planting beds with hardy ground cover, for a low and uniform planting.



A simple, low and hardy cover planting



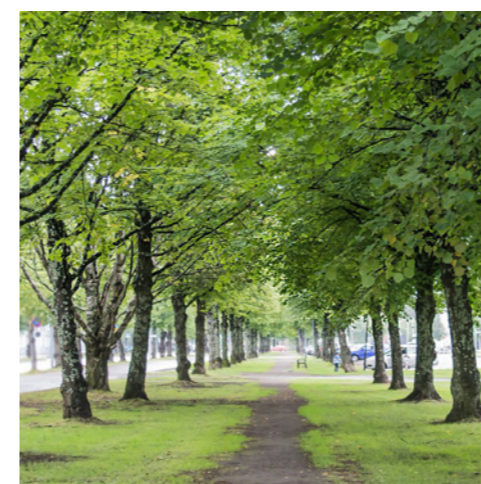
**Acer, maple**  
A dense tree with full shade  
Autumn colours

*Acer platanoides, norway maple, Metsävaahtera*



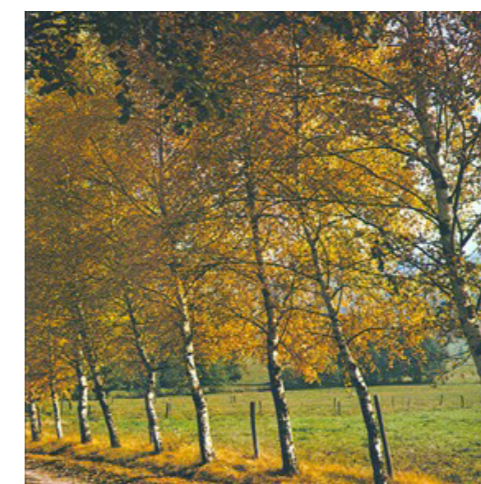
**Fraxinus, ash**  
Light shade

*Fraxinus pennsylvanica, red ash, punasaarni*



**Tilia, linden**  
Full shade

*Tilia x vulgaris, common lime, Puistolehmus*  
*Tilia cordata, small-leaved lime, Metsälehmus*  
(narrow subspecies)



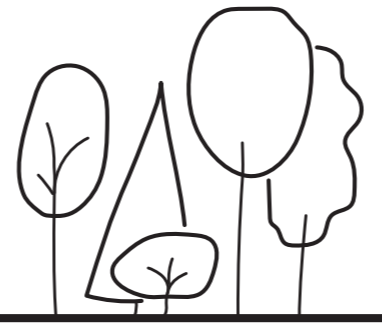
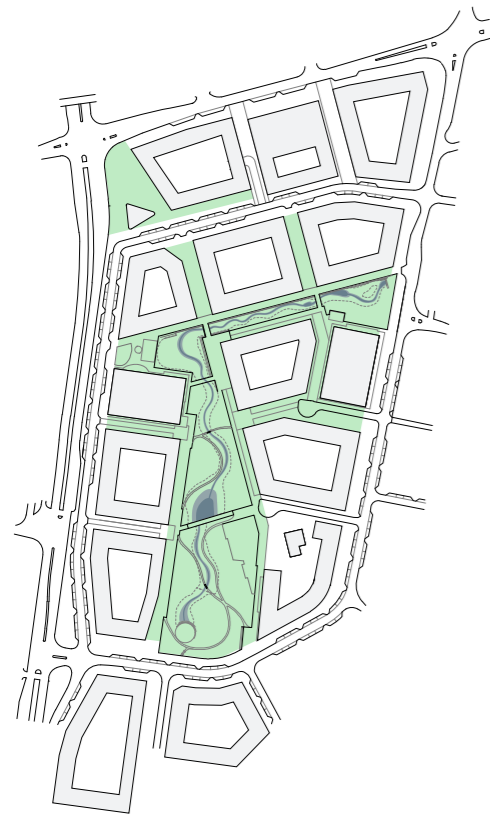
**Betula, birch**  
Light shade  
Autumn colours

*Betula pendula, silver birch, rauduskoivu*



**Quercus, oak**  
Light shade  
Autumn colors for some species

*Quercus robur, common oak, tammi*  
*Quercus rubra, northern red oak, punatammi*



**Group planting with mixed species**

## SQUARE - PROMENADE - SHARED STREET

For the park, square, promenade and shared streets, we seek to create a lush and self-grown expression. A planting inspired by the existing pioneer and culture planting combined with bushes and perennials to ensure a varied and interesting planting that support the biodiversity of the Pihlajaniemi neighbourhood.

Different types of willows together with black alder, oak, European aspen and birch. These species can withstand flooding and will thrive in the rainwater planting beds and along the stream in the channel and stormwater park. Highpoints are underlined with pine and oak

Trees are planted in groups, with mixed species and together with bushes and perennial plantings.

The tree species for the park and channel is specified in the masterplan material. The tree species chosen for the street design manual reflects the planting scheme suggested in the masterplan.

*A selection of species, further detailed on the following pages*



Salix, willow



Alnus, alder



Crataegus, hawthorn



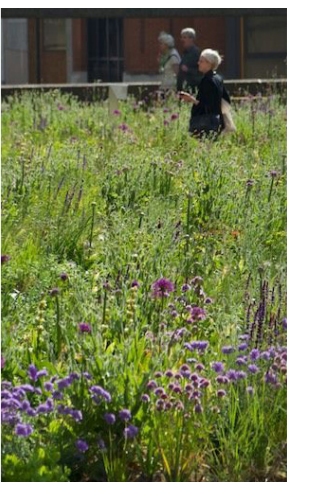
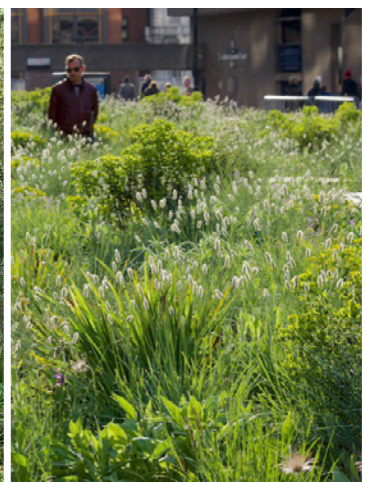
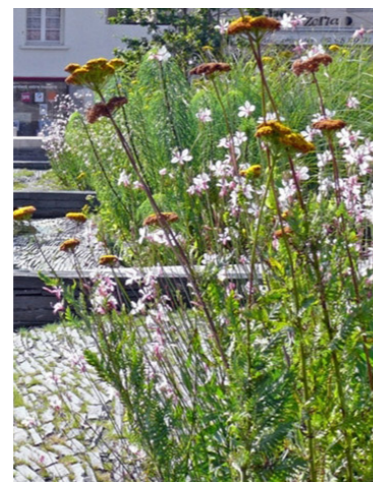
Carpinus, hornbeam



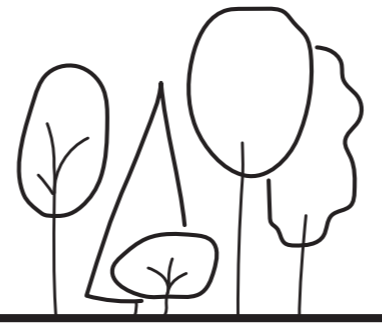
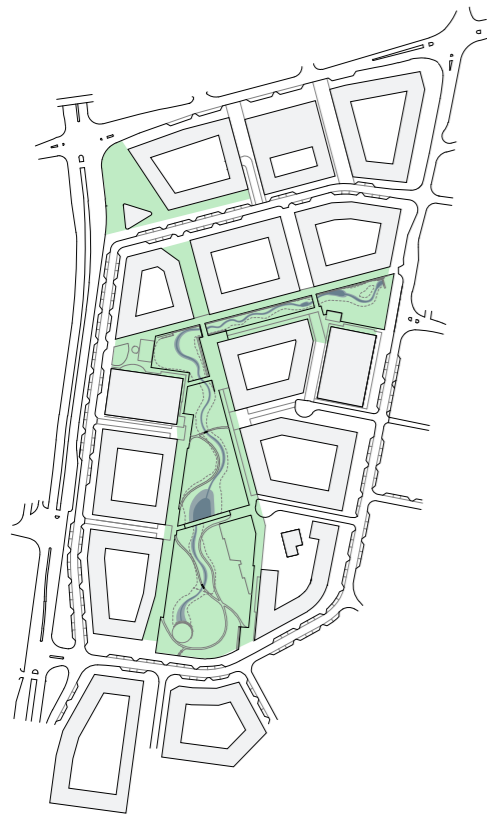
Betula, birch



Populus, aspen



A mixed groundcover with bushes and perennials



Group planting with mixed species

## SQUARE AND PROMENADE TREE SPECIES SPECIFIED

Below are described a variety of species and subspecies, many recommended by Aki Männistö, City of Turku. Additional subspecies can be added.



Siberian crab apple,  
Marjaomenapuu  
*Malus baccata 'Columnaris'*



Alder, *Leppä*  
*Alnus Glutinosa, Tervaleppä*  
*Alnus incana, Harmaaleppä*



Willow, Hopeasalava  
*Salix x rubens 'Basfordiana'*  
*Salix x rubens 'Lasipalatsi'*  
*Salix alba var. sericea 'Sibirica'*



Hornbeam, Euroopanvalkopyökki  
*Carpinus betulus 'Lucas'*



Cherry, Imeläkirsikka  
*Prunus sargentii 'Rancho'*, *Rusokirsikka*  
*Prunus avium 'Plena'*, *Imeläkirsikka*  
*Prunus x gondouinii 'Schnee'*  
*Prunus x hillieri 'Spire'*



Douglas Hawthorn,  
Mustamarjaorapihlaja  
*Crataegus douglasii*



Birch, Koivu  
*Betula pendula, rauduskoivu*



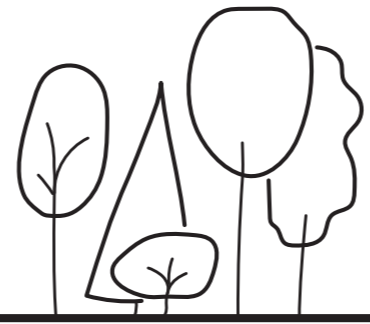
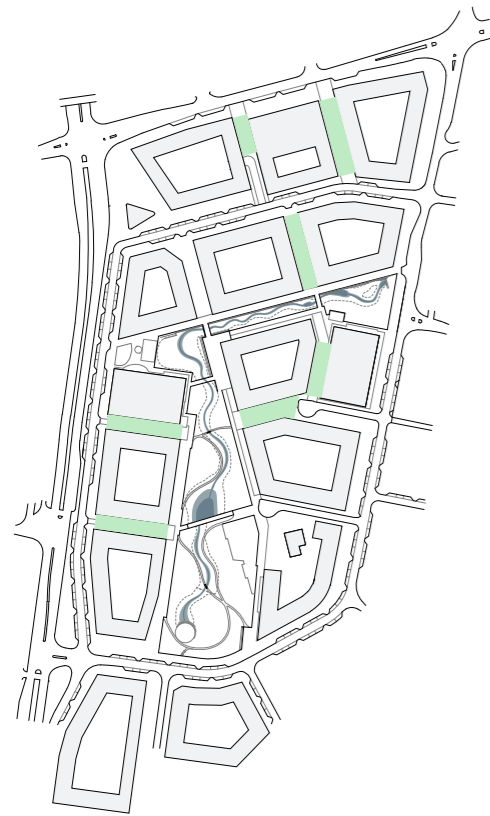
Turkich hazel, Turkinpähkinä  
*Corylus columna*



Maple, Vaahtera  
*Acer rubrum 'Scanlon'*,  
*punavaahtera*  
*Acer negundo, saarnivaahtera*  
*Acer saccharinum, hopeavaahtera*



Whitebeam, Pihlaja  
*Sorbus hybrida, suomenpihlaja*  
*Sorbus incana, hopeapihlaja*  
*Sorbus aria 'Gigantea'*, *saksanpihlaja*  
*Sorbus aria 'Lutescens'*  
*Sorbus intermedia, ruotsinpihlaja*



Group planting with mixed species

## SHARED SPACE STREETS TREE SPECIES SPECIFIED

Below are described a variety of species and subspecies, many recommended by Aki Männistö, City of Turku. Additional subspecies can be added.



Serviceberry, sirotuomipihlaja

*Amelanchier laevis*  
*Amelanchier lamarckii*  
*Amelanchier 'Robin Hill'*



Alder, Leppä

*Alnus Glutinosa, Tervaleppä*  
*Alnus incana, Harmaaleppä*



Willow, Hopeasalava

*Salix x rubens 'BASFordiana'*  
*Salix x rubens 'Lasipalatsi'*  
*Salix alba var. sericea 'Sibirica'*



Cherry, Rusokirsikka

*Prunus sargentii 'Rancho'*



Europaen aspen, Metsähaapa

*Populus tremula*



Birch, Koivu

*Betula pendula, Rauduskoivu*  
*Betula papyrifera, Paperikoivu*



English hawthorn,  
Tylppöorapihlaja

*Crataegus monogyna 'Stricta'*



Maple, Vaahtera

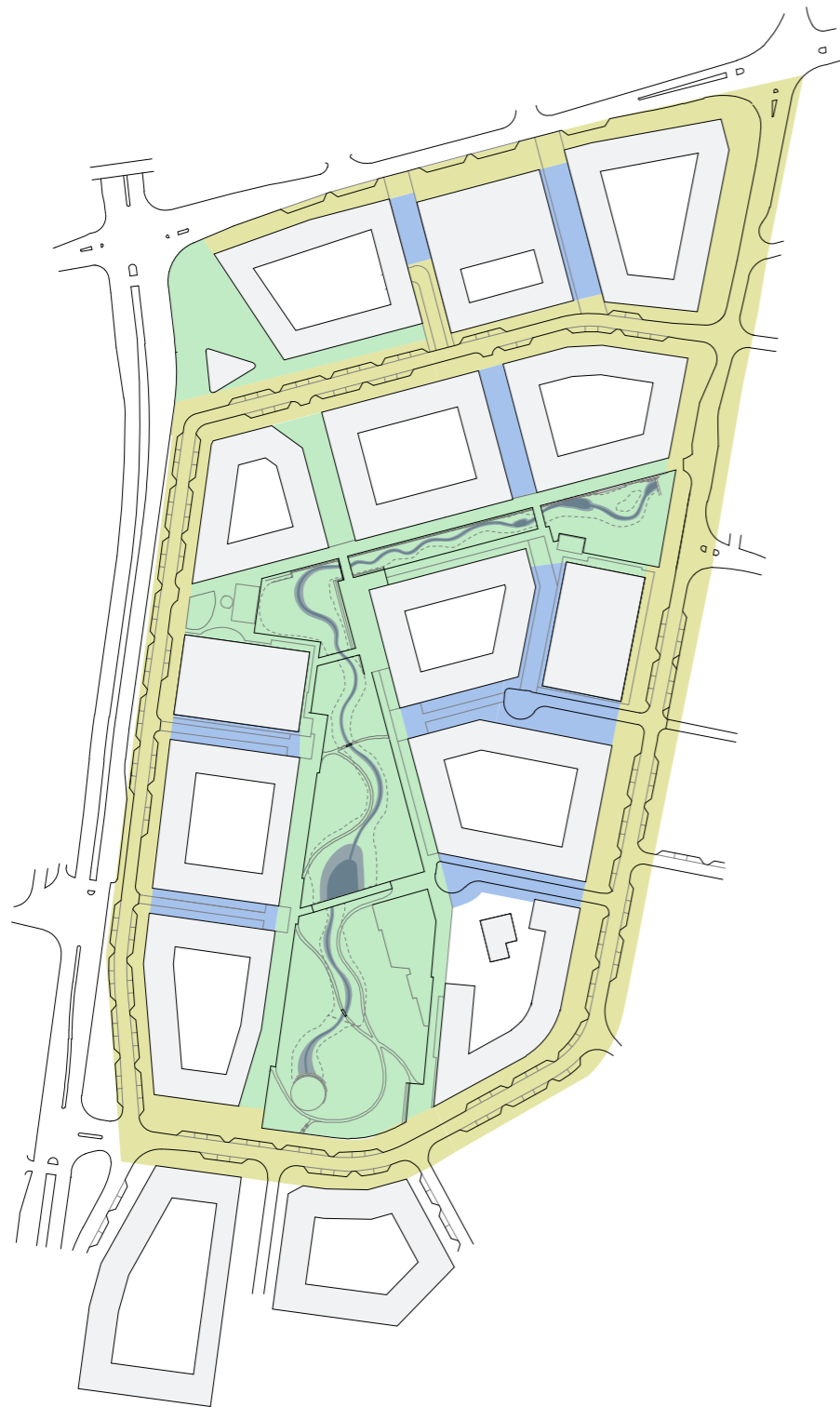
*Acer negundo, Saarnivaahtera*  
*Acer tataricum, Tataarivaahtera*

## MAINTENANCE LEVEL

The streetscape of Pihlajaniemi can be divided into three categories of maintenance levels. The square, park, channel and promenade has a very high maintenance level with perennial plantings, various tree- and bush species. The planting reflects that these are the main urban spaces, and here should be an interesting and lush planting throughout the seasons.

In the shared space street, the rainwater planting bed also consist of a mixed planting. Here a more "wild" and uncontrolled appearance can be tolerated.

The avenue and boulevard require a high level of maintenance, the street trees and planting beds should regularly be maintained.



- **Very high level of maintenance**
- **High level of maintenance**
- **Medium level of maintenance**  
A 'wild-growing' appearance is tolerated in the shared space streets