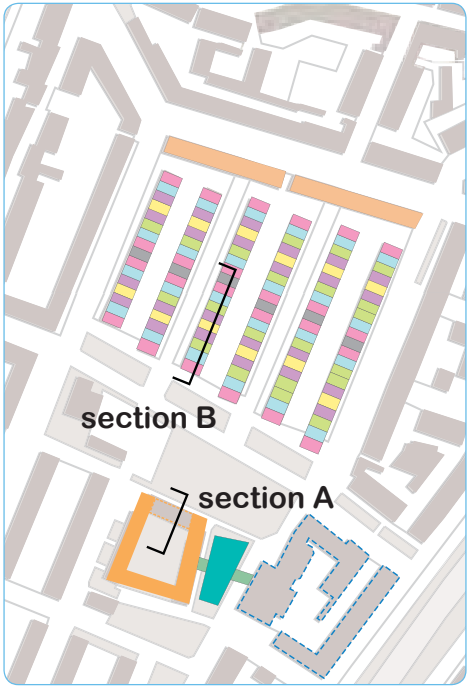
design

It is **more sustainable** (in terms of **social**) to have **mix age** in 1 area.

Considering the existing house and sustainability, the picture 4.1 is showing the regenerated plan of this area.

There will be elderly people, students, family who stay in this area.

Empty building in the south part will be converted into senior house for dependent elderly. It'll be combined with facilities for elderly and kids.

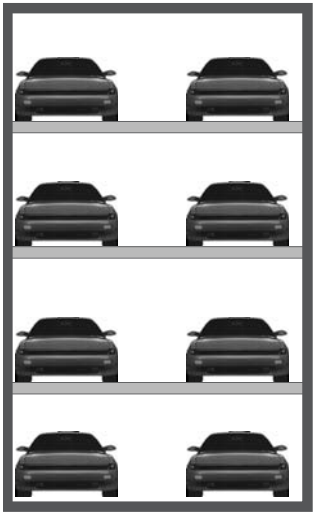


picture 4.1.plan

legend

- sheltered housing
- elderly housing+relative
- relative
- student
- multistorey carpark
- elderly house near relative
- apartment (elderly + other society)
- school
- senior house (dependent)
- library
- connection to library

picture 4.2.typology



picture 4.3.typology

picture 4.4.typology

Picture 4.2. is showing typology section of the kangooro house regeneration.

There will be **multistorey** carpark to make the pedestrian.

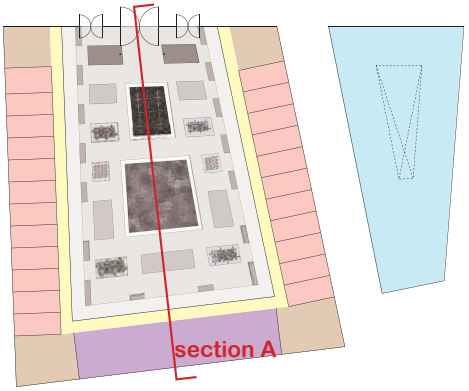
picture 4.4 showing combination of **elderly house** and **day care for kids.**

South part senior house will be a 4 storey buildings.

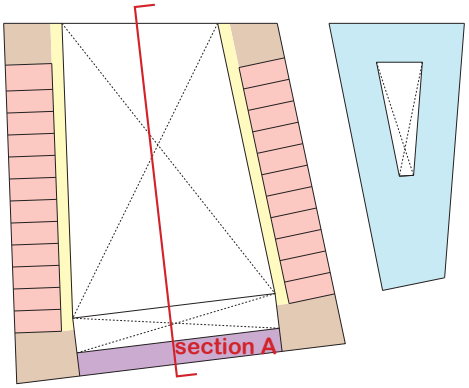
This senior house is located just behind the playground.

There will be big **facilities** at groundfloor that can be used by **elderly and kids** to do **activities** together. (cooking together, reading together etc).

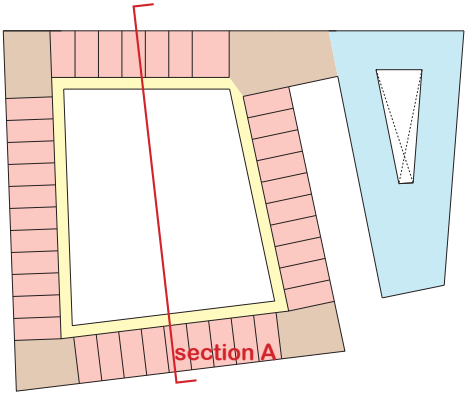
It can be used also for **daycare** by elderly



picture 4.5. senior house - ground floor



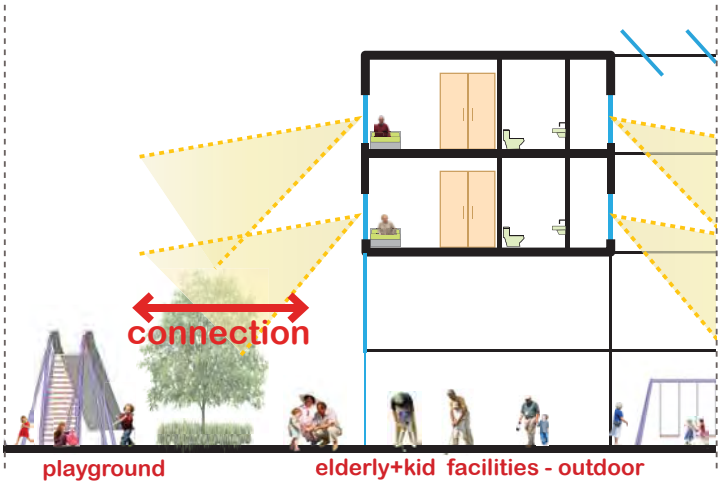
picture 4.6. senior house - 1st floor plan



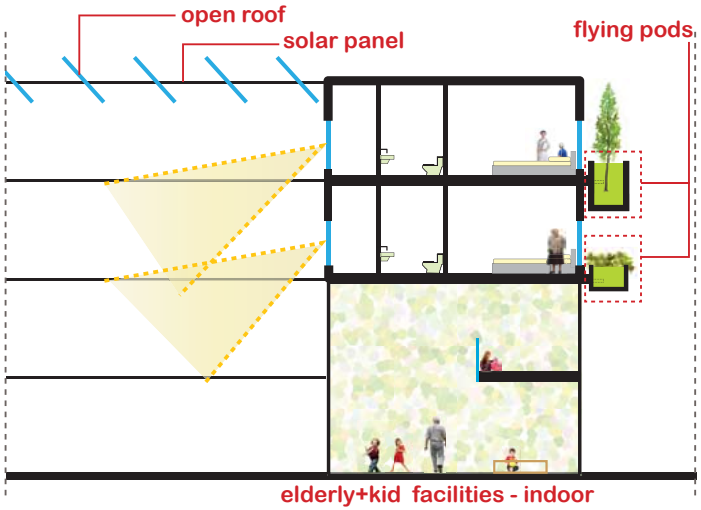
picture 4.7. senior house - 2nd&3rd floor plan

legend

- elder room
- core
- (lift, stair,kitchen, meeting room, utilities)
- elderly and kid facilities - indoor
- elderly and kid facilities - outdoor
- library



picture 4.8. senior house - section



picture 4.9. senior house - section

We can see in picture 4.8., the playground is connected to park at senior house. Kids can also play to the park at senior house.

In picture 4.9. we can see the combination of daycare at ground floor and 1st floor and senior house at the upper floors.

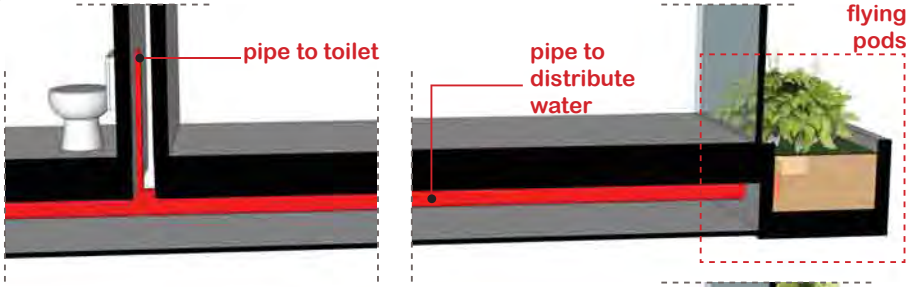
The park at this senior house is using **openable roof** and **solar panel.**

When it's good weather, the roof and doors can be opened so people can enjoy open environment.

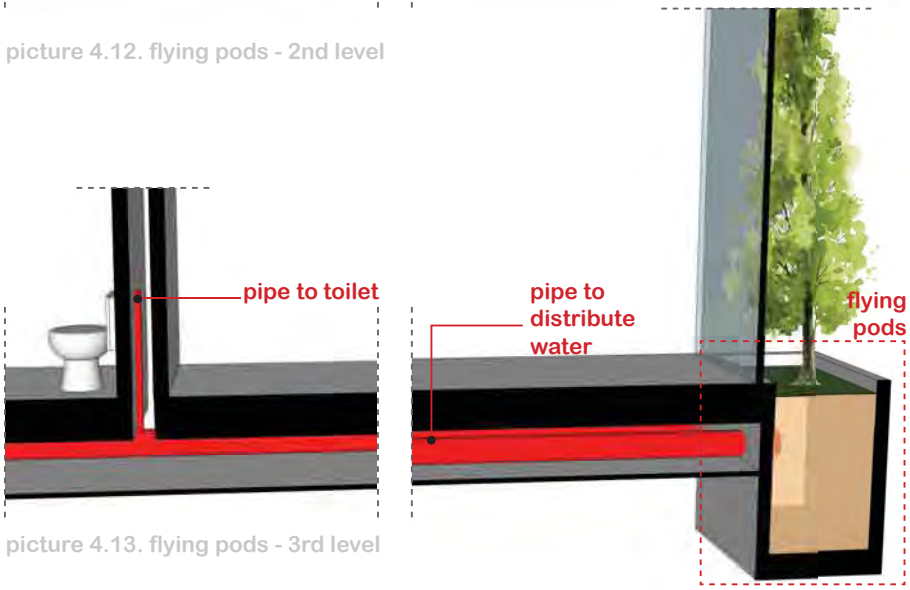
At winter / bad weather the roof can be closed so elderly can still sit 'outside'

picture 4.10. senior house - section
http://www.crunchgear.com

picture 4.11. senior house - section
http://www.cook.rutgers.edu/



picture 4.12. flying pods - 2nd level



picture 4.13. flying pods - 3rd level

There'll be **flying pods** in front of several rooms. This pods can be used to **collect rain water.**

After being processed , the rain water can be **used** for **water usage** in the building.(toilet, washing,etc)

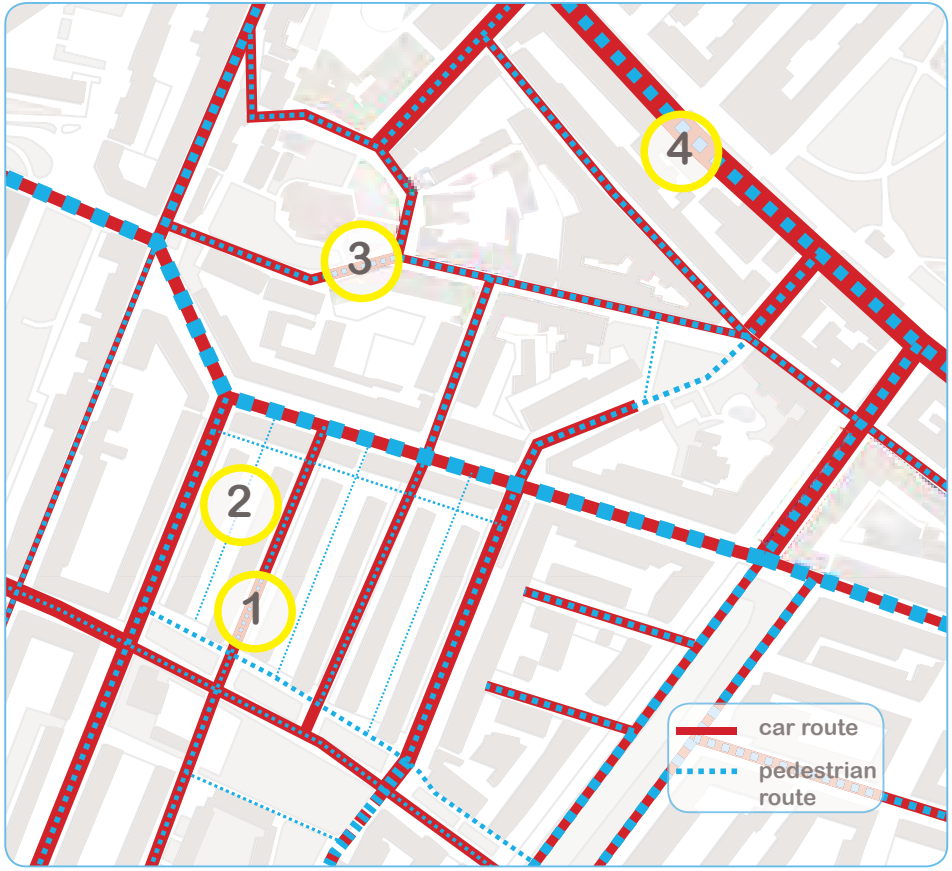
In designing street profile in this area, the concept from **Hans Monderman** has been c**onsid-ered.**

Hans Monderman was a Dutch road traffic engineer and innovator. He was recognized for radically challenging the criteria by which engineering solutions for street design are evaluated.

*His most famous design approach is **Shared Space.** . Shared Space designs typically call for **removing regulatory traffic control features** (such as kerbs, lane markings, signs and lights) and replacing intersections with roundabouts.*(wikipedia)

picture 4.14. hans monderman - previous

picture 4.15. hans monderman - after



picture 4.16.routes

Ideally, of course **every** streets are need to be **enhanced**.

But in this proposal, there are **4 streets** are proposed to be redesigned.

The reason to chose number 1&2 are to enhance accessiblity in the area.

Street number 3 are chosen to enhance accessiblity to reach the facilities (considering its bad condition).

Street number 4 is chosen because to enhance the environment in commercial area.

street profile

This is the street at the back of the houses. The condition which is not appropriate is the solid and high barriers.

These **barriers** make people feel **unsecure**. It can make the area **not safe** as well.

The proposals are to make the barriers lower (picture 4.19) and to change the material with more transparent one (picture 4.20).

picture 4.17.existing

picture 4.18.existing

picture 4.19.proposal 1

picture 4.20.proposal 2

street profile

condition	kids	elderly	others
high & solid barrier	0	0	1
total	1		

table 4.1.existing

condition	kids	elderly	others
low barrier	2	2	-1
total	3		

table 4.2.proposal 1

condition	kids	elderly	others
high & transparant barrier	2	2	0
total	4		

table 4.3.existing

To regenerate the area, we can't forget that this area is **not just** for **elderly**.

The whole society is living there. These **evaluation tables** are measuring how much the regeneration impact. Even **changes** will **not** be '**perfect**' for everybody, we need to make sure that the effect **total** amount is **still positive.**

Like example table 4.2. Even this condition can lowering the privacy of others, (middle age people) but in total this change is positive.

From this tables, we can see that this **impact** is **possitive** to **all society**

street profile

The street beside kerkje Oud Charlois park was chosen because its **narrow** and **high pedestrian** .There are also a lot of **cars parking** beside the pedestrian and worsen the condition.

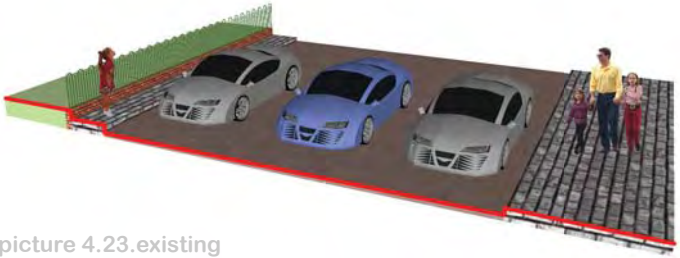
The **lightings** at pedestrian also become **obsticles**.

The proposal is to convert the carpark beside the pedestrian into pedestrian.

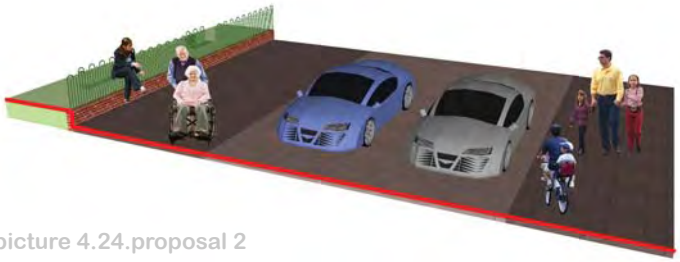
Instead of making the “new pedestrian higher”, the proposal is to make the pedestrian and car route **flat**.

picture 4.21.existing

picture 4.22. existing



picture 4.23.existing



picture 4.24.proposal 2

street profile

condition	kids	elderly	others
parking beside park	0	0	2
narrow pedestrian +obsticle	-2	-2	-1
total	-5		

table 4.4. existing

People who own **cars** may **not** really **like** this change because they need to park their cars at other places.

But if we see consider the whole society, this **change** is **positive**.

This change even can make make this **public place** more **comfort-able.**

condition	kids	elderly	others
no parking beside park	0	0	-2
wider pedestrian & no obsticles	2	2	1
total	3		

table 4.5.proposal 1

street profile

Cars are parking infront of the house at residential area.

Similar to previous solution the proposal is to **flatten** the **pedestrian** and the **car route**.

To make the street free of parking, this street profile is combining with the added of **multistorey carpark** which has been told in typology subject.

picture 4.25.existing

picture 4.26.existing

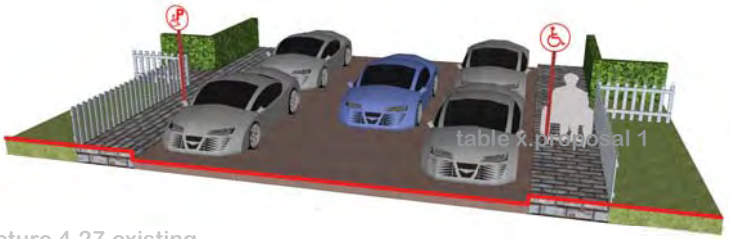
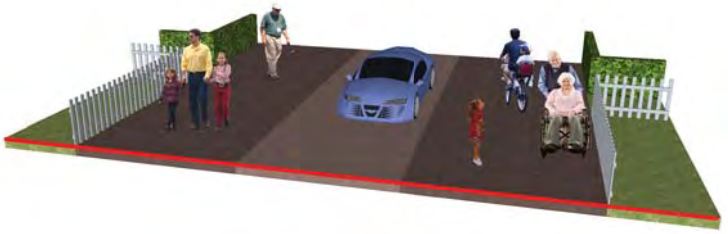


table x.proposal 1

picture 4.27.existing



picture 4.28.proposal 2

street profile

condition	kids	elderly	others
parking in front of house	0	0	2
narrow pedestrian +obsticle	-2	-2	-1
total	-5		

table 4.6. existing

Similar with the previous tables, even people who own **cars** may **not** really **like** this change but if we see consider the whole society, this change is **positive**.

This change even can make make this residential area more comfortable.

condition	kids	elderly	others
parking in multistorey carpark	0	0	0
wider pedestrian & no obsticles	2	2	1
total	5		

table 4.7.proposal 1

Kids can **play** at street since now the **streets** are **safer**.

street profile

The problem at wolphaertsbocht street is the green position (green --> grass and vegetation at pots). The green is not added value when people are shopping.

In fact, the grass and the tree roots are becoming obsticle for the pedestrian.

The furnitures there are just pots which almost can't be enjoyed by anyone because the cars are covering it.

The proposal is to put the grass beside the pedestrian.

The vas/ pots for shrubs will becombined with benches so it can be used by people who walks there.

picture 4.29.existing

picture 4.30.existing

picture 4.31. plan existing

picture 4.32. plan proposal

picture 4.33.proposal

street profile

condition	kids	elderly	others
un used green (grass and vegetation at pots)	0	0	0
no benches (at pedestrian in front of commercial)	-1	-2	0
narrow pedestrian (beside carpark)	-1	-2	0
total	-6		

table 4.8. existing

condition	kids	elderly	others
life green (grass and vegetaton combined with benches)	2	2	2
benches (at pedestrian in front of commercial)	2	2	2
wider pedestrian (beside carpark)	1	2	1
total	16		

table 4.9.proposal 1

This regeneration will make the streets along the shops **more attractive.**

From the tables we can see that these **big interventions** can bring **high positive impacts**.

Different from three street profiles before, this intervention is more for **long term**.

green space

Since the green space is the problem in this area, the design proposal will also **regenerate** the **green space**.

In general, the design purpose will put **more vitality** in the green space and make it more **functional.**

picture 4.34.friendly barrier -

picture 4.35.friendly barrier

picture 4.36.life green space
sasaki.com

picture 4.37.life green space
sasaki.com

picture 4.38. bad pedestrian

The green space that will be regenerated is :

1. park at kerkje Oud Charlois
2. park at Schiilperoortstraat
3. park at barendgregtstraat

Number 1 and 2 are chosen because it's worst condition.

Number 3 is new proposal to increase it's value since the building will be regenerated.

There's no bench surrounding the park in front of the church.

It's potential to have benches in-front of the park.

In picture 4.41 we can see the proposal is to **change** the some **parts** of the **gate** into **benches**.

To make the gate into the benches will have the feeling that the benches is part of the park.

Combined with the regeneration of street profile, this area can be more lively.

picture 4.39. existing

picture 4.40. existing

picture 4.41. proposal

picture 4.42.existing

picture 4.43.existing

The condition of park at Schiilperoortstraat is really poor.

The **bench** is in **bad** condition, there is **gate** that **seperate** the bench and the park infront. It seperate the kids who are playing in the park and the people who watch them.

The east part of the gate seems being **left behind** and become **dead space**.

The proposal is to add more playground tools for kids, put **playground function** at the **east part** of the park, add more **benches** at the park, and to **remove** the **gate** that seperate the existing benches and the park.

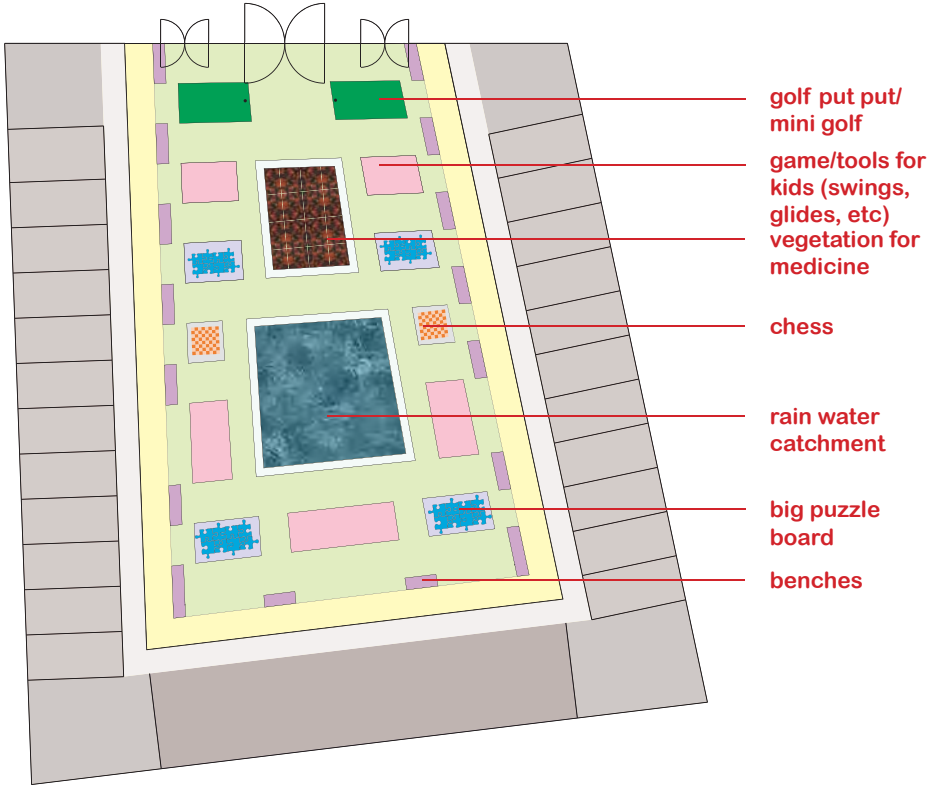
picture 4.44.proposal

There will be a **park** in front of the new senior house. The park will connect the existing play ground and this park.

There will be **outdoor facilities** that can be used by **elderly** and **kids**

There will be a lot of benches that can be used by elderly in this park.

These **benches** will have **several functions**-not just for sitting. We can see the picture of benches variation at **picture 4.48.**

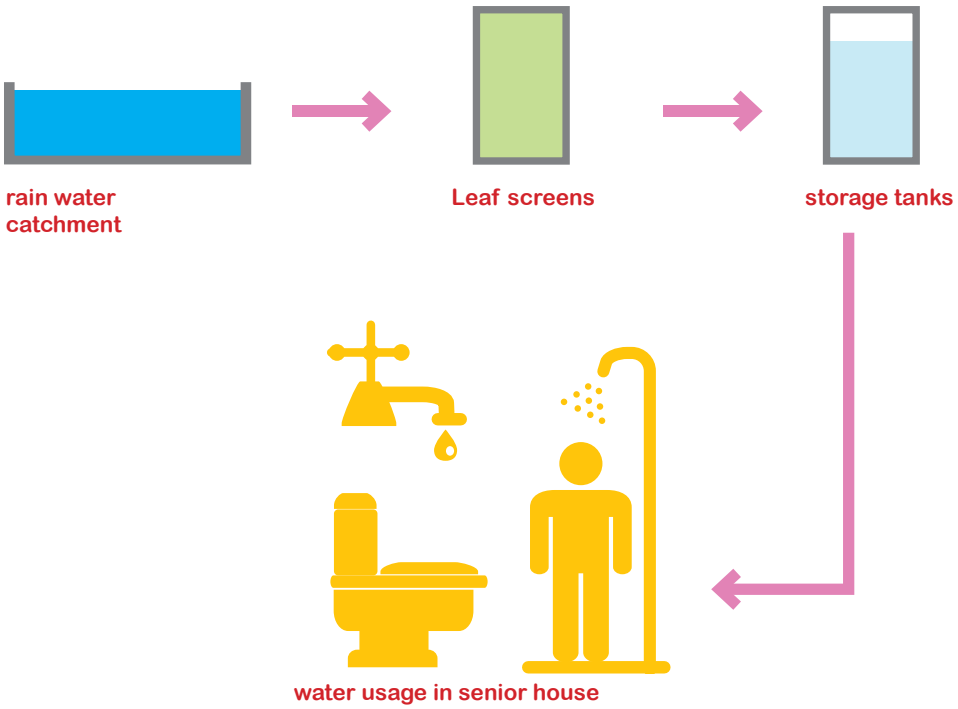


picture 4.45.proposal

There will be **pool** in the middle of the park.

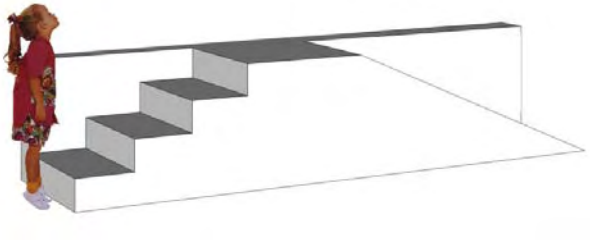
This pool will be used for **rainwater catchment**. After go through leaf screens* and storage tanks, water can be used at senior houses.

*leaf screens components which remove debris and dust from the captured rainwater before it goes to the tank



picture 4.46. rainwater catchment system
http://www.hawaiirain.org/

picture 4.47 park view



picture 4.48. benches variation

assisted living

gps

Based on GPS data, we can see that many elderly spend their time at park.

It's obvious that for elderly, spending time for leisure is important.

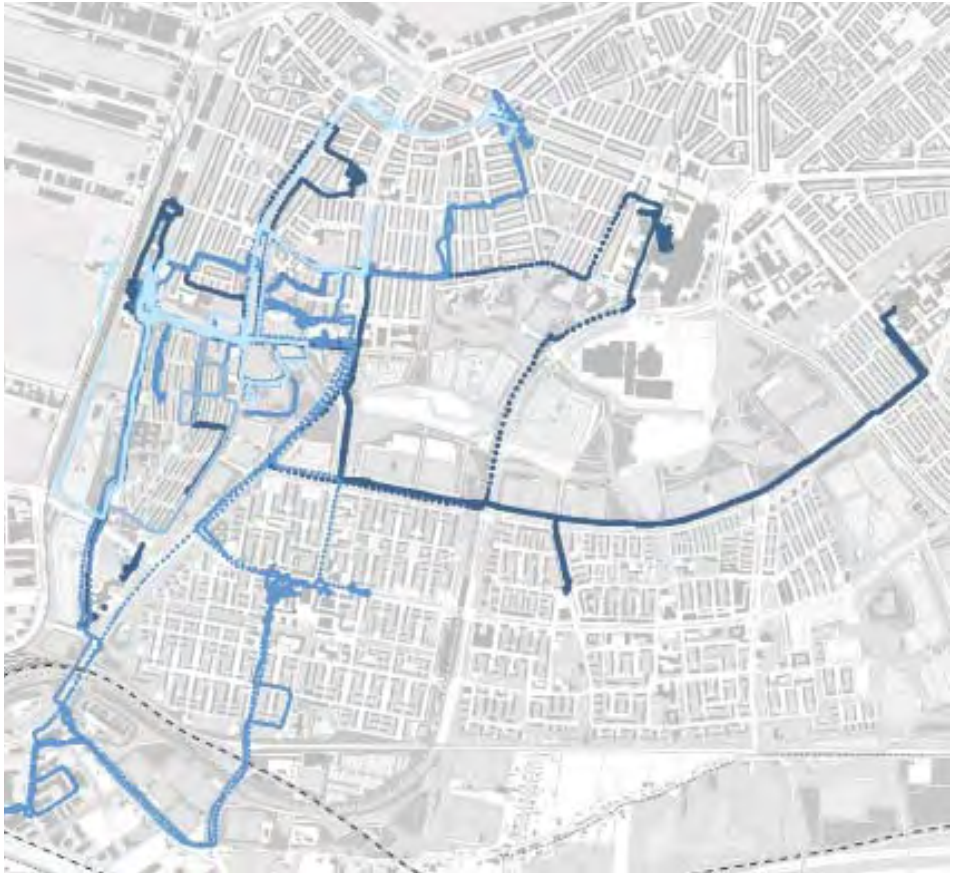
The quality of public space is important for them.

Like the proposal and based on this data, upgrading the green areas for leisure, to make it more lively is crusial.

Density

- Lower Level of Intensity
- Low to Medium Level of Intensity
- Medium to High Level of Intensity
- High level of Intensity

picture 5.1. GPS density



picture 5.1. GPS duration

We can see in picture 5.1 that the elderly like to walk.

Like we see in site condition, the street profiles at the chosen area are bad for pedestrian.

So according to this data, the proposal to upgrade the street profile in this area will be very helpfull for elderly.

Trip Duration

- 0-30 min
- 30 min-1 hour
- c
- c