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Assisted Living

The interaction between public space and building typologies, to create a safe neighborhood through hybrid spaces



Contents

	page
Preface	1
Introduction	2
Analysis	4
Mobility	4
Pubic transport	4
GPS research	5
Safety, facilities and elderly	6
Demography Rotterdam, district and neighbourhood scale	7
Building typologies	10
Discussion with real estate office on Doprsweg	10
Building typologies in Oud Charlois and a comparison with The typologies of Prins Alexander	11
Public space - street typologies and public green	12
Relationship between public and private space	13
Hybrid spaces	13
Planned assisted living area - Voornse Hof	15
Analyses of the Voornse Hof site	16
Sustainability aspects	19

Conclusions deriving from the analysis	19
Statement	20
Concept	20
Design proposal	22
Conclusion	25

Preface

The Changes in priorities occurs with age. Elderly are much more concerned with security and Safety, regardless of nationality, need of help and gender.

This project has the goal to be able to generate a design with a believe that the feeling of safety is a general need among the elderly in their every day life.

In this case it is the interaction between public space and the needed and sustainable building typologies through hybrid spaces, that can create the feeling of safety - control by design

The analysis is mainly based on hard data from the GIS and COS data of Rotterdam municipality. The GPS research you can place somewhere between hard and soft data and is at this stage more of an assumption then a result.

This proposal is of course only dealing with some of the aspects when investigating the possibilities to create an assisted living zone in Oud Charlois. Hopefully it can give you some interesting thoughts and material for further elaborations.



De Jongh's Rotterdam City map, ca. 1910

Rotterdam, Charlois and Oud Charlois

Introduction

Where do I live when I am old?

With the prosperity of the Dutch society, after the second world war, it became a privilege to place the elderly in big nursing homes. Here the elderly could get all the help they needed, that was maybe not possible to get at home. The relatives could come and visit them now and then, and were relieved with the responsibility of nursing the elderly. Often these homes, regardless of level of assistance they provided, can be located far from the persons neighbourhood and social network. This system has now shown to create less healthy elderly, both because they get sicker when they are in a hospital environment and the loss of their social network.

This, in combination with and changes of the Dutch society with a larger part of the population coming from other countries and a model for elderly care that has gone old, leads for a search of a new model for elderly care - assisted living.

The question is how the different areas, in this case Oud Charlois in Rotterdam, can implement age care, living, into the existing area?

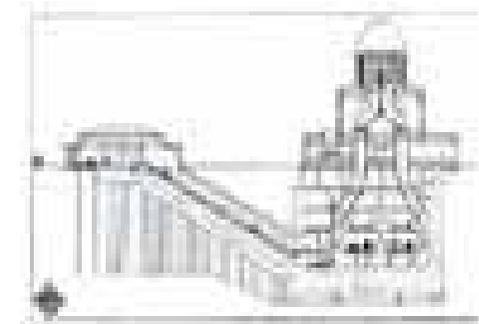
History of Oud Charlois

Rotterdam is not only the second largest city of the Netherlands but also in charge of one of the largest ports in the world. The city and the port have always co. Existed and because of this the development of Rotterdam's residential areas have had a close connection with the harbor that provided the main work for the population. Before our modern day harbor expansion to the west, the harbor expanded over the River Maas from north bank to the south bank. With some of the largest and most modern harbor basins in the world, the beginning at the 20th century, the South of course attracted a big working population. The large residential housing expansion of the South bank, with its peak from 1915-1960, was not only the large increase of the population of Rotterdam in the 1920s but also due to the baby boom after the Second World War.

Oud Charlois is one of the oldest areas of the south bank of the Maas. And this area, as many others in Rotterdam, is closely connected to the harbour. The old core is located in the north part of the area, if not counting the "new" developments of the Dock Haven from the 1980s. The area quickly expanded due to the construction of the largest and most modern harbours in the

world - Waalhaven. The construction (1937), and opening of the Maas tunnel just after the second world war, connected the area to the north bank. This connection was more used for north south connection than the opposite, due to the many workers commuting to work in the big harbour - Waalhaven. The reason why the people of Oud Charlois were in no need to cross the river was mainly because they had all they needed close by as work (Waalhaven), shops (local and Zuidplein), recreation (Zuidpark) and relatives.

The population of Oud Charlois mainly consisted of native Dutch workers before the harbour went less work intensive and mechanized in the 1960-1970s. As the work disappeared from Oud Charlois, the Dutch population moved out. This in combination with the effective suburbanisation of Dutch cities left the area with empty cheap housing, as well as a not so good image of the area.



Oud Charlois current situation

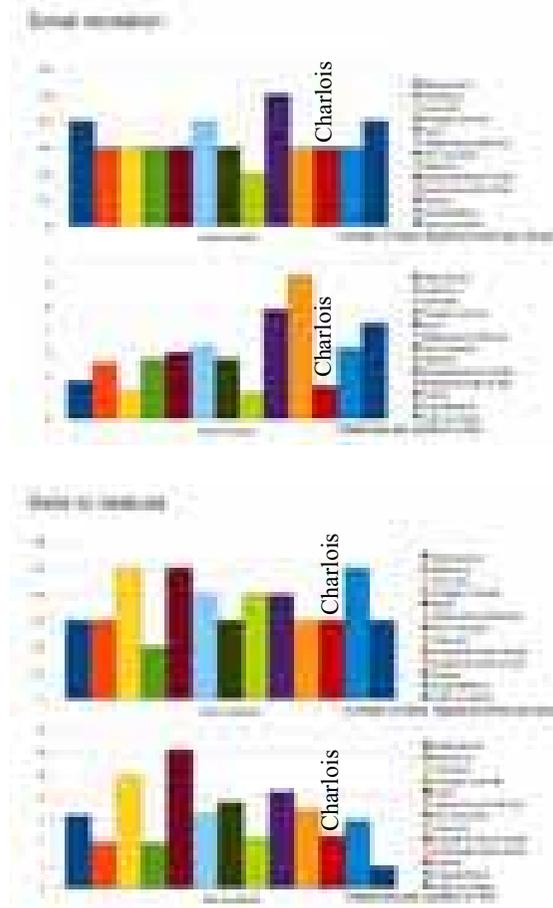
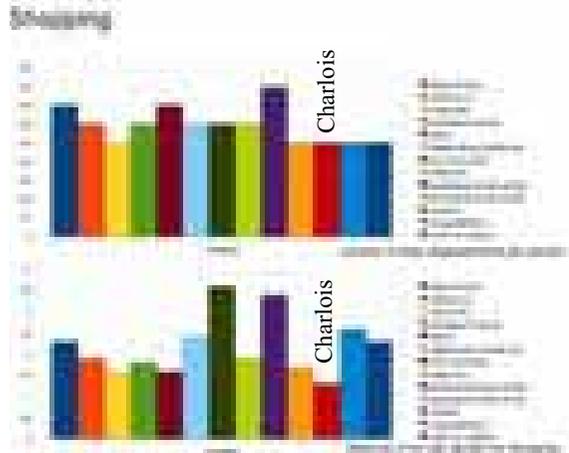
Mobility in Charlois

The data shows that the number of daily displacements per person in Charlois is the general of Rotterdam. Though they tend to move the smallest distances. The same pattern is shown when it comes to shopping and visit to relatives.

In general one can say it is, a quite sustainable neighbourhood in the sense that it is local! The daily displacements, shopping and visiting relatives, in Oud Charlois is one of the lowest of the South.

Work was before close to the neighbourhood - Waalhaven. Now that the harbour activities are disappearing work opportunities are as well.

Daily displacements



The road network in Oud Charlois
The primary road runs along the edges of the, marking the separation between Oud Charlois and other neighbourhoods in Charlois. Zuiderpark, located in the southern part, is cut into by a primary road.

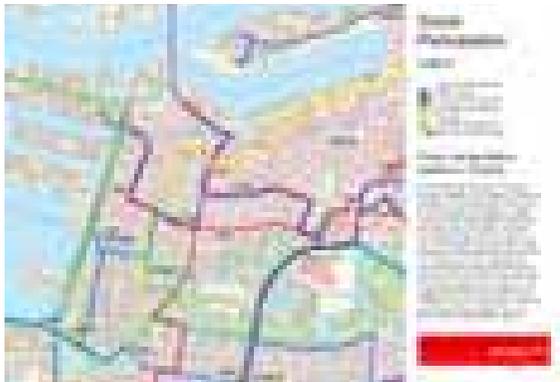


In the south the primary road is located just south of Wielewaal. So this means that Wielewaal and Oud Charlois are connected, or at least not disconnected by a primary road. In the north there is an heavily traf-ficked primary road, the entrance and exit of the Maas tunnel. 70.000 cars/day use the tunnel.

The secondary roads run along the main shopping street in the north, along the singel, between Oud Charlois and Wielewaal and towards Zuidplein. There are only a few bicycle roads, mainly along the dike, in the area.

The Public transport

The are fore north-south connections. One tram line, that goes along the singel, with a direction to the Erasmus bridge. Two bus-ses that make it through the Maas tunnel and then make an endless wining road to the central station of Rotterdam.

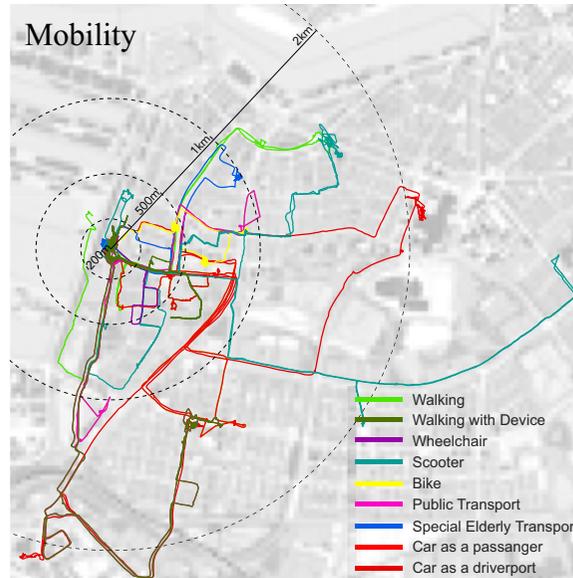


The forth connection is a buss connecting the southern part of Oud Charlois with Pen-drecht and its facilities.

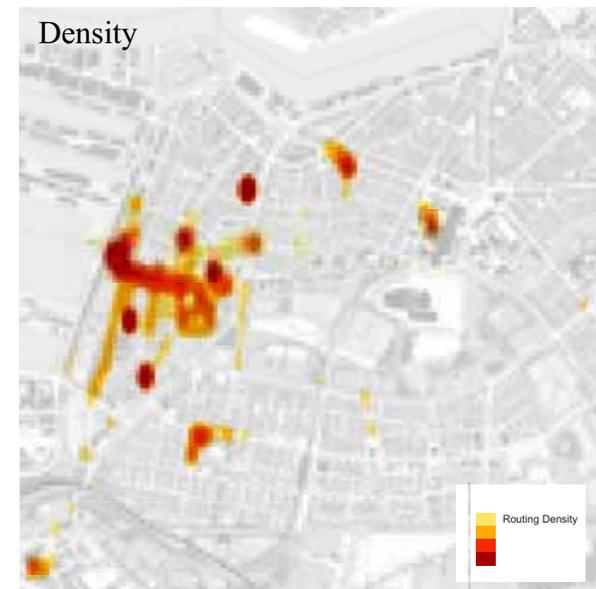
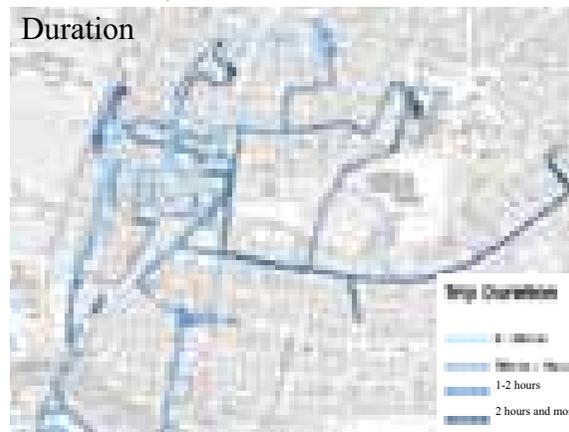
East-west connections are a couple of busses with the main purpose to transport people to Zuidpline, the big public transport hub of the south, as well as a big shopping complex.

GPS research

GPS data, tracing peoples mobility patterns by registering the route the people, in this case elderly living dependently in a assisted living home in the south of Oud Charlois, are using when going out from their homes. These activities and where, how, and why, among other questions, were given to the people when returning the gps, in a prepared questionnaires suiting this purpose. In this case 25 people were included in the re-search, during three days time.



This method can first of all show you the route that was taken, where the final destination was, the duration and mode of transportation (the Gps is set to register every two seconds).



Conclusions from the Gps research

The conclusions should rather be called assumptions because there are too few participants and the duration of the study was too short to make conclusions.

What you can do directly is that no one uses the facilities in the north. They rather go to Pendrecht to do the daily shopping. That there is a bus stop right outside their home and that goes to the facilities in Pendrecht can be another reason. That the shops in the north are much more expensive than the ones in Pendrecht can be another reason. Only one person went out for recreational walking, not having a final destination with the activity, for this he/she did not go to the Zuiderpark. Instead the walk was made around the edges of Wielewaal and to the waterfront. This can be, because walking in Zuiderpark alone might not feel as secure as walking around in a more controlled residential area.

The density of movement shows that the secondary road dividing Oud Charlois and Willer Waal is the most frequently used in this case, this can be because it is the primary road with bus stops and as well the direction to the closest way to the part of Zuiderpark to where they live.

The assumption that the radius, often around 300-500m or 5 min walk, that you are willing to walk and use around your home, is

shown to be a right assumption, but it does also show that if they need to go further, for visits, shopping to the hospital they do so. The distance the elderly can move might not have to do with the distance but with the quality of public space and the need to reach a certain destination.

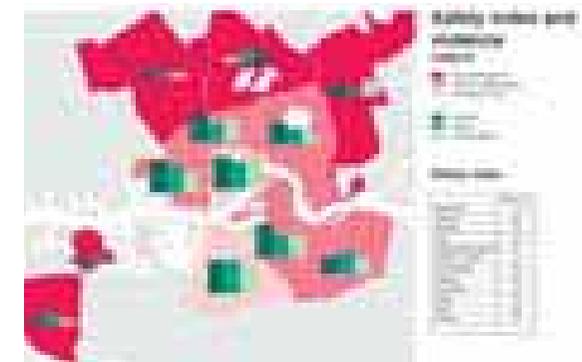
The boundaries of an area in the municipality sense is not the boundaries for people's mobility - the mental map of one's area has probably nothing to do with the "official edges" of an area.

The strong north-south street pattern of Oud Charlois makes you believe that this direction is the strongest one. Also because the facilities are located in the north part. The GPS research shows that the east-west connection is much stronger, when coming to people's mobility. And they move more freely around Charlois than expected



Not the right catchment area for the areas supermarkets according to the GPS result.

Safety, facilities and elderly



Charlois and the center have the lowest safety scores in Rotterdam. The south, in general, has a lower safety score as well as a worse image compared to the northern parts of Rotterdam.



In Oud Charlois the reported violence is concentrated around the, historical, northern part. This is where the shopping facilities of the area are located.



Demography Rotterdam, district and neighbourhood scale

What can the demography, and its changes for the last 15 years (1994-2009), say about the population in general and about the elderly in Rotterdam, Charlois and Oud Charlois? At a Rotterdam scale there has



been a decrease of the population for the past fifteen years. The statistics shows that some of the districts (deelgemeenten) have had a dramatic decrease, as well as increase of the population. Charlois and Prins Alexander Delftshaven had

the largest populations of the Rotterdam districts in 1994. While both Charlois and Delftshaven has had a decrease of the

population Prins Alexander has the largest increase and has by far the largest population of Rotterdam with 90.000 inhabitants. Delftshaven takes a modest second place with its 71.000 inhabitants.

totaal aantal inwoners [aantal personen], 1994, 2009		Demographic changes of the districts for the past 15 years, 94-09
1994	2009	
Stadscentrum	28.668	30.543 ▲
Delfshaven	75.866	71.201 ▼
Overschie	17.775	15.896 ▼
Noord	52.116	49.794 ▼
Hillegersberg-Schiebroek	39.211	41.390 ▲
Kralingen-Crooswijk	54.110	49.289 ▼
Prins Alexander	78.414	90.312 ▲▲
Feijenoord	72.528	68.478 ▼
Dijsselmonde	59.578	57.941 ▼
Charlois	68.020	62.925 ▼
Pernis	4.816	4.810 ●
Hoogvliet	38.040	34.904 ▼
Hoek van Holland	9.230	9.435 ▲
Haven/Industrie gebied	322	243 ▼
Onbekend	-	-
Totaal	598.694	587.161 ▼

Oud Charlois scale

The population changes 1994-09, of the different areas of Charlois.

	Oud Charlois Population 94-09	Pendrecht Population 94-09	Zuidwijk Population 94-09	Carnisse Population 94-09	Tarwewijk Population 94-09
1994	13.130	12.067	13.694	11.198	12.726
2009	12.763	11.726	12.144	10.173	11.219
	= - 367	= - 341	= - 1550	= - 1025	= - 1507

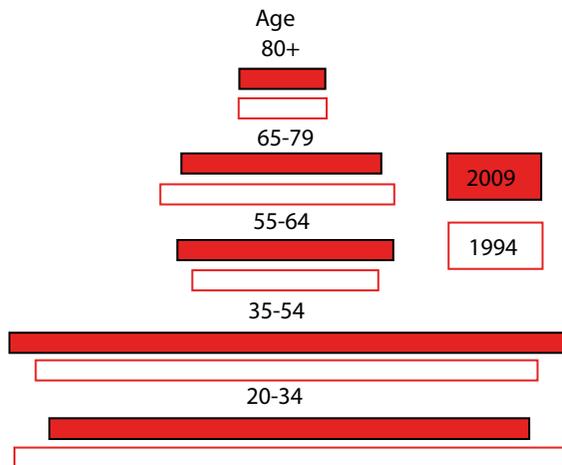
Charlois has had a decrease of 5000 inhabitants. This is on the same level as many of the other population decreases, on district level, in Rotterdam.

The total population of Oud Charlois is approximately 11.000 inhabitants. When comparing Oud Charlois with other areas in Charlois it has a “low” decrease of the population compared with Zuidwijk, Carnisse and Tarwewijk. These areas have decrease in population that is five time as big as Oud Charlois and Pendrecht.

Oud Charlois	2003			2008		
aantal geboorten [aantal personen]	168	183	210	183	183	179
aantal overledenen [aantal personen]	128	156	120	118	104	133

Demography Rotterdam scale

The population, as mentioned before, has decreased in Rotterdam. The demographic pyramid (20-80+) shows that there is an increase, for the past 15 years, in the age groups of 35-54 and 55-64. The other age groups are decreasing in Rotterdam.



20-80+ in Rotterdam 94-09

Age distribution in Oud Charlois

Age distribution	2000	2001	2002	2003	2004	2005	2006	2007	2008
Leeftijd overig	Aantal								
Alles	11193	11071	11077	11098	11331	11346	11219	11087	10775
01. 0 -14 Jaar	1854	1818	1898	1914	2011	2050	2059	2046	1994
02. 15-64 Jaar	7927	7920	7894	7926	8081	8074	7976	7868	7713
03. 65 +	1412	1333	1285	1258	1239	1222	1184	1173	1068

Leeftijdsgroepen , 1994, 2009 - Deelgemeenten

	aantal inwoners 65 t/m 79 jaar [aantal personen]		% inwoners 65 t/m 79 jaar [% personen]		aantal inwoners 80 jaar en ouder [aantal personen]		% inwoners 80 jaar en ouder [% personen]	
	1994	2009	1994	2009	1994	2009	1994	2009
Stadscentrum	2.726	2.601	9,5	8,5	1.058	794	3,7	2,6
Delfshaven	4.633	4.577	6,1	6,4	1.711	1.004	2,3	1,4
Overschie	2.806	1.725	15,8	10,9	1.025	950	5,8	6,0
Noord	4.355	3.586	8,4	7,2	1.743	1.292	3,3	2,6
Hillegersberg-Schiebroek	6.683	4.486	17,0	10,8	3.205	3.046	8,2	7,4
Kralingen-Crooswijk	5.362	4.597	9,9	9,3	2.219	1.855	4,1	3,8
Prins Alexander	11.803	11.516	15,1	12,8	4.975	5.715	6,3	6,3
Feijenoord	5.929	6.213	8,2	9,1	1.973	1.705	2,7	2,5
IJsselmonde	9.137	7.155	15,3	12,3	3.404	3.588	5,7	6,2
Charlois	10.704	5.538	15,7	8,8	3.493	3.080	5,1	4,9
Pernis	611	569	12,7	11,8	169	213	3,5	4,4
Hoogvliet	3.954	4.847	10,4	13,9	1.231	1.668	3,2	4,8
Hoek van Holland	1.199	1.331	13,0	14,1	283	505	3,1	5,4
Haven/Industrie gebied	22	21	6,8	8,6	x	6	x	2,5
Onbekend	-	-	-	-	-	-	-	-
Totaal	69.924	58.762	11,7	10,0	26.492	25.421	4,4	4,3

Elderly population 65-80 + district and neighbourhood scale

When comparing the changes of the age groups 65-79 and 80+ it is clear, in general, that the 65-79 years group is decreasing

in most districts, much more than the 80+ group that is almost on the same level in 2009 as in 1994. Charlois, Prins Alexander and IJsselmonde had a very large elderly population in 1994. On an area level

Leeftijdsgroepen , 1994, 2009 - Wijken

	aantal inwoners 65 t/m 79 jaar [aantal personen]		% inwoners 65 t/m 79 jaar [% personen]	
	1994	2009	1994	2009
Terweste	105	102	3,7	3,6
Centraal	1.400	134	13,8	3,8
Zuidwest	1.741	1.400	10,8	10,3
Oud-Charlois	1.558	973	13,9	7,8
Westen	146	173	11,3	10,4
Zuidplein	242	184	10,8	10,7
Westendijk	1.770	1.008	13,8	8,9
Zuidpark	148	128	10,1	10,4

An interesting fact is that while the 65-79 group has stayed the almost the same Prins Alexander. Charlois has a dramatic decrease in the 65-79 group, almost half of the population in this group has disappeared in fifteen years time. In the mean time the 80 + group has almost stayed on the same level, just with a small decrease.

Wijk	1994	2009	%
Prins Alexander	1500	1000	66,7
Charlois	1190	750	63,1
80+	600	400	66,7

In some of the neighborhoods you can see that, some extreme cases, the 65-79 group have decreased more than 50%, Pendrecht and Carnisse. The 80 + group has a more modest decrease since 1994. The age group 65-79 is of course larger then the 80+ group due to the mortality.

In Oud Charlois, you can see that the 65-79 group has decreased with one third from 1500 inhabitants to 1000 inhabitants in fifteen years time. From 11,9 % to 7,5 % of the population. The 80 + group has actually the same decrease, one third since 1994, 600 to 400 people, from % 4,8% to 3,2% of the population.

Oud Charlois Household distribution age 65-95+

		2000	2001	2002	2003	2004	2005	2006	2007	2008
		Aantal								
Enkelepersoonshuishouden	14-45-60 jaar					118	112	119	111	87
Enkelepersoonshuishouden	65-79-84 jaar					125	89	102	111	94
Enkelepersoonshuishouden	70-75-79 jaar					108	80	90	85	98
Enkelepersoonshuishouden	77-80-84 jaar					118	111	98	85	82
Enkelepersoonshuishouden	85-89-90 jaar					71	88	88	83	89
Enkelepersoonshuishouden	90-99-94 jaar					28	24	25	19	19
Enkelepersoonshuishouden	95-99+						5	8		
Gezinswettelijk samenwonende	14-45-60 jaar					8	14	16	10	11
Gezinswettelijk samenwonende	65-79-84 jaar					7				6
Gezinswettelijk samenwonende	74-80-89 jaar					181	121	138	147	148
Gezinswettelijk samenwonende	75-79-84 jaar					80	117	90	91	88
Gezinswettelijk samenwonende	76-79-79 jaar					107	88	81	79	72
Gezinswettelijk samenwonende	77-80-84 jaar					85	53	58	57	58
Gezinswettelijk samenwonende	78-80-80 jaar					21	17	20	19	12
Gezinswettelijk samenwonende	79-80-84 jaar								7	6
Gezinswettelijk samenwonende	84-85-89 jaar					21	25	28	32	31
Gezinswettelijk samenwonende	85-79-74 jaar					12	8	11	10	11
Gezinswettelijk samenwonende	86-75-79 jaar					12	11	6	6	11
Gezinswettelijk samenwonende	88-89-89 jaar					8	8	7	10	8
Gezinswettelijk samenwonende	89-79-74 jaar					8	8	8	8	
Gezinswettelijk samenwonende	90-79-79 jaar					7	8	5		14
Gezinswettelijk samenwonende	77-80-84 jaar					8	8			
Totaal	65-95+					204	217	243	231	158

In total 1089

Household distribution among the elderly in Oud Charlois

The elderly, 65-80 + , in Oud Charlois have as many people living on their own as living together with their partner. The other, 12 %, are living in an institution. 456 people living on their own results in 456 households. The ones living together, 463 living with partner,

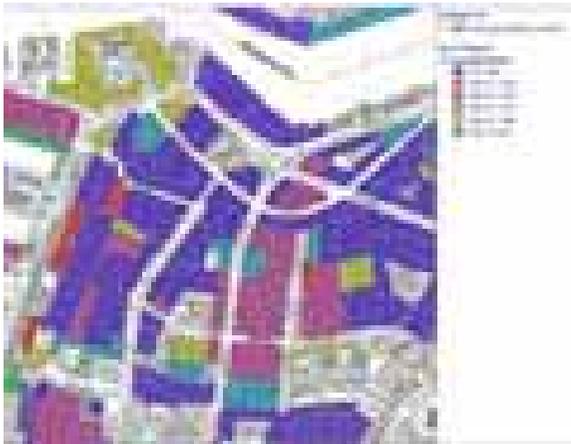
only results in half, 230 households. By these figures we know that 690 households are occupied by people 65-80 +.

Household distribution in Oud Charlois, elderly 65+
43 % living alone
43 % living with partner
690 households
12 % live in an institution

Building typologies

Most of the houses in Oud Charlois are built before the second world war, 50 %. This because this was the large expansion years of the Waalhaven and the workers needed place to live.

Year of construction



Bouwjaar	2000	2006
Alles	6488	6572
01. 1995 en later	230	571
02. 1980 tm 1994	1178	1178
03. 1968 tm 1979	51	55
04. 1956 tm 1967	200	196
05. 1946 tm 1955	870	853
06. Voor 1946	3959	3719

The next big developments after the war were built in the 1980:s. The location is the old Dockhaven area, the northern part along the waterfront. The area is

Bouwjaar	2007						
	01. 1 Kamer	02. 2 Kamers	03. 3 Kamers	04. 4 Kamers	05. 5 Kamers	06. 6 Kamers	07. 7 Kamers
Alles	105	1821	2297	1297	922	120	45
01. 1995 en later	46	276	191	123			
02. 1980 tm 1994		128	555	343	138	14	
03. 1968 tm 1979		9	24	9	12		
04. 1956 tm 1967		66	81	40	9		
05. 1946 tm 1955		180	431	184	53		
06. Voor 1946	99	1392	930	530	587	104	45

clearly disconnected from the rest of Oud Charlois by a dyke, different building types and a not adopting the liner street and enclosed courtyard typology of Oud Charlois. This area has mostly 3 and 4 room apartments, as well as elevators.

Most of the pre war housing apartments are two room apartments, three room apartments come on second place.

Today the three room apartments are the most common. There has been a big increase of 3 and 4 room apartments since the war.

Kamertal	2000		2007	
	Aantal	Aantal	Aantal	Aantal
Oud-Charlois Alles	6488	6622		
Oud-Charlois 01. 1 Kamer	113	105		
Oud-Charlois 02. 2 Kamers	1944	1821		
Oud-Charlois 03. 3 Kamers	2204	2297		
Oud-Charlois 04. 4 Kamers	1240	1297		
Oud-Charlois 05. 5 Kamers	820	922		
Oud-Charlois 06. 6 Kamers	112	120		
Oud-Charlois 07. 7 Kamers	44	45		
Oud-Charlois 08. 8 Kamers en meer	11	15		

And these sizes are now the most common in Oud Charlois. The one room apartments are as rare as the 6 rooms and more. Almost all the one room apartments are pre war housing.

Discussion with real estate office on Doprsweg

- 1 room. No need
- 2 room. For one person
- 3 room. For a couple living together/ lonely parent with children
- 4 rooms and more. For families with children

- Old dwellings are cheaper, because of bad standard.
- Young people tend to want high standard apartments.

- The dwellings in the Hoofd are of bad quality but this is compensated by the nice view of the water.
- The newly built area in the south west is more expensive because of higher standard and close to the small park.

- Need of more small public green.
- Oud Charlois has a bad image.

Concerning the elderly

For the dutch elderly population the social network is more important than any other quality as typology, functions and public space.

The Dutch elderly move to places as Barendrecht- suburbs for:

Social network, with other Dutch.

Higher standard of living.

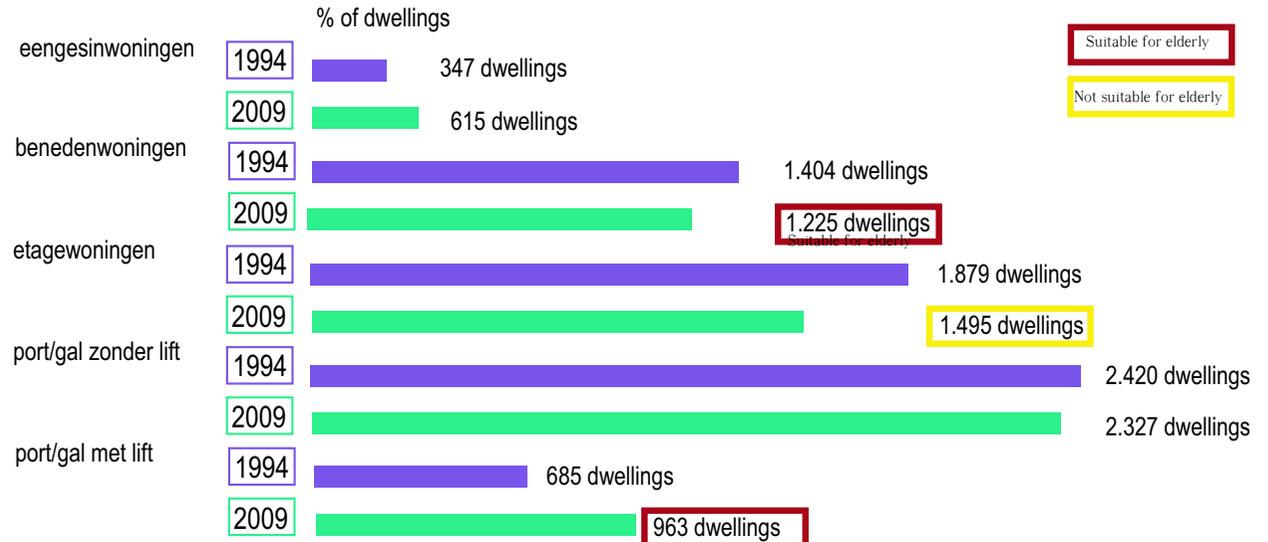
Nice view and nature is important.

Building typologies in Oud Charlois and a comparison with The typologies of Prins Alexander

The dwellings with out an elevator are the most common in Oud Charlois, this has to do with that most of the dwellings are pre war housing. The amount of one family houses (Eengezinwoningen) are low compared with the other types. The two types that have increased, since 1994, are the one family houses and the dwellings with an elevator. The other types have decreased. Still the dwellings with out elevator are the most common.

When comparing Charlois with Prins Alexander the figures are almost the opposite, most dwellings have an elevator and almost all the rest is one family housing. Only a small percentage lack an elevator.

Building typologies in Oud Charlois



Building typologies in Oud Charlois in comparison with Prins Alexander

Charlois	Prins Alexander
Port/gal zonder lift 94-09	Port/gal zonder lift 94-09
1994: 17.651 (50% of dwellings)	1994: 5.086 (14% of dwellings)
2009: 14.923 (44% of dwellings)	2009: 5.242 (12% of dwellings)
= - 2728	= + 156
Port/gal met lift 94-09	Port/gal met lift 94-09
1994: 3.649 (10% of dwellings)	1994: 15.317 (41% of dwellings)
2009: 6.078 (18% of dwellings)	2009: 17.074 (40% of dwellings)
= + 2429	= + 1757

% of different Building Typologies, Oud Charlois in comparison with Prins Alexander

	%OC	%PA
Eengezinwoningen	9	39
Benedenwoningen	18	4
Etagewoningen	22	1
Port/gal zoner lift	34	14
Port/gal met lift	14	41

When comparing Oud Charlois with Prins Alexander the figures are not as bad as the ones on Charlois scale. Though the difference is still huge, you can say they have the opposite building typologies!

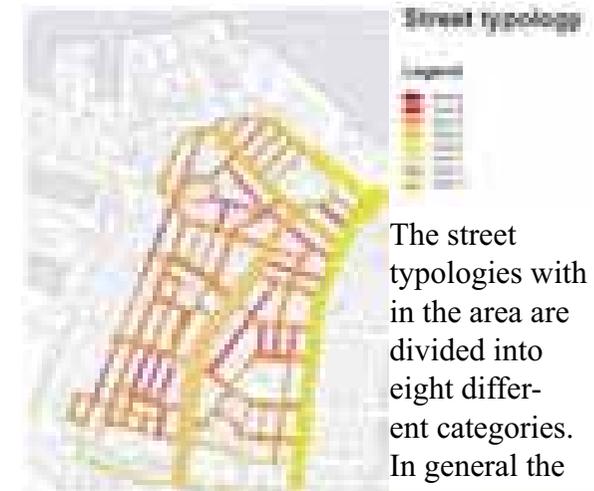
Public space

Street typologies and public green

One of the city's largest parks, Zuiderpark, is located in Charlois. Oud Charlois is connected to the park in the neighborhoods southern part, the Singel begins or ends in the park depending on how you see it. In the northern, waterfront, area there is a large amount of supportive green, though you can not call it a park. This area is poorly maintained. The Karel de Stouten park, located between the northern shopping street and the incinerator, was before a functioning and popular park but has now lost its function as a park. Other public green areas are scattered around the area but most of them are badly maintained. Only the Singel, smaller park between Oud Charlois and Wielewaal and the old center of Oud Charlois are well maintained. The left over green areas run like a circle around the area.



There is also one left over public green area in the middle of the area, now used as a place to “walk” the dogs. Though, one should not underestimate the importance of this function.



The street typologies with in the area are divided into eight different categories. In general the



streets are either narrow, usually cars are placed alongside the streets, or the front gardens of the houses are facing the street and there for gives it a wider feeling. Though the pedestrian area is the same it feels more controlled and wide due to this front gardens.

The singel (Boergoenservliet), the northern shopping street (Wolphaertsboch) and the primary road in the west (Dorpsweg) are the streets that differ from the general street typologies.

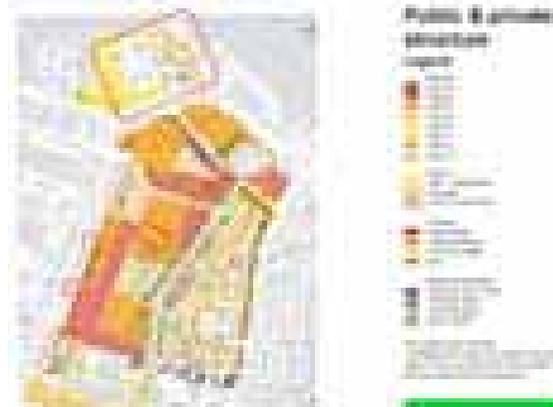


The above evaluation of public space shows that the average is between upper average and lower average. As mentioned before the singel, old center and the park in the south are of higher quality.

The worst public space areas run like a ribbon around the eastern edge of Oud Charlois, as well as a dark spot in the middle where the left over “walking” the dog area is located.

Relationship between public and private space

The relationship between public and private space is a patchwork of lower levels combined with a few on a higher level on the west side of the singel. While conditions between public and private space on the east side of the singel is on a high level. Having a good relation between public and private space is important for a stable neighbourhood. If the structure is bad the area can feel unsafe for the inhabitants.



Hybrid spaces

The transition between public and private space can some times be non existing. The transition, some time called hybrid space, between public and private space is an important space to create a clear definition between the spaces with out being to clear, like high fences. The right hybrid space can avoid undefined public space and. Some times if there is no hybrid space, people tend to create them. This can be as simple as placing a plant ore bench in front of your entrance to building a fence. This is quite usual in Oud Charlois, though there is a lac of hybrid spaces in the area.



No transition between public an private



Example of to clear barrier between public and private space



Examples of own additions of transitions between public and private space.



Examples of functioning transitions between public and private space



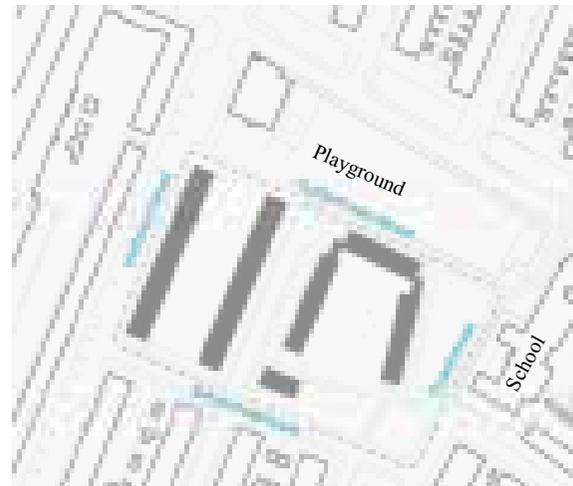
Planned assisted living area - Voornse Hof

On a site, owned by the housing corporation Vestia, located between Verboomstraat and Quackstraat there are plans to build an assisted living area. Here 104 apartments are being torn down to create space for a living complex for elderly people. 1.600 sqm as a nursing home, for people with need of more care. As well as a, 120 apartments, 19.560 sqm, senior housing for 55+. Along Quackstraat runs a playground for children, on a “leftover” plot.

To days proposal is divided into two buildings with a open court yard in the middle. Between the buildings runs a diagonal north-south connection, not clear if it is a street ore a path.



Location of the area in a larger perspective



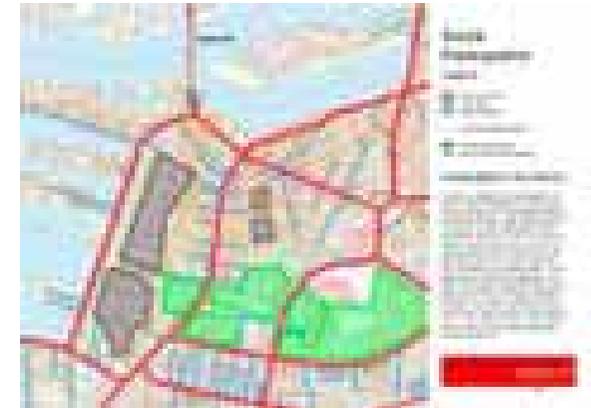
Current plan and houses to be demolisher



To days proposal

Proposed program

Program	Number (approx.)	Area (sqm)	Value
Apartment	120	19	1.000
Senior housing	120	19	2.000
Senior housing	120	19	1.000
Total			4.000



The location of the area is located in a zone that is, concluded from a two step analysis carried out from the primary roads of Oud Charlois, least accessible from the primary roads. Wielewall has the same accessibility, you can choose to see it as hard to access ore as a calm area.

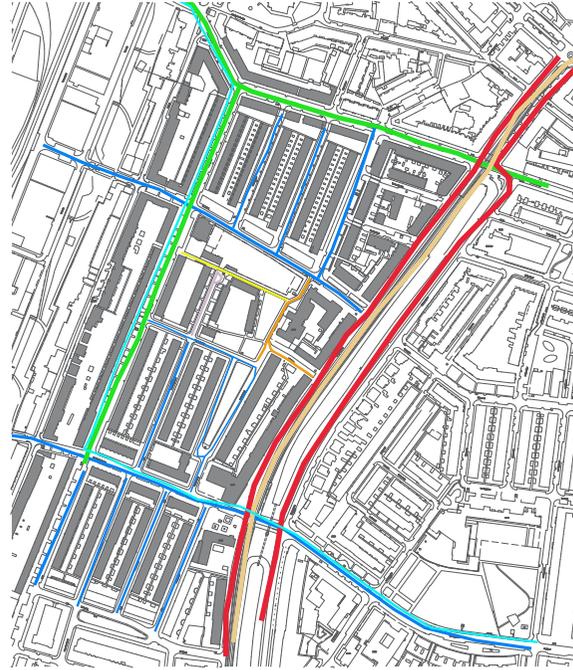
Analyses of the Voornse Hof site



Public and private

- Public green/ dog pooh green
- ★ Public behind fences
- Semi private
- Private

The site has a large amount of public green. The main function of the public green is for walking your dog, officially and unofficially. The public space behind fences, is a large play ground for children. This is the main attraction of the site and for the school children in the nearby school.



Road network



The liner, north-south street pattern is broken at the site. The only north-south connecting with in the area is a dead end road. The east-west street on the south edge, Barendregtstraat, has an unclear connection to the singel. Verboomstraat is the main road, with buss stops, surrounding the area.



Legend

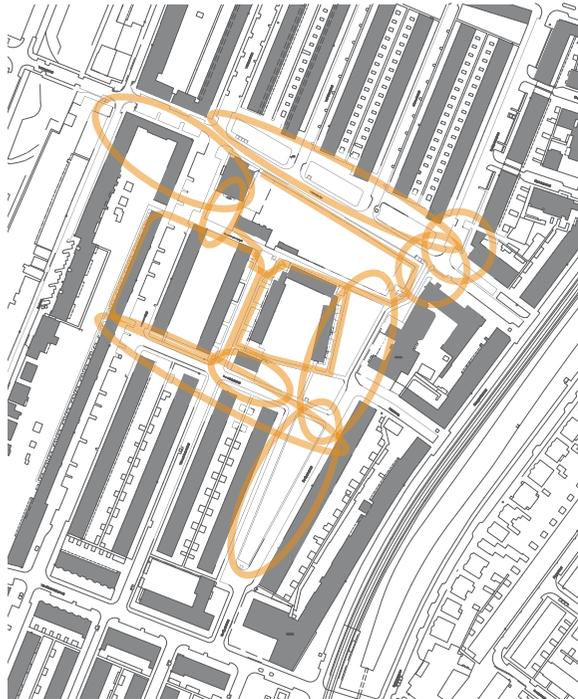
- Blind gables/high fences
- Facade with covered windows/windows above eye level
- Proposed public green

The facades facing the block, in this proposal a park, are only blind gables and facades with covered windows or windows above eye level.

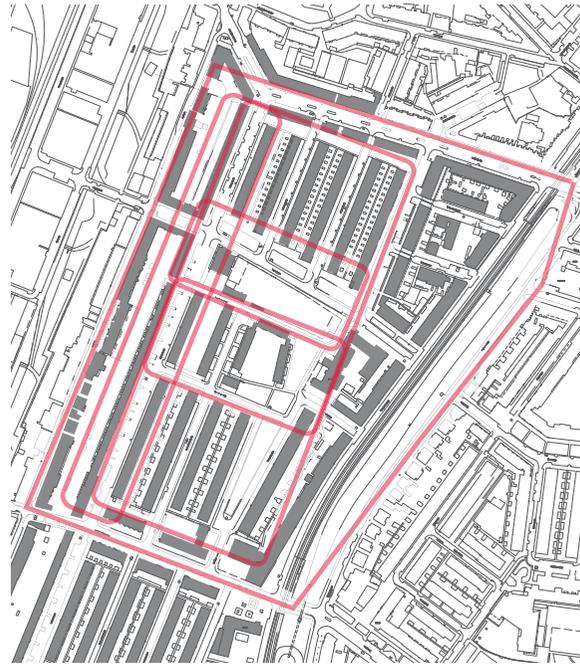


If the entire block would be a park it would have almost the same size as Karel de Stouter Park.

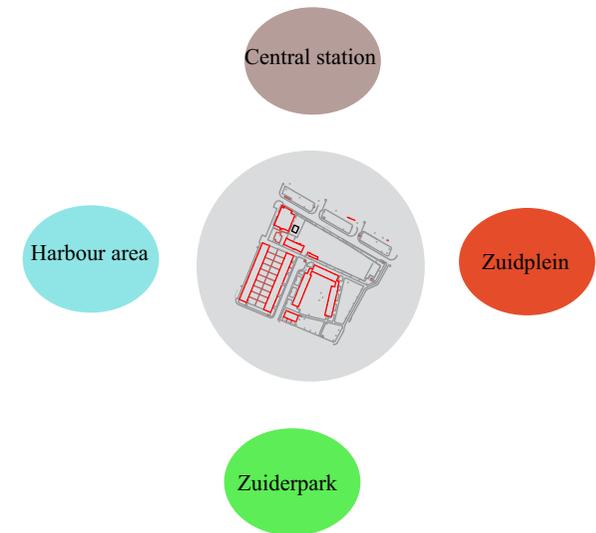
Mental belonging on three scales



On a small scale the area might be divided into several small areas. Your own courtyard, entrance, closest buss/tram stop, dog walking area or shop has your strongest mental belonging. On the opposite, there might be streets, shops or other functions, close by, that are not included into your mental map.



On a medium scale the mental belonging of the area might include the hall block, having the surrounding street as a border. But on the medium scale this area has a larger mental belonging. Here it is proposed it has a connection with the linear north-south and east-west street pattern. Does it go as far as the other side of the Singel?



Large belonging ratio

On a large scale the mental map does not end within the own area. It probably goes as far as Zuidplein for shopping, Zuiderpark, for the thought of recreation, the harbour area (Waalhaven) as waterfront and former working area and the central station as a connection to the rest of Holland or may be the hall world, Schiphol.

Edges surrounding the area



Northern edge - Voornsefliet



Southern edge - Barendregtstraat



Eastern edge - Quackstraat



Western edge - Verboomstraat

Sustainability aspects

Sustainability is divided into three categories: economical, social and environmental sustainability. On a city scale the RDM site/Heijshaven district is developed by The Port of Rotterdam Authority. The site is developed as a campus for educational institutions, knowledge development, innovative manufacturing and new energy sources. On a local scale of Oud Charlois this means that the incinerator on Doklaan/Brielselaan, the most important landmark and a big part of the image, will be concentrating on producing renewable energy in the next few years. The idea is to use residual heat from the waste disposal installation to provide heating for buildings in neighbouring districts of the city.



Conclusions deriving from the analysis

The number of daily displacements per person in Charlois is the average of Rotterdam. Though they tend to move the smallest distances. The same pattern is shown when it comes to shopping and visit to relatives.

The public transport system is satisfying within the area except for the bad connection to the central station.

The GPS research shows that the elderly tend to move in a close range to their home in everyday displacement, a radius of 500m. If they need to reach a certain point shop, health care or visiting a relative or friend they can travel a much longer distance. When going out for recreational reasons they tend to avoid Zuiderpark. By the GPS research, one can make an assumption that when moving around for recreational reasons elderly tend to stay close to their home. As well, and most important, they tend to walk where there public space is controlled. In this case around Wielewaal, rather than in the Zuider park

The safety index of Oud Charlois is not that positive. They are on the same low rate as the City centre of Rotterdam. The main facilities are located in the north

part of Oud Charlois. It is here that the most of the Police reports are reported. This leads to the conclusion that a center of facilities in Oud Charlois will attract more violence. There for the southern, with few shops, area of Oud Charlois should be kept mostly residential, if wanting it to stay safe.

The age group 65-79 has drastically decreased in Charlois and Oud Charlois. 1994 Charlois and Prins Alexander had almost the same amount of elderly in this group but as Prins Alexander has kept the same amount Charlois has lost almost 50 % of this age group.

Prins Alexander had and has the largest amount of dwellings suitable for elderly. Charlois and Oud Charlois has the least suitable building typologies for elderly.

700 dwellings in Oud Charlois are now occupied by elderly people. The group that lives on their own is as large as the ones living with a partner.

The public space in Oud Charlois when considering public green, street typology and building typology is mainly lacking the transition between public and private. The amount of undefined public space is too large for feeling safe in the neighbourhood.

To days proposed and to be realized assisted living area ,Voornse Hof, does not take the surrounding area into consideration. Though this area and Wielewall, considered safe and popular among its inhabitants, are in the same low accessibility area the area north-western area is not as popular as Wielewall.

Statement

The Changes in priorities occurs with age. Elderly are much more concerned with security and Safety, regardless of nationality, need of help and gender.

There is a lack of building typologies suitable for the elderly in Oud Charlois. The missing typologies can be the reason why the elderly are leaving Oud Charlois, to move to other areas.

The distance the elderly can move might not have to do with the distance rather with the quality of public space. To be able to, quickly, reach a health care centre, park ore a supermarket might not be the primer quality of life.

When going out for recreational reasons the size ore the quality of the public green might not be as important as how close it is to your home and the feeling of safety.

Regardless of age it is important to have a functioning social network, feeling safe and not being to lonely is of great value in life! Though it is proven that people who live together stay healthier and live longer.

Though the strong north south street pattern in Oud Charlois the east west connections are more frequently used. Is there a missing link in the connection of the north And south?

The proposed design for the care zone, Voornse Hof, is not suitable for the current site, situation and surroundings. The design of the area is as important as the programing, this to become a pleasant and safe residential area for the elderly.

Concept

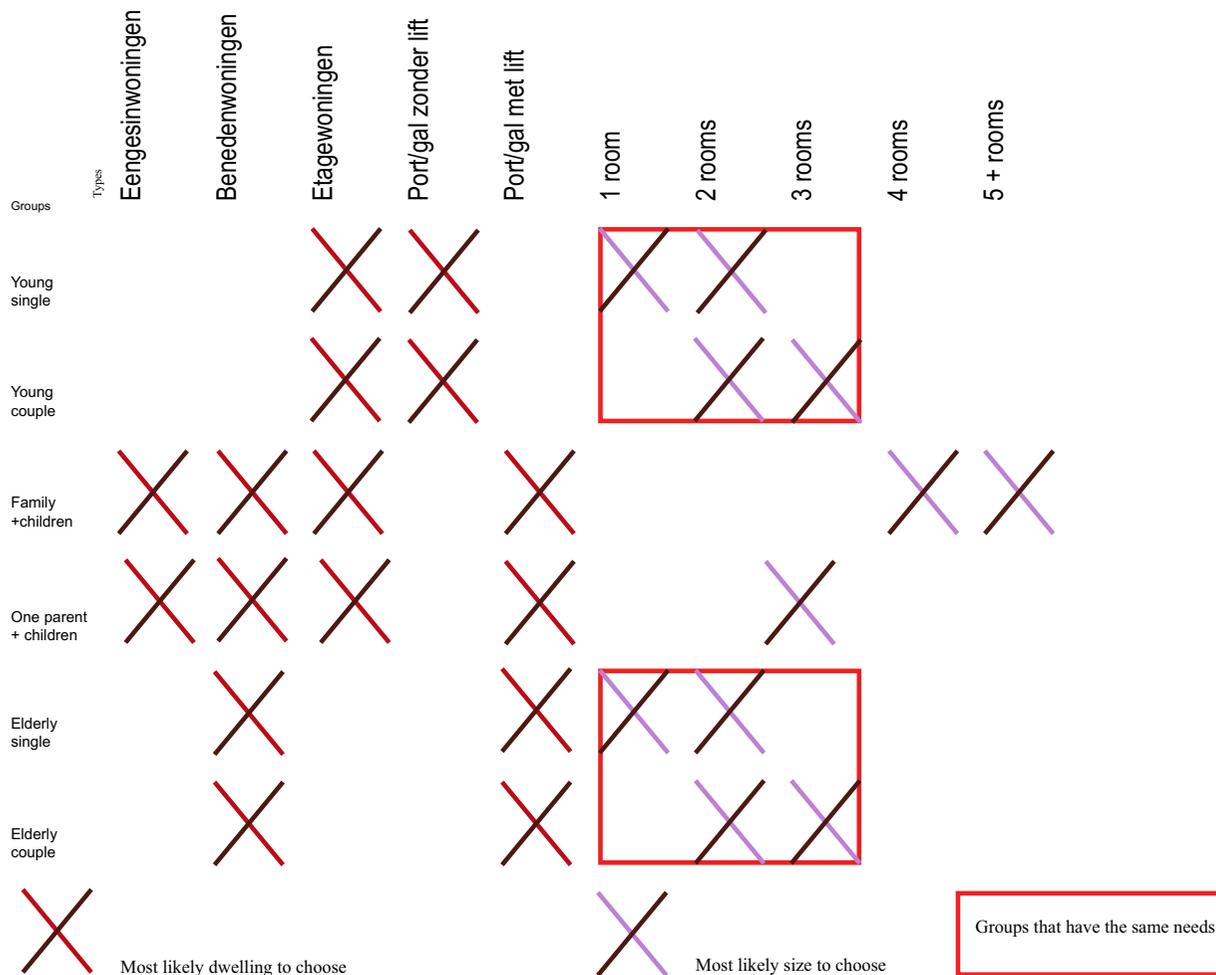
Based on the analysis the main concept is the interaction between Public space and Building typology.



The two main concepts for accomplishing this is to when designing define clear hybrid spaces between the proposed public space and the other main concept: Sustainable building typologies, and sizes, that are suitable not only for the elderly but as well for students.



By carefully designing the hybrid spaces/ transitions between public and private space, avoiding undefined public space, this connection between public space and building typology can create a safe and pleasant neighborhood. And at the same time this can control the collective private, and public space.



Building typologies from an elderly and sustainable perspective.

The building typologies, and size of the dwellings, implemented should not only be suitable for the elderly. This for creating a more sustainable solution if the elderly population will decrease in the future. The elderly and the young people whitt out children have the same needs in size of dwelling but the elderly have special needs in type of dwelling.

To design 1-3 room apartments so they are suitable for both elderly and young will be a sustainable solution - an increase or decrease in the groups will not cause empty apartments.

Design proposal

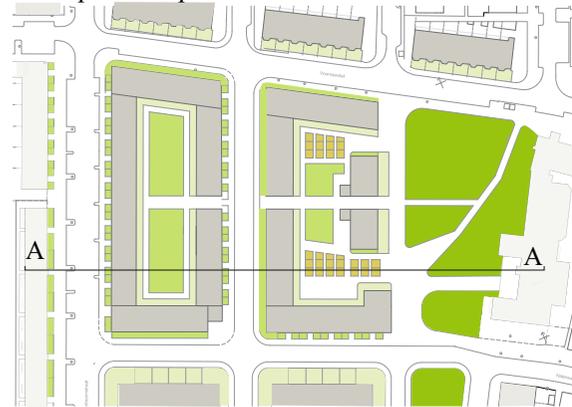


The proposed plan and new public space. Both blocks have public courtyards one more enclosed and the other more open towards the park

- New buildings
- Existing buildings
- New public green

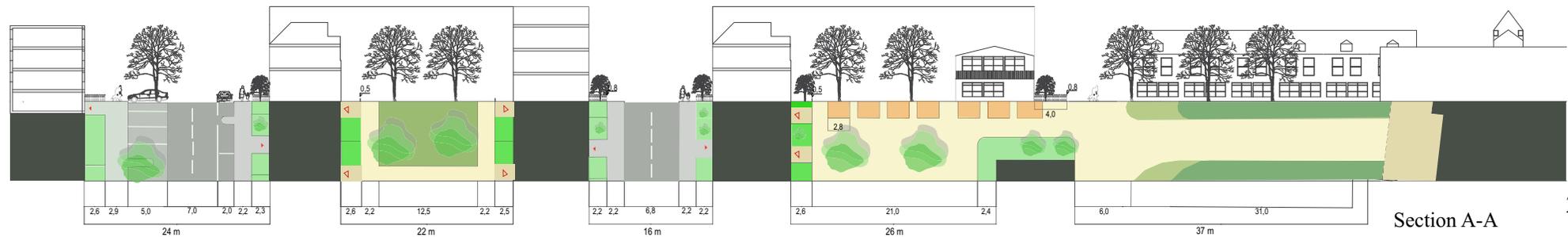


From public to private



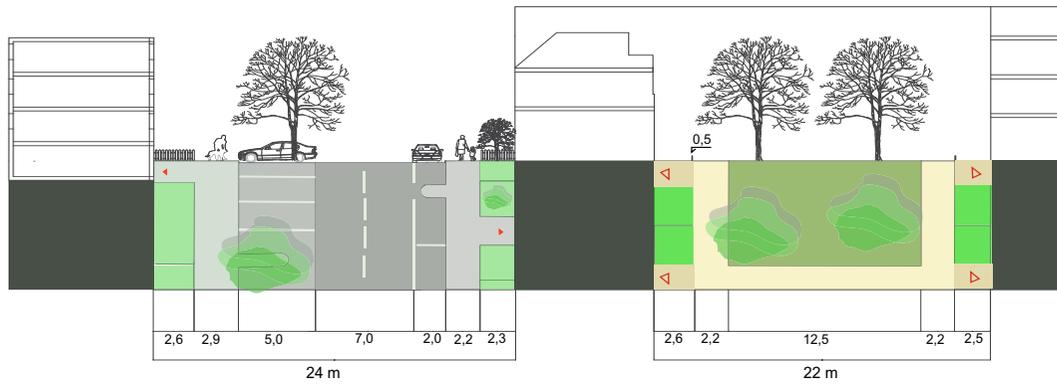
- Territoriality Transitions from public to private
- Public space
 - Collective private space
Allotment gardens
 - Private space
- Old and new buildings
- New proposal
 - Existing buildings

View from the private but open courtyard towards the public park. This relationship creates a feeling of control of the park and at the same time the apartments have a view to the park. Allotment gardens create the feeling of ownership of the collective private courtyard.

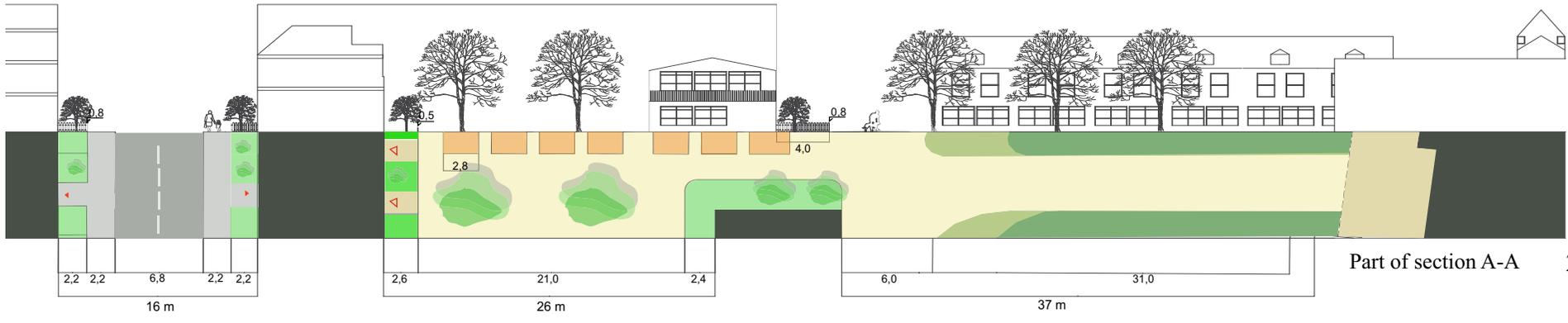




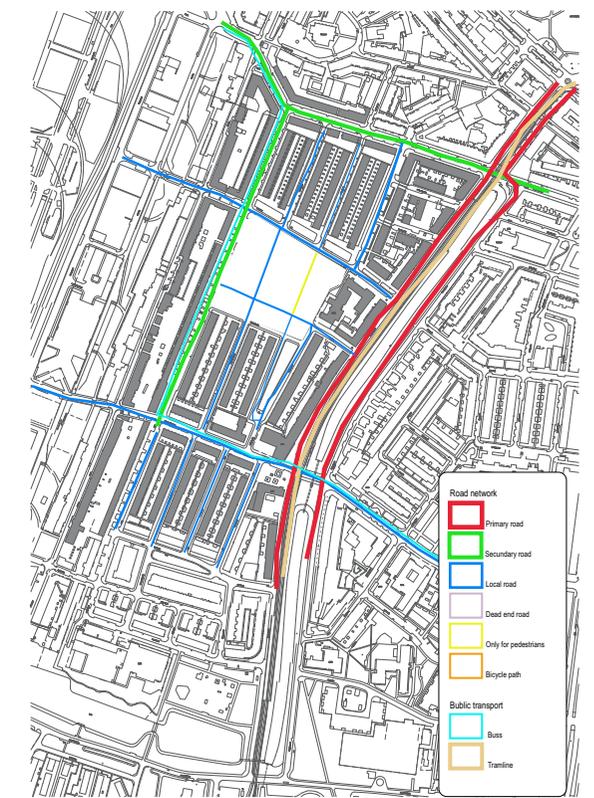
View from the park to the open courtyard and the row houses, with front gardens along Voornsefriet create a feeling of control, both to the street and the park.



Part of section A-A

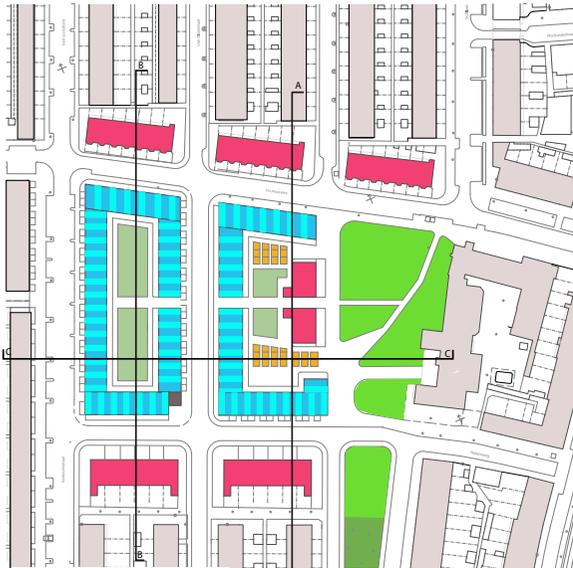


Part of section A-A 23



New road network - More clear connection, and directions, to the singel and north/south connection.

Program



Existing buildings

- Residential not changed
- School

Typology new proposals

- 4 rooms and more Eengesindewoningen
- 2 rooms Benedenwoningen
- 2 and 3 rooms Port/gal met Lift

Green

- Collective private
- Allotment gardens
- Public green

The proposed program is a combination of apartment blocks suitable for elderly surrounded by one family row houses. This to both control the edges of the area and avoiding the area to become an “area only for the elderly”.

The sizes and typologies are suitable for lonely and elderly living with a partner.

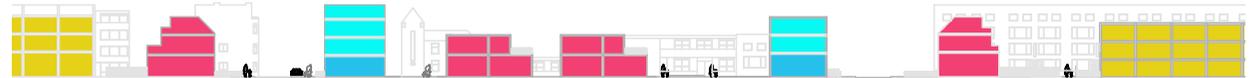
By avoiding etage houses and always include an elevator the elderly can move freely. These typologies have nothing that is not suitable for young singles living alone or with a partner.

Hybrid spaces - transitions

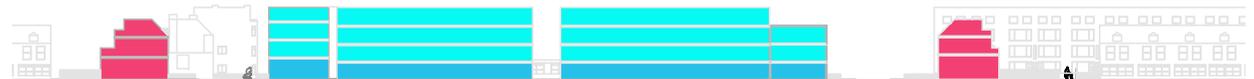
The entrances are places so the “benedenwoningen” apartments have their entrance from the courtyards, this to create sense of control and transition from collective private to private.

The other apartments enter from the streets, transition from public to private with a 2 meters wide lawn, and some time low fence as hybrid space.

The public park functions both as a close by park for the elderly and a playground for the kids in the existing school.



Section A-A

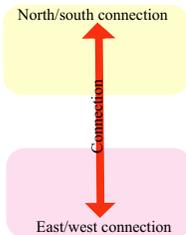


Section B-B



Section C-C

Creating clear directions and connections by design



The left block follows the north/south street pattern while the right block follows both east/west and north/south street pattern. The semiprivate street that runs through the two blocks connects the two blocks and directions

Conclusion

Public space and building typologies are closely connected, they belong together. The one can not exist with out the other.

To design for the elderly with safety as main aspect in the living environment with help of the transitions, hybrid spaces, when implementing the building typologies on this specific site was necessary because of the bad situation of the surrounding edges. In an other case the changes might not have had to be that extensive.

The needed typologies could be different in other cases but the relationship between private and public, with the important transition - hybrid space, could be implemented in any area and situation to avoid undefined public space.

Considering the sustainable aspect the area is al ready local and in that sense sustainable.