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Chapter

Urban Greenery as a Tool to Enhance Social Integration? A Case Study of Altstetten-Albisrieden, Zürich

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Abstract

Urban greenery can help mitigate adverse effects caused by urbanisation. It benefits thermal comfort and individual well-being remarkably. Nevertheless, its benefit to social well-being needs to be further explored. This study investigated green spaces and their potential for boosting community integration in Altstetten–Albisrieden, Zürich. Three green-space types, public, community and private, were categorised by ownership and accessibility and were used to portray green-space structure. The study first analysed public green spaces' connectivity and significance at the district scale. Four significant green space clusters and their 400-m service areas were selected as subsite cases for further discussion concerning their social potentials at the neighbourhood scale. Data on green space structure and space use activities were extracted from the open-source data of Zürich and were collected through onsite observation. The study concluded that practical public green spaces might be the combination of location and size in the urban fabric. The attributes of green spaces, such as size, boundary, and equipped facilities, could be decisive in influencing the activities in green areas significantly for enhancing community integration.

Keywords: urban greenery, social potential, Altstetten–Albisrieden, Zürich, green space, space use

1. Introduction

Living in the era of Anthropocene, returning to nature-based solutions seems like a necessary approach to deal with growing challenges concerning climate change and the biodiversity loss. In cities, such an approach has been underpinned by the advancement of urban greenery, considered an essential tool to help mitigate adverse impacts caused by rapid urban development. Under the circumstance that the population in urban areas are increasingly growing, greenery in cities with diverse space components, such as parks, gardens, and green walls, has been shouldering noteworthiness in urban forms. It contributes to cooling cities [1, 2], providing comfort [3] and other major interests for cities' health [4, 5], economy [6–8], and ecosystems [9]. Psychological research extends the studies of urban greenery to its non-physical contribution. It demonstrates the effectiveness of greenery in releasing negative individual emotions [10–12].

Indeed, urban greenery benefiting social well-being, more explicitly speaking, social cohesion and integration, has been discussed from another perspective.

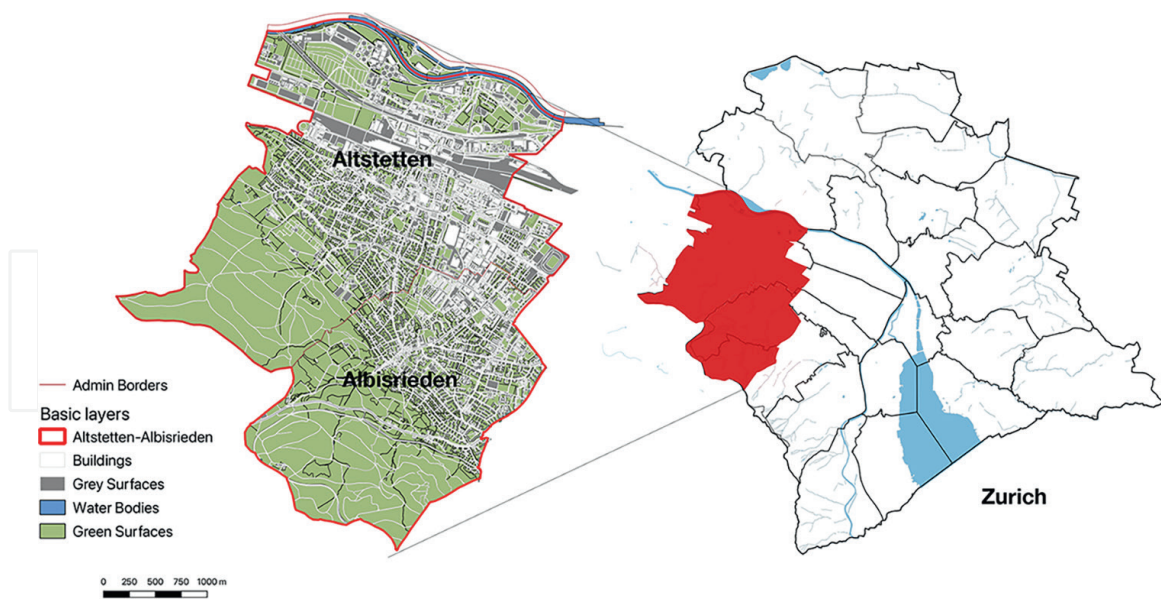


Figure 1.
District 9 in the west of Zürich consists of Altstetten and Albisrieden.

Public green spaces with amenities can encourage outdoor activities and dwellers' interactions, hence, better life satisfaction and enhanced social integration [13, 14]. However, well-equipped green spaces with high aesthetic value may not promise frequent space use: design features and space attributes must concert ensemble to obtain full performance [15]. Many factors act in the course, for instance, proximity to residential buildings, accessibility, functions, size and person-to-person engagement [16]. However, methods employed to investigate such factors are usually questionnaire surveys and interviews. The discrepancy between practical and individual perception requests a measure combining quantitative and qualitative analysis.

To address such a gap, this study, as a part of a research module, Dense and Green Cities¹, aims to analyse urban greenery's potential to improve social integration in the Altstetten–Albisrieden district. Located west of Zürich, the district covers 12.1 km² and extends from the Limmat River to the Uetliberg Foothills (**Figure 1**). Altstetten–Albisrieden has a large diversity of building types, urban forms, and, hence, diverse green areas, developed in different ages, such as single-family houses, low-rise multi-family buildings, and high-rise buildings completed in the last ten years. Following the predicted urban development scenario that Zürich's population would increase by more than 20% by 2040, Altstetten–Albisrieden confronts the severe challenge of housing another 13,000 residents. Such growing urban population and, consequently, rising urban densification needs comprehensive knowledge and approaches to improve social integration from various backgrounds.

The study first compiled urban greenery data derived from the open-source data of Zürich and Open Street Map to illustrate green space distribution and structure.

¹ 'Dense and Green Cities' is one of 13 research modules of the Future Cities Lab (FCL) Global programme, a research platform aimed at bringing transdisciplinary perspectives on shaping sustainable cities and settlement systems. 'Dense and Green Cities' explores the development of sustainable integrated districts (SIDs), as model for high-density high-liveability future cities, attending not only to the factors for the successful implementation of SIDs but also to planning instruments and governance arrangements that enable such developments in different socio-spatial contexts. For more information, please visit: (<https://fcl.ethz.ch/research/cycles-and-districts/dense-and-green-cities.html>).

Four public green space clusters were chosen as subsite cases. An onsite observation regarding space use activities and green space features was applied in these subsite cases. The study reviewed the general performance of public green spaces from the perspective of space structure network and distribution. Further discussion based on observation unveiled the relations between green space structure and community integration. In the end, the study concluded with some remarks on green space design and planning observed through the lens of social integration.

2. Methodologies

2.1 Green space analysis

Using the geographic information on green space types from the open-source data of Zurich², Open Street Map, and introducing another two parameters, ownership and accessibility, green spaces has been grouped into three types:

- Public green spaces: city gardens and public spaces that belong to the city. Residents can access those spaces without conditions.
- Community green spaces: common or shared green spaces in neighbourhood settlements that belong to particular communities. These spaces are open to and usually surrounded by communities.
- Private green spaces: private gardens owned by individual households. Only household members or guests can access these places.

Onsite observation and measurement helped clarify obscure situations and adjust the size of the green spaces.

The study pre-observed the whole district to deposit primary impressions of the green-space use in the area. Two observations emerged: that people usually walked to public green spaces; and that, people seldom visited community green spaces belonging to other neighbourhoods, although these spaces were open and furnished with similar facilities. These impressions generated two premises for the study:

- When illustrating space service coverage and connectivity, the study can apply 800 m (a 10-minute walk) and 400 m (a 5-minute walk) to identify valuable connections and the area of subsite cases.³
- Space users' paths between the three green spaces were usually public – public, public – community, and public – private. People rarely moved between community and private green spaces.

² The open-source data of Zurich classified green spaces into eleven types. These space types suggested that parameters of this classification included ground and flora types, such as forests, meadows and swamps; functions, such as agricultural fields, sports fields and cemeteries; and location, such as street greenery and greenery around the residence.

³ The Categorisation of Public Open Space Based on Size and Coverage Area in *SDG Indicator 11.7.1 Training Module: Public Space* defines the service coverage radius of city public open space and neighbourhood green spaces as 800 and 400 m. [17]

The study employed distance matrices and nearest-neighbourhood tools in QGIS to analyse green space connectivity within the 800-m radius. The accumulated connections towards public green spaces suggest the role of each space in the entire district (**Figure 2**).

To structure further onsite observation, the study selected four representative public green space clusters with high connectivity that cross the whole district. Each cluster comprises one or more large green spaces in the middle, namely Grünau, Lindenplatz, Bachwiesen and Süsslerenanlage. The service areas tool in QGIS generated the 400-m coverage area of these four clusters. Together with their around streets or physical boundaries, the coverage areas shaped four subsite cases (**Figures 3 and 4**). The study further measured the size of three green-space types, building footprints, grey surface, and their composition patterns.

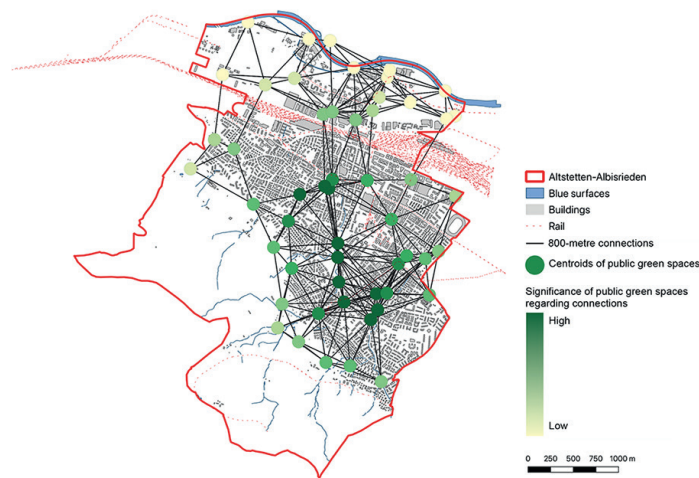


Figure 2. Public green spaces' connectivity and significance in Altstetten and Albisrieden. Each centroid represents a public green space. The colour variation of the centroids from yellow to dark green demonstrates the number of connections accumulated to each centroid from small to large.

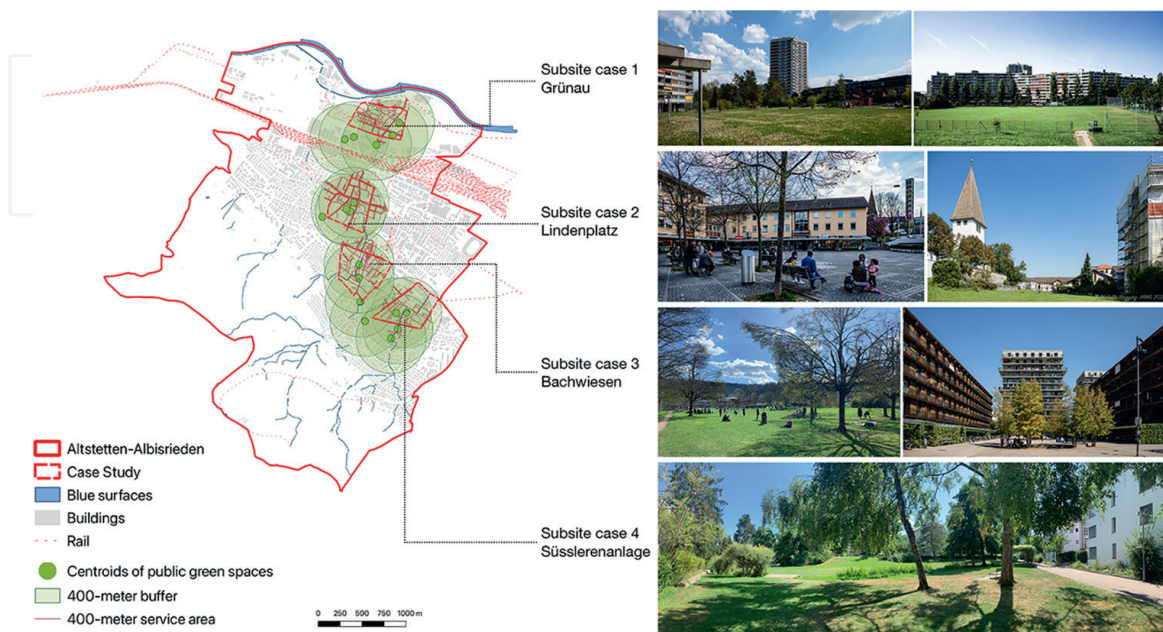


Figure 3. Four selected subsite cases based on the connectivity of public green spaces and their 400-m service coverage.

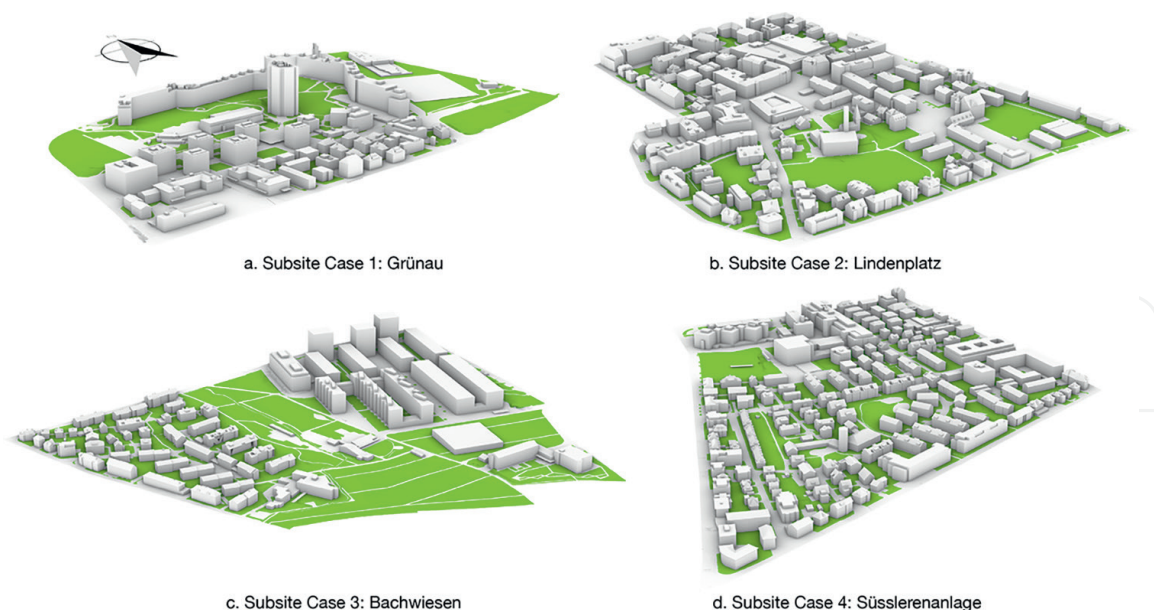


Figure 4.
 Four selected subsite cases in the 3D model.

2.2 Space use analysis

The study obtained space use information through onsite un-participatory observation and open-question interviews. Observed activities and interactions were recorded in photos and videos and marked as point features in QGIS. Details of space users and their activities were fastened as attributes of point features. **Table 1** displays these attributes.

The research team observed all public green spaces, embraced grey spaces where playgrounds or other exercise facilities are installed, and most community green spaces in the four subsites. Due to the lack of access permits and the concern about privacy, the researchers could not observe activities in most private spaces. The observation periods were 14:00–18:30 on weekdays and Sundays when weather conditions and outdoor temperatures were similar.

Space-use Activity Attributes	
Start Time	The time when people entered the observed green spaces
End Time	The time when people left the observed green spaces
Location	Approximate areas where activities occurred in QGIS.
Age	Five broad age groups by visual estimate: <ul style="list-style-type: none"> • < 10 years old: young children and toddlers • 10-20 years old: adolescents • 20-30 years old: young adults • 30-60 years old: adults • > 60 years old: senior people.
Gender	Three groups by observation: <ul style="list-style-type: none"> • Males • Females • Unknown: toddlers and some exceptional cases

Space-use Activity Attributes	
Language	<p>Communication languages of space users:</p> <ul style="list-style-type: none"> • Local languages: Swiss German and Swiss French • European languages: German, French, Italian, Spanish, Portuguese, and English. • Asian languages: including Indian, Chinese, Thai, Malay and Indonesian. • Other languages: languages that cannot be identified.
Activity Types	<p>Eight activity types based on movement levels:</p> <ul style="list-style-type: none"> • Resting • Chatting • Gathering • Playing • Brisk walking and jogging • Walking dogs • Doing exercises • Cycling and riding scooter
User Types	<p>Two user types regarding interactions:</p> <ul style="list-style-type: none"> • Solo visitors • Group visitors

Table 1.
Space-use activity attributes.

Attributes such as start time, end time, location and activity types were exploited for activities frequency and duration, which were visualised using heat maps to indicate points of interest (POIs) in the subcases. Information such as language, age, gender, and user types contributed to the crossing-case discussion of how green-space structure influences daily space use and the potential of these spaces for social integration.

3. Results

3.1 Green spaces of the district

According to the previous classification, **Table 2** below shows the provision of the three green-space types in the district.

Altstetten–Albisrieden relies on its natural geographic conditions and furnishes rich green spaces following the concept of a “Garden City” that has been promoted since the 1930s [18]. In addition to the large surfaces for closed-off forests, woods, farming fields, and restored green spaces along the Limmat River, green spaces coat approximately 20% of the urban area, more than 40 m² per capita. These green spaces sustain daily outdoor activities across a range of accessibility.

Public green spaces disperse evenly regardless of space size, and their 800-m service areas cover the whole district. District dwellers can reach at least one public green space within a 10-minute walk. Public green spaces in the middle of the district have more connections than the others (**Figure 2**), which shape a public green-space corridor 400 m wide across the district (**Figure 5**).

Green Space Type	Altstetten–Albisrieden
Public green spaces	609,244 m ² (5%)
Community green spaces	1,083,642 m ² (9%)
Private green spaces	644,706 m ² (5.3%)
Total green space	2,337,592 m ² (19.4%)
Resident population	57,077 ¹
Average green space per person	41.0 m ²

¹The number of residents referred to the publications of City of Zürich: *Quartierspiegel 091: Albisrieden 2022* and *Quartierspiegel 092: Altstetten 2022*.

Table 2.
 Green spaces provision in Altstetten–Albisrieden.

3.2 Green spaces in subsite cases

Green spaces in the **subsite Grünau (Figure 6a)** consist of the community green space of Grünau, a cooperative housing project, and some public green spaces surrounding a football field. The former supports daily activities in the community; and the latter buffers heavy traffic area, Europabrück and the A1H Motorway, away from the housing area. There are very few private green spaces in the area.

Subsite Lindenplatz (Figure 6b) has been a cultural and commercial landmark of Altstetten for more than a century. Public green spaces in the area are composed of a public square with trees and a large meadow in front of the Altstetten church. Private gardens and a sizable, reserved field for flower picking attached to the old community hall contribute two-thirds of the greenery in the area. Some community green spaces, such as introverted courtyards, are scattered at the subsite’s periphery.

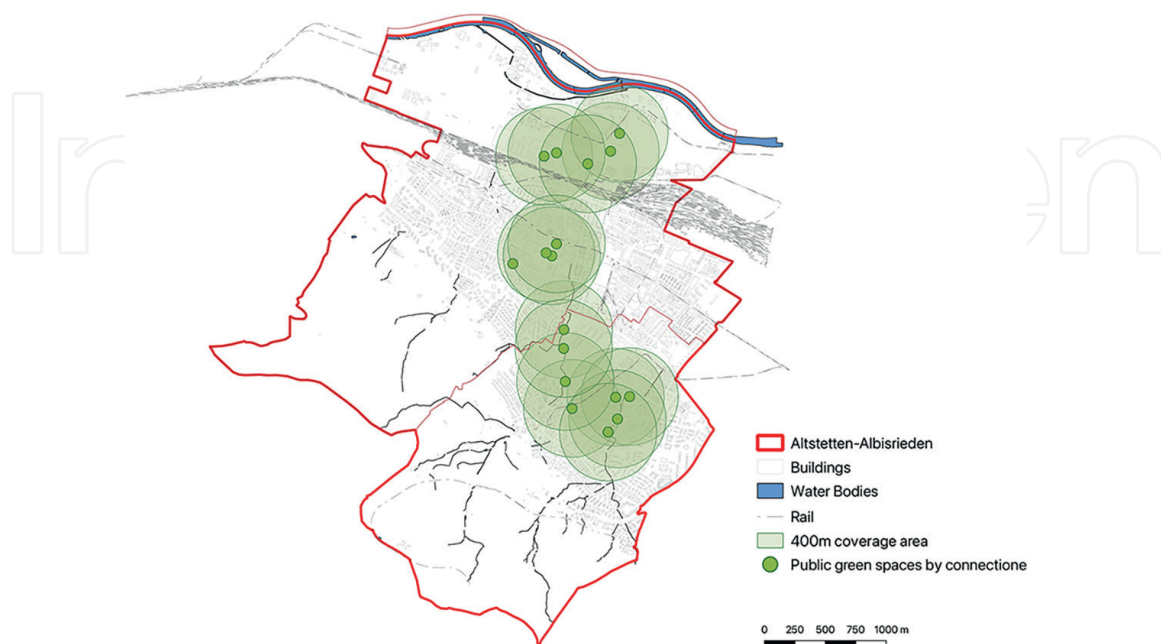


Figure 5.
 A green corridor in the middle of Altstetten-Albisrieden shaped by the 400-m service areas of the public green spaces with most connections in the district.

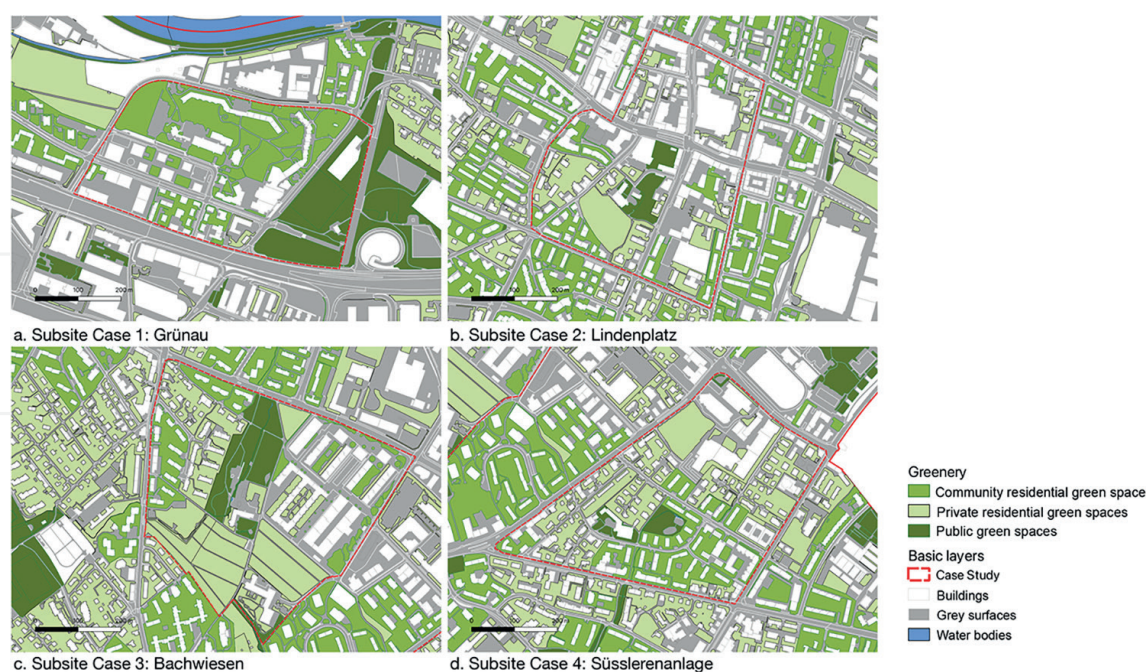


Figure 6.
Green-space structure of the four selected subsites.

Subsite Bachwiesen (Figure 6c), contains one of the significant city parks, Bachwiesenpark, in the middle. The park collects some meadow patches, two playgrounds, a community zoo and the Albisrieden community club. One of the most significant residential developments, named Freilager, some private urban farming areas and a care centre are adjacent to the park. One-third of the ground surface is exploited for private use.

Süsslerenanlage, as the fourth subsite (**Figure 6d**), is in the middle of Albisrieden. As the building typologies here are mainly single-family houses, detached houses and low-rise multi-family buildings, private gardens are most of the green spaces. A small public green space squeezes in the centre next to the Neue Kirche of Albisrieden. Community green spaces, in this case, emerge as gated courtyards with obvious “Do not enter” or “Do not pass through” signs.

The structure of green spaces and other areas (grey and built areas) in four subsite cases is shown in **Table 3**.

3.3 Space use observation

The un-participatory observation obtained more than 1100 valid activities over the four selected subsites, as summarised in **Table 4**.

People generally spent 80 minutes in the public green spaces. Male users were more than female users, and adults and children younger than 10 were the major space users. People preferred to use the green spaces with their families or group; only one-tenth of visitors came alone. People typically came for rest or to play with their children. More than two-thirds of space visitors were Swiss citizens, while the rest had very diverse cultural backgrounds.

The space use varied among the four cases. Much more people visited the green spaces in Bachwiesen and Lindenplatz than those in Grünau and Süsslerenanlage. Nevertheless, people stayed much longer in the cases of Grünau and Bachwiesen,

	Case1 Grünau	Case 2 Lindenplatz	Case 3 Bachwiesen	Case 4 Süsslern- anlage
Total Area (m ²)	191,326	199,225	228,623	199,032
Public green spaces (m ²)	23,039 12.0%	5410 2.7%	22,747 9.9%	5472 2.7%
Community green spaces (m ²)	56,167 29.4%	16,037 8.0%	23,213 10.2%	27,826 14.0%
Private green spaces (m ²)	1116 0.6%	46,623 23.4%	76,412 33.4%	66,202 33.3%
Grey spaces (m ²)	77,677 40.6%	73,606 36.9%	63,067 27.6%	36,172 18.2%
Built area (m ²)	33,327 17.4%	57,549 28.9%	43,184 18.9%	63,360 31.8%

Table 3.
 Green-space structure of the four selected subsites.

more than one and a half hours, than in Lindenplatz and Süsslerenanlage. Space use heat maps (Figure 7) indicate each subsite's most frequently visited areas.

Space use in the Grünau (Figure 7a) subsite was concentrated in the green area next to a high-rise residential tower and a small square equipped with barbecue and

	Grand Total	Case 1 Grünau	Case 2 Lindenplatz	Case 3 Bach- wiesen	Case 4 Süssleren- anlage
Observed areas (m²)	318,605	119,091	67,300	92,250	39,964
Green spaces	193,388	79,166	39,384	45,527	29,311
Grey spaces	125,217	39,925	27,916	46,723	10,653
Ave. distance to buildings		188.8 m	190.0 m	213.5 m	194.0 m
Total observed activities	1113	124	337	491	121
Duration (minute)					
Mean	80	111	58	96	57
Min.	2	10	5	5	2
Max.	270	270	255	270	210
Gender					
Female	47%	47%	43%	52%	42%
Male	51%	52%	57%	45%	58%
Unknown	2%	1%		3%	
Age					
<10	30%	33%	8%	44%	40%
10-20	4%	7%	8%	1%	3%
20-30	12%	6%	11%	10%	26%
30-60	42%	35%	61%	34%	27%
>60	11%	19%	12%	11%	3%
Type of users					
Group	90%	94%	79%	97%	96%
Solo	10%	6%	21%	3%	4%

	Grand Total	Case 1 Grünau	Case 2 Lindenplatz	Case 3 Bachwiesen	Case 4 Süsslereanlage
Activity type					
Resting	444	21	325	94	4
Chatting	110	20	6	53	31
Gathering	67	23		36	8
Playing	420	58	17	273	72
Walking around	28		27	1	
Walking dogs	13		2	8	3
Exercises	6			3	3
Cycling	25	2		23	
Language					
Local languages	726	57	279	273	117
European languages	135	44	45	43	3
Asian languages	25		18	7	
Other languages	211	22	35	153	1
(Blank) ¹	16	1		15	

¹Some individual users slept or did not interact with others during the observation.

Table 4. Results of the onsite un-participatory observation in the four selected subsites.

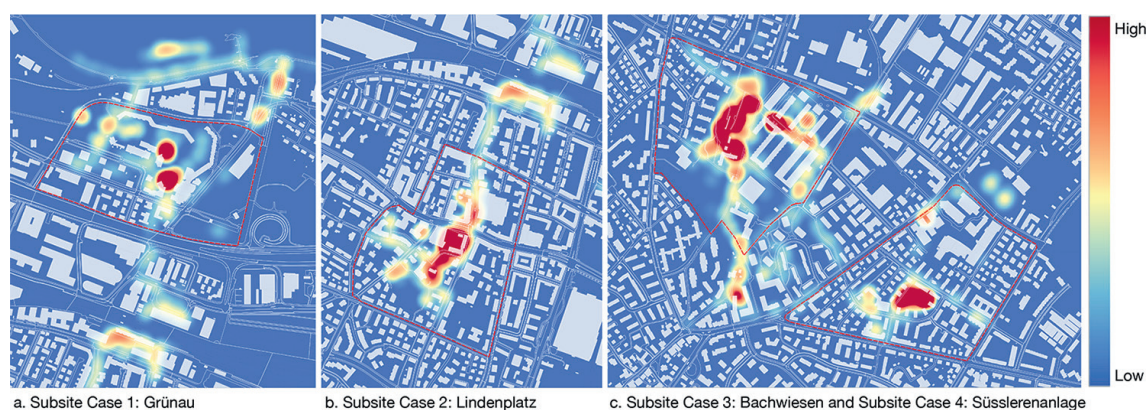


Figure 7. Heat maps of green space use in the four subsites. Space use durations and activity types played roles as weights and scales, respectively, in the heat map calculations.

party facilities. People came to meet their neighbours and played with their children in the afternoon. The green space use peaked around 16:30–18:30. Informal football games between children attracted more than 30 people of various ages during each observation period. Due to its adjacency to a nursing house and well-organised facilities, residents gathered for birthday parties and family events during observation afternoons (**Figure 8b**). Some short, scattered activities occurred in the other playgrounds (**Figure 8a**). Similar situations happened in the two large patches of public green spaces next to the Europabrück and the A1H Motorway. Only three teenagers stayed briefly during the observation to finish their drinks before heading to the tram stop.

Subsite Lindenplatz (Figure 7b) benefited from its central role in the district and hosted many leisure and commercial activities (**Figure 9b**) during the observation. People started to enjoy fresh coffee and bread early in the morning. As stores opened,



Figure 8.
Activities in Grünau.



Figure 9.
Activities in Lindenplatz.

families and friends gathered in the Platz. They met and greeted each other briefly and headed to shopping centres or restaurants nearby. In the afternoon, the pace in the Platz slowed down. People rested on the benches next to the water fountains (**Figure 9a**) or in front of the church. Youths preferred to sit on the lawn next to the church. They could read, chat and practice music for the whole afternoon without spending much. However, the relaxed, peaceful atmosphere did not keep people long, an hour on average.

Subsite Bachwiesen (**Figure 7c**, left) was full of activities during the observations. It supported more daily green-space use than it would be anticipated for its 800-m service radius. Many families came with bicycles and scooters and spent more than one and a half hours onsite. More people used the Bachwiesenpark green space on weekdays than on Sundays. Most people came with their families. Plenty of playgrounds for different ages and a small community zoo (**Figure 10a**) attracted children and young parents. Football matches, badminton and frisbees always engaged several families together in the large lawn area in the south part. Calmer activities took place in the north part – reading, chatting, yoga and sunbathing (**Figure 10b**). Some simple furniture under the trees also allowed people for big family gatherings on a sunny afternoon. Birthday parties with more than 20 people occurred in every observation period. Activity peaked twice in the afternoon, once around 14:00 and again at 17:00. The Freilager development next to Bachwiesenpark has a few community green spaces but large concrete or pebble surface. Some organised groups practised cycling



Figure 10.
Activities in Bachwiesenpark.

around the Freilager and rested several times in the shaded areas in the neighbourhood. Residents appeared to move to other activities after 17:00 when buildings began blocking the sunlight. A small grocery shop, some handicraft stores, a café, and a fine restaurant drew pedestrian flows from different directions through the neighbourhood.

Subsite Süsslereanlage (Figure 7c, right) also has a public green space in the heart of a residential neighbourhood but exhibits a very different space use pattern. As the area features many low-rise residential buildings or single-family houses with gardens, people did not often appear in the public areas in this subsite. The whole area was calm and quiet. The fewest people used the public green spaces among the four subsites, and they spent less than an hour in the spaces averagely. Space users in this area demonstrated a strongly unified social background. Many were acquainted with each other and always chatted and played jointly. Young children used public green spaces more than adults. They played in the equipped playground, observed insects on the lawn, and gathered around table tennis set for some special event. A teenage group regularly met in the public green space or the garden next to the neighbourhood chapel. A few residents did daily exercises in the public green space on weekdays. A few residents did daily exercises in the public green space on weekdays (Figure 11).



Figure 11.
Activities in Süsslereanlage.

4. Discussion: greenery as a tool towards social integration?

4.1 Public green space provision

The Altstetten–Albisrieden district has been developed as a “Garden City” of Greater Zürich since the 1930s. This concept has been fully presented today in two ways. A general picture of green space provision shows that, in the district, green spaces per dweller in the urban area is much higher than those of the overall Zürich⁴, without counting greenery such as forests, urban farming areas and traffic greenery. City parks and other public green spaces disperse in a way that every regional resident can access at least one public green space within a 10-minute walk.

The green-space connectivity counted accumulated connections between public green spaces and towards community and private green spaces, and buildings. The variation of connections implies the importance of each space (**Figure 2**) yet does not correspond with their size (**Figure 12**). The gaps between space significance and size indicate a possible explanation for the fact that some public green spaces cannot attract visitors. They are either unnecessarily big or too small to serve surrounding neighbourhoods appropriately. A rational plan considering space size and location in the city is indispensable to take full advantage of public green spaces.

4.2 Green space size vs. use frequency

The observed space use in Lindenplatz, Bachwiesen and Süsslerenanlage hints that green-space size influences space visit frequency and space use duration positively. The visits towards the Grünau community green space were not many, though the

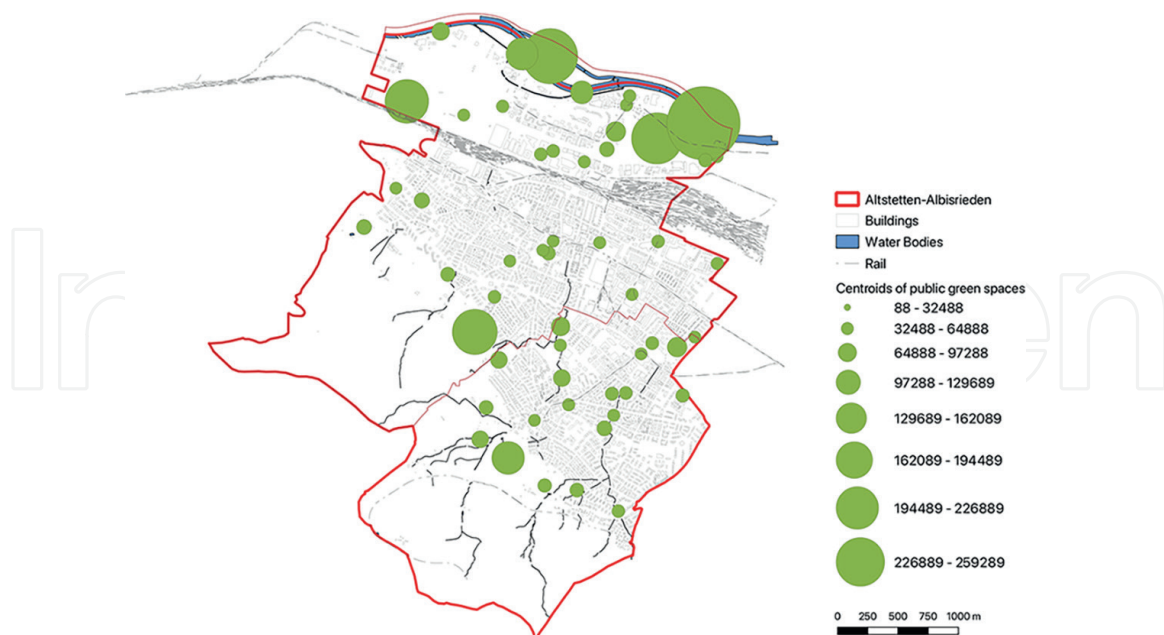


Figure 12. Size of public green spaces in Altstetten–Albisrieden district. The sizes of the circles represent area (m^2).

⁴ The information on green space per resident in Zurich is from Green Space per Inhabitant in the City of Zürich in Switzerland in 2018, by Category: <https://www.statista.com/statistics/860599/green-areas-per-inhabitant-in-zurich-in-switzerland/>.

subsite lacks functional public green spaces as in the other cases. Instead, the dramatically low visits in Grünau, though it has the largest green spaces and is open to the public, demonstrates that the relationship between area and use is not straightforward. Several factors may play roles in this regard:

First, Grünau's green spaces service a limited number of households in the area. The whole area, segregated by the Motorway, was planned mainly for industrial and administration use, with relatively few residential developments. Enlarging the service radius from 400 to 800 m does not help to increase household numbers quickly connecting to the green spaces. The second reason attributes to the large public green spaces along the banks of the Limmat River, 200 m north of Grünau. The attractiveness, including prosperous greenery, water flows and plenty of facilities, creates an enjoyable place welcoming all outdoor activities. Compared to the riverbank, the green spaces in Grünau are simple and unattractive. Third, ownership blocks people's desire to use the space there. A talk with some people sitting in the neighbourhood opposite Grünau indicated that a feeling of not belonging to the Grünau community made them hesitant to use the playgrounds there, even though there was no gate locking them out. Apart from this, the Grünau spaces are supposed to service a nursing home, a kindergarten, and a school in the future as well. More observation during a school period may depict different situations.

4.3 Green spaces vs. users' age groups

Except in the Lindenplatz subsite, young children and adults are the predominant users of green spaces. When considering Zürich's population by age⁵, it is obvious that children younger than 10 enjoyed using the green spaces in all subsites. The proportions of other age groups complied with the population structure of Canton Zürich and waved slightly in a particular range (**Figure 13**).

The observed age groups and their distribution demonstrate two exceptional phenomena: the adults in Lindenplatz and the young adults in Süsslerenanlage. Lindenplatz and its commercial role in the region attract many adults, while Süsslerenanlage might be the only option for young adults to gather with drink and

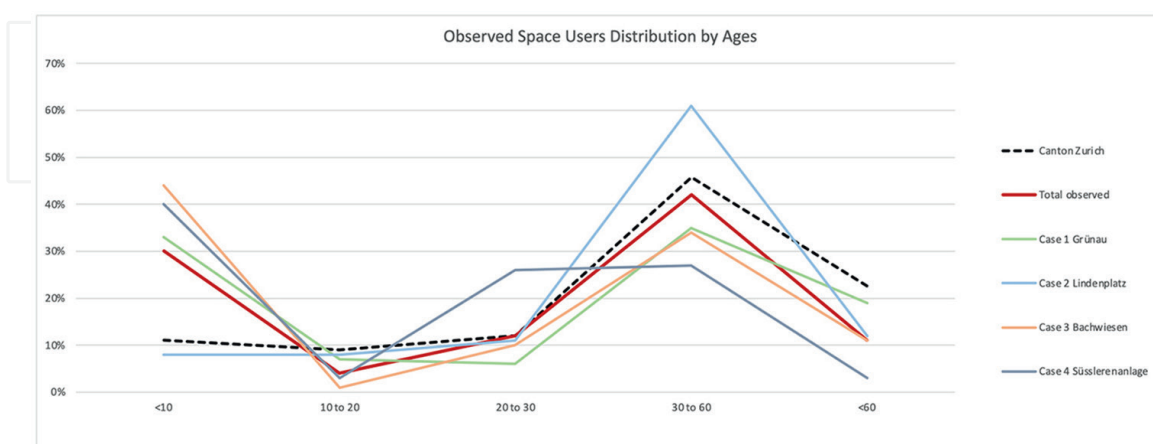


Figure 13.
Proportions of the observed age groups in the four subsites.

⁵ Zürich population by age referred to the website City Population: https://www.citypopulation.de/en/switzerland/admin/01_zürich/. The information was concluded from the open-source data of Canton Zürich (<https://www.zh.ch/de.html>).

music in the neighbourhood. In addition, relatively fewer senior citizens appeared in the Süsslerenanlage. As a matter of fact, many senior citizens stayed on their balconies casually and enjoyed the green space visually due to the interweaving of the residential buildings into the public green spaces.

4.4 Green space structure vs. social diversity

The interweaving between private spaces and the public green spaces in Süsslerenanlage held back the publicity and the space-use diversity. The obvious evidence is the acquaintance among most space users. Strange sounds or foreign behaviours immediately drew attention from the balconies and windows facing the green spaces.

On contrary, Bachwiesenpark has unequivocal boundaries between adjacent properties while incredibly accepting cultural diversity. Some very good evidence is that the research team heard more than 10 foreign languages during the observations. This number was much higher than those in the other subsites. Also, some minority groups travelled far away to use the green spaces there. However, it must be considered that Freilager was a significant residential redevelopment project in Zürich in the last decade, and its residents are relatively younger and more international.

The diversity of Bachwiesen was also reflected in space use activities. As one of the largest green areas in the subsite, Bachwiesenpark comprises six parts with multiple themes, such as open lawns, playgrounds, a bird park, a community zoo, and a community club, connected by paths, bushes, and creeks. The community open space in the Freilager development complements Bachwiesenpark and accommodates other activities such as cycling, riding scooters, and playing tennis. Such a combination of green and grey spaces enables almost all outdoor activities and fulfils a wide range of visitor needs.

In contrast to Bachwiesen, Grünau's green spaces are equipped with four playgrounds far apart. These provisions neither attracted more children nor helped to distribute users equally; instead, one playground was always full of people, while the other three were seldom used. This phenomenon might be taken to suggest that it is unnecessary to offer facilities with similar functions in one public green space. Further study is needed to understand whether other factors shape such situations.

5. Conclusion

The study investigated green spaces in Altstetten–Albisrieden, Zürich, at two scales. At the district scale, public, community and private green spaces, categorised by their ownership and accessibility, were used to depict green space structure. The connectivity analysis of the three green-space types suggested the role of each space in the urban fabric. Four significant green space clusters and their 400-m service areas were selected as subsite cases for further investigation concerning their potential for social integration at the neighbourhood scale.

The study probed the disparities between public green spaces' structural significance and their land areas. These gaps might indicate the malfunction of some spaces and suggest that designing public green spaces entails more than merely facilitating leftover land. Providing and designing public green spaces require more careful consideration of location, size, and roles in the urban fabric. A further investigation shall also take into account public transportation networks and other transport means, which may enlarge public green spaces' service coverage and modify their connectivity at the city scale, thus generating more accurate results.

Providing more or enlarging public green spaces might encourage space use frequency and duration and, hence, improve individual health. The relation between space sizes, space-use frequency, and duration, indicated in the subsites, is not a simple linear relationship but is also impacted by other factors.

Nevertheless, the study showed that the green space structure, represented by the four subsite cases, or, more specifically, the combination of the space types, the provision of facilities and enabling various activities to be undertaken, and the setting of boundaries could impact space-use activities and its social cohesion potential. Among the subsite cases, relatively small green spaces (demonstrated in Süsslerenanlage) interwoven with private areas can benefit the community exclusively. In contrast, green spaces with clear boundaries and various functions (as in Bachwiesen) can strengthen social diversity.

The current findings naturally have some limits. The space use analysis can be improved to reflect the actual situation more accurately by obtaining more onsite observation data during different periods of the year. The demographic data of the four subsites needs to be included. This data may explain the gender or age difference and cultural structures to further our understanding of how green spaces' support for people's outdoor activities can equally cover the different social groups.

Given the challenge that Altstetten–Albisrieden needs to house another 20% population in the coming decade, the study on public green space provision and distribution will synthesise with urban densification scenarios and building typologies as the next step. Green spaces would extend and connect well to each other horizontally on the ground and vertically in building structures. Buildings and green spaces might convert their competitive relationship into collaboration. Levels of green spaces with different accessibility might encourage further community integration with various needs. Nevertheless, a careful planning and design approach involving stakeholders is necessary to optimise development and future performance.

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