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The Hong Kong Polytechnic University

Department of Applied Social Sciences

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APSS465 Capstone Project for Practicing Social Policy and Administration

Understanding the relationship between a Walkable Environment and Elderly's Sense of Community in Hong Kong

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Abstract

This research aims at (1) comparing the relations of walkability attributes and elderly's Sense of Community (SofC) between two constituencies in Hong Kong, and (2) comparing the impacts of objective walkability and perceived walkability attributes on elderly's SofC in two constituencies. In the constituency with higher perceived walkability, Accessibility and Walking Facilities were positively correlated with SofC at significant level. Walking Barriers were also positively correlated with elderly's SofC, which suggested that hillsides and stairs increased elderly's SofC, though it was out of significant level. In the constituency with higher Objective Walkability, Land-use mix, Commercial land use ratio and Connectivity were negatively correlated with SofC. Congestion was also higher in this constituency, which was consistent with the result of Objective Walkability. Comparing the impacts of socio-demographic data, perceived walkability and objective walkability attributes on SofC, objective walkability attributes were not important in explaining SofC in both constituencies. Socio-demographic data had limited influence on SofC, that elderly who were not born in Hong Kong and not living alone had a higher SofC level. The research can help provide officials and urban planners with some insights to pay more attention to the perception of the elderly, instead of simply following the objective standard of a so called "walkable environment".

Introduction

The relation among walkability and Sense of Community (SofC) has been proved significant in affecting mental health of residents, which has aroused much attention from policy makers worldwide in providing a “walkable” neighbourhood for ageing residents. Ageing population has also emerged in Hong Kong, especially in Kwun Tong. In the year of 2050, Hong Kong people aged 55 or above are expected to reach over 40% of the total population (Census and Statistics Department, 2015). At the moment, Kwun Tong is one of the most serious ageing districts in Hong Kong, as it consists of a large proportion of Hong Kong people aged 55 or above, which accounts for 31.97% of the total population in 2016 (Census and Statistics Department, 2017).

In light of this ageing trend, the Hong Kong Government has similar ideas in promoting walkable neighbourhood. According to the 2016 Policy Address (Government of the Hong Kong Special Administrative Region, 2016a), the Hong Kong Government aims to encourage a “pedestrian-friendly environment” in new towns and New Development Areas, which shows the determination of the Government in adopting more walkability-related policies in Hong Kong. When the former Chief Secretary Carrie Lam gave her speech at an opening ceremony of a conference, she emphasized that “in the light of an ageing population”, the policy of “improving the pedestrian environment” as addressed in the 2016 Policy Address is “for the benefit of all, especially the elderly” (Government of the Hong Kong Special Administrative Region, 2016b). Her speech further discloses the intention for the Government to provide elderly with a walkable environment while encountering the challenge of ageing population. In light of this urban planning policy advocated by the government, it is of importance to have findings in understanding if a walkable environment is related to SofC in the local context.

Literature Review

Physical built environment has been discussed in association with social capital, especially SofC by scholars worldwide (Lund, 2002; Wood, Frank & Giles-Corti, 2010; Leyden, 2003; Kim & Kaplan, 2004; Hanibuchi *et al.*, 2012; du Toit, Cerin, Leslie & Owen, 2007; Jung, Lee & Kim, 2015) in recently decades. New Urbanists emphasize that a walkable neighbourhood greatly associates with SofC (Wood *et al.*, 2010). The relation among walkability and SofC has been proved significant in affecting mental health of residents (Saelens, Sallis, Black & Chen, 2003; Van Dyck, Teychenne, McNaughton, De Bourdeaudhuij & Salmon, 2015). It has aroused much attention from policy planners and urban planners in providing a “walkable” neighbourhood for residents, especially facing the deteriorating trend of global ageing population.

Definition of Walkability

Based on Southworth's (2005) definition, walkability is the degree to which an environment motivates walking by achieving comfortable and safe outcomes with visual enjoyment, while connecting pedestrian with various destinations. Based on this definition, walkability is shown to be an important concept illustrating the connection between streets and residents.

Numerous objective environmental criteria are developed to evaluate if a neighbourhood is walkable, as an attempt to figure out its relationship with SofC. Scholars usually utilize the technology of Geographical Information System (GIS) to compare different objectively measured criteria of walkability (Hanibuchi *et al.*, 2012; du Toit *et al.*, 2007; French *et al.*, 2014). Southworth (2005) presented six criteria that could be used for evaluating walkability, which included connectivity of path network, linkage with other modes, fine grained land use patterns, safety, quality of path as well as path context. After Southworth's research, Frank *et al.* (2010) presented

four criteria, which included net residential density, retail floor area ratio, interaction density and land-use mix. In Hong Kong, Cerin, Chan, Macfarlane, Lee, & Lai (2011) developed a 91-item Environment in Asia Scan Tool-Hong Kong (EAST-HK) as an objective measurement of walking environments, 71 of which show sufficient reliability. This measurement does not involve the use of GIS, but counting the number of facilities instead.

At the same time, some subjective methods of evaluating walkability were also developed and these researchers suggested that whether a neighbourhood was walkable or not should also be evaluated by residents from within. For example, Leyden's (2003) measurement of walkability relied on the subjective feelings and ratings of researchers and residents of neighbourhoods, so as to evaluate if neighbourhoods were pedestrian oriented and mixed use.

Definition of Sense of Community

By definition, SofC is a "feeling that members have of belonging and being important to each other and a shared faith that members' needs will be met by the commitment to be together" (McMillan & Chavis, 1986). It is a concept carrying a sense of special attachment among people and their neighbourhood (Davidson & Cotter, 1986). As McMillan & Chavis (1986) analysed, SofC was constituted by four components, which were membership, influence, reinforcement and shared emotional connection. Membership is a sense of belonging, the feeling of individual relatedness; Influence is about one's determination in making change in a community; Reinforcement is "integration and fulfilment of needs", in which individual needs are satisfied by members in a community; Shared emotional connection refers to common history, environment and experience shared by members in a community.

Mak, Cheung & Law (2009), developed a scale of SofC suitable for the Hong Kong context. Their study concluded that McMillan and Chavis's (1986) model was not able to completely explain the extent of SofC in Hong Kong, as no good internal consistency was observed. Out of the 12 items for testing (Perkins, Florin, Rich, Wandersman & Chavis, 1990), they suggested only 7 of which fit for applying in Hong Kong. Their result also revealed that SofC was not associated with socio-demographic indicators on both individual- (e.g. gender or type of residence) and community-levels (e.g. education level or family income).

Walkability and Sense of Community

Many New Urbanists found perceived walkability an important motivation for higher extent of SofC. Perceived walkability implies that the evaluation of walkability is subjectively dependent on residents themselves. Leyden (2003) studied the connection between the design of a neighbourhood and social capital in an individual level. His result showed that citizens living in walkable, mixed-used neighbourhoods obtain higher degree of social capital, more likely to know their neighbours, participate politically, trust others and socially engaged. Another research conducted by Rogers, Halstead, Gardner, & Carlson (2011) also revealed similar result. By comparing the levels of SofC of residents staying in neighbourhoods with high perceived walkability and that with the low one, researchers reported that residents of the former neighbourhoods obtained a higher level of SofC.

However, some scholars only found limited relationship between perceived walkability and SofC. Zhang and Lin (2012) conducted a research in TaiWan to study the relationship between SofC and perceptions of residential environment. They found that the residential environment, including residential satisfactory, the attitude towards the community and the attitude towards neighbours, were positively correlated with community belongingness, but negatively correlated with community affection. Apart from residential variables, some other demographic variables were also

found to be in relation with SofC in this research. Researchers reported that people living in rental units obtained a lower degree of SofC, and ascribed it to the fact that people tended not to personalize their flats and thus performed less attachment to their neighbourhood. They also discovered that people staying longer in a neighbourhood had a higher level of SofC.

Besides investigating on perceived walkability, some New Urbanists found objectively measured walkability an important motivation for higher extent of SofC. Based on the research conducted by Lund (2002), with the use of objective measured urban design factors, she compared the difference in SofC between traditional neighbourhood with high walkability and modern suburban neighbourhood with low walkability, and concluded that SofC was higher in the former neighbourhood and walkability positively influenced SofC. Lund (2003) conducted another research in the same area the following year and received a positive result again. Her study suggested that placing amenities including parks and commercial shops near homes increased pedestrian travel, and thus, enhanced interaction among residents. This paper did not explicitly discuss walkability, yet, it is an important research disclosing a positive relation among objectively measured walkability and SofC.

Nonetheless, some scholars simply found some of the objectively measured walkability crucial in contributing to higher SofC. Wood *et al.* (2010), by using objective measurement of walking and neighbourhood design, reported positive relation between SofC and higher commercial land use ratio, parking area and land for urban design, but negative relation between SofC and higher extent of mixed land use. According to a research conducted in Japan (Hanibuchi *et al.*, 2012), no significant positive relation was found between objective walkability and any social capital indices. On the contrary, they suggested that SofC seemed to be more related to the history and geographic elements of neighbourhoods, instead of built environment.

Walkability and Sense of Community in Hong Kong

As shown from the above reviews, many researches were conducted to understand more about the relationship between walkability and SofC, no matter the result was positive or not, so as to help improve urban policies in different countries (Wood *et al.*, 2010). However, in the face of the government's policy of walkability, limited researches are found in this area. For example, Loo and Lam (2012) conducted a microscale walkability assessment to evaluate factors including safety, comfort and convenience of a neighbourhood in Hong Kong. They held that improvements in walkability were necessary to sustain and improve the elderly's living quality. The result showed the important elements of the overall walkability, such as the width of pavements and covered pavements for elderly residents. Yung, Conejos, & Chan (2016) studied the importance of open spaces for elderly in Hong Kong. They suggested that "rather than adopting standardized planning guidelines" for all urban planning and designs, urban planners should consider other different characteristics of a neighbourhood for urban renewal. Though this paper did not regard "walkability" as a variable, open space, which is also an important element of walkability was mentioned, which also shows the inadequacy of related research in Hong Kong. Insufficient related researches is never a healthy trend for the Government in providing a more suitable and walkable environment for elderly. This research serves to help compensate such a loophole, so as to provide some insights for future Hong Kong urban planning, especially with the rapid growth of ageing population.

Based on the above previous findings, many environmental features were found to be significantly important in influencing people's SofC worldwide. Scholars generally conducted a related research within a broad geographic boundary, such as a country or a region. However, whether differences or similarities could still be observed within a smaller scale of area has not yet been investigated, such

as two constituencies in the same district in Hong Kong. Thus, this research aims at (1) comparing the relations of walkability attributes and elderly's SofC between two constituencies, and (2) comparing the impacts of objective walkability and perceived walkability attributes on elderly's SofC in two constituencies. The two research questions are listed below:

1. Do the relations of walkability attributes and elderly's SofC differ between two constituencies?
2. Do the impacts of perceived walkability and objectively measured walkability attributes differ on elderly's SofC in two constituencies?

Three hypotheses were set below:

H1: Residents living in the constituency with higher scores of perceived walkability attributes conducive to walking would report higher SofC.

H2: Residents living in the constituency with higher scores of objective walkability attributes would report higher SofC.

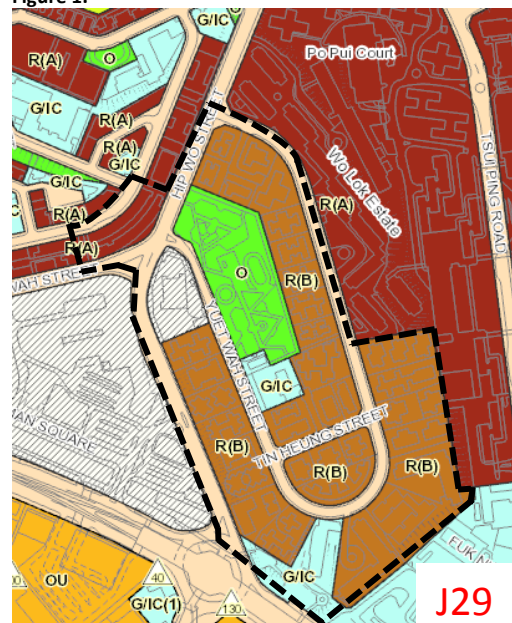
H3: Perceived walkability would be more important in explaining SofC than objective walkability in both constituencies.

Methods

Selection of constituencies

Two constituencies were selected from the district of Kwun Tong for comparisons, which were Yuet Wah (with the constituency code of J29 in Fig. 1) and Kwun Tong Central (KT Central; with the constituency code of J01 in Fig. 2). These two constituencies were purposively selected due to their deteriorating ageing population and the frequent existence of urban renewal projects (Yue Man Square in Yuet Wah and the plan for changing government, institution and community land to residential land use in KT Central). Though the two constituencies consisted of different scales of area, similar numbers of population were found. Yuet Wah (J29) consisted of a population of 13 845; and KT Central (J01) consisted of a population of 16 076.

Figure 1.



Note. Land use map of Yuet Wah with the constituency code of J29 (in dotted lines) (Town Planning Board, 2016).

Figure 2.



Note. Land use map of KT Central with the constituency code of J01 (in dotted lines) (Town Planning Board, 2016).

Sample & Data collection

In order to collect elderly's subjective opinion on their environment and SofC, questionnaire interviews were conducted from 8th February to 10th March 2017. A multi-stage stratified cluster sampling design was used to randomly select residential blocks and household samples. With the help of the District Councillors, two sampling frames were created, which included all the blocks and household addresses in the two constituencies in Kwun Tong. 24 out of 57 blocks from J01, and 23 out of 38 blocks from J29 were clustered primarily. Then, by using stratified sampling method, different patterns of floors and household units were sampled from each block in the two constituencies (see Appendix). With the target of 1200 household units from each constituency, the number of samples in every block was set in accordance to the total number of household units in every block proportionally. A total of 1 240 units and 1 223 units from J01 and J29 were sampled respectively based on the random table (Babbie, 2013). A number was assigned to every building in the two constituencies in advance and they were sampled by using the last 2 digits of the random table. The first 2 digits of the random table were for sampling floor, while the last 2 were for sampling household units. The response rates are 52.3% and 32.4% in Yuet Wah and KT Central respectively. Details of the response rates are shown in Table 1.

Table 1
Response rate

	Yuet Wah		KT Central	
	<i>N</i>	%	<i>N</i>	%
Total sampled household units	1222		1223	
Questionnaire collected	89		141	
Contact rate	406	33.22%	683	55.8%
Households with appropriate respondents	170	13.9%	435	35.56%
Response rate	89	52.3%	141	32.4%

The questionnaire interviews were conducted in Cantonese, which comprised socio-demographic questions, questions of perceived walkability and SofC. Target participants were elderly who were aged 55 or above in the area. One participant from each household was invited to finish the face-to-face in-house questionnaire interviews. In case of more than one elderly in a household, "Next Birthday Rule" was adopted to select one respondent to ensure representativeness of the sample. If no response was resulted in the first visit, another two attempts were made. If no response was resulted for three times for each sampled household unit, it was classified as a non-contact. Invitation letters were sent to every targeted sample at least 3 days before the start of the questionnaire interviews. Both verbal and signed consent were sought from the elderly after reading the information sheet illustrating the purpose of the research. Interviewers included around 30 university students and each of them was well briefed before conducting questionnaires with the elderly.

A pilot test was conducted in Jan 2017 to select suitable questions to be put in the final questionnaire. 41 elderly were asked on the street in Kwun Tong for providing opinion on the difficulty of terms used in the questionnaire. Their facial expressions and attitudes in answering the questionnaires were also observed. It helped researchers adjust the wordings or eliminate the questions if they were not suitable to be used in this research. Except for conducting questionnaires, GIS was used to collect objective geographic data of each of the interviewee.

Measures

Socio-demographic characteristics

Socio-demographic data include gender, age, year of residence, education, religious belief, marital status, working status, health status, and both household and individual income. Target participants were also asked if they were born in Hong Kong, physically disabled, living alone, had children and if their flats were self-owned properties. Education was measured from either being formally educated

or not. Marital status was measured from either married or not. Employment status was measured from either retired or not.

Sense of Community

SofC is the dependent variable of this research. A pilot test was conducted based on the Sense of Community Index (SCI) developed by Perkins *et al.* (1990). The 12 items of SCI originally represent 4 different dimensions, which are (A1) “Shared Emotional Connection”, (A2) “Membership”, (A3) “Reinforcement of needs” and (A4) “Influence”. Adjustments were made in accordance to the results of factor analysis after the pilot test, that one question from each dimension was found to have limited contribution to the factor structure, and only 8 of which were remained in the final questionnaire (see Appendix). Though 8 items remained in the final questionnaire, as “I have no influence over what this community is like” from (A4) was found again to be limited in contributing to the factor structure of the scale, it was further eliminated after the final questionnaire interviews. This result had resonance with the findings of Mak, Cheung & Law (2009), that 7 items were found suitable to be used in Hong Kong. The Cronbach’s Alpha score of the 7 items was .653. Though the 7 items originally represent 4 different dimensions, further factor analysis was conducted after the final questionnaire interviews (Table 2). Mean for each dimension as well as mean for the 7 items were presented.

Table 2.
Factor analysis of SofC

	Component			
	A1	A2	A3	A4
I think the community that I am living is a good place for me to live (S1)	.542			
My neighbors and I want the same things from the community (S2)			.880	
I can recognize most of the people who live in my community (S3)		.938		
I feel at home in this community (S4)		.562		
If there is a problem in this community, people who live here can get it solved (S5)				.983
It is very important to me to live in this particular community (S6)	.845			
I expect to live in this community for a long time (S7)	.868			

Note. Extraction Method: Principal Component Analysis; rotation method = Varimax with Kaiser Normalization; Cronbach's Alpha = .653; KMO Measure of Sampling Adequacy = .696, $p = .000$; (A1) = Shared Emotional Connection; (A2) = Membership; (A3) = Reinforcement of needs & (A4) = Influence.

Perceived Walkability

Perceived walkability is the independent variable of this research. The original Neighbourhood Environment Walkability Scale (NEW-A) includes 54 items with 12 dimensions, which are used to evaluate different environmental features. In order to select suitable and appropriate number of questions to be put in the questionnaire, all 54 questions were asked in the pilot test and adjustments were made in accordance to the results analysed by SPSS and feedback from the elderly and researchers. 54 items were found to be a mental burden for the majority elderly, especially for those who were 70 or above and many questions were found to be redundant or not suitable to be asked under the local context.

As the original subscales of “Residential density” (6 items) and “Land-use-mix – diversity” (23 items) were found inappropriate to be used under the local context, they were each changed to a single-item (W1 & W2 respectively). By using factor analysis and eliminating those items with limited contribution to the factor structure, except for the 4 single-item subscales (Hilliness (W6); Cul-de-sacs (W7); Physical Barriers (W12) & Parking (W11)), all the remaining 6 subscales were changed to single-item subscales (Land-use mix – access (W3); Traffic hazards (W8); Crime (W10); Street Connectivity (W4) Infrastructure (W5) & Aesthetics (W9). Therefore, after the pilot test, 12 items indicating the original 12 dimensions were put in the questionnaire and were rated by a 4-point

Likert scale (ranging from (1) Strongly disagree to (4) Strongly agree) (see Appendix). As it is not a complete scale, the Cronbach's Alpha score of the 12 items was .538, indicating a relatively poor level of internal consistency. Further factor analysis was conducted after the final questionnaire interviews. As shown from the factor analysis results in Table 3, 4 new dimensions were reported, which were renamed as "Accessibility", "Walking Facilities", "Congestion", "Walking Barriers". Mean for each dimension was presented.

Table 3.
Factor analysis of Perceived Walkability

	Component			
	B1	B2	B3	B4
The residential density in my community is high (W1)			.562	
There are many places and facilities to go within walking distance at my home (W2)	.772			
It is easy to walk to a transit stop (bus, MTR) from my home (W3)	.762			
The distance between intersections in my community is usually short (W4)	.524			
There are enough crosswalks and pedestrian signals in my community (W5)				.850
The streets in my community are hilly (W6)		.782		
The streets in my community have many cul-de-sacs (W7)		.559		
Most drivers exceed the posted limits while driving in my community (W8)			.675	
There are trees along the streets in my community (W9)				.767
The crime rate in my community makes it unsafe to go on walks at night (W10)			.574	
I think parking is difficult in my community (W11)			.568	
I face many environmental barriers (such as too many stairs, too many crosswalks and hillsides) in my community (W12)		.780		

Note. Extraction Method: Principal Component Analysis; rotation method = Varimax with Kaiser Normalization; Cronbach's Alpha = .538; KMO Measure of Sampling Adequacy = .538, $p = .000$; B1 = Accessibility; B2 = Walking Barriers; B3 = Congestion & B4 = Walking facilities.

Objective Walkability

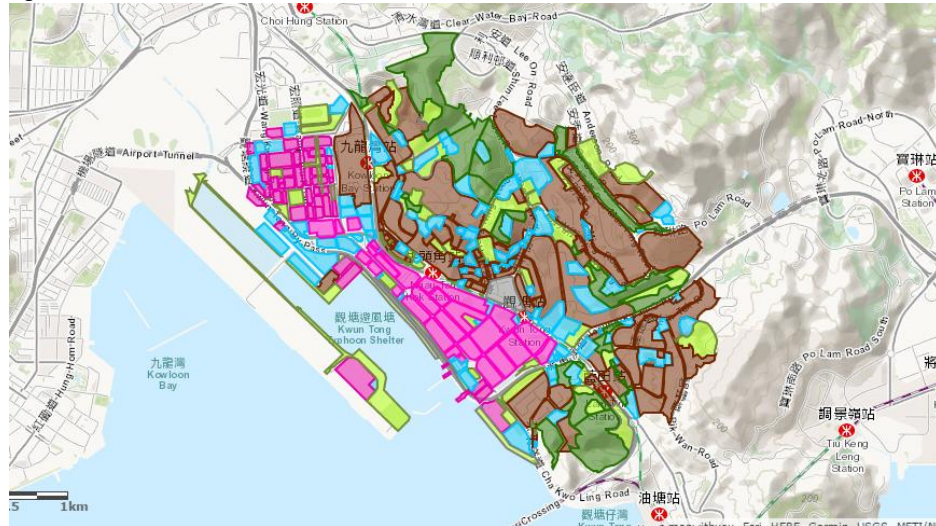
Objective walkability is another independent variable of this research. Scholars usually use GIS to compare objectively measured criteria of walkability (du Toit *et al.*, 2007; Hanibuchi *et al.*, 2012; French *et al.*, 2014). The maximum walking distance was asked during the questionnaire interviews, and majority of the elderly reflected an approximate of 1 km distance. Therefore, 1 km road network distance was set around each of the interviewee in this research. Objective data was calculated by GIS for four variables, which include residential density, commercial floor area ratio, residential density and land-use mix (Frank *et al.*, 2010). Descriptions of measurements are shown in Table 4. Raw scores for each dimension and a standardized total walkability score were presented.

Table 4.
Measurements of Objective Walkability

	Measurement
Residential density	The ratio of residential buildings to the buffer zone per acre
Commercial floor area	The ratio of commercial land use to the buffer zone
Connectivity	The number of intersections with 3 legs or more within the buffer zone
Land-use mix	The extent of the variety of land use presented in the buffer zone by using the formula similar to the entropy formula created by Frank <i>et al.</i> (2010). Five land uses, which included "residential", "commercial", "government, institution and community", "open space" and "green belt" were accessed in accordance to the distribution of land use as provided in the Statutory Planning Portal 2 (Town Planning Board, 2016).
	Entropy formula = $(-1) \times [(b1/a) \ln (b1/a) + (b2/a) \ln (b2/a) + (b3/a) \ln (b3/a) + (b4/a) \ln (b4/a) + (b5/a) \ln (b5/a)] / \ln (n5)$

Note. a = total square of feet of land for b1, b2, b3, b4 & b5; b1 = residential area; b2 = commercial area; b3 = government, institution and community area; b4 = open space area; b5 = green belt area; n5 = number of land uses.

Figure 3.



Note. Land use map (base map) for Yuet Wah (J29) & KT Central (J01) (pink for commercial land use; brown for residential land use; blue for government, institution and community land use; light green for open space; & dark green for green belt) (Esri, 2017)

Data analysis

Data were analysed by SPSS Version 23 and AMOS 23. Descriptive analysis was performed to present socio-demographic data with the use of frequencies, percentage, means and standard error of mean. Univariate associations between socio-demographic data and SofC were then examined. Independent samples t-test was used to compare the difference of means of SofC attributes, perceived walkability attributes and objective walkability attributes between the two constituencies. Bivariate associations between the three variables mentioned above in the two constituencies were further examined.

Linear regression was also examined to compare the impacts of objective walkability and perceived walkability attributes on elderly's SofC between two constituencies. Socio-demographic variables at significant level ($p \leq 0.05$) in the univariate analysis were selected for Model 1, so as to test their association with SofC. Objective walkability attributes were added in Model 2. Objective walkability attributes were then extracted in Model 3, for examining the association with subjective walkability attributes. Model 4 included both objective and subjective walkability as well as socio-demographic attributes. Though different models were tested by linear regression analysis, Structural Equation Modelling (SEM) in the Analysis of Moment Structures (AMOS) was also used to create a structural model with satisfactory fit for measuring the difference between elderly living in the two constituencies. Maximum likelihood estimation was performed with the use of standardized estimates for analysis.

Findings

Descriptive data were first presented to understand the difference of background between the two constituencies (Table 5). Gender distribution was similar between Yuet Wah (Female: 51.1%) and KT Central (Female: 50.6%). Mean age of Yuet Wah (J01: $M=68.93$, $SEM=1.08$; J29: $M=72.68$, $SEM=.69$) and mean length of residence (J01: $M=31.63$, $SEM=1.59$; J29: $M=33.28$, $SEM=1.27$) were slightly higher than that of KT Central. More seniors were born in Hong Kong in KT Central (J01=43.8%; J29=21.3%). Married (J01=61.8%; J29=71.6%), retired (J01=66.3%; J29=80.1%), formally educated seniors (J01=71.9%; J29=92.9%), seniors having children (J01=82.0; J29=91.5%) and with self-owned property (J01=74.2%; J29=87.9%) were also higher in Yuet Wah. The proportions of seniors with religious belief (J01=52.8%; J29=55.3%), chronic disease (J01=55.1%; J29=55.3%), physical disability

(J01=9.0%; J29=9.2%) and living alone (J01=13.5%; J29=14.2%) between the two constituencies were similar. Both individual and household incomes in Yuet Wah (Individual: $M=5,823.33$, $SEM=1,048.99$; Household: $M=20,345.78$, $SEM=2,905.81$) were higher than that in KT Central (Individual: $M=4,923.33$, $SEM=593.46$; Household: $M=12,279.48$, $SEM=835.35$).

Table 5.
Socio-demographic data and the univariate correlations with SofC between Yuet Wah and KT Central

	Yuet Wah (N=89)				KT Central (N=141)			
	N	%	Univariate association with SofC		N	%	Univariate association with SofC	
			M(SD)	p			M(SD)	p
Gender				.472				.452
Female	72	51.1%	2.89 (.29)		45	50.6%	2.86 (.27)	
Male	69	48.9%	2.92 (.27)		44	49.4%	2.82 (.29)	
Born in HK				.000				.088
Yes	30	21.3%	2.73 (.24)		39	43.8%	2.78 (.31)	
No	111	78.7%	2.95 (.27)		50	56.2%	2.88 (.25)	
Marital status				.778				.647
Married	101	71.6%	2.91 (.27)		55	61.8%	2.83 (.26)	
Not married	40	28.4%	2.90 (.30)		34	38.2%	2.86 (.32)	
Working Status				.005				.189
Retired	113	80.1%	2.94 (.26)		59	66.3%	2.87 (.23)	
Not Retired	28	19.9%	2.78 (.31)		30	33.7%	2.78 (.36)	
Religious Belief				.066				.479
With religion	78	55.3%	2.95 (.30)		47	52.8%	2.86 (.31)	
None	63	44.7%	2.86 (.24)		42	47.2%	2.82 (.25)	
Education				.284				.234
Formal education	131	92.9%	2.90 (.27)		64	71.9%	2.82 (.31)	
None	10	7.1%	3.00 (.40)		25	28.1%	2.90 (.20)	
Health Status				.481				.536
With chronic disease	78	55.3%	2.92 (.29)		49	55.1%	2.82 (.28)	
None	63	44.7%	2.89 (.26)		40	44.9%	2.86 (.29)	
Physical disabled				.112				.903
Yes	13	9.2%	2.79 (.13)		8	9.0%	2.85 (.30)	
None	128	90.8%	2.92 (.29)		81	91.0%	2.84 (.28)	
With children				.708				.734
Yes	129	91.5%	2.90 (.28)		73	82.0%	2.87 (.25)	
No	12	8.5%	2.94 (.30)		16	18.0%	2.70 (.09)	
Living alone				.833				.003
Yes	20	14.2%	2.92 (.25)		12	13.5%	2.62 (.37)	
No	121	85.8%	2.90 (.28)		77	86.5%	2.87 (.25)	
Self-owned property				.258				.941
Yes	124	87.9%	2.92 (.27)		66	74.2%	2.84 (.26)	
None	17	12.1%	2.83 (.31)		23	25.8%	2.83 (.35)	
	<i>M</i>	<i>SEM^a</i>	<i>β</i>		<i>M</i>	<i>SEM^a</i>	<i>β</i>	
Age	72.68	.69	.271	.001	68.93	1.08	.140	.190
Length of residence	33.28	1.27	.118	.165	31.63	1.59	.242	.022
Income								
Individual (HK\$)	5,827.33	1,048.99	.039	.642	4,923.33	593.46	.138	.197
Household (HK\$)	20,345.78	2,905.81	-.034	.686	12,279.48	835.35	.222	.036

Note. All missing cases were replaced with Series Mean; beta was reported for continuous dependent variable; results significant at .05 level were bolded; ^a = Standard Error of Mean (SEM).

The univariate correlations between socio-demographic variables and SofC are shown in Table 5. Some correlations were different among the two constituencies. Age ($p=.001$) in Yuet Wah, and length of residence ($p=.022$) and household income ($p=.036$) in KT Central were positively correlated with SofC. Seniors who were not born in Hong Kong ($p=.000$) and were retired ($p=.005$) in Yuet Wah, and not living alone in KT Central ($p=.003$) reported significantly higher scores of SofC.

Table 6 displays the means of SofC, perceived walkability and objective walkability between the two constituencies. Though the difference in SofC (mean of 7 items) between Yuet Wah ($M=2.91$, $SD=.28$) and KT Central ($M=2.84$, $SD=.28$) was not statistically significant, Yuet Wah reported a higher score of SofC. Within the four dimensions of SofC, only the difference in Shared Emotional Connection among the two constituencies was significant ($p=.009$). Shared Emotion Connection appeared to be higher in Yuet Wah ($M=3.07$, $SD=.38$) than another constituency ($M=2.93$, $SD=.40$). Among the four perceived walkability attributes, the differences in Congestion ($p=.023$), Accessibility ($p=.000$) and Walking Barriers ($p=.037$) between the two constituencies were significant. Yuet Wah had higher levels of Accessibility (J01: $M=2.81$, $SD=.35$; J29: $M=3.01$, $SD=.35$) as well as Walking barriers (J01: $M=2.14$, $SD=.39$; J29: $M=2.26$, $SD=.40$) than that of KT Central. Walking Facilities in Yuet Wah was also higher, though it did not reach research significant level. However, KT Central had a higher level of congestion (J01: $M=2.45$, $SD=.30$; J29: $M=2.35$, $SD=.35$) than Yuet Wah. Among the rest of the four objective walkability attributes, the difference in Residential Density ($p=.000$) and Connectivity ($p=.000$) between the two constituencies were significant, that KT Central had higher scores of Residential Density and Connectivity.

Table 6.
Means of variables between Yuet Wah and KT Central

	Yuet Wah		KT Central		Independent samples t-test	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
SofC (mean of 7 items)	2.91	.28	2.84	.28	1.80	.073
Shared Emotional Connection	3.07	.38	2.93	.40	2.65	.009
Membership	2.78	.49	2.77	.43	.25	.801
Influence	2.63	.43	2.52	.50	1.75	.082
Reinforcement of needs	2.94	.30	3.02	.32	-1.96	.051
Perceived Walkability						
Congestion	2.35	.35	2.45	.30	-2.22	.028
Accessibility	3.01	.35	2.81	.35	4.24	.000
Walking Barriers	2.26	.40	2.14	.39	2.08	.038
Walking facilities	2.86	.40	2.77	.43	1.65	.101
Objective Walkability (Total Z)	-.035	2.07	-.577	2.48	1.83	.069
Land-use mix	.89	.01	.89	.05	.51	.611
Commercial land use ratio	.18	.01	.18	.05	.25	.800
Residential density	108.65	4.99	115.21	4.52	-10.07	.000
Connectivity	44.48	1.15	59.55	6.37	-22.10	.000

Note. All missing cases were replaced with Series Mean; results significant at .05 level were bolded.

To understand the correlations between SofC attributes, perceived walkability and objective walkability attributes, bivariate analysis was conducted (Table 7). Results ($p \leq .05$) show that SofC (mean of 7 items), Shared Emotional Connection and Membership were positively correlated with Accessibility and Walking Facilities in Yuet Wah. Membership was also positively correlated with Congestion in Yuet Wah. In KT Central, SofC, Shared Emotional Connection and Membership were negatively correlated with Land-use mix, Commercial land use ratio and Connectivity, but SofC and Membership were positively correlated with Residential Density. SofC and Influence were negatively correlated with Congestion. SofC and Shared Emotional Connection were positively correlated with Walking Facilities, but negatively correlated with Objective Walkability (Total Z). Membership and Reinforcement of needs were found to be negatively correlated with Walking Barriers. Though the correlations between perceived walkability and objective walkability attributes were not the focus in this research, Walking Facilities was found to be negatively correlated with Commercial land use ratio and Connectivity, and Walking Barriers was found to be negatively correlated with Connectivity.

Table 7.

Bivariate correlations between SofC, Perceived Walkability and Objective Walkability

	District no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1 SofC (mean of 7 items)		1													
2 Shared Emotional Connection	J29	.829***	1												
	J01	.854***	1												
3 Membership	J29	.799***	.419***	1											
	J01	.783***	.444***	1											
4 Influence	J29	.290***	.031	.124	1										
	J01	.406***	.202	.145	1										
5 Reinforcement of needs	J29	.291***	.156	.127	-.085	1									
	J01	.200	-.007	.225*	-.220*	1									
6 Congestion	J29	.056	-.028	.166*	-.109	.082	1								
	J01	-.227*	-.137	-.165	-.260*	-.027	1								
7 Accessibility	J29	.308***	.254**	.290***	.044	.018	.100	1							
	J01	-.078	-.181	.024	.132	-.073	.061	1							
8 Walking Barriers	J29	.033	-.133	.158	.064	.108	.215*	-.101	1						
	J01	-.187	-.072	-.227*	-.030	-.221*	.173	-.067	1						
9 Walking facilities	J29	.264**	.198*	.264**	.005	.100	.101	.206*	.149	1					
	J01	.219*	.302**	.126	.020	-.155	-.128	-.128	-.015	1					
10 Objective Walkability (Total Z)	J29	.050	.100	.000	-.080	.057	.092	-.075	-.094	-.061	1				
	J01	-.230*	-.233*	-.196	.008	-.029	.013	.173	.181	-.279**	1				
11 Land-use mix	J29	-.091	-.066	-.131	.065	-.004	.158	.062	.062	.121	-.124	1			
	J01	-.263*	-.246*	-.242*	-.015	-.020	.028	.049	.177	-.235*	.908***	1			
12 Commercial land use ratio	J29	.021	.068	-.038	-.065	.099	.143	-.042	-.069	-.003	.899***	.184*	1		
	J01	-.261*	-.243*	-.238*	-.017	-.025	.014	.086	.182	-.245*	.942***	.991***	1		
13 Residential density	J29	.087	.085	.110	-.105	.028	-.073	-.077	-.017	-.141	.490***	-.861***	.159	1	
	J01	.215*	.159	.238*	.049	.006	-.008	.153	-.102	.079	-.412***	-.746***	-.688***	1	
14 Connectivity	J29	.087	.119	.060	-.058	-.005	-.037	-.098	-.170*	-.102	.799***	-.578***	.514***	.715***	1
	J01	-.253*	-.234*	-.239*	-.001	-.031	-.003	.112	.180	-.265*	.964***	.963***	.982***	-.614***	1

Note. All missing cases were replaced with Series Mean; * test result significant at .05 level; ** test result significant at .01 level; *** test result significant at .001 level.

Table 8.

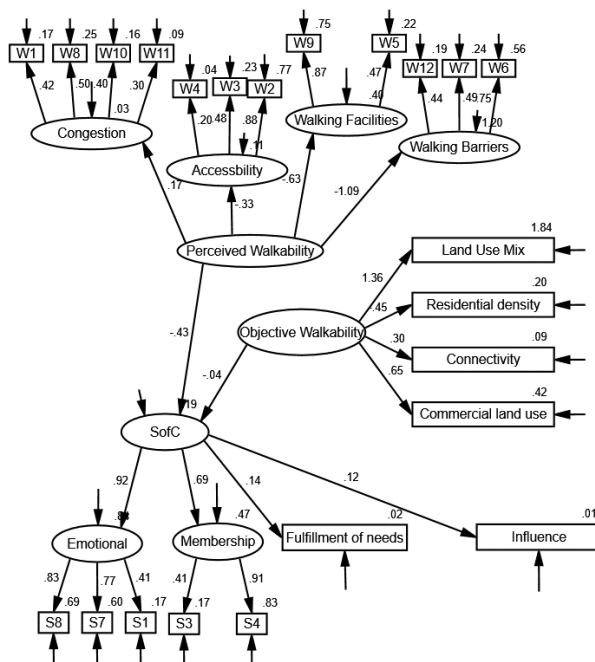
Multivariate correlations with SofC between Yuet Wah and KT Central

	Yuet Wah								KT Central							
	Model 1				Model 2				Model 3				Model 4			
	Socio-demo.				Socio-demo. & Objective Walkability				Socio-demo. & Perceived Walkability				Socio-demo., Objective Walkability & Perceived Walkability			
Adjusted R²	.115				.096				.207				.205			
Sig.	.001				.009				.000				.000			
	<i>β</i>	<i>p</i>	<i>β</i>	<i>p</i>	<i>β</i>	<i>p</i>	<i>β</i>	<i>p</i>	<i>β</i>	<i>p</i>	<i>β</i>	<i>p</i>	<i>β</i>	<i>p</i>	<i>β</i>	<i>p</i>
Socio-demographics																
Born in HK	-.243	.006	-.237	.008	-.192	.022	-.180	.034	-.132	.229	-.112	.334	-.154	.158	-.140	.233
Retired	.140	.109	.134	.133	.163	.055	.153	.075	.051	.714	.068	.631	-.007	.962	.001	.996
Living alone	-.023	.780	-.013	.878	-.022	.777	-.005	.948	-.227	.036	-.223	.044	-.210	.046	-.201	.064
Age	.116	.222	.128	.189	.071	.438	.090	.337	.041	.763	-.019	.894	.041	.767	.013	.930
Length of residence	.085	.294	.076	.370	.114	.146	.102	.214	.174	.115	.186	.102	.207	.054	.213	.057
Household Income	.006	.940	-.005	.957	-.063	.425	-.084	.306	.211	.059	.191	.091	.163	.137	.155	.166
Objective Walkability																
Land-use mix			-.036	.874			-.026	.903			-.088	.930			-.042	.966
Commercial land use ratio			-.025	.860			-.041	.760			.109	.928			.228	.849
Residential density			-.048	.820			-.054	.788			.026	.893			.090	.633
Connectivity			.110	.502			.190	.228			-.222	.718			-.274	.654
Perceived Walkability																
Congestion					-.030	.711	-.028	.746					-.164	.130	-.171	.125
Accessibility					.245	.002	.263	.001					-.057	.562	-.061	.556
Walking Barriers					.033	.676	.061	.461					-.126	.205	-.103	.318
Walking facilities					.201	.014	.209	.011					.184	.066	.153	.142

Note. All missing cases were replaced with Series Mean; standardized coefficients were reported; results significant at .05 level were bolded; Socio-demo = Socio-demographics.

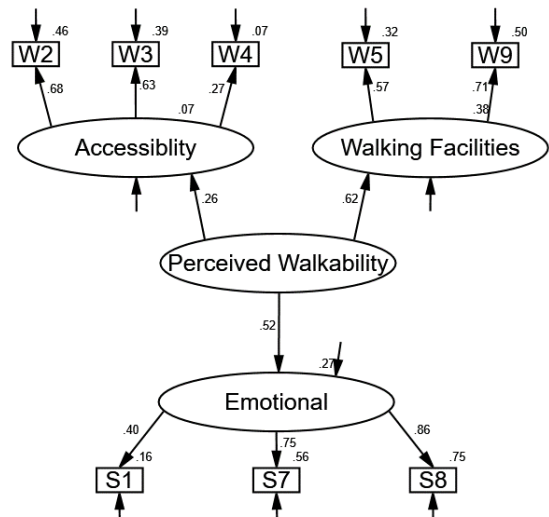
The multivariate models are presented in Table 8. For Yuet Wah, SofC was negatively correlated with seniors born in Hong Kong ($p=.006$) in Model 1, and this result remained in the rest of the 3 Models ($p\leq.05$). Though objective walkability attributes were added in Model 2, none of its dimensions showed significant result with SofC. SofC was positively correlated with Accessibility ($p=.002$) and Walking Facilities ($p=.014$) in Model 3, and this result remained in Model 4 when both perceived walkability and objective walkability were added. However, Accessibility (Model 3: $\beta=.245$; Model 4: $\beta=.263$) had a greater influence in increasing the level of SofC than that of Walking Facilities (Model 3: $\beta=.201$; Model 4: $\beta=.209$) in both Models 3 and 4. Comparing the 4 models in Yuet Wah, Model 3 had the highest adjusted R^2 , that the Model explained 20.7% of the variations when only perceived walkability attributes and socio-demographic data were added. For KT Central, SofC was positively correlated with seniors living alone ($p=.036$), and this correlation remained in Models 2 and 3 ($p\leq.05$), but not in Model 4. Though different combinations of perceived walkability and objective walkability attributes were added in Models 2 to 4 for KT Central, no correlation with SofC at significant level was resulted. Comparing the 4 models in KT Central, Model 3 had the highest adjusted R^2 , that the Model explained 20.0% of the variations. In the two constituencies, Land-use mix and Congestion were negatively correlated with SofC, but Walking Facilities was positively correlated with SofC in both Models 3 and 4, though they were not statistically significant.

Figure 4.



Note. Initial model for pooled data.

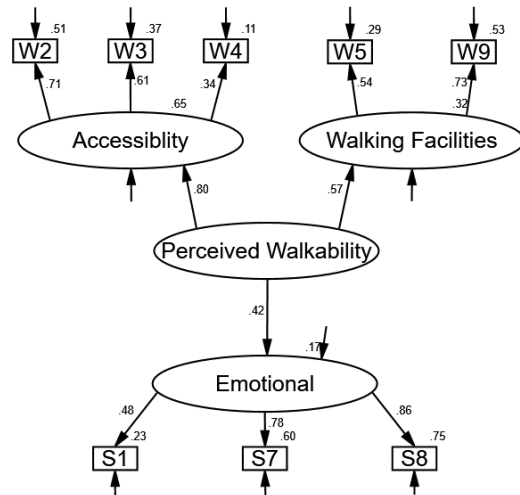
Figure 5.



Note. Final modified structural model for pooled data.

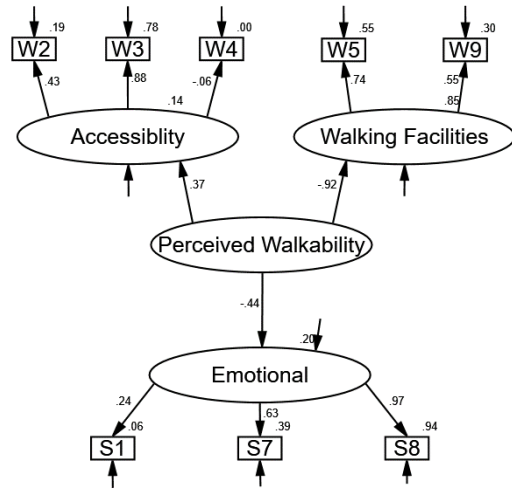
SEM was then conducted to create a model with favourable fit for comparing the difference between elderly living in the two constituencies. An initial model is shown in Figure 4, displaying the structural relationship between SofC, perceived walkability and objective walkability attributes for pooled data. Though socio-demographic data were put into the model previously, no output was resulted. It could also be explained by the regression analysis of Model 1, that limited influence of socio-demographic data was found in explaining SofC in the two constituencies. Thus, the initial model did not contain any socio-demographic data. Yet, as shown from the above results, some variables were not correlated with one another, the initial model did not contain satisfactory goodness of fit for comparisons ($\chi^2(222) = 581.331$, CFI=.778, GFI=.827, RMSEA=.084). With the assistance of the previous results, numerous attempts were made to optimize the model.

Figure 6



Note. Final modified structural model for Yuet Wah.

Figure 7



Note. Final modified structural model for KT Central.

Table 5.
Analysis of moments structure (AMOS) between Yuet Wah and KT Central

	Pooled data		Yuet Wah		KT Central	
	Standard path coefficient	Critical ratio (t-value)	Standard path coefficient	Critical ratio (t-value)	Standard path coefficient	Critical ratio (t-value)
Perceived Walkability → Walking Facilities	.620	1.255	.567	1.644	-.919	-.946
Perceived Walkability → Emotional	.518	1.348	.42	1.881	-.442	-1.101
Accessibility → It is easy to walk to a transit stop (bus, MTR) from my home (W3)	.626	2.762**	.606	3.730***	.883	1.260
Accessibility → The distance between intersections in my community is usually short (W4)	.265	2.611**	.336	2.871**	-.062	-.518
Walking Facilities → There are trees along the streets in my community (W9)	.709	2.640**	.731	2.526*	.545	2.466*
Emotional → I think the community that I am living is a good place for me to live (S1)	.400	5.022	.483	4.987***	.237	1.853
Emotional → It is very important to me to live in this particular community (S7)	.749	6.554	.777	6.318***	.625	2.950**

Note.

All missing cases were replaced with Series Mean.

*Test result is significant at .05 level; **Test result is significant at .01 level; ***Test result is significant at .001 level.

The final modified structural model for pooled data ($\chi^2(17)=39.974$, CFI=.918, GFI=.958, RMSEA=.077) is shown in Figure 5. Since SofC with 7 items was not able to optimize the structure, only Shared Emotional Connection with 3 items remained. Consistent with the result shown in regression analysis, only Accessibility and Walking Facilities, the two variables remained in the final modified model were correlated to SofC in Yuet Wah,. Objective Walkability attributes were forced to be removed due to their weak contribution to the structural fit. It was then tested separately among

seniors living in the two constituencies. Both models for Yuet Wah ($\chi^2(17)=36.968$, CFI=.904, GFI=.936, RMSEA=.092) and KT Central ($\chi^2(17)=21.870$, CFI=.904, GFI=.936, RMSEA=.092) reached satisfactory standard of structural fit. Comparing the two constituencies, Perceived Walkability was positively correlated with Shared Emotional Connection in Yuet Wah, but negatively correlated in KT Central. Some differences were found in the paths between two constituencies. Though the standardized regression weights of “Perceived Walkability → Walking Facilities” and “Accessibility → (W4)” were positive in Yuet Wah, they were negative in KT Central.

Discussions

As shown from the above findings, perceived walkability attributes conducive to walking were generally higher in Yuet Wah, and elderly in Yuet Wah also had a relatively higher SofC than those in KT Central, especially in the dimension of Shared Emotional Connection, which was consistent with H1. Though it could be partly explained by some of the socio-demographic data, such as whether they were born in Hong Kong and living alone, the results suggested that how the elderly perceived their environment also played an important role in increasing their SofC.

Elderly from the two constituencies did not live far apart from each other, but many important differences were found between them. In Yuet Wah, Accessibility and Walking Facilities were positively correlated with SofC and were still important in explaining the higher level of SofC when objective walkability attributes and socio-demographic data were added for comparisons, which shows that easy access to public transportation and shops with sufficient trees and crosswalks had a strong influence to enhance elderly's SofC. Both Accessibility and Walking Facilities were even able to construct a satisfactory structural model to explain Shared Emotional Connection for elderly. It shows that easy access to different destinations is important for retired elderly to kill time and to seek for mental support, as these destinations allow them to interact with each other while their family members are away from home on a daily basis. The result was consistent with the research conducted by Lund (2003) in Portland. Her study suggested that both parks and commercial shops near one's neighbourhood would increase the incentives for walking, and thus, enhanced interaction among residents. She especially emphasized the “unplanned interactions” in parks and “supportive acts of neighbouring” in local retail shops. Applying them into the context of Hong Kong, not only could parks provide space for elderly to physically prevent health risks, but also allow them to mentally support their spiritual emptiness without specific plan in advance. Moreover, local retail shops enhance their communication through bargaining with the shopkeepers together and updating the current prices in the market.

Walking Barriers was significantly higher in Yuet Wah, but it was positively correlated with elderly's SofC, though the result was not statistically significant. In other words, even though many hillsides, stairs and environmental barriers were found in this constituency, elderly were still very enjoyable and satisfied to be a member of this place. Wood *et al.* (2010) found that residents' perception of steep hills was negatively correlated with SofC in Atlantic, the United States of America, which is different from the result found in this research. For elderly in Hong Kong, the so called “barriers” may not really impose any burdens or challenge on them. On the contrary, more hillsides and stairs, instead of electronic lifts and escalators, may provide them with more opportunities to train up their physical health and may prolong the time they share with their counterparts while walking in the community, which may explain why elderly are still happy while encountering a lot of “barriers”.

KT Central had a relatively higher objective walkability, but a lower SofC, which was inconsistent with H2. Congestion was also shown to be negatively correlated with SofC at significant level, which shows that too many residential buildings, cars and crime rates in a neighbourhood would result in lower SofC. Both Residential Density and Connectivity were also higher in KT Central, which were consistent with the perceived opinion from the residents in this constituency, that this

neighbourhood was too dense with people, cars and crimes. Consistent with French *et al.* (2014)'s research conducted in Australia, that higher residents' perception of crime and traffic hazards would result in lower SofC. Higher perception of crime and traffic hazards may easily increase the awareness of deceptions among residents, which may prevent them from trusting people in the neighbourhood. As a result, SofC would be lower.

Land-use mix, Commercial land use ratio and Connectivity were negatively correlated with SofC, which shows that a variety of land uses, high commercial land use ratio and road intersections would result in lower extent of SofC, especially in the dimensions of Shared Emotional Connection and Membership. However, when comparing the impacts of Socio-demographic data, Perceived Walkability and Objective Walkability attributes on SofC, Objective Walkability attributes were no longer important in explaining SofC in both constituencies, which was consistent with H3. The result was also consistent with the research conducted by Hanibuchi *et al.* (2012) in Japan, that walkability was not influential on increasing elderly's SofC. They measured walkability by using residential density, connectivity, land-use mix as well as presence of green space within each participant's buffer zone. They found that walkability was significantly associated with some indices of social capital, while the directions of the associations were mixed. Yet, the correlations were no longer significant when socio demographic data and year of residence were added for analysis. The result found in Japan as well as this research in Hong Kong may serve to shed light on understanding that objective walkability may not be able to predict elderly's SofC in Asia, especially in area where one category of land use may not be able to represent the real functions for the land. Further research should be conducted to understand more about the association between objective walkability and SofC in Asia.

Conclusions

The policy of "improving the pedestrian environment" as addressed in the 2016 Policy Address is "for the benefit of all, especially the elderly". However, the results in this research showed that objective walkability was less influential than perceived walkability in the two constituencies. If the government only focuses on how to improve the environment by using their own mind-set or objective standard without consulting the subjective opinion of the elderly while encountering the ageing population, the elderly may not be able to receive the kind of happiness the government expected. It is therefore of highly importance for the government to rethink how the policy direction of a walkable environment should be proceeded.

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“社區長者(2016-17 年)研究行動一月華老友記”

敬啟者：

香港目前正面臨著嚴峻的人口老齡化問題，對於長者服務及設施的需求將日漸提高，因此我們有迫切的理由去探討如何增加和改善。作為本港提供社會服務教育的主要機構之一，香港理工大學應用社會科學系（下稱本系）希望在長者人數較密集的社區中進行社會調查研究，以了解長者的真實需要，掌握最新的數據和信息，向政府當局提供完善長者服務與設施的政策建議。因此本系啟動了是次研究計劃，名為“社區長者(2016-17 年)研究行動”。

本系在觀塘區議會月華區區議員徐海山先生的全力協助下，對月華社區所有樓宇單位進行了隨機抽樣的程序。而閣下在是次的抽樣程序中被選中為問卷調查的受訪者。本系希望了解您的想法和意見，以幫助我們全面認識月華社區的長者情況及其社會需要，並藉此檢討目前有關長者的設施種類、服務範疇及政策保障。因此，我們誠摯地邀請閣下參加本研究項目。

是次問卷調查將於 2017 年 2 月 8 日至 2 月 15 日進行，全份問卷圍繞四個主題（包括：退休決定、接種流感疫苗、社區環境及社群意識、生活品質與生命尊嚴），大約需時 30 分鐘。本系委派的調查員在訪問前，必須出示有效的香港理工大學學生證及調查員編號，並在閣下的單位內進行面對面的問卷調查。閣下必須理解是次研究完全是自願參與的，即代表閣下有權拒絕參與是次問卷調查。閣下亦有權對本研究調查的任何部分提出質疑，或隨時要求中止或退出，而不被追究任何責任。閣下提供的所有答案將被嚴格保密，並僅限於研究用途。

這是一項有價值的社區研究，將為社會工作者、長者服務機構和有關的政府部門提供重要研究資料，希望有助於推動本港老年學的教育與研究，改善長者家居及社區服務，提升公共政策與行政的質量。如果閣下需要任何進一步的資料，或對是次研究有任何查詢，歡迎透過電子郵件：ykong@polyu.edu.hk 或致電 852-2766 5754 與江揚博士聯繫。本系再次感謝閣下的關注，並提供寶貴的時間參與是次研究。耑此 奉達。順頌

春祉！

香港理工大學
應用社會科學系
江揚博士 謹啟

二零一七年二月二日

INFORMATION SHEET

The Study of Elderly Needs and Services in Yuet Wah

Dear Sir/Madam,

You are invited to participate in a study conducted by undergraduate students from the Department of Applied Social Sciences (the Department) of The Hong Kong Polytechnic University. The project has been approved by the Human Subjects Ethics Sub-committee (HSESC) (or its Delegate) of The Hong Kong Polytechnic University (HSESC Reference Number: HSEARS20170104004).

Hong Kong is facing a serious ageing population issue, and people always have a huge demand and high expectation on the elderly services. As one of the major institutions and pioneers to provide social service education in Hong Kong, the Department would like to investigate the elderly needs and services in local community, in order to obtain the first-hand information and comprehensive understanding from the elderly, as well as advocate a better ageing policy to the Hong Kong Government.

With the assistance of Mr. HSU Hoi-shan, the District Councilor of Yuet Wah, Kwun Tong, you are cordially requested to participate in this research project. The invitations of households are decided by the cluster sampling procedure. The Department would like to gain your thoughts and opinions for assisting us to examine the elderly's social needs and to identify the current ageing problems, your participation is, therefore, appreciated.

This survey (from 8-Feb-2017 to 15-Feb-2017) would take around 30 minutes to complete. Interviewers assigned by the Department will conduct an in-house-self-administered questionnaire in a face-to-face context. Be assured that your participation in the study is absolutely voluntary and refusal to participate has no bearing consequences. You have every right to withdraw from the study before or during the survey without penalty of any kind. All answers you provide will be kept in the strictest confidentiality and used only for research purposes. The study should not result in any undue discomfort, but your response may be recorded. All information related to you will remain confidential and will be identifiable by codes only known to the researcher. If you would like to obtain more information about this study, please contact Dr. KONG, Yeung (tel. no.: 2766-5754 / email: ykong@polyu.edu.hk).

If you have any complaints about the conduct of this research study, please do not hesitate to contact Miss Cherrie Mok, Secretary of the Human Subjects Ethics Sub-Committee of The Hong Kong Polytechnic University in writing (c/o Research Office of the University) stating clearly the responsible person and department of this study as well as the HSESC Reference Number.

Many thanks for your interest in participating in this study.

Dr. KONG Y., William
Principal Investigator/Chief Investigator

2-Feb-2017



THE HONG KONG
POLYTECHNIC UNIVERSITY
香港理工大學

Researcher Code:

Bldg.:

Floor + Rm.:

Start at:

Finish at:

香港理工大學
應用社會科學系
“社區長者(2016-17 年)研究行動”

敬啟者：

香港目前正面臨著嚴峻的人口老齡化問題，對於長者服務及設施的需求將日漸提高，因此我們有迫切的理由去探討如何增加和改善。作為本港提供社會服務教育的主要機構之一，香港理工大學應用社會科學系（下稱本系）希望在長者人數較密集的社區中進行社會調查研究，以了解長者的真實需要，掌握最新的數據和信息，向政府當局提供完善長者服務與設施的政策建議。因此本系啟動了是次研究計劃，名為“社區長者(2016-17 年)研究行動”。

本系在觀塘區議會觀塘中心區議員陳華裕先生的協助下，對觀塘中心所有樓宇單位進行了隨機抽樣的程序。而閣下在是次的抽樣程序中被選中為問卷調查的受訪者。本系希望了解您的想法和意見，以幫助我們全面認識觀塘中心的長者情況及其社會需要，並藉此檢討目前有關長者的設施種類、服務範疇及政策保障。因此，我們誠摯地邀請閣下參加本研究項目。

是次問卷調查將於 2017 年 2 月 21 日至 3 月 24 日進行，全份問卷圍繞長者的社區環境及社群意識，大約需時 10-15 分鐘。本系委派的調查員在訪問前，必須出示有效的香港理工大學學生證及調查員編號，並在閣下的單位內進行面對面的問卷調查。閣下必須理解是次研究完全是自願參與的，即代表閣下有權拒絕參與是次問卷調查。閣下亦有權對本研究調查的任何部分提出質疑，或隨時要求中止或退出，而不被追究任何責任。閣下提供的所有答案將被嚴格保密，並僅限於研究用途。

這是一項有價值的社區研究，將為社會工作者、長者服務機構和有關的政府部門提供重要研究資料，希望有助於推動本港老年學的教育與研究，改善長者家居及社區服務，提升公共政策與行政的質量。如果閣下需要任何進一步的資料，或對是次研究有任何查詢，歡迎透過電子郵件：ykong@polyu.edu.hk 或致電 852-2766 5754 與江揚博士聯繫。本系再次感謝閣下的關注，並提供寶貴的時間參與是次研究。肅此奉達。順頌

春祉！

香港理工大學
應用社會科學系
江揚博士 謹啟

二零一七年二月二十日

參與研究同意書
“社區長者(2016-17 年)研究行動”

本人_____同意參與由香港理工大學應用社會科學系_____開展的上述研究。

本人知悉此研究所得的資料可能被用作日後的研究及發表，但本人的私隱權利將得以保留，即本人的個人資料不會被公開。

研究人員已向本人清楚解釋列在所附資料卡上的研究程序，本人明瞭當中涉及的利益及風險；本人自願參與研究項目。

本人知悉本人有權就程序的任何部分提出疑問，並有權隨時退出而不受任何懲處。

參與者姓名 _____

參與者簽署 _____

研究人員姓名 _____

研究人員簽署 _____

日期 _____

INFORMATION SHEET

The Study of Elderly Needs and Services in Kwun Tong

Dear Sir/Madam,

You are invited to participate in a study conducted by undergraduate students from the Department of Applied Social Sciences (the Department) of The Hong Kong Polytechnic University. The project has been approved by the Human Subjects Ethics Sub-committee (HSESC) (or its Delegate) of The Hong Kong Polytechnic University (HSESC Reference Number: HSEARS20170104004).

Hong Kong is facing a serious ageing population issue, and people always have a huge demand and high expectation on the elderly services. As one of the major institutions and pioneers to provide social service education in Hong Kong, the Department would like to investigate the elderly needs and services in the local community, in order to obtain the first-hand information and comprehensive understanding from the elderly, as well as advocate a better ageing policy to the Hong Kong Government.

With the assistance of Mr. CHAN Wah-yu, Nelson, MH, JP, the District Councilor of Kwun Tong Central, Kwun Tong, you are cordially requested to participate in this research project. The invitations of households are decided by the cluster sampling procedure. The Department would like to gain your thoughts and opinions for assisting us to examine the elderly's social needs and to identify the current ageing problems, your participation is, therefore, appreciated.

This survey (from 21-Feb-2017 to 24-Mar-2017) would take around 10-15 minutes to complete. Interviewers assigned by the Department will conduct an in-house-self-administered questionnaire in a face-to-face context. Be assured that your participation in the study is absolutely voluntary and refusal to participate has no bearing consequences. You have every right to withdraw from the study before or during the survey without penalty of any kind. All answers you provide will be kept in the strictest confidentiality and used only for research purposes. The study should not result in any undue discomfort, but your response may be recorded. All information related to you will remain confidential and will be identifiable by codes only known to the researcher. If you would like to obtain more information about this study, please contact Dr. KONG, Yeung (tel. no.: 2766-5754 / email: ykong@polyu.edu.hk).

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Many thanks for your interest in participating in this study.

Dr. KONG Y., William
Principal Investigator/Chief Investigator

20-Feb-2017

有關老年長者的社會需要以及老年政策的問卷調查

第一部分：基本資料

請在下列空格填上答案，或於最適合描述閣下的選項方格內填上別號。

1. 性別（由訪問員填寫）

1 ☐ 男

2 ☐ 女

2. 以西曆計嘅話，你今年幾多歲？〔寫低年齡〕

888 ☐ 唔知道

999 ☐ 拒絕回答

3. 你係唔係香港出世？

1 ☐ 係

888 ☐ 唔知道

2 ☐ 唔係〔回答 3a〕

999 ☐ 拒絕回答

3a. 你住咗係香港幾多年？〔寫低年份數〕

999 ☐ 拒絕回答

888 ☐ 唔知道

000 ☐ 不適用

4. 你住咗係呢一區幾多年？〔寫低年份數〕

999 ☐ 拒絕回答

888 ☐ 唔知道

5. 你而家嘅就業狀況係點？

1 ☐ 失業

4 ☐ 家庭主婦

7 ☐ 半退休

2 ☐ 僱用 - 全職

5 ☐ 搵緊工

8 ☐ 其他：_____

3 ☐ 僱用 - 兼職

6 ☐ 退休

999 ☐ 拒絕回答

6. 你有無宗教信仰？〔先由受訪者作答，再由訪問員填寫〕

1 ☐ 拜神

4 ☐ 天主教

7 ☐ 無宗教信仰

2 ☐ 道教

5 ☐ 基督教

8 ☐ 其他：_____

3 ☐ 佛教

6 ☐ 回教

999 ☐ 拒絕回答

7. 你嘅教育程度去到邊到呢？〔先由受訪者作答，再由訪問員填寫〕

1 ☐ 無正式接受教育/幼稚園

5 ☐ 預科

8 ☐ 專上教育：學士學位課程

2 ☐ 小學

6 ☐ 工業學院/專業教育學院

9 ☐ 研究院（碩士，博士）

3 ☐ 初中

7 ☐ 專上教育：非學位課程

10 ☐ 其他：_____

4 ☐ 高中

（包括師範，護士，證書及文憑）

999 ☐ 拒絕回答

8. 你有無長期疾病？

1 ☐ 有〔回答 8a〕

2 ☐ 無

999 ☐ 拒絕回答

8a. 你有咩長期病患？〔請註明〕

999 ☐ 拒絕回答

000 ☐ 不適用

9. 你有無身體殘障？

1 ☐ 有〔回答 9a〕

2 ☐ 無

999 ☐ 拒絕回答

9a. 你有咩身體殘障？〔請註明〕

999 ☐ 拒絕回答

000 ☐ 不適用

10. 你嘅婚姻狀況係？

1 ☐ 已婚

3 ☐ 分居

5 ☐ 配偶死亡或失散

2 ☐ 未婚

4 ☐ 離婚

999 ☐ 拒絕回答

11. 你有冇子女？

_____（個）

999 ☐ 拒絕回答

11a. 請問有幾多個子女仲返緊學呢？

_____（個）

999 ☐ 拒絕回答

000 ☐ 不適用

11b. 請問你子女每個月會比幾多錢你呢？〔寫低金額〕

999 ☐ 拒絕回答

000 ☐ 不適用

12. 你有冇同以下人士一齊住？

1 ☐ 配偶

4 ☐ 未成年子女

7 ☐ 無

2 ☐ 已婚子女

5 ☐ 家傭

999 ☐ 拒絕回答

3 ☐ 成年子女

6 ☐ 其他：_____

13. 你每月個人收入是？（包括生果金、綜援以及工作收入）（寫下收入）

_____ 888 ☐ 不知道

999 ☐ 拒絕回答

14. 你的每月家庭收入是多少？（包括子女和配偶的收入）（寫下收入）

_____ 888 ☐ 不知道

999 ☐ 拒絕回答

15. 你宜家住緊嘅單位係咪自置物業？

1 ☐ 係

3 ☐ 其他：_____

999 ☐ 拒絕回答

2 ☐ 唔係

888 ☐ 唔知道

第二部分：休憩用地、步行環境與社群意識問卷

1. 請你係每列✓出一項你對你社區嘅評價。

	非常 不同意 1	不同意 2	同意 3	非常 同意 4	不知道/ 無意見 888	拒答 999
1. 我社區嘅住宅過多						
2. 由我屋企出發，我能夠係短時間內行去使用各項設施						
3. 由我屋企出發，我能夠容易行去交通車站(巴士、地鐵)						
4. 我嘅社區接近十字路口						
5. 我嘅社區有足夠斑馬線同埋紅綠燈						
6. 我社區嘅街道有好多斜路						
7. 我社區嘅街道有好多掘頭路						
8. 我嘅社區裡面，大部分司機都超速駕駛						
9. 我嘅社區裡面，沿路有好多樹木						
10. 我社區嘅犯罪率令我係夜晚行路嘅時候感到不安						
11. 我覺得好難係我既社區裡面泊車						
12. 我係我社區裡面遇到唔同環境障礙（如太多樓梯級、太多馬路同斜坡）						

2. 請你係每列✓出一項最能夠表達你對句子嘅觀感。

我覺得我屋企附近嘅休憩用地……	非常 不同意 1	不同意 2	同意 3	非常 同意 4	不知道/ 無意見 888	拒答 999
1. 設於安全嘅地方						
2. 設於接近民居嘅地方						
3. 提供足夠散步嘅地方						
4. 提供足夠嘅照明						
5. 入口容易識別						
6. 提供足夠嘅綠化地方						
7. 有充分嘅保養同管理						
8. 有足夠嘅無障礙設計，以配合殘疾人士嘅需要						
9. 提供不同種類嘅康樂設施，比兒童、成人、長者及殘疾人士共同享用						
10. 提供足夠嘅座位						
11. 設於方便各類人士前往嘅地方						
12. 提供足夠進行社交活動嘅空間						

3. 請你係每列✓出一項最能夠表達你對句子嘅觀感。

	非常 不同意 1	不同意 2	同意 3	非常 同意 4	不知道/ 無意見 888	拒答 999
1. 我社區係一個適合我居住嘅地方						
2. 我同我嘅鄰居都期望係呢個社區得到一啲相同嘅環境設備						
3. 我認得出大部分住係呢個社區嘅人						
4. 係呢個社區裡面，我感受到家嘅感覺						
5. 我對我社區嘅情況有影響力						
6. 如果我社區出現問題，住係呢度嘅人能夠自己解決						
7. 對我黎講，住係呢個社區非常重要						
8. 我希望能夠長時間住係呢個社區裡面						

為方便工作人員覆查問卷，請你提供電話號碼以及姓名。

電話號碼:

姓名:

問卷完

[以下由訪問員填寫]

訪問員姓名:

訪問日期及時間:

訪問需時:

- 受訪者對接受訪問的最初反應？
1☐願意 2☐不願意 3☐無所謂
- 訪問過程中，受訪者是否合作？
1☐合作 2☐普通 3☐不合作
- 受訪者回答問題的時候是否認真？
1☐認真 2☐對大部份問題都不認真
3☐對一些問題不認真，題目號碼為：
- 受訪者在理解問題過程有沒有困難？
1☐沒有問題 2☐對大部份問題都不能理解
3☐對一些問題有理解困難，題目號碼為：

Survey on the social needs of the elderly

Section 1: Basic Information

Please fill in the following box, or place a check mark next to the phrase that best matches your response.

1. Sex (Filled by interviewer)

1 ☐ Male

2 ☐ Female

2. How old are you in terms of the western calendar?

888 ☐ Do not know

999 ☐ Refuse to answer

3. Are you born in Hong Kong?

1 ☐ Yes

888 ☐ Do not know

2 ☐ No [Answer 3a]

999 ☐ Refuse to answer

3a. How long have you been living in Hong Kong? [Write down year]

999 ☐ Refuse to answer

888 ☐ Do not know

000 ☐ Not applicable

4. How long have you been living in this district? [Write down year]

999 ☐ Refuse to answer

888 ☐ Do not know

5. What is your current working status?

1 ☐ Unemployed

4 ☐ Housewife

7 ☐ Partial retired

2 ☐ Full-time employment

5 ☐ Seeking jobs

8 ☐ Others : _____

3 ☐ Part-time employment

6 ☐ Retired

999 ☐ Refuse to answer

6. What is your religious belief? [Respondent answer first, and then fill out by the interviewer]

1 ☐ Ancestor worship

4 ☐ Catholic

7 ☐ No religious belief

2 ☐ Taoism

5 ☐ Christian

8 ☐ Others : _____

3 ☐ Buddhism

6 ☐ Islam

999 ☐ Refuse to answer

7. What is your education level? [Respondent answer first, and then fill out by the interviewer]

1 ☐ No formal education /
kindergarten

5 ☐ Upper Sixth

9 ☐ Postgraduate degree

2 ☐ Primary school

6 ☐ Technical school or polytechnic

10 ☐ Others : _____

3 ☐ Junior secondary

7 ☐ Diploma or higher

999 ☐ Refuse to answer

4 ☐ Senior secondary

8 ☐ Undergraduate degree

8. Do you have any long term illness?

1 ☐ Yes [Answer 8a]

2 ☐ No

999 ☐ Refuse to answer

8a. What long term illness do you have? [Please specify]

_____	999 ☐ Refuse to answer	000 ☐ Not applicable
-------	---	---

9. Do you have any physical disability?

1 ☐ Yes [Answer 9a] 2 ☐ No 999 ☐ Refuse to answer

9a. What physical disability do you have? [Please specify]

_____	999 ☐ Refuse to answer	000 ☐ Not applicable
-------	---	---

10. What is your marital status?

1 ☐ Married 3 ☐ Separated 5 ☐ Dead or lost touch of spouse
2 ☐ Single 4 ☐ Divorced 999 ☐ Refused to answer

11. Do you have any children?

_____ (number of children) 999 ☐ Refused to answer

11a. Number of children at school

_____ (number of children)	999 ☐ Refuse to answer	000 ☐ Not applicable
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11b. Amount of money from children

_____	999 ☐ Refuse to answer	000 ☐ Not applicable
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12. Who do you live with?

1 ☐ Couple 4 ☐ Children under 18 7 ☐ No
2 ☐ Married children 5 ☐ Domestic helper 999 ☐ Refuse to answer
3 ☐ Adult children 6 ☐ Others : _____

13. What is your monthly income? (Including social security and income from work) (Write down the income)

_____ 888 ☐ Do not know 999 ☐ Refuse to answer

14. What is your household income? (Including income from children and spouse) (Write down the income)

_____ 888 ☐ Do not know 999 ☐ Refuse to answer

15. Is the place you live a self-owned property?

1 ☐ Yes 3 ☐ Other : _____ 999 ☐ Refuse to answer
2 ☐ No 888 ☐ Do not know

Section 2: Open Space, walkability and Sense of Community

1. Please place a check mark next to the phrase that best matches your response.

	Strongly disagree 1	Disagree 2	Agree 3	Strongly agree 4	No opinion 888	Refuse to answer 999
1. There are too many residences in my community.						
2. There are many places and facilities to go within walking distance at my home.						
3. It is easy to walk to a transit stop (bus, MTR) from my home.						
4. The distance between intersections in my community is usually short.						
5. There are enough crosswalks and pedestrian signals in my community.						
6. The streets in my community are hilly.						
7. The streets in my community have many cul-de-sacs.						
8. Most drivers exceed the posted limits while driving in my community.						
9. There are trees along the streets in my community.						
10. The crime rate in my community makes it unsafe to go on walks at night.						
11. I think parking is difficult in my community.						
12. I face many environmental barriers (such as too many stairs, too many crosswalks and hillsides) in my community.						

2. Please place a check mark next to the phrase that best matches your response.

I think open spaces around my home...	Strongly disagree 1	Disagree 2	Agree 3	Strongly agree 4	No opinion 888	Refuse to answer 999
1. are located in a safe location.						
2. are close to residential areas.						
3. provide adequate walking pathways.						
4. provide adequate lighting.						
5. have easily identifiable entrances.						
6. provide adequate green areas.						
7. are well maintained and managed.						
8. have sufficient barrier-free design to cater for the needs of the disabled.						
9. provide different types of recreational facilities for children, adults, the elderly						

and people with disabilities to enjoy together.						
10. provide sufficient seating.						
11. are easily accessible for all people.						
12. provide sufficient space for social activities.						

3. Please place a check mark next to the phrase that best matches your response.

	Strongly disagree 1	Disagree 2	Agree 3	Strongly agree 4	No opinion 888	Refuse to answer 999
1. I think the community that I am living is a good place for me to live.						
2. My neighbors and I want the same things from the community.						
3. I can recognize most of the people who live in my community.						
4. I feel at home on this community.						
5. I have no influence over what this community is like.						
6. If there is a problem in this community, people who live here can get it solved.						
7. It is very important to me to live on this particular community.						
8. I expect to live in this community for a long time.						

In order to review the questionnaire, please provide your telephone number and name.

Telephone number:

Name:

End

[The following is completed by the interviewer]

Name of interviewer:

Date and time:

Start and finish time:

1. Respondents' initial response to the interview?

1 ☐ willing 2 ☐ do not willing 3 ☐ does not matter

2. Did the interviewee cooperate during the interview?

1 ☐ cooperated 2 ☐ fair 3 ☐ not cooperated

3. Was the interviewee serious when answering questions?

1 ☐ serious 2 ☐ do not seriously for most of the questions

3 ☐ not serious for some questions, the question number are:

4. Is there any difficulty in understanding the questions?

1 ☐ no problem 2 ☐ cannot understand most of the questions

3 ☐ difficult to understand some of the questions, the question number are:

Selected Samples in Kwun Tong Central

		Floors																				Unit								Total					
1	晨光大廈	10	14	15	17	12	16	18	21	11	20													a	c										20
2	富裕大廈	4	6	12	14	15	18	20	21	1	7	10	16	5	11	22	25							a	c	e	g								64
3	富安大廈	1	6	11	22	4	5	18	2	14	23												a	b	c	d	e	f							60
4	寶峰大廈	3	7	8	9	10	12	16	6	17	18	23	25	13	15	19	20							c	d										32
5	麗裕大廈	6	7	9	13	17	18	19	23	24	2	4	10	14	16	20	21	25	12	22	26	27	28	a	c	f									66
6	仁厚大廈	13	16	18	20	4	14	19	6	17													b	c	d	e	f	h							54
7	定富樓	6	5	4																			1	2	4	5	6	7	8						21
8	樂善大廈	5	13	14	15	8	9	6	12														b	d	e	f									32
9	定業大廈	1	5	7	10	12																	a	b	c	d									20
10	定興大廈	2	3	9	12	16	18	20	21	22													a	b											18
11	翠屏(北)邨翠柏樓	3	5	6	8	9	11	12	14	15	16	17	18	19	20	21	23	25						1	2	3	4	6	8	9	11	12	15		170
12	寶恩大廈	6	11	19	21	15	17	20	7	9													A	B	C										27
13	安祥大樓	5	7	3	6	2																	a	b	c	d									20
14	冠天閣	3	12	16	18	9	11	20	21	8	19												a	b	c										30
15	定安樓	3	5	6	2																		1	4	6										12
16	七喜大廈	5	6	2	3																		b	c	d	f	i								20
17	百富閣	2	17	20	23	26	29	3	5	6	7	10	19	27									a	b	c	d									52
18	安德大廈	9	10	14	19	16	17	5	6														a	b	c	d									32
19	永英樓	10	12	13	15	14	17	22	8	21													a	b											18
20	金和樓	2	4	5	6																		b	d	e	h									16
21	欣榮大廈	9	12	15	16	21	6	14	20	5	17												a	b	d										30
22	翠屏(北)邨翠梓樓	5	6	14	15	17	18	20	9	12	13	16	23	26	7	11	21	22						1	2	3	7	8	11	13	14	15	16		170
23	翠屏(北)邨翠柳樓	2	3	4	5	6	7	8	11	12	13	14	15	16	17	18	19	20	22	25				1	2	4	5	6	7	8	10	11	16		190
24	仁寧大廈	2	3	5	6	7	11	12	15	17	18	19	20										a	c	d	f									48
		Total:																												1222					

		Floor												Unit																Total no. of units
1	月華樓	10	7	6	2	1	5	8	12	4				A	C	H	E	G										45		
2	佳景樓	6	12	4	7	10	1	11	5	2				G	E	A	C	H										45		
3	啟德樓	1	11	5	4	6	2	7	10	3				A	C													18		
4	華豐大廈	2	10	3	8	7	12	6	9	4	1	5	11	C	D													24		
5	永寧樓	4	2	6	7	9	1	10	11	12	3	5	8	A	D													24		
6	南泰大樓	6	4	8	5	2	3	7						C	H	E	F											28		
7	運通樓	6	9	11	12	4	5	8	1					B	E	D	A											32		
8	仁苑大廈	5	4	8	1	2	9	6	12					A	D	B	C											32		
9	永泰大廈	12	6	2	1	10	11	7	9					4	2	3	5											32		
10	建德大廈	8	6	2	7	9	5							G	D	H	B	C										30		
11	超群大廈	1	12	10	6	11	7	9						B	C	A	E	D										35		
12	好景樓	6	11	7	9	4	12	1						C	B	A	E	D										35		
13	天香花園大廈	1	10	5	12	6	3	2						C	A	D	B	E										35		
14	長安大廈	12	3	2	9	11	8	5						5	7	6	1	4	2									42		
15	華麗樓	3	11	8	9	12	5	1	6	2	4	7	10	A1	A4	B3	B1	A2										60		
16	月威大廈	12	8	5	1	6	2	7						G	B	I	C	D	K	J	H	A	L					70		
17	祥園	2	6	7	5	3	4	10	9	12	1	8	11	C	D	H	J	I	F	A								84		
18	集景樓	10	9	3	6	5	4	7	2	1	8	11	12	K	I	A	N	J	F	O	D							96		
19	華苑大廈	5	10	4	7	12	2	9	8	1	3	6	11	BF	BB	AF	BG	AD	AH	AB	BA							96		
20	僑業大廈	2	4	5	9	8	11	12						H	B	I	L	E	J	D	A	K	C					70		
21	觀景閣	9	12	2	6	5	7	11	4	3	1	8	10	B	E	J	D	A										60		
22	泰康樓	6	5	9	7	4	3	2						A1	A8	B15	B7	A2	B14	B8	B3	B5	B6	A3	A7	B2	A5	98		
23	萬和花園大廈	5	7	11	4	6	3	12	2	8	1	9	10	G	J	C	T	B	E	P	H	F	A	D				132		
														TOTAL:																1223

TOTAL:

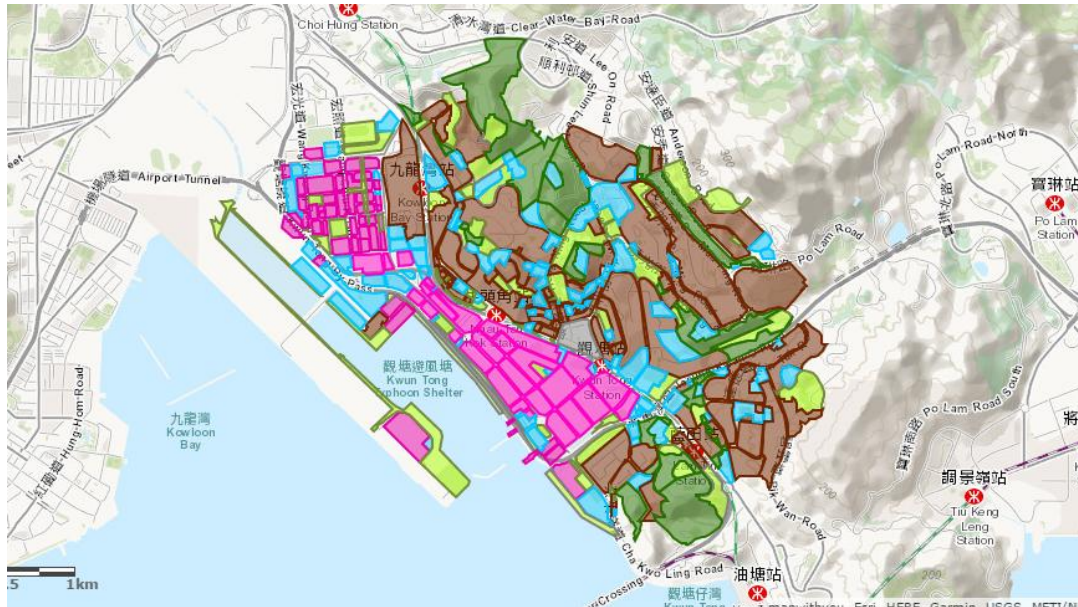
APPENDIX C

Random Numbers

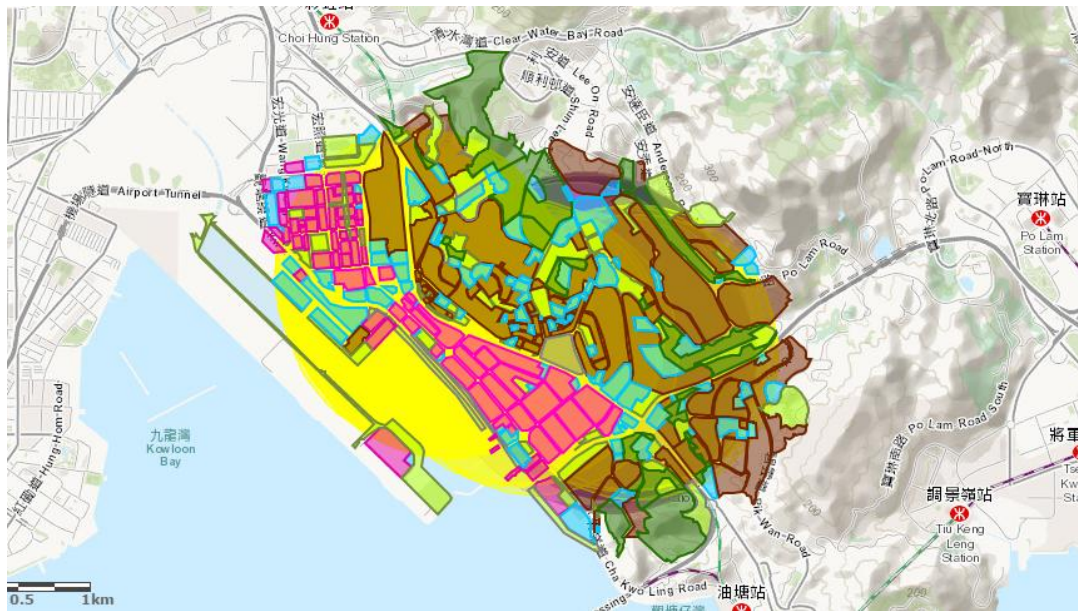
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24130	48360	22527	97265	76393	64809	15179	24830	49340	32081	30680	19655	63348	58629
42167	93093	06243	61680	07856	16376	39440	53537	71341	57004	00849	74917	97758	16379
37570	39975	81837	16656	06121	91782	60468	81305	49684	60672	14110	06927	01263	54613
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63553	40961	48235	03427	49626	69445	18663	72695	52180	20847	12234	90511	33703	90322
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10365	61129	87529	85689	48237	52267	67689	93394	01511	26358	85104	20285	29975	89868
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37169	94851	39117	89632	00959	16487	65536	49071	39782	17095	02330	74301	00275	48280
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03237	45430	55417	63282	90816	17349	88298	90183	36600	78406	06216	95787	42579	90730
86591	81482	52667	61582	14972	90053	89534	76036	49199	43716	97548	04379	46370	28672
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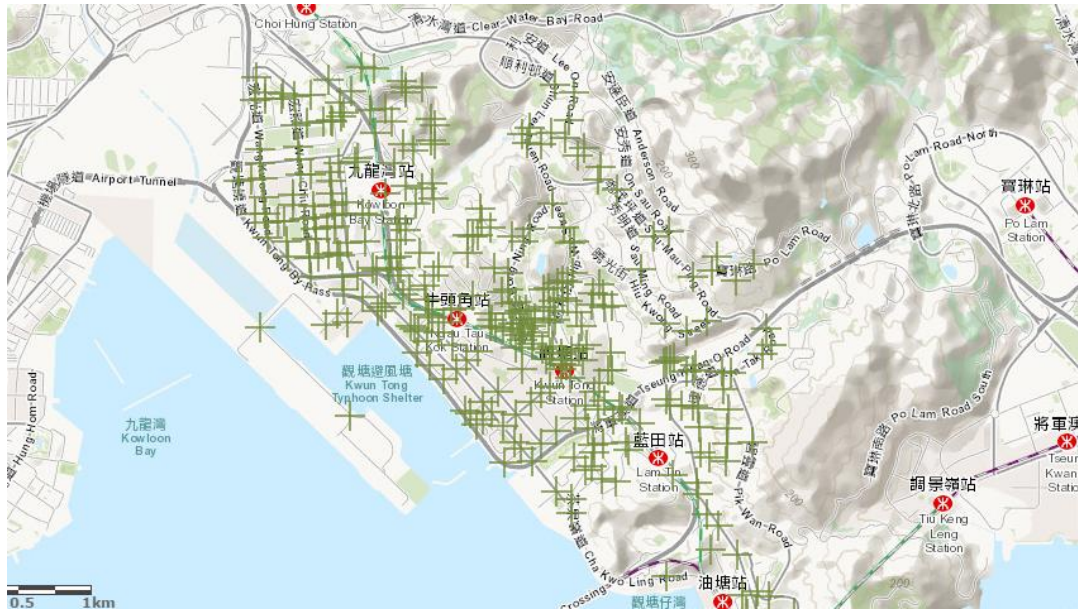
Abridged from *Handbook of Tables for Probability and Statistics*, 2nd ed., edited by William H. Beyer (Cleveland, OH: The Chemical Rubber Company, 1968).
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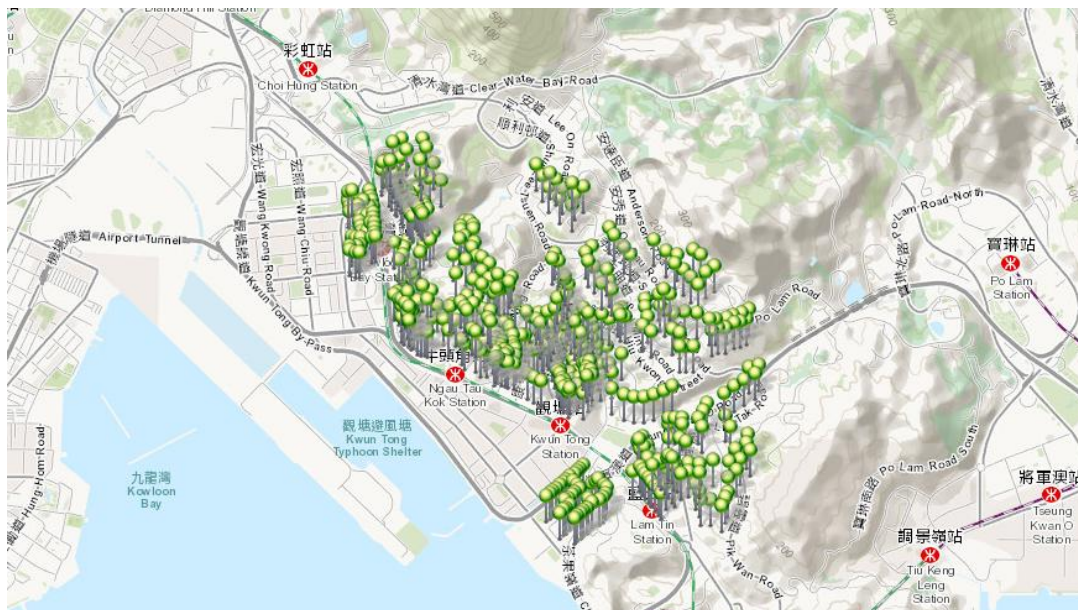
Land use map for Yuet Wah (J29) & Kwun Tong Centre (J01) (pink for commercial land use; brown for residential land use; blue for government, institution and community land use; light green for open space; & dark green for green belt)



1 km buffer zones (circles in yellow) for Yuet Wah (J29) & Kwun Tong Centre (J01)



Connectivity (green crosses indicate intersections with at least 3 legs) for Yuet Wah (J29) & Kwun Tong Centre (J01)



Residential density (green pins indicate the locations of residential units) for Yuet Wah (J29) & Kwun Tong Centre (J01)

Calculations of Objective Walkability in Yuet Wah

		Land Use Mix		Residential density		Connectivity		Commercial Land use ratio		Walkability Score
		Raw Score	Z Score	Raw Score	Z Score	Raw Score	Z Score	Raw Score	Z Score	Z Score
1	永寧樓	0.8845	-0.4346	110.1906	0.3089	44.2675	-0.1830	0.1787	-0.4074	-0.7161
2	華豐	0.8779	-1.1463	108.4580	-0.0396	44.2675	-0.1830	0.1798	-0.3250	-1.6939
3	觀景閣	0.8858	-0.2896	110.9648	0.4646	45.5414	0.9268	0.2040	1.4354	2.5373
4	永泰大廈	0.8845	-0.4318	112.1038	0.6937	44.5860	0.0945	0.1823	-0.1456	0.2109
5	南泰大廈	0.9136	2.7195	102.1016	-1.3182	42.3567	-1.8477	0.1978	0.9789	0.5325
6	萬和	0.8882	-0.0363	110.5643	0.3841	44.5860	0.0945	0.1791	-0.3804	0.0618
7	萬和	0.8882	-0.0363	110.5643	0.3841	44.5860	0.0945	0.1791	-0.3804	0.0618
8	觀景閣	0.8858	-0.2896	110.9648	0.4646	45.5414	0.9268	0.2040	1.4354	2.5373
9	南泰大廈	0.9136	2.7195	102.1016	-1.3182	42.3567	-1.8477	0.1978	0.9789	0.5325
10	南泰大廈	0.9136	2.7195	102.1016	-1.3182	42.3567	-1.8477	0.1978	0.9789	0.5325
11	萬和	0.8882	-0.0363	110.5643	0.3841	44.5860	0.0945	0.1791	-0.3804	0.0618
12	萬和	0.8882	-0.0363	110.5643	0.3841	44.5860	0.0945	0.1791	-0.3804	0.0618
13	祥園	0.8854	-0.3296	111.1747	0.5069	44.5860	0.0945	0.1925	0.5993	0.8710
14	月威大廈	0.8815	-0.7584	110.5335	0.3779	44.5860	0.0945	0.1683	-1.1642	-1.4502
15	華麗樓	0.8845	-0.4347	111.4450	0.5612	45.5414	0.9268	0.2047	1.4804	2.5338
16	華苑	0.8781	-1.1298	111.3554	0.5432	44.5860	0.0945	0.1653	-1.3801	-1.8722
17	永寧樓	0.8845	-0.4346	110.1906	0.3089	44.2675	-0.1830	0.1787	-0.4074	-0.7161
18	永寧樓	0.8845	-0.4346	110.1906	0.3089	44.2675	-0.1830	0.1787	-0.4074	-0.7161
19	萬和	0.8882	-0.0363	110.5643	0.3841	44.5860	0.0945	0.1791	-0.3804	0.0618
20	萬和	0.8882	-0.0363	110.5643	0.3841	44.5860	0.0945	0.1791	-0.3804	0.0618
21	萬和	0.8882	-0.0363	110.5643	0.3841	44.5860	0.0945	0.1791	-0.3804	0.0618
22	華麗樓	0.8845	-0.4347	111.4450	0.5612	45.5414	0.9268	0.2047	1.4804	2.5338
23	祥園	0.8854	-0.3296	111.1747	0.5069	44.5860	0.0945	0.1925	0.5993	0.8710
24	祥園	0.8854	-0.3296	111.1747	0.5069	44.5860	0.0945	0.1925	0.5993	0.8710
25	萬和	0.8882	-0.0363	110.5643	0.3841	44.5860	0.0945	0.1791	-0.3804	0.0618
26	萬和	0.8882	-0.0363	110.5643	0.3841	44.5860	0.0945	0.1791	-0.3804	0.0618
27	萬和	0.8882	-0.0363	110.5643	0.3841	44.5860	0.0945	0.1791	-0.3804	0.0618
28	萬和	0.8882	-0.0363	110.5643	0.3841	44.5860	0.0945	0.1791	-0.3804	0.0618
29	萬和	0.8882	-0.0363	110.5643	0.3841	44.5860	0.0945	0.1791	-0.3804	0.0618
30	萬和	0.8882	-0.0363	110.5643	0.3841	44.5860	0.0945	0.1791	-0.3804	0.0618
31	僑業大廈	0.8884	-0.0061	110.3891	0.3488	45.5414	0.9268	0.2025	1.3259	2.5954
32	萬和	0.8882	-0.0363	110.5643	0.3841	44.5860	0.0945	0.1791	-0.3804	0.0618
33	萬和	0.8882	-0.0363	110.5643	0.3841	44.5860	0.0945	0.1791	-0.3804	0.0618
34	永寧樓	0.8845	-0.4346	110.1906	0.3089	44.2675	-0.1830	0.1787	-0.4074	-0.7161
35	萬和	0.8882	-0.0363	110.5643	0.3841	44.5860	0.0945	0.1791	-0.3804	0.0618
36	萬和	0.8882	-0.0363	110.5643	0.3841	44.5860	0.0945	0.1791	-0.3804	0.0618
37	萬和	0.8882	-0.0363	110.5643	0.3841	44.5860	0.0945	0.1791	-0.3804	0.0618
38	萬和	0.8882	-0.0363	110.5643	0.3841	44.5860	0.0945	0.1791	-0.3804	0.0618
39	萬和	0.8882	-0.0363	110.5643	0.3841	44.5860	0.0945	0.1791	-0.3804	0.0618
40	萬和	0.8882	-0.0363	110.5643	0.3841	44.5860	0.0945	0.1791	-0.3804	0.0618
41	好景大廈	0.9047	1.7602	96.8712	-2.3702	41.7197	-2.4026	0.1710	-0.9655	-3.9782
42	集景樓	0.8770	-1.2472	110.8715	0.4459	43.9490	-0.4605	0.1631	-1.5399	-2.8017
43	永寧樓	0.8845	-0.4346	110.1906	0.3089	44.2675	-0.1830	0.1787	-0.4074	-0.7161
44	華豐	0.8779	-1.1463	108.4580	-0.0396	44.2675	-0.1830	0.1798	-0.3250	-1.6939
45	天香花園大廈	0.8839	-0.4919	112.8175	0.8373	45.2229	0.6494	0.1889	0.3329	1.3276
46	觀景閣	0.8858	-0.2896	110.9648	0.4646	45.5414	0.9268	0.2040	1.4354	2.5373
47	華麗樓	0.8845	-0.4347	111.4450	0.5612	45.5414	0.9268	0.2047	1.4804	2.5338
48	永寧樓	0.8845	-0.4346	110.1906	0.3089	44.2675	-0.1830	0.1787	-0.4074	-0.7161
49	超群	0.9068	1.9913	95.4956	-2.6469	42.3567	-1.8477	0.1719	-0.9026	-3.4060
50	佳景	0.8970	0.9201	105.0993	-0.7152	46.1783	1.4817	0.1993	1.0928	2.7794
51	仁苑	0.8823	-0.6676	113.0403	0.8821	44.5860	0.0945	0.1958	0.8384	1.1474
52	永泰大廈	0.8845	-0.4318	112.1038	0.6937	44.5860	0.0945	0.1823	-0.1456	0.2109
53	祥園	0.8854	-0.3296	111.1747	0.5069	44.5860	0.0945	0.1925	0.5993	0.8710
54	天香花園大廈	0.8839	-0.4919	112.8175	0.8373	45.2229	0.6494	0.1889	0.3329	1.3276
55	僑業大廈	0.8884	-0.0061	110.3891	0.3488	45.5414	0.9268	0.2025	1.3259	2.5954
56	集景樓	0.8770	-1.2472	110.8715	0.4459	43.9490	-0.4605	0.1631	-1.5399	-2.8017
57	華麗樓	0.8845	-0.4347	111.4450	0.5612	45.5414	0.9268	0.2047	1.4804	2.5338
58	佳景	0.8970	0.9201	105.0993	-0.7152	46.1783	1.4817	0.1993	1.0928	2.7794
59	僑業大廈	0.8884	-0.0061	110.3891	0.3488	45.5414	0.9268	0.2025	1.3259	2.5954
60	萬和	0.8882	-0.0363	110.5643	0.3841	44.5860	0.0945	0.1791	-0.3804	0.0618
61	佳景	0.8970	0.9201	105.0993	-0.7152	46.1783	1.4817	0.1993	1.0928	2.7794
62	佳景	0.8970	0.9201	105.0993	-0.7152	46.1783	1.4817	0.1993	1.0928	2.7794
63	永泰大廈	0.8845	-0.4318	112.1038	0.6937	44.5860	0.0945	0.1823	-0.1456	0.2109
64	僑業大廈	0.8884	-0.0061	110.3891	0.3488	45.5414	0.9268	0.2025	1.3259	2.5954
65	集景樓	0.8770	-1.2472	110.8715	0.4459	43.9490	-0.4605	0.1631	-1.5399	-2.8017
66	月威大廈	0.8815	-0.7584	110.5335	0.3779	44.5860	0.0945	0.1683	-1.1642	-1.4502
67	月威大廈	0.8815	-0.7584	110.5335	0.3779	44.5860	0.0945	0.1683	-1.1642	-1.4502
68	萬和	0.8882	-0.0363	110.5643	0.3841	44.5860	0.0945	0.1791	-0.3804	0.0618
69	佳景	0.8970	0.9201	105.0993	-0.7152	46.1783	1.4817	0.1993	1.0928	2.7794
70	集景樓	0.8770	-1.2472	110.8715	0.4459	43.9490	-0.4605	0.1631	-1.5399	-2.8017
71	佳景	0.8970	0.9201	105.0993	-0.7152	46.1783	1.4817	0.1993	1.0928	2.7794

Calculations of Objective Walkability in Yuet Wah

		Land Use Mix		Residential density		Connectivity		Commercial Land use ratio		Walkability Score
		Raw Score	Z Score	Raw Score	Z Score	Raw Score	Z Score	Raw Score	Z Score	Z Score
72	華麗樓	0.8845	-0.4347	111.4450	0.5612	45.5414	0.9268	0.2047	1.4804	2.5338
73	集景樓	0.8770	-1.2472	110.8715	0.4459	43.9490	-0.4605	0.1631	-1.5399	-2.8017
74	集景樓	0.8770	-1.2472	110.8715	0.4459	43.9490	-0.4605	0.1631	-1.5399	-2.8017
75	月威大廈	0.8815	-0.7584	110.5335	0.3779	44.5860	0.0945	0.1683	-1.1642	-1.4502
76	好景大廈	0.9047	1.7602	96.8712	-2.3702	41.7197	-2.4026	0.1710	-0.9655	-3.9782
77	啟德	0.9064	1.9470	95.4616	-2.6538	40.4459	-3.5124	0.1747	-0.6947	-4.9138
78	天香花園大廈	0.8839	-0.4919	112.8175	0.8373	45.2229	0.6494	0.1889	0.3329	1.3276
79	月華	0.8943	0.6338	100.6431	-1.6115	44.5860	0.0945	0.1734	-0.7924	-1.6757
80	天香花園大廈	0.8839	-0.4919	112.8175	0.8373	45.2229	0.6494	0.1889	0.3329	1.3276
81	祥園	0.8854	-0.3296	111.1747	0.5069	44.5860	0.0945	0.1925	0.5993	0.8710
82	萬和	0.8882	-0.0363	110.5643	0.3841	44.5860	0.0945	0.1791	-0.3804	0.0618
83	華苑	0.8781	-1.1298	111.3554	0.5432	44.5860	0.0945	0.1653	-1.3801	-1.8722
84	運通	0.9033	1.6017	93.5849	-3.0313	43.3121	-1.0154	0.1750	-0.6763	-3.1212
85	月威大廈	0.8815	-0.7584	110.5335	0.3779	44.5860	0.0945	0.1683	-1.1642	-1.4502
86	好景大廈	0.9047	1.7602	96.8712	-2.3702	41.7197	-2.4026	0.1710	-0.9655	-3.9782
87	觀景閣	0.8858	-0.2896	110.9648	0.4646	45.5414	0.9268	0.2040	1.4354	2.5373
88	運通	0.9033	1.6017	93.5849	-3.0313	43.3121	-1.0154	0.1750	-0.6763	-3.1212
89	仁苑	0.8823	-0.6676	113.0403	0.8821	44.5860	0.0945	0.1958	0.8384	1.1474
90	好景大廈	0.9047	1.7602	96.8712	-2.3702	41.7197	-2.4026	0.1710	-0.9655	-3.9782
91	華麗樓	0.8845	-0.4347	111.4450	0.5612	45.5414	0.9268	0.2047	1.4804	2.5338
92	超群	0.9068	1.9913	95.4956	-2.6469	42.3567	-1.8477	0.1719	-0.9026	-3.4060
93	祥園	0.8854	-0.3296	111.1747	0.5069	44.5860	0.0945	0.1925	0.5993	0.8710
94	祥園	0.8854	-0.3296	111.1747	0.5069	44.5860	0.0945	0.1925	0.5993	0.8710
95	觀景閣	0.8858	-0.2896	110.9648	0.4646	45.5414	0.9268	0.2040	1.4354	2.5373
96	僑業大廈	0.8884	-0.0061	110.3891	0.3488	45.5414	0.9268	0.2025	1.3259	2.5954
97	佳景	0.8970	0.9201	105.0993	-0.7152	46.1783	1.4817	0.1993	1.0928	2.7794
98	超群	0.9068	1.9913	95.4956	-2.6469	42.3567	-1.8477	0.1719	-0.9026	-3.4060
99	長安	0.9155	2.9253	99.2252	-1.8967	41.7197	-2.4026	0.1918	0.5447	-0.8293
100	華苑	0.8781	-1.1298	111.3554	0.5432	44.5860	0.0945	0.1653	-1.3801	-1.8722
101	南泰大廈	0.9136	2.7195	102.1016	-1.3182	42.3567	-1.8477	0.1978	0.9789	0.5325
102	月威大廈	0.8815	-0.7584	110.5335	0.3779	44.5860	0.0945	0.1683	-1.1642	-1.4502
103	好景大廈	0.9047	1.7602	96.8712	-2.3702	41.7197	-2.4026	0.1710	-0.9655	-3.9782
104	月威大廈	0.8815	-0.7584	110.5335	0.3779	44.5860	0.0945	0.1683	-1.1642	-1.4502
105	華麗樓	0.8845	-0.4347	111.4450	0.5612	45.5414	0.9268	0.2047	1.4804	2.5338
106	僑業大廈	0.8884	-0.0061	110.3891	0.3488	45.5414	0.9268	0.2025	1.3259	2.5954
107	華苑	0.8781	-1.1298	111.3554	0.5432	44.5860	0.0945	0.1653	-1.3801	-1.8722
108	集景樓	0.8770	-1.2472	110.8715	0.4459	43.9490	-0.4605	0.1631	-1.5399	-2.8017
109	天香花園大廈	0.8839	-0.4919	112.8175	0.8373	45.2229	0.6494	0.1889	0.3329	1.3276
110	祥園	0.8854	-0.3296	111.1747	0.5069	44.5860	0.0945	0.1925	0.5993	0.8710
111	月威大廈	0.8815	-0.7584	110.5335	0.3779	44.5860	0.0945	0.1683	-1.1642	-1.4502
112	超群	0.9068	1.9913	95.4956	-2.6469	42.3567	-1.8477	0.1719	-0.9026	-3.4060
113	僑業大廈	0.8884	-0.0061	110.3891	0.3488	45.5414	0.9268	0.2025	1.3259	2.5954
114	萬和	0.8882	-0.0363	110.5643	0.3841	44.5860	0.0945	0.1791	-0.3804	0.0618
115	天香花園大廈	0.8839	-0.4919	112.8175	0.8373	45.2229	0.6494	0.1889	0.3329	1.3276
116	僑業大廈	0.8884	-0.0061	110.3891	0.3488	45.5414	0.9268	0.2025	1.3259	2.5954
117	集景樓	0.8770	-1.2472	110.8715	0.4459	43.9490	-0.4605	0.1631	-1.5399	-2.8017
118	永泰大廈	0.8845	-0.4318	112.1038	0.6937	44.5860	0.0945	0.1823	-0.1456	0.2109
119	好景大廈	0.9047	1.7602	96.8712	-2.3702	41.7197	-2.4026	0.1710	-0.9655	-3.9782
120	月威大廈	0.8815	-0.7584	110.5335	0.3779	44.5860	0.0945	0.1683	-1.1642	-1.4502
121	長安	0.9155	2.9253	99.2252	-1.8967	41.7197	-2.4026	0.1918	0.5447	-0.8293
122	永寧樓	0.8845	-0.4346	110.1906	0.3089	44.2675	-0.1830	0.1787	-0.4074	-0.7161
123	仁苑	0.8823	-0.6676	113.0403	0.8821	44.5860	0.0945	0.1958	0.8384	1.1474
124	觀景閣	0.8858	-0.2896	110.9648	0.4646	45.5414	0.9268	0.2040	1.4354	2.5373
125	永泰大廈	0.8845	-0.4318	112.1038	0.6937	44.5860	0.0945	0.1823	-0.1456	0.2109
126	觀景閣	0.8858	-0.2896	110.9648	0.4646	45.5414	0.9268	0.2040	1.4354	2.5373
127	集景樓	0.8770	-1.2472	110.8715	0.4459	43.9490	-0.4605	0.1631	-1.5399	-2.8017
128	觀景閣	0.8858	-0.2896	110.9648	0.4646	45.5414	0.9268	0.2040	1.4354	2.5373
129	僑業大廈	0.8884	-0.0061	110.3891	0.3488	45.5414	0.9268	0.2025	1.3259	2.5954
130	觀景閣	0.8858	-0.2896	110.9648	0.4646	45.5414	0.9268	0.2040	1.4354	2.5373
131	永寧樓	0.8845	-0.4346	110.1906	0.3089	44.2675	-0.1830	0.1787	-0.4074	-0.7161
132	華苑	0.8781	-1.1298	111.3554	0.5432	44.5860	0.0945	0.1653	-1.3801	-1.8722
133	華苑	0.8781	-1.1298	111.3554	0.5432	44.5860	0.0945	0.1653	-1.3801	-1.8722
134	佳景	0.8970	0.9201	105.0993	-0.7152	46.1783	1.4817	0.1993	1.0928	2.7794
135	華麗樓	0.8845	-0.4347	111.4450	0.5612	45.5414	0.9268	0.2047	1.4804	2.5338
136	僑業大廈	0.8884	-0.0061	110.3891	0.3488	45.5414	0.9268	0.2025	1.3259	2.5954
137	好景大廈	0.9047	1.7602	96.8712	-2.3702	41.7197	-2.4026	0.1710	-0.9655	-3.9782
138	天香花園大廈	0.8839	-0.4919	112.8175	0.8373	45.2229	0.6494	0.1889	0.3329	1.3276
139	僑業大廈	0.8884	-0.0061	110.3891	0.3488	45.5414	0.9268	0.2025	1.3259	2.5954
140	華苑	0.8781	-1.1298	111.3554	0.5432	44.5860	0.0945	0.1653	-1.3801	-1.8722
141	華苑	0.8781	-1.1298	111.3554	0.5432	44.5860	0.0945	0.1653	-1.3801	-1.8722

Calculations of Objective Walkability in KT Central

		Land Use Mix		Residential density		Connectivity		Commercial Land use ratio		Walkability Score
		Raw Score	Z Score	Raw Score	Z Score	Raw Score	Z Score	Raw Score	Z Score	Z Score
1	仁厚	0.9504	1.2894	106.5453	-1.9305	66.1651	1.0456	0.2432	1.1200	1.5245
2	仁厚	0.9504	1.2894	106.5453	-1.9305	66.1651	1.0456	0.2432	1.1200	1.5245
3	仁厚	0.9504	1.2894	106.5453	-1.9305	66.1651	1.0456	0.2432	1.1200	1.5245
4	仁厚	0.9504	1.2894	106.5453	-1.9305	66.1651	1.0456	0.2432	1.1200	1.5245
5	仁厚	0.9504	1.2894	106.5453	-1.9305	66.1651	1.0456	0.2432	1.1200	1.5245
6	冠天閣	0.9207	0.6975	120.7484	1.2324	65.9046	1.0045	0.2257	0.7941	3.7285
7	冠天閣	0.9207	0.6975	120.7484	1.2324	65.9046	1.0045	0.2257	0.7941	3.7285
8	冠天閣	0.9207	0.6975	120.7484	1.2324	65.9046	1.0045	0.2257	0.7941	3.7285
9	冠天閣	0.9207	0.6975	120.7484	1.2324	65.9046	1.0045	0.2257	0.7941	3.7285
10	冠天閣	0.9207	0.6975	120.7484	1.2324	65.9046	1.0045	0.2257	0.7941	3.7285
11	定安	0.9433	1.1471	111.3605	-0.8582	66.1203	1.0385	0.2383	1.0278	2.3553
12	定富樓	0.9466	1.2126	106.9112	-1.8490	67.3145	1.2272	0.2460	1.1706	1.7613
13	定富樓	0.9466	1.2126	106.9112	-1.8490	67.3145	1.2272	0.2460	1.1706	1.7613
14	定富樓	0.9466	1.2126	106.9112	-1.8490	67.3145	1.2272	0.2460	1.1706	1.7613
15	定業	0.9366	1.0132	111.1365	-0.9080	65.1152	0.8798	0.2337	0.9436	1.9285
16	定業	0.9366	1.0132	111.1365	-0.9080	65.1152	0.8798	0.2337	0.9436	1.9285
17	定業	0.9366	1.0132	111.1365	-0.9080	65.1152	0.8798	0.2337	0.9436	1.9285
18	定業	0.9366	1.0132	111.1365	-0.9080	65.1152	0.8798	0.2337	0.9436	1.9285
19	定興	0.9395	1.0726	111.6228	-0.7997	65.5722	0.9520	0.2382	1.0270	2.2518
20	富安	0.9517	1.3143	107.1367	-1.7988	67.3846	1.2382	0.2418	1.0938	1.8476
21	富安	0.9517	1.3143	107.1367	-1.7988	67.3846	1.2382	0.2418	1.0938	1.8476
22	富安	0.9517	1.3143	107.1367	-1.7988	67.3846	1.2382	0.2418	1.0938	1.8476
23	富裕	0.9441	1.1638	108.4452	-1.5074	68.4654	1.4090	0.2445	1.1436	2.2089
24	富裕	0.9441	1.1638	108.4452	-1.5074	68.4654	1.4090	0.2445	1.1436	2.2089
25	寶峯	0.9311	0.9051	117.1244	0.4254	66.3400	1.0732	0.2318	0.9081	3.3119
26	寶峯	0.9311	0.9051	117.1244	0.4254	66.3400	1.0732	0.2318	0.9081	3.3119
27	欣榮	0.9283	0.8492	112.1527	-0.6818	63.8024	0.6724	0.2340	0.9495	1.7893
28	欣榮	0.9283	0.8492	112.1527	-0.6818	63.8024	0.6724	0.2340	0.9495	1.7893
29	欣榮	0.9283	0.8492	112.1527	-0.6818	63.8024	0.6724	0.2340	0.9495	1.7893
30	欣榮	0.9283	0.8492	112.1527	-0.6818	63.8024	0.6724	0.2340	0.9495	1.7893
31	欣榮	0.9283	0.8492	112.1527	-0.6818	63.8024	0.6724	0.2340	0.9495	1.7893
32	欣榮	0.9283	0.8492	112.1527	-0.6818	63.8024	0.6724	0.2340	0.9495	1.7893
33	欣榮	0.9283	0.8492	112.1527	-0.6818	63.8024	0.6724	0.2340	0.9495	1.7893
34	欣榮	0.9283	0.8492	112.1527	-0.6818	63.8024	0.6724	0.2340	0.9495	1.7893
35	永英	0.9233	0.7498	113.6801	-0.3416	63.6609	0.6501	0.2402	1.0631	2.1213
36	百富閣	0.9325	0.9325	111.3005	-0.8715	65.3828	0.9220	0.2398	1.0558	2.0388
37	百富閣	0.9325	0.9325	111.3005	-0.8715	65.3828	0.9220	0.2398	1.0558	2.0388
38	百富閣	0.9325	0.9325	111.3005	-0.8715	65.3828	0.9220	0.2398	1.0558	2.0388
39	翠柏	0.8467	-0.7788	117.3604	0.4780	53.4552	-0.9619	0.1345	-0.8950	-2.1578
40	翠柏	0.8467	-0.7788	117.3604	0.4780	53.4552	-0.9619	0.1345	-0.8950	-2.1578
41	翠柏	0.8467	-0.7788	117.3604	0.4780	53.4552	-0.9619	0.1345	-0.8950	-2.1578
42	翠柏	0.8467	-0.7788	117.3604	0.4780	53.4552	-0.9619	0.1345	-0.8950	-2.1578
43	翠柏	0.8467	-0.7788	117.3604	0.4780	53.4552	-0.9619	0.1345	-0.8950	-2.1578
44	翠柏	0.8467	-0.7788	117.3604	0.4780	53.4552	-0.9619	0.1345	-0.8950	-2.1578
45	翠柏	0.8467	-0.7788	117.3604	0.4780	53.4552	-0.9619	0.1345	-0.8950	-2.1578
46	翠柏	0.8467	-0.7788	117.3604	0.4780	53.4552	-0.9619	0.1345	-0.8950	-2.1578
47	翠柏	0.8467	-0.7788	117.3604	0.4780	53.4552	-0.9619	0.1345	-0.8950	-2.1578
48	翠柏	0.8467	-0.7788	117.3604	0.4780	53.4552	-0.9619	0.1345	-0.8950	-2.1578
49	翠柏	0.8467	-0.7788	117.3604	0.4780	53.4552	-0.9619	0.1345	-0.8950	-2.1578
50	翠柏	0.8467	-0.7788	117.3604	0.4780	53.4552	-0.9619	0.1345	-0.8950	-2.1578
51	翠柏	0.8467	-0.7788	117.3604	0.4780	53.4552	-0.9619	0.1345	-0.8950	-2.1578
52	翠柏	0.8467	-0.7788	117.3604	0.4780	53.4552	-0.9619	0.1345	-0.8950	-2.1578
53	翠柏	0.8467	-0.7788	117.3604	0.4780	53.4552	-0.9619	0.1345	-0.8950	-2.1578
54	翠柏	0.8467	-0.7788	117.3604	0.4780	53.4552	-0.9619	0.1345	-0.8950	-2.1578
55	翠柏	0.8467	-0.7788	117.3604	0.4780	53.4552	-0.9619	0.1345	-0.8950	-2.1578
56	翠柏	0.8467	-0.7788	117.3604	0.4780	53.4552	-0.9619	0.1345	-0.8950	-2.1578
57	翠柏	0.8467	-0.7788	117.3604	0.4780	53.4552	-0.9619	0.1345	-0.8950	-2.1578
58	翠柏	0.8467	-0.7788	117.3604	0.4780	53.4552	-0.9619	0.1345	-0.8950	-2.1578
59	翠柏	0.8467	-0.7788	117.3604	0.4780	53.4552	-0.9619	0.1345	-0.8950	-2.1578
60	翠柏	0.8467	-0.7788	117.3604	0.4780	53.4552	-0.9619	0.1345	-0.8950	-2.1578
61	翠柏	0.8467	-0.7788	117.3604	0.4780	53.4552	-0.9619	0.1345	-0.8950	-2.1578
62	翠柏	0.8467	-0.7788	117.3604	0.4780	53.4552	-0.9619	0.1345	-0.8950	-2.1578
63	翠柏	0.8467	-0.7788	117.3604	0.4780	53.4552	-0.9619	0.1345	-0.8950	-2.1578
64	翠柏	0.8467	-0.7788	117.3604	0.4780	53.4552	-0.9619	0.1345	-0.8950	-2.1578
65	翠柳	0.8308	-1.0945	116.3865	0.2611	50.9693	-1.3546	0.1211	-1.1426	-3.3307
66	翠柳	0.8308	-1.0945	116.3865	0.2611	50.9693	-1.3546	0.1211	-1.1426	-3.3307
67	翠柳	0.8308	-1.0945	116.3865	0.2611	50.9693	-1.3546	0.1211	-1.1426	-3.3307
68	翠柳	0.8308	-1.0945	116.3865	0.2611	50.9693	-1.3546	0.1211	-1.1426	-3.3307
69	翠柳	0.8308	-1.0945	116.3865	0.2611	50.9693	-1.3546	0.1211	-1.1426	-3.3307
70	翠柳	0.8308	-1.0945	116.3865	0.2611	50.9693	-1.3546	0.1211	-1.1426	-3.3307
71	翠柳	0.8308	-1.0945	116.3865	0.2611	50.9693	-1.3546	0.1211	-1.1426	-3.3307

Calculations of Objective Walkability in KT Central

		Land Use Mix		Residential density		Connectivity		Commercial Land use ratio		Walkability Score
		Raw Score	Z Score	Raw Score	Z Score	Raw Score	Z Score	Raw Score	Z Score	Z Score
72	翠梓	0.8207	-1.2958	120.5890	1.1969	54.7384	-0.7593	0.1245	-1.0813	-1.9394
73	翠梓	0.8207	-1.2958	120.5890	1.1969	54.7384	-0.7593	0.1245	-1.0813	-1.9394
74	翠梓	0.8207	-1.2958	120.5890	1.1969	54.7384	-0.7593	0.1245	-1.0813	-1.9394
75	翠梓	0.8207	-1.2958	120.5890	1.1969	54.7384	-0.7593	0.1245	-1.0813	-1.9394
76	翠梓	0.8207	-1.2958	120.5890	1.1969	54.7384	-0.7593	0.1245	-1.0813	-1.9394
77	翠梓	0.8207	-1.2958	120.5890	1.1969	54.7384	-0.7593	0.1245	-1.0813	-1.9394
78	翠梓	0.8207	-1.2958	120.5890	1.1969	54.7384	-0.7593	0.1245	-1.0813	-1.9394
79	翠梓	0.8207	-1.2958	120.5890	1.1969	54.7384	-0.7593	0.1245	-1.0813	-1.9394
80	翠梓	0.8207	-1.2958	120.5890	1.1969	54.7384	-0.7593	0.1245	-1.0813	-1.9394
81	翠梓	0.8207	-1.2958	120.5890	1.1969	54.7384	-0.7593	0.1245	-1.0813	-1.9394
82	翠梓	0.8207	-1.2958	120.5890	1.1969	54.7384	-0.7593	0.1245	-1.0813	-1.9394
83	翠梓	0.8207	-1.2958	120.5890	1.1969	54.7384	-0.7593	0.1245	-1.0813	-1.9394
84	金和	0.9286	0.8556	111.9550	-0.7258	65.1827	0.8904	0.2347	0.9611	1.9814
85	金和	0.9286	0.8556	111.9550	-0.7258	65.1827	0.8904	0.2347	0.9611	1.9814
86	麗裕	0.9294	0.8709	118.7298	0.7829	67.3114	1.2267	0.2395	1.0498	3.9303
87	麗裕	0.9294	0.8709	118.7298	0.7829	67.3114	1.2267	0.2395	1.0498	3.9303
88	麗裕	0.9294	0.8709	118.7298	0.7829	67.3114	1.2267	0.2395	1.0498	3.9303
89	麗裕	0.9294	0.8709	118.7298	0.7829	67.3114	1.2267	0.2395	1.0498	3.9303

Calculations of Objective Walkability in Yuet Wah & KT Central (Pooled data)

		Land Use Mix		Residential density		Connectivity		Commercial Land use ratio		Walkability Score
		Raw Score	Z Score	Raw Score	Z Score	Raw Score	Z Score	Raw Score	Z Score	Z Score
1	仁苑	0.8823	(0.1587)	113.0403	0.3208	44.5860	(0.6831)	0.1958	0.3433	(0.1777)
2	仁苑	0.8823	(0.1587)	113.0403	0.3208	44.5860	(0.6831)	0.1958	0.3433	(0.1777)
3	仁苑	0.8823	(0.1587)	113.0403	0.3208	44.5860	(0.6831)	0.1958	0.3433	(0.1777)
4	佳景	0.8970	0.2980	105.0993	(1.0582)	46.1783	(0.4930)	0.1993	0.4425	(0.8107)
5	佳景	0.8970	0.2980	105.0993	(1.0582)	46.1783	(0.4930)	0.1993	0.4425	(0.8107)
6	佳景	0.8970	0.2980	105.0993	(1.0582)	46.1783	(0.4930)	0.1993	0.4425	(0.8107)
7	佳景	0.8970	0.2980	105.0993	(1.0582)	46.1783	(0.4930)	0.1993	0.4425	(0.8107)
8	佳景	0.8970	0.2980	105.0993	(1.0582)	46.1783	(0.4930)	0.1993	0.4425	(0.8107)
9	佳景	0.8970	0.2980	105.0993	(1.0582)	46.1783	(0.4930)	0.1993	0.4425	(0.8107)
10	佳景	0.8970	0.2980	105.0993	(1.0582)	46.1783	(0.4930)	0.1993	0.4425	(0.8107)
11	佳景	0.8970	0.2980	105.0993	(1.0582)	46.1783	(0.4930)	0.1993	0.4425	(0.8107)
12	僑業大廈	0.8884	0.0316	110.3891	(0.1396)	45.5414	(0.5690)	0.2025	0.5334	(0.1436)
13	僑業大廈	0.8884	0.0316	110.3891	(0.1396)	45.5414	(0.5690)	0.2025	0.5334	(0.1436)
14	僑業大廈	0.8884	0.0316	110.3891	(0.1396)	45.5414	(0.5690)	0.2025	0.5334	(0.1436)
15	僑業大廈	0.8884	0.0316	110.3891	(0.1396)	45.5414	(0.5690)	0.2025	0.5334	(0.1436)
16	僑業大廈	0.8884	0.0316	110.3891	(0.1396)	45.5414	(0.5690)	0.2025	0.5334	(0.1436)
17	僑業大廈	0.8884	0.0316	110.3891	(0.1396)	45.5414	(0.5690)	0.2025	0.5334	(0.1436)
18	僑業大廈	0.8884	0.0316	110.3891	(0.1396)	45.5414	(0.5690)	0.2025	0.5334	(0.1436)
19	僑業大廈	0.8884	0.0316	110.3891	(0.1396)	45.5414	(0.5690)	0.2025	0.5334	(0.1436)
20	僑業大廈	0.8884	0.0316	110.3891	(0.1396)	45.5414	(0.5690)	0.2025	0.5334	(0.1436)
21	僑業大廈	0.8884	0.0316	110.3891	(0.1396)	45.5414	(0.5690)	0.2025	0.5334	(0.1436)
22	僑業大廈	0.8884	0.0316	110.3891	(0.1396)	45.5414	(0.5690)	0.2025	0.5334	(0.1436)
23	南泰大廈	0.9136	0.8156	102.1016	(1.5788)	42.3567	(0.9492)	0.1978	0.3981	(1.3142)
24	南泰大廈	0.9136	0.8156	102.1016	(1.5788)	42.3567	(0.9492)	0.1978	0.3981	(1.3142)
25	南泰大廈	0.9136	0.8156	102.1016	(1.5788)	42.3567	(0.9492)	0.1978	0.3981	(1.3142)
26	南泰大廈	0.9136	0.8156	102.1016	(1.5788)	42.3567	(0.9492)	0.1978	0.3981	(1.3142)
27	啟德	0.9064	0.5934	95.4616	(2.7318)	40.4459	(1.1773)	0.1747	(0.2546)	(3.5703)
28	天香花園大廈	0.8839	(0.1082)	112.8175	0.2821	45.2229	(0.6070)	0.1889	0.1462	(0.2870)
29	天香花園大廈	0.8839	(0.1082)	112.8175	0.2821	45.2229	(0.6070)	0.1889	0.1462	(0.2870)
30	天香花園大廈	0.8839	(0.1082)	112.8175	0.2821	45.2229	(0.6070)	0.1889	0.1462	(0.2870)
31	天香花園大廈	0.8839	(0.1082)	112.8175	0.2821	45.2229	(0.6070)	0.1889	0.1462	(0.2870)
32	天香花園大廈	0.8839	(0.1082)	112.8175	0.2821	45.2229	(0.6070)	0.1889	0.1462	(0.2870)
33	天香花園大廈	0.8839	(0.1082)	112.8175	0.2821	45.2229	(0.6070)	0.1889	0.1462	(0.2870)
34	天香花園大廈	0.8839	(0.1082)	112.8175	0.2821	45.2229	(0.6070)	0.1889	0.1462	(0.2870)
35	好景大廈	0.9047	0.5397	96.8712	(2.4870)	41.7197	(1.0252)	0.1710	(0.3602)	(3.3328)
36	好景大廈	0.9047	0.5397	96.8712	(2.4870)	41.7197	(1.0252)	0.1710	(0.3602)	(3.3328)
37	好景大廈	0.9047	0.5397	96.8712	(2.4870)	41.7197	(1.0252)	0.1710	(0.3602)	(3.3328)
38	好景大廈	0.9047	0.5397	96.8712	(2.4870)	41.7197	(1.0252)	0.1710	(0.3602)	(3.3328)
39	好景大廈	0.9047	0.5397	96.8712	(2.4870)	41.7197	(1.0252)	0.1710	(0.3602)	(3.3328)
40	好景大廈	0.9047	0.5397	96.8712	(2.4870)	41.7197	(1.0252)	0.1710	(0.3602)	(3.3328)
41	好景大廈	0.9047	0.5397	96.8712	(2.4870)	41.7197	(1.0252)	0.1710	(0.3602)	(3.3328)
42	月威大廈	0.8815	(0.1848)	110.5335	(0.1145)	44.5860	(0.6831)	0.1683	(0.4377)	(1.4201)
43	月威大廈	0.8815	(0.1848)	110.5335	(0.1145)	44.5860	(0.6831)	0.1683	(0.4377)	(1.4201)
44	月威大廈	0.8815	(0.1848)	110.5335	(0.1145)	44.5860	(0.6831)	0.1683	(0.4377)	(1.4201)
45	月威大廈	0.8815	(0.1848)	110.5335	(0.1145)	44.5860	(0.6831)	0.1683	(0.4377)	(1.4201)
46	月威大廈	0.8815	(0.1848)	110.5335	(0.1145)	44.5860	(0.6831)	0.1683	(0.4377)	(1.4201)
47	月威大廈	0.8815	(0.1848)	110.5335	(0.1145)	44.5860	(0.6831)	0.1683	(0.4377)	(1.4201)
48	月威大廈	0.8815	(0.1848)	110.5335	(0.1145)	44.5860	(0.6831)	0.1683	(0.4377)	(1.4201)
49	月威大廈	0.8815	(0.1848)	110.5335	(0.1145)	44.5860	(0.6831)	0.1683	(0.4377)	(1.4201)
50	月威大廈	0.8815	(0.1848)	110.5335	(0.1145)	44.5860	(0.6831)	0.1683	(0.4377)	(1.4201)
51	月華	0.8943	0.2156	100.6431	(1.8320)	44.5860	(0.6831)	0.1734	(0.2927)	(2.5921)
52	永寧樓	0.8845	(0.0917)	110.1906	(0.1741)	44.2675	(0.7211)	0.1787	(0.1425)	(1.1294)
53	永寧樓	0.8845	(0.0917)	110.1906	(0.1741)	44.2675	(0.7211)	0.1787	(0.1425)	(1.1294)
54	永寧樓	0.8845	(0.0917)	110.1906	(0.1741)	44.2675	(0.7211)	0.1787	(0.1425)	(1.1294)
55	永寧樓	0.8845	(0.0917)	110.1906	(0.1741)	44.2675	(0.7211)	0.1787	(0.1425)	(1.1294)
56	永寧樓	0.8845	(0.0917)	110.1906	(0.1741)	44.2675	(0.7211)	0.1787	(0.1425)	(1.1294)
57	永寧樓	0.8845	(0.0917)	110.1906	(0.1741)	44.2675	(0.7211)	0.1787	(0.1425)	(1.1294)
58	永寧樓	0.8845	(0.0917)	110.1906	(0.1741)	44.2675	(0.7211)	0.1787	(0.1425)	(1.1294)
59	永寧樓	0.8845	(0.0917)	110.1906	(0.1741)	44.2675	(0.7211)	0.1787	(0.1425)	(1.1294)
60	永泰大廈	0.8845	(0.0909)	112.1038	0.1582	44.5860	(0.6831)	0.1823	(0.0404)	(0.6562)
61	永泰大廈	0.8845	(0.0909)	112.1038	0.1582	44.5860	(0.6831)	0.1823	(0.0404)	(0.6562)
62	永泰大廈	0.8845	(0.0909)	112.1038	0.1582	44.5860	(0.6831)	0.1823	(0.0404)	(0.6562)
63	永泰大廈	0.8845	(0.0909)	112.1038	0.1582	44.5860	(0.6831)	0.1823	(0.0404)	(0.6562)
64	永泰大廈	0.8845	(0.0909)	112.1038	0.1582	44.5860	(0.6831)	0.1823	(0.0404)	(0.6562)
65	祥園	0.8854	(0.0615)	111.1747	(0.0032)	44.5860	(0.6831)	0.1925	0.2501	(0.4977)
66	祥園	0.8854	(0.0615)	111.1747	(0.0032)	44.5860	(0.6831)	0.1925	0.2501	(0.4977)
67	祥園	0.8854	(0.0615)	111.1747	(0.0032)	44.5860	(0.6831)	0.1925	0.2501	(0.4977)
68	祥園	0.8854	(0.0615)	111.1747	(0.0032)	44.5860	(0.6831)	0.1925	0.2501	(0.4977)
69	祥園	0.8854	(0.0615)	111.1747	(0.0032)	44.5860	(0.6831)	0.1925	0.2501	(0.4977)
70	祥園	0.8854	(0.0615)	111.1747	(0.0032)	44.5860	(0.6831)	0.1925	0.2501	(0.4977)

Calculations of Objective Walkability in Yuet Wah & KT Central (Pooled data)

		Land Use Mix		Residential density		Connectivity		Commercial Land use ratio		Walkability Score
		Raw Score	Z Score	Raw Score	Z Score	Raw Score	Z Score	Raw Score	Z Score	Z Score
71	祥園	0.8854	(0.0615)	111.1747	(0.0032)	44.5860	(0.6831)	0.1925	0.2501	(0.4977)
72	祥園	0.8854	(0.0615)	111.1747	(0.0032)	44.5860	(0.6831)	0.1925	0.2501	(0.4977)
73	華苑	0.8781	(0.2917)	111.3554	0.0282	44.5860	(0.6831)	0.1653	(0.5219)	(1.4684)
74	華苑	0.8781	(0.2917)	111.3554	0.0282	44.5860	(0.6831)	0.1653	(0.5219)	(1.4684)
75	華苑	0.8781	(0.2917)	111.3554	0.0282	44.5860	(0.6831)	0.1653	(0.5219)	(1.4684)
76	華苑	0.8781	(0.2917)	111.3554	0.0282	44.5860	(0.6831)	0.1653	(0.5219)	(1.4684)
77	華苑	0.8781	(0.2917)	111.3554	0.0282	44.5860	(0.6831)	0.1653	(0.5219)	(1.4684)
78	華苑	0.8781	(0.2917)	111.3554	0.0282	44.5860	(0.6831)	0.1653	(0.5219)	(1.4684)
79	華苑	0.8781	(0.2917)	111.3554	0.0282	44.5860	(0.6831)	0.1653	(0.5219)	(1.4684)
80	華苑	0.8781	(0.2917)	111.3554	0.0282	44.5860	(0.6831)	0.1653	(0.5219)	(1.4684)
81	華豐	0.8779	(0.2964)	108.4580	(0.4749)	44.2675	(0.7211)	0.1798	(0.1104)	(1.6029)
82	華豐	0.8779	(0.2964)	108.4580	(0.4749)	44.2675	(0.7211)	0.1798	(0.1104)	(1.6029)
83	華麗樓	0.8845	(0.0917)	111.4450	0.0438	45.5414	(0.5690)	0.2047	0.5937	(0.0233)
84	華麗樓	0.8845	(0.0917)	111.4450	0.0438	45.5414	(0.5690)	0.2047	0.5937	(0.0233)
85	華麗樓	0.8845	(0.0917)	111.4450	0.0438	45.5414	(0.5690)	0.2047	0.5937	(0.0233)
86	華麗樓	0.8845	(0.0917)	111.4450	0.0438	45.5414	(0.5690)	0.2047	0.5937	(0.0233)
87	華麗樓	0.8845	(0.0917)	111.4450	0.0438	45.5414	(0.5690)	0.2047	0.5937	(0.0233)
88	華麗樓	0.8845	(0.0917)	111.4450	0.0438	45.5414	(0.5690)	0.2047	0.5937	(0.0233)
89	華麗樓	0.8845	(0.0917)	111.4450	0.0438	45.5414	(0.5690)	0.2047	0.5937	(0.0233)
90	華麗樓	0.8845	(0.0917)	111.4450	0.0438	45.5414	(0.5690)	0.2047	0.5937	(0.0233)
91	萬和	0.8882	0.0229	110.5643	(0.1092)	44.5860	(0.6831)	0.1791	(0.1320)	(0.9014)
92	萬和	0.8882	0.0229	110.5643	(0.1092)	44.5860	(0.6831)	0.1791	(0.1320)	(0.9014)
93	萬和	0.8882	0.0229	110.5643	(0.1092)	44.5860	(0.6831)	0.1791	(0.1320)	(0.9014)
94	萬和	0.8882	0.0229	110.5643	(0.1092)	44.5860	(0.6831)	0.1791	(0.1320)	(0.9014)
95	萬和	0.8882	0.0229	110.5643	(0.1092)	44.5860	(0.6831)	0.1791	(0.1320)	(0.9014)
96	萬和	0.8882	0.0229	110.5643	(0.1092)	44.5860	(0.6831)	0.1791	(0.1320)	(0.9014)
97	萬和	0.8882	0.0229	110.5643	(0.1092)	44.5860	(0.6831)	0.1791	(0.1320)	(0.9014)
98	萬和	0.8882	0.0229	110.5643	(0.1092)	44.5860	(0.6831)	0.1791	(0.1320)	(0.9014)
99	萬和	0.8882	0.0229	110.5643	(0.1092)	44.5860	(0.6831)	0.1791	(0.1320)	(0.9014)
100	萬和	0.8882	0.0229	110.5643	(0.1092)	44.5860	(0.6831)	0.1791	(0.1320)	(0.9014)
101	萬和	0.8882	0.0229	110.5643	(0.1092)	44.5860	(0.6831)	0.1791	(0.1320)	(0.9014)
102	萬和	0.8882	0.0229	110.5643	(0.1092)	44.5860	(0.6831)	0.1791	(0.1320)	(0.9014)
103	萬和	0.8882	0.0229	110.5643	(0.1092)	44.5860	(0.6831)	0.1791	(0.1320)	(0.9014)
104	萬和	0.8882	0.0229	110.5643	(0.1092)	44.5860	(0.6831)	0.1791	(0.1320)	(0.9014)
105	萬和	0.8882	0.0229	110.5643	(0.1092)	44.5860	(0.6831)	0.1791	(0.1320)	(0.9014)
106	萬和	0.8882	0.0229	110.5643	(0.1092)	44.5860	(0.6831)	0.1791	(0.1320)	(0.9014)
107	萬和	0.8882	0.0229	110.5643	(0.1092)	44.5860	(0.6831)	0.1791	(0.1320)	(0.9014)
108	萬和	0.8882	0.0229	110.5643	(0.1092)	44.5860	(0.6831)	0.1791	(0.1320)	(0.9014)
109	萬和	0.8882	0.0229	110.5643	(0.1092)	44.5860	(0.6831)	0.1791	(0.1320)	(0.9014)
110	萬和	0.8882	0.0229	110.5643	(0.1092)	44.5860	(0.6831)	0.1791	(0.1320)	(0.9014)
111	萬和	0.8882	0.0229	110.5643	(0.1092)	44.5860	(0.6831)	0.1791	(0.1320)	(0.9014)
112	萬和	0.8882	0.0229	110.5643	(0.1092)	44.5860	(0.6831)	0.1791	(0.1320)	(0.9014)
113	萬和	0.8882	0.0229	110.5643	(0.1092)	44.5860	(0.6831)	0.1791	(0.1320)	(0.9014)
114	萬和	0.8882	0.0229	110.5643	(0.1092)	44.5860	(0.6831)	0.1791	(0.1320)	(0.9014)
115	萬和	0.8882	0.0229	110.5643	(0.1092)	44.5860	(0.6831)	0.1791	(0.1320)	(0.9014)
116	觀景閣	0.8858	(0.0500)	110.9648	(0.0396)	45.5414	(0.5690)	0.2040	0.5762	(0.0825)
117	觀景閣	0.8858	(0.0500)	110.9648	(0.0396)	45.5414	(0.5690)	0.2040	0.5762	(0.0825)
118	觀景閣	0.8858	(0.0500)	110.9648	(0.0396)	45.5414	(0.5690)	0.2040	0.5762	(0.0825)
119	觀景閣	0.8858	(0.0500)	110.9648	(0.0396)	45.5414	(0.5690)	0.2040	0.5762	(0.0825)
120	觀景閣	0.8858	(0.0500)	110.9648	(0.0396)	45.5414	(0.5690)	0.2040	0.5762	(0.0825)
121	觀景閣	0.8858	(0.0500)	110.9648	(0.0396)	45.5414	(0.5690)	0.2040	0.5762	(0.0825)
122	觀景閣	0.8858	(0.0500)	110.9648	(0.0396)	45.5414	(0.5690)	0.2040	0.5762	(0.0825)
123	觀景閣	0.8858	(0.0500)	110.9648	(0.0396)	45.5414	(0.5690)	0.2040	0.5762	(0.0825)
124	觀景閣	0.8858	(0.0500)	110.9648	(0.0396)	45.5414	(0.5690)	0.2040	0.5762	(0.0825)
125	超群	0.9068	0.6061	95.4956	(2.7259)	42.3567	(0.9492)	0.1719	(0.3357)	(3.4046)
126	超群	0.9068	0.6061	95.4956	(2.7259)	42.3567	(0.9492)	0.1719	(0.3357)	(3.4046)
127	超群	0.9068	0.6061	95.4956	(2.7259)	42.3567	(0.9492)	0.1719	(0.3357)	(3.4046)
128	超群	0.9068	0.6061	95.4956	(2.7259)	42.3567	(0.9492)	0.1719	(0.3357)	(3.4046)
129	運通	0.9033	0.4941	93.5849	(3.0577)	43.3121	(0.8351)	0.1750	(0.2474)	(3.6462)
130	運通	0.9033	0.4941	93.5849	(3.0577)	43.3121	(0.8351)	0.1750	(0.2474)	(3.6462)
131	長安	0.9155	0.8748	99.2252	(2.0783)	41.7197	(1.0252)	0.1918	0.2288	(1.9999)
132	長安	0.9155	0.8748	99.2252	(2.0783)	41.7197	(1.0252)	0.1918	0.2288	(1.9999)
133	集景樓	0.8770	(0.3254)	110.8715	(0.0558)	43.9490	(0.7591)	0.1631	(0.5842)	(1.7246)
134	集景樓	0.8770	(0.3254)	110.8715	(0.0558)	43.9490	(0.7591)	0.1631	(0.5842)	(1.7246)
135	集景樓	0.8770	(0.3254)	110.8715	(0.0558)	43.9490	(0.7591)	0.1631	(0.5842)	(1.7246)
136	集景樓	0.8770	(0.3254)	110.8715	(0.0558)	43.9490	(0.7591)	0.1631	(0.5842)	(1.7246)
137	集景樓	0.8770	(0.3254)	110.8715	(0.0558)	43.9490	(0.7591)	0.1631	(0.5842)	(1.7246)
138	集景樓	0.8770	(0.3254)	110.8715	(0.0558)	43.9490	(0.7591)	0.1631	(0.5842)	(1.7246)
139	集景樓	0.8770	(0.3254)	110.8715	(0.0558)	43.9490	(0.7591)	0.1631	(0.5842)	(1.7246)
140	集景樓	0.8770	(0.3254)	110.8715	(0.0558)	43.9490	(0.7591)	0.1631	(0.5842)	(1.7246)

Calculations of Objective Walkability in Yuet Wah & KT Central (Pooled data)

		Land Use Mix		Residential density		Connectivity		Commercial Land use ratio		Walkability Score
		Raw Score	Z Score	Raw Score	Z Score	Raw Score	Z Score	Raw Score	Z Score	Z Score
141	集景樓	0.8770	(0.3254)	110.8715	(0.0558)	43.9490	(0.7591)	0.1631	(0.5842)	(1.7246)
142	仁厚	0.9504	1.9648	106.5453	(0.8071)	66.1651	1.8929	0.2432	1.6881	4.7387
143	仁厚	0.9504	1.9648	106.5453	(0.8071)	66.1651	1.8929	0.2432	1.6881	4.7387
144	仁厚	0.9504	1.9648	106.5453	(0.8071)	66.1651	1.8929	0.2432	1.6881	4.7387
145	仁厚	0.9504	1.9648	106.5453	(0.8071)	66.1651	1.8929	0.2432	1.6881	4.7387
146	仁厚	0.9504	1.9648	106.5453	(0.8071)	66.1651	1.8929	0.2432	1.6881	4.7387
147	冠天閣	0.9207	1.0386	120.7484	1.6593	65.9046	1.8618	0.2257	1.1894	5.7492
148	冠天閣	0.9207	1.0386	120.7484	1.6593	65.9046	1.8618	0.2257	1.1894	5.7492
149	冠天閣	0.9207	1.0386	120.7484	1.6593	65.9046	1.8618	0.2257	1.1894	5.7492
150	冠天閣	0.9207	1.0386	120.7484	1.6593	65.9046	1.8618	0.2257	1.1894	5.7492
151	冠天閣	0.9207	1.0386	120.7484	1.6593	65.9046	1.8618	0.2257	1.1894	5.7492
152	定安	0.9433	1.7422	111.3605	0.0291	66.1203	1.8876	0.2383	1.5471	5.2059
153	定富樓	0.9466	1.8446	106.9112	(0.7435)	67.3145	2.0301	0.2460	1.7656	4.8968
154	定富樓	0.9466	1.8446	106.9112	(0.7435)	67.3145	2.0301	0.2460	1.7656	4.8968
155	定富樓	0.9466	1.8446	106.9112	(0.7435)	67.3145	2.0301	0.2460	1.7656	4.8968
156	定業	0.9366	1.5327	111.1365	(0.0098)	65.1152	1.7676	0.2337	1.4182	4.7087
157	定業	0.9366	1.5327	111.1365	(0.0098)	65.1152	1.7676	0.2337	1.4182	4.7087
158	定業	0.9366	1.5327	111.1365	(0.0098)	65.1152	1.7676	0.2337	1.4182	4.7087
159	定業	0.9366	1.5327	111.1365	(0.0098)	65.1152	1.7676	0.2337	1.4182	4.7087
160	定興	0.9395	1.6256	111.6228	0.0746	65.5722	1.8221	0.2382	1.5459	5.0683
161	富安	0.9517	2.0038	107.1367	(0.7044)	67.3846	2.0385	0.2418	1.6481	4.9860
162	富安	0.9517	2.0038	107.1367	(0.7044)	67.3846	2.0385	0.2418	1.6481	4.9860
163	富安	0.9517	2.0038	107.1367	(0.7044)	67.3846	2.0385	0.2418	1.6481	4.9860
164	富裕	0.9441	1.7682	108.4452	(0.4772)	68.4654	2.1675	0.2445	1.7243	5.1829
165	富裕	0.9441	1.7682	108.4452	(0.4772)	68.4654	2.1675	0.2445	1.7243	5.1829
166	寶峯	0.9311	1.3636	117.1244	1.0300	66.3400	1.9138	0.2318	1.3640	5.6713
167	寶峯	0.9311	1.3636	117.1244	1.0300	66.3400	1.9138	0.2318	1.3640	5.6713
168	欣榮	0.9283	1.2760	112.1527	0.1667	63.8024	1.6109	0.2340	1.4272	4.4807
169	欣榮	0.9283	1.2760	112.1527	0.1667	63.8024	1.6109	0.2340	1.4272	4.4807
170	欣榮	0.9283	1.2760	112.1527	0.1667	63.8024	1.6109	0.2340	1.4272	4.4807
171	欣榮	0.9283	1.2760	112.1527	0.1667	63.8024	1.6109	0.2340	1.4272	4.4807
172	欣榮	0.9283	1.2760	112.1527	0.1667	63.8024	1.6109	0.2340	1.4272	4.4807
173	欣榮	0.9283	1.2760	112.1527	0.1667	63.8024	1.6109	0.2340	1.4272	4.4807
174	欣榮	0.9283	1.2760	112.1527	0.1667	63.8024	1.6109	0.2340	1.4272	4.4807
175	欣榮	0.9283	1.2760	112.1527	0.1667	63.8024	1.6109	0.2340	1.4272	4.4807
176	永英	0.9233	1.1204	113.6801	0.4319	63.6609	1.5940	0.2402	1.6011	4.7474
177	百富閣	0.9325	1.4064	111.3005	0.0187	65.3828	1.7995	0.2398	1.5899	4.8144
178	百富閣	0.9325	1.4064	111.3005	0.0187	65.3828	1.7995	0.2398	1.5899	4.8144
179	百富閣	0.9325	1.4064	111.3005	0.0187	65.3828	1.7995	0.2398	1.5899	4.8144
180	翠柏	0.8467	(1.2715)	117.3604	1.0710	53.4552	0.3757	0.1345	(1.3956)	(1.2205)
181	翠柏	0.8467	(1.2715)	117.3604	1.0710	53.4552	0.3757	0.1345	(1.3956)	(1.2205)
182	翠柏	0.8467	(1.2715)	117.3604	1.0710	53.4552	0.3757	0.1345	(1.3956)	(1.2205)
183	翠柏	0.8467	(1.2715)	117.3604	1.0710	53.4552	0.3757	0.1345	(1.3956)	(1.2205)
184	翠柏	0.8467	(1.2715)	117.3604	1.0710	53.4552	0.3757	0.1345	(1.3956)	(1.2205)
185	翠柏	0.8467	(1.2715)	117.3604	1.0710	53.4552	0.3757	0.1345	(1.3956)	(1.2205)
186	翠柏	0.8467	(1.2715)	117.3604	1.0710	53.4552	0.3757	0.1345	(1.3956)	(1.2205)
187	翠柏	0.8467	(1.2715)	117.3604	1.0710	53.4552	0.3757	0.1345	(1.3956)	(1.2205)
188	翠柏	0.8467	(1.2715)	117.3604	1.0710	53.4552	0.3757	0.1345	(1.3956)	(1.2205)
189	翠柏	0.8467	(1.2715)	117.3604	1.0710	53.4552	0.3757	0.1345	(1.3956)	(1.2205)
190	翠柏	0.8467	(1.2715)	117.3604	1.0710	53.4552	0.3757	0.1345	(1.3956)	(1.2205)
191	翠柏	0.8467	(1.2715)	117.3604	1.0710	53.4552	0.3757	0.1345	(1.3956)	(1.2205)
192	翠柏	0.8467	(1.2715)	117.3604	1.0710	53.4552	0.3757	0.1345	(1.3956)	(1.2205)
193	翠柏	0.8467	(1.2715)	117.3604	1.0710	53.4552	0.3757	0.1345	(1.3956)	(1.2205)
194	翠柏	0.8467	(1.2715)	117.3604	1.0710	53.4552	0.3757	0.1345	(1.3956)	(1.2205)
195	翠柏	0.8467	(1.2715)	117.3604	1.0710	53.4552	0.3757	0.1345	(1.3956)	(1.2205)
196	翠柏	0.8467	(1.2715)	117.3604	1.0710	53.4552	0.3757	0.1345	(1.3956)	(1.2205)
197	翠柏	0.8467	(1.2715)	117.3604	1.0710	53.4552	0.3757	0.1345	(1.3956)	(1.2205)
198	翠柏	0.8467	(1.2715)	117.3604	1.0710	53.4552	0.3757	0.1345	(1.3956)	(1.2205)
199	翠柏	0.8467	(1.2715)	117.3604	1.0710	53.4552	0.3757	0.1345	(1.3956)	(1.2205)
200	翠柏	0.8467	(1.2715)	117.3604	1.0710	53.4552	0.3757	0.1345	(1.3956)	(1.2205)
201	翠柏	0.8467	(1.2715)	117.3604	1.0710	53.4552	0.3757	0.1345	(1.3956)	(1.2205)
202	翠柏	0.8467	(1.2715)	117.3604	1.0710	53.4552	0.3757	0.1345	(1.3956)	(1.2205)
203	翠柏	0.8467	(1.2715)	117.3604	1.0710	53.4552	0.3757	0.1345	(1.3956)	(1.2205)
204	翠柏	0.8467	(1.2715)	117.3604	1.0710	53.4552	0.3757	0.1345	(1.3956)	(1.2205)
205	翠柏	0.8467	(1.2715)	117.3604	1.0710	53.4552	0.3757	0.1345	(1.3956)	(1.2205)
206	翠柳	0.8308	(1.7655)	116.3865	0.9019	50.9693	0.0789	0.1211	(1.7746)	(2.5593)
207	翠柳	0.8308	(1.7655)	116.3865	0.9019	50.9693	0.0789	0.1211	(1.7746)	(2.5593)
208	翠柳	0.8308	(1.7655)	116.3865	0.9019	50.9693	0.0789	0.1211	(1.7746)	(2.5593)
209	翠柳	0.8308	(1.7655)	116.3865	0.9019	50.9693	0.0789	0.1211	(1.7746)	(2.5593)
210	翠柳	0.8308	(1.7655)	116.3865	0.9019	50.9693	0.0789	0.1211	(1.7746)	(2.5593)

Calculations of Objective Walkability in Yuet Wah & KT Central (Pooled data)

		Land Use Mix		Residential density		Connectivity		Commercial Land use ratio		Walkability Score
		Raw Score	Z Score	Raw Score	Z Score	Raw Score	Z Score	Raw Score	Z Score	Z Score
211	翠柳	0.8308	(1.7655)	116.3865	0.9019	50.9693	0.0789	0.1211	(1.7746)	(2.5593)
212	翠柳	0.8308	(1.7655)	116.3865	0.9019	50.9693	0.0789	0.1211	(1.7746)	(2.5593)
213	翠梓	0.8207	(2.0805)	120.5890	1.6317	54.7384	0.5289	0.1245	(1.6807)	(1.6007)
214	翠梓	0.8207	(2.0805)	120.5890	1.6317	54.7384	0.5289	0.1245	(1.6807)	(1.6007)
215	翠梓	0.8207	(2.0805)	120.5890	1.6317	54.7384	0.5289	0.1245	(1.6807)	(1.6007)
216	翠梓	0.8207	(2.0805)	120.5890	1.6317	54.7384	0.5289	0.1245	(1.6807)	(1.6007)
217	翠梓	0.8207	(2.0805)	120.5890	1.6317	54.7384	0.5289	0.1245	(1.6807)	(1.6007)
218	翠梓	0.8207	(2.0805)	120.5890	1.6317	54.7384	0.5289	0.1245	(1.6807)	(1.6007)
219	翠梓	0.8207	(2.0805)	120.5890	1.6317	54.7384	0.5289	0.1245	(1.6807)	(1.6007)
220	翠梓	0.8207	(2.0805)	120.5890	1.6317	54.7384	0.5289	0.1245	(1.6807)	(1.6007)
221	翠梓	0.8207	(2.0805)	120.5890	1.6317	54.7384	0.5289	0.1245	(1.6807)	(1.6007)
222	翠梓	0.8207	(2.0805)	120.5890	1.6317	54.7384	0.5289	0.1245	(1.6807)	(1.6007)
223	翠梓	0.8207	(2.0805)	120.5890	1.6317	54.7384	0.5289	0.1245	(1.6807)	(1.6007)
224	翠梓	0.8207	(2.0805)	120.5890	1.6317	54.7384	0.5289	0.1245	(1.6807)	(1.6007)
225	金和	0.9286	1.2860	111.9550	0.1323	65.1827	1.7756	0.2347	1.4450	4.6390
226	金和	0.9286	1.2860	111.9550	0.1323	65.1827	1.7756	0.2347	1.4450	4.6390
227	麗裕	0.9294	1.3100	118.7298	1.3088	67.3114	2.0297	0.2395	1.5807	6.2293
228	麗裕	0.9294	1.3100	118.7298	1.3088	67.3114	2.0297	0.2395	1.5807	6.2293
229	麗裕	0.9294	1.3100	118.7298	1.3088	67.3114	2.0297	0.2395	1.5807	6.2293
230	麗裕	0.9294	1.3100	118.7298	1.3088	67.3114	2.0297	0.2395	1.5807	6.2293