PUBLIC SPACE AUDITS IN JOHOR BAHRU, MALAYSIA









Think City is a social purpose organisation based in Malaysia with the mission of making cities more people-friendly, resilient and liveable. As a regional city-making agency, Think City provides urban policy thinking, management and implementation of urban solutions, while acting as a catalyst for change in the way cities are planned, curated, developed, and celebrated.



Safetipin is a technology platform and a set of apps that collects data in order to make cities and public spaces safer and more inclusive for women. Safetipin works with city governments to use data for improvement, and specific initiatives to address women's safety in public spaces.

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Executive Summary

Safetipin uses apps and a technology platform to collect data to measure safety and inclusivity of public spaces in cities. Safetipin in collaboration with the Think City, a social purpose organisation, undertook a pilot project on using data to make cities resilient, liveable and inclusive. Greater Johor Bahru was selected as a pilot city. For this project, two Safetipin applications i.e., Safetipin Nite and Safetipin Site have been used to map the streets and key public spaces. At the core of the Safetipin apps is the safety audit, based on physical infrastructure and social environment related parameters. The parameters are Lighting, Walkpath, Openness, Visibility, Access to Public Transport, Security, People and Gender Usage. In October 2020, over 9,000 images were collected using Safetipin Nite followed by visual analysis on the range of parameters to generate 974 safety audits. The analysed data has been represented in the form of maps in this report showing the existing status of physical infrastructure in the audited area. Most of the audited area has been rated high on the Lighting and Walkpath parameters. The peripheral areas away from the city centre have been rated low on the Visibility (eyes on the street) and Public Transport parameters. Overall, majority of the audits with high Safety Scores have been identified around the commercial zones and near JB Sentral i.e., transportation hub.

As part of second component of the study, detailed audits were conducted around key public spaces using Safetipin Site. In addition to the safety audit parameters, parameters related to vegetation, emergency services, accessibility, noise and cultural balance were included in the methodology. In consultation with the Think City team, 10 public spaces were selected that included commercial spaces, transportation hubs, pedestrian walkways and a park. A factsheet on each of the public spaces audited has been prepared in the report to give an overall view of the space. The presence or absence of accessibility elements; pedestrian crossing, tactile tiles, ramps etc have also been recorded. The collected data revealed issues to be addressed in general across all the public spaces audited in the city.

To address the mobility issues, recommendations have been given for each type of public space in the last section of the report. The study has generated an evidence-based data set that can be readily accessed and imported on any GIS platform to view existing gaps in infrastructure. City governments and other stakeholders can integrate Safetipin data with other data sets for planning, designing and developing inclusive public spaces.

I. Introduction

Safetipin is a technology platform and set of applications that works to make communities and cities safer by collecting and providing safety-related data on a large scale. The data is made available to all users of the app as well as further analysed for use for city governments, urban planners and other stakeholders. Safetipin in collaboration with the Think City, a social purpose organisation, undertook a pilot project on using data to make cities resilient, liveable and inclusive. Greater Johor Bahru was selected as a pilot city where data collection using Safetipin applications were done.

Project Site

Johor Bahru is the capital city of Johor Bahru district, located along the Straits of Johor at the southern end of Peninsular Malaysia. The area of Johor Bahru is 220 km² anchoring Malaysia's third largest urban agglomeration, Iskandar Malaysia. Johor Bahru is well known as an industrial city rather than a tourist attraction. As part of the continuous development process, the rapid urbanisation in Johor has resulted in expansion of the city from its centre to the periphery⁴. One such expansion is Greater Johor Bahru area as seen in the map 1. The key map shows the various townships within Johor Bahru district which are in the Johor Bahru Transformation (JBT) area. With the total area of 4.6 km², the estimated population density of Greater JB is 2,051 people per km² as per 2019.



Map 1: Area selected for the pilot study-Greater Johor Bahru

¹ http://www.ijset.net/journal/2057.pdf

II. Safety Audit Methodology

Safetipin uses apps and technology platforms to collect data to measure the safety and inclusivity of public spaces in cities. For this project, two of the Safetipin applications were used, Safetipin Nite and Safetipin Site. To understand the safety in a place, the physical infrastructure and social usage of a public space are taken into consideration.

At the core of Safetipin is the safety audit. A safety audit is a tool for collecting and assessing information about key parameters of a public space and perceptions of safety in it. 8 key parameters are measured – Lighting, Walkpath, Openness, Visibility, Access to Public Transportation, Security, People and Gender Usage. Each parameter is rated 0/1/2/3 with 0 being a *poor* rating and 3 being *good* (parameter rubric can be seen in Annex 1). With this data, a Safety Score is calculated from the weighted aggregated ratings of the parameters. The Lighting, Gender Usage and Visibility parameters have been given high weightage in terms of their impact on feeling of safety. The parameters are defined and shown below.



III. Safetipin Nite

The Safetipin Nite app is used to collect images along the main streets of the city as well as key public spaces. The phone with the app installed is mounted on the screen of a car. When the driver is driving the car, the app automatically clicks images of the street in landscape mode. These images are collected to capture a pedestrian's safety conditions at regular intervals. Using Safetipin Nite, the entire city road network is mapped with images which are then assessed on the Safetipin backend technology platform.





Legend

Images Collected
 Greater Johor Bahru
 Base: Open Street Map

Johor Bahru: Safetipin Nite Data Collection



Map 2: Area covered in Greater Johor Bahru using the Safetipin Nite application



Image 1: Phone mounted in car with the Safetipin Nite application

In Greater Johor Bahru, around 9000 images were collected through the Safetipin Nite application both in the day and night time by 1 driver. Night time data is collected for the calculation of the Safety Score. It is imperative to have night time data otherwise the amount of lighting cannot be measured. Data in the day time is collected so that the physical infrastructure parameters such as Walkpath, Openness, Access to Public Transport and Security (identification of police stations) can be seen clearly in the images clicked. This method of data collection was adopted when it was noticed that if there is low lighting in the night time, it became difficult to identify and rate the condition of the civic infrastructure.

Note: The data collection was conducted (from 12/10/20 - 23/10/20 for Safetipin Nite and 9/12/20 - 17/12/20 for Safetipin Site) during RMCO (Recovery Movement Control Order) in Johor Bahru. This indicates that there is more flexible movement of people and businesses compared to other states that have undergone CMCO (Conditional Movement Control Order). Due to this, it was considered an appropriate time to conduct the safety audits, given the flexibility to move around in Johor Bahru. Though movement between states was allowed, the border between Johor Bahru and Singapore was closed. This may have an impact on the data collected during the day time as majority of the day visitors in Johor Bahru are Singaporeans. However, most of the night visitors are local residents. This may however also be affected due to the seasonal monsoon and heavy rains.

Data Analysis and Representation

On completion of the data collection through the Safetipin Nite application, the Safetipin team analysed the data based on the previously mentioned 8 parameters as well as on additional sub-parameters to provide accurate recommendations within the city. The sub-parameters measured are shown in table 1.

Lighting	Visibility	Walkpath	Security	Public Transport
No Street Light	50% Boundary Wall	No Pavement	Private Guards	Rail
Off Street Light	100% Boundary Wall	Broken Pavement	Police	Bus/ Mini Bus
Dim Street Light	Unused Land	Unpaved Pavement	Police Van/ Bike	Auto/ Shared Auto
High Street Light	Road Side Vendors	Car Blocking	Police Check	Taxi
Too Far Street Light	Temporary Stalls	Vendor Blocking	Police Booth	Bicycle
Leaves Cover Street Light	Shops	Houses Extending	Other Govt.	
Other Cover Street Light	Houses upto 4 Floors	Trees Blocking		
One Side Street Light	Houses > 4 floors	Other Blocking		
		Walkable Road		
		On-Street Parking		

Table 1: Sub-parameter ratings that are analysed

The images uploaded on the Safetipin server were analysed through the portal as shown in image 2. Each image has its geo-coordinates and time assigned to it, based on which it was analysed. For each audit point, a minimum of two images were selected for clear photographic validation. In total, 464 safety audits were generated using the night time data. This data is made available as a CSV or GIS layer (For CSV data, please refer Annex 2). In this report, maps have been produced on parameters related to physical infrastructure supported with images.



Image 2: Safetipin image analysis portal screen

IV. Safety Audit

The Safety Score at an audit location reflects the aggregated rating of all the parameters. For each audit point, a numeric value between 0 and 5 is provided where 0 is poor or very

unsafe and 5 is good in terms of overall safety. Map 3 shows the Safety Score for all 464 audit points. 32% of the audited points have a Safety Score less than 2 out of 5 which is below average. 26% of the points have an average rating of 3/5 and 42% of the points have a good rating which is 4 or above out of 5. A majority of audits with high Safety Scores are around the commercial zone and near JB Sentral i.e. transportation hub. The peripheral areas away from the city centre have lower score (below average and poor).



Chart 1: Safety Score rating

Safety Score

SAFETIR/N



Legend

- Safety Audits
- Poor
- **Below Average**
- Average
- Above Average
- Good
- Map 3: Safety Score

Land Use

Road

Commercial

Public Amenity

Institution

Base: Open Street Map

Residential

Transportation

Open Space

V. Parameter Findings

Through the graph in this section, the average ratings provided to each of the parameters for the Greater Johor Bahru area can be understood better. Each parameter is provided a rating out of 3 whereas the Safety Score is calculated out of 5.

Graph 1 shows the average rating of all the parameters. It can be seen that the Lighting parameter has the highest rating of 2.5/3 which indicates adequate lighting in the audited area of the city. It is followed by Openness and Walkpath parameters which signify that the streets are wide enough to provide a clear line of sight, and presence of good walking infrastructure in the city respectively.

It should be noted here that due to limited data on police patrolling routes, the security parameter has only recorded the access to formal security i.e. police stations. Also, due to COVID-19 restrictions on people's movement at the time of audit, data on people and gender usage has not been captured completely. Therefore, these parameters have not been analysed in detail.



Graph 1: Average rating of parameters

Lighting



The Lighting parameter measures the amount of illumination at a place and ranges from dark to bright. For the rating of the Lighting parameter, the sources which are considered are streetlights, light from houses, shops and street vendors. Temporary sources of light like the light from cars are not considered when rating this parameter. Images collected in the day time are also not considered for this parameter. Points which have a rating of 0 out of 3 are known as dark spots. These are places where there is either no lighting infrastructure present or where the existing lighting infrastructure is not functional.



Image 3: Street with non-functional streetlights, with only source of lighting coming from surrounding cars and buildings



Image 4: Well-lit street with streetlights illuminating the street from both sides

51% OF THE CITY HAS GOOD LIGHTING



Chart 2: Lighting rating

The average rating for the Lighting parameter is 2.5/3 within the audited area, which is *good*. This distribution of the points can be seen in Map 4.

According to chart 2, only 1% of audited points are identified as dark spots and 4% as poorly lit spaces. 44% audited points with a rating of 2 out of 3 indicates enough light.



Legend

•

 Safety Audits
 Land Use

 Poor Light
 Road

 Some Light
 Comm

Enough Light

Bright Light

- Road
 Commercial
 Institution
 Public Amenity
- ResidentialTransportationOpen Space

Base: Open Street Map

Johor Bahru: Parameter Lighting



Map 4: Lighting rating

Walkpath







The Walkpath parameter indicates whether or not a person can comfortably walk in a place. This includes the quality of the pavement or the space designated for walking along a road. If a pavement is present, its quality is assessed. If it is a residential lane, then the area for walking along with the condition of the road (broken or obstructed) is assessed. The walkability of an area or space is indicative of the activity on the street and the comfort people feel there. Streets with proper infrastructure for walking and crossings are essential for safe walking experiences for children and the elderly. Due to the varying angles of the images collected using the Safetipin Nite application, the width of the pavement is not measured or considered.



Image 5: Street with unpaved walkpath



Image 6: Street with well defined pavement with no obstructions

60%

OF THE CITY HAS GOOD WALKPATH



Chart 3: Walkpath rating

The average rating for the Walkpath parameter is 2.1/3 within the audited area, which is above average. This distribution of points can be seen in Map 5.

According to chart 3, 60% of the points have been rated good in terms of walkability. 32% of the points (including points rated 0 and 1) have been given a poor rating. Few of the poorly rated points are along the highway or roads with 6 or more lanes. Highly used spaces like the markets and JB Sentral have good walking infrastructure.



Walkpath



Map 5: Walkpath rating

Road

Commercial

Public Amenity

Institution

None

Poor

Fair

• Good Transportation

Open Space

Visibility



The Visibility parameter is based on the principle of "eyes on the street", which refers to the elements of the street that ensure there is a visual connection between the street and the built environment to provide natural surveillance to the pedestrians using the space. This includes windows and doors of shops or buildings that can provide opportunities for natural surveillance. This parameter includes temporary vendors as well, as they contribute to the activity on the street. Pedestrians using the public space do not contribute to this parameter as they are temporary users of space.



Image 7: Street with no natural surveillance and presence of 50% boundary walls



Image 8: Active street with good visibility attributed to shops on both sides of the street

23%

OF THE CITY HAS GOOD VISIBILITY



Chart 4: Visibility rating

The average rating for the Visibility parameter is 0.9/3 within the audited area, which is poor. This distribution of points is seen in Map 6.

According to chart 4, only 23% of the points (including points rated 2 and 3) have been rated good in terms of visibility. Out of the points rated below average, 47% have been given a rating of 0 which could be indicative of a highway or lack of street activity in an area.



Legend

Safety Audits Land Use No Eyes Road Few Eyes Institution More Eyes Highly Visible



Residential Transportation Open Space

Base: Open Street Map

Johor Bahru: Parameter Visibility



Map 6: Visibilty rating

Public Transport





the nearest mode of public transportation. Through this parameter, the quality of the mode of public transport is not assessed but instead the accessibility to it is measured. Public transport includes both formal and informal modes of transport such as metros, buses, trains, etc. The time taken and accessibility to any form of public transport adds to the ease of mobility in a city. Through images, it can be difficult to accurately identify the closeness of public transport from a point, so google maps and street view is referred here. A rating of 0 indicates that the nearest mode of public transportation is over 10 minutes walking distance away. Ratings 1, 2 and 3 indicate between 5-10 minutes, between 2-5 minutes and under 2 minutes walking distance, respectively.

The Public Transport parameter measures the distance from the audit point to



Image 9: City bus seen near JB Sentral



Image 10: Bus stop with people seen waiting

64%

OF THE CITY HAS GOOD ACCESSIBILITY **PUBLIC TRANSPORT**



Chart 5: Public transport rating

The average rating for the Public Transport parameter is 1/3 within the audited area, which is poor. This distribution of points can be seen in Map 7.

According to chart 5, 36% of the points are given a poor rating which indicates that there is no or limited access to any mode of public transport within a 10 minute walking distance. 64% of the points are within a 10 minute walking distance of a public transport stop.



Legend

Safety Audits Land Use Unavailable Road Distant Commercial Nearby Institution Very Close



Residential Transportation Open Space

Base: Open Street Map

Johor Bahru: Parameter **Public Transport**



Map 7: Public Transport Rating

VI. Safetipin Site

This is a tool to gather qualitative spatial data of a public space. It is a web application designed to collect information on selected public places or public services through a detailed questionnaire, pictures and spatial data. Prior to this study, the Safetipin Site application has been used to collect data about public parks and metro stations in India as well as taxi ranks in Durban, South Africa. This type of data gathering process helps in making effective decisions to address citizens' concerns and experiences when using the public place. The first step when using this application is to identify the public spaces which have to be assessed and then to create a rubric of questions. This is followed by the team on ground going to each of the public spaces to gather the required data.



Image 11: Screens of the Safetipin Site app tool

For this project, in addition to the existing 8 parameters, (shown in the Safety Audit Methodology section), parameters listed below were added for overall assessment of the area (refer Annex 3).



¹ A place where a person can seek refuge and get help in case of an emergency.

²An indication of diverse ethnicities or nationalities who use the space.

³Presence of certain people is perceived to be intimidating by some such as gangsters, drug addicts or the homeless.

In Greater Johor Bahru, the 10 popular public spaces that were identified for Safetipin Site data collection are shown in map 8.

A detailed questionnaire for site assessment was prepared with the ThinkCity team (for complete form, see Annex 4) and thereafter 3 people were trained to use the Safetipin Site application to collect the information. Based on the data collected, fact sheets have been created for each of the 10 public spaces.



Map 8: 10 public spaces identified for Safetipin Site data

Permaisuri Zarith Sofiah Opera House

Public Space Category: Commercial Space





1

Public Transport:

The nearest bus stop is the R&F Mall bus stop which is 400m away which is around a 5 minute walk.



Noise:

The average sound levels were recorded as 63 db. Owing to its design, the space is located away from the main road, which results in acceptable sound levels.



Lighting:

Though the structure itself is lit, the surrounding area is not well-lit. The path to the Opera House was found to be dimly lit by shops and office buildings' lighting.



Openness:

Being an open area, it offers good view all around with a long promenade along the Johor Strait. There is no path leading to areas without surveillance.



Vegetation:

The area has an ample and maintained vegetative coverage. There are trees, shrubs and bushes throughout the path around the Opera House.



Walkability:

The vehicular path leading to the Opera House has a continuous pavement along it and the promenade along the Opera House is newly constructed, hence wellmaintained. It is surrounded by vegetation beds as well as fences along the Johor Strait. The path has benches and trash cans, clear from the pedestrian path.





Visibility:

Being a commercial area, it has cafes, shops and offices, indicating high visibility in terms of natural surveillance for the pedestrians.



People:

Very few people were seen walking around the Opera House, with a maximum of 10 people.

Gender balance was not good as mostly men were seen walking in the area audited at the Opera House.

The culture balance was average. Between 1-3 cultures were represented based on the people using the space.

No intimidating groups of people were seen at the opera house in the day or night time. Similarly, no anecdotal evidence of intimidating groups in this area exists.



Security:

In terms of security, there is one private guard who is positioned at the building. There is no signage or clear instruction to get help in case of an emergency. No police patrol was recorded in the area.

2 Meldrum Area

Public Space Category: Commercial Space





Public Transport:

There is one bus stop that is within 10-minute walking distance. The bus stop has a shelter, seating infrastructure as well as tactile paving.



Noise:

The average sound levels were recorded as 73 db indicating a moderately high value. Most of the noise is from vehicular movement.



Lighting:

The sources of light are streetlights and lights from the shops. Lighting has been rated good as most of the area is well- lit.



Openness:

The entire Meldrum Area is open with no blind corners. The walkpath is wide enough to offer clear sight and sense of the area.



Vegetation:

Some planters and trees planted along the walkpath are the only form of vegetation in this area.



Walkability:

The walkpath is paved and elevated from the main road, as a means of divider for pedestrians. Bollards and fences are fitted at some stretches, to avoid vehicular parking on the pedestrian path. The pavement is wide enough for wheelchair users but doesn't have curb ramps at the corner for smooth transition. At few points, the path was found broken. Additionally, no pedestrian crossings were identified.





Visibility:

Being a commercial area, it has cafes, shops and offices, indicating high visibility in terms of natural surveillance for the pedestrians.



People:

On average, up to 10 people were seen at the different locations along Meldrum Area.

There was some amount of gender diversity with the presence of women and children seen using this space.

In terms of age and cultural balance, this place has been rated average with multiple cultures represented.

At least one group of people was identified as intimidating or suspicious of creating a brawl.



Security:

No private guards or police personnel were seen patrolling the area. A signage indicating directions to the nearest police station is installed. The 'Balai Polis Sentral' is located within a 5- 10 minute walk from Meldrum Area.

3 Bazar JB (Bazar Karat)

Public Space Category: Commercial Space





Public Transport:

There is a bus stop within a 5 minute walking distance from Bazar JB. The bus stop has proper seating infrastructure, tactile paving and ramps.



Noise:

The noise in the bazaar area is identified to be from two sources mainly; sounds from vehicles moving to and from the bazaar and the other is the music that is played at the market. Average sound level was recorded to be 74 db.



Lighting:

This area is uniformly well-lit. The sources of light in the bazaar are streetlights, lights from surrounding shops and vendors.



Openness:

One can see clearly in all directions in this open market.



Vegetation:

There are some trees and bushes seen outside the market area, near the parking. However, inside the bazaar, there is poor to little vegetation.



Walkability:

The is a properly constructed pavement in and around the bazaar area. The pavement is elevated which acts as a divider from the main road. There are no obstructions on the footpath, however, some patches are broken and require regular maintenance.





Visibility:

Being an open market, the visibility is very good. The area is surrounded by shops and vendors that act as natural surveillance.



People:

Many people were seen in Bazar JB and it is very often, crowded.

Gender balance was good in this area and a good number of women and children were seen using the space.

The culture balance was good. Many different cultures were represented.

No intimidating groups of people were seen in the bazaar.



Security:

The security is rated good as police personnel can be seen in and around the bazaar.

Jalan Tan Hiok Nee Backlane

Public Space Category: Commercial Space





4

Public Transport:

The nearest bus stop is located more than 400m distance.



Noise:

The average level of sound was recorded to be 70 db. The noise is mostly due to moving traffic and air compressors located in the area. People talking in loud voices also contributes to the sound levels.



Lighting:

The lighting sources are streetlights as well as shop lights. At places with only shop lights, the overall lighting is not adequate.





Being a narrow lane, there are some stretches with reduced line of sight.



Vegetation:

There is no groundcover in this area. Limited vegetation is recorded in the form of planters and pots.



Walkability:

There is a well-maintained elevated pavement with proper demarcation between path and road. The path has tactile paving throughout, and trash cans are provided at regular intervals. There is a newly constructed pedestrian crossing with curb ramps.





Visibility:

A street of the colonial era with traditional Malay architecture, it is a lively place with many cafes and restaurants that have been refurbished to commemorate the heritage of the Straits Chinese and Malays.



People:

There were some people in this area, but not many.

The gender diversity has been rated fairly diverse in this area.

A good cultural balance was recorded in this area owing to the various types of cafes and restaurants that attract people of all cultures.

There were no intimidating groups of people seen or recorded at the time of this audit but there are anecdotal instances of homeless people being in the area.



Security:

There is no regular police patrol recorded in this area. In case of an emergency, one can reach out to the shopkeepers and the staff.



Public Space Category: Commercial Space





Public Transport:

The nearest bus stop is located at more than 400m distance. People predominantly use their private vehicles to reach this place.



Noise:

This area has the lowest average sound level recorded i.e. 49.5 db. Due to limited vehicle movement, the area provides a quiet environment to shop and walk around.



Lighting:

This area is well lit. There are various sources of lighting; streetlights, shops, vendors and advertisement boards.



Openness:

This is an open walkway with a clear line of sight.



Vegetation:

The walkway has well maintained trees, shrubs and bushes.



Walkability:

The pavement has been recently upgraded with a/ using a human-centred and universal design approach. The pavement has tactile paving, curb ramps and at grade pedestrian crossing, making it an inclusive space. The elevated pavement is separated from the vehicular passageway with shrubs and bollards.





Visibility:

Once pre-dominantly used by laundrymen, it is now a public place with many cafes and boutiques. Street is active with many restaurants and cafe with outdoor seating facilities. However, some of the shops were found to be closed at night. Being a newly upgraded and well-maintained street, it is also used for prewedding shoots.



People:

On an average 10-20 people were seen walking around this street. More people were present in the daytime as compared to the night time.

Gender diversity has been rated good with many children and women using the space.

Cultural balance in this area has been rated above average with more than 3 cultures represented both by people and establishments.

There were no intimidating groups of people seen in the area and there are no stories from prior experiences either.



Security:

The barricades and checkpoints are set up in the night time with the police personnel patrolling the area. During the day, the security is minimal.

6 Masjid India Backlane

Public Space Category: Pedestrian Walkway





Public Transport:

There is a bus stop on the main road, less than 10 minutes by foot. The bus stop has a shelter, signage and seating infrastructure.



Noise:

Being a narrow lane with limited traffic, the sound levels are low. The average sound level was recorded to be 49.25 db. During prayer time at the mosque, there is sound from the speakers. However, it is not continuous throughout the day.



Lighting:

This lane is well-lit. There are various sources of lighting including street lamps, vendors and advertisement boards.



Openness:

The lane is narrow but it extends into open space so the line of sight is clear.



Vegetation:

There is a small amount of vegetative cover in this area. This includes plants and shrubs.



Walkability:

The laneway is dedicated for pedestrians and is constructed well. In some places, obstructions are found, including debris. There is vegetation around the pavement and there are hand rails as well as ramps. It is observed that there is tactile paving and curb ramps to enhance accessibility.





Visibility:

There are shops and restaurants that act as the natural surveillance and make the street active. No street activities were seen in the back lane.





Few people (up to 10 people) were seen in this area during the audit.

The gender diversity was rated poor with no women or children here. Mostly men were seen around the mosque.

Due to the presence of a mosque, it is frequented by one culture.

There were no intimidating groups of people seen in the area.



Security:

There was no private security or police personnel recorded at the site. There are restaurants where people can seek help if needed.

7 Pedestrian Link Bridge

Public Space Category: Pedestrian Walkway





Public Transport:

This bridge connects to JB Sentral, the biggest public transportation hub in Greater Johor Bahru area.



Noise:

As this link bridge is above a main road, there is a lot of noise due to the traffic. The average level of sound was recorded to be 76.25 db.



Lighting:

The major source of lighting on the bridge is the advertisements boards that have been set up as ascent lighting. There are few ceiling lights to illuminate the area at few stretches.



Openness:

Since it is an elevated walkway, the path has a fixed path to follow with limited entry/exit points. At few stretches, the line of sight is obstructed due to advertisement boards.



Vegetation:

No vegetation is recorded along this path.



Walkability:

This 650m fully sheltered pedestrian bridge connects JB Sentral and the R&F Mall. The entire path has tactile paving. Being an elevated walkway, the edges are secured with an iron grill fence for safety.





Visibility:

There is no natural surveillance in the form of shops/ vendors along the bridge.





On an average 10 commuters were seen using the bridge at the time of the audit.

Few children and women were seen using the bridge; hence gender diversity has been rated somewhat diverse.

In terms of cultural balance, it was rated average as people of various cultures were seen using the bridge.

There were no intimidating groups of people seen in the area at the time of audit. However, there are anecdotal instances of suspicious people being there during different times of the day.



Security:

There is no private security or police personnel at the bridge, however there are CCTV cameras for the purpose of surveillance.

8 Laman Tun Sri Lanang

Public Space Category: Park





Public Transport:

The nearest bus stop is located at 10-minute walking distance. The bus stop is equipped with a proper shelter, tactile paving and seating infrastructure.



Noise:

The average sound level was recorded as 76.5 db i.e., moderately high. Sound from the vehicles on the main road adjacent to the park is the biggest contributor to the noise rating.



Lighting:

The light sources during the night are streetlights and shop lights. Lighting has been rated average as some of the spots were dimly lit due to non-functional streetlights.



Openness:

less:

The park acts like a traffic island as it is flanked by three major roads. Ample space has been allocated for seating infrastructure all around.



Vegetation:

There are trees and bushes all around the park as well as shrubs that provide ample green cover. The trees also shade the footpath for a few stretches.



Walkability:

The pavement along the park is lined with shrubs and trees that also act as a divider between the pedestrian path and main road. Trash cans are provided at proper distance, clear of the pavement.





Visibility:

The park doesn't have temporary shops or vendors, but street performers can be seen at certain times. Across the road from the park, there are many high-rise office buildings. The path from the park leads to shops and cafes that has outdoor seating and open space for street vending activities.



People:

On an average, up to 10 people were seen in and around park.

Mostly men were seen so the gender diversity has been rated not diverse.

With people belonging to different cultures seen using the space, cultural balance has been rated average.

More than one intimidating groups of people have been seen in and around the park who behave oddly (visible/ audible). These were identified as homeless people.



Security:

No patrols or CCTV cameras were identified at or around the park. Some private guards were seen at the office and shops across the road. There is a police station (South Johor Bahru District Police Headquarters) at a 10-15 minute walking distance, that people can access in case of emergency.

9 Majlis Bandaraya Johor Bahru Bus Stop

Public Space Category: Public Transport Stop





Public Transport:

This bus stop is equipped with infrastructure including a shelter, seating space and ramps for accessibility. There is signage and other markings on the road to identify the stop. There is emergency information present at the stop as well. The two sides of this stop have different functions where the main road side (Jalan Ismail Sultan) is a bus stop and the other side (Jalan Dato Onn) is a taxi stand.





Since the bus stop is on a main road, moving traffic contributes to high sound levels there. The average sound level was measured to be 73.5 db.



Lighting:

The bus stop is well lit with streetlights, lamp posts and advertisement boards. It was noted that not all lamp posts were functional.



Openness:

The bus stop is located in an open area providing a clear line of sight for the pedestrians.



Vegetation:

There are some overhanging trees and bushes present on the opposite side of the bus stop. There is no groundcover or vegetation at the bus stop.



Walkability:

The pavement leading to the bus stop is elevated from the road, and is provided a ramp. A fence is provided to demarcate the waiting area of this stop. As seen in the image, while there is a trash can and vending machine, it leaves minimal clearing space in between for wheelchair users.





Visibility:

The bus stop is surrounded by office buildings which provide natural surveillance for this area.



People:

On an average 10 people were seen at the bus stop at the time of audit.

The gender diversity here was rated somewhat diverse. Few women and children were seen using the space.

People of different cultures were seen at the bus stop; hence cultural balance was rated above average.

There were no intimidating groups of people seen in this area at the time of audit. However, there are anecdotal instances of oddly behaving groups of people seen here.



Security:

There are private security guards for the buildings located behind the bus stop. The bus stop also has signage indicating numbers for emergency assistance.

10 Johor Bahru Sentral

Public Space Category: Public Transport Stop





Public Transport:

JB Sentral is an integrated public transport hub with rail and bus transportation. For the buses, there are proper shelters, markings on the road to indicate distance to the stop, accurate signage for identifying the stop, as well as seating infrastructure and proper surveillance system.



Noise:

There is prevalent noise due to the moving traffic and vehicular sound. The average sound level was recorded to be 77db i.e. the highest among the public spaces audited in Johor Bahru.



Lighting:

The terminal space as well as walkpath outside the terminal is well lit owing to the street lights and lamp posts. There are also shops within JB Sentral terminal that provide illumination to the area.



Openness:

The area of JB Sentral is open with ample space for a pedestrian to move and see around.



Vegetation:

There is a small amount of vegetative cover in this area. This includes plants and shrubs.



Walkability:

The pavement leading to the terminal is elevated and provided with shade, fences and vegetation beds at some stretches. There are bollards and signage present to indicate the direction of walking for pedestrians.





Visibility:

Owing to the presence of restaurants, shops, cafe and office buildings, the visibility is high.



People:

At the time of audit, on an average 10 people were seen during the night. During the course of the day, many people were seen using the bus and rail.

The gender diversity was rated fairly diverse here. Women and children were seen at the time of audits.

People of all cultures were seen using this space, hence cultural balance was rated above average.

There were no intimidating groups of people seen in JB Sentral.



Security:

Police personnel along with private guards and CCTV cameras for surveillance were recorded in terms of security. At JB Sentral, female security personnel were present as well.

























VII. Safe and Inclusive Street Design

The data generated revealed issues to be addressed in general across all the public spaces audited in the city. Below are some generic concern areas which need attention to make streets safe and inclusive.

Gender Inclusive Street Design Recommendations for Safe, Accessible, Comfortable Streets must include:

- 1. **Street Lights** which uniformly light up the streets without leaving any dark patches so that the entire surrounding area is clearly visible.
- 2. Footpath and Medians (proper curb cut or curb drop, tactile tiles and guard rails) which improve accessibility and mobility. Clear usable routes without any disruption or encroachments.
- 3. **Informal shopping/eating** to be allowed and given proper space to enable people to engage in street activity hence making it safer.
- 4. **Public Amenities** at transportation hubs to include bus shelters, toilets and police assistance booths.
- 5. At Grade Pedestrian Crossings to allow all users to cross the streets easily and safely. Pedestrian bridges and underpasses include hardships to climb up/down and exposes danger to the user.
- 6. **Traffic Signals, Street Signage and Road Markings** which assist vulnerable groups to take quicker and safer decisions while using the streets.
- 7. **Traffic Calming** measures to be taken at major junctions to increase road safety and pedestrian accessibility.
- 8. **Drainage and Slopes** to be engineered properly to avoid water logging which makes the streets inaccessible especially for vulnerable groups.
- 9. **Street Furniture** to be provided depending on the user groups (commuters/visitors) of the space.
- 10. Non-Motorized Para-Transit options should be developed and provided designated parking spaces near markets, parks and bus stops. These spaces should be organized, adequate and safe.

VIII. Observations and Recommendations

Commercial Space

Commercial spaces are important assets to a city as they provide a space for people to come together and engage with the community. Of the five commercial spaces that were audited, Jalan Dhoby was rated *good* on most of the parameters. Barring Permaisuri Zarith Sofiah House, all the commercial spaces were well-lit and active spaces having shops and cafes flanked with a wide pavement along with seating infrastructure. In terms of accessibility, only Jalan Dhoby has tactile paving throughout the footpath, at-grade pedestrian crossing with curb ramps and enough space between bollards for wheelchair users. The remaining commercial spaces need to be upgraded to include these elements of inclusive design. Additionally, public convenience facilities, proper signage to the nearest bus stop and police stations should also be provided.



Image 12: A street in Jalan Dhoby



Image 13: The promenade at Permaisuri Zarith Sofiah Opera House

Owing to its location, Permaisuri Zarith Sofiah House isn't well-accessible for public transport users or pedestrians. While the promenade is well-developed along the Johor Strait, it is poorly lit and not active, hence seems unsafe after dark. A cycle path could be developed around this area which would help the visitors avoid private transport and also increase the activity along the promenade.

Pedestrian Walkway

The first pedestrian walkway audited was a backlane of Masjid India that can be accessed through stairs or a ramp as seen in image 14. Despite being a back lane, it was well-lit and maintained, providing an obstruction-free space for the pedestrians. The second pedestrian walkway is a crucial link bridge built over Jalan Jim Quee highway, connecting R&F mall to JB Sentral. The major source of lighting over the bridge was from advertisement boards. When placed on both side of the bridge, the boards act as a barrier between the pedestrians and surroundings below. At times when the lighting fixtures are not functional or poorly lit as seen during the audit, the space becomes unsafe with no clear line of sight. Therefore, space should be uniformly lit using ceiling lights and advertisement boards should be kept in a staggered manner so that there is some visual connection with the built environment.



Image 14: Streetview of the Masjid India back lane



Image 16: Night time view of Masjid India back lane



Image 15: Day time view of Pedestrian Link Bridge



Image 17: Lighting on the Pedestrian Link Bridge

<u>Park</u>

A good park attracts a wide range of people, thus enhancing the livability of a city. The park is brightly lit at most of the audited points, but at a few locations, the lighting was not uniform, leading to poorly lit spaces. The park audited was rated *good* in terms of lighting and walkpath for an able-bodied person. To ensure that the park is accessible to all, it needs to provide tactile paving, curb ramps and an at-grade pedestrian crossing. The crossing will have to be developed with proper signage and traffic signal with timer as the park is situated at a junction with high-speed traffic. There is a need to provide public convenience facilities (including public toilets) that are universally accessible.



Image 18: Main street outside the park



Image 20: Walkpath in Laman Tun Sri Lanang park



Image 19: Non-uniform illumination at the park



Image 21: Street lights at the park

Public Transport Stop

Every city is dependent on mobility. To encourage more people to use public transport, it is important to ensure that their travel needs and concerns are understood and incorporated in the planning process. The two transport stops (JB Sentral and MBJB Bus Stop) audited differ in scale and design but a common parameter that needs to be improved is walkpath. In addition to repairing broken edges at a few points, the walkpath should be provided with tactile paving and curb ramps with clear space for wheelchair users. While JB Sentral has tactile paving near the boarding points, it needs to be provided uniformly to ensure smooth movement for the differently-abled. The paving should be provided till the nearest bus/taxi stop outside the station. In terms of security, an assistance booth should be set-up by the police for JB Sentral and signage should be provided at different spots within the complex.



Image 22: Walkpath at JB Sentral in the day



Image 24: Walkpath at JB Sentral at night time



Image 23: Walkpath at MBJB bus stop



Image 25: Night view of MBJB bus stop

Annex 1

Safetipin parameter rubric.

Rubric	0	1	2	3
Light (Night)	None: No street or other lights	Little: Can see lights, but there is low visibility in the area	Enough: Lighting is enough for clear visibility	Bright: Whole area is brightly lit
Walkpath	None: No walking path available	Poor: Path exists but in very bad condition	Fair: Can walk but not run	Good: Easy to walk fast or run
Openness	Not Open: Many blind corners and no clear sightline	Partly Open: Able to see a little ahead and around	Mostly Open: Able to see in most directions	Completely Open: Can see clearly in all directions
Visibility	No Eyes: No windows or entrances of shops or residences overlook this point	Few Eyes: Less than 5 windows or entrances overlook this point	More Eyes: Between 5 to 10 windows or entrances overlook this point	Highly Visible: More than 10 windows or entrances overlook this point
Public Transport	Unavailable: No metro, bus stop or auto/ rickshaw within 10 minutes walking distance	Distant: Metro, bus stop or auto/ rickshaw within a 5 to 10 minute walking distance	Nearby: Metro, bus stop or auto/ rickshaw within a 2 to 5 minute walking distance	Very Close: Metro, bus stop or auto/ rickshaw available within a 2 minute walking distance
Security	None: No guards or police visible in the surrounding area	Minimal: Some private security visible in the surrounding area but not nearby	Moderate: Private security within hailing distance	High: Police/ reliable security within hailing distance
People	Deserted: No one in sight	Few People: Less than 10 people in sight	Some Crowd: Between 10-20 people in sight	Crowded: Many people within touching distance
Gender Usage	Not Diverse: No one in sight or only men	Somewhat Diverse: Mostly men and very few women or children	Fairly Diverse: Some women and children	Diverse: Balance of all genders or more women and children

https://saf https://saf https://saf https://saf nttps://saf nttps://saf nttps://saf nttps://saf nttps://saf nttps://saf nttps://saf https://saf nttps://saf nttps://saf https://saf nttps://saf nttps://saf nttps://saf https://saf https://saf nttps://saf https://saf nttps://saf https://saf nttps://saf nttps://saf https://saf nttps://saf Images Weighted A Comment 4 0 4 3 D 4 D 3.5 D 4 D 3.5 D 3.5 D 3 D 3 D 2.6 D 2.6 D 2.6 D 0.9 D 1.6 D 1.3 D 1.3 D 3 D 3.5 D 3.5 D 1.6 D 1.3 D 1.3 D 1.6 D 1.6 D 4.3 3.5 0.9 2 2 2.6 2.6 4.2 4.4 4.2 4.2 1.3 3.5 ŝ 2 -2 2 2 \sim E L ÷ ÷ ÷, ÷, ÷ ÷ ÷ ÷ ÷, ÷ ÷ ÷ H Public Trans Gender Usa, Feeling 0 0 0 0 0 0 0 0 0 0 0 0 0 0 00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 00 0 H 000 H ÷ 0 ÷, 2 m 2 ÷ β S N --2 -2 ÷ 2 ---2 --2 ŝ 2 2 2 ŝ ŝ ŝ ŝ m m ŝ ŝ ŝ ŝ ŝ ŝ m m m m m n 0 0 0 0 0 0 m m m 0 0 0 N m \sim ŝ ŝ m m ŝ Walkpath 0 0 0 -0 -0 0 0 0 00 0 00 0 -Security 00 0 -0000 0 0 0 00 0000000 00 0 000000 000 0 0 0 0 00 H People e i 00000000 000 H 0 0 00 0 0 0 0 0 00 ŝ ÷ ----÷ --ŝ 2 --Visibility m \sim m m n n \sim \sim \sim \sim \sim m \sim \sim \sim \sim \sim 000 \sim m \sim \sim \sim m \sim 2 2 Openness ŝ Longitude Lighting 103.758177 103.758139 103.755333 103.763053 103.762119 103.760843 103.762747 103.762243 103.762162 103.762629 103.762168 103.760768 103.759872 103.759936 103.759089 103.757259 103.756304 103.765032 103.764104 103.763182 103.762313 103.761411 103.760532 103.759679 103.758751 103.756154 103.754362 103.753429 103.752485 103.751433 103.750516 703377 1.45618078 103.749492 703378 1.45649122 103.748601 103.761728 103.76581 103.757141 103.765467 103.764662 103.763841 703347 1.45668428 703362 1.45535969 703344 1.45572495 1.45526853 703353 1.45550985 703354 1.45497358 703356 1.45463573 703357 1.45447545 1.45443195 1.4563357 703360 1.45594959 703363 1.45513446 703365 1.4547269 703368 1.45425021 703371 1.45451239 703374 1.45523635 1.45691547 703341 1.45641138 703342 1.45606757 703343 1.45577262 703345 1.45562783 703348 1.45747259 1.4573707 703350 1.45662588 703351 1.45596031 1.45570291 1.4548127 1.45563915 1.45494736 703366 1.45457138 1.45436819 703369 1.45413223 1.45420672 703372 1.45467863 1.45492591 1.4553871 703376 1.45568741 Latitude 703346 703349 703352 703359 703355 703373 703375 703358 703364 703367 703370 703340 703361 ₽

CSV file of the raw data collected through the Safetipin Nite application.

Annex 2

Annex 3

Rubric used for Safetipin Site data collection.

	Poor	Below Average	Average	Good
Sound/ Noise	Very Noisy. Noise levels over 85 dBA.	Noisy. Noise levels between 70 - 85dBA.	Fair. Noise levels between 60 - 70dBA.	Quiet. Noise levels under 60 dBA.
Vegetation	None. No greenery, exposed earth, only bare concrete.	Poor. Only ground cover, or poorly managed green area.	Overhanging foliage, bush and ground cover.	Well managed, good amount of foliage for entre segment and beyond.
Emergency Assistance	No.	Yes, but it is too far away and not helpful.	Yes but it is not clear.	Yes. It gives clear and concise directions on who to call or where to get help.
Safe Havens	No.	Too far way.	Yes, but not quite sure how safe it is.	Yes
Pedestrian Crossings	None. Pedestrian crossing signals are not visible, audible, or tactile.	Poor. Pedestrian crossing signals available only meet one criteria. State which one.	Fair. Pedestrian crossing signals are available, but only meet 2 criteria. State which ones.	Good. Pedestrian crossing signals are visible, audible, and tactile.
Shaded Footpaths	None. No paths are shaded.	Poor. Some paths are shaded, but not continuously.	Moderate. Most paths are shaded, but not continuously.	High. All paths are shaded.
Surveillance on Footpath	Poor. A significant length of the footpath deviates to areas without surveillance.	Moderate. More than 50% of the footpath deviates to areas with no surveillance.	Fair. More than 30% of the path deviates to areas without surveillance.	Good. The footpath doesn't deviate to areas without surveillance.
Cultural Balance	Not diverse. Only one culture represented.	Somewhat diverse. One to three cultures represented.	Fairly diverse. Many cultures represented, some integration.	Diverse. Many cultures represented, well integrated.
Age Balance	Not diverse. Only people of working age.	Somewhat diverse. Very few children and/or old people.	Fairly diverse. Some children and older people present.	Diverse. Balanced across all ages
Presence of Intimidating Groups	Several groups of people fighting or drunk/ on drugs or behaving oddly visible/audible.	At least one group/person fighting or drunk/on drugs, or behaving oddly.	No group/person fighting or drunk/on drugs, or behaving oddly but anecdotal evidence from other times available.	No group/person fighting or drunk/on drugs, or behaving oddly .

Name	Category	What is the lo public space?	ication of th	opei	nness Arr	tenities V	/egetation	Noise	Any comment on the smell (sound in the area?	or Lighting	Light Sources	Lighting Comment	v Visibility c	Vhich of the followir an be seen?	g Street Activities
Zarith					J 9	ublic atine									
Sofea	Market/				i, j	frastruct									
Opera	Commercia				'n	e,Trash			No bad smell and no loud	T		lt's day			
House A	l hub				3 ca	ns		67	2 sound	0		time	m	Jone of the above	
	https://safe	ehttps://safetip	oin-site.s3-a	p-so	_			https:	https://safetipin-site.s3-å	ap https://;	https://safet	https://saf	<u> </u>	tttps://safetipin-si	e https://safetipi
								Ň	hich of the following	ls there a	place close l	by Add ar	ly other	>	Vhat is the
Visibility Commen	t People	Intimidating Groups	Gender C	/ ulture E	Age- 3alance	People	nt Secur	ity ap	e present? Select all plicable.	where yo in an eme	u can get he rgency?	p comm the sec	ent about curity hen	e. Walkpath f	ondition of the ootpath?
								-							
The						Not so									
visibility						many									
here is						people						There :	are only o	ne	
100% dut						come to	_					private	guard th	at	
to open						this			-	Yes, but n	hot quite sure	take ca	ire of this		
space are	a 1	0	-	1		1 placepla	S	1	_	how safe.	it is	area		3	
https://si	afe https://	https://safetij	https://sh	ttps://sh	nttps://s	a https://:	safehttps	://shtt	ps://safetipin-site.s3-ap	https://sa	ifetipin-site.s	3-ahttps:/	/safetipin	i-sit h	ttps://safetipin-:
Select all t	that exist					Which	of the fol	lowing	Which of the followin	6				Which of the	
as a separ	ator		Su	rveilland		access	ibility eler	ments a	he are present at the	Pedestr	ian			following are	

as a separator			Surveillanc		accessibility elements are	are present at the	Pedestrian			-	following are	
between the	Obstructions	Shaded	e on	Walkpath	available on the	nearest pedestrian	Crossing	Public	PT around I	ы	present at the	Bus Stop
footpath and road.	on footpath	Walkpath	walkpath	Comment	footpath?	crossing?	Comment	transport	you (Comment	nearest bus stop?	Comment
				The								
				walkabilit								
				y here is								
Vegetation bed				proper								
(shrubs, bushes or				and								
flowers),Fence/	None of the			newly					None of			
Gate	above	1	Nope	added	None of the above			0	the above			
	https://safeti		https://safe/	https://sal	https://safetipin-site.s3-ap-		https://safe	https://sal	https://saf	https://saf	https://safetipin-site.	s3-ap-south
					-							

Excel file of the sorted data collected through the Safetipin Site application.

Annex 4

Annex 4

The Safetipin Site questionnaire.

(ک	
Site Assessment in Johor Bahru		
General		
1- Name of public space *	Upload	
Your Answer		
2- Category of public space *		
Public transport stop		
Public park		
Public square		
Pedestrian walkway/ Link bridge		
Market/ Commercial hub		
Other		
3- What is the location of the public space?*	Get Address	
4- How would you rate the openness of this area? *		
0 (Many blind corners and no sightline)		
1 (Able to see a little ahead and around)		
 2 (Able to see in most directions) 		
 3 (Can see clearly in all directions) 		
Uploed		
5- What amenities are available nearby? Select all applic	cable. *	
Public toilets		
Signage for public transport		
Public seating infrastructure		
Trash cans		
None of the above		
Upload		
6- What is the amount of vegetation? This includes green landscape and foliage. *		
None. No greenery, exposed earth, only bare concr	rete	
 Poor. Only ground cover, or poorly managed green 	area	
 Overhanging foliage, bush and ground cover 		
 Well managed, good amount of foliage for entire set 	gment and beyond	
Upload		
7- Enter the reading of the noise as calculated.		
Your Answer		
8- Any comment on the smell or sound in the area?		
Vour Anomer		

Lighting	
9- How is the lighting at your location?*	
 0 (No street lighting) 	
 1 (None or less than 30 of street lit and a number of d 	ark spots observed)
2 (More than 50 of street lit, with some street lamps r	ot functioning and some dark spots observed)
3 (Both side of street equally lit, all street lamps funct	ioning)
Upload	
10-What are the light sources present? Select all applicable	L.•
Streetlights	Shops
Street Vendors	Ad boards/ signage
Houses	Lamp post
Other	None of the above
Upload	
11- Add any other comments about lighting here. *	
Num Amuna)
TOUR Answer	
	3
11(a)\$-55(a)	
Visionety	
12- How would you rate the visibility of the area? (Natural s	urveillance or a space) *
1 // ere then 5 windows or entreness overleaking the	ventoking the pointy
2 (Returner 5 and 10 windows or entrances overlooking the	point)
2 (between 5 and 10 windows or entrances overlooking the 3 (More than 10 windows or entrances guerlooking the	a point)
S (More than to windows of enhances overlooking th	e point)
Upload	
13-Which of the following can be seen? *	
Houses	Shops
Cafe/ Restaurant	Street vendors
Offices/ Commercial complex	Open/ vacant land
Boundary wall	None of the above
Other	Upload
14-What all activities are there at this point? Select all appl	icable.
Street performer	Recreation
Exercising	Event or exhibition
Open market	Outdoor seating for restaurant
None of the above	Other
Upload	
15-Add any other comment about the visibility or activity of	f the area here.
Vaur Aneuror)
Tour Ariswer	

People and Diversity
16-How many people are using the public space (walking or seated, not including shopkeepers or vendors)?* 0 1-10 10-20 20+ Uploed
17- Are there any intimidating groups present? *
No group/person fighting or drunk/on drugs, or behaving oddly
No group/person fighting or drunk/on drugs, or behaving oddly but anecdotal evidence from other times
available
At least one group/person fighting or drunk/on drugs, or behaving oddly
Several groups of people fighting or drunk/on drugs or behaving oddly visible/audible
18-How is the gender diversity in the area? *
Not diverse. No one in sight or only men
Somewhat diverse. Mostly men, very few women and children
Fairly diverse. Some women and children
Diverse. Balance of all genders or more women and children
19-How is the culture diversity in the area?*
Not diverse. Only one culture represented
Somewhat diverse. One to three cultures represented
Fairly diverse. Many cultures represented, some integration
 Diverse. Many cultures represented, well integrated
20-How is the age-balance in the area? *
Not diverse. Eg: Only people of working age
Somewhat diverse. Eg: Very few children and/or old people
Fairly diverse. Eg: Some children and older people present
Diverse. Balanced across all ages
21- Any comment on the people in the area?
Your Answer
Security
22-How would you rate the security in the area? Are there police personnel and private security guards present?*
0 (No guards or police visible in the area)
1 (Some private security visible in the area but not nearby)
2 (Private security within hailing distance)
3 (Police/ reliable security within hailing distance)
Ubload

23-Which of the following are present? Select all applicable. *	
Police station	Police personnel
Police barricade/ Checkpoint	Police car/ van
Private guards	Signage (emergency/ police assistance)
Female security personnel	CCTV cameras
None of the above	Other
Uploed	
24-Is there a place close by where you can get help in an emerger	cy?*
○ No	
Too far away	
Yes, but not quite sure how safe it is	
Ves Ves	
25-Add any other comment about the security here	
20-Aud any other comment about the accurty here.	
Your Answer	
L	
Walkability and Accessibility	
26-How would you rate the footpath? *	
0 (There is no footpath available)	
1 (Path exists but it is in bad condition)	
2 (Fair conditions with more than 50% surface and with mini	mal or no obstacles)
 3 (Proper and level footpath with enough space to walk) 	
United	
27-What is the condition of the footpath? *	
Unpaved	
Broken	
Obstructed	
Narrow	
None of the above	
Other	
Uploed	
28-Select all that exist as a separator between the footpath and re	ad. *
No level difference	
Elevated footpath	
Vegetation bed (shrubs, bushes or flowers)	
Marking on the roads	
Heightened divider (bollard, etc.)	
Fence/ Gate	
Other	
Other	

29-Are there any o	bstructions on the footpath? Select all	applicable. *	
Shops		Vendors/ Temporary st	alls
Advertisem	ent boards	Construction debris	
Electrical bo	XX.	Vehicles	
Open garba	ge dumps	Trash cans/ Bins	
None of the	above	Other	
Upload			
30-Are the footpat	hs shaded to protect people from the w	eather- sun or rain? *	
No. No paths	are shaded		
Not really. So	me paths are shaded but not continuou	isly	
Somewhat. M	lost paths are shaded, but not continuo	usly	
Yes. All paths	are shaded		
Upload			
31-Does the footp underpasses o	ath lead to areas without surveillance? r segregated paths. Please comment. *	Such as Uplo	d
Your Answer			
			4
32-Add any other	comment about the walkability of the ar	ea here.	
Your Answer			
33-Which of the fo	lowing accessibility elements are available	able on the footpath? *	
Ramps			
Hand rails			
Tactile pavin	9		
Curb ramp			
None of the	above		
Other			
Upload			
	Her free sector and the sector and		
34-Which of the fo	liowing are present at the nearest pede	strian crossing? *	
Curb ramp			
Iraffic signal	for pedestrian crossing		
Traffic signal	with timer for pedestrian crossing		
Median cut			
None of the	above		
Other			
Outer			
Uploed			
Upload 35-Any comments	about the pedestrian crossings?		
Upload 35-Any comments	about the pedestrian crossings?		
Uploed 35-Any comments Your Answer	about the pedestrian crossings?		
Uploed 35-Any comments Your Answer	about the pedestrian crossings?		

Local Public Transport	
36-How far is the nearest public transport stop? (Bus/ train	/ para-transit) *
Unavailable. No stop within a 10 minute walk	
Distant. There is a stop between 5-10 minutes away b	y walk
Nearby. There is a stop between 2-5 minutes away by	walk
Very close. There is a stop within a 2 minute walk	
37-Which of the following public transport options are arou	ind you? *
Bus stop	
Taxi stand	
Para-transit hub	
Train station	
None of the above	
Other	
Upload	
38-Add any other comment about public transport connect	ivity at this point?
Your Answer	
39-which of the following are present at the hearest bus st	opr
Bus sherter	stop
Seating infrastructure	Map/ schedule of buses
Realtime information about buses timings	Tactile paying
Ramp	Curb Ramp
Surveillance system	Emergency information
None of the above	Other
Upload	
40-Any other comments about this bus stop?	
Your Answer	
 Required Field 	Submit



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