

GUWAHATI

A Safety Analysis Report





The manual safety audits were conducted by the volunteers from North East Network. We are thankful for their partnership in data collection.

GUWAHATI

Safetipin, is a map-based mobile phone and online application, which works to make communities and cities safer by providing safety related information collected by users and by trained auditors.

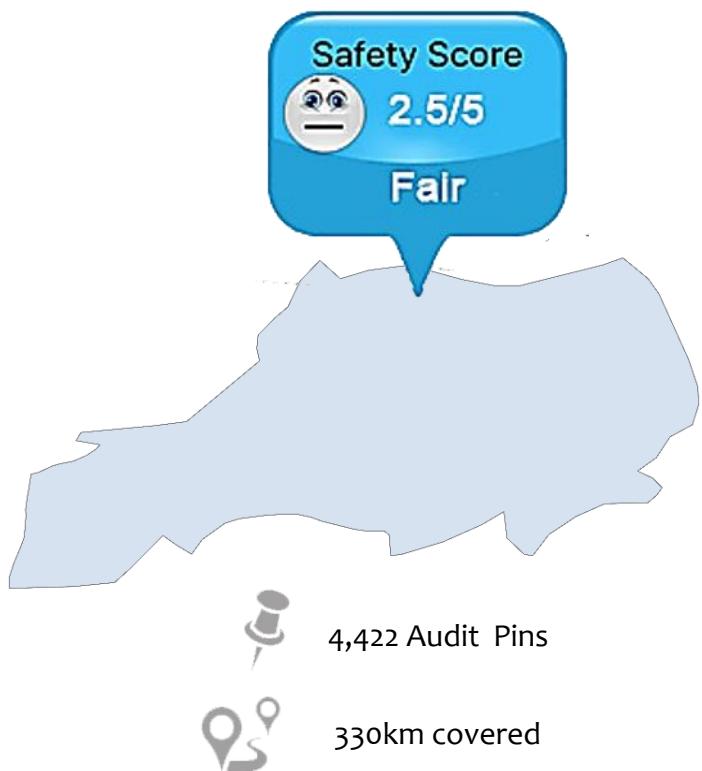
At the core of the app is the Safety Audit. A Safety Audit is a participatory tool for collecting and assessing information about perceptions of safety in public spaces. The audit is based on nine parameters – Lighting, Openness, Visibility, Crowd, Security, Walkpath, Availability of Public Transport, Gender Diversity and Feeling.

Methodology

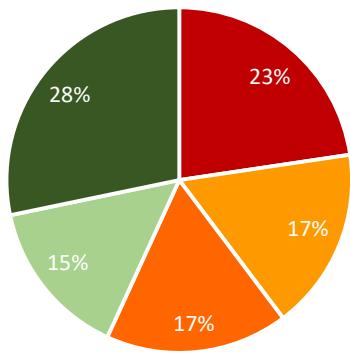
The safety audits have been generated using two methods. First, manual audits were conducted by volunteers from using *My Safetipin* app.

Secondly, safety audits have been generated using the Safetipin Nite app. The assessment was done post sunset till 9 pm. Mobile phones were mounted on the windshield of the taxis', and using the app photographs of the city roads were taken. These photographs were then assessed based on the eight audit parameters to generate audit pins at each location.

A total of 4422 audits have been generated over 330 km of road length. Overall, the Safety Score for Guwahati is rated 2.5/5 i.e. Fair.



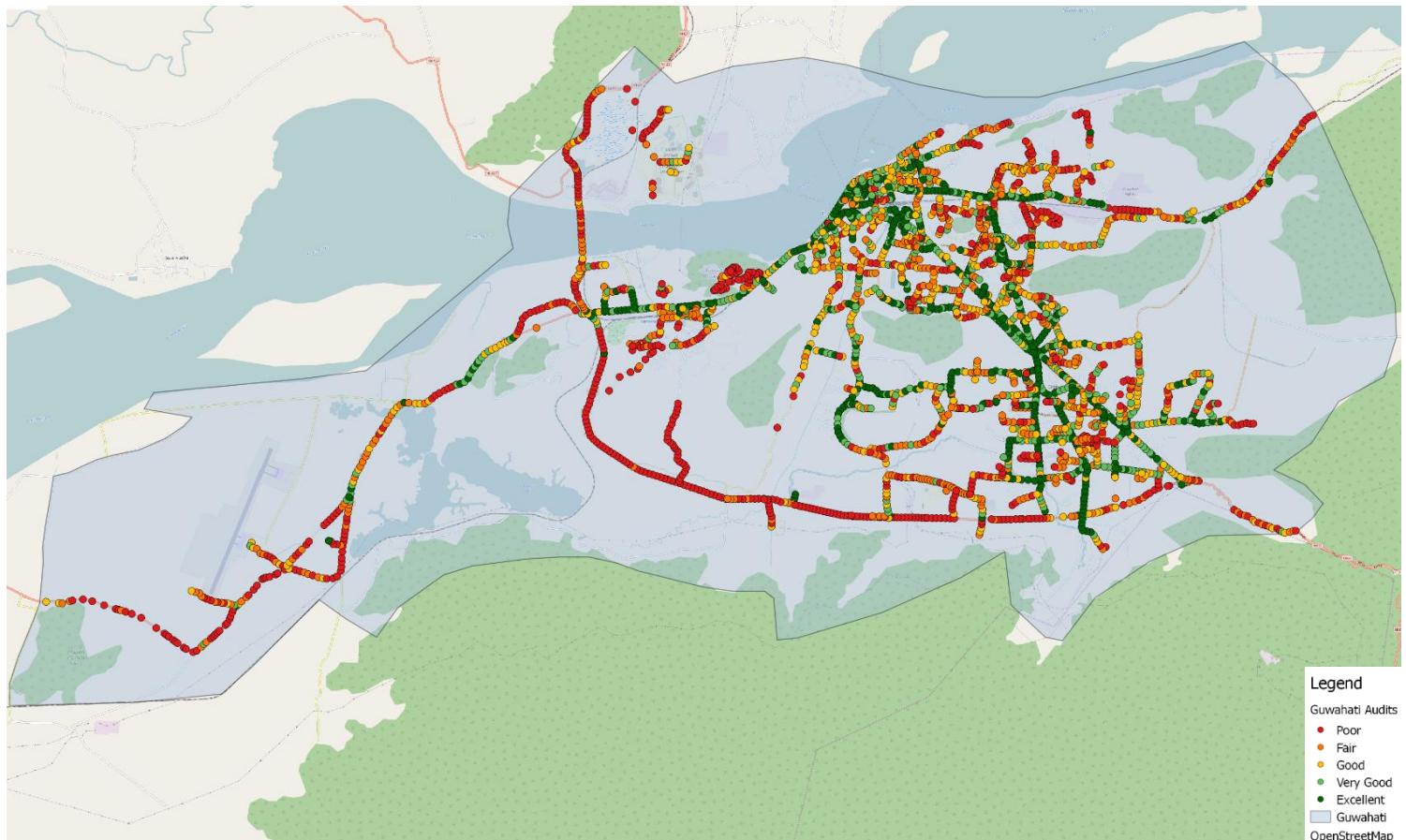
Safety Score



The Safety Score of a point is a reflection of the perception of safety at that particular location. For each audit point it is a number between 0 and 5, 0 being Poor i.e. Very Unsafe and 5 being Excellent in terms of overall safety.

Indicated in the pie chart is the percentage distribution of pins in each range. The Safety Score has also been indicated in the map below. Around 28% of the audit points were found to be safe whereas 40% of the points were rated below average and needs improvement.

	Lighting measures the amount of brightness/ illumination at a place and ranges from Dark to Bright. A place can be lit with street lighting or from other sources.
	Openness refers to whether a person has a good line of sight in all directions.
	Visibility refers to how visible is one to others. It is based on the principle of 'eyes on the street'. This comprises windows-doors of shops, houses along with street vendors and hawkers.
	People indicates the number of people around. This increases as a consequence of usage opportunities.
	Security refers to visible security offered either by the police or private security guards (for example along ATM/Bank).
	Walkpath indicates whether a person can comfortably walk at a place. This could refer to the quality of a pavement or space along a road.
	Transport refers to the ease of accessing any mode of public transport i.e. metro/bus/auto/taxi etc. and is measured in terms of the distance to the nearest mode.
	Gender is about diversity i.e. the percentage of women and children amongst the crowd. This increases as a consequence of safety perception.



Map indicating Safety Score Rating

Parameter Ratings

Each of the nine parameters is rated 0/1/2/3, 0 being the poorest and 3 good. The average parameter ratings graph indicates the overall average rating for each parameter.

Openness parameter has been rated the highest followed by Walkpath, Lighting and Visibility. Security and Gender Usage are the least rated parameter i.e. Poor. The overall feeling of Safety for the city of Guwahati is rated Below Average.

Parameter-wise Pin Distribution

The Parameter wise pin distribution graph indicates the number of points rated 0/1/2/3 i.e. the good points as positive and poor ratings as negative.

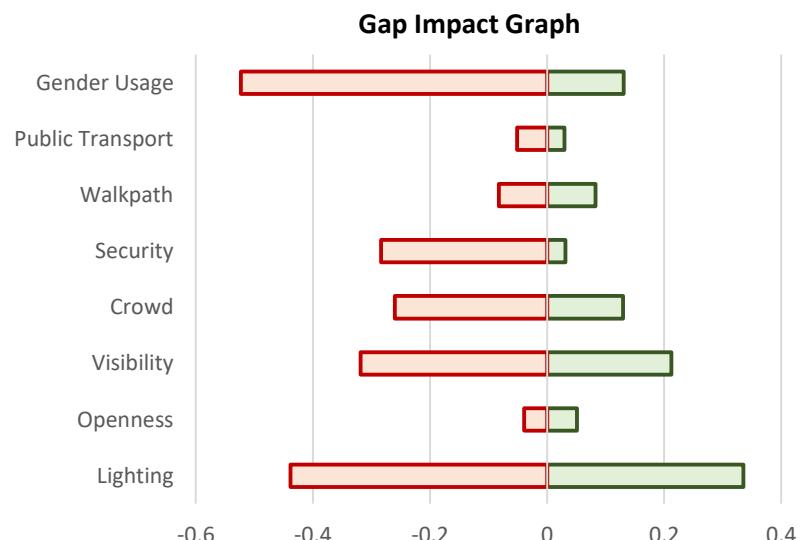
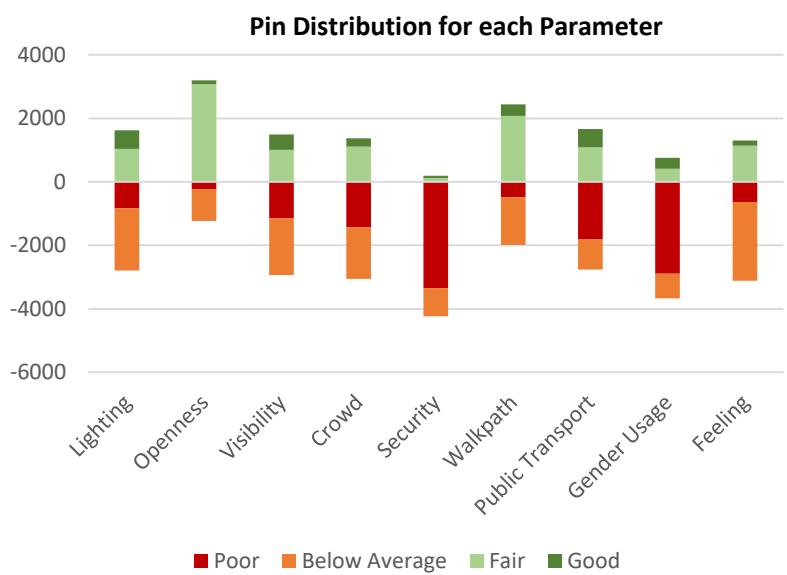
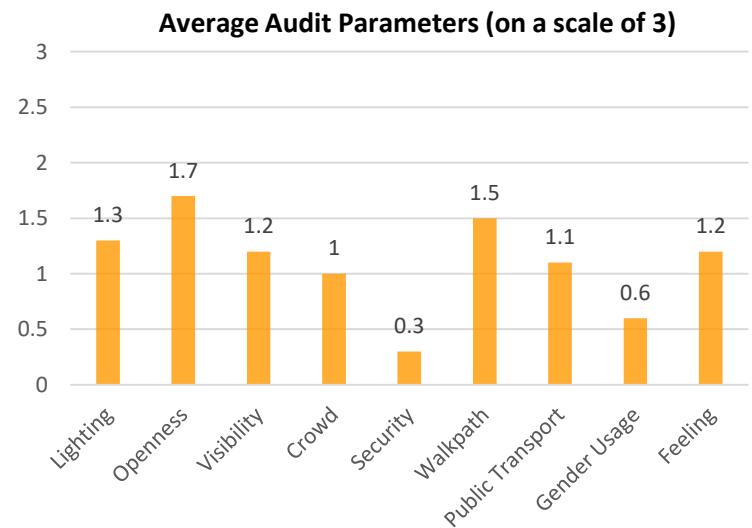
The parameter of Security, Gender Usage, Public Transport and Crowd have been rated poorly for the most parts of the city. Visibility and Lighting needs to be improved in some parts of the city.

Gap Impact Analysis

All parameters do not have an equal impact on the perception of safety. It is therefore useful to know how an improvement in each parameter will impact the Safety Score of the area. The Impact Bar shown indicates the extent of influence and the relative impact that each parameter has on the perception of safety. The combined length indicates the impact potential of the parameter.

The parameters with the maximum combined length have the highest impact on the perception of safety and vice versa i.e. Lighting has the maximum impact and Transportation the least. The positive length (in green) indicates the extent of provision that has already been made on ground. The negative length (in red) indicates the (remaining) amount of improvement needed to increase the Safety Score.

Increase in Crowd and Gender Usage is dependent on other parameters. Improving Visibility and Security on the streets of Guwahati will result in safer public spaces.



Lighting

1.3 / 3

Lighting in the city has been rated 1.3/3 i.e. Average. At some points as seen in Pic 1, there were no streetlights. Some audit points were found to have poor lighting due to streetlights being inoperative or hidden behind trees' foliage. Maintenance checks should be carried out to ensure that the streetlights are operational and regular pruning of tree's leaves would result in improved illumination.

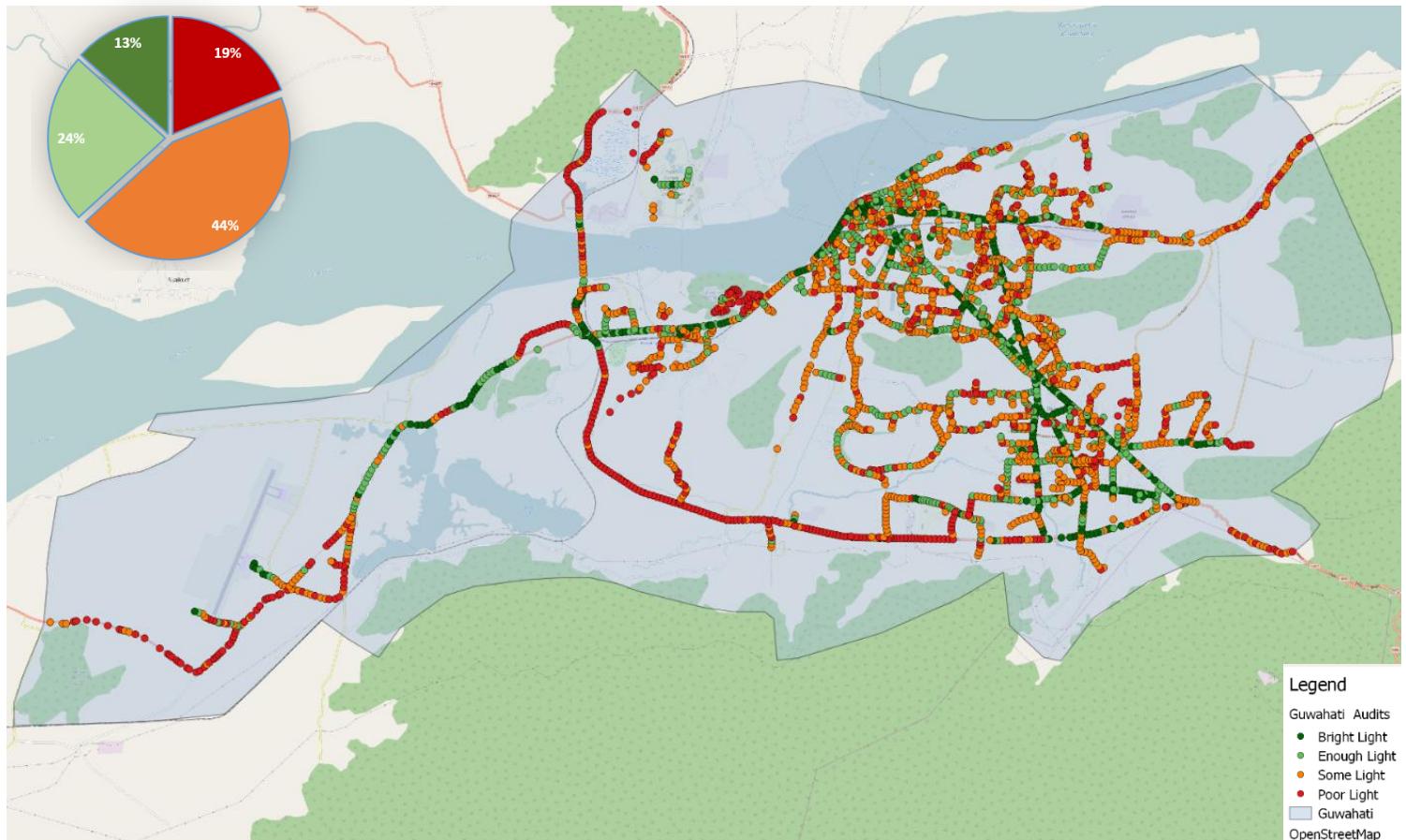
Lighting has maximum contribution to the feeling of safety for the pedestrians. As seen in Pic 2, the streetlights installed along the central median, results in well lit roads but poorly lit footpath. Pedestrian scale streetlights should be installed along the edge of the footpath, clear of any obstruction.



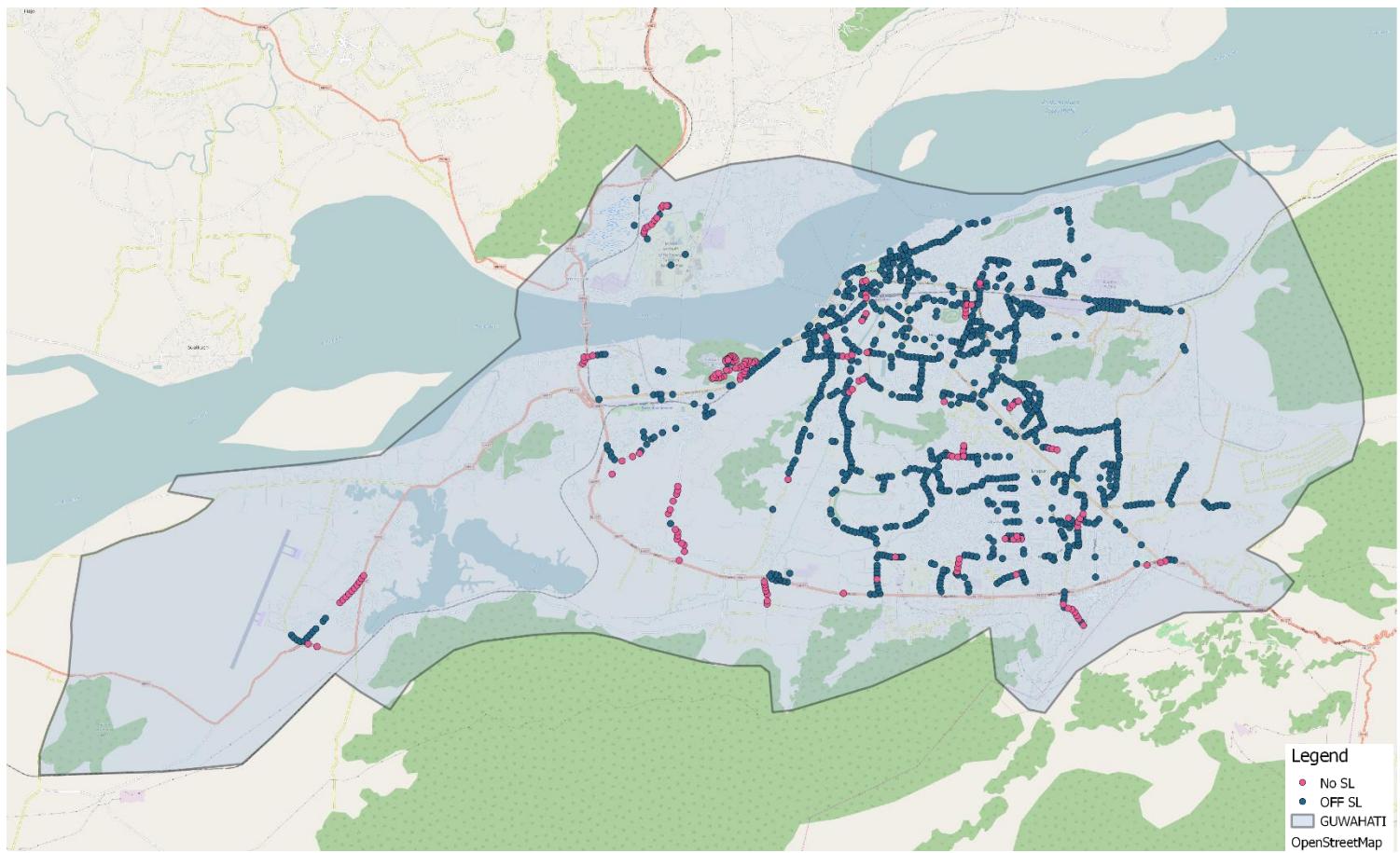
The stretch with no streetlights



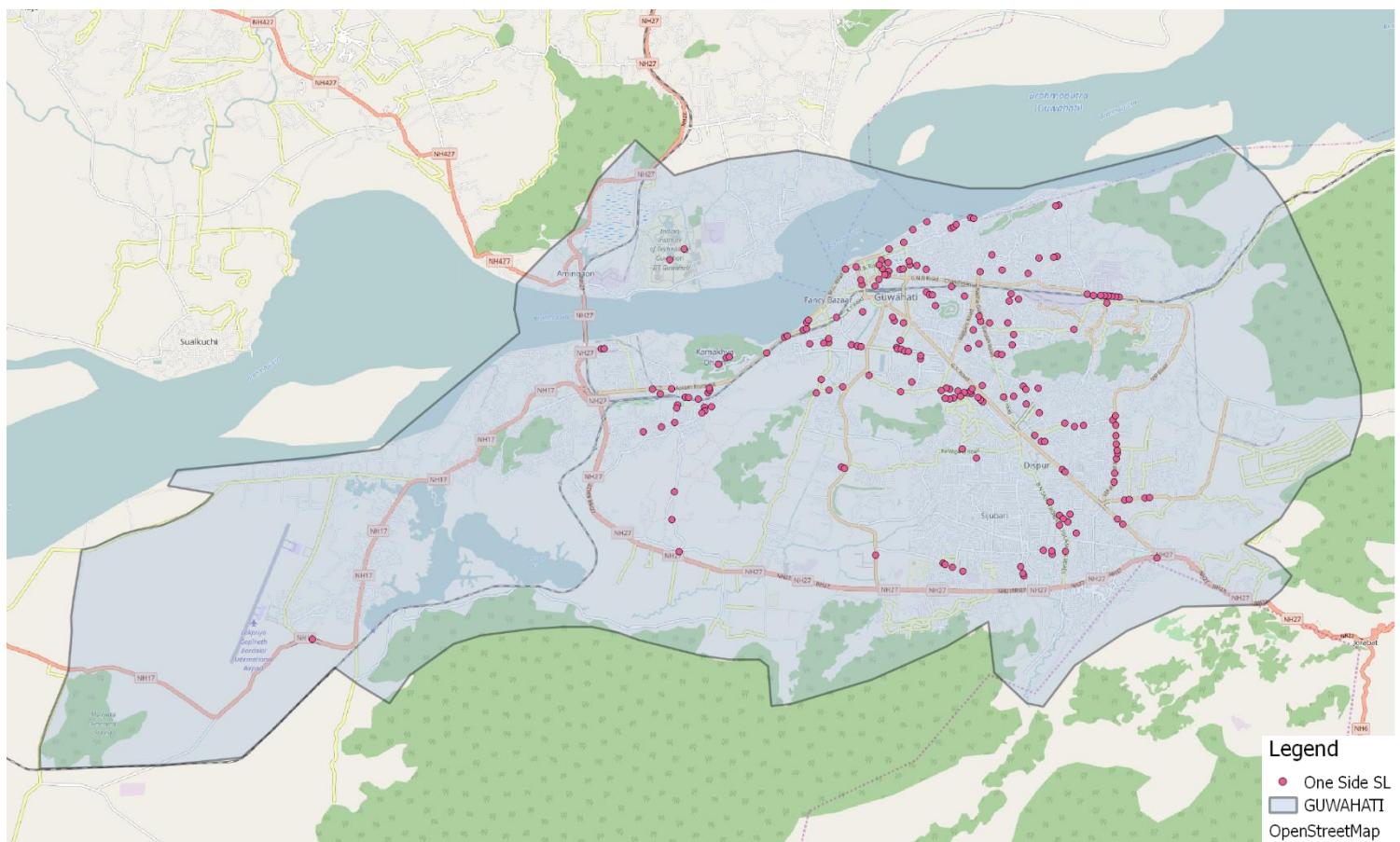
Dim lit footpath



Map indicating Lighting Rating



Map indicating points with no or inoperative streetlights



Map indicating poorly lit points on main roads due to streetlights installed on only one side

Walkpath

1.5 / 3

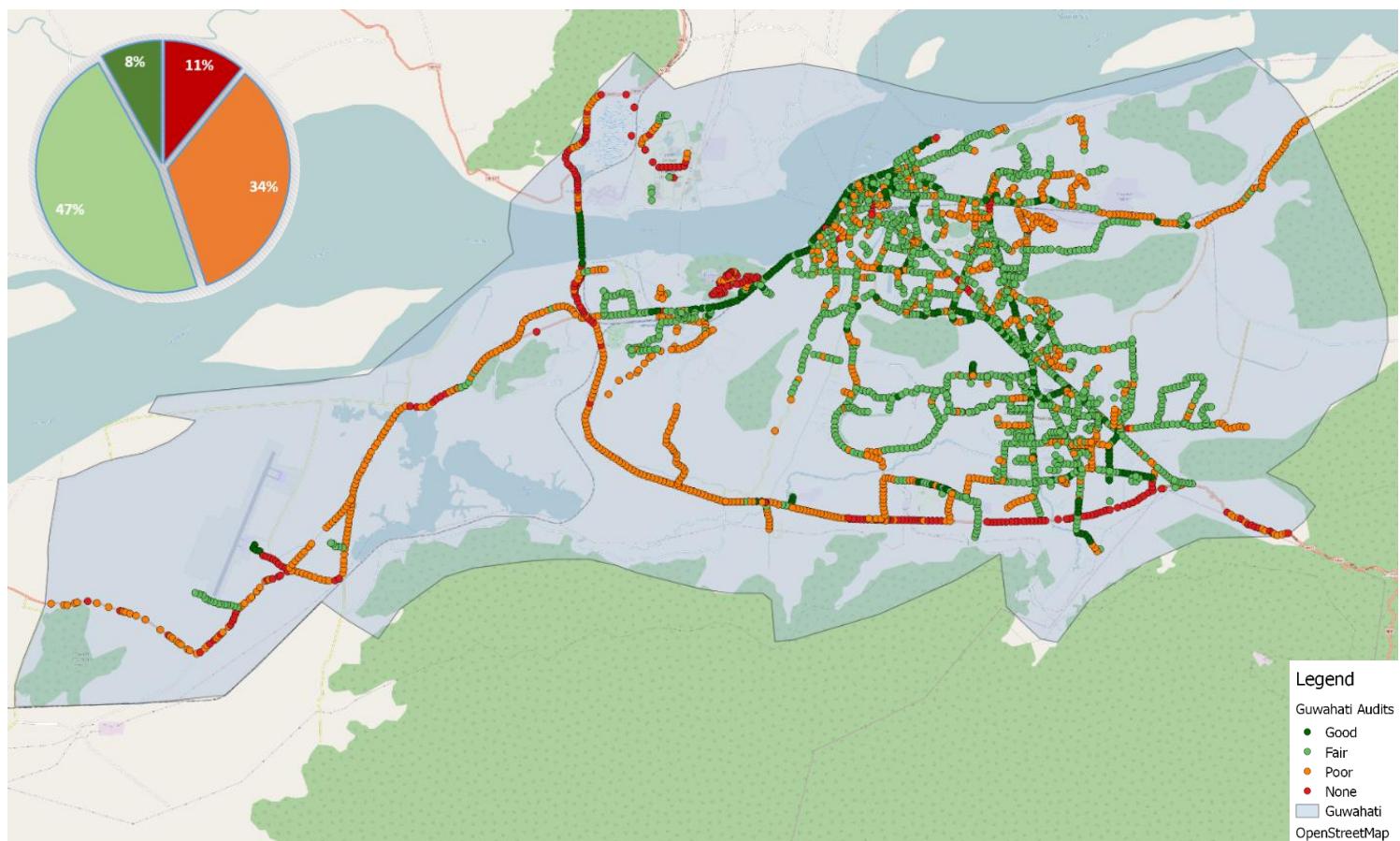
Walk path in the city has been rated 1.5/3 i.e. Average. Though most of the city has a fair availability of walk path, the condition of same is not good. At some audit points along the major roads as seen in Pic 1, kaccha or unmade pavement exists. The existing kaccha pavement should be paved and maintained to ensure smooth movement for the pedestrians. To prevent vehicles from accessing the footpath, the footpath should be raised at a level from the road. At points as seen in Pic 2, wherever there is no provision of walkpath for the pedestrians, a proper footpath should be constructed. The footpath should be clear of any obstruction i.e. signage, lamp posts etc.



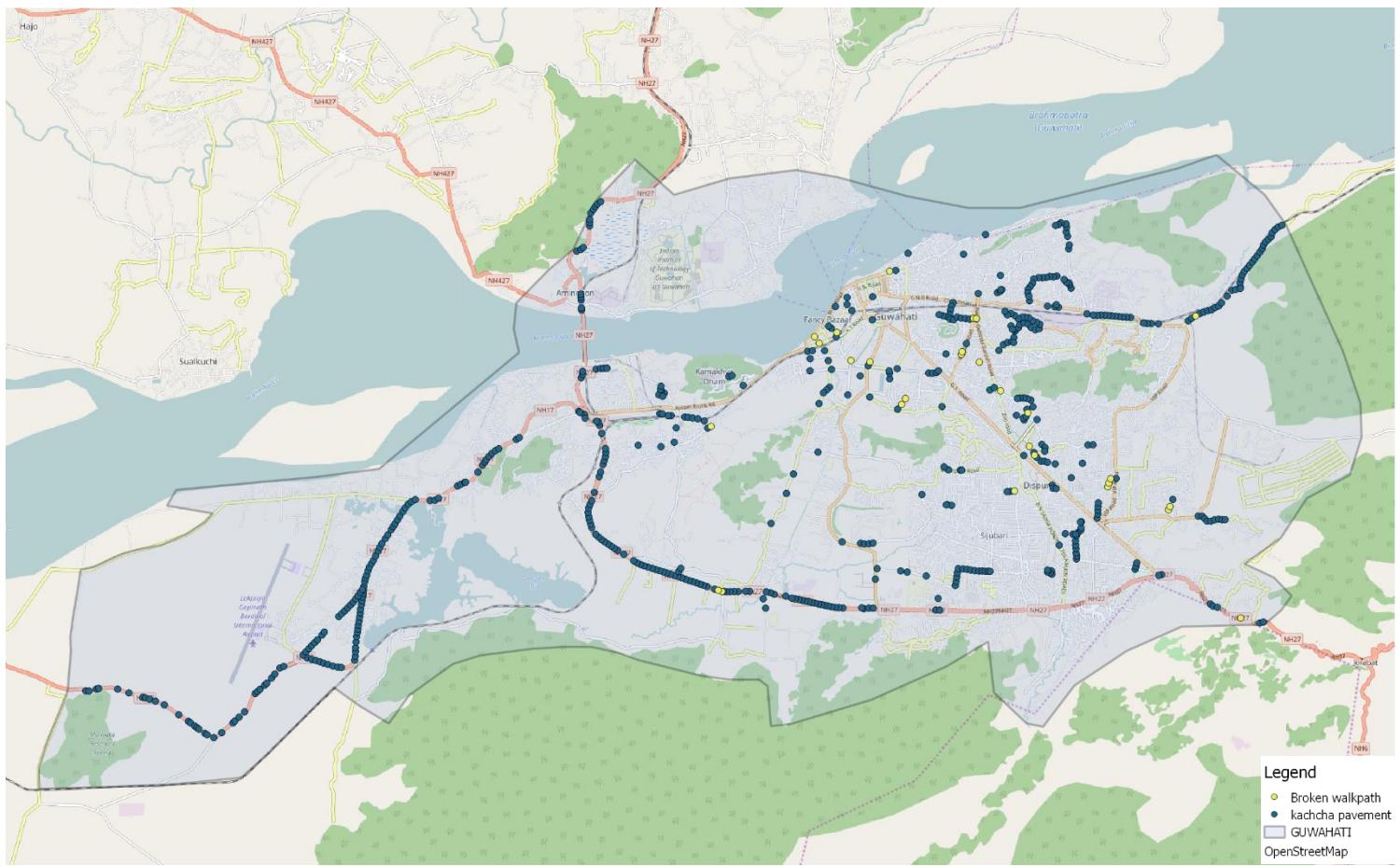
Some stretches have kaccha or unmade pavement



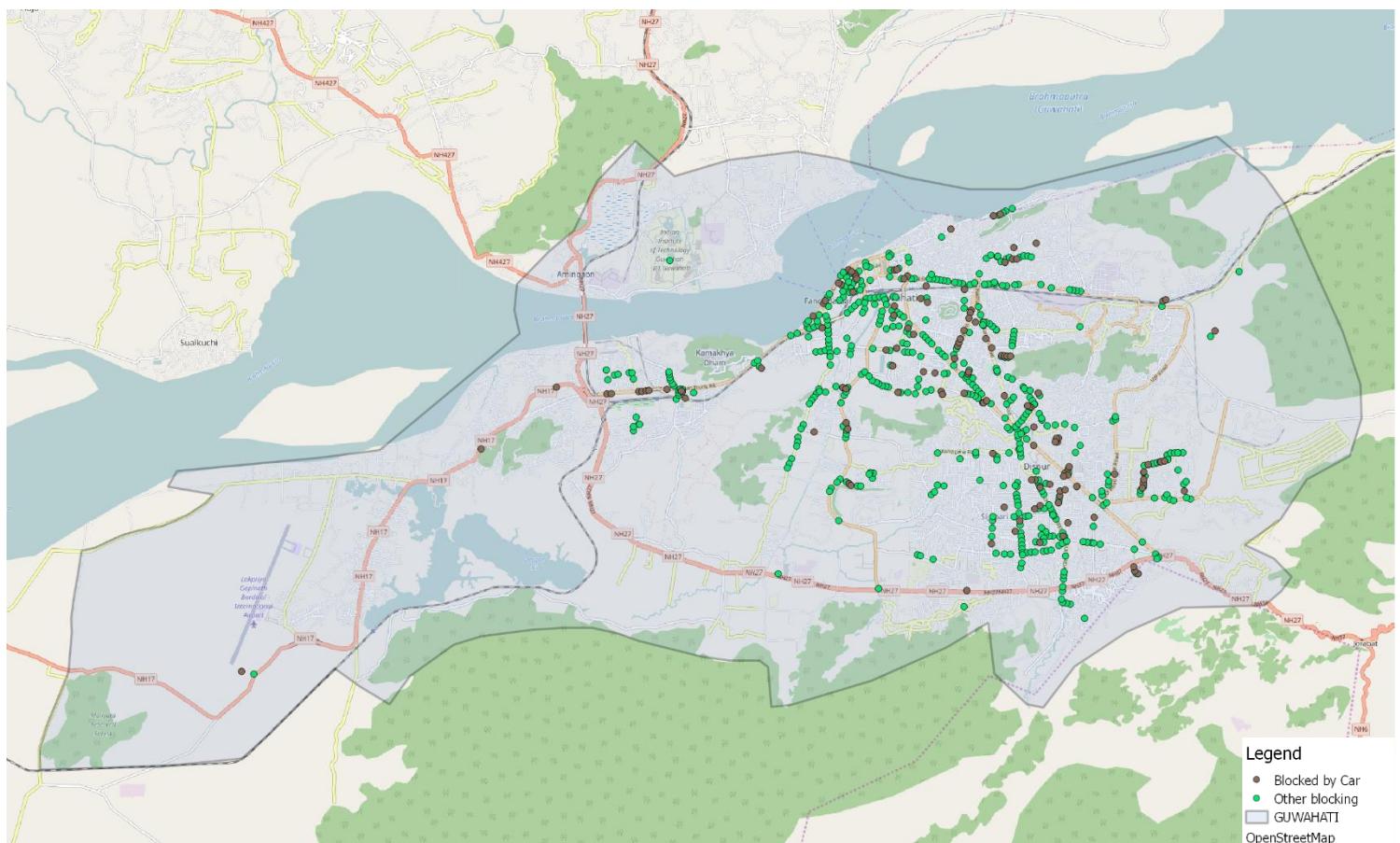
The stretch above has no provision of walk path



Map indicating Walkpath Rating



Map indicating points with broken or unpaved footpath



Map indicating points at which footpath is blocked by cars or others (Signage, light pole etc.)

Visibility

1.2 / 3

Visibility in the city has been rated 1.2/3 i.e. Below Average. As seen in Pic 1, most of the audit points have high boundary walls resulting in poor visibility. The concept of "eyes on street" seems to be missing with boundary walls creating a physical division between the pedestrians and the residents behind the walls. To improve visibility, the height of solid part of the boundary wall should be reduced. The map 1 on the following page identifies locations where there is no visibility or security but are used by people at night.

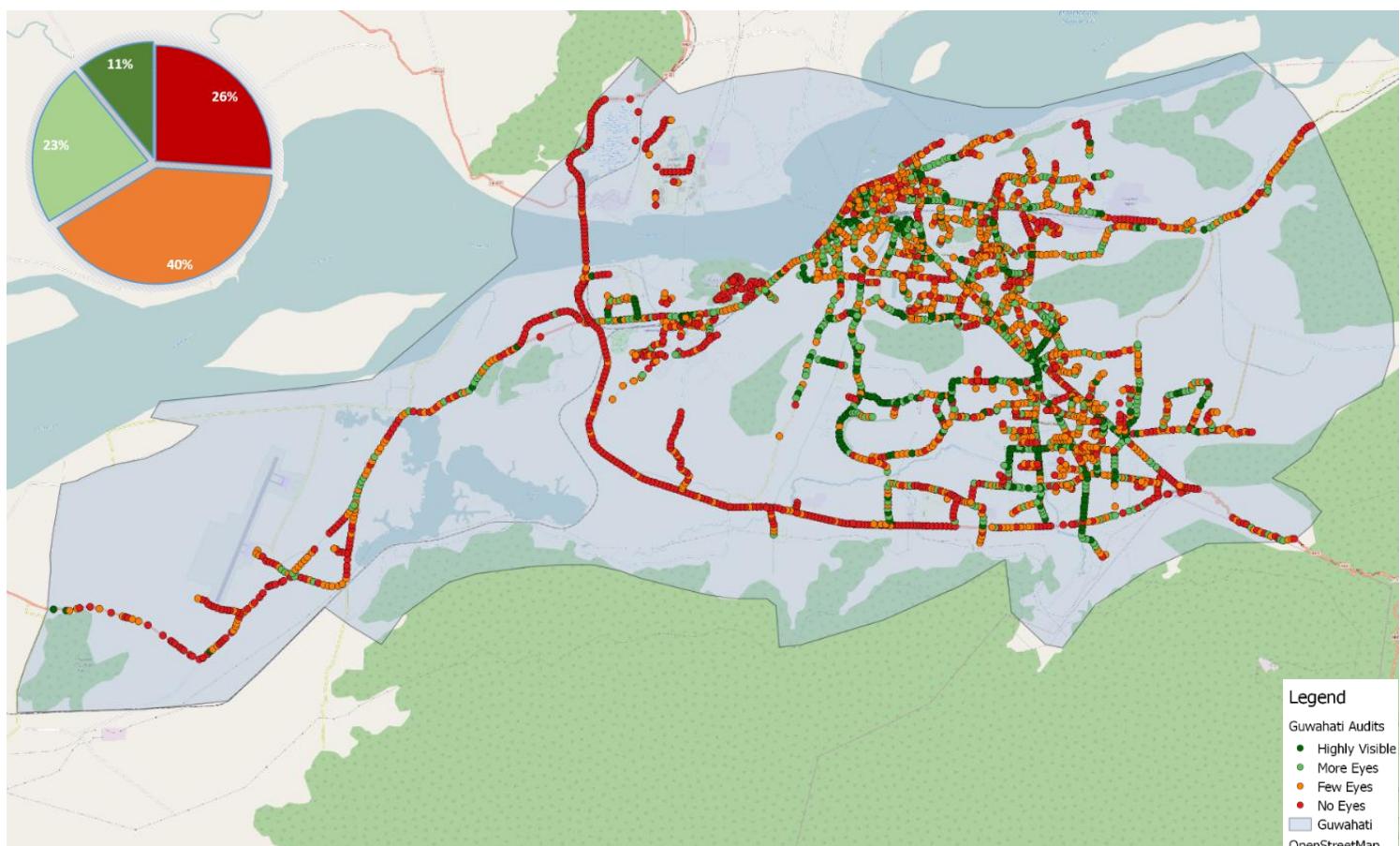
At some points, street side vendors and hawkers were found acting as natural surveillance (Pic 2). Such points with high crowd can be seen in the map 2 on the following page. At places where there are street vendors present, designated spaces should be made for them, clear of the pedestrians' path.

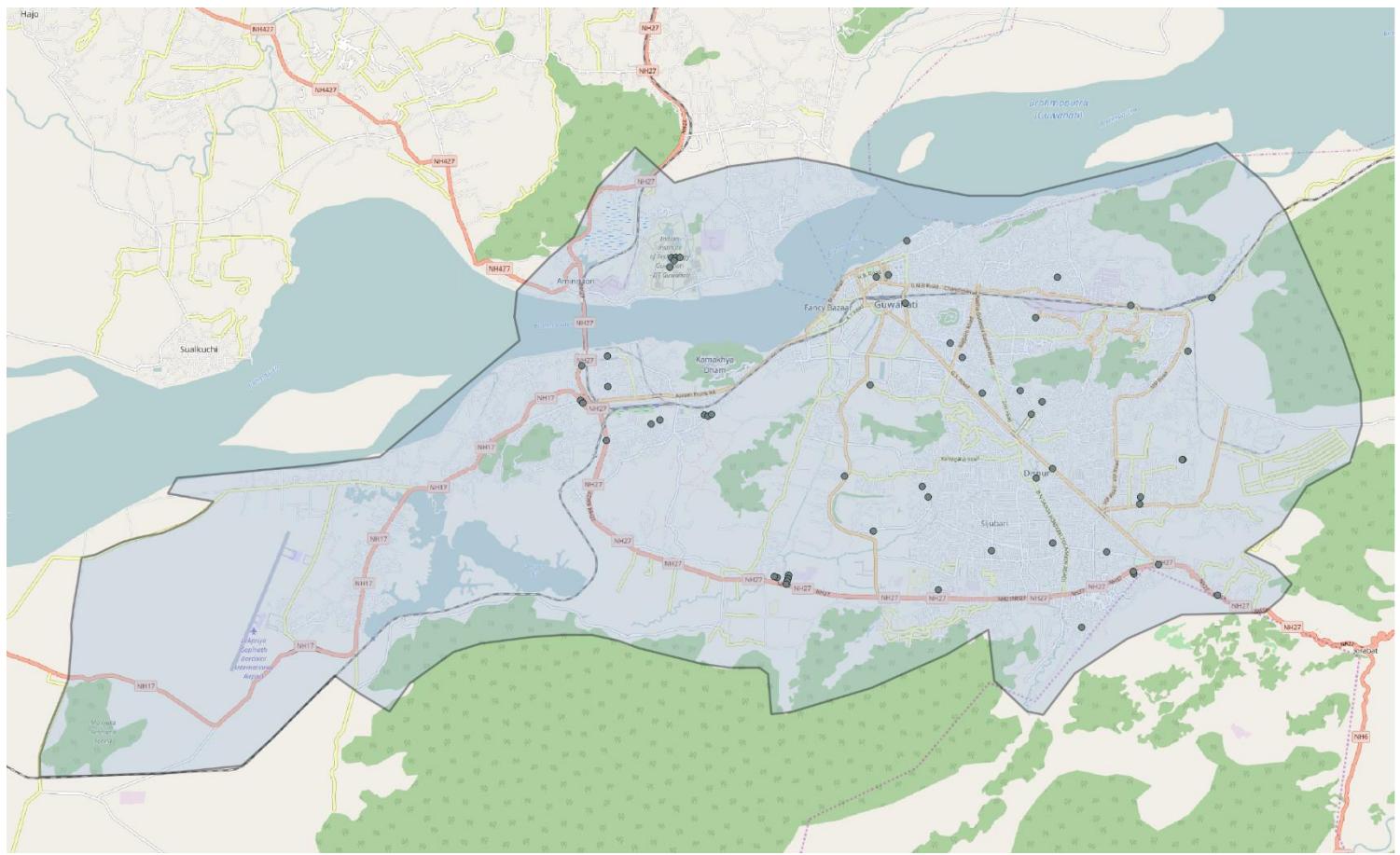


Boundary wall on both sides, leading to poor visibility

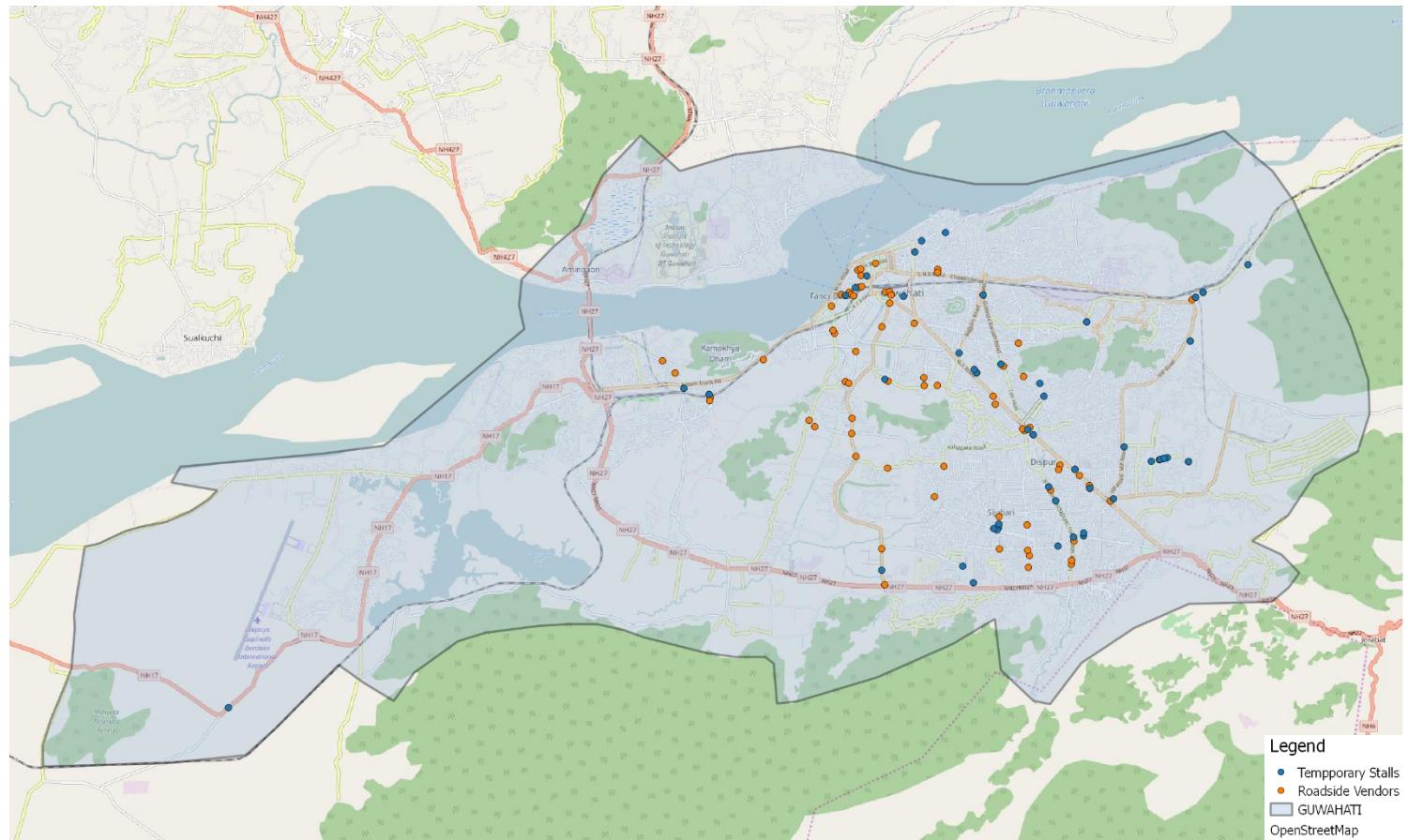


Street Vendors and hawkers results in some visibility





Map indicating points with high crowd but no visibility and security

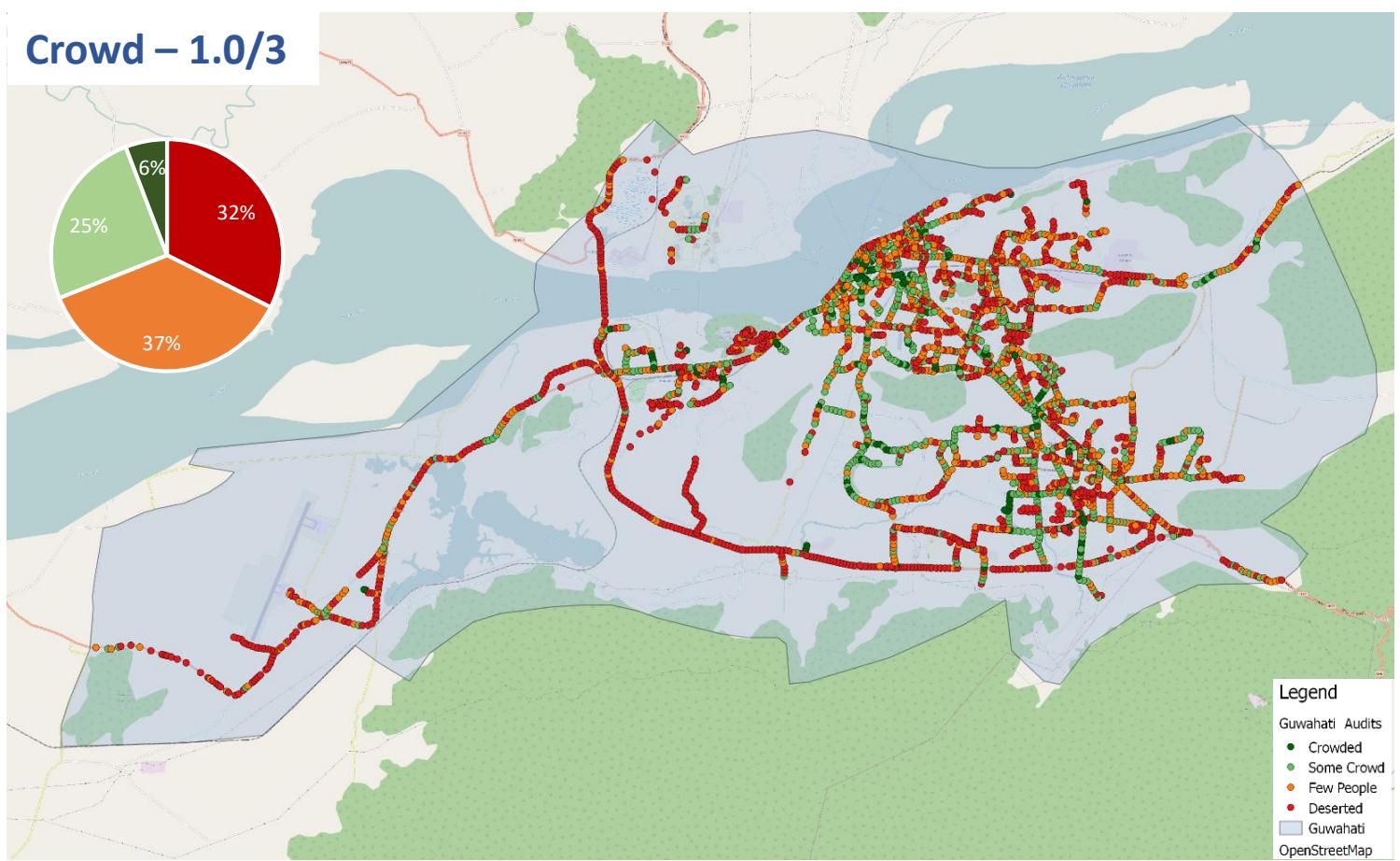


Map indicating points with high crowd with temporary stalls or road side vendors

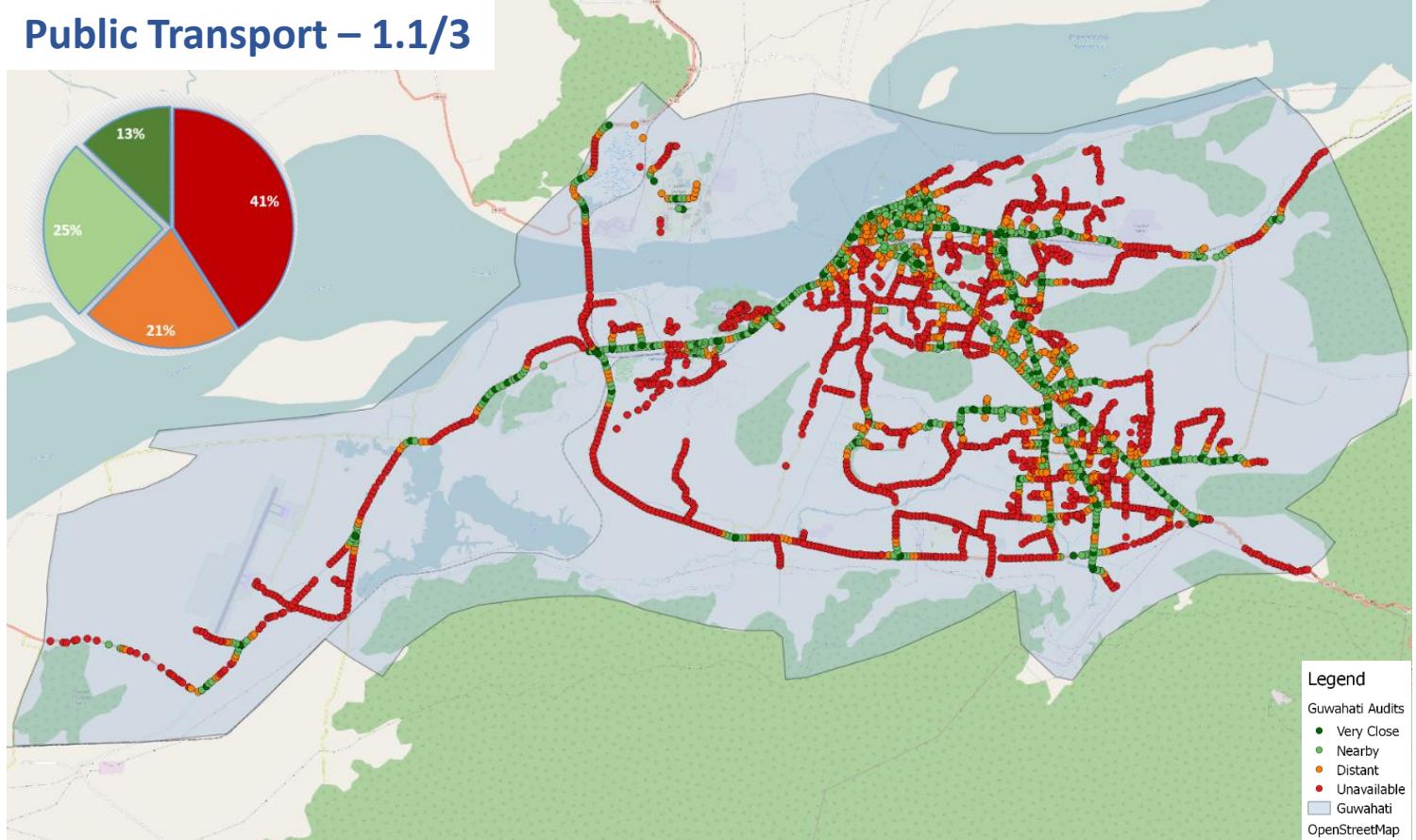
Legend

- Temporary Stalls
- Roadside Vendors
- GUWAHATI
- OpenStreetMap

Crowd – 1.0/3

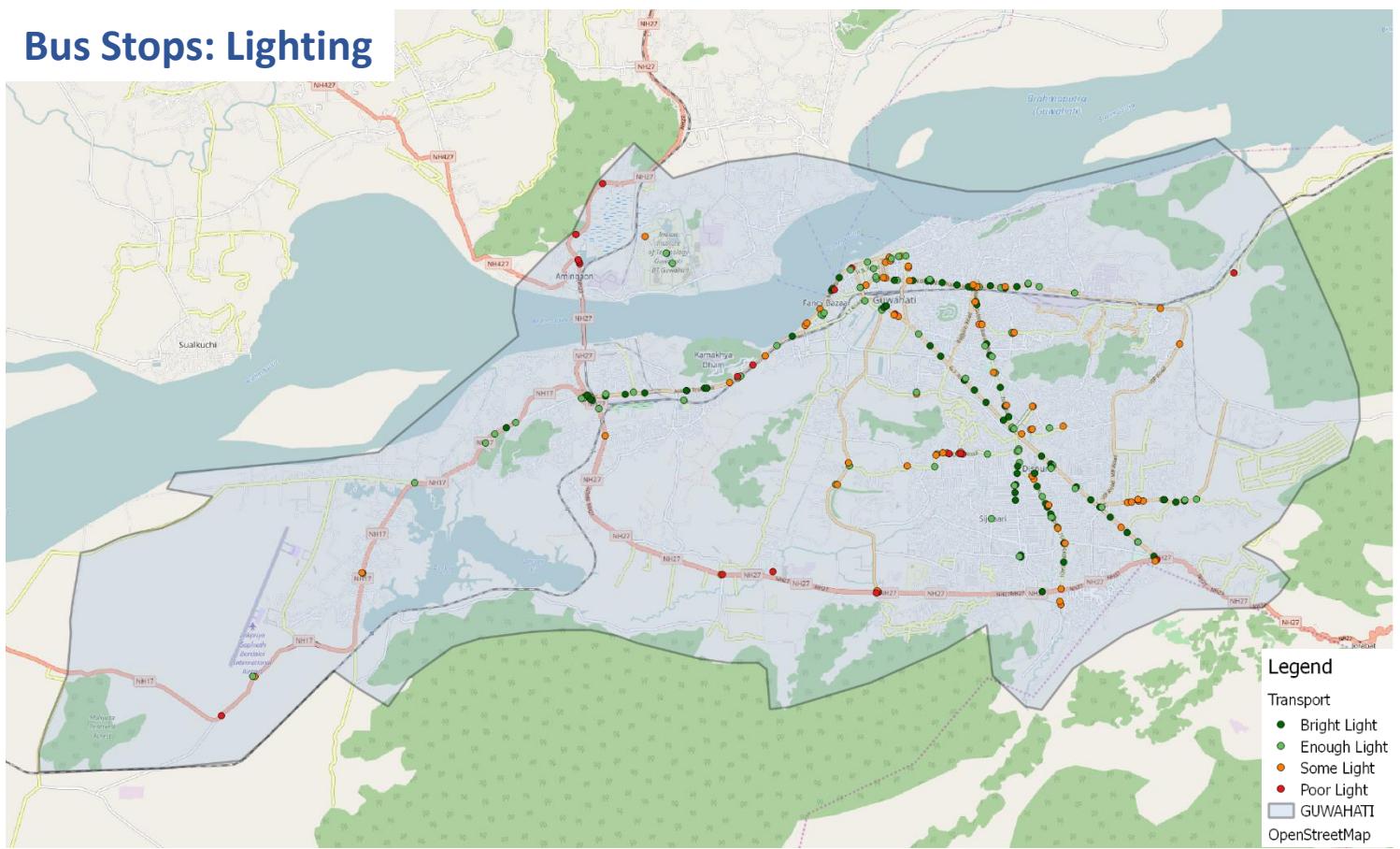


Public Transport – 1.1/3



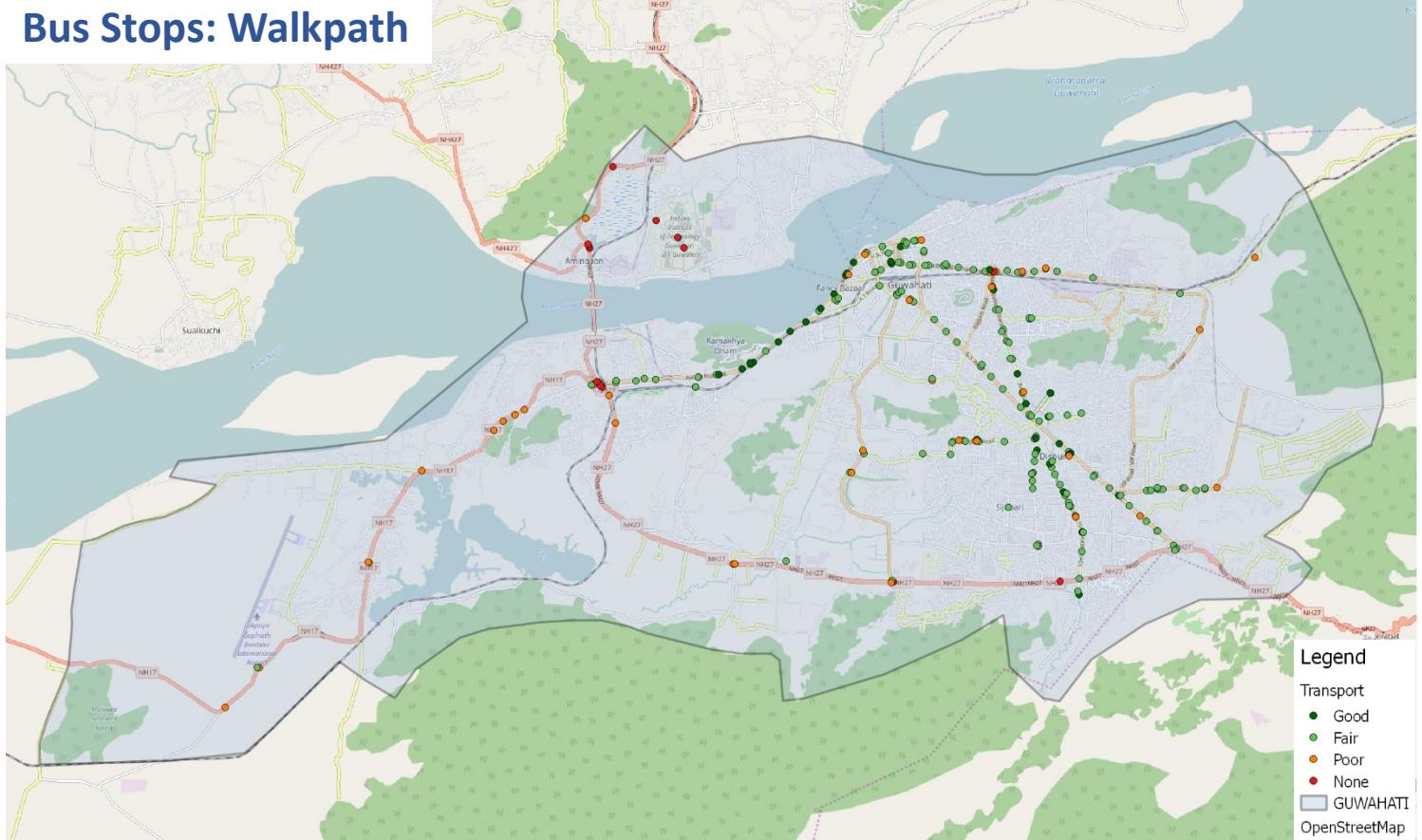
Map indicating Public Transport Rating

Bus Stops: Lighting



Map indicating Lighting Rating around the bus stops

Bus Stops: Walkpath



Map indicating Walkpath Rating around the bus stops



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