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Supporting Safer Cities

ENHANCING LAST MILE CONNECTIVITY

a safety analysis of the Khan Market Metro Station

This Report has been prepared as part of the Project being undertaken with NDMC to Enhance the Last Mile Connectivity along the metro stations within its jurisdiction. The safety audits were conducted by Smt. Bhagwati Bisht, architect from NDMC along with Safetipin team.

NDMC
नई दिल्ली नगरपालिका परिषद्

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Khan Market

SAFETY SCORE: 3.8/5

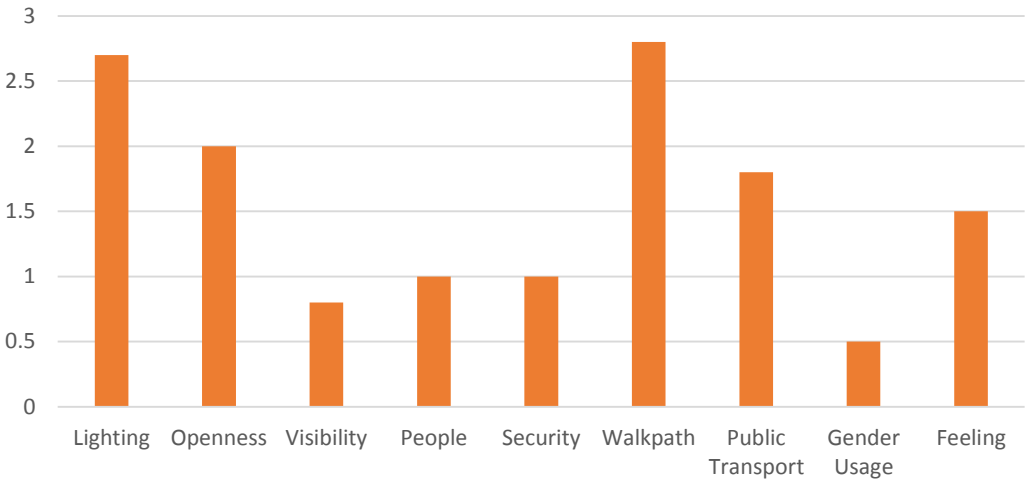
SafetiPin, is a map-based mobile phone and online application, which works to make communities and cities safer by providing safety-related information collected by users and by trained auditors. At the core of the app is the Women's Safety Audit. A Women's Safety Audit (WSA) is a participatory tool for collecting and assessing information about perceptions of urban 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.

The audits were conducted by an architect from NDMC along with Safetipin team. The assessment was done post sunset till 9pm.

Khan Market is an underground metro station on Delhi Metro's Violet line. The metro station is situated near one of the costliest and busiest retail markets i.e. Khan Market. It is surrounded by hotels and residences.

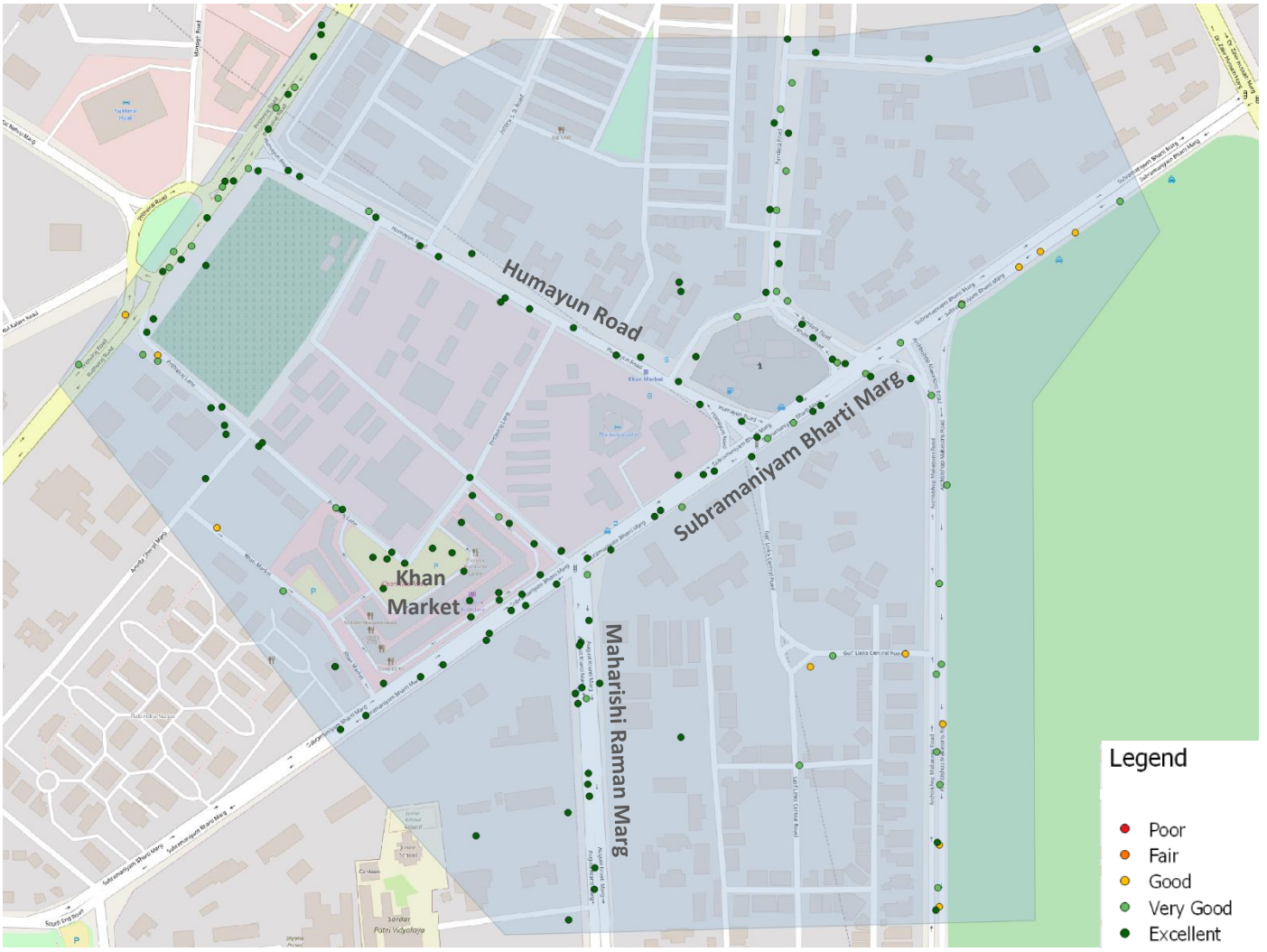
An area of approximately 500m radius around the metro station has been studied and 164 audit pins have been generated. The area outside the metro entry/exit and the bus stop were studied.

Average Audit Parameters (on a scale of 3)



Safety Audits indicate that the area around the metro station is safe. At a few spots near Delhi Golf club, the safety score was found to be lower than the rest of the audit area. The parameter of Security has been rated Below Average. As most of the buildings have high boundary walls, Visibility has been rated below average as well.

Public Transport in this area has been rated Average. The parameter of the People and Gender have been rated Below Average and Poor respectively. The parameter of Lighting and Walkpath has been rated Good. Overall, auditors have rated the Feeling in this area as Average.

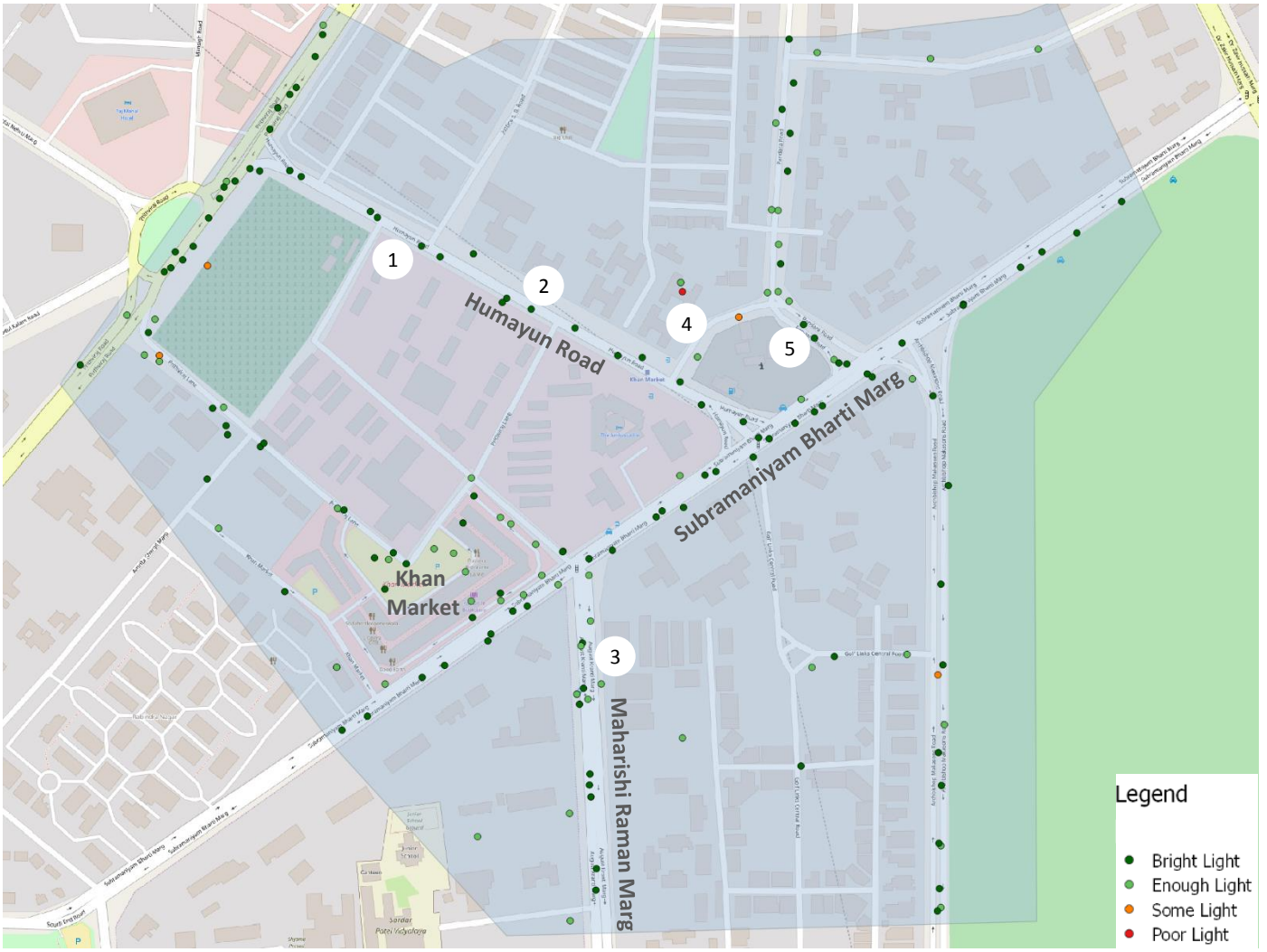


Map indicating Safety Score

Lighting

Lighting Parameter has been rated 2.7/3 i.e. Good. Streetlights are installed on both sides of the main road throughout the audit area. Streetlights are installed on the edge of the footpath facing the carriageway resulting in the brightly lit road but dim lit footpath. Additional streetlights need to be installed to provide pedestrian scale lighting on the footpath.

Also, at some points streetlights are hidden behind trees' foliage. They need to be pruned regularly.
On Maharishi Raman Marg, the spread of installed LED streetlights is low. The Lux level has to be increased for the same so as to provide proper illumination on the road.



Lighting Rating

1

2

3

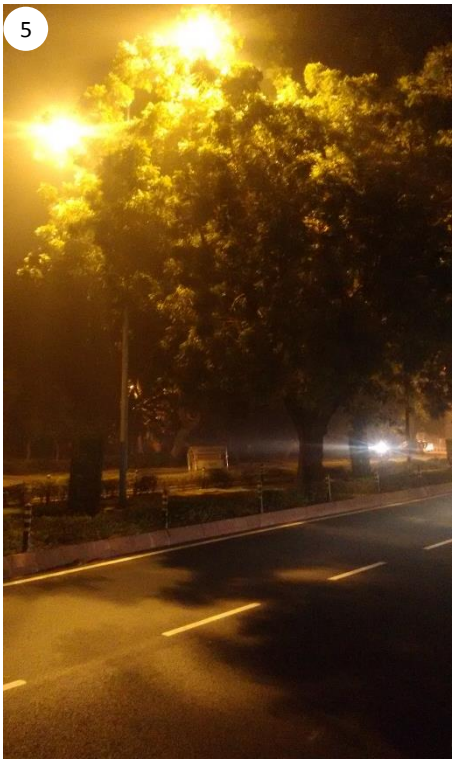
As seen in pic 1 and 2, the streetlights are installed facing the vehicular carriageway resulting in brightly lit road and footpath. However, at some points due to shadows cast by the trees on the footpath, it results in poorly lit spaces along the boundary wall. Seen in pic 2, while the illumination on the footpath is adequate, the green belt equipped with seating along the boundary wall is poorly lit. Pedestrian scale streetlights need to be installed along the boundary wall to ensure uniform illumination.

On Maharishi Raman Marg as seen in pic 3, the spread of LED lights is inadequate. As a result, both road and footpath are poorly lit. In order to improve lighting, the Lux level of the streetlights facing the main road should be increased. Additionally, pedestrian scale lighting should be installed facing the footpath.

4

Along neighbourhood roads, streetlights are present on one side of the road (pic4). They are not adequate as the other side of the road is poorly lit. In such lanes, streetlights should be installed alternately on both sides of the road along the boundary wall.

5

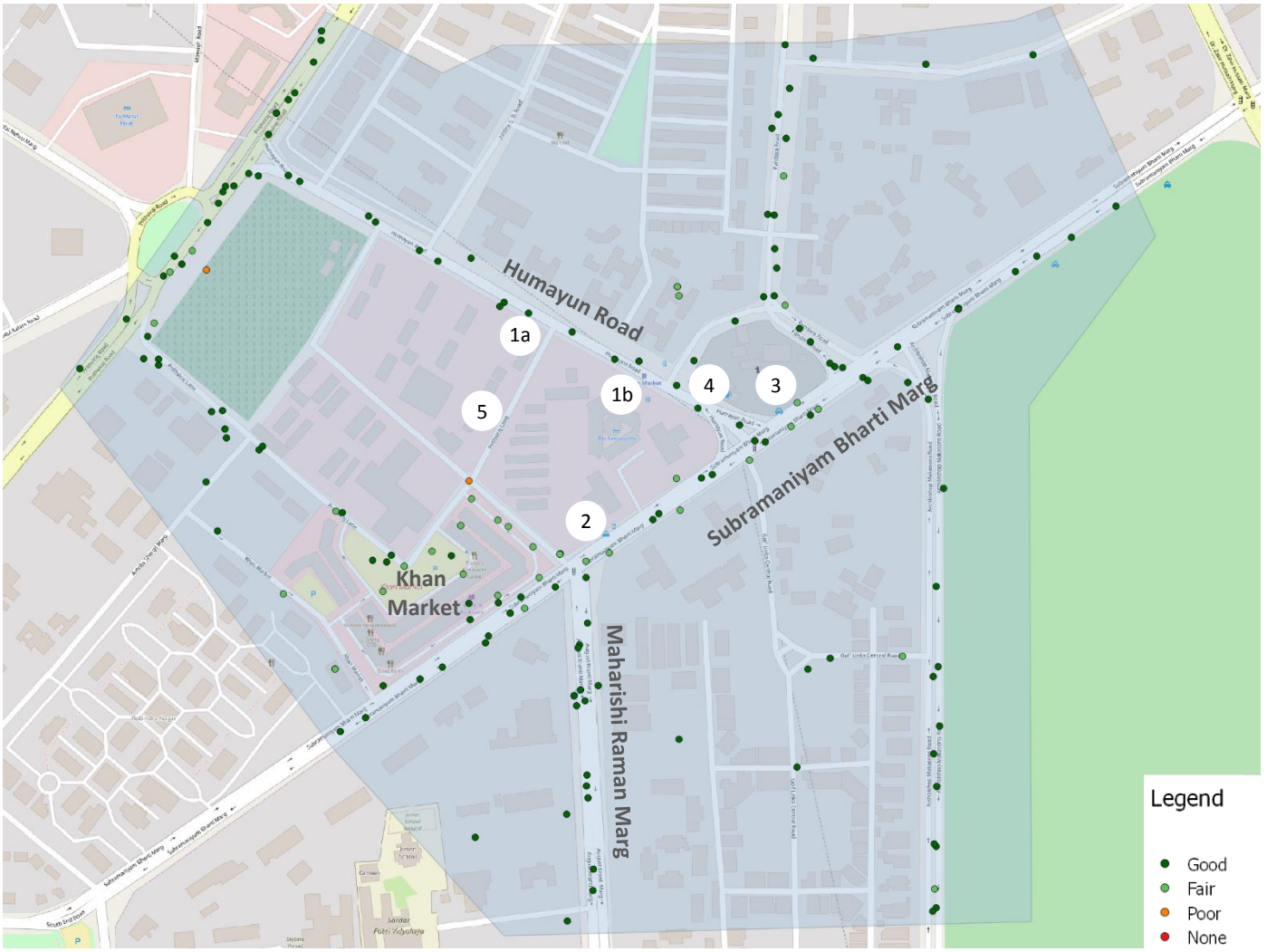


Regular pruning of trees should be carried out to ensure uniform illumination.

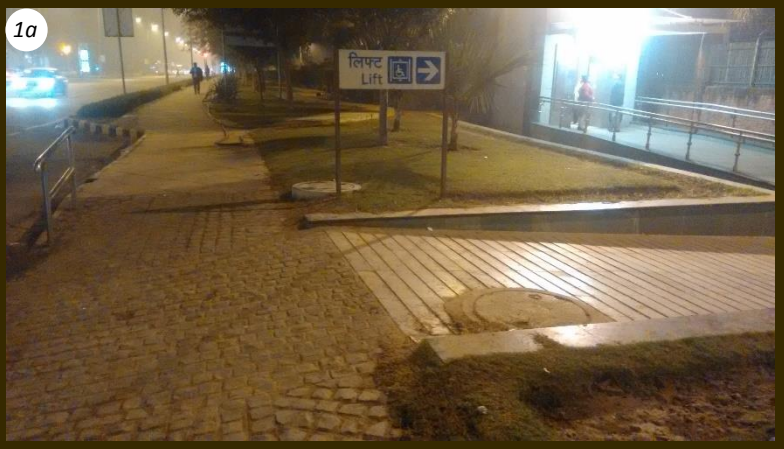
Walkpath

Walkpath Parameter has been rated 2.8/3 i.e. Good. The footpath is well maintained throughout the audit area. However, various types of obstructions were found at some audit points. Streetlights, sign boards, electrical units set up on the footpath obstructs the movement of the pedestrians. The ramps and table top crossing provided at the junctions are also obstructed due to improperly placed sign boards.

The sign boards and streetlights should be placed along the edge of the footpath, thus ensuring smooth movement for the pedestrians including the physically challenged. Another issue found was absence of tactile paving for the visually challenged. Also, the tactile paving provided at the bus stop ends abruptly. The tactile paving should be provided throughout the footpath.



Walkpath Rating



1a

2


3

4


5


1b

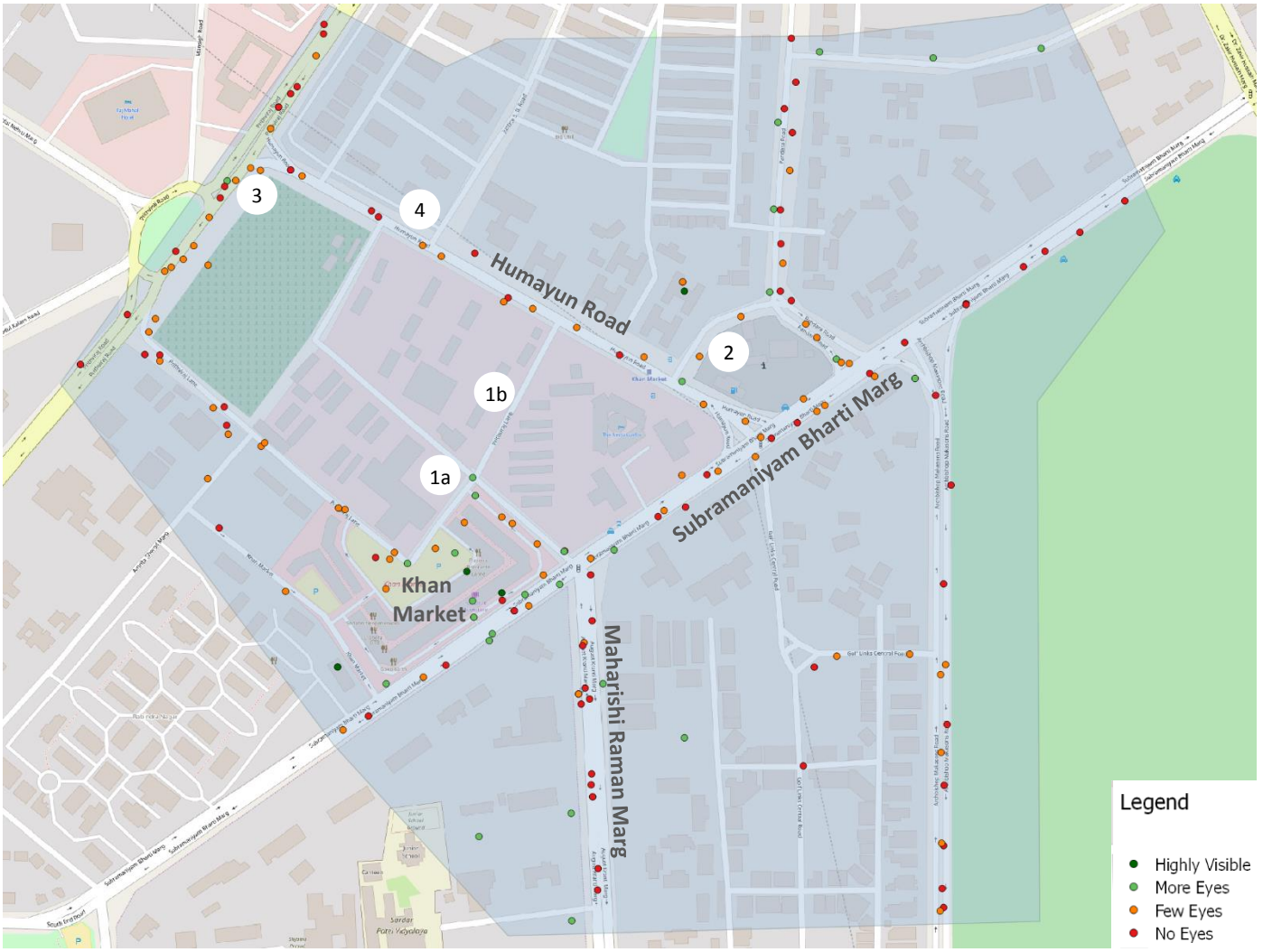
Though the footpath is well maintained throughout the audit area, the ramp and bollards provided for the physically challenged are not easily accessible. Handrails should be provided at the edge of the ramp (pic 1a). Also as seen in pic 1b, the ramp provided is not proper and its edges can prove risky for people on wheelchair. The ramp should be clear of any obstruction and should have a gradual slope. The spacing between the bollards should be such that it is accessible by the physically challenged. Additionally, tactile paving should be provided throughout on the footpath for the visually challenged.

As seen in pic 2 and 3, vehicles have obstructed the walkpath. Seen in pic 2, a taxi stand has been set up on the footpath and has marked its edges using shrubs. To reclaim the footpath for the pedestrians, the space currently used for parking should be cleared for the pedestrians. Separate space should be provided for vehicular parking, clear of the footpath. Similarly, as seen in pic 3 parking should be disallowed on the walkpath and a proper footpath should be constructed, raised at a level, clear of any obstruction. Various obstructions found in the audit area include electrical unit, banners, signage etc. Seen in pic 4 and 5, the sign board and electrical units should be placed along the edge of the footpath, clear of the pedestrian path.

Visibility

Visibility Parameter has been rated 0.8/3 i.e. Below Average. This is due to high boundary walls of the buildings. The height of the solid part of the boundary wall should be maintained at 1 m and the rest of the height could be achieved using grills.

Few kiosks and street vendors present near the bus stop and market respectively, provide some visibility. Designated hawker zones should be set up, clear of the footpath. They should be brightly lit and equipped with street furniture.



Visibility Rating

1a

1b

2

3

4

As seen in Pic 1a and 1b, street vendors present near Khan Market occupy the walkpath. A designated space should be created for these hawkers, clear of the footpath. In Pic 1a, the hawkers can be shifted to one side, leaving the footpath on the other side free for the commuters.

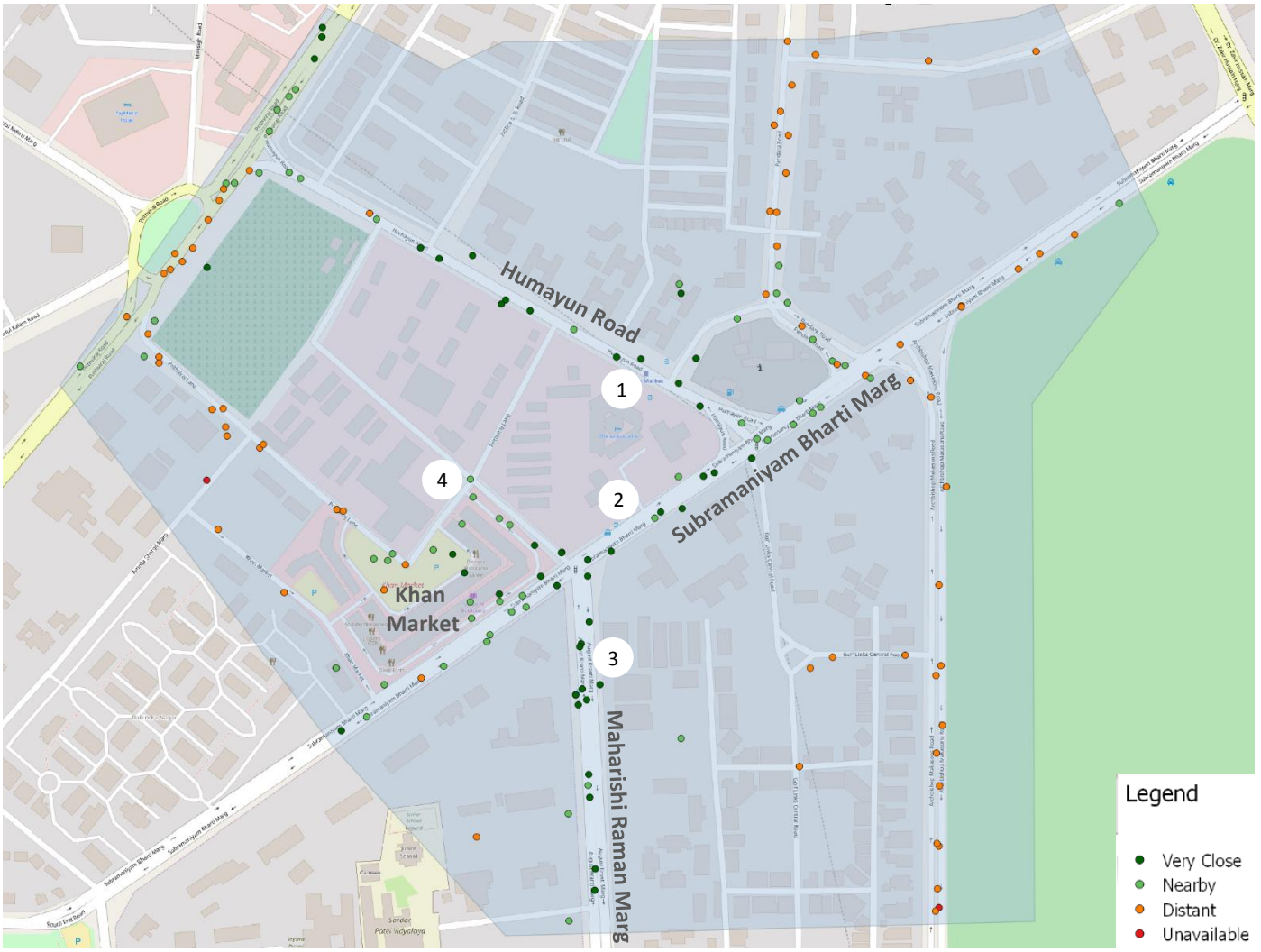
Inactive edges and high boundary walls as seen in pic 2 and 3, results in poor visibility on the footpath. The height of the opaque part of the boundary wall should be maintained at 1m. The rest of the height can be attained using grills. The pavement as seen in pic 3 is wide enough to accommodate street furniture and street vendors. These additions can help in making this area active.

In residential neighbourhood as seen in pic 4, the solid part of the boundary wall is low and the rest of the wall is made opaque using wooden fence. To improve visibility, this wooden fence should be taken down and can be replaced with grills. Also, the edge of the service lane is defined by a low height brick wall. This wall acts as a unnecessary barrier between the service lane and the footpath. The wall should be taken down to provide some visibility and smooth movement for the pedestrians.

Public Transport

Public Transport Parameter has been rated 1.8/3 i.e. Average. Designated space for autos have been provided near the entry/exit of the metro station. However, similar provision is not provided near the bus stops. Designated stands for autos are needed to be created near the bus stops as well.

Additional para – transit stands should be provided in and around residential neighbourhoods and the market. These stands should be equipped with proper shelter and street furniture for the drivers and commuters.



Public Transport Rating

1

2

3

4

As seen in pic 1, there is a designated para transit stand outside the metro station. People are seen squatting on the pavement as existing seating furniture is not adequate. Additional street furniture should be provided for the commuters.

As seen in pic 2, bus stop is identified through the sign board on the footpath and it has no shelter for people. The space left for the bus is occupied by vehicles. A bus shelter should be provided and vehicular parking should be disallowed on the main carriageway.

To improve last mile connectivity, para transit stands should be set up near the bus stops (Pic 3). Additionally, they should be set up in residential neighbourhoods and the market. Seen in Pic 4, an auto stand should be set up near Khan Market. The stand should have parking space for auto/taxi and designated space for vendors, clear of the walkpath.

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