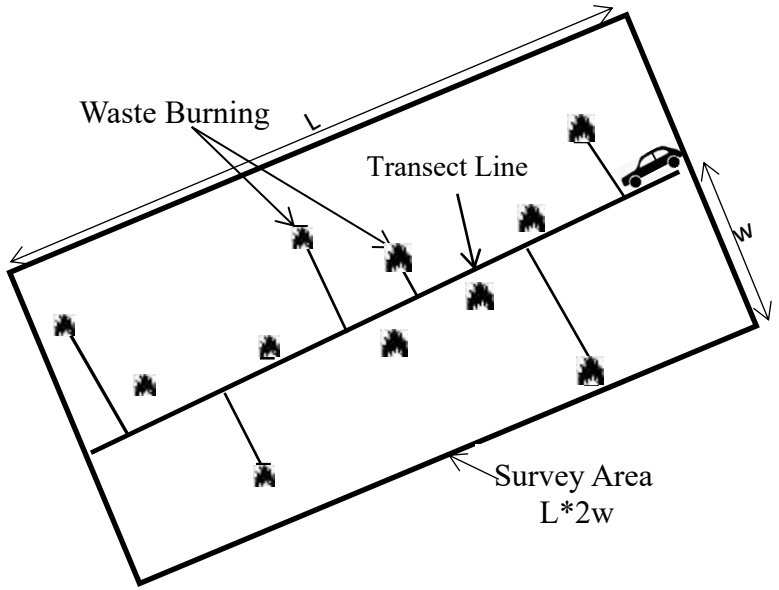
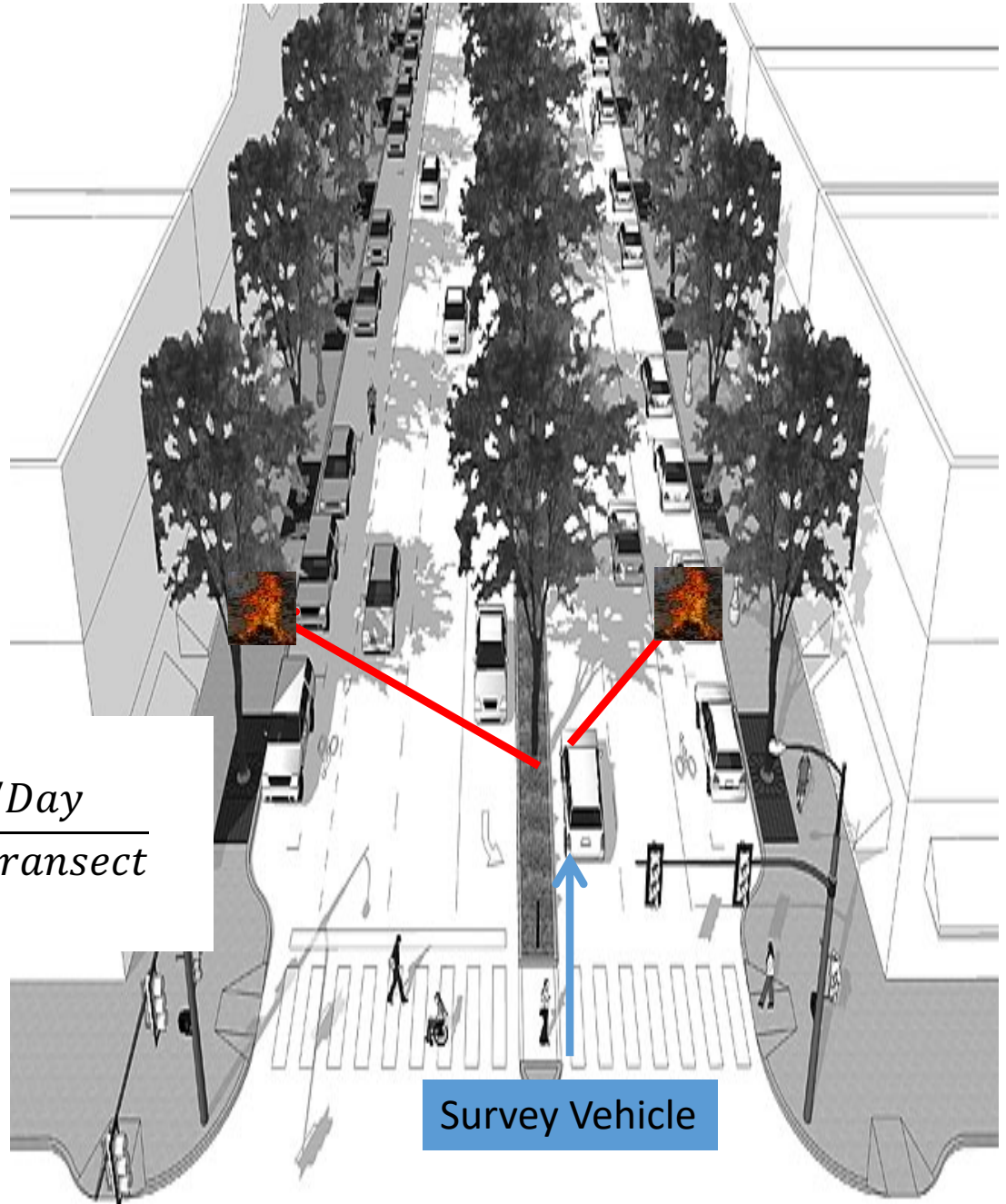
TRANSECT METHOD

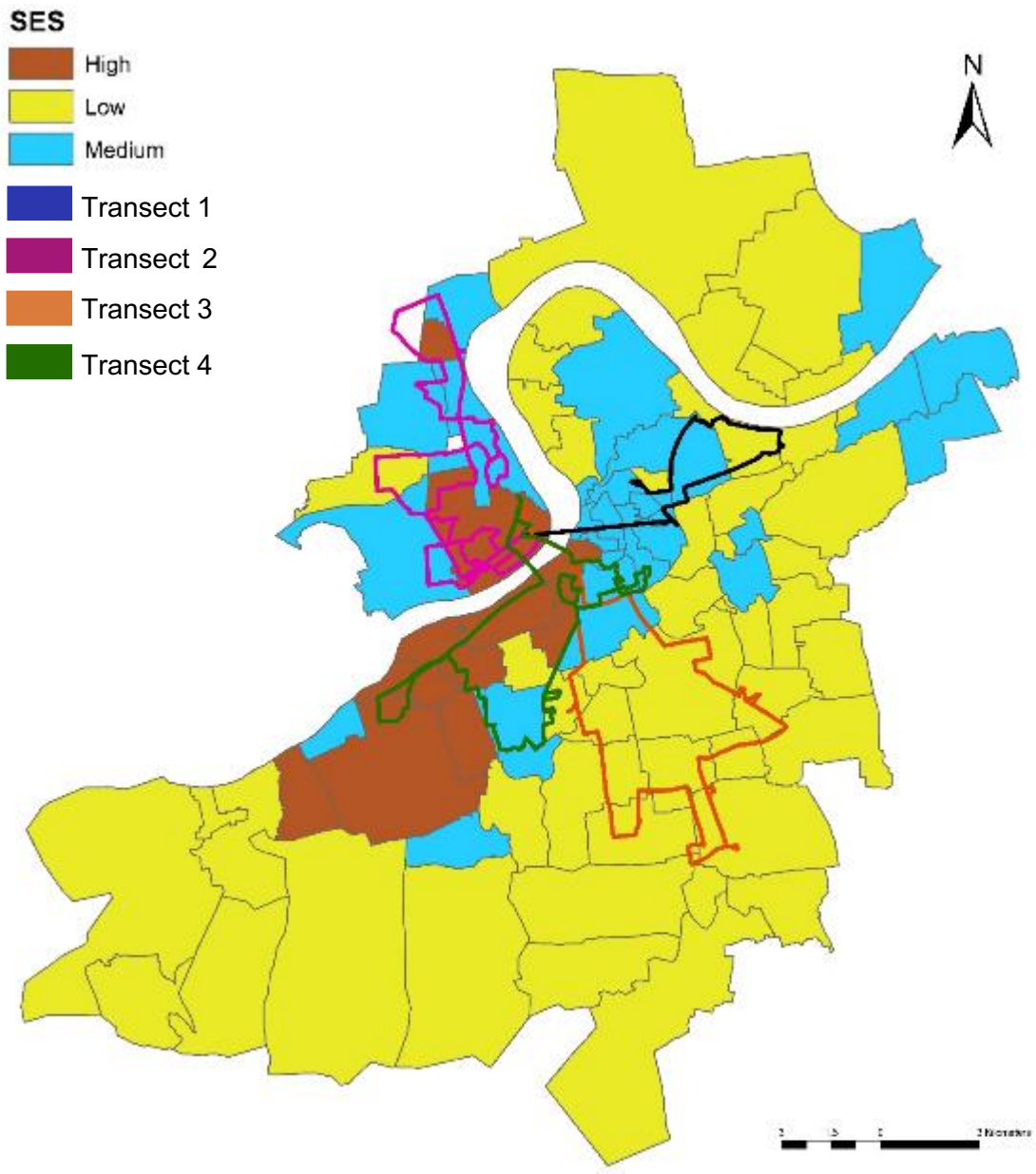




Spatial Frequency

$$= \frac{Observed\ burning\ incidents\ /Day}{Width\ of\ Transect * Length\ of\ Transect}$$

Different Socio Economic Status Neighborhood with Transect



Average Per Capita Municipal Solid Waste Burning in Different Socio Economic Status	
Socio Economic Status	**Average Per Capita Waste Burning (Kg)/Day**
High Income Group	0.002948
Middle Income Group	0.018939
Low Income Group	0.091777

Source: Primary Survey

Other Major Findings While Survey

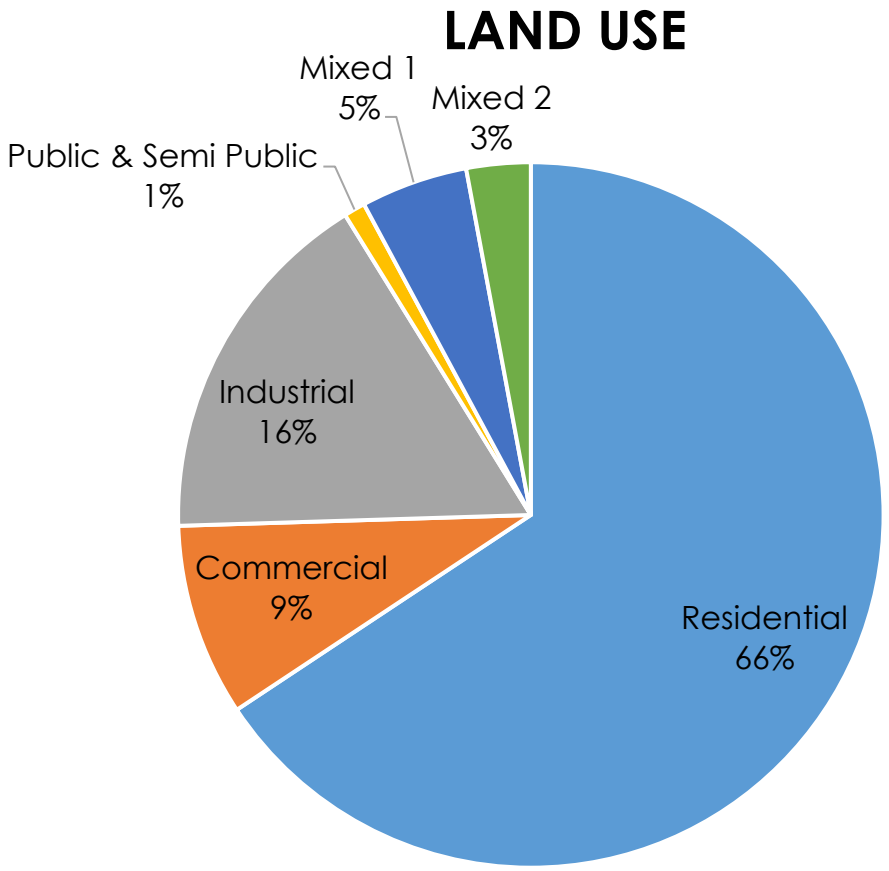


Chart Showing the Estimated Solid Waste Burning Incidences Found in different Land Use

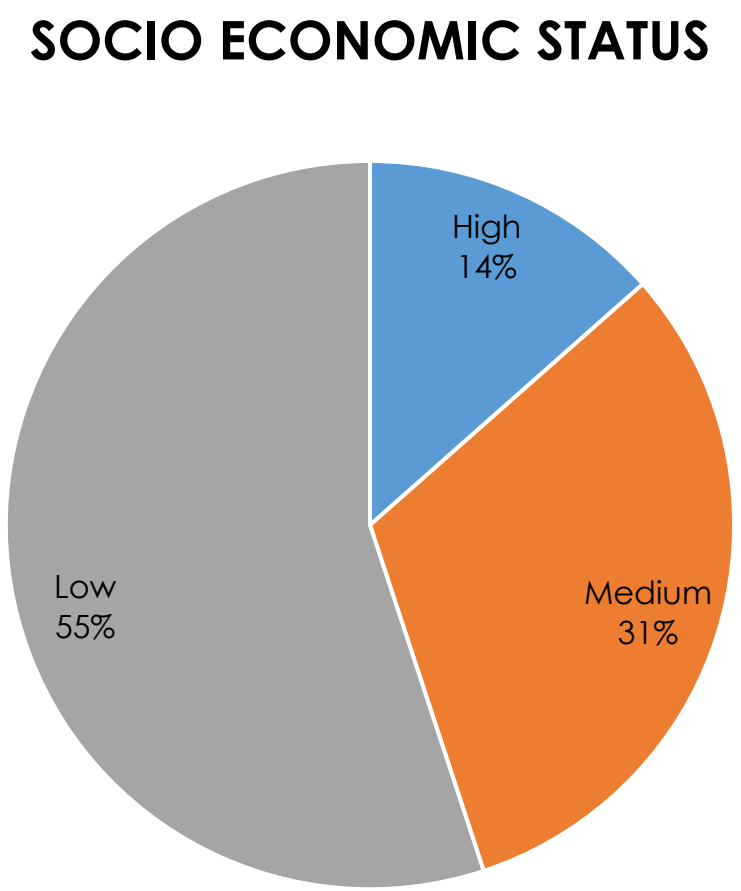
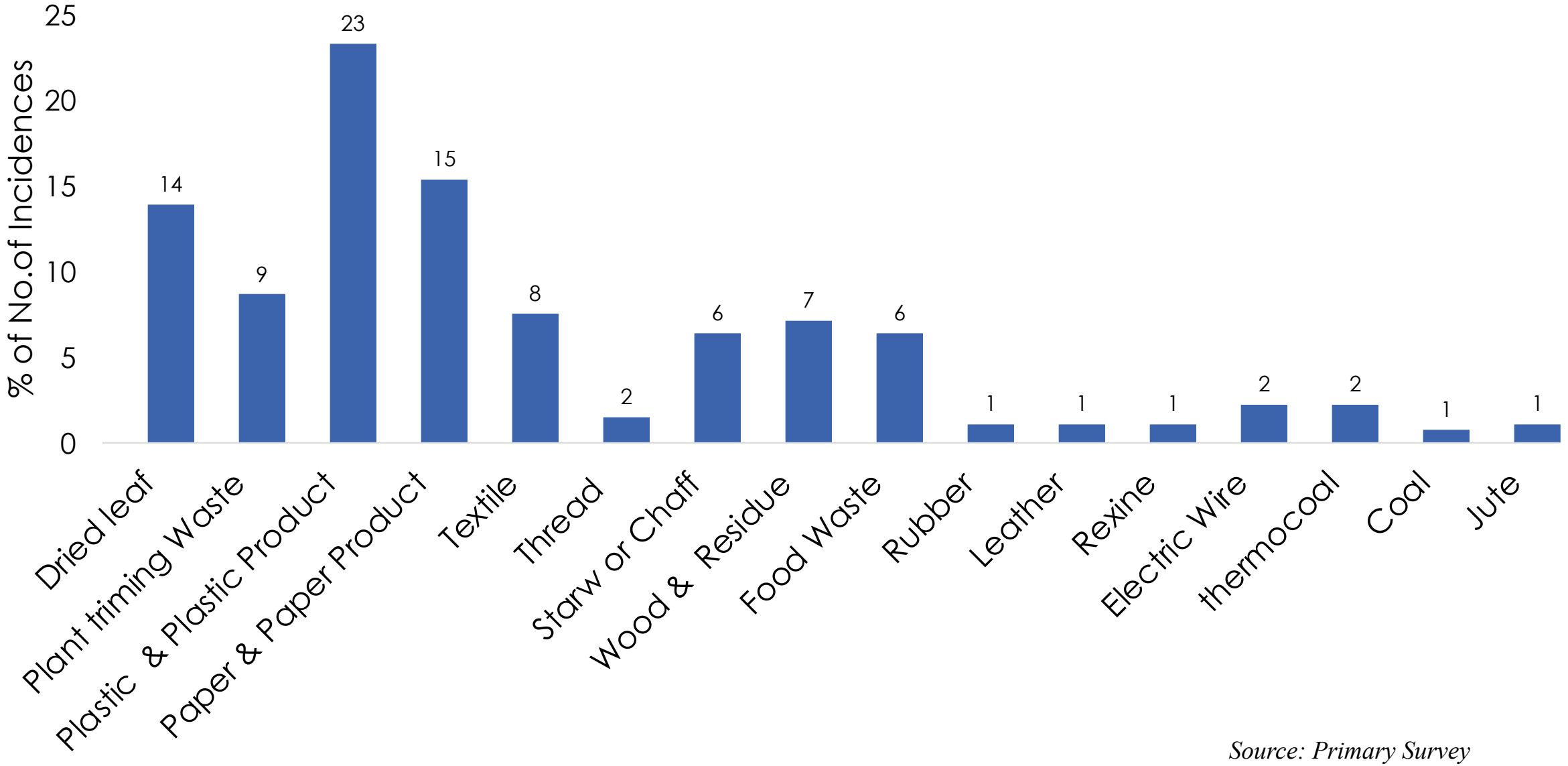


Chart Showing the Estimated Solid Waste Burning Incidences Found in different Socio Economic Status Neighborhood

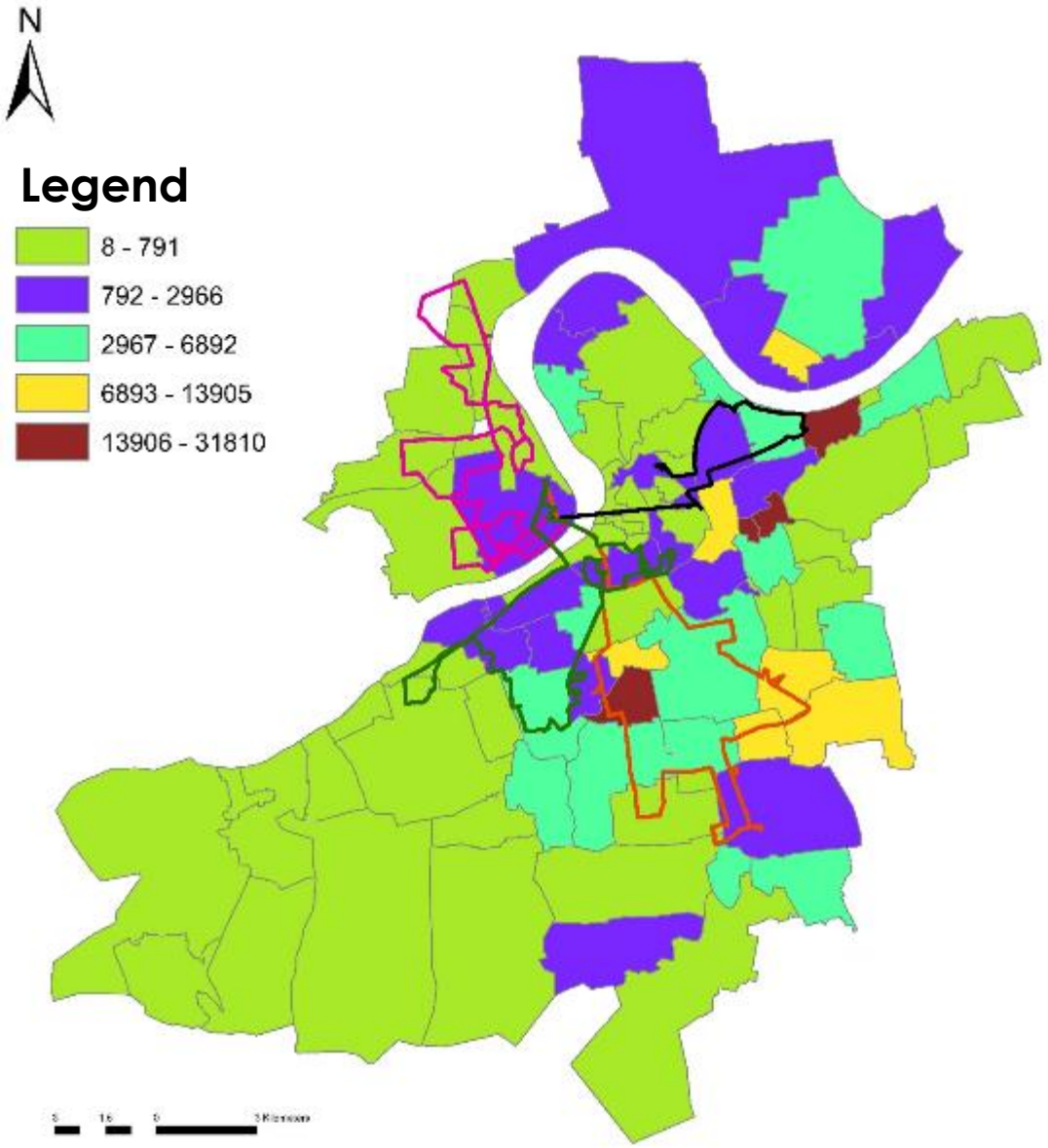
Source: Primary Survey

Composition of burnt MSW observed during transects in Surat



Source: Primary Survey

Waste Burning Finding & Results



Solid Waste Generation in the Surat City-2019

Sl.No.	Particulars	Population (Projected - 2019)	Solid Waste Generation (gm/capita/ day)	Solid Waste Generation (kg/day)
1	Fixed Population	6,352,273	500	3,176,136.8
2	Floating Population	-	150	-
				3,176.136 MT/day

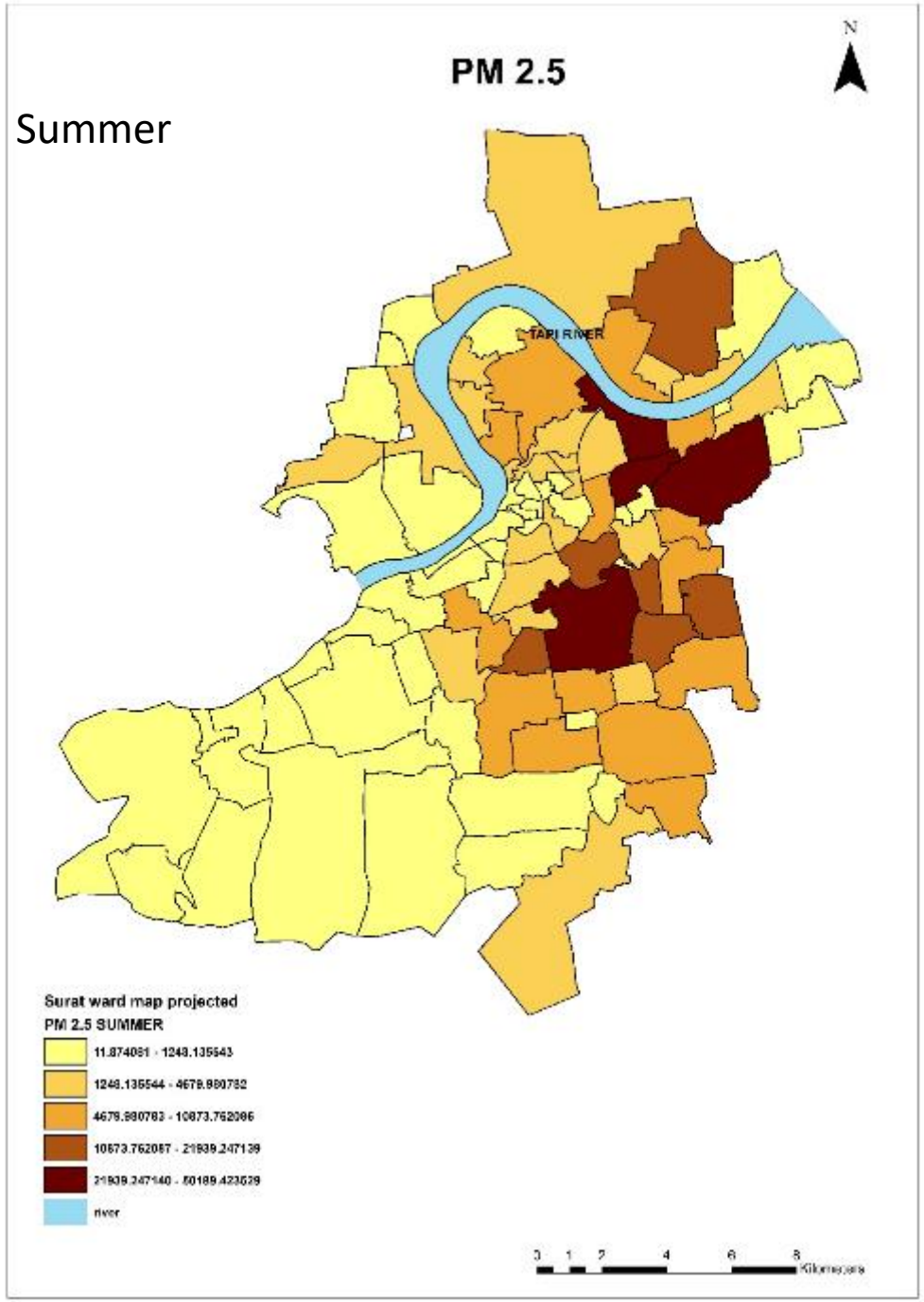
Source: Standard taken From Manual of Solid Waste CHEPPO 2016

Sl.No	Particular	Estimated Solid Waste Burning (Kg/Day)	Estimated Solid Waste Generation (kg/day)	% of Waste Burning
1	Surat City	2,73,594	31,76,136.8	
		273 MT/Day	3,176.136 MT/day	

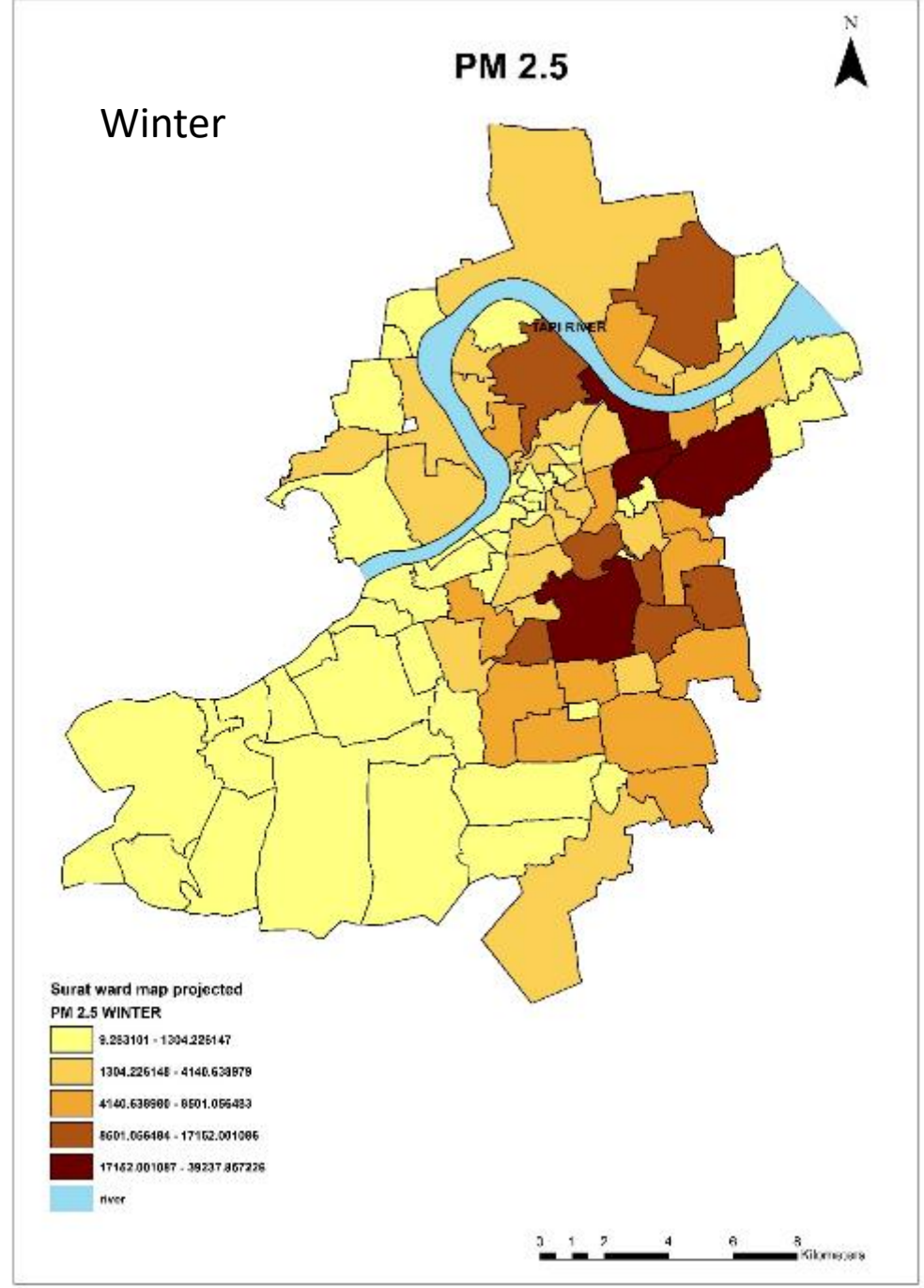
Note: Results Excluding Waste Burning of Old Landfill Site

Source: Primary Survey

Summer



Winter



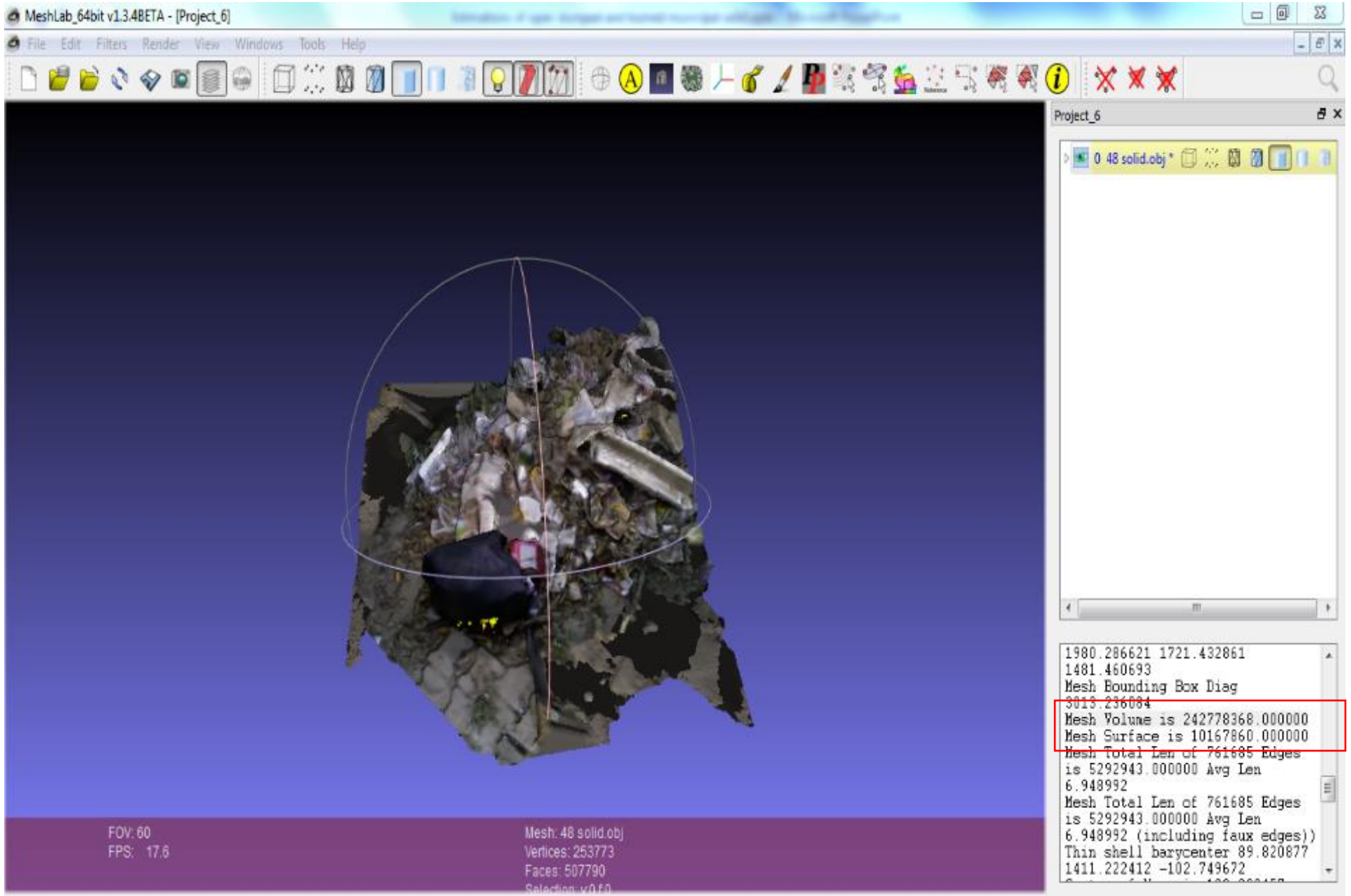
Mass and Composition Estimation

Direct measurement if MSW piles are small

For the bigger MSW piles

1. Bucket Volume = 0.02 m^3
2. Bucket Weight = 0.6 kg
3. MSW weight with bucket = 1.55 kg
4. MSW weight without bucket = 0.95 kg
5. MSW weight 1m^3 = 47.5 kg
6. MSW weight 0.24 m^3 = 11.53 kg

For 3d Scan Mesh volume estimation, MeshLab Software have been used



For Very big Piles


idea

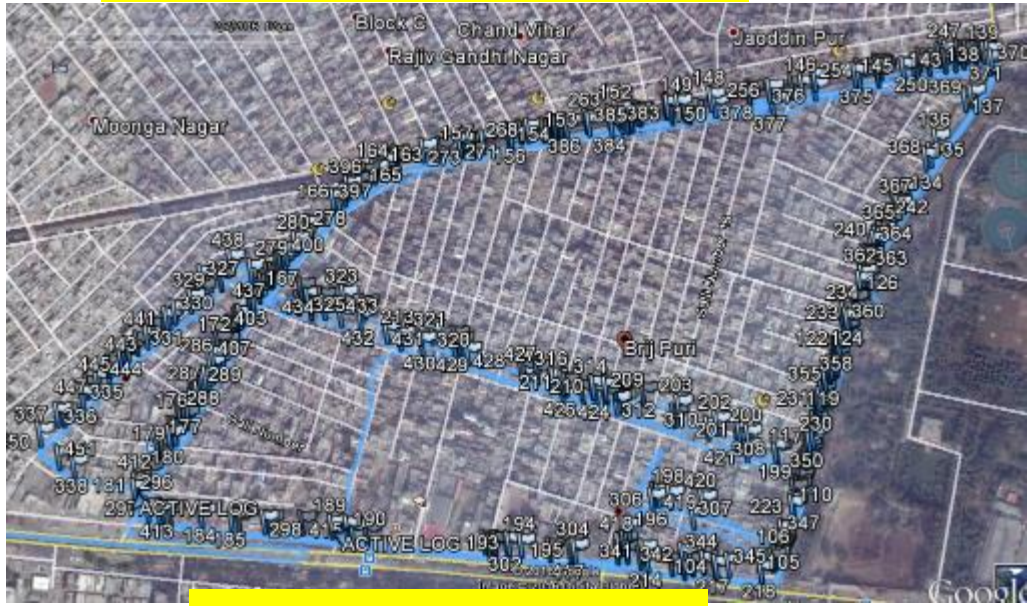
Study Areas

(1) Brijpuri & Chandbag (BP & CB),
(2) Jangpura Extension(JPE)
(3) Safdarjung Enclave (SJE)
(4) Bhogal (BG)

	BP & CB	BG	JPE	SJE
SES	Low	Medium	High & Medium,	High
MCD Colony Category	F&G	C	B	A
Population in person	34519	11300	7007	18344
Number of HH	5939	2441	1596	4341
HH Size	5.81	4.63	4.39	4.22
Area (km^2)	0.397	0.33	0.347	1.251
Density (Person/km^2)	86950	34105	20193	14663
Per capita MSW generation (kg)	0.172	0.385	0.385	0.396
Total Generation (kg)	5937	4351	2698	7264

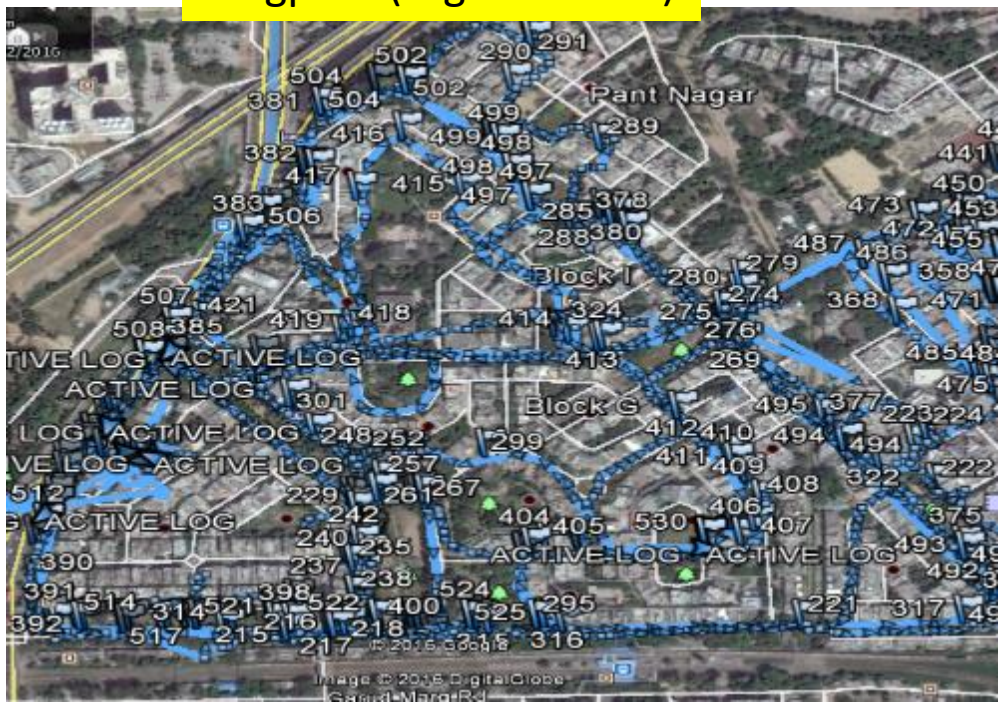
Study Areas

Brijpuri & Chandbag (Low SES)

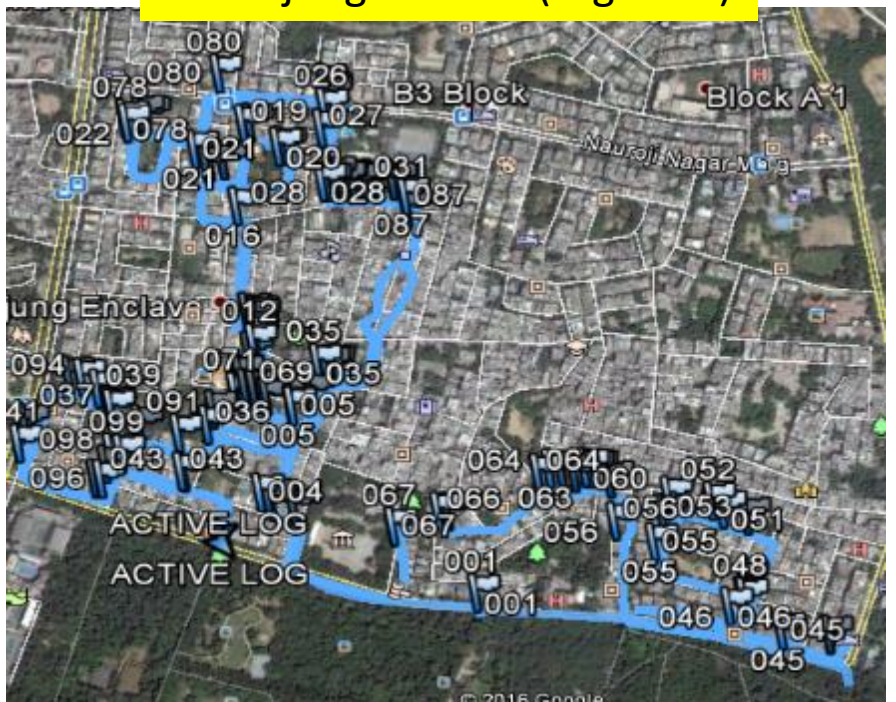


Bhogal (Mid SES)

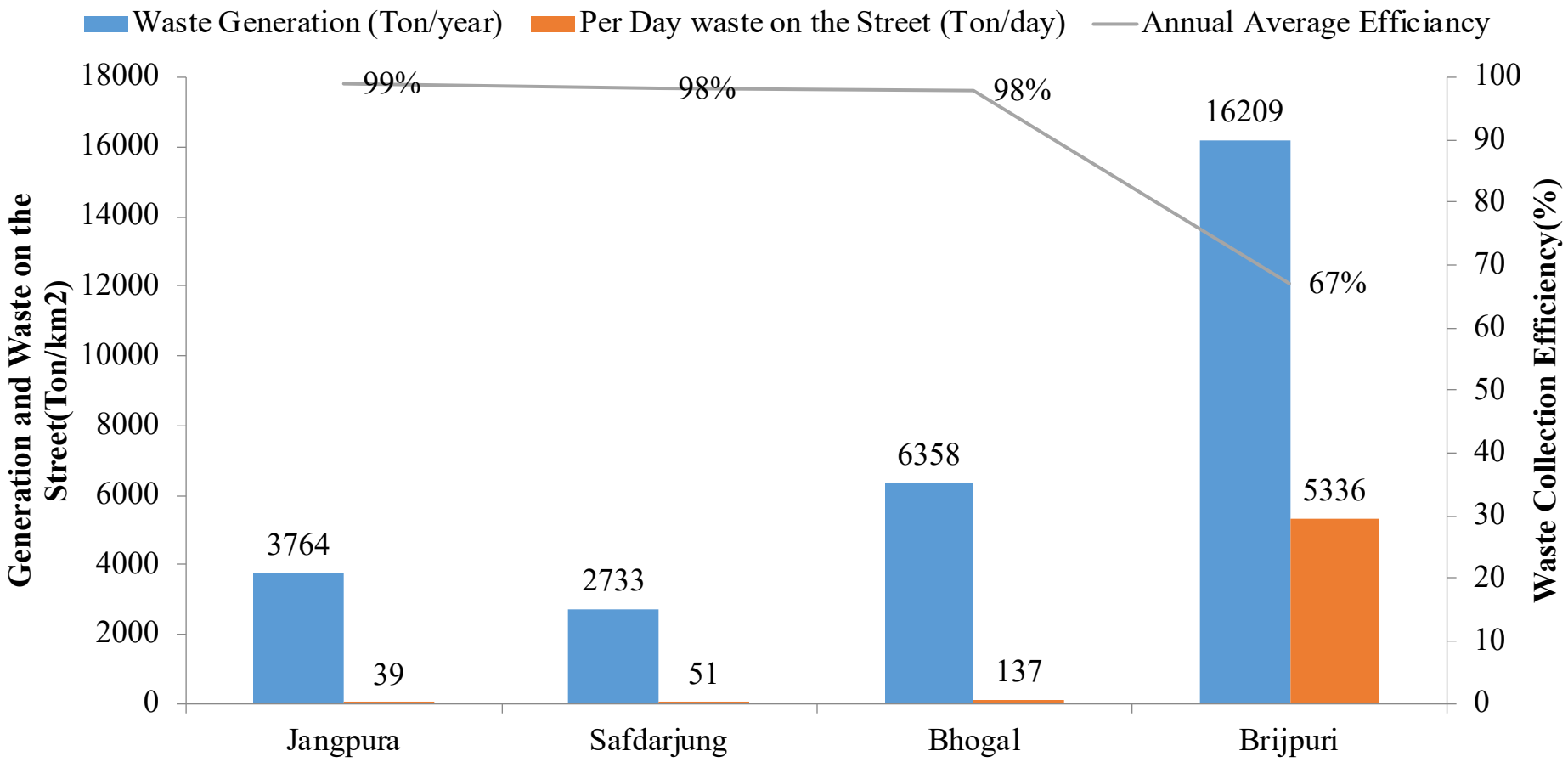
Jangpura (High-Mid SES)



Safdarjung Enclave (High SES)



Waste Generation, waste on the street and waste collection efficiency



Note: Similar per capita generation data have been used for all neighborhoods, which is based on total generation data given for Delhi,

Since it is hard to predict waste accumulation time, therefore one year time have been consider for all waste accumulation