



17th International Geography Olympiad

Istanbul, Turkey

10-16 August 2021

Fieldwork Exercise Part II

Tasks and Resources

25 marks in total

Task 2.1 - Calculate the population density of sites near Ataturk urban forest (6 marks in total)

Map 1. Four neighbourhoods near the Ataturk urban forest

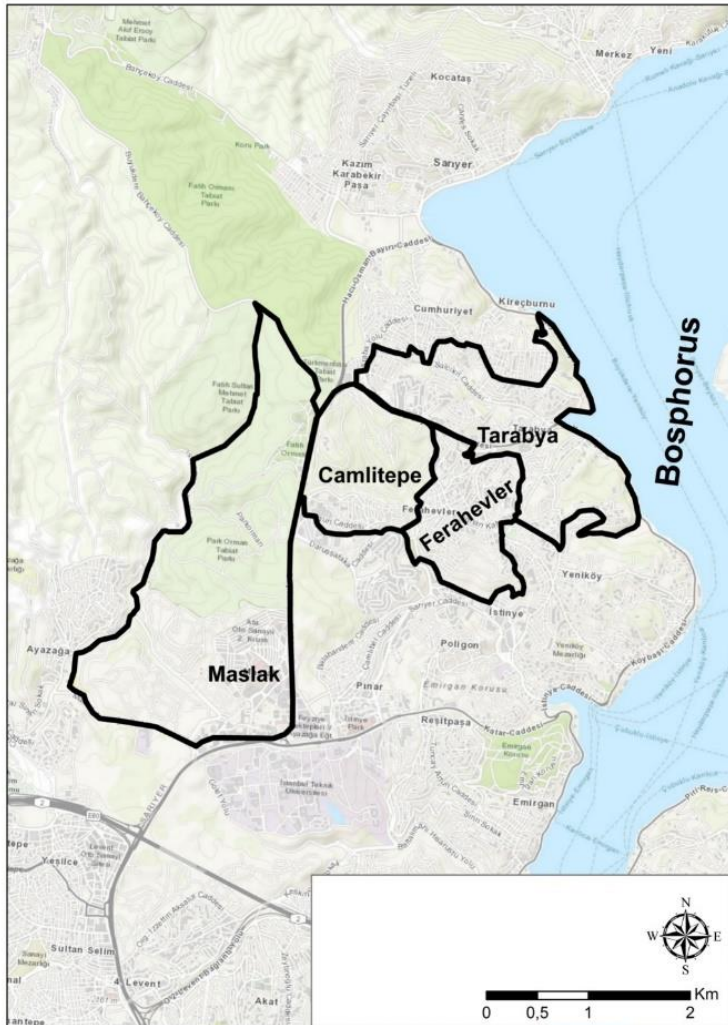
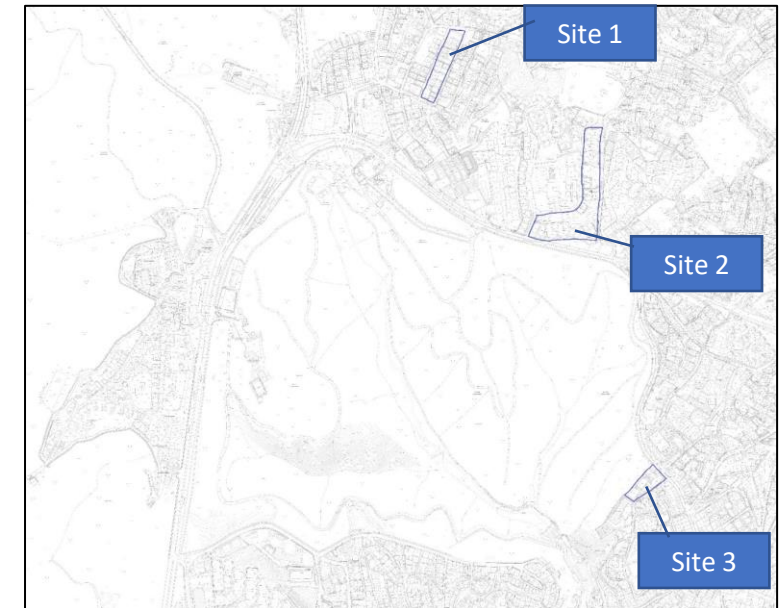


Table 1. Some information about the four neighbourhoods

	Tarabya	Maslak	Camlitepe	Ferahevler
Total population (persons) (2020 data)	17,710	9,895	5,885	15,417
Young / Middle aged / elderly (ratio)	27% / 55% / 18%	31% / 62% / 7%	33% / 55% / 12%	33% / 55% / 13%
Persons per household	2.91	2.31	3.42	3.34

Map 2. Location of the three sites for calculation



For more details about sites 1-3 see next three slides.

Task 2.1 - Calculate the population density of sites near Ataturk urban forest



Note: The number represents the number of floors.

Most common housing type in this site:



Estimated number of families living in this housing type:
1 family per floor

Task 2.1 - Site 1	Write your answers in the table on the response sheet:
A. Estimated site area:	
B. Estimated population:	
C. Estimated population density of this site:	

Task 2.1 - Calculate the population density of sites near Ataturk urban forest



0 50 100 150 m



Note: The number represents the number of floors.

Most common housing type in this site:



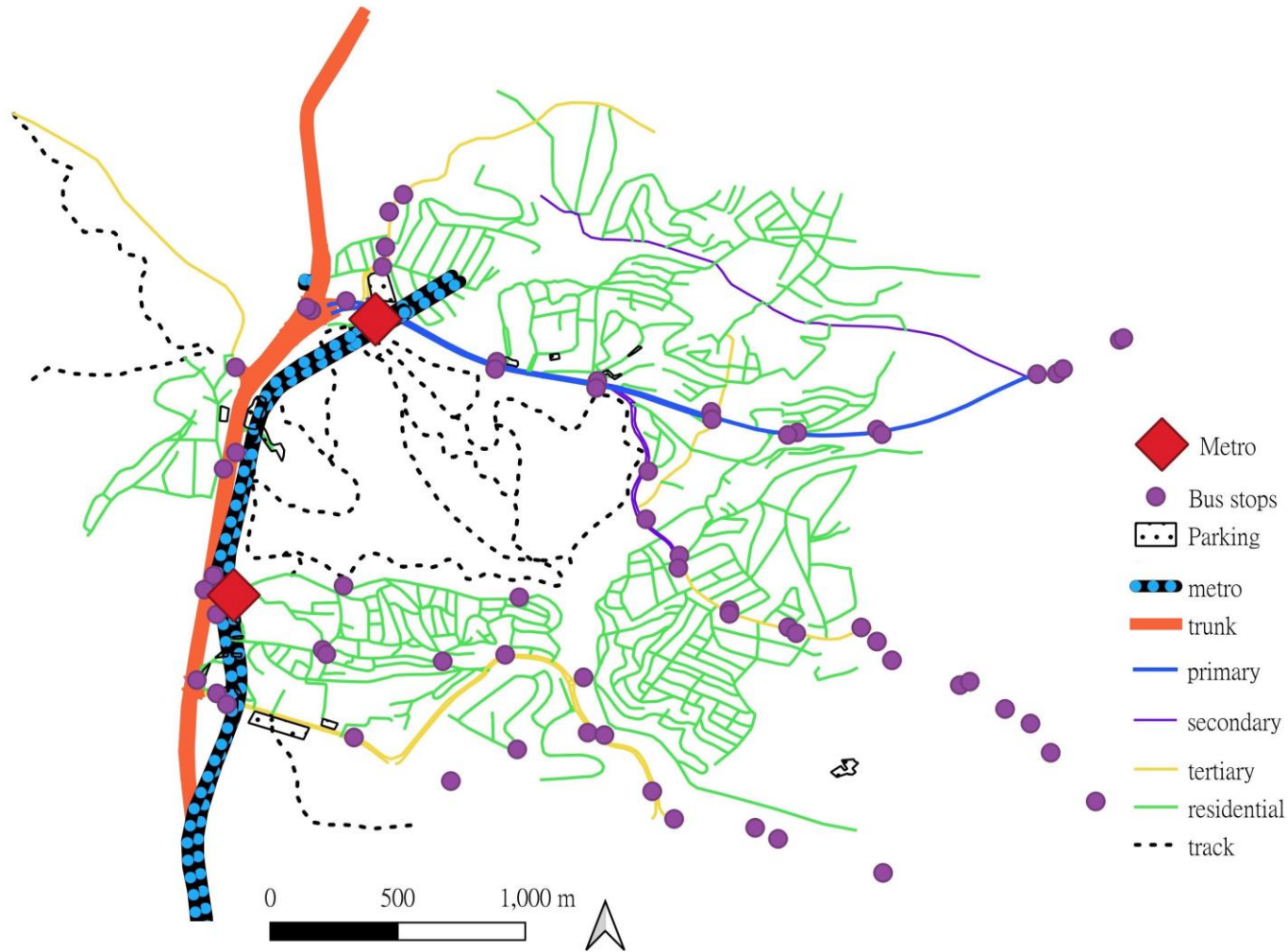
Estimated number of families living in this housing type:
8 families per floor

Task 2.1 - Site 3	Write your answers in the table on the response sheet:
A. Estimated site area:	
B. Estimated population:	
C. Estimated population density of this site:	

Task 2.2 - Accessibility near Ataturk urban forest

(6 marks in total)

Map 3 – Transport infrastructure and network near Ataturk urban forest



Draw **3 polygons** onto the Map shown in the response sheet. Each polygon should be a size of **800 m x 800 m (square in shape)**, with the estimated highest, medium and lowest level of accessibility respectively. Label the squares with 1, 2 and 3 respectively for their estimated accessibility. Provide justifications of your answers in the table on the response sheet.

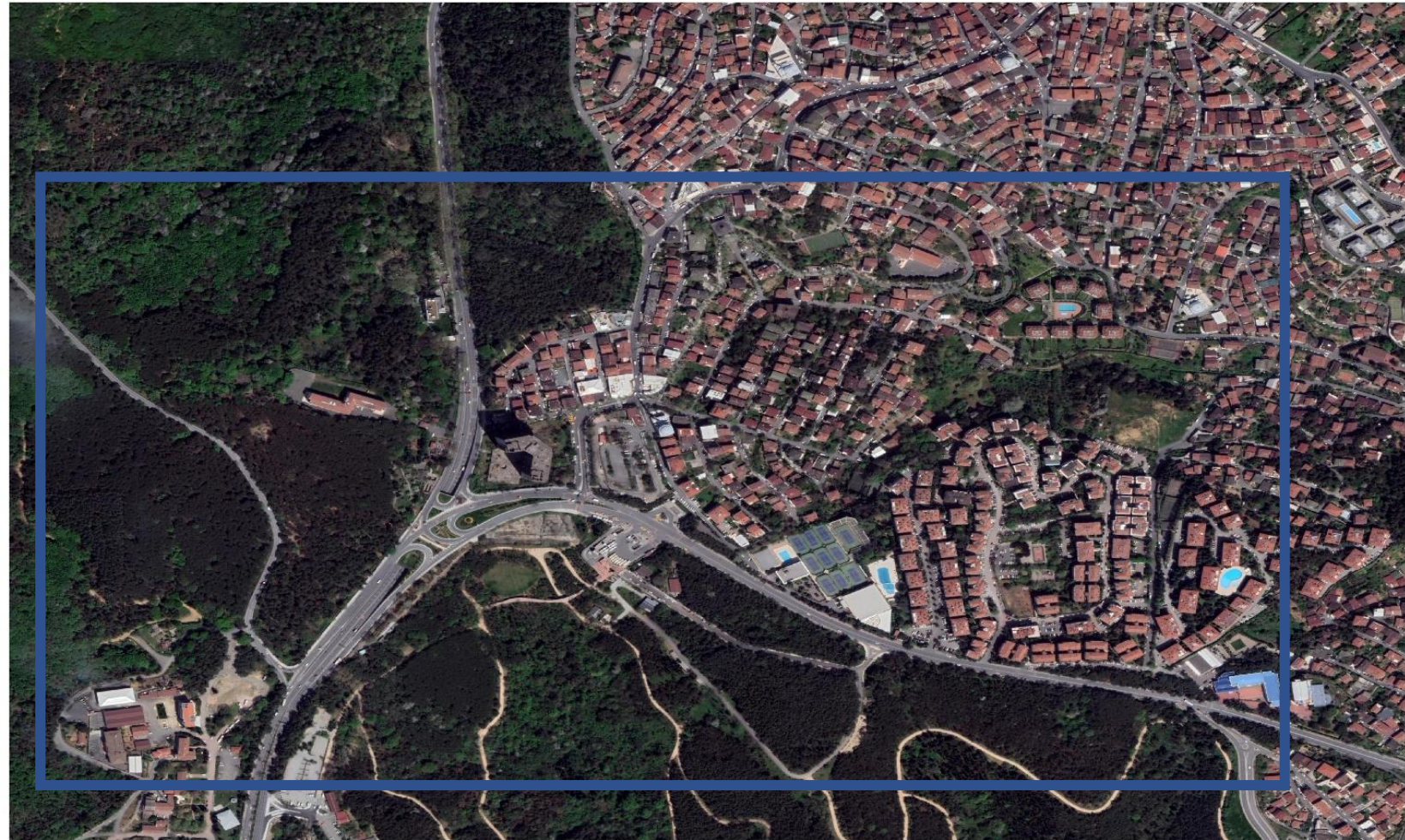
Task 2.2			
A. Polygon number:	1	2	3
B. Level of accessibility:	Highest	Medium	Lowest
C. Justifications:			

Task 2.3 - Mapping and annotation

(4 marks in total)

The satellite image on the left shows the area near Haciosman metro station (the northern terminal of the M2 metro line, opened in 2011 to serve neighbourhoods in Sariyer). Draw a land use map of the highlighted area (the blue rectangle box) shown in the satellite image. The land use map should contain different types of land use in the **built-up area** and **non-built-up area**. In addition, you are required **A) to classify the residential housing shown in the highlighted area into at least two different types** and **B) to classify the non-built-up area into two different types**. A key and the rationale (reasons for) your classifications should also be provided.

Draw your map on the response sheet. The locations, accuracy, size of features, residential housing classification, key and use of symbols will be assessed. **Provide your rationale for A) and B) in the response sheet.**



Task 2.4 - Decision making (4 marks in total)

The local government proposes to have a new housing project in the non-built-up area near the Ataturk urban forest. The possible site of the new housing project is marked as “A” in the satellite image. The area of the site is approximately 25,000 m². The site is targeted to accommodate 10,000 people after completion.



Task continues on next slide.

Task 2.4 - Decision making

List the locational advantages and disadvantages of this new site of housing project 'A'. You have to consider factors related to **natural environment** and **urban development**, as well as of **different scales** (e.g. local and regional if appropriate). You could also make use of other maps and data provided in Task 1 and 2 to answer this question.

Task 2.4	
Locational advantages:	Locational disadvantages
A. Natural environment:	C. Natural environment:
B. Urban development:	D. Urban development:



Task 2.5 - Layout plan (5 marks in total)

Design the layout of the new housing project 'A'. You have to consider:

- i) spatial arrangements,
- ii) building density,
- iii) height of buildings,
- iv) types of housing, and
- v) the target population to be accommodated in the site.

In addition, you have to provide some written justifications of your proposed layout design.



New housing project A
Area: about 25,000 m²
Target population to be accommodated after completion: 10,000 persons.

Task 2.5
Justifications of your layout design:
A. Site layout, density and height of building:
B. Types of housing to be built:

End of Fieldwork Exercise Part II

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Sources of information:

- Google Map, Google Earth Pro
- OpenStreet Map
- Endeksa Teknoloji A.Ş. (real estate data analytics platform) (<https://www.endeksa.com/en>)