



Land-use study of Mellieha Valley

Fieldwork Report





1 *Land-use study of Mellieha Valley*

Location: _____

Date: _____

Time: _____

Apparatus: _____

Weather Conditions: _____

Objectives / Aims:



2 Geological Formation of Mellieha Valley

- 1 a. On the OS map provided mark;
 - Mellieha Bay, Marfa Ridge and Mellieha Ridge
 - In black draw two lines to show the main fault lines of the area from
 - Ic-Cumnija to ta' l-Imgharrqa
 - Ras il-Griebeg to il-Prajjiel
 - b. With the help of the geological map and using the appropriate colours shade the area composed of Upper Coralline Limestone (light green), Blue Clay (blue) and Globigerina Limestone (orange).
 - c. Include the key and title your map: *Geological Structure of Mellieha Bay*.
- 2 Examine and describe the type of rock found in the area by filling the table below.

Name of Rock	<i>English</i>		
	<i>Maltese</i>		
Colour Code		Abbreviated	
Main group			
Age			
Surface Colour			
Thickness			
Resistance			

Permeability	
Formation	
Fossils	
Use	

3 a. Briefly describe how the Mellieha Valley was formed.



c. Now draw a sequence of diagrams to show how the valley was formed.

<i>Section showing land before subsidence</i>
<i>Section showing land after subsidence</i>

c. Now draw a cross-section from the Red Tower to Gnién Ingraw. Indicate clearly the fault lines and the movement of the land.

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3 *Karstland and qarique*

4 a. Name and describe the topography (scenery) of the area.

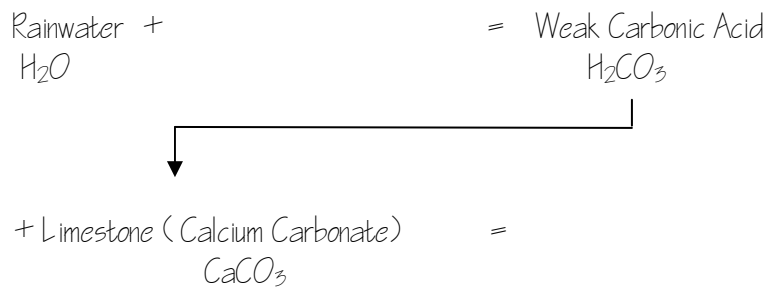
b. Use a measuring tape and a ruler to find out the length, depth and width of some of these solution hollows. Now using these measurements make a simple sketch to show the scenery of the area.

Sketch showing a solution hollow

5 a. Describe the weathering processes involved in shaping the topography of this area.

Chemical Weathering

Continue the formula to show limestone is dissolved by chemical weathering.



Biological Weathering

b. What can you say about the soil found in the hollows?



6. What will happen to these solution hollows in winter after rain falls?

7 a. What do we call the natural vegetation that grows on karstland?

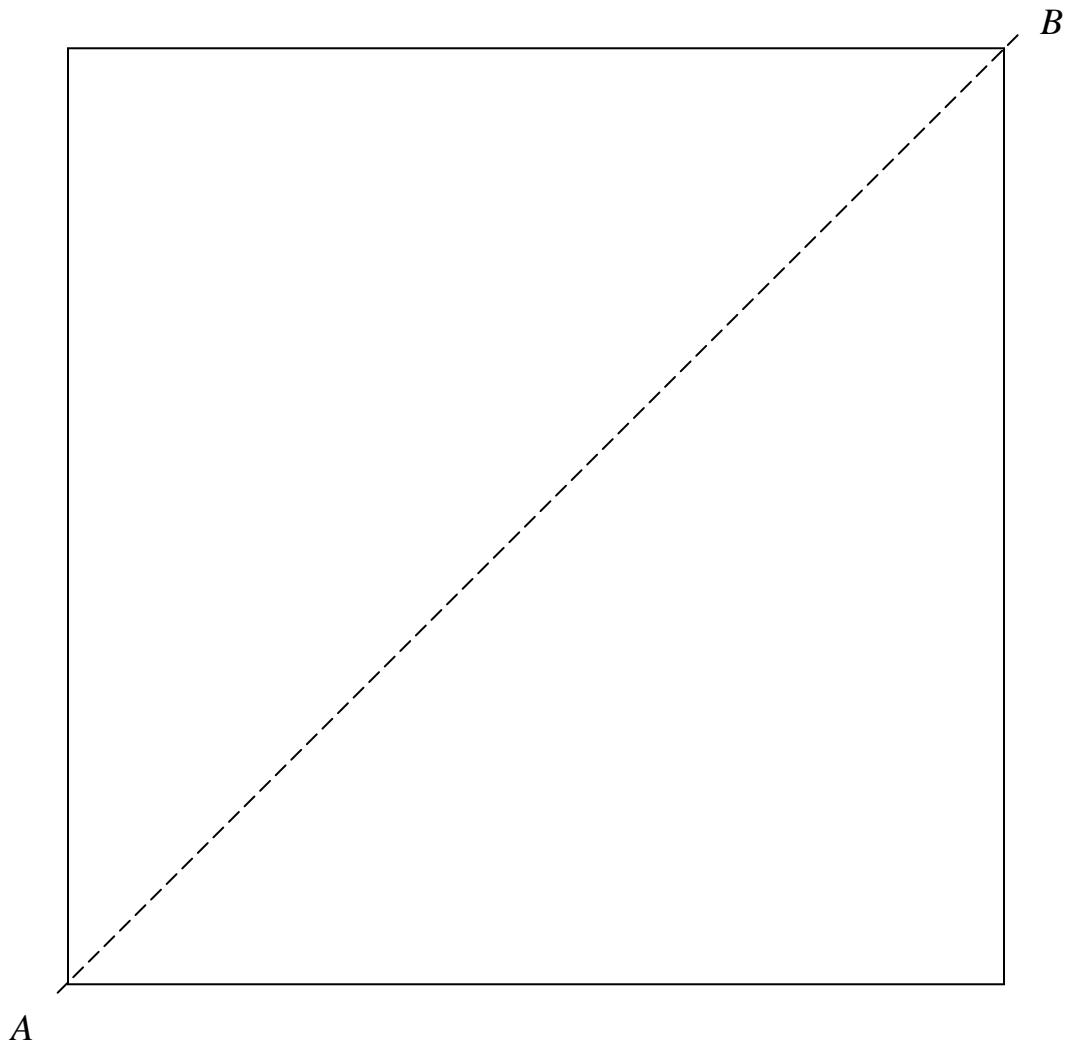
b. What are the main characteristics of plants that are found here?

c. The plants present here live in a harsh and extreme environment. List the problems the plants have to withstand.

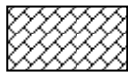
d. Name some of the mechanisms adopted by these plants to withstand the Mediterranean climate.



- 7 a. Study the composition of the vegetation in this karst area by using the quadrat analysis.
 (The quadrat is a square of vegetation with a standard size of 1m^2 chosen at random for the study and composition of vegetation in a selected area).



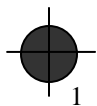
Key



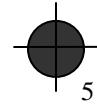
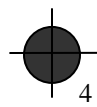
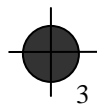
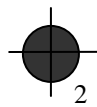
Stones



Bare outcrops with pockets of soil



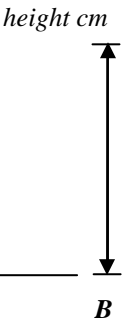
Bulb in the centre and radiating leaves



b. Make a simple description of your quadrat. These questions might help you.

- How deep is the soil?
- Are there any living organisms in the soil?
- Is there a dominant plant in your quadrat?
- How many different species of plants did you record?

c. Draw a cross-section along line A-B of the quadrat.



A

B

- d. Take photos, draw sketches and write brief descriptions of the plants found in your quadrat.
- e. Do you consider this area as a waste land? Should development be allowed to take place in such an area?





4 Farming in Mellicha Valley

8. On the map of Mellicha provided, locate all areas that are under cultivation (used for farming).

9. a. What type of farming is practised in this area? _____

b. Name some crops that are grown in the area. _____

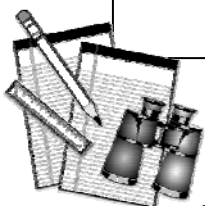
c. What can you say about the size of fields? _____

d. With what are the fields separated from one another? _____

e. Why do you think that these walls were built in the first place? _____

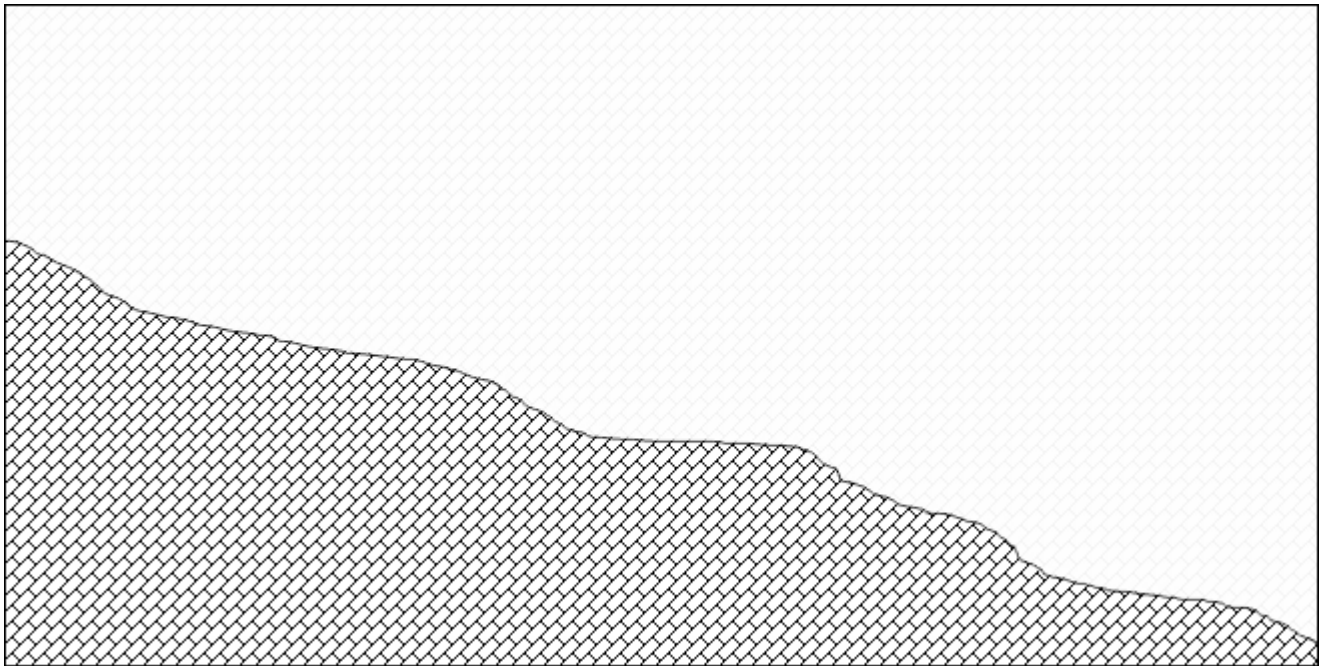
f. Describe the appearance of these walls. _____

g. Try to sketch the appearance of these walls.



h. Name and explain some other advantages of rubble walls especially when they are built on slopes.

i. In the space provided draw a labelled diagram of these walls showing how they can reduce soil erosion. What are the fields behind the walls called?



10 a. Most farmers in the area use a system known as crop-rotation. Briefly explain such a system.



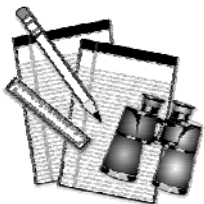
b. What are the reasons and advantages behind this system of farming?

c. What can you notice about the type of soil found in the area?

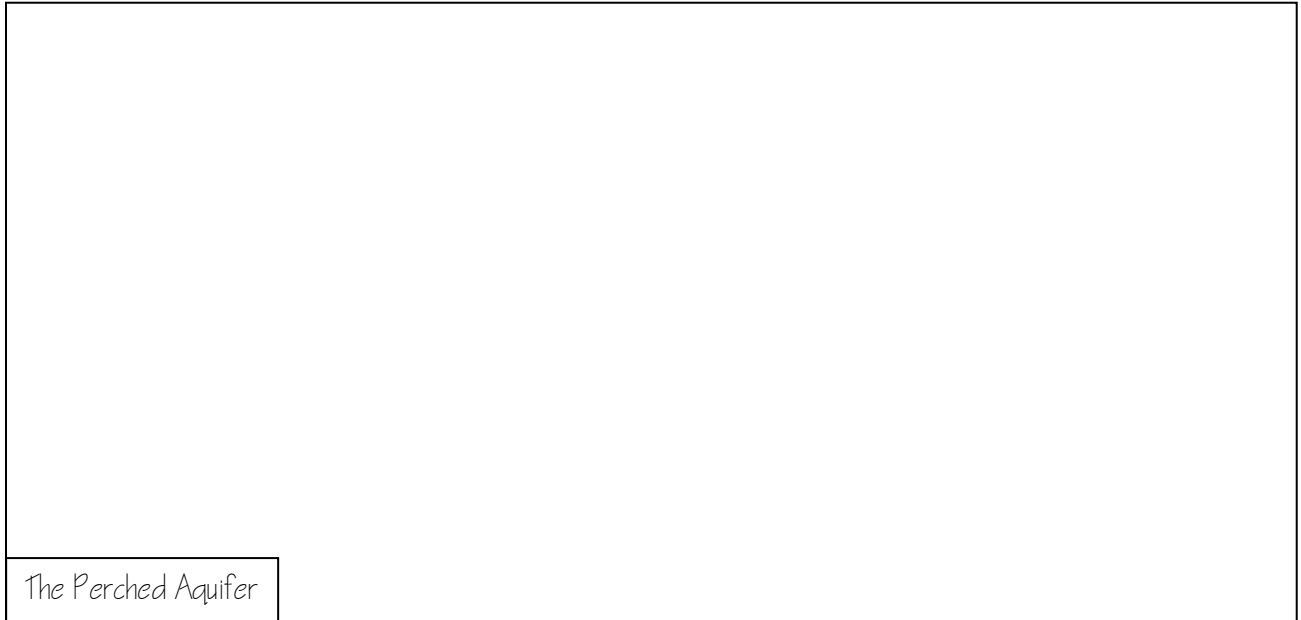
d. What about the fertility of the soil?

11 a. How are fields irrigated in the area? Try to find evidence of various types of irrigation used. Draw diagrams, take photographs and explain how water is obtained.

b. Explain how water is stored underground?



- c. In the space provided draw how the perched aquifer is formed and how water from this source is pumped for irrigation.





5 *Fishing in Mellicha Valley*

- 12 a. On the map provided shade the part used by the fishing community that lives in the area.
- b. Name all the equipment found in the area used by the local fishermen. For what purpose is this equipment used?

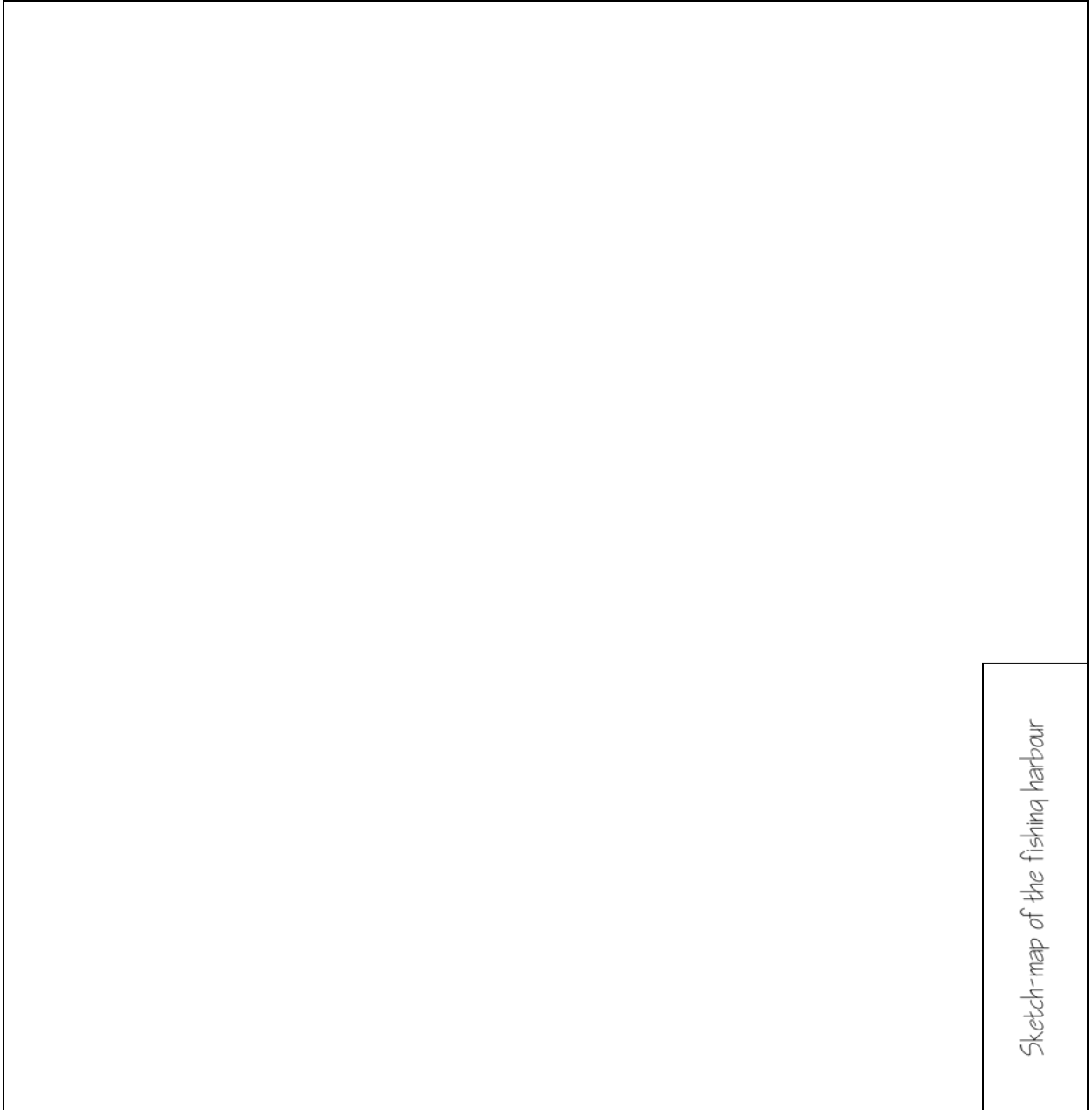
- c. Why do you think that most fishing vessels are on shore?

- d. What is the job of the fisherman at this time of the year?

- e. What kind of fishing boats can you notice on shore? Give a brief description of each. (measure some of them).

f. Why do you think that these fishing boats find it difficult to stay at sea for more than 24 hours?

g. Make a simple sketch-map of the small fishing harbour. Label it by including all fishing equipment.



Sketch-map of the fishing harbour





5 Ghadira Nature Reserve

13 a. What type of ecosystem do we find at Ghadira Nature Reserve?

b. Briefly describe such an ecosystem.

14 a. Locate the nature reserve on the map of Mellichea Valley provided.

b. Describe the site and situation of the Nature Reserve.

15 a. For what purpose is the nature reserve used nowadays?

b. Does the site suffer from any pollution hazards?

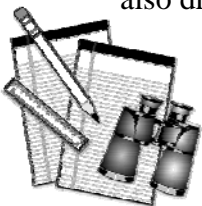
16 a. How did Birdlife Malta manage to convert the area into a nature reserve – a suitable habitat for birds, animals and plants?

b. What was constructed to control unauthorised access to the reserve?

17 a. Name two salt-loving plants that were planted in the reserve? Why were these plants planted in great numbers?

b. Name some species of plants that grow in the reserve.

c. Write brief descriptions of some of these plants found living in the reserve. You can also draw simple sketches of these plants.



d. Name some animals (fauna) and insects that live in the nature reserve.

18 a. Why are birds attracted to Ghadira Nature Reserve?

b. Make a list of some of the birds that visit the reserve.

c. Write some information accompanied by pictures, photos or drawings of some of the birds that are drawn to the tiny enclave of Ghadira.





6 Permanent Caravan-Site

19 a. On the map locate the area where we find the permanent caravan site.

b. Describe the location of the caravan site.

c. What colour are the caravans painted and why?

d. Of what material are these houses built?

e. Are these buildings according to the law?

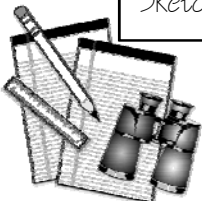
e. Is this caravan-site provided with proper public services? If yes name them. How can you tell?

f. What other facilities are found in the area.

g. Why do you think that the area is nearly empty at the moment?

h. Measure one of the caravans and make a simple sketch in the place provided below.

Sketch and layout of a caravan



- 20 a. In the space provided below draw:
- i) the road leading to Cirkewwa
 - ii) the layout of the Caravan site
 - iii) label each row with the appropriate letter
 - iv) telephone box
 - v) the distance between each row
 - vi) other services

Plan of the permanent Caravan Site

- 21 a. Make a simple estimate of the number of houses found in the site. _____
- b. Describe the density of population in this area in summer.
- _____
- _____
- c. What can you say about the up keep of the area?
- _____
- _____





8 Afforestation Project

22 a. On the map of Mellieha shade the afforestation project that is being developed. Name the shaded area **Foresta 2000 in Mellieha**.

b. Describe the location and site of the proposed project.

c. Who is involved in this project?

d. What is proposed to be done in this area?

e. Are there signs of alien species in the area? Name some of them.

f. What type of trees are being planted?

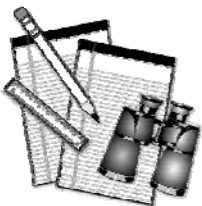
g. For what purpose was the area used for in the past?

h. What has been built to control access by vehicles which were causing considerable damage to the clay slopes.

i. Name some activities that are not allowed in the area?

j. Why do you think that rubble walls are being built?

k. Sketch and describe some of the trees that are being planted.





9 *Tourism at Mellieha Bay*

23 a. On the map of Mellieha mark all tourist facilities found at Mellieha. (include hotels, restaurants, lidos, holiday flats etc.).

b. Why do you think that tourists visit this part of the island?

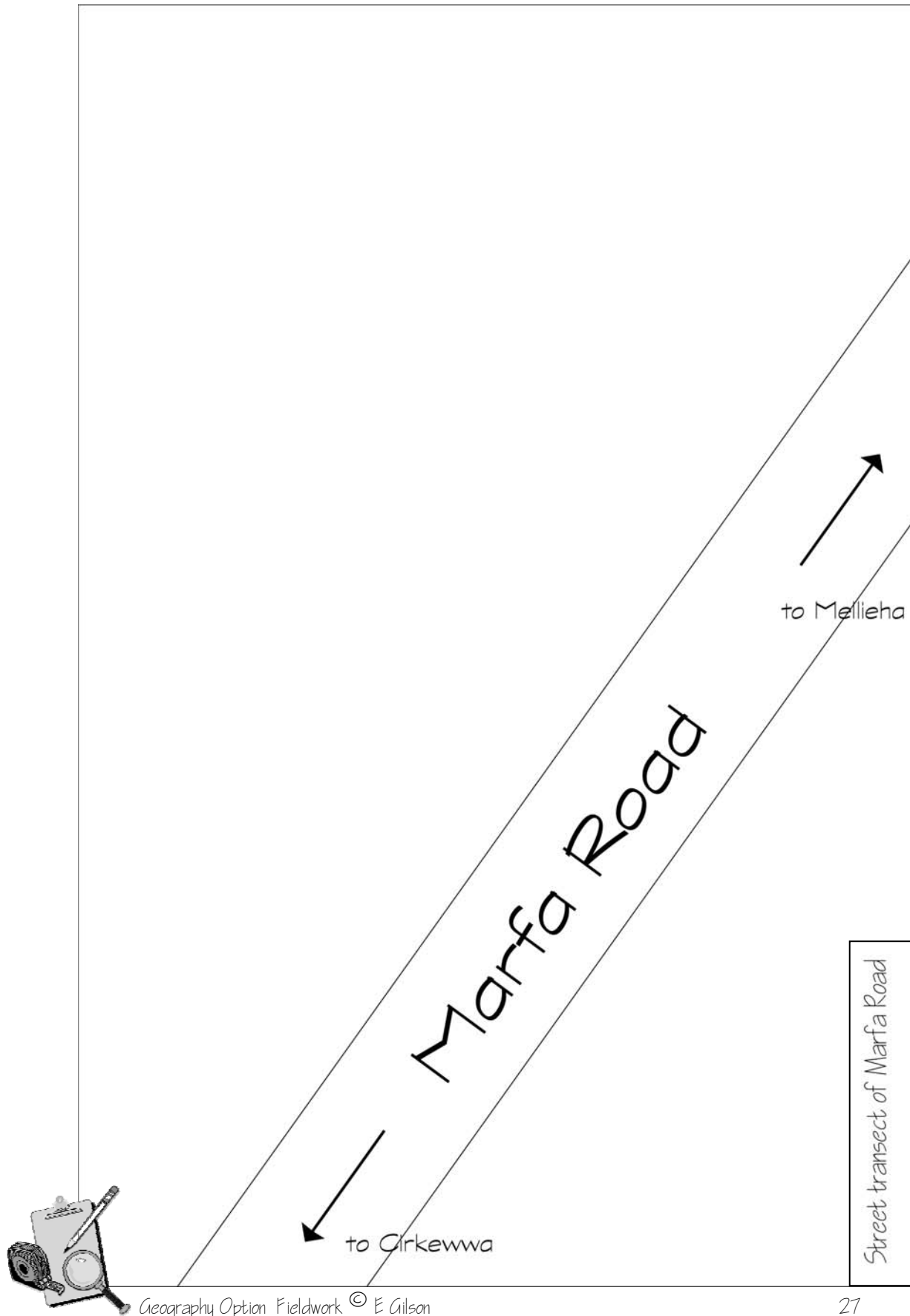
c. Name the main hotels found along Mellieha Bay.

d. What do these hotels offer to tourists?

f. Can you mention some negative impacts of tourism to the area?

g. Write in some detail about one of the hotels found at Mellieha Bay.

24. Use the street transect below to sketch the land use of Marfa Road.



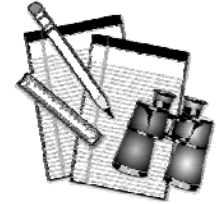
25. Carry out the questionnaire to a number of tourists and then analyse the answers and present the information and data obtained in graphical form.

Good morning. I'm from St. Joseph Junior Lyceum. We are doing a survey of tourists to Mellieha. Would you mind helping us by answering a few questions?

1. Which town or country do you live in?

Town _____ Country _____

(If the answer is Malta then thank them saying that you are only doing a survey to tourists)



2. How long do you intend to stay in Mellieha?

Tick the appropriate box.

Half a day A day a week

Less than a week Longer than a week

If longer than a week state the exact duration.

3. What kind of accommodation are you staying in?

Hotel Guest House Camping Site

Holiday Flat Holiday Complex

4. Have you been to Mellieha before?

Yes No

If yes ask ... How many times? No. of times

5. What type/means of transport do you use while in Mellieha?

Hire Public Transport

Taxi Others

6. Here is a list of reasons why people come to Mellieha. Tick the main reasons in your case..

- a. Good entertainment
- b. Quiet
- c. Good shopping area
- d. Beautiful scenery
- e. Good accommodation
- f. Bathing and swimming facilities
- g. Others _____

7. What do you dislike about Mellieha?

Note down their dislikes.



Summer Residential Areas

- 26 a. On the map of Mellieha locate the summer residential area.
b. What type of buildings do we find here?

- c. Why do you think that this area was chosen for such a development?

- d. Draw a simple sketch of a block of apartments found in this area.

Sketch of an apartment

- e. Briefly describe the layout of one of these apartments.
