GCSE Geography

Primary Data Collection Pack

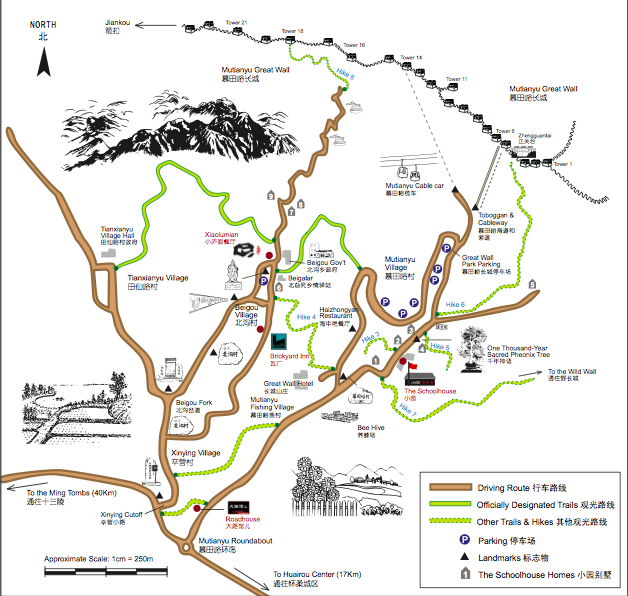
*‘Investigate the environmental impacts of tourism on Mutianyu Great Wall, Beijing.’*

September 12th 2017



Student Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Don’t forget to take photographs throughout the day, especially of you collecting the data as this can go in your methodology table.



1 = Visitor Centre Carpark

2 = Main entrance to the Great wall

3 = On the Great wall

Note: When filling in the EQI the lowest score is -2, 0 is an average score and 2 is the highest score.

Environmental Quality Survey Site 1

|  |  |  |  |
| --- | --- | --- | --- |
| Criteria | Worst EQ: | Scale | Best EQ: |
| Building Condition: | Poor Conditions: Lack of maintenance; peeling paint; some damage e.g footpath erosion; not cleaned; temporary structure. | **-2 -1 0 1 2** | Excellent condition e.g. no peeling paint, no cracking, evidence of cleaning; no visible signs of damage; permanent structure. |
| Green Space: | Dirt; concrete; no plants; unplanned; weeds; no management. | **-2 -1 0 1 2** | Large areas of green space; variation of plants; health of plants; evidence of gardening (mowing etc.); designed/planned. |
| Rubbish/Litter: | No bins; lots of litter evident on streets | **-2 -1 0 1 2** | Multiple well placed bins; no litter on street; recycling bins. |
| Faecal matter: (animal) | Visible on pavement, next to pavement, common; unpleasant smell. | **-2 -1 0 1 2** | None seen; no unpleasant smell; notices warning against it. |
| Decorations: | Nothing | **-2 -1 0 1 2** | Art displays; flowers; floor decorations etc. |
| Graffiti: | Large amounts throughout area. | **-2 -1 0 1 2** | None seen. |
| Noise | Very noisy | **-2 -1 0 1 2** | Very Quiet |
| Smell | Unpleasant smells are very evident | **-2 -1 0 1 2** | Pleasant or no smell. |
| Environmental Management | No management evident, no signs | **-2 -1 0 1 2** | Good signage (bilingual), clear emphasis on conserving the environment (natural and built) |

Total Score for Site: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Decibel Count for Site 1

Environmental Quality Survey Site 2

|  |  |  |  |
| --- | --- | --- | --- |
| Criteria | Worst EQ: | Scale | Best EQ: |
| Building Condition: | Poor Conditions: Lack of maintenance; peeling paint; some damage e.g footpath erosion; not cleaned; temporary structure. | **-2 -1 0 1 2** | Excellent condition e.g. no peeling paint, no cracking, evidence of cleaning; no visible signs of damage; permanent structure. |
| Green Space: | Dirt; concrete; no plants; unplanned; weeds; no management. | **-2 -1 0 1 2** | Large areas of green space; variation of plants; health of plants; evidence of gardening (mowing etc.); designed/planned. |
| Rubbish/Litter: | No bins; lots of litter evident on streets | **-2 -1 0 1 2** | Multiple well placed bins; no litter on street; recycling bins. |
| Faecal matter: (animal) | Visible on pavement, next to pavement, common; unpleasant smell. | **-2 -1 0 1 2** | None seen; no unpleasant smell; notices warning against it. |
| Decorations: | Nothing | **-2 -1 0 1 2** | Art displays; flowers; floor decorations etc. |
| Graffiti: | Large amounts throughout area. | **-2 -1 0 1 2** | None seen. |
| Noise | Very noisy | **-2 -1 0 1 2** | Very Quiet |
| Smell | Unpleasant smells are very evident | **-2 -1 0 1 2** | Pleasant or no smell. |
| Environmental Management | No management evident, no signs | **-2 -1 0 1 2** | Good signage (bilingual), clear emphasis on conserving the environment (natural and built) |

Total Score for Site: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Decibel Count for Site 2

Environmental Quality Survey Site 3

|  |  |  |  |
| --- | --- | --- | --- |
| Criteria | Worst EQ: | Scale | Best EQ: |
| Building Condition: | Poor Conditions: Lack of maintenance; peeling paint; some damage e.g footpath erosion; not cleaned; temporary structure. | **-2 -1 0 1 2** | Excellent condition e.g. no peeling paint, no cracking, evidence of cleaning; no visible signs of damage; permanent structure. |
| Green Space: | Dirt; concrete; no plants; unplanned; weeds; no management. | **-2 -1 0 1 2** | Large areas of green space; variation of plants; health of plants; evidence of gardening (mowing etc.); designed/planned. |
| Rubbish/Litter: | No bins; lots of litter evident on streets | **-2 -1 0 1 2** | Multiple well placed bins; no litter on street; recycling bins. |
| Faecal matter: (animal) | Visible on pavement, next to pavement, common; unpleasant smell. | **-2 -1 0 1 2** | None seen; no unpleasant smell; notices warning against it. |
| Decorations: | Nothing | **-2 -1 0 1 2** | Art displays; flowers; floor decorations etc. |
| Graffiti: | Large amounts throughout area. | **-2 -1 0 1 2** | None seen. |
| Noise | Very noisy | **-2 -1 0 1 2** | Very Quiet |
| Smell | Unpleasant smells are very evident | **-2 -1 0 1 2** | Pleasant or no smell. |
| Environmental Management | No management evident, no signs | **-2 -1 0 1 2** | Good signage (bilingual), clear emphasis on conserving the environment (natural and built) |

Total Score for Site: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Decibel Count for Site 3

Pedestrian Counts Carry out pedestrian counts at sites 1, 2 and 3 count for 10 minutes.

|  |  |
| --- | --- |
| Site 1 | Time: |
| Tally: | Total Number in 10 minutes: |

|  |  |
| --- | --- |
| Site 2 | Time: |
| Tally: | Total Number in 10 minutes: |

|  |  |
| --- | --- |
| Site 3 | Time: |
| Tally: | Total Number in 10 minutes: |

Traffic Counts. Carry out traffic counts at Site 1 and 2. Count for 10 minutes.

|  |  |
| --- | --- |
| Site 1 | Time: |
| Tally: Cars:  Coach and Buses:  Minibus:  Truck:  Loaded tricycles:  Motorbikes:  Bicycles: | Total Number in 10 minutes: |

|  |  |
| --- | --- |
| Site 2 | Time: |
| Tally: Cars:  Coach and Buses:  Minibus:  Truck:  Loaded tricycles:  Motorbikes:  Bicycles: | Total Number in 10 minutes: |

Footpath Erosion measure from one side of the footpath to the other. Measure from the highest part of the path.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Distance  (cm) | 10  cm | 20  cm | 30  cm | 40  cm | 50  cm | 60  cm | 70  cm | 80  cm | 90  cm | 100  cm | 110  cm | 120  cm | 130  cm | 140  cm | 150  cm | 160  cm | 170  cm |
| Depth (cm) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Distance (cm) | 10  cm | 20  cm | 30  cm | 40  cm | 50  cm | 60  cm | 70  cm | 80  cm | 90  cm | 100  cm | 110  cm | 120  cm | 130  cm | 140  cm | 150  cm | 160  cm | 170  cm |
| Depth (cm) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |





Spearman’s Rank

Correlation Coefficient (Rs)

**What is it?**

This is one of the most widely used statistical tests in Geography. It is relatively quick and easy to do, but is classified as a complex method. It is called a ‘rank’ correlation because only the *ranks* (as opposed to the raw data) are correlated.

**Why do we use it?**

Rsallows us to decide whether or not there is a **correlation** (relationship) between two sets of data. In some cases it is obvious whether a correlation exists, however, in most cases it is not so clear.

It also tests the reliability of this data in relation to your sample size (‘*n’*).

How do we use it?

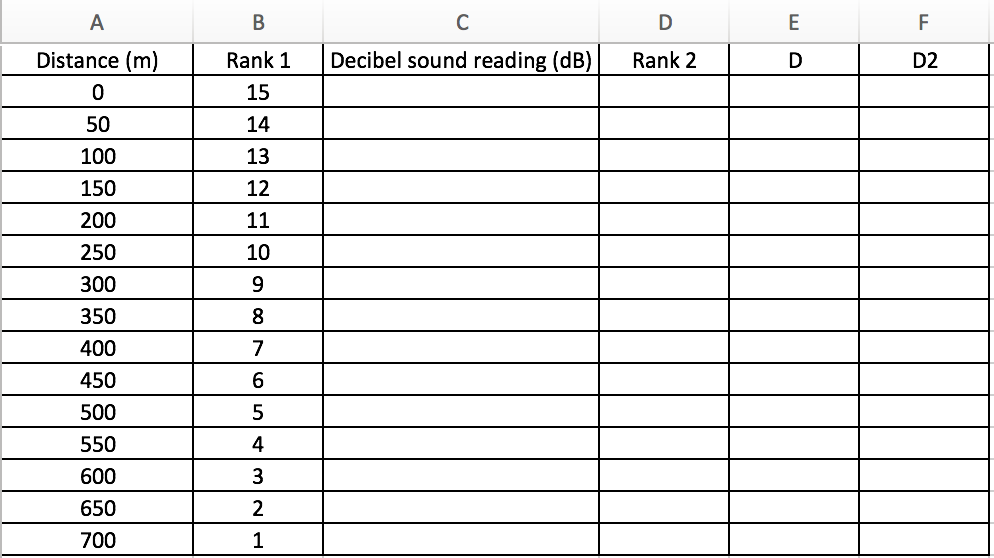
Spearman’s rank will give us a value from –1 to +1 (if you value falls outside of this range you have made a mistake somewhere). The closer to +1 your Rs value is, the stronger the positive correlation. The closer to –1, the stronger the negative correlation.

We calculate the Spearman’s rank (Rs) using the formula:

Rs = Spearman Rank Formula

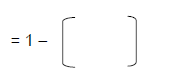
A Step-by-step guide

1. Complete the table. Don’t forget, the highest value is ranked 1.
2. Rank the data in Column D. The highest should be awarded 1 and the lowest ranked 15.
3. Calculate the *difference* (‘**d**’) in the two ranks (B-D) and enter the figure in Column E.
4. *Square* the differences listed in Column E and enter the results in Column F (‘**d2**’).
5. Add all the squares together and put the total at the bottom of Column F.
6. You can now calculate the Rs figure and assess the strength of the relationship, by putting the appropriate numbers into the equation. *N* means the number in your sample, in this case 15. Show each stage of working.
7. Then write a conclusion on your result. Is there a relationship? 0 being no correlation, 1 being strong/perfect positive, and -1 being strong/perfect negative.
8. Compare your result with the values in the statistical ‘significance level’ table (Fig 3) to establish the **level** of significance.



Sum of **d2:**

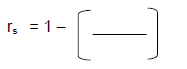




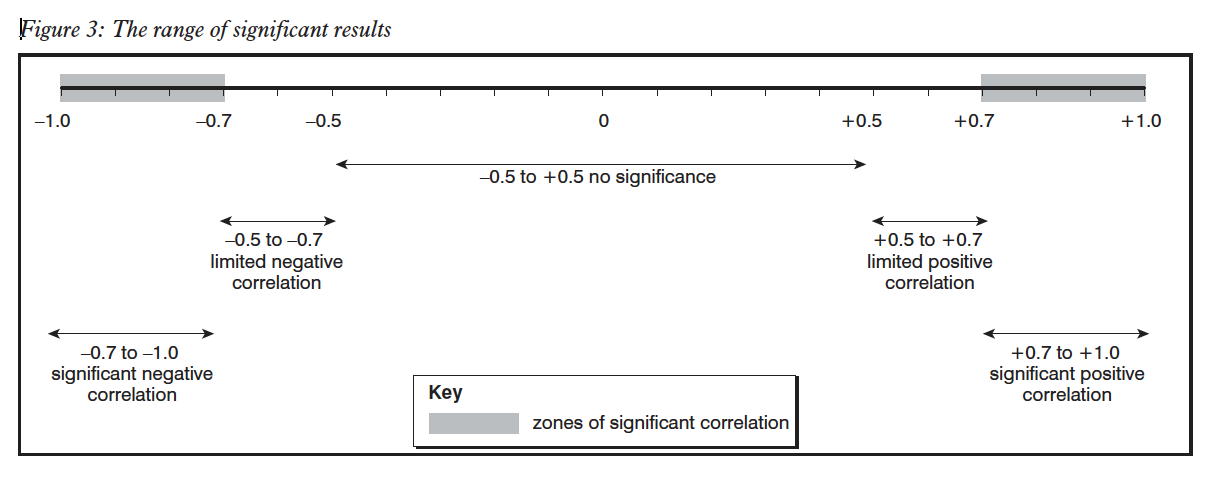
Step 2:

Step 3:

Step 1:



Rs =



1. M: \_\_\_ F: \_\_\_ Questionnaire No: 1
2. Age: 0-20: \_\_\_ 21-30: \_\_\_\_ 31-40: \_\_\_ 41-50: \_\_\_ 51-60: \_\_\_ 61+ \_\_\_\_
3. Are you a: Visitor \_\_\_\_\_ Worker \_\_\_\_\_
4. Where do you live? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. How long did it take you to travel here today?   
   Less than 1 hour \_\_\_\_ Between 1 and 2 hours \_\_\_\_\_   
   Between 2 and 3 hours \_\_\_\_\_ More than 3 hours \_\_\_\_\_
6. How did you get here?   
   Bus \_\_\_\_ Minibus \_\_\_\_\_ Car\_\_\_\_\_\_ Motorbike\_\_\_\_  
   Bike \_\_\_\_\_\_ Walk \_\_\_\_\_\_ Other\_\_\_\_\_\_\_\_\_\_\_\_
7. How many times have you visited this area?  
   First time \_\_\_\_ Twice \_\_\_ Three times\_\_\_ Many (4+) \_\_\_\_
8. How would you grade the quality of the environment in this area?

Excellent: \_\_\_\_\_ Good: \_\_\_\_\_\_ OK: \_\_\_\_\_\_

Poor: \_\_\_\_\_\_\_ Very Poor (needs improving): \_\_\_\_\_

1. Would you say that tourism has had a positive or a negative impact on the environmental in this area?   
   Negative impact: \_\_\_\_\_\_ Positive impact: \_\_\_\_\_\_ Both: \_\_\_\_\_
2. What environmental impacts of tourism on Mutianyu have you seen?  
   Negative impacts Positive impacts  
   Litter \_\_\_ Improved the wall \_\_\_  
   Noise Pollution \_\_\_ More tree planting \_\_\_  
   Traffic Congestion \_\_\_ Better management \_\_\_  
   Air Pollution \_\_\_ Conservation signs \_\_\_  
   Deforestation \_\_\_ Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_  
   Graffiti on wall \_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
   Footpath erosion \_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. M: \_\_\_ F: \_\_\_ Questionnaire No: 2
4. Age: 0-20: \_\_\_ 21-30: \_\_\_\_ 31-40: \_\_\_ 41-50: \_\_\_ 51-60: \_\_\_ 61+ \_\_\_\_
5. Are you a: Visitor \_\_\_\_\_ Worker \_\_\_\_\_
6. Where do you live? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. How long did it take you to travel here today?   
   Less than 1 hour \_\_\_\_ Between 1 and 2 hours \_\_\_\_\_   
   Between 2 and 3 hours \_\_\_\_\_ More than 3 hours \_\_\_\_\_
8. How did you get here?   
   Bus \_\_\_\_ Minibus \_\_\_\_\_ Car\_\_\_\_\_\_ Motorbike\_\_\_\_  
   Bike \_\_\_\_\_\_ Walk \_\_\_\_\_\_ Other\_\_\_\_\_\_\_\_\_\_\_\_
9. How many times have you visited this area?  
   First time \_\_\_\_ Twice \_\_\_ Three times\_\_\_ Many (4+) \_\_\_\_
10. How would you grade the quality of the environment in this area?
    1. Excellent: \_\_\_\_\_ Good: \_\_\_\_\_\_ OK: \_\_\_\_\_\_
    2. Poor: \_\_\_\_\_\_\_ Very Poor (needs improving): \_\_\_\_\_
11. Would you say that tourism has had a positive or a negative impact on the environmental in this area?   
    Negative impact: \_\_\_\_\_\_ Positive impact: \_\_\_\_\_\_ Both: \_\_\_\_\_
12. What environmental impacts of tourism on Mutianyu have you seen?  
    Negative impacts Positive impacts  
    Litter \_\_\_ Improved the wall \_\_\_  
    Noise Pollution \_\_\_ More tree planting \_\_\_  
    Traffic Congestion \_\_\_ Better management \_\_\_  
    Air Pollution \_\_\_ Conservation signs \_\_\_  
    Deforestation \_\_\_ Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_  
    Graffiti on wall \_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
    Footpath erosion \_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
13. M: \_\_\_ F: \_\_\_ Questionnaire No: 3
14. Age: 0-20: \_\_\_ 21-30: \_\_\_\_ 31-40: \_\_\_ 41-50: \_\_\_ 51-60: \_\_\_ 61+ \_\_\_\_
15. Are you a: Visitor \_\_\_\_\_ Worker \_\_\_\_\_
16. Where do you live? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
17. How long did it take you to travel here today?   
    Less than 1 hour \_\_\_\_ Between 1 and 2 hours \_\_\_\_\_   
    Between 2 and 3 hours \_\_\_\_\_ More than 3 hours \_\_\_\_\_
18. How did you get here?   
    Bus \_\_\_\_ Minibus \_\_\_\_\_ Car\_\_\_\_\_\_ Motorbike\_\_\_\_  
    Bike \_\_\_\_\_\_ Walk \_\_\_\_\_\_ Other\_\_\_\_\_\_\_\_\_\_\_\_
19. How many times have you visited this area?  
    First time \_\_\_\_ Twice \_\_\_ Three times\_\_\_ Many (4+) \_\_\_\_
20. How would you grade the quality of the environment in this area?
    1. Excellent: \_\_\_\_\_ Good: \_\_\_\_\_\_ OK: \_\_\_\_\_\_
    2. Poor: \_\_\_\_\_\_\_ Very Poor (needs improving): \_\_\_\_\_
21. Would you say that tourism has had a positive or a negative impact on the environmental in this area?   
    Negative impact: \_\_\_\_\_\_ Positive impact: \_\_\_\_\_\_ Both: \_\_\_\_\_
22. What environmental impacts of tourism on Mutianyu have you seen?  
    Negative impacts Positive impacts  
    Litter \_\_\_ Improved the wall \_\_\_  
    Noise Pollution \_\_\_ More tree planting \_\_\_  
    Traffic Congestion \_\_\_ Better management \_\_\_  
    Air Pollution \_\_\_ Conservation signs \_\_\_  
    Deforestation \_\_\_ Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_  
    Graffiti on wall \_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
    Footpath erosion \_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
23. M: \_\_\_ F: \_\_\_ Questionnaire No: 4
24. Age: 0-20: \_\_\_ 21-30: \_\_\_\_ 31-40: \_\_\_ 41-50: \_\_\_ 51-60: \_\_\_ 61+ \_\_\_\_
25. Are you a: Visitor \_\_\_\_\_ Worker \_\_\_\_\_
26. Where do you live? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
27. How long did it take you to travel here today?   
    Less than 1 hour \_\_\_\_ Between 1 and 2 hours \_\_\_\_\_   
    Between 2 and 3 hours \_\_\_\_\_ More than 3 hours \_\_\_\_\_
28. How did you get here?   
    Bus \_\_\_\_ Minibus \_\_\_\_\_ Car\_\_\_\_\_\_ Motorbike\_\_\_\_  
    Bike \_\_\_\_\_\_ Walk \_\_\_\_\_\_ Other\_\_\_\_\_\_\_\_\_\_\_\_
29. How many times have you visited this area?  
    First time \_\_\_\_ Twice \_\_\_ Three times\_\_\_ Many (4+) \_\_\_\_
30. How would you grade the quality of the environment in this area?
    1. Excellent: \_\_\_\_\_ Good: \_\_\_\_\_\_ OK: \_\_\_\_\_\_
    2. Poor: \_\_\_\_\_\_\_ Very Poor (needs improving): \_\_\_\_\_
31. Would you say that tourism has had a positive or a negative impact on the environmental in this area?   
    Negative impact: \_\_\_\_\_\_ Positive impact: \_\_\_\_\_\_ Both: \_\_\_\_\_
32. What environmental impacts of tourism on Mutianyu have you seen?  
    Negative impacts Positive impacts  
    Litter \_\_\_ Improved the wall \_\_\_  
    Noise Pollution \_\_\_ More tree planting \_\_\_  
    Traffic Congestion \_\_\_ Better management \_\_\_  
    Air Pollution \_\_\_ Conservation signs \_\_\_  
    Deforestation \_\_\_ Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_  
    Graffiti on wall \_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
    Footpath erosion \_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
33. M: \_\_\_ F: \_\_\_ Questionnaire No: 5
34. Age: 0-20: \_\_\_ 21-30: \_\_\_\_ 31-40: \_\_\_ 41-50: \_\_\_ 51-60: \_\_\_ 61+ \_\_\_\_
35. Are you a: Visitor \_\_\_\_\_ Worker \_\_\_\_\_
36. Where do you live? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
37. How long did it take you to travel here today?   
    Less than 1 hour \_\_\_\_ Between 1 and 2 hours \_\_\_\_\_   
    Between 2 and 3 hours \_\_\_\_\_ More than 3 hours \_\_\_\_\_
38. How did you get here?   
    Bus \_\_\_\_ Minibus \_\_\_\_\_ Car\_\_\_\_\_\_ Motorbike\_\_\_\_  
    Bike \_\_\_\_\_\_ Walk \_\_\_\_\_\_ Other\_\_\_\_\_\_\_\_\_\_\_\_
39. How many times have you visited this area?  
    First time \_\_\_\_ Twice \_\_\_ Three times\_\_\_ Many (4+) \_\_\_\_
40. How would you grade the quality of the environment in this area?
    1. Excellent: \_\_\_\_\_ Good: \_\_\_\_\_\_ OK: \_\_\_\_\_\_
    2. Poor: \_\_\_\_\_\_\_ Very Poor (needs improving): \_\_\_\_\_
41. Would you say that tourism has had a positive or a negative impact on the environmental in this area?   
    Negative impact: \_\_\_\_\_\_ Positive impact: \_\_\_\_\_\_ Both: \_\_\_\_\_
42. What environmental impacts of tourism on Mutianyu have you seen?  
    Negative impacts Positive impacts  
    Litter \_\_\_ Improved the wall \_\_\_  
    Noise Pollution \_\_\_ More tree planting \_\_\_  
    Traffic Congestion \_\_\_ Better management \_\_\_  
    Air Pollution \_\_\_ Conservation signs \_\_\_  
    Deforestation \_\_\_ Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_  
    Graffiti on wall \_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
    Footpath erosion \_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Field Sketch (fully annotated)

Site: 2

Field Sketch (fully annotated)

Site: 3