AQA

AS
Geography

7036/2 PAPER 2 – Human Geography and Geography Fieldwork Investigation

Mark scheme

7036

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Version/Stage: 1.0 Final

Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every associate understands and applies it in the same correct way. As preparation for standardisation each associate analyses a number of students' scripts. Alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Assessment Writer.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

Further copies of this mark scheme are available from aqa.org.uk

Level of response marking instructions

Level of response mark schemes are broken down into levels, each of which has a descriptor. The descriptor for the level shows the average performance for the level. There are marks in each level.

Before you apply the mark scheme to a student's answer read through the answer and annotate it (as instructed) to show the qualities that are being looked for. You can then apply the mark scheme.

Step 1 Determine a level

Start at the lowest level of the mark scheme and use it as a ladder to see whether the answer meets the descriptor for that level. The descriptor for the level indicates the different qualities that might be seen in the student's answer for that level. If it meets the lowest level then go to the next one and decide if it meets this level, and so on, until you have a match between the level descriptor and the answer. With practice and familiarity you will find that for better answers you will be able to quickly skip through the lower levels of the mark scheme.

When assigning a level you should look at the overall quality of the answer and not look to pick holes in small and specific parts of the answer where the student has not performed quite as well as the rest. If the answer covers different aspects of different levels of the mark scheme you should use a best fit approach for defining the level and then use the variability of the response to help decide the mark within the level, ie if the response is predominantly level 3 with a small amount of level 4 material it would be placed in level 3 but be awarded a mark near the top of the level because of the level 4 content.

Step 2 Determine a mark

Once you have assigned a level you need to decide on the mark. The descriptors on how to allocate marks can help with this. The exemplar materials used during standardisation will help. There will be an answer in the standardising materials which will correspond with each level of the mark scheme. This answer will have been awarded a mark by the Lead Examiner. You can compare the student's answer with the example to determine if it is the same standard, better or worse than the example. You can then use this to allocate a mark for the answer based on the Lead Examiner's mark on the example.

You may well need to read back through the answer as you apply the mark scheme to clarify points and assure yourself that the level and the mark are appropriate.

Indicative content in the mark scheme is provided as a guide for examiners. It is not intended to be exhaustive and you must credit other valid points. Students do not have to cover all of the points mentioned in the Indicative content to reach the highest level of the mark scheme.

An answer which contains nothing of relevance to the question must be awarded no marks.

Description of Annotations

Annotation	Description
?	Questionable point
[	Start of creditworthy passage
]	End of creditworthy passage
^	Missing detail / elaboration needed
AO1	Assessment Objective 1
AO2	Assessment Objective 2
Highlight	Use to highlight important phrases / examples or as a side-bar to highlight a creditworthy passage
JUST	Just at the level awarded or point just awarded
L1	Level 1
L2	Level 2
L3	Level 3
L4	Level 4
EG	Use of Example
EVAL	To show Evaluation
LNK	To show links being made
KU	To show Knowledge and Understanding
REP	Repeated Point
TV	Too vague
NAQ	Not Answering the Question
NC	Not creditworthy
Not Relevant	Wavy-line – use on side-bar to identify text that is not relevant
On Page Comment	Text box
SEEN	To show that work has been read and used on unanswered pages
H Line	Use to underline incorrect text
Tick	Use on point mark questions where creditworthy

Qu	Part	Marking guidance	Total marks

Section A

01	1	**Which would be the best type of map to show cultural and social differences within a place that you have studied?** C	1 AO1 = 1

01	2	**A student was categorising the global and local connections identified in the place being studied.** **In which of the following lists have these connections been correctly categorised?** C	1 AO1 = 1

01	3	**Outline the cultural characteristics <u>or</u> social inequalities you found in the local place that you have studied.** **<u>Mark scheme</u>** **<u>Point marked</u>** Award one mark for each relevant point with extra mark(s) for developed points (d). (Max one mark for identifying the cultural characteristic or social inequality.) **<u>Notes for answers</u>** Answers will depend on the size, location and nature of the local place studied. The answer will focus on evidence for **either** cultural characteristics **or** social inequalities. Only credit one option if examples of both are outlined in a response. Cultural characteristics are shown by the variety of religious buildings there are in the town (1). There is a church, a mosque and a synagogue (d) and they each reported a high level of attendance (d). • Comparing census maps showing the Index of Multiple deprivation highlighted social inequality (1) showed that there are two areas that have very high levels of deprivation (d) and map overlays show that these are also the areas with the highest number of migrants from Eastern Europe (d). • There is a 50% difference in the number of pupils receiving pupil premium money in two neighbouring primary schools (1) • Variations in housing density (1) can reveal social inequality with some areas having multi-occupancy properties densely packed together (d) and others having larger single	3 AO1 = 3

		households in more spacious surroundings (d) • Areas with high concentrations of certain ethnic groups (1) are shown with a concentration of ethnic shops and businesses (d).	

01	4	**Using evidence from Figures 1a, 1b and 1c, analyse the way in which this place is represented.** **AO3** – Analysis of the way in which this place is represented. **Mark scheme** **Level 2 (4–6 marks)** **AO3** – Clear analysis of the qualitative evidence provided, which makes appropriate use of data in support. Clear connection(s) between different aspects of the data and evidence. **Level 1 (1–3 marks)** **AO3** – Basic analysis of the qualitative evidence provided, which makes limited use of data and evidence in support. Basic connection(s) between different aspects of the data and evidence. **Notes for answers** The question requires analysis of the way in which this place is represented in the photographs and the text. Level 2 answers must refer explicitly to how the place is represented. • All three sources suggest this is a 'modern' place. Figure 1a refers to 'Salford is being rebuilt' and in Figure 1c the buildings are all modern. There is evidence of some older buildings in Figure 1b, but they are not at the forefront of the image the modern representation dominates. • In Figures 1a, 1b and 1c the waterways are identified as significant in place identity. • Represented as a place for tourists looking at the sign in Figure 1c and Figure 1a mentions that it is a 'place to visit', whereas in Figure 1b the focus is more on this area as a place of business opportunity. • Salford is represented as a place with good 'connectivity'. Figure 1a refers to transport infrastructure, Figure 1b to regional and national connections and Figure 1c has signs to the Metrolink. • Figure 1a represents this place in a more holistic way as a place 'to live, work, invest and visit', whereas Figure 1b represents it as a good location for business and Figure 1c is	6 AO3 = 6

		focused on tourist activity. • Figure 1b represents Salford as a 'place of media' and this is not a representation seen in the other two sources. It could be represented in this way as a 'selling point'. • Figures 1b and 1c could be seen to give 'outsider' representations of this place whereas figure 1a mentions jobs and residents and could be seen to give a more 'insider' representation of this place. • Figures 1a and 1b both represent this place as a 'work in progress' and somewhere that is not yet complete as a place. • Figure 1a represents Salford as 'sustainable' and there is evidence of green space in Figure 1b. • There are some clear similarities in how Salford is represented as a place, but the same place is also represented in different ways as the sources are for different purposes and targeted at different audiences. • Credit responses suggesting that the representation may be biased (especially 1a and 1b) as they are from promotional material.	

01	5	**Discuss how continuity and/or change in the built environment have affected perceptions of a local place that you have studied. Refer to both your own perceptions and the perceptions of others.** **AO1** – Knowledge and understanding of continuity and/or change in the built environment and our own and others' perceptions of place. Knowledge and understanding of the local place chosen for study. **AO2** – Application of knowledge and understanding by the discussion of how continuity and/or change in the built environment may have impacted on ours or others' perceptions of a place. **<u>Mark scheme</u>** **Level 3 (7–9 marks)** **AO1** – Demonstrate detailed knowledge and understanding of how continuity and /or change in the built environment may impact on ours or others' perceptions of place. **AO2** – Demonstrate detailed application of knowledge and understanding by the analysis of how continuity and/or change in the built environment may impact on our own or others' perceptions of place. Synthesises information and reaches a conclusion about how continuity and/or change in the built environment has impacted on	9 AO1 = 4 AO2 = 5

perception(s) of place. Uses appropriate evidence to fully support a conclusion about the impact of continuity and/or change in the built environment on ours and others' perception of place.
Must refer to **both** own perceptions and perceptions of others for a L3 mark.

Level 2 (4–6 marks)

AO1 – Demonstrate clear knowledge and understanding of how continuity and/or change in the built environment may impact on ours or others' perceptions of place.

AO2 – Demonstrate clear application of knowledge and understanding by the analysis of how continuity and/or change in the built environment may impact on our own or others' perceptions of place. Partially synthesises information and reaches a conclusion about how continuity and/or change in the built environment has impacted on place perception. Uses some appropriate evidence to support a conclusion about the impact of continuity and/or change in the built environment on ours and/or others' perception of place.

Level 1 (1–3 marks)

AO1 – Demonstrate basic knowledge and understanding of how continuity and/or change in the built environment may impact on ours or others' perceptions of place.

AO2 – Demonstrate basic application of knowledge and understanding by the analysis of how continuity and/or change in the built environment may impact on our own or others' perceptions of place. Reaches a conclusion about how continuity and/or change in the built environment has impacted on place perception. Uses limited evidence to support a conclusion about the impact of continuity and/or change in the built environment on ours and/or others' perception of place.

Notes for answers

The question requires a discussion of the impact of continuity and/or change(s) in the built environment on the student's own, and others' perceptions of the local place studied. Perception is the way in which the place is viewed or regarded by people (not just conflicting views about a proposed development). Discussion of other factors affecting perceptions is valid, but consideration of the built environment needs to be included to receive credit.

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AO1

- Knowledge and understanding of the local place that has been chosen for study.
- Knowledge and understanding of how the built environment is an endogenous factor that contributes to the character of a place. The built environment may include historical buildings, architecture, housing, infrastructure, factories or other man-made structures such a skate parks etc.

		• Knowledge and understanding of the students' own perception(s) of place and that of others' perceptions of the same place. • Knowledge and understanding of the way students' own perceptions of place and those of others are affected by continuity and change in the nature of places. • Credit mention of changes to the built environment, including new housing estates, regeneration of buildings for a different function, flagship or iconic buildings, demolition of significant buildings, buildings that are contested, the development of greenfield or brownfield sites. Also credit that there may have been little change to the built environment over time and this may have a significant impact on place perception. • Acknowledge that the students' own perceptions may be different or the same as those of others. (Others may be groups, such as the elderly, or individuals within or outside the locality.) • Credit the use of student's own research or fieldwork where relevant. **AO2** • Application of knowledge and understanding to discuss the impact of continuity and/or change(s) in the built environment on the student's own and others' perceptions of the local place studied. The answer may focus on either continuity or change, or analyse both. The discussion may include positive and negative perceptions of place. • Discussion of how continuity and/or change in the built environment has contributed to place-meaning and representation by individuals or groups living within the locality and/or contributed to the perceptions of this place of those from outside the locality. For example, new housing developments may be viewed negatively by those already living in a place as they may be perceived to be changing the nature of the place whereas the same changes to the built environment may be viewed positively by those moving into the new houses. • Discussion of the ways in which continuity and/or change(s) in the built environment can contribute to perceptions of a place. For example, a sense of attachment or sense of belonging may be closely bound-up with the built environment. Also, the built environment (or specific buildings) may be seen to have a significant impact on place identity. Some individual buildings or aspects of the built environment make evoke strong positive or negative feelings about a place. • Students and others' views on how continuity and/or changes in the built environment have contributed to perceptions of a place may or may not differ. Perceptions are also likely to be different for those who live, work or use this place for leisure. Perception may relate to age or length of time residing in the	

		place or whether they are 'insider' or 'outsider' perspectives on place. • Evidence from the local place study is synthesised to enable a rational, evidence-based conclusion to be reached about how continuity and/or change(s) in the built environment has/has not impacted on both the student's own and others' perceptions of this place.	

01	6	**For a distant place that you have studied, assess the extent to which flows of people have been important in developing the character of this place.** **AO1** – Knowledge and understanding how flows of people have contributed to place character. Knowledge and understanding of other factors that may contribute to place character. Knowledge and understanding of the character of a distant place. **AO2** – Assessment of how flows of people have contributed to place character. Assessment of factors other than flows of people that may have contributed to place character. **<u>Notes for answers</u>** This question makes connections between different parts of the specification content on Changing Places, specifically the linking role of flows of people in developing the character of the chosen place. Responses should focus on how far flows of people and other factors have contributed to place character. **AO1** • Knowledge and understanding of the distant place and its developing place character. • Knowledge and understanding of the role of past and present flows of people in developing place character. Flows of people may be intra-national or international. It can include out-migration or in-migration, seasonal migration, tourism or even daily flows such as commuting. • Knowledge and understanding of a range of other factors in developing place character such as trading connections, flows of investment, media influence, discovery or exhaustion of resources etc. • Knowledge and understanding that place character may include people's lived experiences, the demographic and cultural characteristics of place or socio-economic characteristics. **AO2** • An assessment of how far flows of people have been important in developing place character. Responses might examine, for example, how past and present flows of people have contributed to the character of the built environment. For example, past flows of people may have led to the	20 AO1 = 10 AO2 = 10

		development of terraced housing as people moved to urban areas for work. Out-migration may have contributed to a cycle of decline for some areas. Some may consider how flows of people has contributed to people's lived experiences of this place. • Assessing the extent to which factors other than migration have been important in creating place character. For example, a particular local industry may have helped to develop place character. • Responses may consider that flows of investment and money have contributed more to place character than flows of people. Some may argue that low migration has helped to 'preserve' the unique character of the place. • Responses may acknowledge that the role of flows of people and/or other factors in creating place character may have changed over time. • Conclusions should make a judgement about how far flows of people have contributed to the character of the distant place studied.	

Marking grid for Question 01.6

Level/ Mark Range	Criteria/Descriptor
Level 4 (16–20 marks)	• Detailed evaluative conclusion that is rational and firmly based on knowledge and understanding which is applied to the context of the question. (AO2) • Detailed, coherent and relevant analysis and evaluation in the application of knowledge and understanding throughout (AO2). • Full evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts (AO2). • Detailed, highly relevant and appropriate knowledge and understanding of place(s) and environments used throughout (AO1). • Full and accurate knowledge and understanding of key concepts and processes throughout (AO1). • Detailed awareness of scale and temporal change which is well integrated where appropriate (AO1).
Level 3 (11–15 marks)	• Clear evaluative conclusion that is based on knowledge and understanding which is applied to the context of the question (AO2). • Generally clear, coherent and relevant analysis and evaluation in the application of knowledge and understanding (AO2). • Generally clear evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts (AO2). • Generally clear and relevant knowledge and understanding of place(s) and environments (AO1). • Generally clear and accurate knowledge and understanding of key concepts and processes (AO1). • Generally clear awareness of scale and temporal change which is integrated where appropriate (AO1).
Level 2 (6–10 marks)	• Some sense of an evaluative conclusion partially based upon knowledge and understanding which is applied to the context of the question (AO2). • Some partially relevant analysis and evaluation in the application of knowledge and understanding (AO2). • Some evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts (AO2). • Some relevant knowledge and understanding of place(s) and environments which is partially relevant (AO1). • Some knowledge and understanding of key concepts, processes and interactions and change (AO1). • Some awareness of scale and temporal change which is sometimes integrated where appropriate. There may be a few inaccuracies (AO1).
Level 1 (1–5 marks)	• Very limited and/or unsupported evaluative conclusion that is loosely based upon knowledge and understanding which is applied to the context of the question (AO2). • Very limited analysis and evaluation in the application of knowledge and understanding. This lacks clarity and coherence (AO2). • Very limited and rarely logical evidence of links between knowledge and understanding to the application of knowledge and understanding in different contexts (AO2). • Very limited relevant knowledge and understanding of place(s) and environments (AO1). • Isolated knowledge and understanding of key concepts and processes. (AO1) • Very limited awareness of scale and temporal change which is rarely integrated where appropriate. There may be a number of inaccuracies. (AO1).

Level 0 (0 marks)	• Nothing worthy of credit.

Qu	Part	Marking guidance	Total marks

Section B

02	1	**Outline one ethical consideration you should think about when collecting geographical data.** **<u>Point marked</u>** Allow one mark for each suggestion and one mark for development (d). Generally, the first mark will be for a specific ethical consideration, such as confidentiality, and the development may be an example, why it is a consideration or how it is addressed. **<u>Notes for answers</u>** This will involve learned knowledge and understanding of the specification and/or of fieldwork carried out. • Permission should be sought for anything that is recorded or written down (1) to ensure that interviewees are active participants and/or are fully aware of the nature of the investigation with which they are taking part (d). • Confidentiality is an important concern (1) so respondents should not normally be named (d). • The purpose of the research should be clearly explained to any respondents (1) in order that they can make a choice about whether to take part or not (d). • The location of the fieldwork should be carefully considered (1) for the safety of those involved in the process (d). • Data collection methods should give consideration to the natural/physical environment (1) and aim to minimise disruption or damage to wildlife, habitats, landscapes etc. (d). • The investigation should give consideration to other users of the site (1), for example hikers (d).	2 AO1 = 2

02	2	**Using Figure 2, suggest how the map could be a useful starting point for fieldwork investigations into both the physical and human geography in this area.** **<u>Point marked</u>** Award one mark for each suggestion of how the map would be a useful starting point for local fieldwork investigations. Allow additional mark for developed point (d). Max three marks if only physical or human fieldwork considered. Naming or listing features seen on the map is insufficient for credit; candidates need to relate features to fieldwork investigations. • There are a number of rivers on the map that students could	4 AO3 = 4

		use for a river study (1) and they could identify rivers that may form the basis of a comparative study (d). • Students may look at the impact of nearby settlements on river water quality (1) or rates of run-off (1). • Fieldwork about coastal processes (1) or specific coastal landforms such as the spit that is seen on the map (d). Direction of longshore drift could be investigated (1). • A number of settlements are shown which could be compared for quality of life or amenity surveys (1) or qualitative data could be collected about places on the map (1). • The map could be useful for considering the sites for a comparative investigation on air quality (1). • There is a regional airport in Norwich and this may enable students to investigate the impact of noise for those living near to the flight path (1). • Norwich could offer opportunities for urban geography fieldwork such as environmental quality surveys (1).	

02	3	**Using Figure 2, suggest <u>two</u> limitations of using this map as a planning tool for fieldwork.** **<u>Point marked</u>** Award one mark for each suggested limitation. No credit for developed points. • The scale of the map is too large for planning a local fieldwork enquiry (1). • It is difficult to identify what would be safe and/or suitable sites for physical fieldwork involving coasts or rivers (1). • Landscape features (other than rivers) are not marked on this map, so limited use for physical fieldwork (1). • It is not possible to identify the size of the settlements or their amenities, so limited use for planning human fieldwork (1). • Credit other relevant suggestions.	2 AO3 = 2

02	4	**State the aim of your fieldwork investigation.** **Justify how you analysed your data in order to achieve the aims and objectives of the enquiry.** **AO1** – Knowledge and understanding of methods of data analysis and the aims and objectives of the enquiry. **AO2** – Application of knowledge and understanding of the methods of data analysis used to justify the choices made regarding appropriate methods of analysis that would enable aims and objectives to be achieved. **<u>Mark scheme</u>**	6 AO1 = 2 AO2 = 4

Level 2 (4–6 marks)
AO1 – Clear knowledge and understanding of the data analysis methods used. Clear knowledge of how these were appropriate to achieve the aims and objectives of this enquiry.

AO2 – Clearly applies knowledge and understanding of the data analysis methods used and justifies personal choices made. Makes a direct link between the choice of data analysis method(s) and the aims and objectives of the enquiry.

Level 1 (1–3 marks)
AO1 – Basic knowledge and understanding of the data analysis methods used. Basic knowledge of how these were appropriate to achieve the aims and objectives of this enquiry.
AO2 – Basic application of knowledge and understanding of the data analysis methods used and limited justification of personal choices made. Basic links made between the choice of data analysis method(s) and the aims and objectives of the enquiry.

Notes for answers.
There is some requirement for knowledge and understanding of data analysis method(s), but the emphasis in this question is on applying knowledge and understanding to make judgements and to justify how these were appropriate analysis methods to achieve the aims and objectives of the enquiry.

AO1

- Knowledge and understanding of the process of data analysis in a geographical enquiry sequence.
- Knowledge and understanding of data analysis method(s) (statistical tests; use of descriptive statistics; analysing trends; spatial analysis using map and geospatial techniques; coding; discourse or image analysis etc).
- Knowledge and understanding of the aims and objectives of the enquiry and how this links to the methods, eg: Qualitative studies – coding, discourse analysis etc. Quantitative studies – statistical tests, descriptive statistics, graphical techniques, etc.
- Knowledge and understanding of the actual data analysis tools used to achieve the aims and objectives of the enquiry.

AO2

- Application of knowledge and understanding to justify the choices made for this enquiry. For example, method(s) of data analysis and how they were suitable to help achieve the aims and objectives of this enquiry.
- Justification is likely to include an acknowledgement that the analysis method(s) chosen was linked to whether the aims and objectives included the testing of a hypothesis(es) that would lend itself to quantitative data analysis or whether it was a more 'exploratory' enquiry that would lend itself to more

		qualitative data analysis methods. • Application of knowledge and understanding to show that there is a link between the chosen method(s) of data analysis and the aims and objectives of the enquiry. For example, if the aim of the study was to examine spatial patterns then geospatial techniques of analysis may have been used such as overlays and other cartographic techniques. Similarly, aims and objectives linked to trends may use graphs to carry out analysis in relation to aims and objectives and comparative studies may use descriptive statistics such as measures of central tendency and dispersion. • Acknowledgement that if the aims and objectives were to examine relationships between data sets, then it is likely that results of statistical tests, such as Spearman's Rank Correlation and application of significance may have been used to analyse the data in relation to a set hypothesis. • Application of knowledge and understanding to link the aims and objectives of the enquiry to justify decisions regarding data analysis. For example, some qualitative data collected may have been quantified in order to analyse the data in relation to specific aims and objectives. Alternatively, coding may be justified as an objective method for analysing text, such as interview transcripts or other methods of qualitative analysis may be more appropriate in relation to aims and objectives, for example, discourse or image analysis.	

02	5	**To what extent did the use of secondary sources of data in your investigation contribute to the conclusions you reached?** **AO1** – Knowledge of the fieldwork enquiry that was carried out. Knowledge of secondary and primary sources of data used in the enquiry. Knowledge of conclusions reached. **AO2** – Application of knowledge and understanding to evaluate the extent to which secondary data sources contributed to the conclusions reached. Assessment of the relative importance of secondary sources to the overall conclusions reached compared to the importance of primary data sources. **Level 3 (7–9 marks)** **AO1** – Detailed knowledge and understanding of the sources of data used in the enquiry process and of the conclusions reached. **AO2** – Detailed evaluation of the sources of data to assess the relative contribution of secondary data sources to the conclusions, that is well-supported with evidence from the enquiry. Makes detailed links between the data sources and conclusions reached. Rational conclusions reached about the extent to which secondary data sources contributed to conclusions. **Level 2 (4–6 marks)**	9 AO1 = 3 AO2 = 6

AO1 – Clear knowledge and understanding of the sources of data used in the enquiry process and of the conclusions reached.
AO2 – Clear evaluation of the sources of data to assess the relative contribution of secondary data sources to the conclusions, that is supported with evidence from the enquiry. Makes clear links between the data sources and conclusions reached. Partial conclusions reached about the extent to which secondary data sources contributed to conclusions.

Level 1 (1–3 marks)
AO1 – Basic knowledge and understanding of the sources of data used in the enquiry process and of the conclusions reached.
AO2 – Basic evaluation of the sources of data to assess the relative contribution of secondary data sources to the conclusions, that is supported with evidence from the enquiry. Makes basic links between the data sources and conclusions reached. Basic conclusions reached about the extent to which secondary data sources contributed to conclusions.

Notes for answers
The question requires an evaluation of the importance of secondary data sources used in the fieldwork investigation carried out by the candidate in relation to conclusions reached. This can include evaluation of the quality/value of the secondary sources.

AO1

- Knowledge and understanding of the fieldwork enquiry carried out, specifically the sources of data used.
- Knowledge of conclusions reached.
- Knowledge of the usefulness of secondary data sources and how they may contribute to conclusions reached.
- Knowledge of appropriate secondary data sources.
- Knowledge and understanding of the importance of secondary data sources for the enquiry.
- Consideration of the links between secondary data sources, and conclusions reached.
- Knowledge and understanding of possible strengths and limitations of the secondary data sources used.
- Knowledge of primary sources of data that have contributed to conclusions reached.

AO2

- Evaluation of the importance of secondary sources of data to the final conclusions reached.
- Evaluation of the contribution of the secondary sources to the conclusions may be linked to the fact that these sources were originally collected for a different purpose and may not be directly linked to the aims of this enquiry and this may limit the contribution it can make to conclusions reached. Primary data is more likely to lead to conclusions that are directly relevant to the aims of this enquiry.

		• Evaluation of the contribution of secondary data to the conclusions may be linked to any perceived problems with the reliability and validity of secondary data sources. Primary data may be seen to have led to more valid conclusions as it is original and unbiased. • The evaluation of secondary data sources might show that they are useful for helping to draw conclusions about changes over time or to compare different locations. • The usefulness of secondary data sources for drawing conclusions may be questioned if the findings contradict that of the student's primary data collection. Conversely, findings that are similar may help to verify the student's own conclusions. • Credit suggestions that secondary data sources may have helped in the analysis of data and therefore contributed significantly to conclusions. For example, overlays of census or rainfall data may have helped to explain geographical patterns found which then contributed to overall conclusions reached. • Credit suggestions that secondary sources of data contributed less to the conclusions reached, but contributed more to the planning stages of the enquiry. • Overall, a judgement may be reached that primary data collection contributed more significantly to the final conclusions as it was a fieldwork investigation that centred around the collection of primary data in the field. • Other assessments might suggest that secondary sources of data contribute equally to the conclusions reached or alternatively that conclusions could not have been reached by using secondary sources alone.	

03	1	**Using Figure 4, suggest what further background reading or research would be useful for the student before planning the investigation in more detail.** One mark for reasonable suggestion (1) and further marks for development (d). • The student could read about the studies conducted in larger cities (1) as this would help to show what methods of data collection have been used (d), what analysis was carried out (1) or what conclusions have been reached (d). • Other studies of a similar nature (1) may be useful for planning data collection techniques (d) or examining how data can be presented (d) or useful to compare findings (d). These studies may offer alternative models for the student to consider (1). • Research of relevant secondary sources of data (1) – further marks and development points for identifying relevant sources such as: - census data (1) in different areas(wards) of the town (d) to establish a pattern of house ownership/occupancy(d) - housing types and/or market values (1) in different parts of Blackburn, available from estate agents (d) - local government data (1) such as value of domestic properties for council tax purposes (d) in different parts of the town. • Credit other valid background reading or research providing it is linked to Figure 4.	4 AO3 = 4

03	2	**Using Figure 5, outline <u>one</u> advantage of the sampling technique chosen** One mark for any valid advantage (1) and a further mark for development (d). For example: • The sampling points would be equidistant (1), meaning that a systematic sample could be collected (1) this would increase the reliability and/or validity of the data (d). • Data collected across a transect (1) would enable the student to compare their findings with the transect model of the large city (d). • The number of sampling points would mean that data could be collected over a short timescale (1) and would be manageable for one person to collect (d). • The location of sampling points at grid square references would be easy to locate using GPS (1) and it would be easy to overlay the data onto maps using GIS in order to spatially analyse the findings (d).	2 AO3 = 2

03	3	**Using Figure 5, outline <u>one</u> health and safety risk that the student would need to consider when using this sampling technique to collect data.** One mark for any reasonable suggestion (1) and one mark for development (d). Generally, one mark for identifying a risk, the second mark for 'why' it is a risk (not how it is mitigated). • Survey points are near main roads/railways (1) and would mean that there was a risk of injury from the traffic/rail hazard (d). • Personal safety would need to be considered if conducting the survey alone (1) as some survey points may be relatively isolated or in large built-up areas (d). • There may be a risk of personal injury (1) as in the semi-rural areas there may be a hazard of walking on uneven surfaces (d) to reach survey points (d).	2 AO3 = 2

03	4	**Using Figures 3, 4, 5, and 6 evaluate the extent to which the planned data collection would enable the student to reach valid conclusions.** **AO3** - Use a range of information and techniques to synthesise and draw aspects of the study together. Evaluation of data collection. **<u>Mark scheme</u>** **Level 3 (7–9 marks)** Detailed use of information about the enquiry which is used to evaluate how planned data collection could lead to valid conclusions. Detailed evidence of drawing together different elements of the study in order to support the response. **Level 2 (4–6 marks)** Use of information about the enquiry which is used to evaluate how planned data collection could lead to valid conclusions. Clear evidence of drawing together different elements of the study in order to support the response. **Level 1 (1–3 marks)** Basic use of information about the enquiry which is used to evaluate how planned data collection could lead to valid conclusions. Basic evidence of drawing together different elements of the study in order to support the response.	9 AO3 = 9

Notes for answers

- Responses should focus on the data in the figures (AO3) and not the student's own knowledge and understanding (AO1, AO2)
- Acceptable for response to focus on evaluation of the planned data collection in the context of the overall investigation without having to explicitly refer to all figures.
- The systematic sample would enable the hypothesis to be tested and a conclusion reached about variations in housing type and quality across the town. A 'transect' of data across the town may make it easier to draw conclusions about how housing changes as outlined on the model in the background reading.
- Distances from the town centre could be measured for each data collection point and the student could use scatter graphs to identify if there is a relationship between distance from the town centre and housing type and/or quality. In addition, a statistical technique, such as Spearman's Rank Correlation could be used to test the strength of any such relationship enabling firmer conclusions to be drawn about whether there is a relationship between distance from the CBD and type of housing or housing quality.
- The housing data collected could be plotted and overlaid onto a map to analyse if there is a particular pattern of housing type/quality. This could be 'triangulated' with evidence from OS maps, aerial photographs and census data.
- There was an attempt to collect data in a way that was easy to quantify. However, judgements about housing quality are subjective and the student's own value judgements may impact on the validity of conclusions about housing quality.
- Some students may question whether the same conclusions could have been reached by the use of the secondary data alone.
- Overall, the student would be able to map and graph types of housing and quality of housing in order to identify spatial variations across the town and draw conclusions in relation to the hypothesis.

4	1	**Using Figure 8, suggest what further background reading or research would be useful for the student before planning the investigation in more detail.** One mark for any reasonable suggestion (1) and further marks for development (d). • The student could read about the studies conducted in larger cities (1) as this would help to show what methods of data collection have been used (d), what analysis was carried out (1) or what conclusions have been reached (d). • Other studies into local or urban climates (1) may be useful for planning data collection techniques (d) or examining how data can be presented (d) or useful to compare findings (1). • Research of relevant secondary sources of data (1) – further marks and development points for identifying relevant sources such as: - researching data from the Weather Observation website (1) to establish a pattern of temperatures in the town and surrounding areas (d) - research thermal imaging maps of the area(1) as these would give a snapshot spatial pattern of temperature variation (d). • Credit other valid background reading or research providing it is linked to Figure 8.	4 AO3 = 4

04	2	**Using Figure 9, outline <u>one</u> advantage of the sampling technique chosen.** One mark for any reasonable point (1) and one mark for development (d). For example: • The sampling points would be equidistant (1), meaning that a systematic sample could be collected (1) this may increase the reliability and/or validity of the data (d). • Data collected across a transect (1) would enable the student to compare their findings with the transect model of the large city (d). • The number of sampling points would mean that data could be collected over a short timescale (1) and would be manageable for one person to collect (d) and would minimise variations in temperature data caused by time of day (d). • The location of the sampling points at grid square references would be easy to locate using GPS (1) and it would be easy to overlay the data onto maps using GIS in order to spatially analyse the findings (d).	2 AO3 = 2

04	3	**Using Figure 9, outline <u>one</u> health and safety risk that the student would need to consider when using this sampling technique to collect data.** One mark for any reasonable suggestion (1) and one mark for development (d). Generally, one mark for identifying a risk, the second mark for 'why' it is a risk (not how it is mitigated). • Survey points are near main roads/railways (1) and would mean that there was a risk of injury from the traffic/rail hazard (d). • Personal safety would need to be considered if conducting the survey alone (1) as some survey points may be relatively isolated or in large built-up areas (d). • There may be a risk of personal injury (1) as in the semi-rural areas there may be a hazard of walking on uneven surfaces (d) to reach survey points (d).	2 AO3 = 2

04	4	**Using Figures 7, 8, 9 and 10, evaluate the extent to which the planned data collection would enable the student to reach valid conclusions.** **AO3** – Use a range of information and techniques to synthesise and draw aspects of the study together. Evaluation of data collection. **<u>Mark scheme</u>** **Level 3 (7–9 marks)** **AO3** – Detailed use of information about the enquiry which is used to evaluate how planned data collection could lead to valid conclusions. Detailed evidence of drawing together different elements of the study in order to support the response. **Level 2 (4–6 marks)** **AO3** – Use of information about the enquiry which is used to evaluate how planned data collection could lead to valid conclusions. Clear evidence of drawing together different elements of the study in order to support the response. **Level 1 (1–3 marks)** **AO3** – Basic use of information about the enquiry which is used to evaluate how planned data collection could lead to valid conclusions. Basic evidence of drawing together different elements of the study in order to support the response.	9 AO3 = 9

Notes for answers

- Responses should focus on the data in the figures (AO3) and not the student's own knowledge and understanding (AO1, AO2)
- Acceptable for response to focus on evaluation of the planned data collection in the context of the overall investigation without having to explicitly refer to all figures.
- The systematic sample of temperature would enable the hypothesis to be tested and a conclusion reached about the spatial patterns of temperature across the survey site. A 'transect' of data across the town may make it easier to draw conclusions about a 'temperature gradient' as outlined on the graph in the background reading.
- Distances from the town centre could be measured for each data collection point and the student could use scatter graphs to identify if there is a relationship between distance from the town centre and temperature recorded. In addition, a statistical technique, such as Spearman's Rank Correlation could be used to test the strength of any such relationship enabling firmer conclusions to be drawn about a temperature differences with distance from the town centre.
- The temperature data collected could be plotted and overlaid onto a land use map to analyse if there is a spatial relationship between built-up land and temperature although it would not be possible to draw conclusions about cause and effect that is alluded to in the background reading.
- The secondary data on wind could help to account for anomalies or factors other than land use that may be influencing the temperatures and contribute to conclusions reached.
- The background reading suggests that the temperature differences tend to be greater at night. The student, however, has recorded the differences during the day and this may affect the validity of conclusions. Also, the student would be collecting temperatures at different times during the day which would affect the reliability of data and any conclusions reached. Any decrease in temperature with altitude has also not been considered.
- Overall, the student would be able to map and graph temperature recordings and reach tentative conclusions about differences in relation to land use changes across the city. However, the student needed to take more account of factors that might skew the results such as time of day and weather

		conditions.	