GCSE
GEOGRAPHY
8035/3

Paper 3 Geographical Applications

Mark scheme

June 2022

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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 Examiner.

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.

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Point marked questions marking instructions

The mark scheme will state the correct answer or a range of possible answers, although these may not be exhaustive. It may indicate how a second mark is awarded for a second point or developed idea. It may give an indication of unacceptable answers. Each mark should be shown by placing a tick where credit is given. The number of ticks must equal the mark awarded. Do not use crosses to indicate answers that are incorrect.

Level of response marking instructions

Level of response mark schemes are broken down into levels, each of which has a descriptor. The descriptor is linked to the Assessment Objective(s) being addressed. The descriptor for the level shows the average performance for the 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. You should read the whole answer before awarding marks on levels response questions.

Step 1 Determine a level

Descriptors for the level indicate the different qualities that might be seen in the student's answer for that level. 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 2 with a small amount of Level 3 material it would be placed in Level 2 but be awarded a mark near the top of the level because of the Level 3 content. For instance, in a 9 mark question with three levels of response, an answer may demonstrate thorough knowledge and understanding (AO1 and AO2) but fail to respond to command words such as assess or evaluate (AO3). The script could still access Level 2 marks. Note that the mark scheme is not progressive in the sense that students don't have to fulfil all the requirements of Level 1 in order to access Level 2.

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 also help. There will generally 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.

Assessment of spelling, punctuation, grammar and use of specialist terminology (SPaG)

Accuracy of spelling, punctuation, grammar and the use of specialist terminology will be assessed via the indicated 9 mark questions. In each of these questions, three marks are allocated for SPaG as follows:

- **High performance** – 3 marks
- **Intermediate performance** – 2 marks
- **Threshold performance** – 1 mark

Responses with SPaG marks that gain a mark of 0 for the content/skills of the question can still be awarded SPaG marks if the response is judged to be a genuine attempt to answer the question.

General guidance

- Mark schemes should be applied positively. Examiners should look for qualities to reward rather than faults to penalise. They are looking to find credit in each response they mark. Unless the mark scheme specifically states, candidates must never lose marks for incorrect answers.
- The full range of marks should be used. Examiners should always award full marks if deserved, ie if the answer matches the mark scheme.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked unless the candidate has replaced it with an alternative response.
- Do NOT add ticks to level-marked questions – use the highlight tool/brackets to signify what is relevant.
- Sometimes there are specific "triggers" in the mark scheme that enable higher level marks to be awarded. For instance, an example or case study may be required for Level 3 if it is stated within the question.
- Where a source, such as a photograph or map, is provided as a stimulus it should be used if requested in the question, but credit can often be given for inferred as well as direct use of the source.
- Always be consistent – accept the guidelines given in the mark scheme and apply them to every script
- If necessary make comments to support the level awarded and to help clarify a decision you have made.
- Examiners should revisit standardised script answers as they apply the mark scheme in order to confirm that the level and the mark allocated is appropriate to the response provided.
- Mark all answers written on the examination paper.

Section A : Issue evaluation

<table>
<tr><th>Qu</th><th>Pt</th><th>Marking Guidance</th><th>Total marks</th></tr>
<tr><td>01</td><td>1</td><td>What percentage of waste in the UK was household waste in 2018?

One mark for correct answer:

B: 12%

No credit if two or more answers are shaded.

AO4c – 1 mark</td><td>1</td></tr>
<tr><td>01</td><td>2</td><td>Describe the trend in the rate of recycling in England between 2000–2019.

1 mark for some appreciation of increase across the whole time period.
1 mark for use of data (2000 - 11/12% and 2019 – 46% / increased by around 35/36% / just over 10% (2000) and 45% (2019))

1 mark for identifying a single change in relation to distinct periods;
- rapid growth for first ten years approximately
- relatively static/slow growth from about 2010 -2018
- slight decline from 2018

No credit for simply saying ‘it has stalled’.

AO4c – 2 marks</td><td>2</td></tr>
<tr><td>01</td><td>3</td><td>Suggest why the government’s aim to recycle 65% of waste by 2035 may not be met.

<table>
<tr><th>Level</th><th>Marks</th><th>Description</th></tr>
<tr><td>2
(Clear)</td><td>3–4</td><td>AO2 – Demonstrates a clear awareness of the concept of recycling and the processes involved in order to allow it to work effectively.
AO3 – Applies understanding of recycling to offer analytical observations based on the information in the resources.</td></tr>
<tr><td>1
(Basic)</td><td>1–2</td><td>AO2 – Demonstrates some understanding of the concept of recycling with limited awareness of the processes involved.
AO3 – Applies limited understanding of recycling by identifying appropriate points from the resource.</td></tr>
<tr><td></td><td>0</td><td>No relevant content.</td></tr>
</table>

• Level 2 (clear) – sound use of resources which uses information to explain the complexity of recycling and why the aim to recycle 65% of waste by 2025 may not be met.</td><td>4</td></tr>
</table>

		Limited investment in recycling plants – restricts the ability to increase recycling. The system of sorting, collecting is complicated –discourages people from participating in recycling. People know that rubbish is being burnt or being sent to landfill -discourages them from recycling Instructions on packaging are complicated-this discourages people from recycling • **Level 1 (basic)** – a limited number of appropriate points identified/copied which are used to offer basic descriptive observations. Identifies factors from the resource with no real development. Limited investment in recycling plants. The system of sorting, collecting is complicated. People know that rubbish is being burnt / sent to landfill Instructions on packaging are complicated <u>Indicative content</u> The resource makes it clear that recycling is a complex relationship between a number of different parties, including: • industry (use of materials/packaging/labelling) • individuals (understanding what can be recycled/how to recycle) • waste management (investment in plant). Other factors which are mentioned include: • communication/information (confusion about this) • the ease with which recycling can be carried out • the relative cost of recycling • how incineration might be curtailing recycling. AO2 (1) – 2 marks; AO3(b) – 2 marks	

01	4	**Give one reason why managing waste is a global issue.** Accept any reasonable point which expresses a global link. This could include: • the idea of trade in waste • recycling as an international business • pollution associated with waste adding to the threat of global warming/climate change/marine pollution • increased globalisation/development generates increasing amounts of waste • it is an issue for most countries (so is a global issue) No credit for stating that there is more waste. AO2(2) – 1 mark	1

01	5	**Waste should be seen as 'a resource opportunity rather than a problem'.** **Do you agree? Explain your answer.**	6

Level	Marks	Description
3 (Detailed)	5–6	AO2 – Demonstrates a thorough understanding of the concept of a resource and the relative part that waste can play in resource management. Shows sound awareness of the concept of sustainability. AO3 – Demonstrates thorough application of knowledge and understanding in making a judgement about the opportunities and problems relating to the management of waste.
2 (Clear)	3–4	AO2 – Demonstrates a clear understanding of the concept of a resource and the part that waste can play in resource management. Some appreciation of the concept of sustainability. AO3 – Demonstrates reasonable application of knowledge and understanding in making a judgement about the opportunities and/or problems relating to the management of waste.
1 (Basic)	1–2	AO2 – Demonstrates some understanding of the concept of a resource and how recycling can provide resources. AO3 – Demonstrates basic application of knowledge and understanding in making a judgement about the opportunities and/or problems relating to the management of waste.
	0	No relevant content.

- **Level 3 (detailed)** – a range of supporting points identified and developed from the resources in order to develop an evaluative discussion. Offers detailed observations which develop a discussion which considers the opportunities and problems of managing waste and how effective waste management can provide resources.

- **Level 2 (clear)** – sound use of resources which identifies how waste can provide resource opportunities and offers a clear attempt at an evaluative discussion about the problems and/or opportunities of managing waste. Some development beyond the source.

- **Level 1 (basic)** – a limited number of appropriate points identified/copied which are used to offer basic descriptive observations about problems and/or opportunities.

Indicative content

		• The question picks up the debate about the circular waste economy identified within the resource booklet. • The question brings in the concept of sustainability (short term verses long term management). • The "problems" identified are largely related to cost and environmental factors. • Although many materials can be recycled/re-used (paper and metals are mentioned within the resource), not all materials can be recycled/re-used so it is not a total solution to resource use. • Cost and technical factors may make the recycling of some materials not viable. • There are relative cost issues (it may be cheaper to dispose of waste in other ways; it may be cheaper to produce new resources rather than recycle old materials). AO2(1) – 3 marks, AO3(d) – 3 marks	
		Spelling, punctuation and grammar (SPaG) **Responses with SPaG marks that gain a mark of 0 for the content/skills of the question can still be awarded SPaG marks if the response is judged to be a genuine attempt to answer the question.** **High performance** • Learners spell and punctuate with consistent accuracy. • Learners use rules of grammar with effective control of meaning overall. • Learners use a wide range of specialist terms as appropriate. **Intermediate performance** • Learners spell and punctuate with considerable accuracy. • Learners use rules of grammar with general control of meaning overall. • Learners use a good range of specialist terms as appropriate. **Threshold performance** • Learners spell and punctuate with reasonable accuracy. • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. • Learners use a limited range of specialist terms as appropriate. **No marks awarded** • The learner writes nothing. • The learner's response does not relate to the question. • The learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.	**3** **2** **1** **0**

02	1	**Why will dealing with waste be a challenge for the Cambridge area in the future?** Accept 2x1 marks for two identified points • Growing population • Increasing number of households • Increase in Industry • Limited recycling provision • Limited landfill space. • Incinerator won't be built • Dealing with waste is expensive • Air pollution is/will be harmful to people • Local conflicts of interest/land use conflicts 2 marks for developed point • Population numbers are increasing (1) which means more waste will be generated (1)(d). • There is an increase in housebuilding (1) which means that there will be more construction waste (1)(d). • There is limited landfill space (1) so other methods of dealing with waste will be required (1)(d). AO3(b) – 2 marks	2

02	2	**Using map evidence, describe the physical geography of the area surrounding the proposed incinerator development.** Any 2x1 marks for two identified points OR 2 marks for a developed idea or use of evidence to support an identified point. The two key physical features are: • the nature of the relief (low-lying/flat/no hills) (1) – few contour lines/10 metres high/spot height evidence(1) floodplain (1) • evidence of surface water/drainage (1) - streams/lakes (d) (1) AO3(a) – 2 marks	2

02	3	**What is the approximate direct distance from the roundabout (470621) to the proposed incinerator site?** One mark for correct answer: **D:** 7km No credit if two or more answers are shaded. AO4(c) – 1 mark	1

02	4	**'Managing waste is both an economic and an environmental issue.' Discuss this statement.**	6

Level	Marks	Description
3 (Detailed)	5–6	AO3 – Applies knowledge and understanding to offer a discussion based on a wide range of evidence, making specific links between different elements of the specification. AO4 – Communicates ideas with clarity and good use of geographical language.
2 (Clear)	3–4	AO3 – Applies knowledge and understanding to offer a discussion based on a reasonable range of evidence, making some links between different elements of the specification. AO4 – Communicates ideas effectively with some use of geographical language.
1 (Basic)	1–2	AO3 – Applies knowledge and understanding to offer a discussion based on a narrow range of evidence, with limited links between different elements of the specification. AO4 – Communicates ideas using basic language.
	0	No relevant content.

- **Level 3 (detailed)** – a range of supporting points identified and developed from the resources in order to develop a discussion. Reference made to points from the resource booklet which brings in the wider specification context. Offers detailed observations which develop a discussion which considers both economic and environmental factors.

- **Level 2 (clear)** – sound use of resources which identifies economic and/or environmental factors and uses this information as the basis for a discussion. Some development beyond the source.

- **Level 1 (basic)** – a limited number of appropriate points identified/copied which are used to offer basic descriptive observations about economic and/or environmental factors with limited attempt to offer a discussion.

<u>Indicative content</u>

- Economic factors include
  - Reference to job creation
  - Waste management seen as a major national/international business which has significant local and national economic significance.
  - Development and operational costs
  - Links to the multiplier (technological development/construction/transportation).

		• A range of environmental factors are considered, including: ○ air pollution/climate change ○ water pollution ○ landfill issues ○ visual impact ○ illegal dumping ○ links to health issues. AO3(c) – 3 marks, AO4(d) – 3 marks	

03

The proposal to build the waste incinerator was rejected in June 2020. Do you think that this was the correct decision?

Use evidence from the resources booklet and your own understanding to explain your answer.

9 + 3 SPaG

Level	Marks	Description
3 (Detailed)	7–9	AO3 – Demonstrates thorough application of knowledge and understanding in evaluating the opportunities and challenges relating to the development of waste incinerators. AO3 – Applies knowledge and understanding to make a decision based on a wide range of evidence, making specific links between different elements of the specification. AO4 – Communicates ideas with clarity and good use of geographical language.
2 (Clear)	4–6	AO3 – Demonstrates reasonable application of knowledge and understanding in evaluating the opportunities and challenges relating to the development of waste incinerators. AO3 – Applies knowledge and understanding to make a decision based on a reasonable range of evidence, making some links between different elements of the specification. AO4 – Communicates ideas effectively with some use of geographical language.
1 (Basic)	1–3	AO3 – Demonstrates basic application of knowledge and understanding in evaluating the opportunities and challenges relating to the development of waste incinerators. AO3 – Applies knowledge and understanding to make a decision based on a narrow range of evidence, with limited links between different elements of the specification. AO4 – Communicates ideas using basic language.
	0	No relevant content.

- **Level 3 (detailed) –** a range of supporting points identified and developed from the resources in order to support a judgement. Reference made to points across the resource booklet which brings in the wider specification context. Offers detailed observations which develop a discussion and support an evidenced judgement.

- **Level 2 (clear) –** use of Figure 3 and some reference to the other resources used in order to support a discussion. Some developed points from resource booklet to support the judgment.

- **Level 1 (basic) –** a limited number of appropriate points identified, mainly from Figure 3, which are largely copied or with limited development. Offers a narrow range of basic observations to support a judgement.

<u>Indicative content</u>

- Responses might use evidence to consider the viability of waste incinerators in general or focus on the specific issue of the waste incinerator under discussion. A more general discussion is likely to be self-limiting in relation to the use of specific locational evidence.
- Focus might be concentrated on the merits of waste incinerators or make relative judgements in relation to other types of waste management. A narrow assessment of waste incinerators alone, in the context of the issue, is likely to be self-limiting.
- Waste incineration is seen as an efficient way of dealing with large quantities of waste.
- There are environmental questions about potential air pollution and links to health issues and climate change.
- Heat and energy generated is seen as an important part of a sustainable energy mix.
- There is a relative judgement in terms of how waste incineration can take the pressure off the need to use landfill.
- There are other potential by-products that can be utilised (ash).
- Waste incineration requires large and regular quantities of waste in order to be efficient. As such it may put pressure on recycling and potential resources may be lost to incineration.
- With the increasing cost of exporting waste and more limited global opportunities for exporting waste there will be an increasing volume of waste to manage within the UK.
- Waste incineration is not seen as a viable part of the ‘Zero waste hierarchy/circular waste economy’.

		In relation to Cambridge • Population growth, industrial development and construction will create additional waste. • The current landfill arrangements have a relatively short time-span so there will be a need for alternative arrangements. • With general recycling rates around 45% there is an opportunity for more recycling but this will require additional facilities. • The proposed waste incinerator will have a significant visual impact. • A new town is going to be built nearby. The waste incinerator can supply this new town (and many other homes) with energy, although there may be concerns about pollution issues because of the nearness to such a large residential area. • The development will create a large number of employment opportunities. • There is a debate about the notion of 'green energy' related to waste incineration. • There may be issues relating to different phases of development (construction/running). AO3(c) – 3 marks, AO3(d) – 3 marks, AO4(d) – 3 marks	
		Spelling, punctuation and grammar (SPaG) **Responses with SPaG marks that gain a mark of 0 for the content/skills of the question can still be awarded SPaG marks if the response is judged to be a genuine attempt to answer the question.** **High performance** • Learners spell and punctuate with consistent accuracy. • Learners use rules of grammar with effective control of meaning overall. • Learners use a wide range of specialist terms as appropriate. **Intermediate performance** • Learners spell and punctuate with considerable accuracy. • Learners use rules of grammar with general control of meaning overall. • Learners use a good range of specialist terms as appropriate. **Threshold performance** • Learners spell and punctuate with reasonable accuracy. • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. • Learners use a limited range of specialist terms as appropriate. **No marks awarded** • The learner writes nothing. • The learner's response does not relate to the question. • The learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning.	**3** **2** **1** **0**

Section B: Fieldwork

Qu	Pt	Marking guidance	Total marks
04	1	**Which of the following methods would be an appropriate way of presenting the land use survey data?** One mark for correct answer: **C:** Pie chart No credit if two or more answers are shaded. AO4 (1a) – 1 mark	1
04	2	**What was the total environmental quality score?** Minus 6 or -6 AO4 (1c) – 1 mark	1
04	3	**Using the data from Figure 4, state two conclusions that the student might draw about the impact of tourism.** Accept any appropriate idea which is related to the purpose of the investigation and supported by the data. **No credit for just saying "more pollution", "makes environment worse"** The question asks for impacts so suggestions can be positive or negative • There are a significant number of tourist related businesses/tourism generates income. • Specific reference to the number/proportion of dedicated tourist businesses (hotels/souvenirs) • The environmental quality is affected because of traffic/congestion. • The environmental quality is affected because of litter. • Pedestrian numbers are quite high/higher in the summer/ tourism brings added numbers of people. • Lots of traffic • Lots of litter No credit for **more** traffic/**more** litter Allow two marks if the there are two creditworthy points on the same line AO4 (c) – 2 marks	2

04	4	**Suggest two ways that the primary data collection methods could be adapted to give more reliable data.** The question asks for adaptation rather than additional methods so the answer must clearly reference the information on Figure 4. Suggestions might include: • more data / larger sample/ larger number of people/longer period of time/repeated observations • different days of the week • different times of the day • different times of the year (times must be qualified) • wider range of business categories • looks at a larger area/different locations. • less biased way of carrying out environmental quality survey. Accept other relevant adaptations. No credit for reference to questionnaires/asking people. Allow two marks if the there are two creditworthy points on the same line. AO4 (1b) – 2 marks	2

04	5	**Use Figure 5 to complete the following table, which was used to analyse the students' data.** Mean: 17.6 **Mode: 17** **Median: 17.5** **Range: 4** 3x1 marks (three to complete) AO4 (1c) – 3 marks	3

04	6	**Which of the four measures shown in Question 04.5 do you feel is most useful for this enquiry?** **Give one reason for your choice.** No credit for selection. Response needs to reflect the aim of the enquiry which is to consider whether the beach gets wider from west to east. In those terms: • the mean may have some use if compared with the measurements at either end of the beach • the mean considers all values • the range can be used to identify an increase or change • mode might be useful because many measurements are the same. Credit other valid reasons. No credit for definition of terms AO4 (1a) – 1 mark	1

04	7	**Suggest a conclusion that the students might draw in relation to the original hypothesis.** 1st mark for some understanding that the data tends to prove the hypothesis (the beach gets wider from west to east/the hypothesis is supported by the evidence) 2nd mark for some development which might include: • comparative use of data (west –east). Accept 3 or 4 metre increase. • identification of anomalies/outliers (an increase overall, but not consistent) No credit for explanation of why beach gets wider (longshore drift) AO3 (1a) – 2 marks	2

04	8	**Which area shown in Figure 6 has the highest residential quality?** **Use the data in Figure 6 to justify your decision.**	4

Level	Marks	Description
2 (Clear)	3–4	AO3 – Demonstrates clear analysis of the data (Figure 6) in reaching a judgement about which area has the highest residential quality. AO4 – Clear manipulation/use of data (calculation of totals/range of data) to reach a conclusion.
1 (Basic)	1–2	AO3 – Demonstrates limited analysis of the data (Figure 6) and makes a superficial judgement about which area has the highest residential quality. AO4 – Some reference to the data in Figure 4. Limited evidence of data manipulation.
	0	No relevant content.

Level 2 (Clear) - Uses the data to make a reasoned judgement with some reference to the overall scores and individual categories.

Max 3 marks if no use of numerical data.

Level 1 (Basic) - Makes a judgement based on overall score AND/OR individual category.

Totals

A – 22 B - 26 C – 36 D – 35 (C and D appear to have the highest quality)

Credit data total if shown at the bottom of the table.

<u>Indicative content</u>

- There are significant differences in the total scores which suggest that residential quality varies.
- There are variations within the selected categories.
- The categories have equal weighting which may make the overall score unreliable.
- Area C and D have similar scores but significant variations within the data.
- Some aspects identified may be more significant in relation to residential quality.
- Different types of residents may view certain aspects as more or less important.
- There are always aspects about perception and personal preference in relation to this type of survey.

AO3 (1b) – 2 marks, AO4 (1c) – 2 marks