# Examiners' Report
# Principal Examiner Feedback

## January 2025

Pearson Edexcel International Advanced Level In Geography (WGE02) Paper 01 Geographical Investigations

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## Introduction

This report is about the January 2025 series for assessment of WGE02: Geographical Investigations. There were about 160 entries.

Most candidates completed all questions, but some wrote overlong answers for 1- or 2-mark questions. Some made mistakes on questions 3c and 3d, and wrote about the incorrect part of the route to enquiry, but overall there were sound answers for all parts of the paper from most candidates.

Overall, Q4 (Investigating Crowded Coasts) was slightly more popular than Q5 (Investigating Urban Problems, Planning and Regeneration).

## Reports on Individual Questions

### Question 1ai

Most candidates were able to identify the two ecosystems shown on Figures 1a and 1b as a coral reef and a sand dune. Each of these are listed in the specification, so it is expected that candidates would be able to recognise these.

Answers such as ocean, sand, beach and land were not credited.

### Question 1aii

Most candidates were able to score 2 marks here, writing about overfishing, litter, plastic, construction of artificial islands for example. Also human responsibility for increased CO2 emissions, resulting in global warming leading to negative impacts on coral species.

The best answers tended to focus on one of the two ecosystems in Figures 1a and 1b, but some tried to do both, resulting in superficial answers, or else overlong answers for the 2 marks available.

Some tried to explain how to prevent human activity, for example by reducing rubbish disposal into sea, which did not answer the question and scored no marks.

### Question 1b

The two 8 mark essays are designed to be broad and allow for candidates to examine the themes and bring their own interpretations.

This essay title allowed for a straightforward essay structure which examined the success of different soft engineering approaches. The best answers also considered the limitations of these methods, and many made comparisons with hard engineering approaches, which was acceptable as long as the main focus was on soft engineering.

Many answers did not mention the word ‘success’ at all, which was a shame as this was an easy route to ‘examine’ and often provided a framework to open up access to higher level 2 or level 3 marks.

Like other questions, there were key words in this question missed by some candidates. Here the focus of the question was on the success of soft engineering in protecting coasts **from erosion**. Many candidates wrote solely about flooding. Whilst these answers often included some creditable material, the emphasis of the answer was incorrect, and restricted the marks gained. Some were confused about what approaches are considered as soft engineering, and either wrote solely about sea walls, riprap and groynes, or else did not distinguish between hard and soft approaches. The specification in 2.3.4.1b clearly identifies beach nourishment, cliff re-grading and drainage and dune stabilisation as soft approaches, and in and 2.3.4.3b beach profiling is listed as a sustainable coastal defence which was also acceptable.

There were relatively few examples used in this 8 mark question. Examples are not essential, but they do provide context and help candidates demonstrate their knowledge and understanding of a broad range of ideas, as they discuss the success or lack of success of a soft engineering approach in a particular local place.

Examples seen included the creation of eco-shorelines in Hong Kong, the attempts to stabilise dunes in Studland Bay, UK and in replanting mangroves on Lowé, Gabon.
The majority of answers focused on the strengths and limitations of soft engineering approaches in protecting from erosion in general, and the best gave detailed specifics on at least two different methods. For example, they wrote about how the roots of marram grass bind soil and the plants themselves absorb some of the energy of the waves so successfully lessening the erosion. This was balanced by discussion of the costs involved (unless volunteer labour can be used) and the need for upkeep after storms, alongside the ongoing concerns from rising sea levels.

**Question 2ai**

Most were able to score 2 marks here by describing two changes in traffic volume. There were multiple ways to achieve these marks, including reference to the rises and falls in the volume, or making direct comparisons between the numbers of cars counted between two specific times.

Some gave answers outside the time frame stated, and some did not write about changes, but instead said how many cars there were at 10am, for example without going on to describe a change. These answers were not awarded marks.

Some described one change, then went on to suggest a reason that might have happened, so only one mark was scored. Some suggested solutions to help reduce the number of vehicles. This was answering a question from a previous exam series, but did not score marks here.

Note that there were only 2 marks available here, so a lengthy answer which repeats the question and describes multiple changes is a waste of time in this examination where some candidates find they experience pressure to complete the whole paper.

**Question 2aii**
This was a well answered question with most responses being related to human health (specifically respiratory diseases, asthma, lung cancer, or heart disease) as result of pollution levels. Some wrote about stress from noise or from delayed journeys, or the risk of accidents causing injury or slow journeys.

Some explained why traffic might increase which was not creditable.

**Question 2b**
This question asked about the costs and benefits of large-scale infrastructure projects used for urban regeneration. The question provided a clear structure which most followed. Some focussed on transport infrastructure, which was suitable as long as there was an urban context. Answers that wrote solely about HS2 (UK rail infrastructure under construction) tended to score low marks unless there was some focus on the urban places that were being linked together.

The question was answered reasonably well, with most achieving at least mid-marks. Many wrote generalised answers, which could still reach level 3 if a range of geographical knowledge and understanding was applied to find fully relevant connections or relationships, such as the extent to which the infrastructure acted as a catalyst for further investment or development to improve economic and social development. Examples that were used effectively were the 2022 World Cup in Qatar, the 2012 London and the 2016 Rio Olympics.

Candidates that were able to structure their answer further by selecting economic, social and/or environmental costs and benefits produced developed answers with balance and coherence. The stronger answer were able to come to some sort of judgement overall about whether or not the benefits exceeded the costs. Many also considered the different perspectives of the players involved, including planners, local government, businesses and residents and how they weighed the costs against the benefits.

There were more Level 3 answers on question 2b compared to question 1b, and the mean mark was slightly higher.

**Question 3** is the 'familiar fieldwork' section where candidates are asked to write about fieldwork they have carried out themselves. Each sub-question is likely to be taken from a different section of the 'Geographical investigation process', as outlined in Appendix 8 of the specification.

**Question 3a**
Most scored at least one mark here, with a mean mark of just over 2, and overall answers were stronger than on other recent starter questions in the 'familiar fieldwork' section. Candidate were asked to explain a risk to them as they collected fieldwork data. Most were able to identify a risk, and some were able to explain this further for a second, and a few for a third mark.

Many slipped into offering a solution to minimise the risk, which was not creditable here.

Many wrote about weather related risks, traffic and some to slips and trips. There was a balance between answers relating to coastal and to urban fieldwork, as would be expected. These strings of 3 mark explanations need to be practised in the classroom, as many fail to gain the 3 marks available as they drift off topic or repeat themselves. Here it was relatively straight forward to gain the marks, for example,

> *Traffic was a risk as we had to visit sites along roads to count vehicles (1) and the roads were very busy at certain times (1) so we could have been knocked over and injured (1).*
>
> *Collecting data on a rocky beach meant walking over wet rocks which were slippery (1) so we might trip and fall over (1) and need to go to hospital in case of a broken ankle (1).*

**Question 3b**

This question asked about how the internet was used to help plan the investigation. Many were able to gain at least 2 marks here. Perhaps the simplest option and certainly one that was often seen was to say that google maps was used to identify suitable sites for data collection, and then to plan a route between the sites, and to ensure that the shortest time was spent travelling.

Many mentioned the use of old photos for comparison, which was fine as this was then linked to planning the choice of sites to compare the appearance of the place/number of vehicles/ state of repair of the coastal defences as appropriate.

Simply obtaining information from the internet was not enough to score more than one mark as the question asked about planning. Likewise, vague answers that wrote about using the internet to find news or articles about the place rarely scored more than one mark. The more candidates can make their answer specific to their location and the way they carried out their data collection, the more likely they are to score the extra marks.

**Question 3c**

The 6 mark question this year was about the advantages of the methods used for presentation of data, and most candidates were able to score at least 3 marks. Some still wrote (incorrectly) about primary data collection methods, and some wrote an overview of the whole route to enquiry, which limited their score as much was not relevant to the answer required.

There was some confusion between presentation and analysis, and of course the one often leads to the other. Here the main focus had to be on presentation as there were only 6 marks and 12 lines available, which indicated the suggested maximum length of the answer. Answers that wrote about tabulating data or using a spreadsheet to calculate means and

modes, or as part of a statistical calculation missed the chance to write about the advantages of their presentation methods.

Simple answers about bar charts and line graphs having the advantages of being 'quick and easy' tended to score level 1 or low level 2 marks. Stronger answers talked about comparisons, or placing the bar charts on a GIS map to look for patterns, or the use of divided bar charts, which had the advantage of showing changes over time or spatial differences. Some explained how annotated photographs compared past and present locations in terms of sea defences or regeneration.

Answers needed to explain the advantages of their methods, rather than just describing what they did. This did not need to be complicated, for example, coding interview data and then creating bar charts enabled identification of common responses, an advantage to students in analysing the opinions of different groups. Proportional pie charts placed on a map enabled students to compare volume of traffic in contrasting locations in their study area, with the sections on the pie charts showing which types of vehicle dominated at each place.

A similar method was used to compare biodiversity at different sections of a coast, which helped to determine which part was the most threatened by human activity.

**Question 3d**

Most candidates were able to write something about how the reliability of their results was affected by their sampling procedures and sample sizes. Candidates tended to be more confident in writing about sample sizes than sampling procedures. Answers based on urban topics tended to be longer than those on physical topics. They did not necessarily score higher marks, however.

It is a concern that there were several who wrote nothing at all. As this question is awarded up to 12 marks, such candidates are losing 20% of the marks for this paper. Even a short answer about the effect of only interviewing 3 people would have scored a few marks. Please encourage candidates to attempt the 12 mark questions.

Some wrote about operator error or faulty equipment so were answering a different question, although there could be some credit in terms of the ways that reliability was affected where there was some reference to the locations or people surveyed.

Very few started their answer by explaining why sampling was necessary. Some began to do, by saying that they were trying to find a way to select points or people to measure data from a location in a way that aims to represent the whole area without bias. An understanding of this idea as a starter might help some candidates decode what they are trying to do when collecting fieldwork data.

In terms of sampling procedures, candidates who had two or three different data collection methods, which each used a different sampling strategy were in a stronger position to tackle this question.

Candidates who described their sampling procedures (e.g. random, systematic, stratified, cluster, pragmatic for example) started to answer the question, but to move up the level-based marks scheme, they needed to explain why systematic sampling, for example, was an appropriate choice for their data collection in the location chosen.

Few candidates explained how they carried out the sampling procedure they had identified, particularly in the case of random sampling. And few said what the effects were of using this method, but few explained what the limitations were of using it. Quite a few said it avoided bias, but only the best answers explained what difference this made to the results or why it was desirable.

A sampling window was a helpful concept used by some to explain why their results might be unreliable. If data was only collected in a 10am -12 midday window in the morning on one day, then afternoons, evenings and weekends might be completely different in terms of the people using a location. A wider sampling window would have improved reliability. Likewise, measuring wave height and frequency one day might be unreliable in terms of results about the effect of erosion on a coastline, when stronger wind and waves were experienced during the winter or during a storm.

Some wrote about the reliability of results being reduced because of the sampling procedures used. For example, by using opportunity sampling, and approaching people who look friendly to interview, it was argued that these people might be more likely to give positive answers to the questions, thus making their information biased.

Sample size was linked by some to the use of statistical methods, which enabled candidates to measure the strength and direction of any relationship between the two variables they recorded.

Evaluation was likely to be in the context of the effect of the sampling on each section or paragraph on the results and their reliability. But some did argue that one approach was the best or most useful for them, or that caused the biggest decrease in reliability. For example, having to curtail data collection because of weather or the tide coming in. Some talked about the success of an online survey in attracting more respondents (and therefore a larger sample size) but perhaps reducing the range of age or socio-economic class of respondents, if social media was used to find respondents. Also some explained that by using systematic sampling their reliability of the results was increased (as respondents were not selected using bias) but their sample size was reduced (as some refused to answer questions).

Centres are advised to use past papers for practice and use mark schemes to help candidates understand what is expected in this question.

**Questions 4ai and 5ai**

The answer to question 4ai and 5ai was 14. Candidates are advised to ensure their number 4 was written clearly, as some could have been misread as 19.

**Questions 4aii and 5aii**

By far the majority could calculate a simple % of a total. But a surprising number were flummoxed and spent time attempting this question and still failed to achieve either of the available marks**.**

**Questions 4aiii and 5aiii**

Most achieved at least 2 on this question. As the mark scheme shows there were several ways the recording sheet could have been improved. The question did not ask for 'one way' so three short features could have been identified, scoring 1 mark for each. Candidates need to read these three mark questions carefully and respond appropriately.

Most commented that there were errors in the age groups, large age ranges in some groups, and that people could be doing two of these activities at the same time, leading to unreliable results.

Several commented on the results themselves, rather than writing about the design of the recording sheet itself. Several said there was missing numbers for example. These answers did not score marks.

**Questions 4aiv and 5aiv**

Few candidates identified a specific secondary source, and most weaker answers said 'the internet' or 'past reports'. This tended to lead to a lower mark out of 3 as comments were so general.

Whilst this was unfamiliar fieldwork so candidates could not be expected to know anything about the location, some candidates offered thoughtful and more creative answers. Those who wrote about crime figures, economic data from local council figures, past photos, or using a time slider on Google earth to see numbers of visitors on the beach or the level of damage to sand dunes or the amount of litter left, or who suggested looking at tourist websites to view comments left by visitors were all well on the way to a higher scoring answer.

**Question 4b and 5b**

This question produced sound answers, and most were able to score at least 2 marks, perhaps because there was an interview plan to give a framework for answers. Many scored all 3 marks, even if their overall score was in the lower part of the cohort. Candidates were required to explain the advantages of using this interview plan. As on question 4aiii/5aiii candidates could identify one or more advantage and expand their answer or give further advantages.

Most commented on the time frame being helpful for both the interviewer and the person being interviewed, and that by saying the interview was confidential, fuller answers might

be obtained. Also, the main period of time was spent on the more important open-ended questions, with the official able to give detailed answers from their own expertise.

Some gave very general points about the plan, saying what the interview was about, but failed to expand this to say how this might be an advantage either to the official or to the person conducting the interview.

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