



Mark Scheme (Results)

Summer 2026

Pearson Edexcel International Advanced Subsidiary
Level in Geography
Geographical Investigations
WGE02_01

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- 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.

Question number	Answer	Mark
	State two ways this mangrove ecosystem might provide services to the local area.	
1(a)	<p style="text-align: center;">AO2 (2 marks)</p> <p>Award 1 mark for each valid idea:</p> <ul style="list-style-type: none"> • Fish/shellfish breeding grounds /nursery • Food (fish, shrimp, crabs, oysters and others) or edible fruit (<i>Sonneratia caseolaris</i>) • Protection from erosion • Protection against storm surges/ flooding • Habitat/feeding ground for marine/bird /insect species • Possibility for ecotourism/ tourism • Fuel wood, building materials • Jobs harvesting timber or fishing • Roots anchor soil • Roots filter pollutants • Medicines • Tourism <p>Credit other valid ideas.</p> <p>Do not allow global services e.g. biodiversity, carbon sequestration, nutrient cycling, water purification and similar ideas as question is about the local area.</p>	(2)

Question number	Answer	Mark
	Explain one way human activity threatens mangrove ecosystems.	
1(b)	<p style="text-align: center;">AO1 (2 marks)</p> <p>Award 1 mark for a threat from human activity and a further expansion mark which either explains the threat or the consequence, up to a maximum of 2 marks:</p> <ul style="list-style-type: none"> • Deforestation (1) for shrimp farming / farming/ fuel wood / preventing the trees from providing a habitat for fish/birds (1). • Coastal development brings hotels to the coastline (1) and mangroves are removed to make space for tourist accommodation (1). • Industrial pollution reaches sea or river (1) and heavy metals accumulate leading to tree death (1). • Rising sea levels as a result of warming temperatures/ global warming (1) could outpace mangrove growth/inundate mangroves (1). • Carbon emissions and raised ocean acidity (1) affects growth of ocean ecosystems such as mangroves (1) 	(2)

	Do not allow hurricanes/storms as they are natural, also mangroves grow back Credit other valid explanations.	
Question number	Answer Examine how coastal management decisions often lead to conflicts between different players	
1(c)(i)	<p style="text-align: center;">AO1 (6 marks) AO2 (2 marks)</p> <p>Marking instructions Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:</p> <p>AO1</p> <ul style="list-style-type: none"> • Coastal management includes a range of different players and stakeholders who have different objectives and priorities. • These include local government, residents, business owners, land-owners, tourists, environmentalists. • Conflicts are often about losses / compromises for one group and advantages and gains for another. • 'Winners': some players have gained from the decisions either economically, socially or environmentally. • 'Losers': some players have lost property, work, income etc. Others often include swimmers, surfers etc, e.g. if area is polluted by poor management by water companies, or other areas suffer increased erosion if sediment movement is prevented or access to beach is made more difficult. • Economic and technical considerations and governments often have more power than the opinions / views of local residents and other players. • Hard defences are seen as unsightly and therefore ruin the view / landscape for people living nearby but may provide longer term protection, so compromise is needed. • Soft engineering or managed retreat may create new habitats so be acceptable to some groups, but may not provide the security from erosion and flooding that businesses require. • Coastal management involves decisions that directly affect people's lives, so stress and anxiety may result. <p>AO2</p> <ul style="list-style-type: none"> • Most agree that there will never be enough financial resources available to coastal managers and planners to reduce potential conflicts, so difficult decisions have to be made. • Coastal systems are very complex, and it is likely that whatever option is chosen it is a compromise. 	

	<ul style="list-style-type: none"> • Actions at one coast can create increased erosion elsewhere so conflict may be harder to manage. • Sustainable approaches may help cope with future threats, but not all will welcome this, with explanations. <p>Some might argue that in some places everyone or at least some players agree so there is no or little conflict.</p>
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Level	Mark	Descriptor
Level 0	0	No acceptable response.
Level 1	1–3	<ul style="list-style-type: none"> • Demonstrates isolated elements of geographical knowledge and understanding, some of which may be inaccurate. (AO1) • Understanding addresses a narrow range of geographical ideas. (AO1) • Understanding of geographical ideas lacks detail. (AO1) • Applies knowledge and understanding to geographical information/ideas, with limited logical connections/relationships. (AO2)
Level 2	4–6	<ul style="list-style-type: none"> • Demonstrates geographical knowledge and understanding, which is mostly relevant and may include some inaccuracies. (AO1) • Understanding addresses a range of geographical ideas. (AO1) • Understanding of geographical ideas is not fully detailed and/or developed. (AO1) • Applies knowledge and understanding to geographical information/ideas logically to find some relevant connections/relationships. (AO2)
Level 3	7–8	<ul style="list-style-type: none"> • Demonstrates accurate and relevant geographical knowledge and understanding throughout. (AO1) • Understanding addresses a broad range of geographical ideas. (AO1) • Understanding of the geographical ideas is detailed and fully developed. (AO1) • Applies knowledge and understanding to geographical information/ideas logically to find fully relevant connections/relationships. (AO2)

Question number	Answer	Mark
	State two possible impacts of congestion in these cities	
2(a)(i)	<p style="text-align: center;">AO2 (2 marks)</p> <p>Award 1 mark for each idea:</p> <ul style="list-style-type: none"> • Stress as delays occur/ Mental health worsened (1) • Air pollution (1) • Health problems (1) • Cost in terms of wasted fuel (1) • Cost in wasted work time (1) • Noise pollution (1) • Increased NO_x/CO₂/CO/allow Ozone/VOCs (1) <p>Note – must be related to an idea developed from the graph. Do not credit ‘Increased risk of accidents’ Do not credit Traffic or congestion or pollution (must say air pollution or similar) Do not credit answers which copy out the statement beneath Figure 2: ‘Hours lost per driver per year due to congestion’.</p>	(2)

Question number	Answer	Mark
	Explain one reason for the rapid increase in motor vehicles in many cities	
2(a)(ii)	<p style="text-align: center;">AO1 (2 marks)</p> <p>Award 1 mark for explaining a reason and a further expansion mark, up to a maximum of 2 marks:</p> <ul style="list-style-type: none"> • Rising affluence in many urban areas (1) as the middle class increases (1). • Increased urban population (1) many of whom drive to work (1). • People become better off (1) so they buy a car (1). • Economic development in urban areas leads to growth of suburbs (1) and people need cars to get to work/school (1). • Industrialisation in urban areas means vehicles are needed to transport goods to and from ports and factories (1) along with workers moving daily to and from home (1). • Public transport is inadequate/slow/crowded /expensive (1) so people prefer to drive (1), <p>Do not credit ‘so there are more cars on the road’ as this is the question. Allow ‘motor vehicles’ to include any type of vehicle with a motor. But the reason must explain why there is a rapid increase in motor vehicles in cities. Credit other valid ideas.</p>	(2)
Question number	Answer	
	Assess the costs and benefits of small-scale regeneration projects in urban areas	

2(b)

AO1 (6 marks) AO2 (2 marks)

Marking instructions

Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.

Indicative content guidance

The indicative content below is not prescriptive and candidates are not required to include all of it. Other relevant material not suggested below must also be credited. Relevant points may include:

AO1

- Urban regeneration involves the renewal of run-down, derelict or unused urban space to improve economic, social and environmental conditions.
- Small scale regeneration projects have varying costs and benefits (economic, social and environmental) for different groups involved.
- Smaller-scale regeneration projects often focus on improving communities with the benefits of housing, representation, alongside education, and skills for the local people and may increase employment opportunities.
- These allow for further benefits as there may be increased local representation and consultation over type of what is included in the regeneration, and may be more responsive to local needs. Costs in terms of rent may be lower, and housing more affordable.
- Informal housing and service provision may be improved by residents, NGOs and community groups through consolidating temporary buildings and installing sanitation systems.
- Urban regeneration in some places increasingly focuses on urban sustainability in terms of resource consumption, social equality, community identity and representation and pollution reduction. Smaller-scale projects may be able to better balance these multiple aims.
- Gated communities are developed in many urban areas, and could be judged as smaller or larger scale depending on the context. They are growing in number in Mexico, South Africa, Brazil, southern China, Saudi Arabia. Financial costs of these communities are often high and lead to inequality of access for those who are less well off.
- Regeneration may force existing residents and businesses out as costs increase.
- Construction workers may gain employment, and investors gain business opportunities.
- Environmental harm to habitats, water courses and the atmosphere may result.
- Habitat for Humanity works alongside people from marginalised and vulnerable communities e.g. in Colombo, Sri Lanka to build their own small houses and access safe drinking water. However costs may be too high for the poorest, and numbers built are relatively small, only 23,000 households since 1995.

AO2

	<ul style="list-style-type: none"> Financial pressures may make smaller scale projects more realistic in some places, as costs are lower. There are often restrictions over redevelopment in historic cities/ urban areas, and smaller scale projects may be designed more easily to fit in with existing buildings and streetscapes, for example conversions. However profits will be less, and finding funds for investment may be more difficult. The power of local stakeholders in smaller scale redevelopment is often insufficient to push through decisions if these are opposed by governments or other stakeholders. <p>Note that this question is NOT focussed on large scale infrastructure. Could include comments on stakeholders</p>
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Level	Mark	Descriptor
Level 0	0	No acceptable response.
Level 1	1–3	<ul style="list-style-type: none"> Demonstrates isolated elements of geographical knowledge and understanding, some of which may be inaccurate. (AO1) Understanding addresses a narrow range of geographical ideas. (AO1) Understanding of geographical ideas lacks detail. (AO1) Applies knowledge and understanding to geographical information/ideas, with limited logical connections/relationships. (AO2)
Level 2	4–6	<ul style="list-style-type: none"> Demonstrates geographical knowledge and understanding, which is mostly relevant and may include some inaccuracies. (AO1) Understanding addresses a range of geographical ideas. (AO1) Understanding of geographical ideas is not fully detailed and/or developed. (AO1) Applies knowledge and understanding to geographical information/ideas logically to find some relevant connections/relationships. (AO2)
Level 3	7–8	<ul style="list-style-type: none"> Demonstrates accurate and relevant geographical knowledge and understanding throughout. (AO1) Understanding addresses a broad range of geographical ideas. (AO1) Understanding of the geographical ideas is detailed and fully developed. (AO1)

		<ul style="list-style-type: none"> Applies knowledge and understanding to geographical information/ideas logically to find fully relevant connections/relationships. (AO2)
Question number	Answer	Mark
3(a)	<p align="center">AO3 (3 marks)</p> <p>NB: the aim / question / hypothesis provides a context for the investigation and the subsequent parts that follow – no credit for this.</p> <p>Award 1 mark for identifying a way the fieldwork helped and further expansion marks up to a maximum of 3 marks. Nature of question, title or hypothesis will vary depending on the location as well as the context of the fieldwork.</p> <p>Mark the 'State the title question' answer space as part of the candidate answer for this question.</p> <ul style="list-style-type: none"> We collected data about the plant species on active sand dune ecosystems (1) and compared the height/number of species/ soil pH (1) which helped us understand about psammosere succession (1). We collected data about wind speed and vegetation in sand dunes (1) so we could understand about the impact of wind on dune morphology/shape (1) and see if there was a direct correlation on the day of our visit (1). We recorded quality of the environment surveys in 3 locations in the regeneration zone (1) and compared three places in areas outside the regenerated zone (1) which helped us see how effective the redevelopment was (1). We conducted a survey of local people about their travel choices (1) so we could investigate why people did not use the public transport (1) to help us understand about what changes were needed (1). Visiting the place helped us see the issue/ the differences/ the improvements (1) and collect our own quantitative/ qualitative data about the issue (1) so we could draw graphs/ conclusions about it/compare with secondary data (1). Visiting the place allows qualitative data/ primary data (1) whereas statistical data is quantitative (1) which may be more biased (1). <p>Note the title / question provides a context for the investigation and the subsequent parts that follow.</p>	(3)

Question number	Answer	Mark
3(b)	<p style="text-align: center;">AO3 (3 marks)</p> <p>Award 1 mark for identifying how secondary data was used and further expansion marks or ideas up to a maximum of 3 marks.</p> <p>More than one method and more than one explanation are allowed.</p> <ul style="list-style-type: none"> • Coastal flood risk data from the local government helped assess local risk factors (1) and therefore analyse the coastal stretch better (1) and decide which areas to focus the investigation on (1). • Maps were used to select the sites visited (1) and decide where we could park (1). • Old postcards were used as evidence of the change (1) so that this could be later used to help evaluate the degree of rebranding in the city (1). • A questionnaire results from the past showed what the concerns of residents were before the regeneration (1) which meant we could compare our own results with what was expected (2). • Google maps and the time slider was used to select an area to study coastal ecosystem change (1). This enabled us to see how the sand dunes had altered (1) over the period of management by the wildlife NGO (1) • Google Street View was used to see the past land-use (1) meaning that we could compare our results to see changes from historical land uses (1). • An online GIS geology map source allowed a stretch of coast to be chosen (1) so we could see which areas were more susceptible to erosion/flooding (1) and understand the choice of management methods (1). • A local detailed map of the area helped us select a safe site to carry out field work (1) and whether the area was flat enough as one of our class needed to use a wheelchair (1). • Census data helped us plan our stratified sample (1) as we could see the percentage of the population who were 65+ (1) and ensure that we questioned a representative sample of people (1). <p>Accept other valid ideas.</p>	(3)

	Focus should be on HOW data was used, not why. Accept more than one reason.	
Question number	Answer Explain the advantages and disadvantages of your primary data collection methods	
3(c)	<p style="text-align: center;">AO3 (6 marks)</p> <p>Marking instructions Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance Content depends on students' choice of research question. Methodology and design (which overlap) may include the following ideas:.</p> <ul style="list-style-type: none"> • Design of sampling framework and its advantages and disadvantages: number of sites, spacing, sample sizes, sampling method – linked to specific methods of data collection. These will impact the extent to which the data obtained is valid /representative of the whole population. • Disadvantages may be linked to the design of the sampling framework (for example, may explain why the planned was stratified/systematic sampling method was not possible) • Also the problems encountered once on site, such as weather, road diversions, tide levels, and the effect this had on the validity of the data obtained. • Methodologies and their advantages and disadvantages; these will depend on specific methods chosen but can include explanation of the equipment used, operator error; success or otherwise of recording sheets / tallies. • Inaccessibility of sites / lack of ability collect data due to time of day, seasons, or unanticipated hazards such as bad weather. • Ethical issues could be considered e.g. appropriateness of questionnaire questions and whether people could be approached for participation. This impacts on both the range and quality of data and in turn has effects upon the accuracy of the results and the validity of the data. <p>Nature of responses will be heavily dependent on the context of the fieldwork and the environment in which it was undertaken. However, examiners should reward for detailed clear and specific data and information which are supported with depth and detail in terms of factual accuracy and realism linked to risk in terms of data collection.</p>	

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–2	<ul style="list-style-type: none"> Limited understanding of the relationships between geographical questions and the background information, geographical context and research question (AO3) Uses a limited range of fieldwork research skills and techniques to obtain information that may link to, but not support, the investigation of the research question. (AO3) Limited evidence of an ability to draw conclusions and the evaluation is simplistic, limited to one stage in the route to enquiry. (AO3)
Level 2	3–4	<ul style="list-style-type: none"> Some understanding of the relationship between the background information, geographical context and research question (AO3) Uses some fieldwork research skills and techniques to obtain information that may link to, but not support, the investigation of the research question. (AO3) Some evidence of an ability to draw conclusions and the evaluation is relevant, but restricted to one or two stages in the route to enquiry. (AO3)
Level 3	5–6	<ul style="list-style-type: none"> A full understanding of the relationship between the background information, geographical context and research question. (AO3) Evaluates fieldwork research skills and techniques to obtain information that supports the investigation of the research question. (AO3) Clear evidence of an ability to draw conclusions and the evaluation is full, across a number of stages in the route to enquiry. (AO3)

Question number	Answer You used presentation and analysis methods to help you reach conclusions to your geographical investigation. Evaluate the effectiveness of your presentation and analysis methods
3(d)	AO3 (12 marks) Marking instructions

	<p>Markers must apply the descriptors in line with the general marking guidance and the qualities outlined in the levels-based mark scheme below.</p> <p>Indicative content guidance</p> <p>Content depends on students' choice of research question. Evaluation of success in relation to how presentation and analysis could help reach conclusions may include some of the following:</p> <ul style="list-style-type: none"> • Choice of data presentation/analysis techniques, their reliability, utility, function and how far the methods communicate results clearly and lead towards conclusions. • Advantages / limitations of using ICT to support either analysis or presentation. • Hand-drawn /computer maps or graphs used to compare data sets or locate them on a base map/GIS to show spatial patterns. Photos and annotations used to show change. These methods can be time-consuming. • Analysis techniques, e.g. quantitative vs qualitative tools, how and why some might be more appropriate/ useful than others. • Use of simple statistics to look for patterns or relationships, for example averages and standard deviation, range and interquartile range, and how they help draw conclusions. • Use of Spearman's Rank or other statistical tests to measure whether patterns are significant or could have occurred by chance. • Presentation and analysis may have shaped the conclusions with possible comments about reliability and accuracy, etc. • Other factors also affect the reaching of conclusions, for example the design of sampling framework, problems in collecting data. <p>Nature of responses will be heavily dependent on the context of the fieldwork and the environment in which it was undertaken. However, examiners should reward for detailed clear and specific data and information which are supported with depth and detail in terms of factual accuracy and realism.</p> <p>Some confuse presentation of data with the idea of doing a powerpoint presentation of their results. Allow this interpretation and mark on its merits. Some evaluate their methods and equipment used in primary data collection. This is not relevant, but read such answers carefully as they may include reference to presentation or analysis such as graphs, Spearman's rank etc later on in the answer.</p> <p>Level 3 answers are likely to consider both presentation and analysis, and link to the reaching of conclusions.</p>
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Level	Mark	Descriptor
	0	No rewardable material.

Level	Mark	Descriptor
Level 1	1–4	<ul style="list-style-type: none"> Limited understanding of the relationships between geographical questions and the background information, geographical context and research question (AO3) Uses a limited range of fieldwork research skills and techniques to obtain information that may link to, but not support, the investigation of the research question. (AO3) Limited interpretation, analysis based on the data / information collected. (AO3) Limited evidence of an ability to draw conclusions and the evaluation is simplistic, limited to one stage in the route to enquiry. (AO3)
Level 2	5–8	<ul style="list-style-type: none"> Some understanding of the relationship between the background information, geographical context and research question (AO3) Uses some fieldwork research skills and techniques to obtain information that may link to, but not support, the investigation of the research question. (AO3) Interpretation and analysis based on the data / information collected form part of the response (AO3) Some evidence of an ability to draw conclusions and the evaluation is relevant, but restricted to one or two stages in the route to enquiry. (AO3)
Level 3	9–12	<ul style="list-style-type: none"> A full understanding of the relationship between the background information, geographical context and research question (AO3) Evaluates fieldwork research skills and techniques to obtain information that may link to, but not support, the investigation of the research question. (AO3) Critically considers the role of interpretation, analysis based on the data / information collected. (AO3) Clear evidence of an ability to draw conclusions and the evaluation is full, across a number of stages in the route to enquiry. (AO3)

Question number	Answer	Mark
4(a)(i)	<p>Suggest one possible risk for the students doing fieldwork on this beach</p> <p style="text-align: center;">AO3 (2 marks)</p> <p>Award 1 mark for suggesting a risk and a further expansion mark, up to a maximum of 2 marks:</p>	(2)

	<ul style="list-style-type: none"> • Litter on beach might include dangerous items (1) so they might cut themselves (1). • The tide might come in more quickly than expected (1) and they may be cut off from their exit and need to be rescued (1). • Powerful waves might sweep students off their feet (1) and they would be wet and cold/ washed out to sea (1). • Sand in their eyes (1) as strong winds occur on many beaches/ hard to record results (1). • Slips, trips and falls (1) causing injuries /have to leave the fieldtrip to visit hospital (1). • Getting lost (1) as not familiar with the area /map not adequate/and so exposed to the sun without enough water (1). • Weather related – sunburn /sunstroke (1) leading to swelling / skin damage/ dehydration /loss of consciousness (1). <p>Accept other valid ideas linked to the photograph. Do not allow bad wea Do not allow risk of not collecting enough /suitable data.</p>	
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Question number	Answer	Mark
	Explain how the students could manage this risk.	
4(a)(ii)	<p style="text-align: center;">AO3 (3 marks)</p> <p>Award 1 mark for explaining a way a risk could be managed and up to 2 further expansion marks, or an additional management method/s.</p> <p>Note the items are not copied together, so interpret the risk from the candidate's answer.</p> <p>Do not credit points about the nature of the risk, as this is about management of the risk.</p> <p>Do not credit risks</p> <ul style="list-style-type: none"> • Application of sun-tan lotion (1) and covering up the skin with clothing/ use a parasol (1). • Wearing walking boots / sturdy footwear to offer stability when walking (1). • Warn each other of hazards on the path used (1). • Safety equipment/gloves/boots / shoes / goggles (1) • Carry out own risk assessment (1) to identify dangers (1) and wear suitable PPE/helmet whilst on site (1). • Risk assessment drawn up (1) to say that no student is permitted in the sea (1). • Identify nearest flotation device in case of accident (1). • Carry out own risk assessment (1) including consulting the tide timetable to avoid being trapped by tide (1). • Set phone alarm to give a warning of time to leave (1). 	(3)

	<ul style="list-style-type: none"> • Ensure all have emergency phone numbers (1) so you can contact help if they lose contact with the group (1). • Ensure you have a map to fall-back meeting point (1). • All should have a map / phone (1) so they can find their way / call for help if needed (1). <p>Accept other valid ideas. Allow more than one method as long as the answer is focussed on one risk. Do not allow management of the risk of not collecting enough/suitable data. Do not allow 'walk carefully' or 'take care'.</p>	
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Question number	Answer	Mark
	Calculate the total number of people interviewed	
4(b)(i)	<p style="text-align: center;">AO3 (1 mark)</p> <p>Award 1 mark for the correct answer.</p> <ul style="list-style-type: none"> • 20 (1) <p>Do not accept other answers.</p>	(1)

Question number	Answer	Mark
	Suggest one reason why the students chose the number of people interviewed the different groups interviewed	
4(b)(ii)	<p style="text-align: center;">AO3 (4 marks)</p> <p>Award 1 mark for explaining a reason for the number interviewed and a further expansion mark for this reason. And award 1 mark for explaining a reason for the different groups interviewed and a further expansion mark for this reason.</p> <p>Number of people:</p> <ul style="list-style-type: none"> • By interviewing the same number of people from each sample group comparisons can be made (1) and percentages calculated (1). • By collecting group data collected (1) statistical methods/Chi square test can be used to see if there is a statistical relationship (1). • 5 per group is an odd number so there will always be a majority/minority split in the yes/no decision (1). • 5 is a relatively large number of people from each group (1) to represent a range within the group/ makes the results more representative of the whole population. (1) <p>Different groups:</p>	(4)

	<ul style="list-style-type: none"> • Get a range of opinions from different groups (1) more representative of the views/opinions across the whole community (1). • By asking local business owners they would gain an understanding of the economic impacts of the development (1) in terms of how many jobs they might create for students (1). • By asking both retired people and students they would understand the impacts on different age groups (1) and find a wider range of perspectives to aid their investigation (1). • Stratified sample represents 4 stakeholder groups (1) and obtains their contrasting views / more representative of the views across the whole community (1). <p>Accept other valid ideas.</p>	
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Question number	Answer	Mark
4(c)	<p>AO3 (2 marks)</p> <p>Award 1 mark for a primary data method and 1 expansion mark about the method up to a maximum of 2 marks.</p> <ul style="list-style-type: none"> • Count number of pieces of litter in a square metre (1) and repeat this along a transect along the beach (1). • Measure the width of a footpath through an ecosystem (1) by recording the width every 25m as the path goes away from the car park (1). • Land use survey to record buildings/car parks on the beach (1) and compare with a past photo (1). • Measure height of vegetation in a sand dune (1) and compare with a protected area / a previous year's data (1). • Complete an Environmental Quality survey (1) and compare different sections of beach/ comparing different types of litter (1). • Pedestrian count (1) at different times of the day/year/ to investigate their activities (1). <p>Accept any primary data collection method that would help investigate the impact of human activity.</p> <p>Do not allow any method that asks stakeholders about their opinions or views cannot be accepted</p>	(2)

	Allow reference to secondary data as long as the main idea is a primary data collection method.	
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Question number	Answer	Mark
	Suggest one possible risk for the students doing fieldwork in this area	
5(a)(i)	<p style="text-align: center;">AO3 (2 marks)</p> <p>Award 1 mark for suggesting a risk and a further expansion mark, up to a maximum of 2 marks:</p> <ul style="list-style-type: none"> • They might walk into barriers (1) and injure themselves/ and have to visit the hospital (1). • Something might come drop on them from above (1) cause concussion/they would need medical attention (1). • Heavy traffic/building site vehicles (1) they would be injured/killed/ cause accident (1). • Cuts, stings, bites which lead to skin irritation / reactions (1) and need urgent medical attention (1). • Slips, trips and falls (1) causing injuries/ have to leave the fieldtrip to visit hospital (1). • Getting lost (1) as not familiar with area (1). • Weather related – sunburn /sunstroke (1) leading to swelling / skin damage/ dehydration /loss of consciousness (1)/ • Getting lost (1) as not familiar with the area /maps may be out of date (1). • Weather related – sunburn /sunstroke (1) leading to swelling / skin damage/ dehydration /loss of consciousness (1). <p>Accept other valid ideas linked to the photograph Do not allow risk of not collecting enough /suitable data.</p>	(2)

Question number	Answer	Mark
	Explain how the students could manage this risk.	
5(a)(ii)	<p style="text-align: center;">AO3 (3 marks)</p> <p>Award 1 mark for explaining a way a risk could be managed and up to 2 further expansion marks, or an additional management method.</p> <p>Do not</p> <ul style="list-style-type: none"> • Application of sun-tan lotion (1) and covering skin with clothing/ use a parasol (1). 	(3)

	<ul style="list-style-type: none"> • Wearing walking boots / sturdy footwear (1) to offer stability when walking (1). • Warn each other of hazards on route used (1). • Wear bright jacket (1) and cross at safe location (1) and look both directions (1). • Carry out own risk assessment (1) to identify dangers (1) and wear suitable PPE/ helmet/ mask/ headphones whilst on site (1). • Ensure you have emergency phone numbers (1) to contact help if contact with the group is lost (1). Take a map with a fall-back meeting point (1). • All student groups must have a map / phone (1) so they can find their way / call for help (1). <p>Accept other valid ideas.</p> <p>Do not credit points about the nature of the risk, as this is about management of the risk.</p>	
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Question number	Answer	Mark
	Calculate the total number of people interviewed	
5(b)(i)	<p style="text-align: center;">AO3 (1 mark)</p> <p>Award 1 mark for the correct answer.</p> <ul style="list-style-type: none"> • 20 (1) <p>Do not accept other answers.</p>	(1)

Question number	Answer	Mark
	Suggest one reason why the students chose the number of people interviewed the different groups interviewed	
5(b)(ii)	<p style="text-align: center;">AO3 (4 marks)</p> <p>Award 1 mark for explaining a reason for the number interviewed and a further expansion mark for this reason.</p> <p>And award 1 mark for explaining a reason for the different groups interviewed and a further expansion mark for this reason.</p> <p>Number of people:</p> <ul style="list-style-type: none"> • By interviewing the same number of people from each sample group comparisons can be made (1) and percentages calculated (1). • By collecting group data collected (1) statistical methods/Chi square test can be used to see if there is a statistical relationship (1). • 5 per group is an odd number so there will always be a majority/minority split in the yes/no decision (1). 	(4)

	<ul style="list-style-type: none"> • 5 is a relatively large number of people from each group (1) to represent a range within the group/ makes the results more representative of the whole population. (1) <p>Different groups:</p> <ul style="list-style-type: none"> • Get a range of opinions from different groups (1) more representative of the views/opinions across the whole community (1). • By asking local business owners they would gain an understanding of the economic impacts of the development (1) in terms of how many jobs they might create for students (1). • By asking both retired people and students they would understand the impacts on different age groups (1) and find a wider range of perspectives to aid their investigation (1). • Stratified sample represents 4 stakeholder groups (1) and obtains their contrasting views / more representative of the views across the whole community (1). <p>Accept other valid ideas.</p>	
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Question number	Answer	Mark
5(c)	<p data-bbox="311 347 1219 383">AO3 (2 marks)</p> <p data-bbox="311 421 1219 490">Award 1 mark for a primary data method and 1 expansion mark about the method to a maximum of 2 marks.</p> <ul data-bbox="363 528 1166 1189" style="list-style-type: none"> • Count the number of visitors in a regenerated part of the urban area (1) and compare with data from a place that was not regenerated (1). • Count the number of vacant shops/cafes (1) and compare with data from a previous study (1). • Take photos/ draw field sketches to enable a clear record of the place and key features to be recorded (1). Compare to old photos to see the changes (1). • Record different land uses (e.g. residential, commercial, green space, derelict land) (1) and compare with older maps to assess changes (1). • Complete an Environmental Quality survey (1) and compare e.g. noise/ accessibility/ graffiti/ litter/ vandalism (1). • Pedestrian count (1) at different times of the day/year (1). • Noise survey (1) using a decibel monitor/ noise app in different parts of the regenerated place (1). <p data-bbox="311 1227 1219 1299">Accept any primary data collection method that would help investigate the impact of regeneration.</p> <p data-bbox="311 1305 1219 1377">Do not allow interviews/ questionnaire /survey /focus groups as this is the method that has been used already.</p> <p data-bbox="311 1415 1219 1487">Allow reference to secondary data as long as the main idea is a primary data collection method.</p>	(2)