Commentary on candidate evidence

The candidate evidence has achieved the following marks for each section of this course assessment component - folio (Geographical Study).

Candidate 1

How do beach profiles and landforms change along the Scottish East Coast and Why?

The candidate was awarded a total of **33/60 marks** overall.

A: Justify the choice of a complex geographical topic to research

The candidate was awarded **2/4 marks**.

There is clear purpose from title and reference to wider reading to set the context:

♦ On page 1, the candidate states the title 'How do beach profiles and landforms change along the Scottish East coast and why'.
♦ In the introduction, the candidate on page 3 discusses the geology of the coastline and Aberdeen Council groynes.

The study lacks clear relevance and is implicit only from background reading. To gain further marks, the candidate would need to have said why this is an important topic to study, placing this in the 1-2 mark category.

B: Plan and carry out detailed research, which could include fieldwork

The candidate was awarded **7/10 marks**.

There is reasonable evidence of planning for research that allows the generation of four relevant research questions. Relevant sources of information have been used to produce sufficient data to support reasonable analysis. This places the candidate within the 5-7 marks category.

♦ On page 7, candidate highlights 3 locations with 4 sites at each, therefore there are 12 sites in total.
♦ Data collection was carried out over 2 days.
♦ The width and slope angle of the beach profile were noted and discussed on page 8.
♦ On page 8, wave frequency was recorded over a period of 1 minute.

♦ On page 9, sediment size and shape was noted using 5 pebbles from each site.

♦ Observation of landforms and flood defences were made. These include photographs but how they were recorded is unclear. Observations may have used OS maps, but this is unclear.

♦ Geology was discussed using secondary data from the atlas on page 10.

There is some confusion about the recording of data. The number of sites and measurements limits the scope of detailed analysis.

C: Evaluate the research techniques and the reliability of the data gathered
The candidate was awarded **4/8 marks**.

The candidate makes reasonable evaluative comments on the research techniques and/or relevance and reliability of data: The candidate could have discussed the reliability of the data gathered and made reasoned comments relating to next steps. This places them within the 4-6 marks category.

♦ On page 7, the candidate provides justification of their sampling strategy and considered the sites, and number of sites, selected; 'it was imperative that each beach was unique' and 'visited each beach before noon to ensure…'.

♦ They noted that wave collection is subjective and open to human error on page 8.

♦ The candidate noted that 'callipers would have been a more accurate option' (only reference to next steps) and discussed the subjectivity of Power's scale on page 9.

♦ Also on page 9, the candidate states that subjectivity was controlled by themselves; 'measuring was all done myself'.

♦ The candidate makes a simplistic reference to missing something important on page 10.

♦ The candidate states 'hence displaying the inaccuracy with using one singular method….'on page 17.

D: Demonstrate detailed knowledge and understanding of the topic from wider reading
The candidate was awarded **5/8 marks**.

The candidate includes reasonable evidence from relevant wider reading. Evidence is used to support findings from the research, but the candidate could have used this to develop ideas and analysis. This places the candidate within the 4-6 marks category:

♦ There is evidence of background reading in the introduction however, it is not at Advanced Higher level. The study lacks sufficient reference to more academic geographical research and articles.

♦ The candidate provides examples of KU supporting findings for example with reference to geology on page 11, the coastline nourishment programme on page 14 and the explanation of sediment size and shape on pages 18 and 19.

♦ The candidate provides a reasonable bibliography.

E: Use a wide range of appropriate techniques to process the gathered information

The candidate was awarded **5/10 marks**.

A reasonable range of valid techniques have been used to process the gathered data, although the techniques have not been effectively integrated placing the candidate in the 5-7 marks category**:**

♦ Annotated photograph on page 4

♦ Beach profiles, but without scales on page 13

♦ Bar graph on page 16, although this is a simple technique

♦ Stacked bar graph on page 18

♦ Dispersion graph, also on page 18

♦ Chi square on page 20 however, this is not well integrated. The purpose of doing this is unclear and could be more relevant to RQ3 on wave frequency.

F: Analyse all the information that has been gathered and processed to identify and explain relationships

The candidate was awarded **6/12 marks**.

The candidate makes limited explanations of relationships identified from the information or data gathered and processed. Overall, the candidate identifies relationships, but does not reasonably explain them placing them within the 5-7 marks category:

♦ In Aim 1 on page 12, the candidate states 'metamorphic rocks, hence making them highly resistant to erosion…'

♦ In Aim 2 on page 14, the candidate notes the impact of the groynes, and beach nourishment. On page 15, they discuss the seasonal changes in beach profiles. The candidate also makes evaluative comments about where measurements were taken.

♦ In Aim 3 on page 16, the candidate makes analytical comments that refer to waves, wind and shape of coastline with a comparative point also being made on page 17.

♦ In Aim 4 on page 18, the candidate explains the relationships between rock size and angularity.

♦ On page 19, the candidate states 'This results in more sediment being moved up the beach rather than down…'

♦ Also on page 19, the candidate tries to link roundest sediment to destructive waves at Aberdeen.

♦ The relevance of chi squared results not clear on pages 20 and 21.

G: Reach reasoned conclusion(s) supported by a wide range of evidence

The candidate was awarded **4/8 marks**.

A valid conclusion is supported by a reasonable range of evidence. The candidate attempts to go beyond repetition of the analysis. A lack of detail and insight places the candidate within the 4-6 marks category:

♦ The candidate could have used background reading to support their conclusion.

♦ More detailed concluding points for each RQ would have benefitted the candidate.

♦ The candidate has brief concluding points in Aim 3 on page 17 stating 'this removal of sediment is a key characteristic of destructive waves, hence displaying…'

♦ On page 22, the candidate has summed up the factors that have led to the variations between the 3 locations - geology, human influence, wind and waves.

♦ The candidate repeats points already mentioned in the main aims. For example, 'This is largely due to the placement…' is repetition of information found in Aim 1.

♦ The candidate attempts to go beyond repetition of the analysis for example, regarding defences in place to protect Aberdeen city centre. Further development and use of wider reading to give examples from other areas would have benefitted the conclusion.

Candidate 2

What factors influence surfing in a bay?

The candidate was awarded a total of **33/60 marks** overall.

A: Justify the choice of a complex geographical topic to research

The candidate was awarded **3/4 marks**.

Reference is made to wider reading but is not explicit. Facts are stated rather than explicit reference to wider geographical reading/research placing the candidate in the 3-4 marks category.

♦ The title of the Study shows purpose; 'What factors influence surfing in a bay?' In paragraph 2 of the introduction on page 27, there is purpose; '…to discover what makes a beach 'good' for surfing'.

♦ Relevance is less clear, but it is attempted; 'not many studies covering this topic'. he candidate revisits relevance in the conclusion on page 39; 'Dunes become eroded with increased footfall, as well as general human activity…'.

♦ On page 27, an example of literature is provided; 'This study will focus… as they have been declared as some of the best spots to surf in Scotland.'

B: Plan and carry out detailed research, which could include fieldwork

The candidate was awarded **6/10 marks**.

The candidate provides reasonable evidence of planning for research with four appropriate research questions. The candidate includes hypotheses and sufficient evidence to support reasonable analysis, and data is relevant. The candidate was placed in the 5-7 marks category for the following reasons:

♦ On page 30, the candidate has surveys, but the sampling strategy, number of people asked and the purpose of collecting information is unclear. The questions asked were simplistic and less likely to generate analysis for example, 'people were asked if they prefer to walk locally or travel to other beaches'.

♦ On page 32, the candidate states that wave observation was carried out, but the number of sites and the technique that was used is unclear. The candidate states that a systematic sampling method was used but again, this is unclear or not explained. Wind speed was recorded, but was done so via a forecasting app. The candidate did not state how many data sets were used. They also state 'the sea temperature was around 6 degrees', but it is unclear how this information was obtained.

♦ On page 35, the beach gradient was measured using ranging poles. 1 transect was recorded on each beach. Evaluative comments made don't indicate the use of a clinometer.

♦ On page 37, the candidate states that a nurdle survey was conducted on each beach. Page 12: The candidate used 10 one metre segments at random points on 3 sites to investigate the number of nurdles.

♦ The candidate states on page 34 that data from both beaches was collected on the same day.

C: Evaluate the research techniques and the reliability of the data gathered

The candidate was awarded **4/8marks**.

The candidate has made reasonable evaluative comments on the research methods, relevance and reliability of data. The candidate has justified methods and recognised their limitations, but they are quite simplistic placing them in the 4-6 marks category:

♦ The candidate has noted on pages 30 the limitations of the survey; 'Surveys are a quick and easy method to conduct, with problems including that people may not feel inclined to tell the truth or prefer not to say', and on page 37 'A limitation is that some people do not want to answer question so data can be limited.' This is generic and does not reflect the candidate's gathering techniques.

♦ On page 32, the candidate states that 'forecasting apps and websites, which are reliable in a short time scale and are site specific…'. The candidate also states 'It was not possible to record any data about surfing conditions as there were no waves or surfers.' The candidate could have tried to expand here and link this to the reliability of their data.

♦ The candidate is implicit again about reliability on page 34; 'A lack of data (surfers) will alter results as they are not able to be compared against averages…'. The candidate then suggests that all the data was collected in winter.

♦ The candidate goes on to describe more limitations on page 35; 'The ranging poles… will be placed on sand and held still as to ensure the pole doesn't sink into the sand.'

♦ The candidate made other vague and simplistic comments on page 37 for example; 'fast…efficient…cheap', qualitative data, and on page 34 discusses conducting results on New Year's day where they describe it as being 'a lot busier' than usual.

♦ The candidate has used background reading on page 37 to help evaluate research methods (snapsurveys.com).

♦ The candidate makes reference to next steps on page 34; 'In future studies, recording of data over a prolonged period of time will provide more data and prove more useful'. This is simplistic and not clearly linked to the reliability of the candidate's data.

The candidate had many opportunities to develop the points by linking these limitations to reliability of data, and then to next steps.

D: Demonstrate detailed knowledge and understanding of the topic from wider reading

The candidate was awarded **5/8 marks**.

The candidate has provided reasonable evidence from relevant wider reading to support their analysis. They have also provided a reasonable bibliography: The candidate could have developed their analysis more with wider reading, so they were placed in the 4-6 marks category.

♦ The candidate states on page 30, 'A psammosere allows development of dune sequencing.'

♦ Reference is made to wave formation and fetch on page 32.

♦ On page 35, the candidate describes reasons for waves breaking however, these are wiki references.

♦ Referencing Waugh, the candidate on page 36 states 'which indicates that the beach is quite steep, so waves will break closer to the shore.'

♦ Reference is made to nurdles via research from a valid website on pages 37 and 38.

♦ On page 37, the candidate makes reference to community beach cleans.

E: Use a wide range of appropriate techniques to process the gathered information

The candidate was awarded **6/10 marks**.

A reasonable range of valid techniques have been used to process the gathered information. Some techniques have been integrated, but not with skill therefore placing the candidate in the 5-7 marks category:

♦ Annotated photographs on page 28

♦ Annotated maps on page 29

♦ Pie charts on page 31

♦ On page 33, a scatter graph has been used however, a comparison of only 3 variables per site reduces the validity.

♦ A bar graph has been used on page 35, but the scale of the survey results is unclear.

♦ Gradient profiles of beach on page 36

♦ A stacked bar graph has been used on page 37, but the scale and relevance are unclear.

♦ A proportional symbols map is used on page 38. This is the most effective technique and is drawn with some skill.

F: Analyse all the information that has been gathered and processed to identify and explain relationships

The candidate was awarded **5/12 marks.**

The candidate has provided only a limited explanation of the relationships identified. The candidate's analysis lacks in depth, but the candidate has made a good attempt. There is no real development other than simple cause and effect placing the candidate in the 5-7 marks category.

♦ Research Question (RQ) 1 on page 30 has not been answered to effect.

♦ In RQ 2 on page 32, the candidate tries to explain the impact of wind and swell, and on page 34, there is comparison of both bays.

♦ RQ 3 on page 35 is rather limited, and already credited for, reference is made to wider reading (Waugh and wiki). The candidate has detailed a little analysis on page 36; 'This helps prove waves heavily impact the quality of the surf, and because there is a greater body of water, providing bigger waves at Belhaven…'

♦ The only further analysis is found in RQ 4 on page 38 'Belhaven had many more nurdles than Gullane. This could be because there is more vegetation for the beads to get caught up in, also as a result of currents from all over the world, washing plastics onto the exposed beach.' However, the candidate doesn't link the relevance of the results to surfing.

G: Reach reasoned conclusion(s) supported by a wide range of evidence

The candidate was awarded **4/8 marks**.

The candidate provides a valid conclusion supported by a reasonable range of evidence, and they attempt to go beyond repetition of the analysis. The candidate could have included more detail and insight placing them in the 4-6 marks category:

♦ The candidate attempted to recap on their response to the question but was more implicit than explicit.

♦ They attempted to bring in relevant background reading from National Geographic.

♦ The candidate revisits the factors and attempts to compare, therefore drawing a conclusion however, this lacks substance.

♦ There is evidence of simplistic sub-conclusions in the final paragraphs on page 31; 'Therefore, in conclusion, the psammosere system does influence beach users in that they choose to avoid dune slacks'.

♦ The candidate also later states on page 34; 'Overall, data indicates wind speed had an effect on surfers, but the general use of the water was determined by social tradition at the time of data gathering'.

Candidate 3

A comparative investigation of urban issues in Edinburgh's Old and New Town.

The candidate was awarded a total of **55/60 marks** overall.

A: Justify the choice of a complex geographical topic to research

The candidate was awarded **4/4 marks**.

Reference is made to relevance, purpose and literature placing the candidate in the 3-4 marks category.

♦   The candidate states on page 44; 'The concept of cities not being designed to keep women safe has become increasingly topical in the light of the murder of Sarah Everard'.

♦   The candidate demonstrates purpose by stating; 'I wanted to incorporate my interest in women's safety into this study by researching how geographical issues, specifically safety, can impact different groups in Edinburgh's Old and New Town'.

♦   Explicit reference is also made to geographical literature and research throughout page 44. For example, the candidate references an academic journal 'The Fear of Crime' written by Jelle Brands, the Safer Sweden Foundation and the 'Feminist City' by Leslie Kern.

B: Plan and carry out detailed research, which could include fieldwork

The candidate was awarded **10/10 marks**.

The candidate provides clear and explicit evidence of detailed planning. They use relevant sources of information to support detailed analysis, and skilful use of research techniques, including self-devised approaches, to gathering information. This places the candidate in the 8-10 marks category:

♦   On page 46, research was carried out to choose areas studied

♦   Systematic sampling was applied

♦   On page 46, two sites were selected; Old Town, Cowgate and New Town, Rose Street.

♦   The candidate details three explicit hypotheses on page 47.

♦   A pilot questionnaire using survey monkey on page 47

♦   A series of Instagram polls with 300 responses on page 47

♦   On page 51, the candidate details pedestrian and traffic counts; six of each at Cowgate and six of each at Rose Street.

♦   On page 49, the candidate states that a blank map was given to class with a key; a perception study map of feeling safe/unsafe.

♦   Land use mapping using RICEPOTS and google street view on page 52..

♦   Accessibility survey covering six sites in each area on page 55.

C: Evaluate the research techniques and the reliability of the data gathered

The candidate was awarded **8/8 marks**.

The candidate makes clear, explicit and extensive evaluative comments on research techniques. The relevance and reliability of the data gathered, and next steps are discussed in detail placing the candidate in the 7-8 marks category:

♦   Referring to the pilot questionnaire on page 47, the candidate states 'I think this reduced the reliability due to the created bias…privately educated, middle class teens…' and 'To improve, I would ask a wider (e.g., age, ethnicity, sex) demographic.'

♦   The candidate also states on page 47; 'I used two different techniques (quantitative and qualitive) to make my results more reliable and varied.'

♦   Much of the reference to the Survey Monkey results on page 50 is evaluative, but specifically 'my data cannot be wholly representative of these two areas even though I represent it this way'.

♦   The candidate goes on to state on page 50; 'Using two survey methods also made my data more reliable'.

♦   Referring to traffic on page 51, the candidate states; 'I was hindered by a lack of time because it was getting dark and unsafe… I had to leave the Cowgate at 22:00 when it was just starting to get busy…'.

♦   More reference is made to sampling on page 51; 'systematic sampling … meant that I missed out on some busy corners of Rose St e.g., Hannover Street.'

♦   The candidate refers to land use mapping on page 52; 'Instead of using a sampling strategy …I decided to land use map the whole street meaning I could gather data on every service/shop'.

♦   The candidate continues on page 52; 'As the Street View car was taken in August 2019 it wasn't the most accurate as some shop's fronts had either changed or been left derelict reducing precision'.

♦   An example of reliability and possible next steps to improve data is given on page 53; 'my data would have been more useful …'.

♦   The candidate states on page 54; 'Although this reduced the reliability as the app wasn't very precise in counting the exact metres'.

♦   They continue on page 54; 'However, as I used fewer than 30 sites, I cannot confidently say the distribution is clustered'.

♦   Referring to the accessibility survey on page 55, the candidate discusses sampling and missing out on some litter and bad pavements. They also discuss the limitation of 'personal bias'. The candidate then discusses next steps; 'to improve, I would use a partner to gather two sets of data then average it as two opinions are more reliable…'. The final sentence in this section discusses another limitation of the candidate's research 'I also only investigated women and wheelchair users as marginalised groups'.

♦ On page 57, the candidate discusses judgements of the accuracy of the annotated photographs; 'because of my narrow scope of data I was only able to use wheelchair users to represent the marginalised groups'.

D: Demonstrate detailed knowledge and understanding of the topic from wider reading

The candidate was awarded **7/8 marks**.

The candidate uses reasonable evidence from wider reading and supports their findings with research, specifically in the conclusion, to provide evaluation and analysis however, this could have been developed further. In their analysis, the candidate relies on websites like Edinburgh Live rather than the research that stimulated the topic of study placing them in the 7-8 marks range:

♦ There are sections on page 44 where reference is made to more explicit wider reading; 'Fear of Crime', 'Safer Sweden Foundation' and 'Feminist City'.

♦ The candidate uses 'Travelness' on page 46 to support their choice of sites.

♦ SIMD data 2020 on page 48 is used to link the idea of deprivation and safety.

♦ The candidate used Edinburgh Live on page 49 to confirm the Old Town as a 'no go area'.

♦ The candidate uses Edinburgh Council on page 56 to support the idea of required improvements to connectivity and usability in the old town, for example, 'urban lifts'.

♦ In conclusion, the candidate refers back to 'Brands theory' on page 58 to suggest that people make mental notes on areas they have heard to be unsafe when passing through similar places; 'Living Streets'.

E: Use a wide range of appropriate techniques to process the gathered information

The candidate was awarded **9/10marks**.

A wide range of valid techniques are used throughout the Study however, these could have been more skilfully integrated placing the candidate in the 8-10 marks category.

♦ The candidate uses pie charts and qualitative comments on page 48, but they are not integrated with skill as the charts and extracts haven't been referred to in the text.

♦ A self-made perception of safety map taking averages from class data on page 49.

♦ Although bar charts have been used on page 50, these should be referred to in the text.

♦ Column graphs have been superimposed onto Google Earth on page 51. There is no scale, but it is acknowledged that it would have been difficult to do this graphically.

- Land use maps displayed on page 52 are referred to on page 53 but could have been more detailed 'Rose Street has greater public activity….'
- Also on page 53, a stacked bar graph has been used and is referred to it in the text; 'my traffic survey showed…'.
- The 'Nearest Neighbour' statistical test has been used on page 54, and is supported by comments about the extreme clustering of pubs.
- The candidate makes use of, and refers to, donut graphs (pie charts) with a colour coded key on pages 55 and 56; 'As seen in the photos and data collected from my Accessibility Survey…'.
- The candidate has included their own photographs on pages 56 and 57.

F: Analyse all the information that has been gathered and processed to identify and explain relationships
The candidate was awarded **10/12 marks**.

The candidate identifies and gives clear and reasonable explanations of relationships. Relationships between the hypotheses could be better developed with wider reading. The candidate was placed in the 8-10 marks category:

- On pages 48 and 49, the candidate uses surveys, SIMD and wider reading from 'Edinburgh Live' to link the idea of deprivation and unsafe environments; 'This is due to these areas being typically less developed and therefore the urban environment can be more challenging to navigate due to lack of public funding.' They go on to state; 'This means that peoples' perceptions of criminal activity are what informed how safe they saw either place'.
- On page 53, the candidate links land use maps to traffic and pedestrian counts, and then to the street layouts. They then link back to the theory about lighting however, this could have been better developed.
- The candidate on page 54 describes extreme clustering but could have developed this further.
- The candidate links theories with visual data on pages 56 and 57 and surveys on page 55 to develop the idea of mobility issues on accessibility in both areas.

G: Reach reasoned conclusion(s) supported by a wide range of evidence
The candidate was awarded **7/8 marks**.

The candidate has provided a valid conclusion on page 58, using evidence from each hypothesis. They go beyond repetition with some insight into the topic chosen placing them in the 7-8 mark category:

- The candidate links findings about deprivation/safety to Brands theory about people taking mental notes. This is an attempt to go beyond repetition of analysis.

- ♦ The candidate accepts Hypothesis 2 and 3 but has already stated it in their analysis. They don't go beyond repetition of analysis here.

- ♦ In the final paragraph, the candidate provides an overall conclusion and suggests their research could be used to inform future urban planning decisions, and links this to proposals that Edinburgh Council have for the future. This final point goes beyond repetition and demonstrates some insight into the topic.