GCSE
GEOGRAPHY
8035/2

Paper 2 Challenges in the Human Environment

Mark scheme

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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

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

Qu	Pt	Marking Guidance	Total marks
01	1	**Calculate the mean rate of growth per hour for the Asian cities shown in Figure 1.** Answer: 52 One mark for working, one for correct answer. Full marks for correct answer with no working. Allow 1 mark if answer given with correct decimals to one or two places and not rounded eg 52.16 / 52.17 / 52.2 AO4 = 2 marks	2
01	2	**Outline one reason for the slower rates of growth in HIC cities.** The question focusses on HICs, it should be clear the candidate is referring to these and not cities in general. One mark for an initial overall comment or single relevant statement eg • They have already developed / they urbanised in the past / during the industrial revolution (1). • Many people no longer wish to live in cities (1). • Transport makes it possible to commute from outside the city (1). Second mark for developing the comment eg • They urbanised in the past / during the industrial revolution (1) so the cities have already grown to a large size (d)(1) so most of the population already live in urban areas (d)(1). • Many people no longer wish to live in cities (1) as they have a better quality of life in rural areas (d)(1). • Transport makes it possible to commute from outside the city (1) so people live in the surrounding areas rather than the city (d)(1). Credit answers that refer to lower natural increase / lower birth rates. AO1 = 2 marks	2

01	3	**Give one way in which a major city in an LIC/NEE is regionally important.** Credit any reasonable statement in relation to the named city. Allow wide interpretation of 'regional' as both supra and intra-national. Eg Lagos – a main financial centre (for West Africa). Rio de Janeiro – Cultural capital for Brazil / Olympic host city. Mumbai – major port/ Bollywood No credit for HIC city. AO1 = 1 mark	1

01	4	**Explain how urban planning is improving quality of life for the urban poor.** **Use Figure 2 and an LIC/NEE example you have studied.**	6

Level	Marks	Description
3 (Detailed)	5–6	AO2 – Shows detailed understanding of the relationship between urban planning and quality of life for poorer people. AO3 – Demonstrates thorough application of knowledge and understanding to offer analysis of the example provided and / or the link in broader terms.
2 (Clear)	3–4	AO2 – Shows clear understanding of the relationship between urban planning and quality of life for poorer people. AO3 – Demonstrates some application of knowledge and understanding through some analysis of the example provided and / or the link in broader terms.
1 (Basic)	1–2	AO2 – Shows limited understanding of the relationship between urban planning and quality of life for poorer people. AO3 – Demonstrates limited application of knowledge and understanding through basic analysis of the example provided and / or the link in broader terms.
	0	No relevant content.

- **Level 3 responses** will cover the figure and either a named example or well-developed geographical knowledge and provide a considered analysis of the link.
- **Level 2 responses** will show reasonable understanding of the link using the figure and an example / clear geographical knowledge or more considered analysis for just the figure or example used.
- **Level 1 responses** will show simple understanding of the link using the figure and / or a named example / simple geographical knowledge.
- **Max top L2** if only appropriate example or Figure 2 covered.
- **Max top L2** if no example.
- **Max L1** for HIC example

		<u>Indicative content</u> • Full specification requires an example of urban planning in the context of an LIC/NEE to be studied and candidates should use this. Credit references to schemes which have been planned even if the word planning is not stated. • Answers should make use of both Figure 2 and a named city in a LIC/NEE, balance is not required. • Reference to Figure 2 may be inferred even if not explicitly stated through comment on improvements to infrastructure relating to quality of life. • Figure 2 shows how living conditions, notably water and sanitation, can be improved but that governments need to be involved also. Clearly clean water and better sanitation will reduce incidence of disease and more durable housing helps residents feel settled and more secure, both of which improve quality of life. • The command 'explain' requires a link to be established between the planning / actions taken and how the quality of life is improving as a result. • Specific examples may be used such as the Favela-Barrio scheme in Rio or more general approaches such as improving traffic infrastructure in Lagos. • eg Favela-Barrio: day care centres provide adult education classes to improve job prospects so that employment is more secure; poorly built houses are replaced with brick structures and ownership rights are granted so danger of eviction and therefore stress are reduced. • eg Lagos has developed a Bus Rapid Transit and light railway system to carry more people into the city which will improve access to employment and thereby increase pay and quality of life. AO2 = 3 marks AO3 = 3 marks	

01	5	**Suggest how developments such as this can help urban areas to become more sustainable.** **Use Figure 3 and your own understanding.**	4

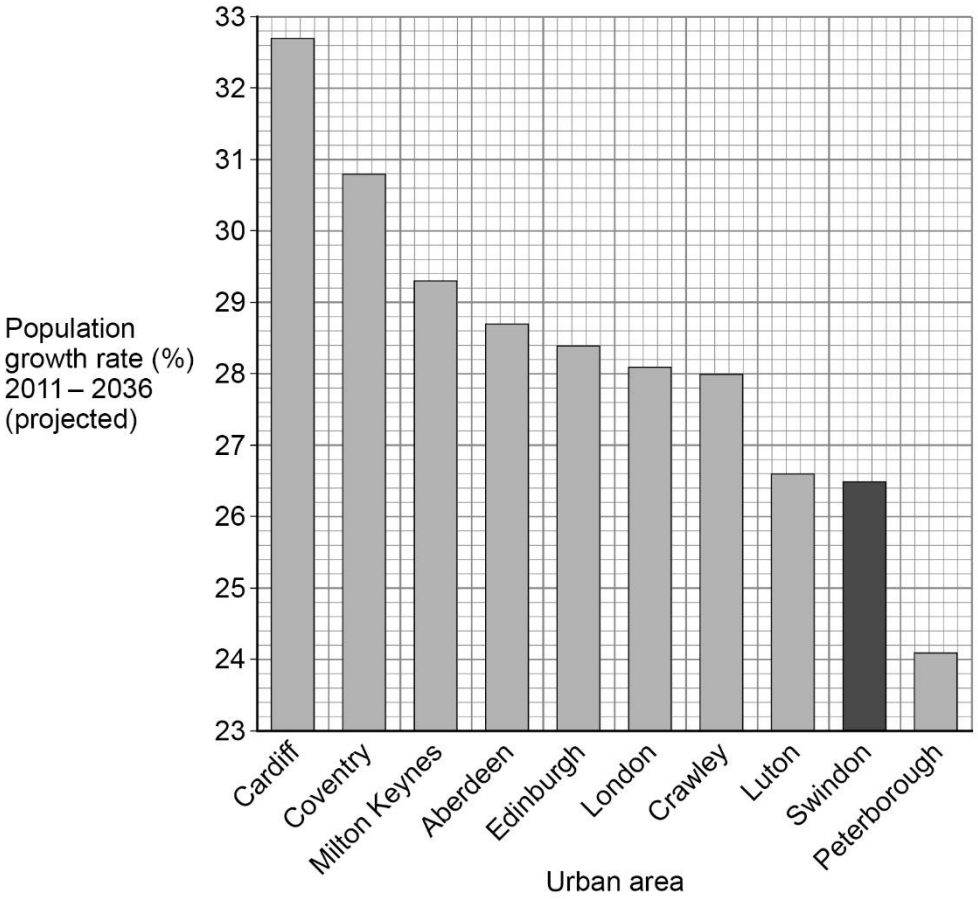
Level	Marks	Description
2 (Clear)	3–4	AO2 – Shows clear understanding of urban areas and the concept of sustainability. AO3 – Uses Figure 3 effectively and offers development to interpret the link between the developments shown and sustainability.
1 (Basic)	1–2	AO2 – Shows limited understanding of urban areas and the concept of sustainability. AO3 – Uses Figure 3 OR own knowledge to begin to interpret the link between the developments shown and sustainability.
	0	No relevant content.

- **Level 2 responses** will apply geographical knowledge and understanding in combination with the figure to present a reasoned interpretation.
- **Level 1 responses** will show simplistic interpretation or simply assert a cause / effect link
- No credit for description of urban sustainability in isolation.

Indicative content

- Answers should make use of Figure 3 which should be clear through reference to specific developments shown in the figure or more implicit through reference to sustainable transport developments.
- Development need not be through use of a named place but use of an example may add clarity and should be credited. Development may also be found in explanation of urban sustainability and how it might be achieved.
- From Figure 3: bus routes promote public transport which reduces fuel consumption and congestion thereby reducing emissions with both environmental and social benefits; clear separate cycle lanes will make cycling easier and safer for people; solar panels use renewable energy and reduce fossil fuel dependency and greenhouse gas emissions; LED lighting will reduce energy consumption; adding green roofs creates green space and will increase wildlife habitats with environmental benefits; recycling concrete for the base of the shelter saves both the primary resources and the energy used in concrete manufacture.
- All aspects of urban sustainability are valid ie environmental, social, economic and political and full marks may be obtained for full development of one aspect.
- Expect to see: BedZed, Freiburg, Greenhouse Leeds and Curitiba as popular examples.
- Own knowledge will vary based on the aspects or example chosen but is likely to cover similar ideas with other possible themes from the specification that are not shown in the figure being: water conservation and waste recycling.

AO2 = 2 marks AO3 = 2 marks

01	6	**Complete Figure 4 using the following data.** One mark for correct completion of graph. 0.1% lower than Luton to the immediate left. Width can be ignored, shading not needed  AO4 = 1 mark	1

01	7	**Calculate the range of population growth rate (%), 2011–2036 (projected) for the urban areas shown in Figure 4.** One mark for the correct answer. **C** – 8.6% No credit if two or more answers are shaded. AO4 = 1 mark	1

01	8	**Compare the distribution of the 10 highest and 10 lowest urban areas shown in Figure 5.** One mark for an initial overall descriptive comment or single relevant descriptive statement eg • Most of the highest in the south and east / lowest in the north (1). • All of the lowest growing ones are in England / 7 of the highest ones (1). • Most of the lowest growing are on the coast / most of the highest are inland (1). Second mark may be a second separate point <u>or</u> developed point for further descriptive clarity, eg • Highest in the south and east / lowest in the north (1) with all the lowest in England / three of the highest not in England (d)(1). • All of the lowest growing ones are in England / 7 of the highest ones (1) so the highest growing cities are more widely distributed / the 2 furthest north actually amongst the highest growing (d)(1). • Most of the lowest growing are on the coast (1) but most of the highest are inland (d)(1). Credit reference to' Midlands' for 10 lowest in UK context. AO4 = 2 marks	2

01	9	**Outline how international migration has affected a UK city you have studied.** Credit one migration and consequent change only. One mark for a basic statement, eg • Migration means cities have got bigger (1). • Migration from other countries means some cities have areas dominated by the new population (1). • People from other countries bring shops and building styles that are different from what was there before (1). Two marks for a developed idea, eg • Migrants from other countries will often live near to each other for support (1) and so they will become the majority population in the area, meaning you are as likely to hear the migrant language spoken on the street as you are English (d) (1). • The clustering of many migrants from China in one place in London has led to the development of Chinatown (1) where many buildings are in Chinese style and there are a number of Chinese supermarkets (d) (1). Max 1 mark if city not named or clearly able to be inferred or non-UK city. Max 1 if the migration is not international, at least implicitly. Allow named area of a city AO1 = 2 marks	2

01	10	**Assess the challenges created by urban change in a UK city you have studied.**	9

Level	Marks	Description
3 (Detailed)	7–9	AO1 – Demonstrates detailed knowledge of places and processes in urban environments. AO2 – Shows a thorough understanding of how urban change in the UK creates challenges. AO3 – Demonstrates thorough application of knowledge and understanding to make thorough assessment of the challenges in a UK city.
2 (Clear)	4–6	AO1 – Demonstrates reasonable knowledge of places and processes in urban environments. AO2 – Shows clear understanding of how urban change in a UK city creates challenges. AO3 – Demonstrates reasonable application of knowledge and understanding to make partial assessment of the challenges in a UK city.
1 (Basic)	1–3	AO1 – Demonstrates limited knowledge of places and processes in urban environments. AO2 – Shows limited understanding of how urban change in a UK city creates challenges.

		AO3 – Demonstrates limited application of knowledge and understanding to make limited assessment of the challenges in a UK city.
	0	No relevant content.

- **Level 3 responses** will provide a more considered assessment with conclusion of the extent / scale of challenges, supported with precise knowledge.
- **Level 2 responses** will provide specific knowledge with implicit assessment of challenge(s) or generically accurate knowledge with well-reasoned assessment of challenge(s).
- **Level 1 responses** will show simple understanding of whether or not challenge(s) result.
- **Max level 2** if no assessment of the challenges.
- **Max Level 2** if no named city / non-UK city with relevant comments
- No credit for discussion of the opportunities**.**

<u>Indicative content</u>

- The question specifies challenges only but a wide range are available for comment, depending on the city chosen.
- Answers must refer to a named UK city. Likely examples are Liverpool, Bristol, London, Birmingham.
- Credit any significant urban area even if not technically a city eg Teesside, Gateshead.
- The command 'assess' requires some appraisal of the degree to which changes in urban areas in the UK create challenges. There should be an effort to link the change to the resulting issues which are as follows:

Social and economic inequalities in...

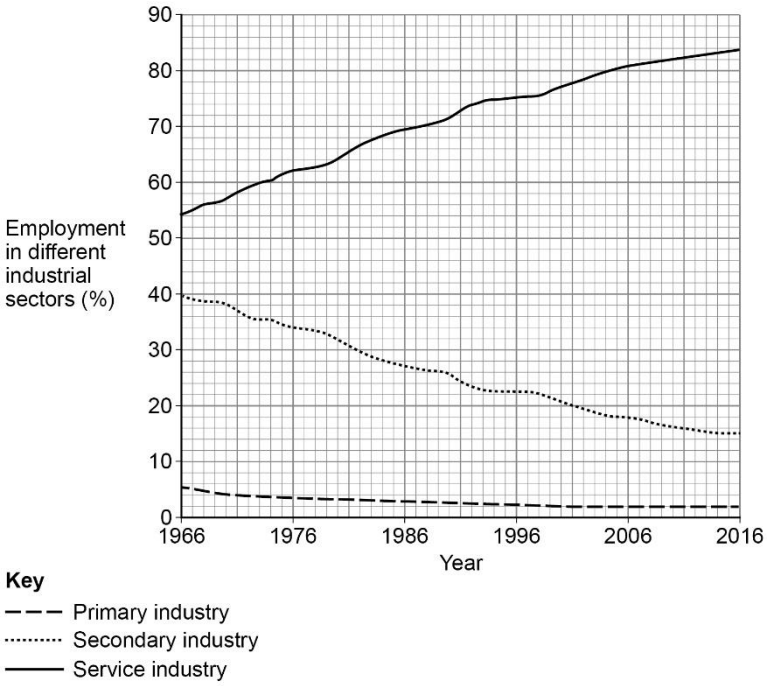
- Housing: Poor quality housing in inner city areas is slow to be redeveloped eg £1 houses, Granby Four Streets, Liverpool.
- Education: Students in Filwood, Bristol gained much lower GCSE scores than the Bristol Average (P8 = -0.6 vs -0.1)
- Health: Life expectancy in Aston, Birmingham is only 76, below UK average and lower than areas such as Four Oaks at 85.
- Employment: 9% of adults in Anfield are unemployed.
- All of the above indicating high levels of deprivation eg Filwood, Bristol in the top decile for deprivation nationally and can be linked to the processes of industrial decline.
- Break up of communities, particularly in recent past, due to large scale clearance of unfit housing.
- Maintaining mixed communities as many new developments are dominated by one housing type and therefore one or two social groups eg city centre flats and suburban 'executive' estates.

Environmental…

- Dereliction: see above re £1 houses as they were in such poor condition they couldn't be sold otherwise.
- Building on greenfield and brownfield sites: whilst the former may be cheaper they reduce areas of green space eg Croxteth Park, Liverpool, but the latter require significant investment as they can be contaminated which is

		slow to arrive from private companies eg Urban Splash, Park Hill Flats, Sheffield. • Waste disposal: an increasing problem as city populations grow. • The challenge of maintaining green space as cities grow and unused space is infilled. **Urban sprawl on the rural-urban fringe**… • See above re greenfield sites, including out-of-town shopping developments eg New Mersey shopping park. • Growth of commuter settlements which lose character and become too expensive for most eg Shenstone, N of Birmingham. • Pressure to develop on the greenbelt. • Ensuring a viable mix of retail / leisure / housing as many new developments become 'commuting ghettos'. Full marks may be achieved for thorough assessment of one or two challenges. AO1 = 3 marks , AO2 = 3 marks, AO3 = 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

Qu	Pt	Marking Guidance	Total marks
02	1	**Complete Figure 6 using the following data.** 1 mark for each point correctly plotted and then joined with a solid line. Max 1 mark if points plotted without being joined correctly by a solid line.  AO4 = 2 marks	2
02	2	**Calculate the difference between employment (%) in primary industry and secondary industry in 2016.** One mark for the correct answer: **A** – 13% No credit if two or more answers are shaded. AO4 = 1 mark	1
02	3	**Which one of the following describes the change in secondary employment from 1966 to 2016?** One mark for the correct answer. **B** – It more than halves No credit if two or more answers are shaded. AO4 = 1 mark	1

02	4	**Outline one or more reasons for the decline of traditional industries in the UK.** 1+1+1 Or 1+1+1(d) Or 1+1(d)+1(d) Candidates should show that they can apply knowledge and understanding linking the factors to the resultant decline. Expect comments on increased mechanisation / robots, globalisation, outdated locations and practices, and government policy. Also credit reference to more recent trends such as 'green' policies reducing the demand for coal. Credit any reasonable explanation eg: Machines and increasingly robots have reduced the need for labour (1) which leads to loss of jobs (1) and the closure of some plants with increased efficiency (1). Labour costs are lower abroad (1) which means they can produce goods more cheaply (1) so UK manufacturing close as they can't compete (1). Many traditional UK industrial areas are inland e.g. Sheffield (1) which adds to costs of transporting materials / importing raw materials as they are far from large ports (1) and so they are uncompetitive and close (1). Government policies such as privatisation (1) meant that state run industries were sold off (1) and many jobs were lost to make the companies more competitive (1) increasing demand/shift to tertiary/quaternary (1) office based jobs seen as more desirable (1) more educated workforce allows service industries to expand (1) AO2 = 3 marks	3

02	5	**Suggest how changing economic and political links may affect the UK's place in the wider world. Use Figure 7 and your own understanding.**	6

Level	Marks	Description
3 (Detailed)	5–6	AO2 – Shows detailed understanding of the relationship between changing economic and political links and the UK's place in the wider world. AO3 – Demonstrates thorough application of knowledge and understanding to offer effective analysis of the resource and linking to the implications for the UK.
2 (Clear)	3–4	AO2 – Shows clear understanding of the relationship between changing economic and / or political links and the UK's place in the wider world. AO3 – Demonstrates some application of knowledge and understanding to offer analysis of the resource with some effectiveness, linking to the implications for the UK.
1 (Basic)	1–2	AO2 – Shows limited understanding of the relationship between changing economic and / or political links and the UK's place in the wider world. AO3 – Demonstrates limited application of knowledge and understanding to offer basic analysis of the

		resources provided linking to the implications for the UK.
	0	No relevant content.

- **Level 3 responses** will cover the figure and well-developed geographical understanding. There will be specific detail of changing economic and political links and considered analysis of the implications.
- **Level 2 responses** will cover the figure and / or some geographical understanding. There may be some specific detail of changing economic and / or political links, with some more generic statements and clear analysis of the implications.
- **Level 1 responses** will cover the figure and / or limited geographical understanding. Points made will be basic and generic with limited analysis of the implications.
- **Max top L2** if Figure 7 or own understanding only.
- **Max top L2** if economic or political links only.

Indicative content

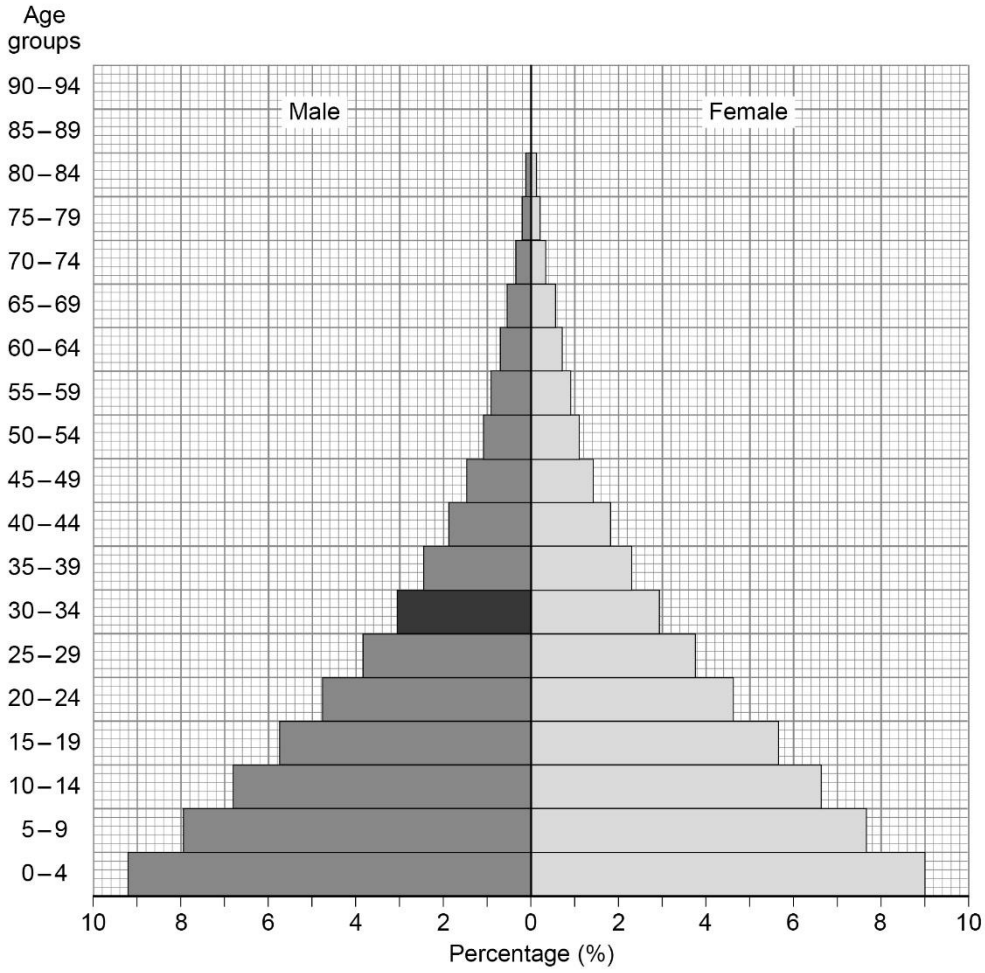
There is no need for balance answers may be entirely positive or negative

- Answers should focus on political and economic links, although this can be interpreted broadly.
- As the question relates to a rapidly changing situation credit appropriate suggestions given.
- The focus should remain on how the changes impact on the UK's place in the wider world, rather than a discussion of the pros and cons of Brexit.
- Credit implicit links to the global status of the UK.
- The specification requires that the European Union and the Commonwealth are studied but credit other appropriate examples if used.
- Colonialism and the British Empire are creditworthy ideas.
- The figure suggests that leaving the EU may lead to greater control over both economic and political decisions. It also poses the question that the UK may look to build stronger trading relationships with other countries.

Economic

- Potential to forge new trading alliances with other countries and to be seen as a global player.
- Opportunity to build on links within the Commonwealth, opening up new markets.
- The UK could be seen as more economically powerful when trading with some LICs/NEEs.
- The UK could be seen as an unfavourable place for business and TNCs may leave the UK to relocate to other EU countries to reduce import taxes after Brexit.
- The UK will save money from no longer paying to be a member of the EU, which it can use to develop links with other countries.
- However the UK will also lose out on economic support given by the EU, which poorer areas of the UK used to support industry so businesses may be less competitive in the global market.

		• If the UK is seen as unwelcoming to migrants it may not attract skilled workers and foreign investment, losing its place at the forefront of international business and innovation. Political • The UK will no longer have a decision-making voice in the EU. • It may be harder for the UK to have international influence as it is seen as less important now it is no longer part of a large group of countries. • After Brexit the UK can make its own rules so it can forge alliances with other countries. • The UK may have a more powerful role in the Commonwealth as there are less members who are powerful HICs. • However it may also have to make alliances with countries like the USA, where the balance of power is in favour of the other country. • The Queen is Head of State of the Commonwealth, which gives the UK some importance • But although the Queen is the figurehead, the Secretary General is elected from different member countries. AO2 = 3 marks AO3 = 3 marks	

02	6	**Complete Figure 8 using the following data.** 1 mark for correct completion of bar. Shading is not necessary.  AO4 = 1 mark	1

02	7	**Using Figure 8, calculate the percentage (%) of children aged 0–4 years old.** One mark for the correct answer. **D** – 18.2% No credit if two or more answers are circled. AO4 = 1 mark	1

02	8	**What is meant by infant mortality rate?** 1+1 1 mark for accuracy in terms of death – 'children/babies who die (under the age of 1)'/ number of children who die 1 mark for the accurate description of rate – 'per 1000 (live) births per year'. AO1 =2 marks	2

02	9	**Using Figure 9, suggest how population change in Stage 3 may have economic benefits.** 1+1+1 Or 1+1+1(d) Or 1+1(d)+1(d) Candidates should make reference to Figure 9 through reference to the birth and death rates and total population change shown in stage 3. They should show that they can apply knowledge and understanding by making the connection between stage 3 of the DTM and economic benefits. Figure 9 shows birth rates falling, which means more money will be available in households (1) which can lead to increased spending in the country (1). Fewer babies being born can reduce the amount of money needed for maternity services and schools (1) which allows more to be spent on developing industry (1). As the total population increases there are more people to work in industry (1) so the country can increase its GNI (1). Max 1 mark if no reference to Figure 9, at least implicitly. No credit for reference to population change in isolation. AO3 = 3 marks	3

02	10	**Describe one or more impacts that international aid has had on a named LIC/NEE country.**	4

Level	Marks	Description
2 (Clear)	3–4	AO1 – Demonstrates clear knowledge of international aid in a named country. AO2 – Shows clear understanding of the impact(s) of international aid.
1 (Basic)	1–2	AO1 – Demonstrates partial or basic knowledge of international aid. AO2 – Shows limited understanding of the impact(s) of international aid.
	0	No relevant content.

- **Level 2 responses** will provide clear knowledge of international aid and a developed understanding of the specific impact(s) on a named country.
- **Level 1 responses** will be simplistic with basic knowledge of international aid and limited understanding of the impact(s), which may be generic.
- **Max L1** if no country named or if HIC country named but points still applicable.

Indicative content
- Full marks are possible for one well developed impact.
- Credit aid only. No credit for comments about debt, fairtrade or microfinance loans.
- There should be a link between the aid and the impact on the receiving country.
- Answers given will depend on the country but may involve funding for education, water supply and sewerage, disease prevention, improvements to infrastructure or farming techniques.
- Negative impacts are also creditworthy – such as tied aid, government corruption or aid being spent unwisely.
- Eg The UK gave £45 million to Tanzania to fund a family planning programme. This will allow women to control the size of their family and improve their quality of life.
- Eg Water Aid has helped provide clean water to over 12 000 people in their villages in Malawi. Their children can now spend more time getting educated, rather than walking to collect water, and villagers can grow more food, some of which can be sold, providing income.
- Eg The UK gave aid to Malaysia to build the Pergau Dam to make electricity to improve the standard of living of people in the cities. However in return Malaysia had to spend more money buying weapons from the UK so their government had less to spend on schools and hospitals.

AO1 = 2 marks
AO2 = 2 marks

02	11	**'Transnational corporations (TNCs) bring more disadvantages than advantages to a host country.'** **Do you agree? Explain your answer.**	6

Level	Marks	Description
3 (Detailed)	5-6	~~AO1 – Demonstrates detailed knowledge of the operations of a TNC in a named LIC/NEE.~~ AO2 – Shows a thorough understanding of how a TNC brings advantages and disadvantages. AO3 – Demonstrates thorough application of knowledge and understanding in evaluating the balance between advantages and disadvantages brought by a TNC.
2 (Clear)	3-4	~~AO1 – Demonstrates clear knowledge of the operations of a TNC in a named LIC/NEE.~~ AO2 – Shows a reasonable understanding of how a TNC brings advantages and/or disadvantages. AO3 – Demonstrates reasonable application of knowledge and understanding in evaluating the balance between advantages and/or disadvantages brought by a TNC.
1 (Basic)	1–2	~~AO1 – Demonstrates basic knowledge of the operations of a TNC in a named LIC/NEE.~~ AO2 – Shows a limited understanding of how a TNC brings advantages and/or disadvantages. AO3 – Demonstrates limited application of knowledge and understanding in evaluating the balance between advantages and/or disadvantages brought by a TNC.
	0	No relevant content.

- **Level 3 responses** will provide well-reasoned connections between the operation of (a) TNC(s) and the resulting advantages and disadvantages.
- **Level 2 responses** will provide clear reasoning of the connections between the operation of (a) TNC(s) and the resulting advantages and disadvantages.
- **Level 1 responses** will give basic link(s) between (a) TNC(s) and the advantage(s) and disadvantage(s) that result or merely assert a connection between them.

- ~~**Max top L2** if no named country.~~
- ~~**Max top L2** if HIC country but comments could still apply.~~
- ~~**Max L2** if no conclusion.~~

		<u>Indicative content</u> • A good grasp of the geographical processes is potentially as creditworthy as exemplar knowledge. • Candidates are likely to have studied a range of TNCs and countries, with likely textbook examples being Unilever in India and Shell in Nigeria. • Using the latter as an example: • Answers should suggest advantages such as: ✓ Direct employment for 65 000 Nigerians and a further 250 000 indirectly. ✓ 91% of Shell contracts go to Nigerian companies. ✓ Shell makes significant contributions to Nigeria's tax coffers and thereby increases national wealth. ✓ Credit development of the above to show how they increase security of employment and thereby disposable income, increase government revenue to allow funding of infrastructure and social provision, and create multiplier effects which have wider benefits. • However answers should also address 'do you agree?' and will need to show disadvantages such as: × Oil spills, particularly in the Bodo region, cause conflict and resentment and ruin fishermen's livelihoods. × Oil flaring is still used, increasing greenhouse emissions and air pollution. × Oil wealth has provoked armed conflict and new terrorist groups such as the Niger Delta Avengers who cause loss of life and revenue for the government. • Answers should be brought to a conclusion, with an overall evaluation of whether advantages outweigh disadvantages or vice-versa. Either view is perfectly acceptable. ~~AO1 = 3 marks~~ AO2 = 3 marks AO3 = 3 marks	

Section C

Qu	Pt	Marking Guidance	Total marks
03	1	**Which of the following continents has the largest number of countries with a score of 0 – 0.57?** One mark for the correct answer. **A** – Africa No credit if two or more answers are shaded. AO4 = 1 mark	1
03	2	**Suggest how poor water supply may affect social well-being.** 1+1+1 Or 1+1+1(d) Or 1+1(d)+1(d) There is no requirement to refer to Figure 10, though candidates may choose to. They should show that they can apply knowledge and understanding by making the connection between either the quality of the water supply and / or unreliable / scarce water supply and the resultant well-being issues. Many LICs will not have access to a clean water supply which can lead to illness (1) such as typhoid / cholera (1) which clearly causes distress and death (1) people may get dehydrated (1) In many countries the water supply is very distant so people have to spend time walking to collect it (1) a task which often falls to girls and children (1) so they don't have a proper childhood / can't go to school. (1) there may not be enough water for cooking/cleaning/washing (1) Max 1 mark if no reference to social well-being, at least implicitly. Credit reference to agriculture/food supply/malnutrition AO3 = 3 marks	3

03	3	**Explain how changing demand for food has affected the UK's carbon footprint.**	4

Level	Marks	Description
2 (Clear)	3–4	AO1 – Demonstrates clear knowledge of changing demand for food in the UK. AO2 – Shows clear understanding of the impact(s) of changing demand on carbon footprint.
1 (Basic)	1–2	AO1 – Demonstrates partial or basic knowledge of changing demand for food in the UK. AO2 – Shows limited understanding of the impact(s) of changing demand on carbon footprint.
	0	No relevant content.

- **Level 2 responses** will provide clear knowledge of changing demand for food in the UK and the resulting impact(s) on carbon footprint.
- **Level 1 responses** will be simplistic with basic knowledge of changing demand and limited understanding of the impact(s) on carbon footprint, which may be generic.
- **Max L1** if country other than the UK named but points still applicable.

<u>Indicative content</u>
- Full marks are possible for one well developed impact.
- Answers given will depend on the impact(s) chosen but may involve year-round demand for seasonal foods, increasing demand for high-value foods, demand for cheaper food.
- Positive impacts are also creditworthy such as demand for more local food.
- Eg Growing demand for seasonal foods all year round means that this food has to be imported such as apples from New Zealand or grown in the UK in heated greenhouses such as Scottish strawberries. This means that CO2 is generated either from transport / cold storage or from heat and light used to grow the crops.
- Eg High value foods such as Avocados and Madagascan vanilla are becoming increasingly common in supermarkets. These are around the world creating thousands of food miles and the higher the food miles the higher the CO2 produced and the higher the UKs resulting carbon footprint.
- Eg People are becoming concerned about where their food comes from so may be buying more locally at farmers' markets, which can have the effect of reducing carbon footprints as the food will not have been transported far..

AO1 = 2 marks
AO2 = 2 marks

03	4	**Discuss the challenges of the changing demand for water in the UK. Use Figure 11 and your own understanding.**	6

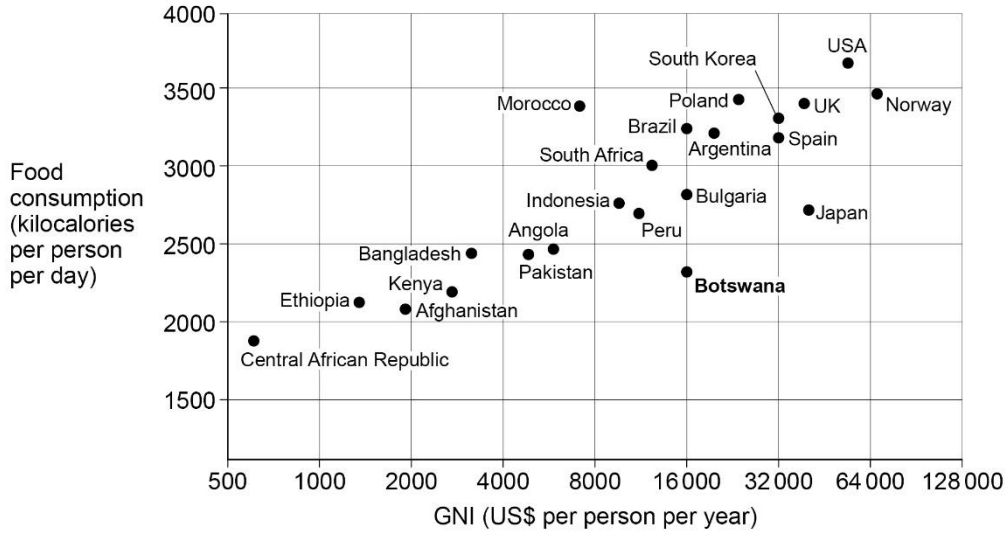
Level	Marks	Description
3 (Detailed)	5–6	AO2 – Shows detailed understanding of the issues around water demand in the UK. AO3 – Demonstrates detailed application of knowledge and understanding by analysing the resource thoroughly and effectively discussing the issues arising.
2 (Clear)	3–4	AO2 – Shows some understanding of the issues around water demand in the UK. AO3 – Demonstrates some application of knowledge and understanding by analysing the resource with some effectiveness with some discussion of the issues arising.
1 (Basic)	1–2	AO2 – Shows limited understanding of the issues around water demand in the UK. AO3 – Demonstrates limited application of knowledge and understanding through simple analysis of the resource with limited discussion of the issues arising.
	0	No relevant content.

- **Level 3 responses** will provide a well-reasoned analysis of the resource, supported with thorough understanding of the issues.
- **Level 2 responses** will give a partially reasoned analysis of the resource supported with either thorough or generically appropriate understanding of the issues.
- **Level 1 responses** will show basic analysis of the resource with simple understanding of the issues that result.
- **Max top L2** if Figure 11 or own understanding only.

<u>Indicative content</u>

- Figure 11 shows: increasing ownership of appliances that consume water; a trend for more bathrooms; spatial focus on demand in the SE.
- Candidates should be showing awareness of how these changes will present issues for the UK.
- Figure 11 should be used by reference to facts or figures given or description that is accurate enough to infer use of the resource rather than learned knowledge.
- Candidates should also be bringing their own understanding to the answer through discussion of the issues that result. Eg water consumption of appliances, number of UK households irrespective of population change (smaller household units), water surplus and deficit and the need for transfer, and rainfall variability in a changing climate.
- Credit any reasonable issues that result for example:
- Water demand per household is increasing as shown with more than doubling of dishwasher use, this will present a challenge to meet demand, especially when combined with the increasing number of UK households as unit sizes get smaller, effectively increasing demand still further.

		• Demand is also more focussed on the SE of the UK, already the most populated area. This is made worse by the fact that this is already an area of rainfall deficit, so that the problem is compounded in one part of the UK. The challenge will lie in meeting this demand, probably through transfer from areas of water surplus. This then raises an issue of cost as such schemes are very expensive, so the challenge will be both technical and economic. AO2 = 3 marks AO3 = 3 marks	

Qu	Pt	Marking Guidance	Total marks
04	1	**Plot the following data on to Figure 12.** One mark for the correct plot, need not be named  AO4 = 1 mark	1
04	2	**Which country is identified by the following data?** Spain. AO4 = 1 marks	1
04	3	**Draw a best fit line on Figure 12.** One mark for correct line which should be in the centre of the scatter, and a straight line from lower left to top right. AO4 = 1 marks	1

04	4	**Describe the relationship between GNI and food consumption shown in Figure 12.** Answers should make use of Figure 12 through naming countries and quoting figures in order to describe the relationship. One mark for a basic statement, eg • Positive correlation (1). • As GNI increases so does food consumption (1). • Countries with high GNI have a high food consumption (1). Second mark may be a second separate point or developed point for further clarity eg • Positive correlation (1) so that as GNI goes up so does the food consumption per person (d)(1). • As GNI increases so does food consumption (1) with anomalies such as Morocco (d)(1) which has high food consumption but only moderate GNI (d)(1). • Countries with high GNI have a high food consumption (1) though Japan is an anomaly (d)(1) with high GNI but a lower food consumption than the trend suggests (d)(1). Max 1 for opposites or list of names / data. Credit illustration of relationship with examples from graph for second mark No credit for explanation. AO4 = 2 marks	2

04	5	**Outline one or more reasons for the link between GNI and food consumption.** 1+1+1 Or 1+1+1(d) Or 1+1(d)+1(d) Candidates should show that they can apply knowledge and understanding of the link between GNI and food supply. Expect recognition that food consumption increases as a consequence of increased wealth and development, though not always universally. Allow awareness that calorie consumption may go up due to higher consumption of processed and calorie dense foods. Credit any reasonable explanation eg: At lower stages of development countries rely on subsistence farming (1) which leads to a low GNI (1) and is dominated by the production of staple cereal crops which provide fewer calories (1). As countries increase in wealth they are able to buy more food (1) this can mean an increased consumption of ('richer') foods (1) including meat and dairy which are more calorie dense (1), there is also a change to more 'westernised' diets (1) which will involve increased meat and higher calorie consumption (1). Japan illustrates that wealth does not always lead to increased calorie intake (1) as cultural norms lead to a healthier diet with fewer calories (1). AO2 = 3 marks	3

04	6	**Give two impacts of food insecurity.** One mark for each correct answer. Credit any reasonable answer which states an impact / effect resulting from food insecurity, even if indirectly. Malnutrition, undernutrition, disease (accept disease if simply named e.g. kwashiorkor), reduced ability to work, rising food prices, social unrest / political instability, soil erosion, poor quality of life, famine, death AO1 = 2 marks	2

04	7	**Suggest how food supplies have been made more sustainable.** **Use an example of a local scheme in an LIC/NEE.**	6

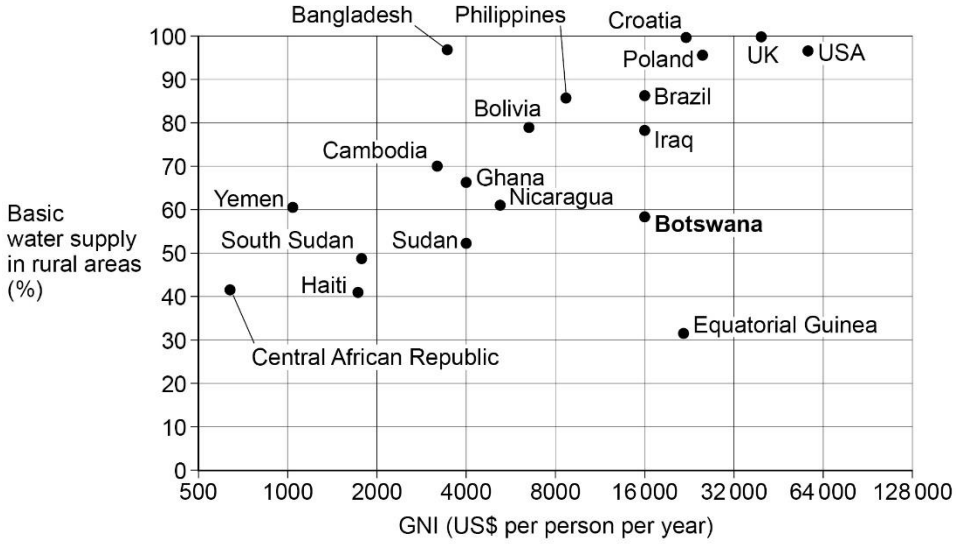
Level	Marks	Description
3 (Detailed)	5–6	AO2 – Shows thorough geographical understanding of how different actions contribute to sustainability in food supplies. AO3 – Demonstrates detailed application of knowledge and understanding by interpreting the link between the actions in the scheme and sustainability.
2 (Clear)	3–4	AO2 – Shows reasonable geographical understanding of how different actions contribute to sustainability in food supplies. AO3 – Demonstrates some application of knowledge and understanding by interpreting the link between the actions in the scheme and sustainability.
1 (Basic)	1–2	AO2 – Shows limited geographical understanding of how different actions contribute to sustainability in food supplies. AO3 – Demonstrates limited application of knowledge and understanding through simple interpretation of the link between the actions in the scheme and sustainability.
	0	No relevant content.

- **Level 3 responses** will cover a named local scheme in detail and link this to how it provides a more sustainable food supply.
- **Level 2 responses** will give specific detail of a named local scheme with a generic link to sustainability or generic ideas about a non-specific local scheme with a more specific link as to how it provides a more sustainable food supply.
- **Level 1 responses** will cover a local scheme in a basic manner, which may not be named and / or merely assert the sustainability.
- **Max L2** if scheme not named or cannot be inferred.
- **Max L2** if HIC/ large scale scheme but comments could still apply.

<u>Indicative content</u>

- Likely examples are: rice-fish farming in Bangladesh, Sand dams in Kenya, Agroforestry in Mali.
- Clearly the exact content will vary according to the development chosen, but is likely to include:
  - Improvement in crop yields and therefore food security.
  - Reduction in time spent farming and fetching water.
  - More balanced diet with items from different food crops rather than just one staple crop.
  - Reduction of soil erosion and desertification.
- Sustainability will equally vary according to example but is likely to include:

		○ More 'closed' systems are inherently more sustainable as they reduce dependence on external inputs. ○ The soil is retained for future years so crops can go on being produced. ○ Mutual benefit from rice-fish as fertiliser / wet environment and trees as shade and shelter / anchor to retain the soil mean that the systems can continue into the future. Credit wider ideas of sustainability such as reduction in depopulation so rural areas can maintain their populations and therefore have a future. AO2 = 3 marks AO3 = 3 marks	

Qu	Pt	Marking Guidance	Total marks
05	1	**Plot the following data on to Figure 13.** One mark for the correct plot, need not be named  Basic water supply = access to water within 30 minutes AO4 = 1 mark	1
05	2	**Which country is identified by the following data?** Sudan. AO4 = 1 mark	1
05	3	**Draw a best fit line on Figure 13.** One mark for correct line which should be in the centre of the scatter, and a straight line from lower left to top right. AO4 = 1 mark	1

05	4	**Describe the relationship between GNI and access to a basic water supply shown in Figure 13.** Answers should make use of Figure 13 through naming countries and quoting figures in order to describe the relationship. One mark for a basic statement, eg • Positive correlation (1). • As GNI increases so does the water supply (in rural areas) (1). • Countries with high GNI have a good water supply (in rural areas) (1). Second mark may be a second separate point or developed point for further clarity eg • Positive correlation (1) so that as GNI goes up so does the water supply (in rural areas) per person (d)(1). • As GNI increases so does water supply (in rural areas) (1) with anomalies such as Bangladesh which has good water supply (in rural areas) but only moderate GNI (d)(1). • Countries with high GNI have a good water supply (in rural areas) (1) though Equatorial Guinea is an anomaly with high GNI but a lower water supply (in rural areas) than the trend suggests (d)(1). Max 1 for opposites or list of names / data. No credit for explanation. Credit illustration of relationship with examples from graph for second mark AO4 = 2 marks	2

05	5	**Outline one or more reasons for the link between GNI and water supply.** 1+1+1 Or 1+1+1(d) Or 1+1(d)+1(d) Candidates should show that they can apply knowledge and understanding of the link between GNI and water supply. Expect recognition that water supply improves as a consequence of increased wealth and development as the government is able to fund improved infrastructure and this is particularly the case by being able to extend the reach further / to rural areas and not just the cities. Credit any reasonable explanation eg: At lower stages of development countries have a low GNI (1) which means they can't fund infrastructure such as water supply (1), this is particularly true in rural areas which may be more remote (1). As countries increase in wealth they are able to spend on infrastructure (1) which will often focus on water supply (1) to reduce the burden of disease / because it is the most basic need (1), wealth may also mean that local areas are able to fund their own water supply (1). Bangladesh illustrates that wealth is not essential to provide a water supply (1) as priorities or individual country circumstances may affect supply (1). AO2 = 3 marks	3

05	6	**Give two impacts of water insecurity.** One mark for each correct answer. Credit any reasonable answer which states an impact / effect resulting from water insecurity, even if indirectly. Disease (accept diseases if simply named e.g. cholera), reduced food production, reduced industrial output, reduced ability to work, potential for conflict over access to supply, poor quality of life AO1 = 2 marks	2

05	7	**Suggest how water supplies have been made more sustainable.** **Use an example of a local scheme in an LIC/NEE.**	6

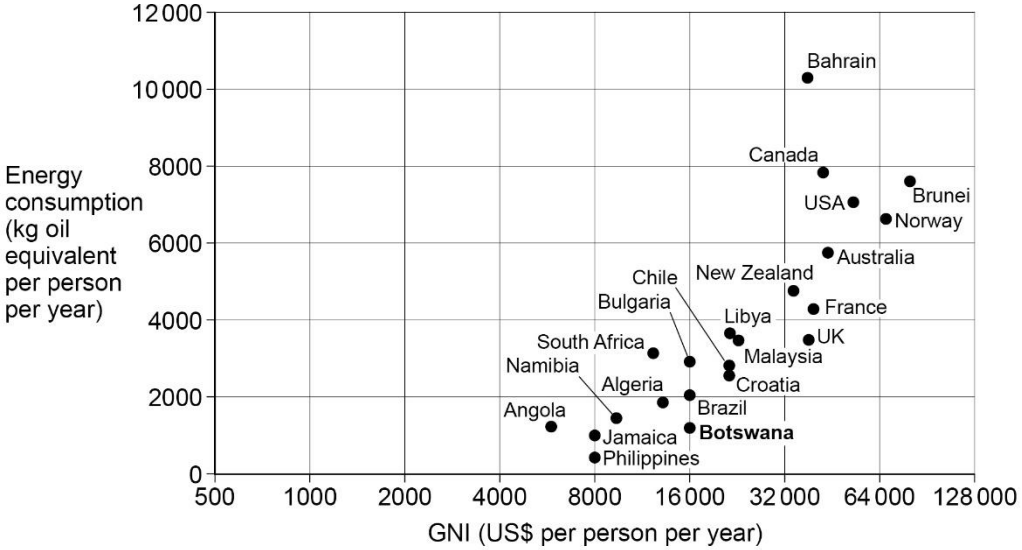
Level	Marks	Description
3 (Detailed)	5–6	AO2 – Shows thorough geographical understanding of how different actions contribute to sustainability in water supplies. AO3 – Demonstrates detailed application of knowledge and understanding by interpreting the link between the actions in the scheme and sustainability.
2 (Clear)	3–4	AO2 – Shows reasonable geographical understanding of how different actions contribute to sustainability in water supplies. AO3 – Demonstrates some application of knowledge and understanding by interpreting the link between the actions in the scheme and sustainability.
1 (Basic)	1–2	AO2 – Shows limited geographical understanding of how different actions contribute to sustainability in water supplies. AO3 – Demonstrates limited application of knowledge and understanding through simple interpretation of the link between the actions in the scheme and sustainability.
	0	No relevant content.

- **Level 3 responses** will cover a named local scheme in detail and link this to how it provides a more sustainable water supply.
- **Level 2 responses** will give specific detail of a named local scheme with a generic link to sustainability or generic ideas about a non-specific local scheme with a more specific link as to how it provides a more sustainable water supply.
- **Level 1 responses** will cover a local scheme in a basic manner, which may not be named and / or merely assert the sustainability.
- **Max L2** if scheme not named or cannot be inferred.
- **Max L2** if HIC / large scale scheme but comments could still apply.

<u>Indicative content</u>

- Likely examples are: Wakel river basin in India, Sand dams in Kenya, Gravity fed water transfer in Hitosi, Ethiopia.
- Clearly the exact content will vary according to the development chosen, but is likely to include:
  - Improvement in water supply and therefore water security.
  - Reduction in time spent fetching water.
  - Reduction in water lost through evaporation.
  - Improved year-round access to water.

		• Sustainability will equally vary according to example but is likely to include: ○ Using more appropriate technology, ie they are lower cost and easier to maintain. ○ Water is retained during the rainy season for the dry season to make the supply more even through the year. ○ Small scale promotes local involvement so the locals have a stake in making the system work. • Credit wider ideas of sustainability such as reduction in depopulation so rural areas can maintain their populations and therefore have a future. AO2 = 3 marks AO3 = 3 marks	

Qu	Pt	Marking Guidance	Total marks
06	1	**Plot the following data on to Figure 14.** One mark for the correct plot, need not be named  AO4 = 1 mark	1
06	2	**Which country is identified by the following data?** Philippines. AO4 = 1 marks	1
06	3	**Draw a best fit line on Figure 14.** One mark for correct line which should be in the centre of the scatter, and a straight line from lower left to top right. AO4 = 1 marks	1

06	4	**Describe the relationship between GNI and energy consumption shown in Figure 14.** Answers should make use of Figure 14 through naming countries and quoting figures in order to describe the relationship. One mark for a basic statement, eg • Positive correlation (1). • As GNI increases so does the energy consumption (1). • Countries with high GNI have a high energy consumption (1). Second mark may be a second separate point or developed point for further clarity eg: • Positive correlation (1) so that as GNI goes up so does the energy consumption per person (d)(1). • As GNI increases so does energy consumption (1) with anomalies such as Bahrain which has high energy consumption but only moderate GNI (d)(1). • Countries with high GNI have a high energy consumption (1) though the UK has a lower energy consumption than many others with a similar GNI (d)(1). Max 1 for opposites or list of names / data. Credit illustration of relationship with examples from graph for second mark No credit for explanation. AO4 = 2 marks	2

06	5	**Outline one or more reasons for the link between GNI and energy consumption.** 1+1+1 Or 1+1+1(d) Or 1+1(d)+1(d) Candidates should show that they can apply knowledge and understanding of the link between GNI and energy consumption. Expect recognition that energy consumption is a consequence of increased wealth on both a national scale through industrialisation and urbanisation and on a personal scale through the ability to afford energy intensive activities. Credit any reasonable explanation eg: At lower stages of development countries have a low GNI (1) which means they can't afford to spend money on energy (1). As countries increase in wealth they are able to spend on developing industry / exploiting further energy sources (1) which will lead to a higher energy consumption (1) and increase the availability of energy consuming products (1). Industrialisation may increase personal wealth (1) which will allow purchase of consumer products which will use more energy (1). In HICs technology can lead to cheaper energy (1) which can then lead to increased consumption without increasing the cost of use (1). AO2 = 3 marks	3

06	6	**Give two impacts of energy insecurity.** One mark for each correct answer. Credit any reasonable answer which states an impact / effect resulting from energy insecurity, even if indirectly. Exploration of difficult and environmentally sensitive areas, environmental damage, increasing costs, loss of industrial output, unemployment, potential for conflict over access to supply, poor quality of life AO1 = 2 marks	2

06	7	**Suggest how energy supplies have been made more sustainable.** **Use an example of a local renewable energy scheme in an LIC/NEE.**	6

Level	Marks	Description
3 (Detailed)	5–6	AO2 – Shows thorough geographical understanding of how different actions contribute to sustainability in energy supplies. AO3 – Demonstrates detailed application of knowledge and understanding by interpreting the link between the actions in the scheme and sustainability.
2 (Clear)	3–4	AO2 – Shows reasonable geographical understanding of how different actions contribute to sustainability in energy supplies. AO3 – Demonstrates some application of knowledge and understanding by interpreting the link between the actions in the scheme and sustainability.
1 (Basic)	1–2	AO2 – Shows limited geographical understanding of how different actions contribute to sustainability in energy supplies. AO3 – Demonstrates limited application of knowledge and understanding through simple interpretation of the link between the actions in the scheme and sustainability.
	0	No relevant content.

- **Level 3 responses** will cover a named local scheme in detail and link this to how it provides a more sustainable energy supply.
- **Level 2 responses** will give specific detail of a named local scheme with a generic link to sustainability or generic ideas about a non-specific local scheme with a more specific link as to how it provides a more sustainable energy supply.
- **Level 1 responses** will cover a local scheme in a basic manner, which may not be named and / or merely assert the sustainability.
- **Max L2** if scheme not named or cannot be inferred.
- **Max L2** if HIC / large scale scheme but comments could still apply.
- No credit for extraction of a fossil fuel.

<u>Indicative content</u>

- Likely examples are: Micro-hydro schemes in Peru and Nepal, Rice husk energy plants in Bihar, India.
- Clearly the exact content will vary according to the development chosen, but is likely to include:
  - Improvement in energy supply and therefore energy security.
  - Low maintenance and running costs.
  - Using locally available materials, sometimes waste from other processes.

		○ Reduction in air pollution as need for diesel / kerosene generators is removed. • Sustainability will equally vary according to example but is likely to include: ○ Using more appropriate technology, ie they are lower cost and easier to maintain. ○ Energy supply is more consistent and avoids costs of oil increasing on the world markets. ○ Small scale promotes local involvement so the locals have a stake in making the system work. ○ Less need to burn fuelwood, reducing deforestation risk. ○ Reduced danger of flooding as micro-hydro schemes help regulate flow. • Credit wider ideas of sustainability such as reduction in depopulation so rural areas can maintain their populations and therefore have a future. AO2 = 3 marks AO3 = 3 marks	