

# Mark Scheme

## Sample Assessment Material

Principal Learning

### Environmental and Land based Studies (ES307/01)

## General guidance on marking

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Examiners should look for qualities to reward rather than faults to penalise. This does NOT mean giving credit for incorrect or inadequate answers, but it does mean allowing learners to be rewarded for answers showing correct application of principles and knowledge, and for critical and imaginative thinking. Examiners should therefore read carefully and consider every response; even if it is not what is expected it may be worthy of credit. The Principal Examiner or Team Leader should be consulted as necessary.

### Using the mark scheme

- 1 In the first row the question is identified.
- 2 The first column identifies the relevant Assessment Objective(s). These give an indication as to the relative degree of difficulty of the question.
- 3 The second column identifies how the marks should be awarded.
- 4 The (6 marks) or similar shown in the column is the sub total allocated to that part of the question, and is the same as the sub total which appears on the question paper.
- 5 The third column identifies exemplar responses to the question. The exemplar responses are not necessarily exhaustive and so professional judgement should be applied by the marker.
- 6 For some of the exemplar responses, example answers have been supplied to give additional guidance, particularly where the question allows for a wide range of response from the learner.
- 7 (1) identifies the award of each mark.
- 8 Each bullet point illustrates an alternative way of obtaining the mark(s).
- 9 The use of a dash '-' indicates the separation of points made, to show where the marks lie. The use of an oblique '/' indicates an alternative point for the same mark.
- 10 The use of underscore indicates that the word/phrase is drawn from the question and does not have marks directly allocated to it.

Where more extended answers are required from the learner, levels of response style instructions are provided.

Question Number	Correct Answer	Mark
1(a)	<p>Company needs to plan ahead for demand (1) but is not in control of what that demand will be (1). To a large extent as they control planning so government will be able to influence demand in a predetermined way (1) so only by the working together will supply/demand be balanced/ If supply/demand are balanced then the company is more likely to make a profit (1)</p> <p>Award 1 mark per explanatory point that links the company with supply and government agencies with profit and then sums up why this is important to the water company.</p>	(4)

Question Number	Correct Answer	Mark
1(b)	<ul style="list-style-type: none"> <li>• Make representations to Thames Water</li> <li>• Provide information to local residents</li> <li>• Pool local expertise to argue case etc</li> <li>• Consider the benefit for the whole community not just individuals</li> <li>• Become a focus for residents</li> </ul> <p>Or any other realistic response</p> <p>1 mark for each valid role. Credit further if detail on role is given.</p>	(4)

Question Number	Correct Answer	Mark
1(c)(i)	<p>Pipeline River transfer</p> <p>1 mark for each realistic alternative</p>	(2)

Question Number	Correct Answer	Mark
1(c)(ii)	<p>Pipelines involve a great deal of upheaval as large areas of ground are disturbed for the pipeline and for access by vehicles (1). This causes disturbance to natural ecosystems and may destroy some habitats for ever (1)</p> <p>River transfers mean that the natural flow of rivers is altered (1)</p> <p>This may raise the level of I and flood homes of bank living animals (1)</p> <p>Population growth may take place in the areas of surplus (1) so there will be conflict as to who has the water/the investment will be lost (1)</p>	(4)

Question Number	Correct Answer	
1(d)	<p><i>The candidates are not expected to deal with every possible point and may be rewarded well for a comparatively small number of points if these are developed and supported by relevant evidence. This list is not exhaustive.</i></p> <p>Consideration of figures for building and increased efficiency as sustainable idea            Figure take into account climate change/ comparison to last century use            Considerations of large increase in domestic demand but relatively small decrease in leakage            Is it sustainable for individual use to increase that much            Power needed for pumping/disruption to ecosystems of extraction.            Impact of 7 reservoirs</p>	
Level	Mark	
	0	No rewardable material
1	1-4	Basic statements that select individual aspects of the policy and indicate whether they might be considered sustainable or not
2	5-7	Some analysis of the various facets of the strategy. There will be some consideration of both supply and demand issues. Analysis will probably stay with the problems of ongoing water supply
3	8-10	Detailed analysis of the sustainable issue, which should be seen as both a supply/demand issue and a wider issue in terms of sustainability of other resources - e.g. power needed for filling reservoirs or the habitat loss to reservoirs themselves for example

Question Number	Correct Answer	Mark
1(e)	<p>Responses may use information from examples at a variety of scales. Accept responses that use sound examples to illustrate how the reverse is true, thus highlighting the importance of sustainability.</p> <p>E.g.            UK has treated N.Sea gas/oil as endless resource over the last 30 years (1). Has exploited it without using income to ensure supplies for the future(1).High prices of imported gas now means that industry here is at a disadvantage            Up to 6 marks for explanation. Maximum marks if response is not linked firmly to examples</p>	(6)

Question Number	Correct Answer	Mark
2(a)	<p>Award up to 3 marks per sustainability need assessed. E.g.            Possible contamination of the site is possible from the heavy metals (1). These could be washed through into soil/groundwater by rain (1) so an organised system of removal is needed to ensue no long term damage (1)            Other possible areas - marshland, water supplies</p>	(6)

Question Number	Correct Answer	Mark
2(b)(i)	Award 1 mark for basic explanation as to how there is an internal conflict of interest and up to a further 2 for applying that to the given plan Ramblers would see it as an intrusion upon the area as they probably value its seclusion and natural beauty (1). The rafters may be more favourable as it could see upgrading of the track giving them better access to the upper reaches of the river (1) and so improving its amenity value for them (1)	(3)

Question Number	Correct Answer	Mark
2(b)(ii)	Award 1 mark for basic explanation as to how there is an internal conflict of interest and up to a further 2 for applying that to the given plan The Planning Council would be keen on the development in terms of providing employment to a run down area and raw materials to local industries, so helping the declining area (1). However it is also responsible for ensuring that developments do not harm residents in other ways (1), for example fouling the water supply with heavy metals (1)	(3)

Question Number	Correct Answer	Mark
2(c)	Up to 4 marks for explanation which should include some reference to the role of both groups in agreeing the issue for the full marks. As it is an important habitat the mining company may realise that the operation may be prevented if they cause disturbance (1). They may be willing to reroute the road at their expense (1) consulting with groups such as the RSPB as to the level of traffic that might be acceptable in October (1) or as to how far away the line of the road should be (1)	(4)

Question Number	Correct Answer	Mark
2(d)	For each, award 1 mark for a monitoring method and 1 mark for linking it to the effectiveness of the plan Soil samples could be taken every 6 months to test for levels of heavy metals in the soils (1). This would show whether waste was being disposed of effectively (1) The number of birds using the marshland in October could be counted/estimated each year (1). If it reduced then the compromise was possibly not being effective (1)	(4)