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General Certificate of Education June 2004 Advanced Level Examination ASSESSMENT and
QUALIFICATIONS
ALLIANCE

## GEOGRAPHY Unit 7

GGA7

Friday 18 June 2004 Morning Session

In addition to this paper you will require:

pre-release material (previously despatched); a calculator.

Time allowed: 2 hours

#### **Instructions**

- Use blue or black ink or ball-point pen.
- Fill in the boxes at the top of this page.
- Answer all questions in the spaces provided.
- Do all rough work in this book. Cross through any work you do not want marked.
- Figure and page numbers prefixed **P** are to be found in the pre-release book.

#### **Information**

- The maximum mark for this paper is 100.
- Mark allocations are shown in brackets.
- You will be assessed on your ability to use an appropriate form and style
  of writing, to organise relevant information clearly and coherently, and
  to use specialist vocabulary, where appropriate.
- The degree of legibility of your handwriting and the level of accuracy of your spelling, punctuation and grammar will also be taken into account.

#### Advice

Where appropriate, credit will be given for the use of diagrams to illustrate answers and where reference is made to your personal investigative work. You are advised to allocate your time carefully.

For Examiner's Use						
Number	Number Mark Number					
1						
2						
3						
4						
5						
Total (Column	1)	<b>→</b>				
Total (Column	2)	$\rightarrow$				
TOTAL						
Examiner	's Initials					

# Answer all questions in the spaces provided.

Aims	S
(a)	With reference to your own experience of planning a fieldwork enquiry, and the objectives on page <b>P2</b> , outline how <b>Figure P1a</b> might have provided the idea for this study on the issue of regeneration.
	(4 marks)
(b)	Suggest why the Goad Plan of the Broad Street section of Birmingham's central area was an appropriate source for determining the initial study area.



(2 marks)

1

#### 2 Methods

Figure P9 gives the descriptors of the quality decay index for the buildings and (a) environment for scores of 4 and 7. Provide the descriptor for a quality decay index score of 1. **Buildings** Environment Quality Decay Index 1 Quality Decay Index 1 ..... (4 marks) (b) The method of collecting the pedestrian count data is described on page P5 and the location of the study sites is shown on Figure P5. Comment critically on the distribution of the study sites and outline how the sampling of the study sites and the timing of the pedestrian counts could be improved.

(6 marks)

1.	How long	g has th	ne business been at this address?	
2.	Is this	(a)	a first location?	
		(b)	a relocation? (if so, from where?)	
		(c)	an additional location (other locations when	
		(-)		
3.	Why did	vou ch	oose this location?	
	,, iij 616	(a)	access for pedestrians	
		(b)	access for vehicles/nearby parking	
		(c)	relatively cheap	
		(d)	available premises	
		(e)	near similar businessess	
		(f)	a lot of investment in area	
		(g)	had potential	
		(h)	other (please specify)	
4.			as your business been successful here?	
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(c)

3	Skills,	<b>Techniques</b>	and	Interpretation
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(a) (i	(i)	<b>Figure P3</b> shows three locations in the study area before regeneration whilst <b>Figure P6</b> shows land use before regeneration. Summarise the key characteristics of the study area before regeneration.
		(8 marks)

QUESTION 3 CONTINUES ON THE NEXT PAGE

(ii) Figures 1 and 2 show location C before and after regeneration. Label Figures 1 and 2 to show the changes which have occurred to both the buildings and the environment.



Figure 1



Figure 2

(6 marks)

# NO QUESTIONS APPEAR ON THIS PAGE

QUESTION 3 CONTINUES ON THE NEXT PAGE

(iii) Figures 3 and 4 are land use maps drawn from the raw data displayed on Figures P7 and P8, whilst Figure P6 shows land use before regeneration.

## Figure 3:

Land use map of Birmingham's Central Area before regeneration using raw data. Has not been reproduced here due to third-party copyright constraints.

(Figure 3) and assess the extent of continued change between 1994 and 2002 (Figure 4).

Fi	gure	4:
rı	gure	4:

Land use map of Birmingham's Central Area after regeneration using raw data. Has not been reproduced here due to third-party copyright constraints.

 	 (8 marks)

Turn over ▶

(b) (i) Using **Figures P4** and **P8**, identify features A–E on **Figure 5**, an outline plan of the area shown on and drawn from **Figure P4**.

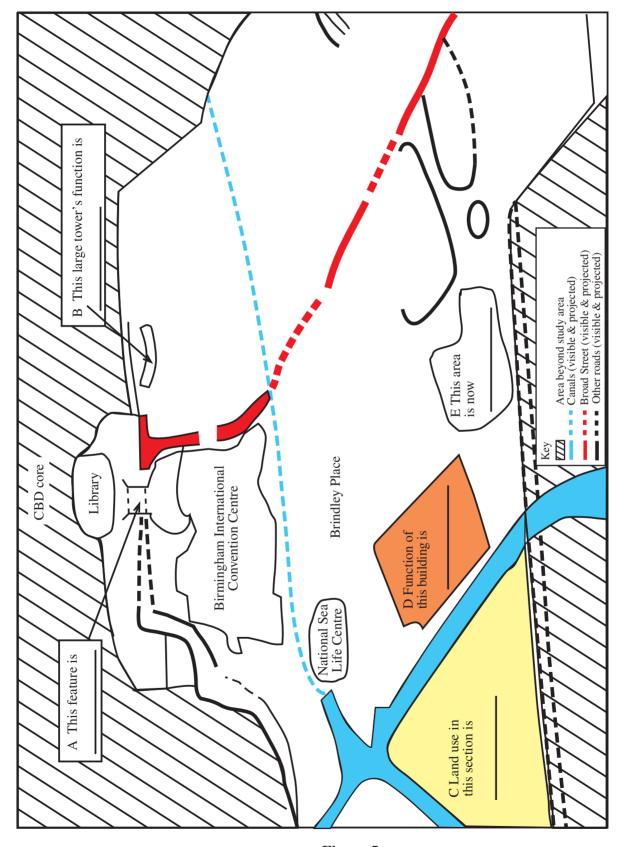
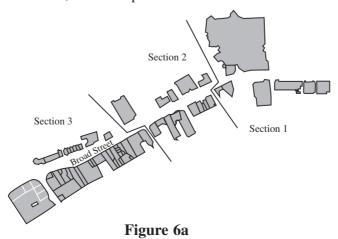


Figure 5

(5 marks)

With reference to <b>Figures P4</b> and <b>P5</b> , provide the evidence which supports the following statement:
"The land use and characteristics of the buildings change with increasing distance from the central business district core."
(8 marks)

(iii) To further investigate changes in land use along Broad Street only, a chi squared test can be applied. Broad Street was split into three sections (**Figure 6a**). Three functions – hotels, bars and places to eat – were selected.



Turn over ▶

(ii)

State your expected/alternative hypothesis.	
	(2 marks)

## (iv) Complete **Figure 6b** to calculate the value of $\chi^2$ .

<b>Broad Street</b>	Hotels	Bars	Places to Eat	Total
Section 1	1	3	0	4
Section 2	2	9	1	12
Section 3	1	8	8	17
Total	4	20	9	33

### Observed Frequency

<b>Broad Street</b>	Hotels	Bars	Places to Eat	Total
Section 1	$\frac{4\times4}{33} = 0.48$	$\frac{20\times4}{33} = $	$\frac{9\times4}{33}$ = 1.09	4
Section 2	$\frac{4\times12}{33} = 1.45$	$\frac{20 \times 12}{33} = \\ 7.27$	$\frac{9 \times 12}{33} = $	12
Section 3	$\frac{4 \times 17}{33} = 2.06$	$\frac{20 \times 17}{33} = 10.30$	=	17
Total	4	20	9	33

**Expected Frequency** 

$$\chi^{2} = \sum \frac{(0-E)^{2}}{E}$$

$$\chi^{2} = \frac{(1-0.48)^{2}}{0.48} + \frac{(3-2.42)^{2}}{2.42} + \frac{(0-1.09)^{2}}{1.09}$$

$$+ \frac{(2-1.45)^{2}}{1.45} + \frac{(9-7.27)^{2}}{7.27} + \frac{(1-3.27)^{2}}{3.27}$$

$$+ \frac{(1-2.06)^{2}}{2.06} + \frac{(8-10.3)^{2}}{10.3} + \frac{(9-7.27)^{2}}{3.27}$$

$$= 0.56 + 0.14 + 1.09 + 0.21 + 0.41 + 1.58 + 0.55 + 0.51 + 0.55 + 0.55 + 0.51 + 0.55 + 0.55 + 0.51 + 0.55 + 0.55 + 0.51 + 0.55 + 0.55 + 0.51 + 0.55 + 0$$

Figure 6b

(3 marks)

(v) Using only the table of critical values below, interpret the  $\chi^2$  value which has been calculated.

	Significance Level	
Degrees of Freedom	0.05	0.01
4	9.49	13.28
		(3 marks)

QUESTION 3 CONTINUES ON THE NEXT PAGE

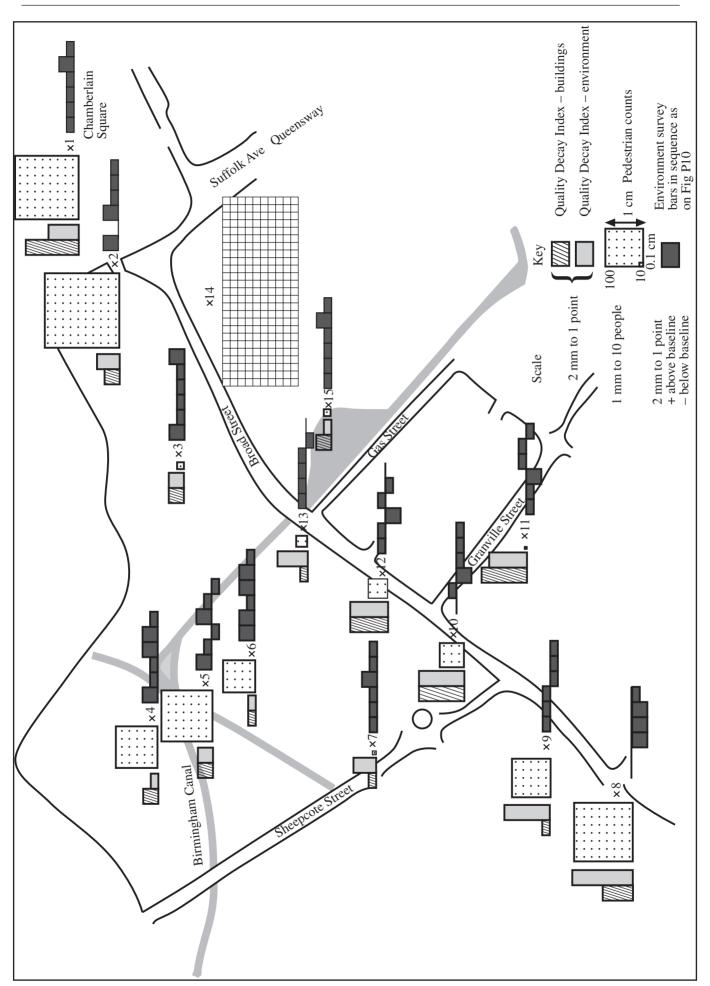


Figure 7

(c)	(i)	<b>Figure P10</b> shows the results of the quality decay index, environment survey and pedestrian count. These are partly presented on <b>Figure 7</b> . Complete <b>Figure 7</b> by adding the information for study site 14.  (4 marks)
	(ii)	Using evidence from <b>Figure 7</b> only, comment on the extent to which regeneration has been successful in the Broad Street area of Birmingham.
		(8 marks)

 $\left(\frac{}{55}\right)$ 

## TURN OVER FOR THE NEXT QUESTION

Write a summary of your findings for this enquiry with specific reference to the aims and

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4 (	Conc	lusion

objectives given on <b>page P2</b> . Using your own experience of conducting an enquiry, you should, in addition, consider the reliability of these findings and suggest how this enquiry could be improved and extended.
Summary

Reliability	
Improvements and Extensions	
(10	0 marks)



# **5** Enquiry Related Issues

(a) <b>Photographs 16</b> and <b>17</b> on <b>Figure P5</b> show two residential areas in the International Convention Centre Broad Street quarter of Birmingham's central area. With reference to the residential areas shown in the photographs, suggest an expected/alternative hypothesis, question, problem or issue which could be investigated and justify this as an extension to this enquiry.
(5 marks)

(b)	With reference to your hypothesis, question, problem or issue suggested in (a), outline the additional primary <b>and</b> secondary data you would collect and describe how you would collect it.
	(8 marks)

# $\left(\frac{13}{13}\right)$

## END OF QUESTIONS

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# THERE ARE NO QUESTIONS PRINTED ON THIS PAGE