



SOUTH CAMBRIDGESHIRE DISTRICT COUNCIL

**SOUTH CAMBRIDGESHIRE
VILLAGE CAPACITY STUDY**

**Technical Appendix
Volume 2 (Sustainability Issues)**

May 1998

CHRIS BLANDFORD ASSOCIATES

Environment Landscape Planning

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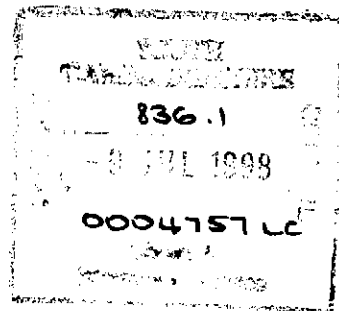
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VILLAGE CAPACITY STUDY**

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Environment Landscape Planning

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1.0 INTRODUCTION

1.1 Purpose

The purpose of this technical appendix is to describe in detail the investigations undertaken, and the results obtained, from work intended to identify:

the extent to which the balance between housing, employment and community services in different locations can underpin the concept of sustainability in South Cambridgeshire; and

potential constraints on further development arising from utility services provision.

1.2 Scope and Structure

The main focus is on:

a discussion of basic issues, especially those relating to the measurement of sustainability indicators; and

describing the results for the selected villages with which this study has been primarily concerned.

Section 2 therefore starts with an examination of the extent to which a favourable relationship between job opportunities and population in any given group of villages, together with the availability of public transport, is likely to minimise journeys to work by car in the particular context of South Cambridgeshire. The results of this analysis are then extended to take into account factors affecting non-work journeys - for example, the availability of schools and shops - as the basis for a possible approach to a broad sustainability ranking.

Section 3 sets out an analysis of the more significant potential development constraints currently identified from an analysis of utility services provision in the District.

The investigations have also however been extended to cover all villages in South Cambridgeshire, although sometimes at a slightly less detailed scale, and the relevant data for the District as a whole is contained in the annex tables, A.1, A.2 and A.3.

2.0 SUSTAINABILITY ISSUES: MINIMISING CAR USE

2.1 Approach

In the context of this study it is clear that the level of car use implied by different development locations is a major element in the debate about sustainability. The work undertaken has been in four main stages.

(1) The 1991 Census data for the 42 wards in South Cambridgeshire have been analysed in order to establish relationships between journey to work patterns and characteristics such as distance from Cambridge or the ratio of local jobs to resident economically active persons.

(2) For each village and ward in the District, the 1991 jobs / economically active residents ratio has been brought up to date to provide a 'baseline' relationship that takes into account additional developments and commitments since then, whether via the Local Plan process or via other planning permissions. This 'baseline' includes any new allocations (or other changes) incorporated in the 1997 local Plan review consultation draft.

(3) Data on the availability of services and facilities related to car use have been assessed. These include:

- bus services;
- rail stations;
- schools; and
- shops.

(4) Finally, key points from all of the above analyses have been brought together in order to provide overall guidelines on sustainability. The aim is to allow judgments to be made as to which villages are most likely to be able to absorb additional housing with minimum impact upon levels of car use. The main analysis is set out here for those wards that contain the selected villages with which this study is primarily concerned. Data for all other wards / villages in South Cambridgeshire are contained in Appendix Table A.1.

2.2 Journey to Work Characteristics in 1991

Context

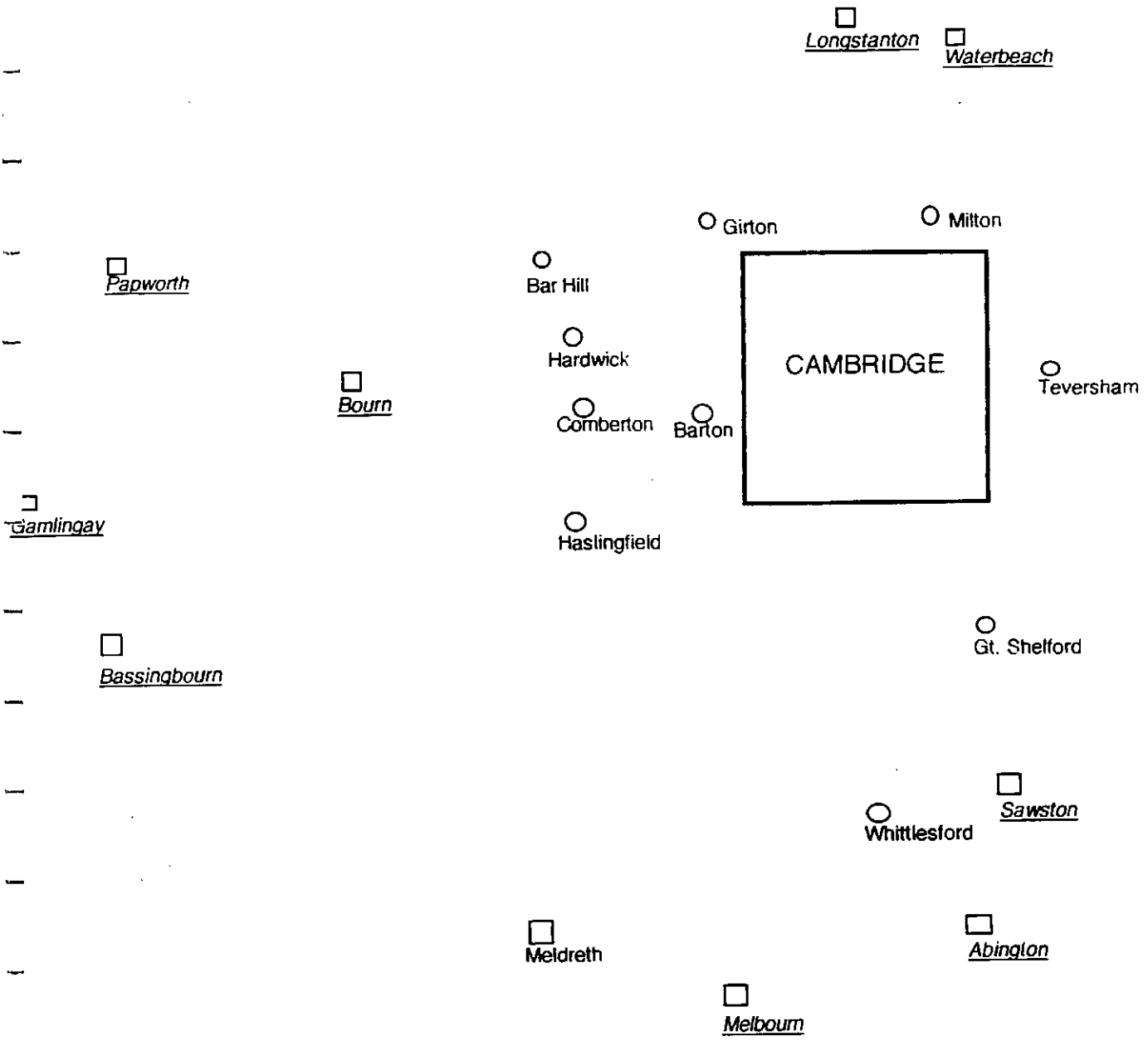
As a starting point it seems reasonable to assume that settlements which offer at least as many jobs locally as there are resident employees will meet certain sustainability criteria more readily (ie have less tendency to generate long distance travel to work journeys) than will those which have relative few jobs available locally and thus are predominantly dormitory areas. Data from the 1991 Census however reveal a much more complex picture.

Overall 'Best and 'Worst' Commuting Patterns

Key characteristics of the 10 wards in South Cambridgeshire with the 'worst' and 'best' commuting patterns are shown in Table 1 and, diagrammatically, in Figure 1.

Table 1: 'Best' and 'Worst' Commuting Patterns, 1991

Ward	1991 Census			% Resident Econ. Active Working <u>Locally</u>	Rail Station ? (Y = <u>Yes</u>)
	A. Res. Econ. <u>Active</u>	B. Jobs in <u>This Ward</u>	Ratio <u>B/A</u>		
Worst Commuting Patterns					
Haslingfield	680	180	0.3	16	
Teversham	1950	2460	1.3	16	
Comberton	1230	410	0.3	20	
Whittlesford	1040	1080	1.0	20	Y
G. Shelf'd/Staple'd	2430	1400	0.6	21	Y
Barton	720	290	0.4	22	
Bar Hill	3060	2410	0.8	23	
Milton	2110	2510	1.2	23	
Hardwick	1950	630	0.3	23	
Girton	1570	740	0.5	24	
Total this group	16740	12110	0.7		
Best Commuting Patterns					
Sawston	3350	3110	0.9	36	
Bassingbourn	2150	1640	0.8	36	
Gamlingay	1620	850	0.5	36	
Waterbeach	2560	1910	0.8	37	
Melbourn	1960	2240	1.1	37	Y
Longstanton	1010	640	0.6	41	
Meldreth	1110	1180	1.1	41	Y
Abington	1010	1530	1.5	42	
Bourn	890	1090	1.2	43	
Papworth	820	1610	1.4	54	
Total this group	16480	15800	1.0		



KEY

□ Melbourn Areas with lowest levels of out commuting

○ Whittlesford Areas with highest levels of out commuting

FIGURE 1: AREAS WITH HIGHEST AND LOWEST LEVELS OF OUT COMMUTING

In many respects the two groups of settlements listed in Table 1 are more remarkable for their similarities than for their differences. Average settlement size, at least as measured by numbers of economically active residents, is virtually the same, and in each group two areas have rail services and eight do not. The 'best' settlements do certainly have a somewhat more favourable overall ratio between jobs and economically active residents, but this ratio quite often seems to bear little relationship to commuting levels in individual cases.

The key differences seem to be a combination of the factors already discussed, plus geographical location, especially in relation to Cambridge city, which of course provides by far the largest concentration of employment as well as the greatest range of job types in the sub region. The areas with the lowest levels of out commuting are in general considerably further distant from Cambridge than those with the highest out commuting levels.

An apparent exception to this pattern is the combination of Whittlesford and Sawston. Although located close to each other, one settlement, Whittlesford, has a much higher level of out commuting than the other. This may be explained in part by the fact that Whittlesford is somewhat closer to a railway station and has less employment provided locally (even though the balance between economically active residents and jobs is very similar). It is also possible that the socio-economic structures of the two areas have a bearing on commuting levels.

Looking at all areas, there is some evidence to suggest that, although the ratios between locally available jobs and numbers of economically active residents are similar in areas that are both distant from, and close to Cambridge, the more distant settlements tend to have lower levels of out commuting. It is also true however that the distance travelled by those who do commute from outer villages is on average greater than is the case with the commuters living in areas closer to Cambridge.

Employment Balance and Commuting in More Distant Villages

Having established that proximity to Cambridge is an important issue it is then possible to examine the impact of a favourable balance between economically active residents and locally available jobs within a context where the Cambridge effect could be expected to be less important. The ten areas most distant from Cambridge were therefore ranked in terms of the ratio of locally available jobs to economically active residents.

The five 'best' areas had, overall, a ratio of 1:1, while the 'worst' five areas had only one locally available job for every two economically active residents. The average population size and distance from Cambridge were closely matched between the two groups. In the first group 38% of economically active residents worked locally compared with 31% in the second group. This was despite the fact that three of the areas in the first group, but none of those in the second group, had easy access to a railway station.

Summary of the 1991 Census Analysis

This analysis suggests that:

although the ratio of jobs to resident workforce varies very considerably, none of the South Cambridgeshire wards is entirely lacking in local jobs;

even with a very favourable ratio of jobs to economically active residents, it is unlikely that more than about half of economically active residents will work locally; and

in areas at some distance from Cambridge, a high ratio of jobs to economically active residents will have at least a modest beneficial impact on the proportion of the latter who work within the area of residence.

Implications for the Selected Villages

The relationships between resident economically active, numbers of jobs available locally, and out commuting for wards containing one or more of the selected villages is set out in Table 2. Although only a few of the selected villages could be classified as being very close to Cambridge, the overall average distance from the city is virtually the same as that for all villages in the District. The selected villages are also on average representative of the District as a whole in terms of the level of out commuting experienced (about 70% of economically active residents) and in terms of the ratio of local jobs to economically active residents (about 80%).

There are nevertheless very marked differences between the 'best' and 'worst' commuting patterns in the selected wards / villages. On the basis of the 1991 balance between employment, economically active and commuting, it could be argued that villages such as Papworth Everard, Great / Little Abington, Longstanton and Meldreth might be better locations for additional housing than would be, say, Comberton or Haslingfield.

2.3 Baseline Ratios Between Local Jobs and Resident Workforces

For the purposes of this study the starting point for judgments on a village by village basis is however not 1991 but rather a baseline that takes into account net gains in both housing and employment since then. Table 3 shows both the 1991 ratios and updated 'baseline' ratios.

The local jobs element of the 'baseline' ratio has been calculated by adjusting the 1991 Census figures to take into account allocations in the 1993 and 1997 Local Plan revisions, together with any additional planning permissions granted after 1991 and any other significant expansions believed to have taken place since then. Local economically active resident numbers have been derived in two stages. First, baseline population figures have been obtained by adjusting the 1996 village populations (as estimated in the 1997 Local Plan Review) to take account of outstanding housing allocations and commitments. Using best available estimates of economic activity rates, these population figures have then been translated into 'baseline' economically active resident figures for each village.

2.4 Baseline Sustainability Indicators

The extent to which village residents travel to work elsewhere is only one, albeit highly significant, determinant of sustainable development. Non-work trips, especially those connected with shopping, leisure and schools, are becoming increasingly important. In addition, the availability of good quality public transport may help to reduce car use.

Table 4 combines the travel to work indicators with village by village data on the availability of facilities that are likely to influence the level of non-work trips made by car. Likely differences in total car use, for both work and non-work purposes, then provide the basis for an overall assessment of baseline sustainability rankings for those villages with which this study is particularly concerned.

Some facilities that are in principle significant have been omitted at this stage. These include the availability of secondary schools (since it would appear that none currently have spare capacity); the availability of primary schools with less than 5 spare spaces; and leisure facilities (these being relatively insignificant in this context). Bus services have not been included, partly because of their comparatively small contribution to reducing car use, and partly because current service patterns are not necessarily a good guide to likely future availability.

The overall rankings are a matter of judgment. In the illustration set out in Table 4, the weightings used are, in decreasing order of importance:

the % of economically active residents working locally in 1991;

significant changes in the ratio of jobs to economically active residents between 1991 and the 'baseline';

the presence of a primary school with significant spare capacity;

the availability of a food shop; and

the presence of a rail station.

Table 2: Commuting Patterns in Selected Wards / Villages, 1991

Ward	Village	Ratio: local jobs/ resident economically active	% of resident econ. active working locally
Papworth	Papworth Everard x Papworth St Agnes Graveley	1.4	54
Abington	G'/Little Abington x Pampisford Babraham	1.5	42
Longstanton	Longstanton x	0.6	41
Meldreth	Meldreth x Whaddon (inc MoD)	1.1	41
Melbourn	Melbourn x	1.1	37
Waterbeach	Waterbeach x Landbeach	0.8	37
Sawston	Sawston x	0.9	36
Gamlingay	Gamlingay x	0.5	36
Bassingbourn	Bassingb'n x Litlington	0.8	36
Fulbourn	Fulbourn x	1.1	35
Histon	Histon x Impington x	1.1	34
Elsworth	Elsworth Boxworth Childerley Conington Fen Drayton x Knapwell Lolworth	0.5	34

Table 3: Ratio of Jobs to Resident Economically Active: 1991 and 'Baseline'

Ward	Village	Ratios: local jobs/resident economically active	
		1991	'Baseline'
Papworth	Papworth Everard x Papworth St Agnes Graveley	1.4	1.3
Abington	G/Little Abington x Pampisford Babraham	1.5	2.4
Longstanton	Longstanton x	0.6	0.9
Meldreth	Meldreth x Whaddon	1.1	1.0
Melbourn	Melbourn x	1.1	1.1
Waterbeach	Waterbeach x Landbeach	0.8	1.6
Sawston	Sawston x	0.9	1.0
Gamlingay	Gamlingay x	0.5	0.5
Bassingbourn	Bassingb'n x Litlington	0.8	0.7
Fulbourn	Fulbourn x	1.1	1.2
Histon	Histon x Impington x	1.1	1.3
Elsworth	Elsworth Boxworth Childerley Conington Fen Drayton x Knapwell Lolworth	0.5	0.5
Duxford	Duxford x	1.9	1.7

Table 3 (cont'd)

Harston		0.7	0.7
	Harston x Newton(S)		
Over		0.5	0.9
	Over x		
Swavesey		0.6	1.3
	Swavesey x		
Cottenham x		0.7	0.5
	Cottenham x Rampton		
Balsham		0.4	0.4
	Balsham x Carlton West Wratting Weston Colville		
Linton		0.6	0.5
	Linton x Hildersham		
Foxton		0.4	0.4
	Foxton x Fowlmere x		
Girton		0.5	0.4
	Girton x		
Willingham		0.4	0.3
	Willingham x		
Hardwick		0.3	0.3
	Hardwick x Caldecote H'fields x Toft		
Bar Hill		0.8	0.8
	Bar Hill x Oakington/Westwick x		
G. Shelf'd/Staple'd		0.6	0.5
	G. Shelf'd/Staple'd x		
Comberton		0.3	0.3
	Comberton x		
Haslingfield		0.3	0.2
	Harlton Haslingfield x		

Notes: (1) Selected villages within each ward are marked x.

(2) 'Baseline' is an estimate of the position if all outstanding planning permissions and Local Plan allocations (including those proposed in the 1997 review) were to be developed.

**Table 4: SUMMARY OF SUSTAINABILITY INDICATORS
SELECTED WARDS / VILLAGES**

<i>Ward/Village</i>	<i>% econ act working locally,1991</i>	<i>Ratio local jobs/ econ act residents: 1991 'Baseline'</i>	<i>Primary school w. capacity</i>	<i>Food shop</i>	<i>Rail stat'n</i>	<i>Overall sus dev ranking</i>
<i>Papworth</i>	<i>54</i>	<i>1.4</i>	<i>1.3</i>			
<i>Papworth Everard x</i>				<i>N</i>	<i>N</i>	<i>N</i>
<i>Papworth St Agnes</i>				<i>N</i>	<i>N</i>	<i>N</i>
<i>Graveley</i>				<i>N</i>	<i>N</i>	<i>N</i>
<i>Abington</i>	<i>42</i>	<i>1.5</i>	<i>2.4</i>			
<i>GV/Little Abington x</i>				<i>Y</i>	<i>N</i>	<i>N</i>
<i>Pampisford</i>				<i>N</i>	<i>N</i>	<i>N</i>
<i>Babraham</i>				<i>Y</i>	<i>N</i>	<i>N</i>
<i>Longstanton</i>	<i>41</i>	<i>0.6</i>	<i>0.9</i>			
<i>Longstanton x</i>				<i>Y</i>	<i>N</i>	<i>N</i>
<i>Meldreth</i>	<i>41</i>	<i>1.1</i>	<i>1.0</i>			
<i>Meldreth x</i>				<i>N</i>	<i>Y</i>	<i>Y</i>
<i>Whaddon</i>				<i>N</i>	<i>N</i>	<i>N</i>
<i>Melbourn</i>	<i>37</i>	<i>1.1</i>	<i>1.1</i>			
<i>Melbourn x</i>				<i>Y</i>	<i>Y</i>	<i>Y</i>
<i>Waterbeach</i>	<i>37</i>	<i>0.8</i>	<i>1.6</i>			
<i>Waterbeach x</i>				<i>Y</i>	<i>Y</i>	<i>N</i>
<i>Landbeach</i>				<i>N</i>	<i>N</i>	<i>N</i>
<i>Sawston</i>	<i>36</i>	<i>0.9</i>	<i>1.0</i>			
<i>Sawston x</i>				<i>Y</i>	<i>Y</i>	<i>N</i>
<i>Gamlingay</i>	<i>36</i>	<i>0.5</i>	<i>0.5</i>			
<i>Gamlingay x</i>				<i>Y</i>	<i>Y</i>	<i>N</i>
<i>Bassingbourn</i>	<i>36</i>	<i>0.8</i>	<i>0.7</i>			
<i>Bassingbourn x</i>				<i>Y</i>	<i>Y</i>	<i>N</i>
<i>Litlington</i>				<i>N</i>	<i>N</i>	<i>N</i>
<i>Fulbourn</i>	<i>35</i>	<i>1.1</i>	<i>1.2</i>			
<i>Fulbourn x</i>				<i>Y</i>	<i>Y</i>	<i>N</i>
<i>Histon</i>	<i>34</i>	<i>1.1</i>	<i>1.3</i>			
<i>Histon x</i>				<i>N</i>	<i>Y</i>	<i>N</i>
<i>Impington x</i>				<i>N</i>	<i>Y</i>	<i>N</i>
<i>Elsworth</i>	<i>34</i>	<i>0.5</i>	<i>0.5</i>			
<i>Elsworth</i>				<i>Y</i>	<i>Y</i>	<i>N</i>
<i>Boxworth</i>				<i>N</i>	<i>N</i>	<i>N</i>
<i>Childerley</i>				<i>N</i>	<i>N</i>	<i>N</i>
<i>Conington</i>				<i>N</i>	<i>N</i>	<i>N</i>
<i>Fen Drayton x</i>				<i>Y</i>	<i>N</i>	<i>N</i>
<i>Knapwell</i>				<i>N</i>	<i>N</i>	<i>N</i>
<i>Lolworth</i>				<i>N</i>	<i>N</i>	<i>N</i>
<i>Duxford</i>	<i>32</i>	<i>1.9</i>	<i>1.7</i>			
<i>Duxford x</i>				<i>Y</i>	<i>Y</i>	<i>Y</i>

Table 4 (cont'd)

<i>Harston</i>	32	0.7	0.7				
Harston x Newton				Y N	N N	N N	M
<i>Over</i>	31	0.5	0.9				
Over x				Y	Y	N	H
<i>Swavesey</i>	31	0.6	1.3				
Swavesey x				N	Y	N	M
<i>Cottenham</i>	30	0.7	0.5				
Cottenham x Rampton				N N	Y N	N N	L
<i>Balsham</i>	30	0.4	0.4				
Balsham x Carlton West Wrating Weston Colville				Y N N N	Y N N N	N N N N	M
<i>Linton</i>	30	0.6	0.5				
Linton x Hildersham				Y N	Y N	N N	M
<i>Foxton</i>	25	0.4	0.4				
Foxton x Fowlmere x				N N	N N	Y N	L L
<i>Girton</i>	24	0.5	0.4				
Girton x				Y	Y	N	M
<i>Willingham</i>	24	0.4	0.3				
Willingham x				Y	Y	N	M
<i>Hardwick</i>	23	0.3	0.3				
Hardwick x Caldecote/H'fields x Toft				Y Y N	Y Y Y	N N N	M M
<i>Bar Hill</i>	23	0.8	0.8				
Bar Hill x Oakington/Westwick x				Y Y	Y Y	N N	M M
<i>G. Shelf'd/Staple'd</i>	21	0.6	0.5				
G. Shelf'd/Staple'd x				Y	Y	Y	M
<i>Comberton</i>	20	0.3	0.3				
Comberton x				Y	Y	N	M
<i>Haslingfield</i>	16	0.3	0.2				
Harlton Haslingfield x				N Y	N N	N N	L

Notes to Table 4:

- (1) Y/N = facility available / not available.
- (2) Selected villages within each ward are marked x.
- (3) No secondary schools had spare capacity in 1997; capacity only recorded for primary schools with at least 5 spaces available.
- (4) Sustainability rankings: H = high, M = medium, L = low.
- (5) Sustainability rankings based on:
 - 1991 % working locally (1 mark per 10%, up to max of 5)
 - significant increases/decreases 1991 to baseline ratio of jobs to econ active residents (1 mark)
 - presence of a primary school with capacity (2 marks)
 - presence of a food shop (1 mark)
 - presence of a rail station (1 mark)
 - H = 7+, M = 4 - 6, L = 1 - 3

3.0 UTILITY SERVICES

3.1 Context

Although only indirectly linked to environmental issues in most instances, there is nevertheless a set of practical issues to be explored concerning the likely availability of utility services. If these will not be available in certain villages, there will clearly be a need to examine the extent to which other locations can absorb additional development.

3.2 Implications for the Selected Villages

Our assessment suggests that there is no overwhelming rationale for rejecting the possibility of additional development in any of these selected villages on the basis of water supply problems as currently stated by the relevant supply companies, but that some degree of caution is probably required in making additional allocations on the grounds of sewerage provision and / or flood related risks. The type and location of these potential constraints is set out in Table 5 for the selected villages and for all the villages in the District in Table A.3.

**TABLE 5 SELECTED VILLAGES - SEWERAGE AND FLOODING:
SUMMARY OF POTENTIAL DEVELOPMENT CONSTRAINTS**

Village	Summary of Potential Constraints		
	Sewerage	Flooding/ Floodplain	Comments
Papworth Everard	*		Limited capacity
Longstanton	*		Possible problems with both surface water and foul drainage
Meldreth			
Melbourn	*		Limited capacity
Waterbeach	*		System operates at capacity. Surface water issues.
Sawston		*	Housing alloc 1 in LP 97 adjacent to area liable to flood
Gamlingay	*	*	Potential storm water/flooding problems
Bassingbourn			
Fulbourn			
Histon		*	Much of Histon drains to Impington village pond
Impington		*	(see Histon)
Fen Drayton		*	Part of Special Policy Area liable to flood
Swavesey		*	Surface water and floodplain issues
Cottenham	*		Limited capacity

Table 5 (Cont'd)

Village	Summary of Potential Constraints		
	Drainage	Flooding/ Floodplain	Comments
Balsham	*		Pollution risk from leaking sewer
Linton		*	Eastern part of Special Policy Area is within floodplain
Caldecote/H'fields	*	*	Poorly drained
Bar Hill	*		Limited capacity
Oakington/Westwick	*		Limited capacity
G. Shelf'd/Staple'd		*	Part of housing allocation in LP 97 within floodplain

Note

- (1) This table sets out assessments for the selected villages only. A fuller analysis for all South Cambridgeshire villages is contained in Appendix A. 2
- (2) Villages with no identified constraints have been omitted.

Table A.1
Ratios of Jobs / Resident Economically Active and Commuting Patterns: All
Wards / Villages, 1991

Ward	Village	Ratio: local jobs/ resident economically active	% of resident econ. active working locally
Papworth	Papworth Everard x Papworth St Agnes Graveley	1.4	54
Bourn	Bourn Monkfield New Vill Caxton Croxtan Eltisley	1.2	43
Abington	Gt/Little Abington x Pampisford Babraham	1.5	42
Longstanton	Longstanton x	0.6	41
Meldreth	Meldreth x Whaddon	1.1	41
Melbourn	Melbourn x	1.1	37
Waterbeach	Waterbeach x Landbeach	0.8	37
Sawston	Sawston x	0.9	36
Gamlingay	Gamlingay x	0.5	36
Bassingbourn	Bassingb'n x Litlington	0.8	36
Fulbourn	Fulbourn x	1.1	35

Table A.1(Cont'd)

Ward	Village	Ratio: local jobs/ resident economically active	% of resident econ. active working locally
Castle Camps	Bartlow Castle Camps Horseheath Shudy Camps West Wickham	0.4	35
Histon	Histon x Impington x	1.1	34
Elsworth	Elsworth Boxworth Childerley Conington Fen Drayton x Knapwell Lolworth	0.5	34
Harston	Harston x Newton(S)	0.7	32
Duxford	Duxford x	1.9	32
Coton	Coton Dry Drayton Madingley	0.7	32
Arrington	Arrington Croydon Hatley L. Gransden Longstowe Tadlow	0.4	31
Over	Over x	0.5	31
Swavesey	Swavesey x	0.6	31
Cottenham x	Cottenham x Rampton	0.7	30

Table A.1(Cont'd)

Ward	Village	Ratio: local jobs/ resident economically active	% of resident econ. active working locally
Balsham	Balsham x Carlton West Wrating Weston Colville	0.4	30
Linton	Linton x Hildersham	0.6	30
Little Shelford	L. Shelford Hauxton	1.1	30
The Mordens	Guilden Morden Sicple Morden Abington Piggots Shingay-c-Wendy	0.6	28
Orwell	Orwell G. Eversden Kingston L. Eversden Wimpole	0.6	27
Barrington/Shepreth	Barrington Shepreth	0.8	26
Foxton	Foxton x Fowlmere x	0.4	25
Ickelton	Ickelton Hinnton Heydon G. and L. Chishill	0.4	24
Girton	Girton x	0.5	24
Willingham	Willingham x	0.4	24

Table 2 (cont'd)

Harston	Harston x Newton(S)	0.7	32
Duxford	Duxford x	1.9	32
Over	Over x	0.5	31
Swavesey	Swavesey x	0.6	31
Cottenham x	Cottenham x Rampton	0.7	30
Balsham	Balsham x Carlton West Wrating Weston Colville	0.4	30
Linton	Linton x Hildersham	0.6	30
Foxton	Foxton x Fowlmere x	0.4	25
Girton	Girton x	0.5	24
Willingham	Willingham x	0.4	24
Hardwick	Hardwick x Caldecote/H'fields x Toft	0.3	23
Bar Hill	Bar Hill x Oakington/Westwick x	0.8	23
G. Shelf'd/Staple'd	G. Shelf'd/Staple'd x	0.6	21
Comberton	Comberton x	0.3	20
Haslingfield	Harlton Haslingfield x	0.3	16

Note: These data are available only at ward level. Selected villages within each ward are marked x.

Table A.1(Cont'd)

Ward	Village	Ratio: local jobs/ resident economically active	% of resident econ. active working locally
The Wilbrahams	G. Wilbraham L. Wilbraham Stow-cum-Quy	0.4	24
Hardwick	Hardwick x Caldecote/H'fields x Toft	0.3	23
Bar Hill	Bar Hill x Oakington/Westwick x	0.8	23
Milton	Milton	1.2	23
Barton	Barton Grantchester	0.4	22
G. Shelf'd/Staple'd	G. Shelf'd/Staple'd x	0.6	21
Whittlesford	Whittlesford Thriplow Heathfield/Dux. Camp	1.0	20
Comberton	Comberton x	0.3	20
Haslingfield	Harlton Haslingfield x	0.3	16
Teversham	Teversham Fen Ditton Horningsea	1.3	16

Note: These data are available only at ward level. Selected villages within each ward are marked x.

Table A.2
Availability of Selected Community Services, All Village
(1 = available)

Village	Public Transport		Schools		Food Shop
	Rail	Bus	Primary	Secondary	
Papworth, Everard x		1		1	
Papworth, St Agnes					
Graveley					
Bourn		1		1	
Monkfield New Village (n/a)					
Caxton		1			
Croxton		1			
Eltisley		1		1	
Gt/Little Abington x		1		1	
Pampisford		1		1	
Babraham		1		1	
Longstanton x		1		1	
Meldreth x	1	1		1	1
Whaddon					
Melbourn x	1	1	1	1	1
Waterbeach x		1			
Landbeach		1			
Sawston x		1	1	1	1
Gamlingay x		1	1	1	1
Bassingbr'n x		1	1	1	1
Litlington		1			
Fulbourn x		1	1		1
Bartlow		1			
Castle Camps					
Horseheath		1			
Shudy Camps		1			
West Wickham		1			
Histon x		1	1		1
Impington x		1			1
Elsworth		1	1		1
Boxworth		1			
Childerley		1			
Conington			1		
Fen Drayton x		1			
Knapwell		1			
Lolworth					

Table A.2 (Cont'd)

Village	Public Transport		Schools		Food Shop
	Rail	Bus	Primary	Secondary	
Harston x Newton(S)		1 1	1		
Duxford x	1	1	1		1
Coton Dry Drayton Madingley		1 1 1	1 1		
Arrington Croydon Hatley L. Gransden Longstowe Tadlow		1 1 1 1 1			
Over x		1	1		1
Swavesey x		1	1	1	1
Cottenham x Rampton		1 1	1	1	1
Balsham x Carlton West Wratting Weston Colville		1 1	1		1
Linton x Hildersham		1 1	1	1	1
L. Shelford Hauxton		1 1	1		
Guilden Morden Steeple Morden Abington Piggots Shingay-c-Wendy	1	1 1	1 1		
Orwell G. Eversden Kingston L. Eversden Wimpole		1 1 1 1	1		1
Barrington Shepreth	1	1 1		1	
Foxton x Fowlmere x	1	1 1		1 1	

Table A.2 (Cont'd)

Village	Public Transport		Schools		Food Shop
	Rail	Bus	Primary	Secondary	
Ickelton		1			1
Hinxton		1			1
Heydon		1			
G. and L. Chishill					
Girton x		1	1		1
Willingham x		1	1		1
G. Wibraham		1	1		
L. Wibraham		1			
Stow-cum-Quy		1			
Hardwick x		1	1		1
Caldecote/H'fields x		1	1		1
Toft		1			
Bar Hill x		1	1		1
Oakington/Westwick x		1	1		1
Milton		1	1		1
Barton		1	1		
Grantchester		1			
G. Shelf'd/Staple'd x	1	1	1		1
Whittlesford	1	1	1		
Thriplow		1	1		
Comberton x		1	1	1	1
Harlton		1			
Haslingfield x		1	1		
Teversham		1	1		
Fen Ditton		1	1		
Homingsea		1			

**TABLE A.3: SEWERAGE AND FLOODING
SUMMARY OF POTENTIAL DEVELOPMENT CONSTRAINTS**

Village	Summary of Potential Constraints		
	Sewerage	Flooding/ Floodplain	References
Papworth Everard	*		1 / 2
Longstanton	*		2
Melbourn	*		1
Waterbeach	*		2 / 4
Sawston		*	2
Gamlingay	*	*	2 / 7
Histon		*	
Impington		*	(see Histon)
Fen Drayton		*	2
Swavesey		*	2
Cottenham	*		1 / 2
Balsham	*		11
Linton		*	2
Caldecote/H'fields	*	*	2
Bar Hill	*		1
Oakington/Westwick	*		1
G. Shelf'd/Staple'd		*	2
Coton	*		1
Dry Drayton	*		1
Barton		*	11
Hauxton	*		1
Bourn		*	2
Caxton		*	2

TABLE A.3 (Cont'd)

Village	Summary of Potential Constraints		
	Drainage	Flooding/ Floodplain	References
Childerley	*		1
Longstowe	*		11
Tadlow		*	
Aston Piggotts	*		1
Shingay-cum-Wendy	*		1
Barrington		*	11
Pampisford		*	2
Babraham	*	*	1 / 11
Carlton	*		1
Bartlow	*	*	1 / 11

Notes

1. In addition to the above, other apparently minor constraints include:

- Environment Agency: need for surface water details to be agreed in Bassingbourn, Comberton, Dry Drayton, Fowlmere, Girton, Histon, Impington, Lt. Gransden, Long Stanton, Oakington, Orwell, Over, Papworth Everard, Stow-cum-Quy, West Wickham and Willingham.
- General: minor flooding recorded in Bourn, Caldecote, Caxton, Duxford, Melbourn; flooding in Green Road, Orwell And in Bridge Street, Whaddon; poor drainage in Fen Road, Milton; public supply borehole NW of Gt. Eversden; major aquifer to N, E and S of Wimpole.

2. Villages with no identified constraints have been omitted.

References

1. SCDC: Constraints Analysis, 1997
(Constraints noted = either no main drainage or main drainage system has limited spare capacity)
2. Environment Agency: response to 1997 Local Plan Consultation Draft
3. Cambridge Water company: response to 1997 Local Plan Consultation Draft
4. Waterbeach Level Internal Drainage Board: response to 1997 Local Plan Consultation Draft
5. Swaffham Internal Drainage Board: response to 1997 Local Plan Consultation Draft
6. Old West Internal Drainage Board: response to 1997 Local Plan Consultation Draft
7. Bedfordshire and River Ivel IDB: response to 1997 Local Plan Consultation Draft
8. Anglian Water Services: response to 1997 Local Plan Consultation Draft
9. Environment Agency: Bedford Ouse (Lower Reaches) Catchment Management Plan
First Annual Review, February 1995 - April 1996
10. Environment Agency: Ely Ouse Catchment Management Plan
Second Annual Review, January 1995 - March 1996
11. Environment Agency: Cam Leap, Development Constraints by Parish

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