

**Cambridge City Council and
South Cambridgeshire District
Council**

**Infrastructure Delivery
Study**

Executive Summary

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Infrastructure Delivery Study
Executive Summary

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1 Introduction

1.1.1 Baker Associates and Transport Planning International were commissioned to undertake an Infrastructure Delivery Study by Cambridge City Council and South Cambridgeshire District Council. However, since the start of the project Baker Associates merged with Roger Tym & Partners and Peter Brett Associates LLP and as a result the study has been completed by Peter Brett Associates (PBA) and Transport International (TPI).

1.1.2 The output from this work is to provide Cambridge City Council and South Cambridgeshire District Council with an evidence base to support its planning policies on infrastructure and developer contributions. This Executive Summary provides an overview on the Infrastructure Delivery Study (IDS) and sets out the overall costs and funding shortfalls from the identified infrastructure requirements to support planned provision.

1.2 Objectives

1.2.1 The objective of the IDS is to:

- Highlight infrastructure capacity issues and existing capacity where possible, through the review of existing information and consultation with stakeholders;
- Identify the infrastructure impacts of additional development in generic and location specific terms for Cambridge and South Cambridgeshire;
- Illustrate the net infrastructure impact of new development and highlight significant issues;
- Provide information on the indicative cost of infrastructure;
- Identify public funding mechanisms and responsibility for delivery;
- Identify infrastructure delivery funding shortfalls. This output is considered to be the crucial element of the study, as it draws together evidence and identifies infrastructure tipping points.

1.2.2 It is important to note that the IDS represents a snap shot in time and uses information available at the time of writing. The strength of the study has been the engagement with infrastructure and community service providers to obtain first hand views on requirements. The IDS provides a basis to enable the Councils to support the development or implementation of their Local Plans.

1.3 Important Caveats for the Infrastructure Delivery Study

1.3.1 It must be noted that this study has been undertaken at a time of significant economic uncertainty and represents a snapshot in time. It is important to note that several

assumptions have been made on planned provision and the future phasing of development that all represent an element of uncertainty.

1.3.2 The IDS provides a focus for long term strategic financial decisions that will inevitably need to be refined and realigned as the process and time unfolds. In this context, there are a number of important points which should be borne in mind:

- The IDS is not a policy document. Information included in the assessment does not override or amend agreed/adopted strategies, policies and commitments which Cambridge City Council, South Cambridgeshire District Council or other infrastructure providers currently have in place.
- Infrastructure planning is continually evolving and infrastructure providers continue to review their plans over the life of proposed timescales of both the Core Strategy and Local Plan Review. Planned provision and subsequent infrastructure requirements are likely to evolve and this will need to be monitored by both councils. The IDS sets out a broad framework for infrastructure delivery to 2031 but with more detail and detailed costings in the first 5 to 10 years where available.

1.4 Planned Provision

1.4.1 **Table 1.1** overleaf sets out the proposed development for Cambridge City and South Cambridgeshire between 2010 and 2031. The first column of the table identifies projected completions for 2010-2011 because the IDS started one year before the base date of the new plans.

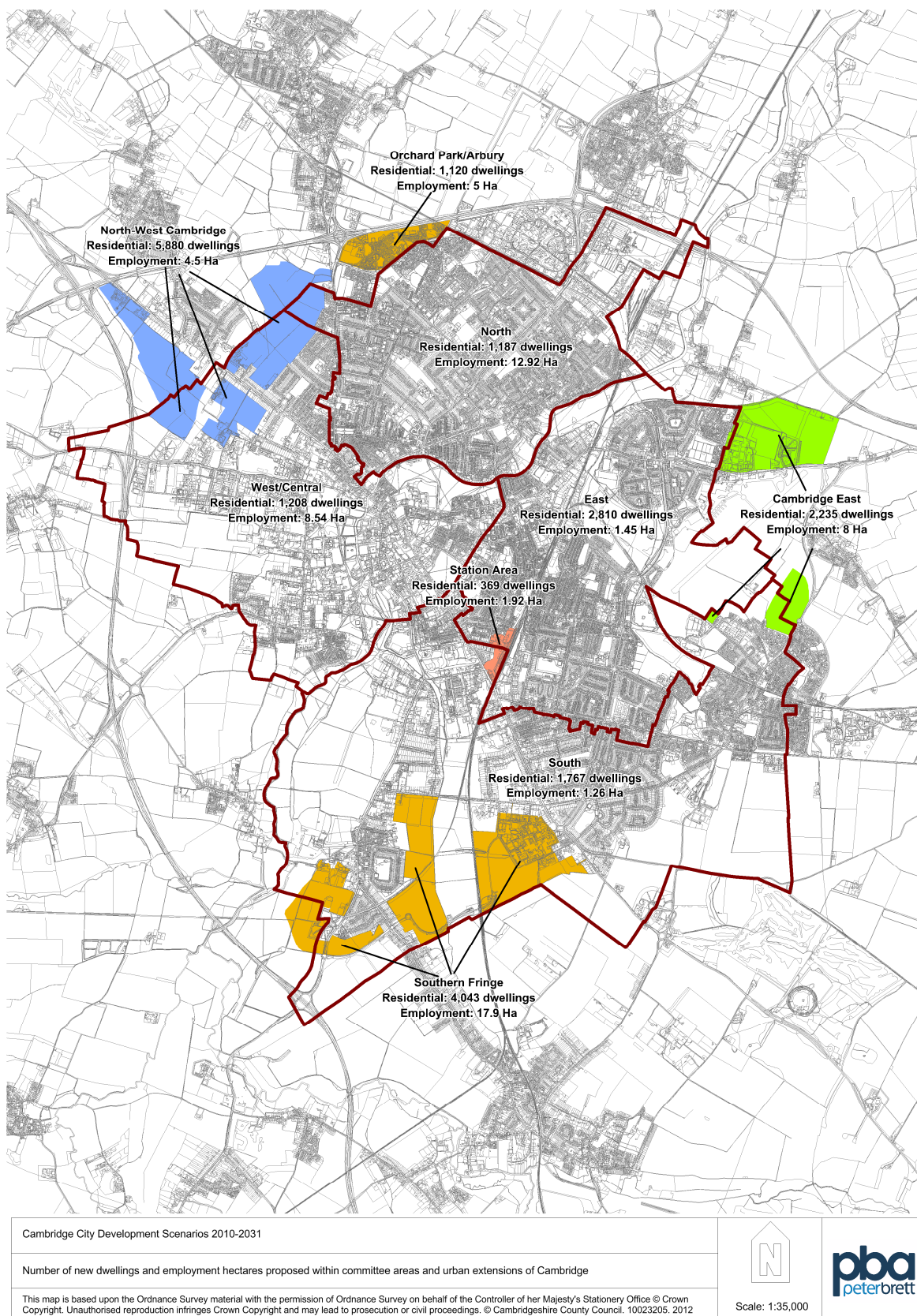
Table 1.1: Proposed Development 2010-2031

District	Projected Completions 2010-2011	Residential Requirement 2011-2031	Employment Requirement 2011-2031
Cambridge	447 dwellings	14,000 dwellings	48.49 ha
South Cambridgeshire	759 dwellings	21,000 dwellings	112.96 ha

Source: 2010 Annual Monitoring Reports (Cambridge City Council and South Cambridgeshire District Council)

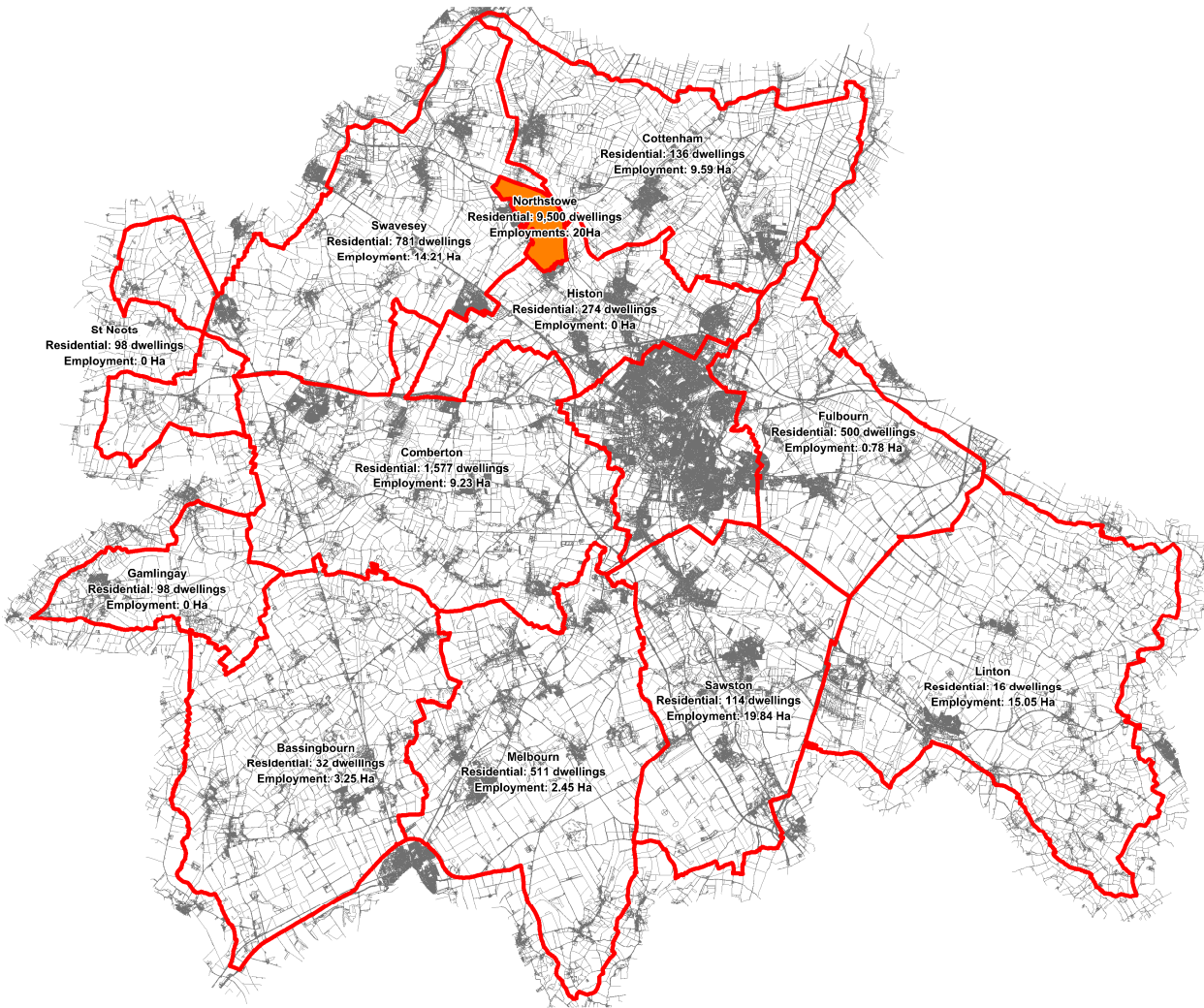
1.4.2 The distribution of planned provision used in the Infrastructure Delivery Study is subject to change depending on Council decisions made through the Local Plan preparation process. **Figures 1.1** and **1.2** overleaf illustrate the indicative distribution used for testing.



Figure 1.1: Cambridge Planned Provision Distribution



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Figure 1.2: South Cambridgeshire Planned Provision Distribution



South Cambridgeshire Development Scenarios 2010-2031	 1:160,000 @ A3	
Number of new dwellings and employment hectares proposed within secondary school catchment areas across South Cambridgeshire and Northstowe		
<small>This map is based upon the Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of her Majesty's Stationery Office © Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. © Cambridgeshire County Council. 10023205. 2012</small>		

1.5 Scope of Infrastructure

1.5.1 The IDS has examined three infrastructure categories, physical, social and green. **Table 1.2** sets out a list specific areas and indicative facilities to help define their scope.

Table 1.2: Scope of Infrastructure

Physical Infrastructure Categories	Indicative Facility Types
Transport	Road Rail Bus Cycling Walking/public realm
Energy	Electricity Gas
Water & Drainage	Water Supply Waste Water Drainage and Flood Alleviation
Waste (non-strategic)	Household Recycling Centres Refuse and Recycling Vehicles Bring Sites Kerbside Collection Containers
Telecommunications	Broadband
Social Infrastructure Categories	Indicative Facility Types
Education	Childcare/Nurseries/Children's Centres Primary Schools Secondary Schools Further Education Special Schools
Health Care	General Practitioners Hospitals Ambulance
Leisure and Recreation	Swimming Pools Sports Halls/Centres Play Pitches
Community and Social	Libraries Community Centres and Village Halls (including Arts and Culture) Faith Facilities Cemeteries and Crematorium
Emergency Services	Police Fire
Green Infrastructure Categories	Indicative Facility Types
Green Space	Informal Open Space Children's Play Space Allotments Natural Space Public Rights of way

1.5.2 Information gathered has been entered into a Microsoft Access database which provides the opportunity to monitor progress of any/all projects and proposals and also to prepare reports relevant to various aspects and/or areas. The IDS schedule includes the following information:

- Specific infrastructure requirement (what);
- Spatial location (where);
- Cost; (how much)
- Phasing in five year times bands (when);
- Lead delivery and management organisation (who);
- Sources of funding (who will pay); and
- Prioritisation (what's most important).

2 Findings

2.1.1 The following paragraphs and tables set out the overall findings for:

- Cambridge
- South Cambridgeshire
- Cross Boundary
- Both Local Authorities

2.1.2 The analysis highlights the overall cost of infrastructure for each Local Authority and individual sub areas by time phase. Overall funding from both the public and private sector is included to identify an overall funding shortfall for each time phase.

2.2 Overall Requirements – Cambridge

2.2.1 Overall the cost of infrastructure requirements for Cambridge is approximately £234.3 million. **Table 2.1** sets out the infrastructure requirements for locations within Cambridge.

Table 2.1: Infrastructure Requirements - Cambridge

	2010-2015	2015-2020	2020-2025	2025-2031	Total
Cambridge (Strategic)	7,167,000	143,200,575	34,767,100	-	185,134,675
Station Area	254,287	-	-	-	254,287
Area North	12,307,507	3,712,530	95,403	105,748	16,221,188
Area East	4,516,716	3,438,957	283,335	314,944	8,553,952
Area South	10,876,423	2,159,771	116,093	128,736	13,281,023
Area West/Central	7,010,168	3,768,967	47,711	52,874	10,879,720
Cambridge Total	42,132,101	156,280,800	35,309,642	602,302	234,324,845
Public Funding/Bids	20,000	6,500,000	10,000,000	-	16,520,000
Private Funding	4,669,345	17,646,319	9,553,975	78,600	31,948,239
SHORTFALL	37,442,756	132,134,481	15,755,667	523,702	185,856,606

2.2.2 Taking into consideration identified public funding/bids (£16.5 million) and private funding (£31.9 million) an overall shortfall of approximately £185.8 million has been identified for 2010-2031.

2.2.3 This includes funding shortfall in all time periods. The funding shortfall for 2010-2015 is £37.4 million, but increases to £132.1 million in 2016-2020. The shortfall then decreases to £15.7 million by 2021-2025 and further still to £0.5 million in 2025-2031.

2.2.4 Infrastructure planning is constantly evolving and the further into the future you look the more difficult it is to identify requirements, costs and funding mechanisms. Crucial to the delivery of the planning strategies is delivery within the first 5 years. The Planning Inspectorate has

made it clear that infrastructure delivery plans need to take a pragmatic view towards delivery.

2.2.5 Peter Brett Associates has worked with stakeholders to identify views on what infrastructure is the highest priority. Ultimately a view on what constitutes critical infrastructure is one to be taken by the Councils.

2.2.6 The cost of this indicative list of Critical Infrastructure is set out below in **Table 2.2**:

Table 2.2: Critical Infrastructure – Cambridge

	2010-2015	2015-2020	2020-2025	2025-2031	Total
Cambridge (Strategic)	3,550,000	5,432,000	15,692,000	-	24,674,000
Station Area	-	-	-	-	0
Area North	11,200,000	3,000,000	-	-	14,200,000
Area East	300,000	2,000,000	-	-	2,300,000
Area South	9,400,000	2,000,000	-	-	11,400,000
Area West/Central	6,000,000	3,000,000	-	-	9,000,000
Cambridge Total	30,450,000	15,432,000	15,692,000	-	61,574,000
Public Funding/Bids	-	6,500,000	10,000,000	-	16,500,000
Private Funding	300,000	6,820,920	5,634,066	-	12,754,986
SHORTFALL	30,150,000	2,111,080	57,934	-	32,319,014

2.2.7 Overall the critical Infrastructure funding shortfall is approximately £61.5 million, with specific shortfalls in the all the time periods. Importantly the shortfall for the first 5 years is approximately £30.1 million. Infrastructure critical for delivery of planning strategies generally relates to physical infrastructure such as transport, flood prevention and utilities, including gas, electricity and water/sewerage due to their fundamental enabling nature.

2.3 Overall Requirements – South Cambridgeshire

2.3.1 Overall the cost of infrastructure requirements for South Cambridgeshire is approximately £484.7 million. **Table 2.3** sets out the infrastructure requirements for locations within South Cambridgeshire.

Table 2.3: Infrastructure Requirements - South Cambridgeshire

	2010-2015	2015-2020	2020-2025	2025-2031	Total
South Cambridgeshire (Strategic)	33,812,064	33,059,700	6,500,000	63,600,000	136,971,764
Bassingbourn Area	43,597	15,529	-	-	59,126
Comberton Area	4,334,947	1,537,639	-	-	5,872,586
Cottenham Area	282,735	66,603	-	-	349,338
Fulbourn Area	2,110,327	560,858	136,032	-	2,807,217
Gamlingay Area	4,211,680	40,606	-	-	4,252,286
Histon / Impington Area	3,569,627	135,097	-	-	3,704,724
Linton Area	34,398	2,006,630	-	-	2,041,028
Melbourn Area	998,874	10,004,100	-	140,122	11,143,096
Sawston Area	246,079	4,547,236	-	-	4,793,315

	2010-2015	2015-2020	2020-2025	2025-2031	Total
Swavesey Area	1,757,529	3,752,185	-	-	5,509,714
Northstowe	686,302	141,801,496	118,796,325	45,941,648	307,225,771
South Cambridgeshire Total	52,088,159	197,527,679	125,432,357	109,681,770	484,729,965
Public Funding/Bids	12,000,000	21,250,000	6,500,000	-	39,750,000
Private Funding	10,377,505	12,228,964	4,886,058	5,239,844	32,732,371
SHORTFALL	29,710,654	164,048,715	114,046,299	104,441,926	412,247,594

2.3.2 **Table 2.3** identifies the total cost of infrastructure at approximately £484.7 million. Identified funding includes public funding/bids (£39.7 million) and private funding (£32.5 million) resulting in an overall funding shortfall of approximately £412.2 million over the 2010-2031 period.

2.3.3 Peter Brett Associates has worked with stakeholders to identify views on what infrastructure is the highest priority across South Cambridgeshire. A view on what constitutes critical infrastructure is one to be taken by the Council, but **Table 2.4** sets out what the consultants consider to be critical.

Table 2.4: Critical Infrastructure –South Cambridgeshire

	2010-2015	2015-2020	2020-2025	2025-2031	Total
South Cambridgeshire (Strategic)	35,750,000	6,500,000	6,500,000	-	48,750,000
Bassingbourn Area	-	-	-	-	-
Comberton Area	-	-	-	-	-
Cottenham Area	-	-	-	-	-
Fulbourn Area	-	-	-	-	-
Gamlingay Area	4,000,000	-	-	-	4,000,000
Histon / Impington Area	3,000,000	-	-	-	3,000,000
Linton Area	-	2,000,000	-	-	2,000,000
Melbourn Area	-	9,500,000	-	-	9,500,000
Sawston Area	-	4,500,000	-	-	4,500,000
Swavesey Area	-	3,000,000	-	-	3,000,000
Northstowe	-	9,634,000	-	-	9,634,000
South Cambridgeshire Total	42,750,000	35,134,000	6,500,000	-	84,384,000
Public Funding/Bids	12,000,000	23,450,000	6,500,000	-	41,950,000
Private Funding	8,909,507	9,550,000	-	-	18,459,507
SHORTFALL	21,840,493	2,134,000	0	-	23,974,493

2.3.4 **Table 2.4** shows that the cost of critical infrastructure across South Cambridgeshire is £84.3 million and currently there is an identified shortfall of £21.8 million all within the first five year period.

2.4 Overall Requirements – Cross Boundary

2.4.1 **Table 2.5** below sets out the overall requirements for Cross Boundary development at the Southern Fringe, North West Cambridge, Orchard Park and Cambridge East.

Table 2.5: Infrastructure Requirements - Cross Boundary

	2010-2015	2015-2020	2020-2025	2025-2031	Total
Orchard Park/Arbury	2,173,845	250,790	-	-	2,424,635
Cambridge East	356,315	8,424,692	31,636,384	-	40,417,391
Southern Fringe	24,369,109	46,858,126	-	-	71,227,235
North West Cambridge	13,009,771	22,866,436	48,207,578	500,000	84,583,785
Cross Boundary Total	39,909,040	78,400,044	79,843,962	500,000	198,653,046
Public Funding/Bids	3,530,000	£3,900,000			7,430,000
Private Funding	25,482,085	49,745,204	6,489,354		81,716,643
SHORTFALL	10,896,955	24,754,840	73,354,608	500,000	109,506,403

2.4.2 **Table 2.5** illustrates an overall shortfall of £109.7 million and funding shortfall in all time periods. The funding shortfall for 2010-2015 is £11.5 million, but increases to £24.7 million in 2016-2020. The shortfall then increases further to £73.3 million in 2021-2025 and then decreases to £0 in 2025-2031. Critical infrastructure is set out in **Table 2.6**:

Table 2.6: Critical Infrastructure – Cross Boundary

	2010-2015	2015-2020	2020-2025	2025-2031	Total
Orchard Park/Arbury	-	-	-	-	-
Cambridge East	-	-	-	-	-
Southern Fringe	1,230,000	4,500,000	-	-	5,730,000
North West Cambridge	-	3,500,000	-	-	3,500,000
Cross Boundary Total	1,230,000	8,000,000	-	-	9,230,000
Public Funding/Bids	-	3,900,000	-	-	3,900,000
Private Funding	-	4,100,000	-	-	4,100,000
OVERALL SHORTFALL	1,230,000	0	-	-	1,230,000

2.4.3 **Table 2.6** illustrates that overall critical infrastructure to support cross boundary development costs 9.23 million and there is a funding shortfall of 1.23 million in the first 5 years.

2.5 Overall Requirements – Both Local Authorities

2.5.1 **Table 2.7** below set out additional infrastructure costs for both local authorities. The schemes include strategic transport improvements such as improvements to the A14.

Table 2.7: Infrastructure Requirements – Both Local Authorities

	2010-2015	2015-2020	2020-2025	2025-2031	Unknown	Total
Both Local Authorities	11,465,000	1,192,005,000	2,725,000	2,725,000	85,000,000	1,293,920,000
Public Funding/Bids	4,050,000	55,750,000	1,250,000	1,250,000	30,000,000	92,300,000
Private Funding	4,091,070	20,755,461	-	-	55,000,000	79,846,531
Overall Shortfall	3,323,930	1,115,499,539	1,475,000	1,475,000	0	1,121,773,469

2.5.2 **Table 2.7** shows a funding shortfall of £1.12 billion, largely due to the alternative A14 scheme. It should be noted that the unknown column represents the BDUK Superfast Broadband project which will be implemented over the whole of Cambridgeshire by 2031. In terms of critical Infrastructure for Both Local Authorities, all schemes except the BDUK broadband project are considered critical.

2.6 Addressing the Funding Shortfall

Secure Increased Levels of Public Funding

2.6.1 At present limited secured public funding has been identified. It is important that now that infrastructure requirements have been identified public funding avenues are rigorously pursued. Public funding streams will be available over the 2012-2031 period and new rounds of funding and new sources of public funding will become available for assist infrastructure delivery.

2.6.2 The IDS study has considered a wide variety of funding sources in **Section 8** of the main report. Cambridge City Council and South Cambridgeshire District Council will have to consider the use of these sources, including prudential borrowing, user chargers and the new homes bonus to potentially address the funding shortfall.

Secure and Increased Levels of Private Funding

2.6.3 Developer contributions could potentially contribute a significant amount of funding towards infrastructure delivery. Even though in the current economic climate, contributions from this source are likely to be reduced, the long term potential is considerable. The slowdown should be seen as an opportunity for the Councils to formulate a comprehensive approach to securing developer contributions via the Community Infrastructure Levy.

Spatial Priorities and Delayed Infrastructure Phasing

2.6.4 Financial resources will rarely meet all the identified needs for infrastructure and there will inevitably be a requirement to phase and prioritise projects across an area. As a result, it is recommended that a qualitative framework and a decision-making body will need to be

defined to prioritise between settlements, sub areas and individual projects required to support development.

- 2.6.5** As collectors of developer contributions and custodians of relevant policy, it is likely that Cambridge City Council and South Cambridgeshire District Council will need to promote a corporate prioritisation process as the demand on CIL and S106 increases. A framework for prioritisation will need to operate taking account of three main elements:
- 2.6.6** Prioritisation will need to reflect the intended spatial pattern of growth and be presented so that the infrastructure requirements for each settlement and particular development areas. In this context, infrastructure related to strategic growth locations that are programmed to come forward in the first five or ten years of the plan period are likely to form the initial focus for investment.
- 2.6.7** Prioritisation between types of infrastructure (where funding is not ring fenced to certain types of investment) - clearly, a balance needs to be struck between different types of infrastructure needed to make viable places aligned to government thinking on sustainable development. There may well be tensions between competing objectives
- 2.6.8** Prioritising infrastructure within the phasing trajectory, so that infrastructure is provided slightly later than desired is considered a potential solution towards trajectory funding issues. Community infrastructure in particular could potentially be delayed to assist in the smooth delivery of development and associated strategic infrastructure. It is considered that critical and necessary infrastructure should be prioritised over desirable infrastructure in terms of funding and delivery.
- 2.6.9** It is considered that this process must involve local authority officers, infrastructure stakeholders and, ultimately, Councillors.