

Broxbourne Local Plan 2018 – 33

Draft Infrastructure Delivery Plan

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Executive Summary

Context

1. Over the period from 2018 to 2033 – the period covered by its emerging Local Plan - the Borough of Broxbourne will be focus of substantial housing and employment growth. This will result in increased pressure on local infrastructure, services and facilities. It is crucial that sufficient new infrastructure is provided, to support the delivery of new homes and jobs, and create sustainable and stable communities.
2. The IDP is a document that seeks to identify all relevant infrastructure needs anticipated over the entire timeframe of the plan from April 2018 until the end of the plan period in March 2033. The IDP only covers growth that is clearly related to the development planned, so that there is clear evidence that such need is both evidenced and being actively planned for.

What the IDP covers

3. The IDP is part of the evidence base to support the emerging Plan. It is not a policy document, but instead responds to Plan policies, and as such is concerned with the infrastructure needs arising from growth as set out in the Local Plan It does not address any perceived deficiencies and/or underinvestment in the infrastructure currently provided.
4. Infrastructure includes physical infrastructure (e.g. roads and utilities); social infrastructure (schools and health centres); or green infrastructure (open spaces and sports grounds). It can be provided at the local, neighbourhood, settlement wide, boroughwide or regional/national level.

Methodological approach

5. The key aspects of the approach taken to define infrastructure needs are as follows:
 - infrastructure is classified on a topic by topic basis (e.g. healthcare, education, transport etc)
 - these topics are cross referenced by infrastructure need expressed on a geographical basis
 - specific consideration is given to the borough's 6 strategic sites (Brookfield, Rosedale Park, Cheshunt Lakeside, Waltham Cross Northern High Street, Park Plaza North and Park Plaza West, and the IDP provides an overall assessment of infrastructure need for each, given how critical they are to the Plan's growth strategy
 - infrastructure providers have been engaged in defining infrastructure need

- a start and an end date for the IDP are clearly defined, to identify infrastructure need arising from growth from 1st April 2018 to the 31st March 2033
- infrastructure needs are also expressed across time, drawing heavily on the Plan's anticipated trajectory, to define infrastructure needs of the 15 years of the Plan within three 5 year tranches; 2018 – 2023; 2023 – 2028; and 2028 – 2033
- due consideration is given to the impact of infrastructure needs of adjoining districts which have a relevance to Broxbourne (albeit that this is not considered to be significant)
- the IDP is backed up with a detailed evidence base
- detailed consideration has been given to how infrastructure requirements can be funded

6. The IDP also takes account of the physical context and characteristics of Broxbourne, including

- its 3 major towns (Cheshunt, Hoddesdon and Waltham Cross) linked to a number of smaller settlements
- the location of the Borough in the core area of the London – Stansted – Cambridge corridor
- the significance of the A10 in linking the Borough's main settlements, and also providing north-south access including into London
- other transportation congestion issues, especially at peak hours
- the importance of rail services to the borough
- the good range of services already provided in the district including schools, healthcare services, community facilities, sports facilities and open space
- the proposals to extend Crossrail 2 into the Borough

Local Plan growth on which infrastructure need is based

7. The infrastructure need is shown in the following table overleaf. This shows how the housing growth contained within the draft Local Plan is expected to be delivered. The table does not include the 1785 dwellings within the Plan that have been consented but not yet constructed¹.

¹ Including all sites shown as 'commitments' in the housing trajectory, the largest of which are High Leigh (523 dwellings) Broxbourne School (153) and Hazelmere Marine (118)

Table ES1: Housing growth on which infrastructure need is based

Time period Site Category	2018 - 2023	2023 - 2028	2028 - 2033	Total
Site allocations excluding committed sites	1914	1759	1533	5191
SLAA sites/urban capacity	147	199	58	419
Self Build	25	25	25	75
Windfalls	111	185	185	481
Totals (% in 5 year tranches)	2197 (36%)	2168 (35%)	1801 (29%)	6166

Source: Broxbourne Pre-Submission Housing Trajectory 2017

8. A key element of the growth strategy and therefore infrastructure requirements are the Plan's strategic sites. Set out in the table below are the dwelling numbers and trajectory associated with the strategic housing sites:

Table ES2: Dwelling numbers and trajectory for the borough's 6 strategic housing sites

Strategic housing site	Trajectory of growth by 5 year tranches			
	2018 - 2023	2023 - 28	2028 - 33	Total
Delamare Road - Cheshunt Lakeside	540	675	535	1750
Waltham Cross Northern High Street	0	0	300	300
Brookfield Riverside/Garden Village	200	680	620	1500
Rosedale Park (Tudor Nurseries/Rags Brook)	586	293	0	879
Totals	1326	1648	1455	4429

Source: Broxbourne Pre-Submission Housing Trajectory 2017

9. Also of great significance is the quantum and profile of the Plan's proposed business growth, with the total quantum of employment floorspace derived from the relevant Local Plan policies and the application of an appropriate phasing for infrastructure planning purposes:

Table ES3: Quantum and profile of business development

Time period Location/use/ Quantum (m ²)	2018 – 2023	2023 - 2028	2028 - 2033	Total
Brookfield Riverside Business Use	10,000	20,000	20,000	50,000
Brookfield Riverside Retail	10,000	23,500	0	33,500
Park Plaza West Business Use	20,000	30,000	30,000	80,000
Park Plaza North Business Use	20,000	30,000	0	50,000
Total Business	50,000	80,000	50,000	180,000
Total Retail	10,000	23,500	14,350	33,500

Source: Broxbourne pre submission Local Plan 2017

Education infrastructure

10. For primary schools, Herts County Council use a pupil yield of 1 Form of Entry (1FE) to every 500 dwellings. Given that the Local Plan identifies around 6,160 new dwellings that are expected to be delivered within the Plan period 2018 – 2033, up to around 12 Forms of Entry (12.32 precisely) could be required in the years to 2033 to deal with the growth identified.
11. This equates theoretically to the provision of 6 new 2FE primary schools in total, although the current expectation is that 4 new primary schools will be established and up to 7 existing primary schools will be extended.
12. For secondary schools, similar calculations as to that for primary schools apply, which means that up to around 12FE of new secondary school provision (again, 12.32FE precisely) could be required. It is anticipated that one entirely new secondary school will be built, with the balance of future secondary needs being met through the expansion of existing schools.
13. In addition, for early years, 3 new Children’s Centres (combining nursery provision with other areas of support for preschool children) will be required in locations to be determined, with additional nursey provision within new and expanded primary schools.

Transport infrastructure

14. Drawn from the Borough Council’s draft Transport Strategy (September 2017) and draft Local Cycling and Walking Infrastructure Plan (September 2017), and supported by transport modelling work, the IDP identifies a total of 61 transport infrastructure investment schemes considered necessary to deliver the Plan, which can be categorised as follows:
 - 22 highway schemes, ranging from major strategic investment to small scale highway interventions
 - 2 parking measures
 - 15 public transport measures, including 2 new stations and Turnford and Park Plaza
 - 7 Smarter Choices investments
 - 15 walking and cycling initiatives
15. Schemes are costed and profiled to provide the following summary of transportation investment required.

Table ES4: Summary of transportation investment required

Category	Estimated Cost (£m)
Highways	68.88
Parking	0.75
Public Transport	48.535
Smarter Choices	1.13
Walking and Cycling	13.475
Total	132.770

Source: 2017 draft Transport Strategy (September 2017) and draft Local Cycling

Healthcare infrastructure

16. Healthcare infrastructure needs - which take the form of primary healthcare services provided by doctors, nurses and dentists, and secondary healthcare services provided by specialists – are assessed within the IDP. This assessment has identified the need for premises for the equivalent of an additional 7.4 GPs, and investment in acute care, mental health facilities and community care.

Other infrastructure needs

17. Additional infrastructure needs are also identified for the following:
- Social Infrastructure – built facilities (new indoor sports facilities)
 - Social Infrastructure – outdoor facilities (new outdoor recreational uses)
 - Emergency Services – new Intervention and Safer Neighbourhood Police Base
 - Waste and Recycling – new Household Waste Recycling Centre
 - Gypsy and Travellers Site

Infrastructure needs still to be costed

18. Where it has not proved possible to identify and cost infrastructure needs, details of additional requirements will be added to the IDP when they are known.

The Funding of Infrastructure

19. The means of funding the infrastructure the Plan gives rise to consideration of the following:
- s106 agreements
 - CIL (if introduced)
 - Government funding programmes
 - Bonds, loans and land value capture
 - Private/commercial funding
20. Transportation funding is likely to be sourced from the following:

Table ES5: Identified sources of transportation infrastructure funding

Funding source	Potential contribution (£m)
Funding secured/anticipated	43.98
Self funding	0.75
S106	31.6
Growth Deal	12.0
CIL	5.738
Government programmes	12.202
Home Building Fund	2.0
Bonds/loans/land value capture	11.4
New Stations Fund	10.0
Bus Operator Contributions	3.0
Total	132.77

Source: original research for the IDP

Overall summary of infrastructure need and cost

21. In summary (and as detailed in the IDP's Infrastructure Delivery Schedule) the following infrastructure is required to support the growth identified in the Plan:

Table ES4: Summary of transportation investment required

Infrastructure Category	Estimated cost of Delivery (£m)	Timescale for Delivery (expressed in expenditure)		
		2018 - 2023	2023 - 28	2028 - 33
Education	91.37	32.85	31.96	26.56
Transport	132.77	59.39	63.28	10.1
Healthcare	22.783	8.201	7.975	6.607
Social Infrastructure – Built Facilities	4.205	1.36	2.775	1.219
Social Infrastructure – Outdoor Recreation and Open Space	5.7	1.755	3.715	0.07
Public Realm	2.0	0	2.0	0
Emergency Services	1.2	0	1.2	0
Waste and Recycling	1.4	0	1.4	0
Gypsy and Travellers Sites	1.5	0	1.5	0
Total Infrastructure Need	263.428	103.556	114.502	44.067

Source: Original research for this IDP

SECTION 1: INTRODUCTION: THE PURPOSE OF THE INFRASTRUCTURE DELIVERY PLAN (IDP) AND INFRASTRUCTURE DELIVERY SCHEDULE (IDS)

Introduction

- 1.1** Over the period from 2018 to 2033 – the period covered by its emerging Local Plan - the Borough of Broxbourne will be focus of substantial housing and employment growth, which will result in increased pressure on local infrastructure, services and facilities. Given this, it is crucial that new infrastructure is provided, to support the delivery of new homes and jobs, and create sustainable and stable communities.

What this IDP seeks to establish

- 1.2** This IDP seeks to identify all relevant infrastructure needs that are anticipated over the entire timeframe of the plan from 2018) until the end of the plan period in 2033 and which can clearly be related to growth, so that there is clear evidence that such need is both known and being actively planned for.
- 1.3** The content of the IDP is based on the potential implications of infrastructure need arising from meeting the borough’s own needs, also taking into account the needs arising from any relevant development taking place in adjoining districts that might have significant infrastructure implications for the borough.
- 1.4** Chapter 4 of this document summarises the local plan growth strategy and arrives at a total of 6,166 new dwellings that will be delivered over the plan period, together with both new employment and retail uses.
- 1.5** Identifying infrastructure need over such a long period – up to 15 years – is not a straightforward matter, however. Few infrastructure providers are actively planning over so lengthy a timeframe and for that reason alone, the identification of needs in the later years of the plan period include a degree of speculation.
- 1.6** More than this, however, the precise nature of what is needed in a range of services – indeed, perhaps all services – has and most probably will be in a constant state of flux. This is influenced by a range of factors such as changes in demographics and movements into and out of local communities, the power and influence of new technology and new arrangements for planning and delivering infrastructure – not forgetting also that expectations of what communities feel they need to be provided with – is also constantly shifting.

What do we mean by infrastructure?

- 1.7 For communities to thrive, it is vital that they are well served by a range of infrastructure that is appropriate to people's needs, are affordable, and are accessible.
- 1.8 Infrastructure can generally be grouped into three main areas:

Table 1.1: Infrastructure provision characterised

Infrastructure category	Description
Physical Infrastructure	Includes transport infrastructure (roads, public transport, pedestrian and cycle routes, public rights of way and bridleways), cemeteries, gas and electricity infrastructure, water provision and treatment, sewerage works and waste collection, recycling and disposal
Social Infrastructure	Includes primary and secondary schools, nurseries, further education, primary and secondary healthcare, public emergency services, libraries, sports and recreation facilities, community facilities and cultural services
Green Infrastructure	Includes open space, allotments, parks and gardens, formal and informal green space, green corridors, river corridors, waterways, greenways, urban open land, Sites of Special Scientific Interest, conservation areas, and sports pitches

- 1.9 As well as the characteristics of infrastructure it is also important to consider the scale at which it is provided, as different types of infrastructure are also required to support different scales of development within an area:

Table 1.2: Infrastructure by scale

Scale	Infrastructure need
Local, site level	On site infrastructure (including roads and walk/cycleways, gas pipes and electricity cabling, water supply and waste water disposal pipes etc) is necessary to enable the delivery of a specific development
Neighbourhood and settlements level	At what the Local Plan defines as the Place level, infrastructure is required to mitigate the impact of the development and support the day to day needs of the new population (e.g. community facilities, GP surgeries, schools, places of worship and sports facilities)
Boroughwide and strategic	Larger items of infrastructure (including new waste disposal facilities, sewerage treatment works, cemeteries, cultural facilities such as museums and galleries, hospitals, electricity sub-stations, and improvements to the strategic highways network etc) are needed to support population and economic growth across the district and the wider area

The process of defining infrastructure needs

- 1.10** The process of defining infrastructure needs is one that requires the local planning authority to work closely with infrastructure providers to determine requirements over time. Such engagement is an important process in itself as it will:
- require infrastructure providers to give proper consideration of the scale, nature and location of growth, information which they can then factor into other elements of their service planning work
 - encourage such providers to think beyond the short term and holistically (to see their infrastructure planning work in a wider context, including its relationship with other service providers)
 - alert them as to the available public funding opportunities (including section 106 and the Community Infrastructure Levy (CIL) – when and if introduced but also other public and private funding sources that are already in existence or may emerge
 - identify the opportunities for them to engage in whatever appropriate governance arrangements are put in place to oversee infrastructure planning and delivery

What the IDP represents

- 1.11** It is important from the outset to set out precisely what an IDP represents (and equally what it does not).
- The IDP is **part of the evidence base to support** the emerging local plan and therefore is required to be compatible with it
 - The **IDP is however not a policy document**, but instead responds to plan policies
 - Finally, and critically, the IDP is **concerned with the infrastructure needs arising from growth** as set out in the local plan, and not about addressing any perceived deficiencies and/or underinvestment in the infrastructure currently provided.
- 1.12** Any perceived underinvestment in infrastructure is clearly a concern, and the borough council would expect this to be addressed by infrastructure funders and/or providers. It is however unreasonable for future growth to take responsibility for remedying any past shortfalls, for example in hospital beds; these are responsibilities that must rest with those who plan for such services. Whilst the provision of infrastructure needs to be considered in the round, the IDP should only address that element of need directly associated with growth
- 1.13** There are a number of exceptions to this, however, and the chief of these relates to the **provision of transportation infrastructure**. Most other infrastructure need is met through a series of geographically based decisions – meeting the growth needs arising from school places for example is resolved through a range of separate

decisions to expand schools (or provide new schools) in appropriate locations to meet overall demand.

- 1.14** With transportation infrastructure it is impossible to view such infrastructure other than as being part of an interconnected network, in which decisions to locate growth in one location has significant wider repercussions. A single child requires a sole school place and an individual patient just one hospital bed, whereas a single journey across the district's highway network will involve numerous interactions with other parts of the network. If some of these are already suffering from congested roads, or overcrowded public transport, then it becomes very difficult to consider the highway infrastructure impacts of growth in one part of the district in isolation.
- 1.15** For this reason, the IDP looks at transportation infrastructure holistically – not just examining the immediate consequences of growth but the wider picture of current stresses on the network.

Status of this IDP

- 1.16** This document has been prepared for Broxbourne Borough Council in support of the Council's emerging Local Plan. Whilst as already noted the IDP is not a policy document, it does however constitute a key piece of the borough council's evidence base. It will also form the basis for any future development of the Council's Community Infrastructure Levy charging schedule should that council decide to introduce a CIL.
- 1.17** The IDP will also assist in facilitating further dialogue with both service providers and developers, and in seeking to influence public, private and agency funding and priorities, to ensure that new development is supported by the right infrastructure. To this end, the IDP is a living document, and will require updating, periodically, to take account of further updates to the plans and programmes on which it is based.

SECTION 2: PROFILE OF BROXBOURNE

Introduction

- 2.1 A detailed profile of Broxbourne Borough is provided in Chapter 1 of the draft Local Plan. The main features of the borough that will have an impact on the future provision of infrastructure are set out in Table 1.1 below:

Table 2.1: Profile of Broxbourne

Characteristic	Impact on infrastructure provision
3 major towns – Cheshunt, Hoddesdon and Waltham Cross linked to a number of smaller settlements	Ensure focus of new infrastructure investment in major settlements to promote ease of accessibility whilst ensuring at the same time smaller settlements are not neglected
Location of the borough in the core area of London – Stansted – Cambridge corridor	Ensure the borough secures a high proportion of the infrastructure benefits associated with the promotion of this corridor
Significance of A10 in linking the borough's main settlements, and also providing north-south access including into London	Emphasise investment needed to upgrade the A10 and its associated links
Other transportation congestion issues, especially at peak hours	Make investment in tackling peak hour congestion a priority
Importance of rail services to the borough	Seek to secure investments to enhance the capacity, frequency, speed and comfort of the rail services
Good range of services already provided in the district including schools, healthcare services, community facilities, sports facilities and open space	Ensure that future growth does not have an adverse impact on such services, which means that such growth needs to be matched by investment in new facilities as well as enhancing the capacity of what is already provided
Crossrail 2 proposals to extend into the borough	Seek to make maximum advantage on the back of this proposal in securing associated infrastructure investment
Proximity to London	Broxbourne's location on the outskirts of London means that it attracts commuters and young families in search of more affordable, family size housing

SECTION 3: METHODOLOGICAL APPROACH

3.1 The methodological approach adopted for this IDP is set out in Table 3.1 below:

Table 3.1: The IDP Methodological Approach

Key Consideration	Methodological Approach Taken
Classification of infrastructure need on a topic by topic basis	Infrastructure need is largely topic driven, with discrete areas of need, with only a limited amount of overlap. The key areas of infrastructure need are transport, health and education but there are many other areas of need. The IDP covers these in 11 separate sections (Sections 6 – 16)
Cross referencing of a topic based approach with an assessment of infrastructure need on a geographical basis	The overall impact of infrastructure need is experienced by Broxbourne residents and businesses often at the locational level, through factors such as access to GP services, schools and the immediate transportation network. This IDP therefore also examines infrastructure need on the 'Places' as identified in the Local Plan. This is explored in Section 18
A further consideration of need in relation to the local plan's 6 strategic sites	Section 5 notes the importance of the local plan's strategic sites and provides an overall assessment of infrastructure need for each of these, given how critical they are in the plan's overall growth strategy
The active engagement infrastructure providers ²	In the preparation of the IDP infrastructure providers have been directly engaged to ensure it accurately reflects their individual expectations, and the challenges in delivery that they expect to face. Where necessary the IDP challenges the views expressed by providers, as there needs to be a recognition that what infrastructure providers seek and what the local plan considers appropriate in terms of infrastructure requirements to best serve the interests of the borough's residents and businesses may not always be the same thing
Poorly thought out and uncostered infrastructure needs are not included	The IDP should not be (and is not) a 'wish list' of aspirational infrastructure needs presented to the council by infrastructure providers that are either vague, unrelated to growth needs, or uncostered. Should the providers provide further details of such requirements at a later date, then these can be added to future iterations of the IDP
The start and end dates of the IDP are clearly defined	The IDP identifies infrastructure need arising from growth from 1 st April 2018 to the 31 st March 2033

² A summary of the engagement of infrastructure providers in the preparation of the IDP is contained in Appendix A

Table 3.1: The IDP Methodological Approach (continued)

Key Consideration	Methodological Approach Taken
Infrastructure needs expressed across the plan period	Growth related infrastructure needs need to be expressed across time, drawing heavily on the local plan's anticipated development trajectory. The identified infrastructure needs of the 15 years of the local plan (2018 – 33) are split into 5 year tranches; 2018 – 2023; 2023 – 2028; and 2028 - 2033
With one exception, the IDP identifies a start date for new infrastructure requirements. Infrastructure needs dating before this are discounted	An IDP should not seek the provision of infrastructure for development that has already taken place, as it is not the responsibility of new development to remedy any historic infrastructure deficit. Any infrastructure needs not currently being met (i.e. shortage of school places, GP surgeries at overcapacity) remains the responsibility of the infrastructure providers/planners
The one exception to the discounting of historic infrastructure need is transportation infrastructure	With transportation infrastructure, the IDP explores a holistic solution derived at addressing both existing and potential congestion issues and associated mitigation measures in the round to encompass future growth in addition to current capacity issues
Due consideration is given to infrastructure needs of adjoining districts of relevance to Broxbourne	The impact of development in adjoining districts needs to be assessed
The IDP is backed up with a detailed evidence base	As noted, Appendix A to this IDP contains a summary of the engagement of infrastructure providers, whilst Appendix B summarises sources of evidence that have been analysed to support the IDP's conclusions
Detailed consideration has been given to funding	The IDP involves a comprehensive exploration of funding mechanisms. It includes both public and private funding sources and competitive bidding mechanisms as well as potential for innovative sources of funding. Appendix C to the IDP summarises potential sources of funding
The IDP acknowledges the challenges of infrastructure funding	The IDP considers the difficulties of providing certainty that all identified infrastructure needs spread over the next 15 years can have a guaranteed source of funding. All IDPs struggle to do this and it would be unrealistic to expect this IDP to be any different.
The IDP takes a proactive approach to infrastructure funding	The explores in detail a range of funding opportunities and proposes a strategy which will seek to maximise the securing of infrastructure funding as well as appropriate governance arrangements to oversee delivery

The complexities of infrastructure planning

- 3.2 There are wider complexities in calculating future plan based infrastructure need which will need to be factored into such work, and which make (at this stage at least) precise calculations difficult. Factors to be taken into account include the following considerations, set out in the table below:

Table 3.2: The Complexities of Infrastructure Planning

Area of complexity	Considerations
Limited forward planning timescales of many infrastructure providers	Many infrastructure service providers only plan on a 3-5 years' time cycle. Others such as some of the utility providers tend to react only when proposals are at the planning application stage because of a lack of certainty in housing delivery. This has obvious limitations in terms of planning ahead within the local plan timeframe of 2033. Emphasis has therefore been on ensuring a detailed understanding of infrastructure requirements for early phases of plan delivery in the knowledge that further work will be needed to inform requirements for later phases
The changing and short term nature of funding programmes	Most of the national funding programmes identified in the IDP have been established within the last 5 years (and many have been set up within the last 18 months). All are relatively short term, covering at most the next 5 years (e.g. Local Growth Deal, Roads Investment Strategy, Housing Infrastructure Fund)
Lack of responsiveness by some infrastructure providers	Some providers have been reluctant to provide a response to requests for information on infrastructure needs, often because of staffing constraints, but also in some instances because they fail to fully appreciate the value of good infrastructure planning. The Council will continue to engage with these providers
New ways in delivering infrastructure in the future	Infrastructure delivery is a constantly evolving process. For instance, a move away from delivering secondary care from large district hospitals towards more community based provision would have fundamental consequences for health infrastructure planning
Changing demographics	Demographic changes have a major impact on infrastructure planning. Many of these are well known, such as the needs of an increasingly aging population and (for the moment at least) rising birth rates. These and other factors show that infrastructure planning is not about growth alone, but also other critical factors relating to the district as a whole
Development viability considerations can change over time	Viability is determined by a range of factors, only a few of which can be expected to be constant (variables include land values, build costs, SDLT)

SECTION 4: THE DEVELOPMENT STRATEGY

Summary

- 4.1 This section looks at where growth is expected to take place over the Local Plan period from 2018 to 2033. Whilst being primarily concerned with housing growth it also considers the anticipated profile of employment and retail growth.
- 4.2 Overall housing and employment growth figures are identified and assigned to a trajectory – the profile of delivery of that growth over the timescale of the plan is set out in 5 year tranches. This cumulative data is then cross referenced with an assessment of where that growth is expected to take place within the borough. Relevant growth in nearby districts adjoining the borough boundary is also identified, as infrastructure need is not always a respecter of administrative boundaries.
- 4.3 There is a particular focus on strategic housing sites – which collectively comprise nearly 70% of anticipated housing growth over the plan period.

Assignment of growth by location and time

- 4.4 Most (although not all) growth-related infrastructure has a direct relationship with the development that gives rise to the need for that infrastructure. This needs to be provided either at some defined point concurrent with or after that growth takes place.
- 4.5 Secondly, most growth-related infrastructure has a close geographical nexus with the growth it is intending to serve. This is particularly true of infrastructure like primary schools, GP surgeries and clinics and play/games areas, although less so in relation to major infrastructure items such as hospitals leisure facilities. For health and education providers it is important to know not only when growth is expected to take place but also where, as although this may not influence the overall quantum of infrastructure need, it will have a major influence over both its location and potentially the form in which it is provided.

The nature of growth

- 4.6 The IDP draws a distinction between the Local Plan's larger (strategic) sites (those sites of 300 dwellings or more) and smaller sites which include allocated sites and those urban capacity sites identified in the Local Plan drawn from the June 2017 Strategic Land Availability Assessment (SLAA)³. This is important for the following reasons:
- for most smaller sites the infrastructure impact tends to be cumulative e.g. a new primary school may become necessary because of the collective impact of a large number of small housing developments
 - larger sites tend to have the capacity to incorporate a range of land uses as part of an overall masterplan, so that infrastructure needs such as schools, health centres and structural greenspace can be planned into that development, rather than located offsite

³ www.broxbourne.gov.uk/slaa

- the changing funding regime (with the availability of a CIL) means that developer contributions towards meeting the infrastructure needs of large sites may be secured in a different manner to those contributions towards the infrastructure needs of urban capacity sites
- experience suggests that the infrastructure needs of large sites will most probably continue to be funded through s106 agreements. For smaller sites, infrastructure may be secured through the allocation of CIL funds secured through collective contributions made by developers identified in the CIL Regulation 123 list (with s106 contributions being relatively small in such circumstances).

Cross Referencing with the Broxbourne Local Plan 2018 - 33

- 4.7** This section of the IDP should be read in conjunction with the draft Local Plan Part 3: Development Strategy, particularly paragraphs 3.1 – 3.21, policy DS1, and the separate housing trajectory which accompanies the Local Plan.

Headline housing growth figures

- 4.8** The objectively assessed need is for 7,718 dwellings over the plan period, an overall average of 454 dwellings a year. The Local Plan provides for a 7% contingency, planning for a total of 8,248 dwellings a year.
- 4.9** The 8,248 figure includes 1,785 dwellings that have been consented but not yet constructed (also called commitments) and 252 completions. We do not propose to make allowance for the infrastructure needs of such dwellings on the assumption that the infrastructure need for such development will have been taken into account in the granting of planning consent for such development. When such dwellings have been discounted the actual figure for which infrastructure needs to be planned is **6,166 dwellings**.
- 4.10** The IDP has a start date of April 1st 2018. From that date it will be necessary to plan for the infrastructure needs of all housing (and employment development) being brought forward. As time rolls forward, new development will be started and completed, changing the profile of infrastructure need within the plan period. To address this, it will be important to ensure that the IDP is updated regularly.
- 4.11** Completions are discounted as the infrastructure needs associated with historic development should have been factored in with the grant of planning consent, or covered by the service providers of the relevant infrastructure category.
- 4.12** As noted elsewhere there are issues associated with the “infrastructure deficit” — but the IDP takes the view that it is unreasonable for future development to take responsibility for making up any shortfall of any past failures.

Trajectory

- 4.13** As set out in the Local Plan the trajectory of housing growth is not uniform, but in earlier years is set higher than average (i.e. above the annual rate of dwellings p.a. that the OAN identifies) Table 4.1 below shows the trajectory on the IDP housing growth figure in 5 year tranches by category of site.

Table 4.1: Housing growth trajectory for the IDP over the plan period 2018 - 2033

Time period	2018-2023	2023-2028	2028-2033	Total
Site allocations	2042	1769	1533	5344
Brownfield register	134	139	58	331
SLAA sites	38	25	25	88
Self-build	25	25	25	75
Windfalls	111	185	185	481
Total	2350	2143	1826	6319⁴
% in each 5 yr tranche	37%	34%	29%	100%

Source: Broxbourne Pre-Submission Local Plan Housing Trajectory, November 2017

Strategic housing sites

- 4.14** Around 70% of all projected housing growth within the borough is expected to take place on strategic housing sites of 300 dwellings or more.
- 4.15** The scale and timing of housing growth on strategic sites is set out below.

Table 4.2: Housing Growth for the borough's strategic sites 2016 - 2031

Strategic housing site	Trajectory of growth by 5 year tranches			
	2018 - 2023	2023 - 28	2028 - 33	Total
Delamare Road - Cheshunt Lakeside	540	675	535	1750
Waltham Cross Town Centre (High Street North)	0	0	300	300
Brookfield Riverside/Garden Village	200	680	620	1500
Rosedale Park (Tudor Nurseries/Rags Brook)	586	293	0	879
Totals	1326	1648	1455	4429

Source: Broxbourne Pre-Submission Local Plan Housing Trajectory, November 2017

Housing growth by 'place'

- 4.16** Table 4.3 overleaf sets out housing growth over the plan period by place. The table differentiates between the four strategic sites identified in Table 4.2 and smaller site allocations and Strategic Land Availability Assessment (SLAA) sites. It excludes completions and commitments in Table 4.2, but also windfalls and self-builds (which cannot be assigned to a specific place, and amount to 556 as shown in Table 4.1).

⁴ It should be noted that the 6319 dwellings showing the proposed development trajectory illustrated in Table 4.1 is 2.5% higher than the total dwellings figure tested within this IDP (6166) dwellings as the Local Plan has a built in contingency to allow for a proportion of sites that do not ultimately come forward within the plan period

Table 4.3: IDP housing Growth 2018-2033 – by place

	Strategic Sites	Other site allocations	SLAA Sites and Brownfield Register sites	Sub-total	<i>Completions</i>	<i>Commitments</i>	Grand total
Brookfield	1500	0	0	1500	4	43	1547
Broxbourne	0	0	36	36	4	203	243
Cheshunt	2629	589	62	3280	84	395	3759
Goffs Oak and St James'	0	193	0	193	12	32	237
Hoddesdon	0	40	244	284	29	770	1083
Waltham Cross	300	0	62	362	114	324	800
Wormley and Turnford	0	0	0	0	5	18	23
Totals	4429	822	404	5655	252	1785	7692
Self build							75
Windfall							481
Grand total							8248

Source: Broxbourne Borough Council, Local Plan Housing Trajectory (November 2017)

Employment and retail growth

- 4.17** The impact in terms of infrastructure need associated with economic growth in the borough needs considerations in the IDP (e.g. transport interventions identified as a result of transport modelling as well as some utility, waste and emergency service needs). The Local Plan identifies the need to provide for in excess of 6,500 net new jobs and an additional 40,000m² of new retail development.
- 4.18** The main employment land provision is expected to be met at Brookfield Riverside, Park Plaza West and North, Cheshunt Lakeside, and the town centres, whilst retail development will take place primarily at Brookfield Riverside with a smaller amount in the town centres. Within the Plan it is calculated that Brookfield Riverside has the capacity for c30,000 to 50,000m² of business space and c30,000m² of retail space; at Park Plaza West c100,000m² of business space (80,000² within the Plan Period) and at Park Plaza North, 50,000m² of business space (all to be delivered within the Plan period). There are smaller allocations elsewhere.
- 4.19** The employment floorspace is of significance in terms of calculating the contributions that such development can make towards the cost of new infrastructure through s106 (largely on the strategic sites) and CIL (on the smaller sites). It should be noted that in addition to the major sites the Local Plan also contains commercial floorspace allocations for a number of smaller sites and a leisure allocation of 10,000 m² at Brookfield Riverside. These sites could make a small contribution towards the funding of new infrastructure but these developments are either not significant or subsumed within more significant uses in the funding of new infrastructure (specifically at Cheshunt Lakeside and Brookfield Riverside).
- 4.20** Table 4.4 below shows a simplified table of commercial land rollout which we return to in Section 17 to identify potential s106 and CIL contributions to new infrastructure.

Table 4.4: Employment and business use by location and trajectory

Time period Location/use/ Quantum (m ²)	2018 – 2023	2023 - 2028	2028 - 2033	Total
Brookfield Riverside Business Use	10,000	20,000	20,000	50,000
Brookfield Riverside Retail	10,000	23,500	0	33,500
Park Plaza West Business Use	20,000	30,000	30,000	80,000
Park Plaza North Business Use	20,000	30,000	0	50,000
Total Business	50,000	80,000	50,000	180,000
Total Retail	10,000	23,500	14,350	33,500

Source: research undertaken for the IDP

Development in adjoining districts

- 4.21** The Borough of Broxbourne adjoins 4 other local authorities – East Herts Council, Epping Forest District Council, Enfield Council and Welwyn Hatfield Borough Council. The IDP should take account of any development in adjoining districts which has implications for the provision of infrastructure within the district.
- 4.22** This might either be smaller scale development located immediately adjoining or close to the district boundary or it might be larger scale development which can be considered to have an effect over a wider area than the development itself. The most obvious of these is the impact of traffic flows on adjoining roads, although education and health are also considerations. Sewage infrastructure is dominated by a small number of high capacity Sewage Treatment Works often serving a wide catchment area encompassing a considerable number of authorities.
- 4.23** The following developments in adjoining districts were considered in the preparation of the IDP.

Table 4.5: Growth in adjoining districts

Authority	Local Plan status	Commentary
East Hertfordshire Council	The District Plan – which runs to 2033 - was submitted for Examination on 31 st March 2017. Adoption is anticipated for late 2018	The main impact of the proposals will be the proposed development at Gilston of 10,000 new homes, 3,000 of which will be delivered within the Plan period, which will have an impact on traffic flows on the A10. The Plan also identifies 1000+ new homes at Ware and 950 at Hertford, although both towns are set some distance from the borough boundary. In close proximity are the villages of Hertford Health, Stanstead Abbots and Stanstead St Margarets. There are no housing proposals at these settlements and although neighbourhood plans are encouraged to bring forward housing proposals these are not expected to be significant
Epping Forest District Council	Work is being undertaken on a Reg 19 pre submission version of the Plan	The December 2017 Submission Version of the Local Plan proposes 11,400 new homes and 10,000 new jobs. The Plan identifies development in relatively close proximity to the Broxbourne borough boundary, with 858 new homes in Waltham Abbey and a further 122 in Nazeing, with the intensification of employment uses.

Authority	Local Plan status	Commentary
Enfield Council	Work has commenced on a replacement Local Plan covering the period 2017 – 2032 with an Issues and Options publication expected in the near future	<p>The new local plan aims to consider a strategy to cater for a total population of over 400,000 by 2032, which translates into between 25,000 – 35,000 new households.</p> <p>The main Enfield issues are Crossrail 2 with its associated growth, which will lead to higher growth in Enfield; and the proposed Northern Gateway Access Road, running parallel to the M25 and in effect acting as a relief road.</p> <p>Two significant employment sites are identified to the north of the area adjoining the borough boundary. There are also major regeneration proposals for the whole of the Upper Lee Valley; however, the M25 provides a major barrier between Enfield and Broxbourne and apart from the wider considerations around the impact of London's growth on the A10, the infrastructure impact is unlikely to be significant</p>
Welwyn Hatfield Borough Council	The Local Plan August 2016 (which runs to 2032) was submitted for examination on 15 th May 2017 with hearings taking place in late 2017/early 2018.	Plan proposes around 12,000 new dwellings, at least 116,400 of new floorspace for industry, offices and distribution and 12,500 sq.m. of new retail floorspace over the Plan period. The only settlement of any significance to the borough is the village of Cuffley where the plan proposes an additional 299 dwellings. Although this is a relatively modest figure, the settlement immediately adjoins the borough boundary and there are some implications for educational provision requiring the Cuffley dwelling figure to be programmed into calculations for education need within the Goffs Oak area

Source: original research for IDP

SECTION 5: THE LOCAL PLAN STRATEGIC SITES – INFRASTRUCTURE NEEDS

Summary

- 5.1** This section provides details of the Local Plan's 6 strategic sites. In addition to the 4 strategic housing sites identified in section 4 we have added the strategic employment sites of Park Plaza West and North.
- 5.2** Strategic sites comprise just under 70% of the homes to be delivered over the Plan period; a high proportion all of the new employment uses; and most of the anticipated new retail uses. They also have the size and scope to accommodate a considerable proportion of the future infrastructure needs identified in subsequent chapters.
- 5.3** Initial masterplanning has enabled an early consideration of the mix of uses that can be accommodated and this has been cross referenced with the work that has taken place within the Council to determine precisely what infrastructure is needed, where and when.
- 5.4** Differences can occur between the infrastructure proposed to be accommodated on the site and what is actually generated by the development. For example, a specific development may generate 1.8FE (forms of entry) primary school aged need, but the masterplan proposes a 2FE primary school on the site (Primary School X). The reason for this is that a 1.8FE school would be difficult to operate, with split year groups, and the metric for schools is ideally a complete form of entry (or failing that, a half form of entry).
- 5.5** In the example cited above the developer contribute to the cost of provision generated by that development through a s106 (1.8FE) with other s106 contributions from another development, or CIL if introduced⁵. Alternatively, the developer might agree to meet the cost of an entire 2FE school. Such considerations relate to primary schools only as all secondary schools will be met offsite. Brookfield Riverside, Rosedale Park and possibly Cheshunt Lakeside are expected to incorporate primary healthcare facilities. Other strategic sites will contribute towards primary healthcare needs being met offsite.
- 5.6** In successive tables we look at each of the strategic sites, with a brief description of the scheme and a schedule setting out the anticipated areas of developer contributions.
- 5.7** Assumptions have been made on the ability of these schemes to fund the infrastructure such development gives rise to. It should be noted that this a desktop exercise involving the calculation of need, associated costs and development viability. It is indicative, and is not intended to substitute for the detailed negotiations

⁵ CIL contributions could give rise to issues with the CIL Regulation 123 list, which sets out what CIL is to potentially fund. It needs to be made clear that CIL is intended to meet only part of the cost of the new school if s106 agreements are to fund part of the school; in the example above the Reg123 list would have to make it clear that CIL was funding 0.2fe of new Primary School X

that will take place around obligations between the borough council and the developers, However, the IDP provides an initial benchmark for those negotiations.

Development costs

- 5.8** The tables below from Table 5.1 onwards do not include essential on-site infrastructure such as internal roads/footways, open spaces and play areas, landscaping and any other requirements necessary to mitigate the effects of the development (such as on site ecological mitigation and protecting the setting of onsite ancient monuments). These are costs necessarily incurred to secure an acceptable development.
- 5.9** An example of this is the environmental improvements anticipated to be required (e.g. improved facilities, signage, and habitat improvements) for the Lee Valley Regional Park as mitigation for the effects of the proposed development at Cheshunt Lakeside. These costs are part and parcel of the costs of securing a development for the site that meets regulatory requirements and is acceptable in planning terms. These development costs do not fall within the remit of this IDP.
- 5.10** The tables do however include abnormal costs where there are specific development requirements that would not usually arise. Specifically, at Brookfield Riverside/Garden Village, this includes the costs for a replacement Household Waste Recycling Centre, a Gypsy and Travellers site and an allotment site. These are offsite infrastructure requirements arising as a consequence of growth related development, and should therefore be included in the IDP.
- 5.11** There are two other relevant points to note:
- there are references in in the individual site identification of infrastructure needs to a 'Sustainable Transport Package'. This comprises a range of walking, cycling, Smarter Choices and passenger transport contributions which will vary from site to site depending on circumstances. In some cases it will include bus service contributions; however, where major contributions are anticipated, these are identified separately
 - the Brookfield Riverside/Garden Village table included reference to a proposed Safer Neighbourhood and Policing Team Base (as identified in the Emergency Services section of this IDP at a Total Cost of £1.2m). This is however a general future infrastructure requirement for the borough, not attributable to the Brookfield development, so it does not feature in that site's development costs

Delamare Road – Cheshunt Lakeside

Table 5.1: Infrastructure requirements and costs, Delamare Road – Cheshunt Lakeside

Delamare Road – Cheshunt Lakeside	Growth Trajectory			
	2018 - 2023	2023 - 28	2028 - 33	Total
	540	675	535	1750
Scheme comprises:	1,750 new homes; 40% affordable homes; elderly persons' accommodation; business and business floorspace for new business start-ups; a local centre; a primary school; landscaped open space			
Contributions to infrastructure provision	<p>Up to 3.5FE (forms of entry) of primary provision (2FE to be met on site, the remainder offsite)</p> <p>Up to 3.5FE of secondary school provision contribution (requirement expected to be met offsite)</p> <p>Contribution towards 0.7 children's centre (onsite)</p> <p>Contribution for the cost of the equivalent of 1.2 GPs (possibly in health facilities on site)</p> <p>A10 and other highway improvements</p> <p>Sustainable transport package including bus services contribution</p> <p>Improvements to Cheshunt Old Pond</p> <p>Contribution to indoor and outdoor sports and green infrastructure</p> <p>Contribution to community facilities</p>			
Infrastructure summary and ability of development to meet contributions	Item		Projected cost £m)	
	<ul style="list-style-type: none"> • Education • Health • A10/other highway improvements • Sustainable Transport Package⁶ • Contribution to bus services • Old Pond improvements • Indoor/outdoor sports 		<p>28.11</p> <p>1.09</p> <p>5.0</p> <p>0.87</p> <p>1.5</p> <p>2.0</p> <p>0.5</p>	
	Total		39.07	
	<p>Cost per dwelling in terms of s106 contributions would be just over £22,000 per dwelling. We believe that this would be well within the viability range of this development, with the possibility if not probability that other funding sources for delivering this infrastructure will not need to be identified</p>			

Source: original estimate for IDP, drawing on evidence set out within it and various evidence sources (e.g. draft Transport Strategy)

⁶ Package covers a package of walking, cycling and smarter choices investment for each individual site

Waltham Cross Town Centre Northern High Street

Table 5.2: Infrastructure requirements and costs, Waltham Cross Town Centre Northern High Street

Waltham Cross Town Centre	Growth Trajectory																			
	2018 - 2023	2023 - 28	2028 - 33	Total																
	0	0	300	300																
Scheme comprises:	c300 new homes; 40% affordable homes; shops/commercial/community ground floor uses																			
Contributions to infrastructure provision:	0.6FE (forms of entry) of primary provision (to be met offsite) 0.6FE of secondary school provision contribution Contribution towards 0.12 children's centre Contribution for the cost of the equivalent of 0.36 GPs Highway improvements Sustainable transport package Indoor/Outdoor Sports Town Centre improvements																			
Infrastructure summary and ability of development to meet contributions:	<table border="0"> <thead> <tr> <th>Item</th> <th>Projected cost (£m)</th> </tr> </thead> <tbody> <tr> <td>• Education</td> <td>5.44</td> </tr> <tr> <td>• Health</td> <td>0.19</td> </tr> <tr> <td>• A10/other highway improvements</td> <td>0.5</td> </tr> <tr> <td>• Sustainable Transport Package</td> <td>0.26</td> </tr> <tr> <td>• Indoor/outdoor sports</td> <td>0.1</td> </tr> <tr> <td>• Town Centre improvements</td> <td>0.5</td> </tr> <tr> <td>Total</td> <td>6.99</td> </tr> </tbody> </table> <p>Cost per dwelling in terms of development contributions would be £23,300 per dwelling. Given this will be a difficult brownfield site to develop we believe that this would be on the high side in terms of viability when compared to similar schemes elsewhere, and other funding sources may need to be considered</p>				Item	Projected cost (£m)	• Education	5.44	• Health	0.19	• A10/other highway improvements	0.5	• Sustainable Transport Package	0.26	• Indoor/outdoor sports	0.1	• Town Centre improvements	0.5	Total	6.99
Item	Projected cost (£m)																			
• Education	5.44																			
• Health	0.19																			
• A10/other highway improvements	0.5																			
• Sustainable Transport Package	0.26																			
• Indoor/outdoor sports	0.1																			
• Town Centre improvements	0.5																			
Total	6.99																			

Source: original estimate for IDP, drawing on evidence set out within it and various evidence sources (e.g. draft Transport Strategy)

Brookfield Riverside/Garden Village

Table 5.3: Infrastructure requirements and costs - Brookfield Riverside/Garden Village

Brookfield Riverside/Garden Village	Proposed Trajectory of growth by 5 year tranches			
	2018 - 2023	2023 - 28	2028 - 33	Total
Homes	200	680	620	1500
Employment Uses	20,000	43,500	20,000	83,500
Scheme comprises:	<p>Brookfield Garden Village: c1250 new homes; 40% affordable homes; elderly persons' accommodation; 3FE primary school; local centre; public open space and woodland including a green corridor and linear park through the development; protection and enhancement of ancient monuments</p> <p>Brookfield Riverside: up to 30,000 sq.m. net retail comparison floorspace; c3,500 sq.m. retail convenience floorspace; up to 10,000 sq.m. leisure floorspace; a civic centre; c250 new homes; 40% affordable homes; elderly persons accommodation; business campus with c50,000 sq.m. floorspace; exceptional quality public realm; car parking; easy pedestrian connectivity to adjoining uses; new community woodland</p>			
Contributions to infrastructure provision:	<p>3.0FE (forms of entry) of primary provision (met onsite)</p> <p>3.0FE of secondary school provision contribution (offsite)</p> <p>Contribution towards 0.6 children's centre (onsite)</p> <p>Contribution for the cost of the equivalent of 1.6 GPs (new health centre to be provided onsite)</p> <p>Package of major highway works</p> <p>Sustainable transport package</p> <p>Contribution to new bus service</p> <p>Indoor/Outdoor Sports</p> <p>Relocation of 20 plot Halfhide Lane allotments, Gypsy and Travellers site and Household Waste Recycling Centre</p> <p>Green Infrastructure</p>			

Brookfield Riverside/Garden Village (continued)		
Infrastructure summary and ability of development to meet contributions:	Item	Projected cost £m)
	• Education	24.09
	• Health	0.93
	• <i>(Package of major highway works</i>	<i>19.4)</i> ⁷
	• <i>(Safer Neighbourhoods Policing Team Base</i>	<i>1.2)</i> ⁸
	• Sustainable Transport Package	1.1
	• New bus service	6.0
	• Indoor/outdoor sports	0.4
	• Relocation of allotments	0.2
	• HWRC replacement	1.4
	• Gypsy and Traveller site relocation	1.5
	• Green infrastructure	5.0
	Total	37.62
	If the commercial element's contribution to the new infrastructure required is set aside, the cost per dwelling in terms of development contributions would be £25,080. This is on the high side but will be significantly reduced when contributions from the proposed commercial development are factored in.	

Source: original estimate for IDP, drawing on evidence set out within it and various evidence sources (e.g. draft Transport Strategy)

⁷ As categorised in paragraph 5.8 above, this is a scheme development scheme cost not an offsite infrastructure cost for which a developer contribution is being sought. It is included here for completeness as it is identified in the Transportation Strategy and therefore features in the IDP

⁸ As explored in paragraph 5.11 above, this is a general infrastructure cost and not one specific to the Brookfield development, so it is not included as a scheme cost

Rosedale Park (Tudor Nurseries/Rags Brook)

Table 5.4: Infrastructure requirements and costs - Rosedale Park (Tudor Nurseries/Rags Brook)

Rosedale Park (Tudor Nurseries/Rags Brook)	Growth Trajectory			
	2018 - 2023	2023 - 28	2028 - 33	Total
	586	293	0	879
Scheme comprises:	c879 new homes; 20% starter/shared ownership homes; 40% affordable rented homes; retirement 'village' and other elderly persons' accommodation; a local shop; expanded sports pitches; extensive pedestrian connections; a 2FE primary school; landscaped open space; expansion of Rosedale sports club and its facilities including an all-weather pitch and expanded sports area; a public park; extensive tree planting			
Contributions to infrastructure provision	<p>1.76FE (forms of entry) of primary provision (to be met on site)</p> <p>1.76FE of secondary school provision contribution (requirement to be met offsite)</p> <p>Provision of early years education in the form of a Children's Centre (nursery attached to a school)</p> <p>Contribution for the cost of the equivalent of 0.9 GPs (possibly in a primary health facility on site)</p> <p>Highway improvements</p> <p>Sustainable transport package</p> <p>Contribution to indoor and outdoor sports</p> <p>Provision of public park and open space</p> <p>Expansion of Rosedale Sports Club</p>			
Infrastructure summary and ability of development to meet contributions	Item		Projected cost £m)	
	<ul style="list-style-type: none"> • Education • Health • Highway improvements • Sustainable Transport Package • Public park and open space • Expansion of Rosedale Sports Club 		<p>15.36</p> <p>0.55</p> <p>1.5</p> <p>1.5</p> <p>3.0</p> <p>2.5</p>	
	Total		24.41	
	Cost per dwelling in terms of s106 contributions would be £27,800 per dwelling. We believe that this would be within the viability range of comparable similar schemes elsewhere			

Source: original estimate for IDP, drawing on evidence set out within it and various evidence sources (e.g. draft Transport Strategy)

Park Plaza West

Table 5.5: Infrastructure requirements and costs, Park Plaza West

Park Plaza West	Proposed Trajectory of growth by 5 year tranches			
	2018 - 2023	2023 - 28	2028 - 33	Total
Employment Uses	20,000	30,000	30,000	80,000
Scheme comprises:	Up to 100,000 sq.m. gross of business floorspace (80,000 sq.m.in Plan period); Landscape setting laid out as open space (min 12.5ha); bus service; pedestrian and cycle connections; restoration of Cecils Pond			
Contributions to infrastructure provision:	Contributions to A10 major works Cost of highway network amendments to serve development Contributions towards new railway station at Park Plaza Funding of new pedestrian and cycle bridge to cross A10 Contributions to new bus service Indoor/outdoor sports Green infrastructure and open space			
Infrastructure summary and ability of development to meet contributions:	Item	Projected cost (£m)		
	<ul style="list-style-type: none"> • A10 major works • <i>Highway works to serve development</i> • Sustainable Transport Package • New railway station contributions • New pedestrian and cycle bridge • Contributions to new bus service • Indoor/outdoor sports • Green Infrastructure and open space 	5.0 0.75 ⁹ 2.0 5.0 2.0 0.75 0.1 1.4		
	Total	16.25		
	The viability of commercial development is more difficult to calculate than residential but as the Local Plan anticipates high end uses on this site, a contribution figure of £200/sq.m. is potentially achievable – if not, other funding sources may need to be found. There is an important relationship between this site and Park Plaza North in terms of the pooling of contributions to infrastructure linked to the development of both sites as Park Plaza North - with its proposed restrictions of use classes and to Small and Medium Size Enterprises (SMEs) - is likely to result in much lower levels of viability			

Source: original estimate for IDP, drawing on evidence set out within it and various evidence sources (e.g. draft Transport Strategy)

⁹ New 4 arm junction to Park Plaza on B198. Considered a development cost and therefore excluded from IDP

Park Plaza North

Table 5.6: Infrastructure requirements and costs, Park Plaza North

Park Plaza North	Proposed Trajectory of growth by 5 year tranches																	
	2018 - 2023	2023 - 28	2028 - 33	Total														
Employment Uses	20,000	30,000		50,000														
Scheme comprises:	Allocation for A1, B1 and B2 uses for SMEs displaced from elsewhere																	
Contributions to infrastructure provision:	Cost of highway network amendments to serve development Contributions towards new railway station at Park Plaza Contributions to new bus service Indoor/outdoor sports																	
Infrastructure summary and ability of development to meet contributions:	<table border="0"> <thead> <tr> <th>Item</th> <th>Projected cost (£m)</th> </tr> </thead> <tbody> <tr> <td>• Highway works to serve development</td> <td>0.25</td> </tr> <tr> <td>• Sustainable Transport Package</td> <td>0.5</td> </tr> <tr> <td>• New railway station contributions</td> <td>2.0</td> </tr> <tr> <td>• Contributions to new bus service</td> <td>0.75</td> </tr> <tr> <td>• Indoor/outdoor sports</td> <td>0.1</td> </tr> <tr> <td>Total</td> <td>3.60</td> </tr> </tbody> </table> <p>To meet all the potential contributions that might be anticipated would we think impact on viability, so the contribution the development could potentially make to the cost of the new Park Plaza station has been reduced from £5m to £2m, meaning either the Park Plaza West development would need take on an increased contribution to such a proposal, or alternative funding sources would have to be sought.</p>				Item	Projected cost (£m)	• Highway works to serve development	0.25	• Sustainable Transport Package	0.5	• New railway station contributions	2.0	• Contributions to new bus service	0.75	• Indoor/outdoor sports	0.1	Total	3.60
Item	Projected cost (£m)																	
• Highway works to serve development	0.25																	
• Sustainable Transport Package	0.5																	
• New railway station contributions	2.0																	
• Contributions to new bus service	0.75																	
• Indoor/outdoor sports	0.1																	
Total	3.60																	

Source: original estimate for IDP, drawing on evidence set out within it and various evidence sources (e.g. draft Transport Strategy)

Cross referencing the transportation requirements of the strategic sites with individual transport schemes

- 5.11 In the tables above individual sites have transportation investment included in the overall package of infrastructure costs; these are all drawn from specific transportation schemes identified in section 7 (see Table 7.6). It is possible to cross reference these as follows:

Table 5.7: Cross referencing strategic sites transportation costs with Transport Strategy schemes

Strategic Site	Transport investment (with costs)	Specific schemes in Transport Strategy for which funding will be sought	Transport Strategy references
Delamare Road - Cheshunt Lakeside	A10/Other Highway Improvements (£5m)	Improvements to A10 at College Road and Church Lane and Church Lane High St Cheshunt plus contributions to other improvements on the A10	HS.05, H.S.06, HS.07, plus contributions to HS.02 and HS.03
Delamare Road - Cheshunt Lakeside	Sustainable Transport Package (£0.87m)	Proportionate contribution to various schemes	e.g. WC.05, WC.06, WC.07, WC.09
Delamare Road - Cheshunt Lakeside	Contribution to bus services (£1.5m)	50% of contribution to new bus service to serve site and also Park Plaza/Waltham Cross Town Centre	PT.04
Waltham Cross Town Centre Northern High Street	A10 improvements (£0.5m)	Contributions to improvements on A10	HS.02, HS.03
Waltham Cross Town Centre Northern High Street	Sustainable transport package (£0.26m)	Proportionate contributions to various schemes	e.g. WC.07, WC.09
Brookfield Riverside/Garden Village	<i>Package of Major highway works (£19.4m)</i>	<i>Meeting entire of cost highway works associated with the development¹⁰</i>	<i>HS.09 – HS.013</i>
Brookfield Riverside/Garden Village	Sustainable Transport package (£1.1m)	Proportionate contributions to various schemes	e.g. WC.07, WC.08
Brookfield Riverside/Garden Village	Meeting cost of new bus (£6m)	Entire cost of new bus service	PT.03
Rosedale Park (Tudor Nurseries/Rags Brook)	Highway improvements (£1.5m)	Contributions to A10 improvements	HS.02, HS.03, HS.05, H.S.06, HS.07
Rosedale Park (Tudor Nurseries/Rags Brook)	Sustainable Transport Package (£1.5m)	Proportionate contributions to various schemes	e.g. WC.07
Park Plaza West	A10 highway improvements contribution (£5m)	Primarily to the cost of junction of A10 with B198/A121 and associated works	HS.02, HS.03
Park Plaza West	<i>Highway works to serve development (£0.75m)¹¹</i>	<i>Meeting entire cost of new access arrangements to site from B198</i>	<i>HS.04</i>

¹⁰ Note: these are view as scheme development costs, not cost to be sought from developer to mitigate the effect of the development; they are not included as an infrastructure cost in the IDP

¹¹ Development cost, therefore not included in IDP

Table 5.7: Cross referencing strategic sites transportation costs with Transport Strategy schemes (cont)

Strategic Site	Transport investment (with costs)	Specific schemes in Transport Strategy for which funding will be sought	Transport Strategy references
Park Plaza West	Sustainable Transport Package	Proportionate contributions to various schemes	e.g.WC.07
Park Plaza West	New railway station contribution (£5m)	50% of cost of new Park Plaza Station	PT.10
Park Plaza West	New pedestrian and cycle bridge (£2m)	Entire cost of new bridge across A10	WC.13
Park Plaza West	Contributions to new bus service (£0.75m)	25% of the cost of new bus service	PT.04
Park Plaza North	Highway works to A10 (£0.25)	Contribution to the cost of junction of A10 with B198/A121 and associated works	HS.03
Park Plaza North	Sustainable Transport Package (£0.25m)	Proportionate contributions to various schemes	e.g.WC.07
Park Plaza North	New railway station contribution (£5m)	10% of cost of new Park Plaza Station	PT.10
Park Plaza North	Contributions to new bus service (£0.75m)	25% of the cost of new bus service	PT.04

Source: original research for IDP

Summary of infrastructure costs requirements and achievability

- 5.12** As a final task of this assessment we have sought to summarise an infrastructure cost total per strategic site and what we consider the ability of new development to meet them. If any issues of funding these measures arise, this does not mean that such development is unviable, but instead it will be a question of identifying alternative funding sources to meet any shortfall.
- 5.13** Table 5.8 overleaf summarises strategic infrastructure contributions required by site and assessment of the ability of the associated development to fund them.

Table 5.8: Summary of Infrastructure Costs, Strategic Sites

Strategic site	Total cost identified (£m) (per dwelling cost 000s)	Assessment potential to fund such associated infrastructure costs in their entirety
Delamere Road – Cheshunt Lakeside	£39.07m (£22,325)	Good
Waltham Cross Town Centre North	£6.99m (£23,300)	Difficult
Brookfield Riverside/Garden Village	£37.62m (£25,080 ¹²)	Good (if commercial element is factored in)
Rosedale Park (Tudor Nurseries/Rags Brook)	£24.41m (£27,770)	Good
Park Plaza West	£16.25m (£203/sq.m. of commercial floorspace)	Good
Park Plaza North	£3.60 (£72/sq.m. of commercial floorspace)	Potentially difficult
Total infrastructure cost identified	£127.94m	

¹² (Reduces to £19,513 when contributions from the development's commercial activities are factored in)

SECTION 6: EDUCATION

Summary

- 6.1** This section looks at existing education provision and advises on new facilities required to support housing growth.

Education planning including the role of the County Council

- 6.2** Education provision in the borough of Broxbourne takes many forms, including pre-school (early years) education, primary education, secondary education, further education and higher education.
- 6.3** Hertfordshire County Council (HCC) is the local education authority covering early years, primary and secondary education. It has a range of statutory duties and responsibilities including:
- planning to ensure there are sufficient school places in its local authority area
 - resourcing the shared maintenance, improvement to, and provision of, the built school environment, and securing value for money.
- 6.4** These responsibilities include a statutory duty to secure sufficient school places in Broxbourne, ensuring that every child has access to a school place. This is done by forecasting the demand for school places to identify an appropriate balance between supply and demand.

Forecasting demand

- 6.5** HCC produces pupil forecasts every six months for both Reception and Year 7 demand. At a primary level, forecasts are published four years ahead and secondary forecasts stretch to 10 years in the future. The forecasts for Broxbourne have taken account of an assumed housing growth trajectory for the longer term, as provided by the borough council.
- 6.6** Further information on the methodology around the pupil forecasts can be found on the Herts Direct website¹³:
- 6.7** Although Broxbourne has experienced a significant rise in the demand for primary places across the County in recent years in line with the picture nationally, the position is currently a mixed one, according to the County Council, looking at the position until 2026/27¹⁴

¹³ www.hertsdirect.org/services/edlearn/aboutstatesch/planning/ and <http://www.hertsdirect.org/services/edlearn/aboutstatesch/risingdemand/>

¹⁴ Meeting the Rising Demand for School Places: 2 publications (October 2016) covering both primary and secondary schools

Primary (next 3 years)

- Cheshunt East, Turnford North and South: modest surplus (peaking at 1.4FE in 2018/19)
- Cheshunt West: variable, with deficit of 1.2FE in 2017/18 followed by surplus of 0.8FE in 2018/19
- Flamstead End/Ridgeway West: deficit of 0.4FE in 2017/18 followed by small surplus (0.2FE) by 2019/20
- Hoddesdon: shortage of spaces in 2017/18 but a surplus of 1.9FE by 2019/20
- Waltham Cross: minor surplus in 2017/18 followed by an 0.4FE deficit by 2019/20

Secondary (next 9 years)

- Cheshunt: a surplus of spaces from a maximum of 3.7FE (current year) falling to 1.4FE (2022/23)
- Hoddesdon: currently a small surplus of spaces of 1.3FE falling to the position of a small shortage (1.3FE) by 2023/24

Planning New Schools

6.8 The way in which new schools are established has undergone significant change in recent years. The County Council's role as a commissioner of places is such that where it considers there is a basic need for a new school it must:

- Seek proposals to establish an academy/free school; or (if unsuccessful)
- Hold a statutory competition; or (if unsuccessful)
- Publish its own proposals for a new maintained school

6.9 In the event of any failure to secure the necessary funding for new schools the County Council remains the 'funder of last resort'.

Calculating pupil numbers

6.10 School provision is often described in terms of 'Forms of Entry'. 1 Form of Entry (FE) equals 30 places per year group.

6.11 Primary schools have seven year groups from Reception through to Year 6. HCC prefers primary schools of 2FE or more, as this larger size provides improved opportunities for delivery of a broad education curriculum and staff development, as well as offering the ability to better manage fluctuations in demand. A 2FE primary school will have 7 year groups of 60 pupils (420 in total), plus a nursery class where offered.

6.12 Secondary schools have five year groups, from Year 7 through to Year 11, and Sixth Forms with lower and upper year groups. There is a preference for secondary schools of 6 to 8FE as this offers improved opportunities for the delivery of a broad

education curriculum. A 6FE school will have 5 year groups of 180 pupils (1080 in total) plus a Sixth Form (should the school have one).

- 6.13** Currently, on average, approximately 60% of students take up places in the sixth form. As a result of government policy this proportion is expected to rise to an average of 80% as the number of places in education and training for 16 to 18 year olds increases to meet the rise in the participation age. Local authorities have a duty to ensure that sufficient, suitable places are available to meet the reasonable needs of all young people, and to encourage them to participate.

Pupil Yield

- 6.14** When undertaking high level school place planning related to new residential development, HCC's approach to child yield is based on a ratio of **1FE per 500** dwellings to be 97.5% confident of not underestimating yield.
- 6.15** This is based on a study of 49 Hertfordshire developments undertaken by HCC's demographer (c. 2008). This work produced a yield range of 1FE per 500 dwellings (42 children per 100 dwellings / 97.5% confidence) to 1FE per 850 dwellings (24.7 children per 100 dwellings/50% confidence). The County Council applies the upper end of the range, 1FE per 500 dwellings, in the first instance to ensure prudent planning.
- 6.16** While this is a county-wide figure, Broxbourne's location on the outskirts of London means that it attracts young families in search of more affordable, family size housing. ONS¹⁵ figures demonstrate that the net outflow from London has increased significantly in recent years and is highest for people aged 30-39 with young children¹⁶. This has knock on effects for educational (and other) infrastructure, relative to localities further from London. When considering actual proposals or planning applications, the County Council uses specific development forecasting models to ascertain more tailored demographic profiles, including pupil yields.

Site Size

- 6.17** School site standards have recently changed (School Premises Regulations, 2012) and provide a much less stringent approach to school site standards. The County Council is now using the site areas that refer to Building Bulletin 103 area guidelines for mainstream schools.¹⁷
- 6.18** A school should have all the facilities it requires, including hard and soft play areas, provided on a single site, although there may be situations where in order to provide additional school place capacity at an existing site a detached playing field may be

¹⁵ ONS: Population estimates for UK, England and Wales, Scotland and Northern Ireland: mid- 2016. June 2017

¹⁶ Ferguson D. 'We didn't even have room for a table': meet the 30-somethings fleeing London. The Guardian. 11 February 2017.

¹⁷ <https://www.gov.uk/government/publications/mainstream-schools-area-guidelines/area-planning-for-maintained-schools>

appropriate. Guidance now states that artificial grass recreational areas may replace grass as the former can be used far more extensively

Education Planning Areas

- 6.19** For the purposes of school place planning, HCC is divided into geographical Education Planning Areas (EPAs). There are a total of 22 secondary EPAs within the county and each of these contains one or more primary EPAs. The forecasts are produced to planning area level, not to individual schools. The 7 primary EPAs covering Broxbourne are Cheshunt East, Cheshunt West, Flamstead End Ridgeway South, Hoddesdon, Turnford North, Turnford South and Waltham Cross and the 2 secondary EPAs are Cheshunt and Hoddesdon.

Early Years education provision

- 6.20** The County Council works with the PVI (private, voluntary and independent) sector and schools to ensure adequate early years education places. It also assists and enables the provision of day nurseries, play schemes and after school clubs, making sure there are sufficient places for parents to access across the county. Where new primary school sites are identified, early years education provision will usually be sought as part of the onsite provision.

Form of early years provision

- 6.21** Early years provision can be met in numerous ways, as follows:
- **Maintained Nursery School:** funded by the state where children aged 3 and 4 receive their free early education entitlement before attending primary school.
 - **Maintained nursery classes:** based in primary schools where children aged 3 and 4 receive their free early education entitlement until they move up to reception
 - **Preschool/Playgroup:** this provision usually educates children between the ages of 2 and school age. These are run by PVI providers and some children attending will be accessing their free early education place. They are often set up in community buildings or schools, and usually operate in term time only
 - **Day Nurseries:** these offer childcare and early education for children from 0 to 5. They are used predominately by working parents for childcare purposes. They also offer free early education for eligible children, with additional services parents pay for. This provision is market led
 - **Childcare:** the County Council has a statutory duty to ensure there is sufficient childcare for working parents, for children aged 0 – 14 years (19 for children with Special Education Needs and Disability). Childcare can take place in preschools, day nurseries, childminders and out of school provision such as holiday clubs and after school clubs depending on the age of the child. It can be provided in school or community use buildings. New schools should be designed to be able to offer childcare to children aged 2 years upwards

- **Children's Centres:** see 6.25 below

Children's Centres

- 6.22** The County Council also has a duty to provide Children's Centres in every community for children under 5 years old and their families. These provide a range of services at designated children's centres and community venues, such as community centres and schools.
- 6.23** Children's Centres have a wider remit than nursery schools and offer services to support child development; outreach and family support; parenting support; access to training and work opportunities; and child and family health services.
- 6.24** There are 7 centres in Broxbourne Borough each of which serve a defined geographical area. The County Council uses a RAG (Red Amber Green) rating to define the sufficiency levels of places in all Hertfordshire's Children's Centres, as follows:
- **Green:** sufficient places available (provision largely matches family's needs)
 - **Amber:** near sufficient places available (a gap exists which may give families difficulties in accessing provision)
 - **Red:** insufficient places available (a gap exists which may prevent families from accessing provision)

- 6.25** Details of Broxbourne Borough's Children's Centres are as follows:

Table 6.1: Children's Centres in the Borough of Broxbourne with their capacity

Children's Centre	Capacity ^{*/} and RAG rating as at September 2016
B1 Rye Park	+123 Green
B2 Hoddesdon and Broxbourne	+169 Green
B3 Turnford and Wormley*	-209 Green
B4 Flamstead End	+281 Green
B5 Goffs Oak	+ 48 Green
B6 Cheshunt Central	+362 Green
B7 Waltham Cross *	-25 Green

Source: Hertfordshire County Council

* Data suggests that there are insufficient places in the given area – however local knowledge from stakeholders and parents indicate that parents do not have a problem finding places in this area.

- 6.26** It should be noted that the capacity and rating for any Children's Centre can quickly change.

Early Years Education Infrastructure Requirements

6.27 Early years education Infrastructure provision associated with the delivery of the Local Plan and its funding is identified as follows:

- Early Years provision within primary schools is a cost that should be included in the expansion of existing primary schools and any new primary school provision as identified in this IDP
- Some early years provision is provided by the market (day nurseries, childminders, the voluntary sector) which means that its provision does not require public funding and therefore does not need to be identified in the IDP
- The IDP supports the provision of Children’s Centres to provide support for early years pupils and their parents in addition to nursery provision in primary schools. The cost of their provision needs to be identified in the IDP

6.28 Hertfordshire County Council has stated that, as a guide, a new development of about 2,500 new homes would create the requirement for a new children’s centre based on an anticipated figure of 800 children aged 0 - 5 years. Given the number of new dwellings that remain to be constructed over the period between 2018 - 2033 is around 6,166 new dwellings there may be the requirement for up to **3 new Children's Centres** to be provided within the major locations for growth within the district, and the Borough Council will continue to work with HCC to take this forward.

6.29 For a consideration of potential locations and costs for new Children’s Centres see paragraph 6.48 and 6.49, and Tables 6.8 and 6.9 below.

Primary Age Education Provision – Current

6.30 There are currently 30 primary schools in the borough of Broxbourne providing a total of 45.5 forms of entry.

6.31 To meet rising demand for school places the County Council either plans for the provision of new schools or expands provision at existing schools. In the last two years the response to rising demand has seen the following changes in the borough:

Table 6.2: Actions in respect of Broxbourne primary schools 2015 – 16 (Source HCC)

Education Priority Area	Year	School	Changes made
Cheshunt East	2015	Downfield	Permanent enlargement by 0.5FE (15 places) to 2FE
Cheshunt West	2015	St Andrews Lane	Temporary enlargement by 1fe (30 places) to 2FE
Hoddesdon	2016	Forres School	Temporary enlargement by 0.5fe (15 places) to 2FE
Hoddesdon	2016	Forres School	Permanent enlargement by 0.5fe (15 places) to 2FE

Source: Hertfordshire County Council

6.32 HCC has appraised all the primary schools in the district for expansion. Many of the more straightforward sites have already been expanded. With others, it should

however be noted that there is a level of uncertainty regarding the practical implications of expansion, with planning/environmental issues being but one factor. The County Council does however plan to expand St Catherine's School in Hoddesdon by 0.5fe from 2018.

- 6.33** HCC's policy is to provide primary schools of at least 2fe in size, plus a nursery, where possible. Ancillary uses including pre-schools, children's centres and extended services facilities often co-locate on school sites offering wider provision to the local community.

Identification of Growth Related Primary School Needs

- 6.34** With 6,166 new dwellings to be delivered within the Plan period 2018 – 2033, around **12 Forms of Entry** (12.32 precisely) will be required to deal with the growth identified within the Plan. This equates to the provision of up to **6 new 2FE primary schools in total**.

- 6.35** It is also possible to express those needs according to housing trajectory:

Table 6.3: Primary school education needs over time 2018-33

Time period	2018 - 2023	2023 - 2028	2028 - 2033	Total
Primary School needs over time by form of entry	4.44FE	4.31FE	3.57FE	12.32FE

Source: original research for IDP

- 6.36** Finally for primary school needs it is possible to express growth related housing infrastructure figures by development characteristic:

Table 6.4: Primary school need by development characteristic

Characteristic	Total No. dwellings	No. of FEs
Site allocations including strategic sites	5191	10.38
<i>(Of which strategic sites)</i>	<i>4429</i>	<i>8.86</i>
SLAA sites/urban capacity	419	0.84
Self Builds and windfalls	556	1.11
Total	6166	12.32

Source: Original research for IDP

- 6.37** Provision will be secured either through the expansion of existing schools or by the construction of new ones.
- 6.38** It is possible to provide an indication of where this new demand would be met, and this is set out in paragraphs 6.53 – 6.56 and Table 6.12.

Secondary Age Education Provision - current

- 6.39** There are seven secondary schools across the Borough of Broxbourne, between them offering 1394 Year 7 places for September 2016, equating to 4FE. For school planning purposes, Broxbourne is divided into two secondary education planning areas, Hoddesdon and Cheshunt. There is currently surplus Year 7 capacity across the area, however there has been a significant rise in the primary population, with around 3FE of permanent primary capacity added and additional temporary capacity in order to ensure access for every child to a local school place.
- 6.40** The surplus in capacity is currently concentrated mainly in Robert Barclay Academy to the north and, more significantly, in Goffs Churchgate School in the south of the area.
- 6.41** The table below details the schools and places available in the year of admission across the Borough of Broxbourne for the school year 2016/17:

Table 6.5: Secondary Schools in the Borough of Broxbourne as at September 2016

School	2016/17 Year 7 places available
Goffs Churchgate	150
Goffs	210
St Marys	240
Haileybury Turnford	182
The Broxbourne	216
Robert Barclay Academy	171
John Warner	225
Total	1394 (46FE)

Source: HCC

- 6.42** The important considerations around these figures are as follows:
- It is apparent that a number of local Academies (who are their own admitting authorities) plan to increase the number of places available in coming years. Any additional places being considered by these schools are not included in the current forecast
 - even without further demand from new housing, the actual existing overall school aged population living in the Borough is set to rise in coming years
- 6.43** As for primary schools, meeting the rising demand for school places is either by planning for the provision of new schools or expanding provision at existing schools. In the latter case this can be instigated by the County Council or by the schools themselves through expanding their Planning Admission Number (PAN). In the last two years the response to rising demand has seen the following changes in the district illustrated overleaf initiated by these schools through increased PAN numbers:

Table 6.6: Actions in respect of Broxbourne primary schools 2015 – 16 (Source HCC)

Education Priority Area	Year	School	Changes made
Hoddesdon	2016	The Broxbourne School	Temporary increase of 10 places through increase in the school's PAN
Hoddesdon	2016	John Warner	Temporary increase of 15 places through increase in the school's PAN

Source: HCC Meeting the Rising Demand for School Places

Identification of Growth Related Secondary School Needs

6.44 An estimated **12FE of new secondary school provision** (again, 12.32FE precisely) will be required over the plan period. Given that the usual size of secondary school being sought by the County Council is 6FE – 10FE, this equates to the provision of the equivalent of **1 new secondary school (with the additional expansion of one or more existing secondary school)**.

6.45 In terms of the trajectory of need and the relationship of need relating to site characteristics, this is the same as for primary age provision shown in tables 6.4 and 6.5 above. It should be noted that the Local Plan identifies a secondary school reserve site at Wormley which could fulfil the requirements of a new secondary school.

6.46 At this stage it is possible only to provide an indication of where this new demand would be met. Taking into account current provision and where new growth is expected, it is possible to provide an indication where future secondary education provision could be met, as set out in paragraphs 6.53 – 6.56 and Table 6.12 and 6.13 below. This will be the subject of further detailed planning as the need arises.

Calculating the cost of meeting additional school places

6.47 As noted above, the demand for new school places associated with growth is expressed in terms of forms of entry (FE). The cost of each FE can be determined by establishing the cost of each form of entry within the overall cost of a new school, using costs provided by HCC, as follows:

Table 6.7: Cost of new education calculated by form of entry, primary and secondary education

School provision	Estimated Cost	Cost per fe
2FE Primary School	£7.64m	£3.82m
6FE Secondary School	£24.36m	£3.48m

Source: HCC¹⁸

6.48 In a similar fashion, the cost of a new Children's Centres can be worked out on a per dwelling basis by dividing the cost of a new Children's Centre by the estimated number of new dwellings the Centre would serve, as follows:

¹⁸ The County Council have however acknowledged that all education infrastructure costs need updating

Table 6.8: contribution towards the cost of a Children’s Centre, per dwelling

Estimated average cost of Children’s Centre	No of dwellings a new Children’s Centre is expected to serve	Contribution per dwelling
£0.48m	2500	£192 per dwelling

Source: Hertfordshire County Council¹⁹

- 6.49** Using these figures it is possible to identify the cost of growth related infrastructure need arising out of the IDP figure of 6,166 new dwellings to be delivered 2018-2033:

Table 6.9: Total cost of growth related education infrastructure 2018 - 33

Need	Cost (£m)
Children’s Centres	1.44
Primary Education	47.06
Secondary Education	42.87
Total	91.37

Source: Original research for IDP

- 6.50** These costs can also be expressed in the form of infrastructure costs over time by cross referencing this data with the anticipated trajectory:

Table 6.10: Education infrastructure by 5 year tranches

Time period	2018 - 2023	2023 - 2028	2028 - 2033	Total
Children’s Centres	£0.48m	£0.48m	£0.48m	£1.44m
Primary Education	£16.94m	£16.47m	£13.65m	£47.06m
Secondary Education	£15.43m	£15.01m	£12.43m	£42.87m
Total	£32.85m	£31.96m	£26.56m	£91.37m

Source: Original research for IDP

- 6.51** Finally, this data can also be represented by development characteristic:

¹⁹ As with other education costs, the County Council have acknowledged that these figures need updating

Table 6.11: Education infrastructure by development characteristic

Characteristic	Total No. dwellings	Cost (£m)
Site allocations including strategic sites	5191	76.92
<i>(Of which strategic sites)</i>	<i>4364</i>	<i>64.67</i>
SLAA sites/urban capacity	419	6.21
Self Builds and windfalls	556	8.24
Total	6166	91.37

Source: Original research for IDP

Location of new educational facilities

- 6.52** Whilst the purpose of the IDP is to define in precise detail the need, timing and quantum of growth related new infrastructure, it is not specifically its task to identify precisely where that should be located as this will be a matter of detailed negotiation between the borough council, HCC and developers.
- 6.53** Notwithstanding this there have been discussions about the provision of new schools and the expansion of existing ones. The Local Plan is proposing:

Table 6.12: Future education requirements as identified in the Local Plan 2018 - 33

Location	Requirement identified in Local Plan
Brookfield Garden Village	3 forms of entry of primary schooling on a single site
Broxbourne School	Borough Council is supportive of its rebuilding and expansion. Outline planning permission granted
Cheshunt Lakeside	A new 2FE primary school
Rosedale Park	A new 2FE primary school
North of Albury Farm, Cheshunt	Allocation of site for a new 2fe primary school at Albury Ride
Woodside Primary School, Goffs Oak	Support for expansion
Westfield Primary School Hoddesdon	Relocation/expansion of school to 2fe on the High Leigh development site. Outline planning permission granted
Former Ryelands Primary School	Possible reopening to cater for additional school places in Hoddesdon area in line with the County Councils proposal
Waltham Cross	Proposed expansion of 2 local schools to 2FE to accommodate current shortfall if required
Wormley and Turnford	Proposed New River secondary school between Church Lane and the A10 Turnford link

Source: Local Plan

- 6.54** The draft Local Plan also notes that Goffs School is currently being redeveloped, there are improvements under way at Goffs Churchgate School and John Warner School and improvements are planned at Haileybury/Turnford and Sheredes School (now Robert Barclay Academy).

6.55 In summary then the expectation is that:

- growth related primary school provision is proposed to be secured through 4 new primary schools (at Brookfield Garden Village, Cheshunt Lakeside, Rosedale Park and Albury Farm, plus the extension of up to 7 existing primary schools (with precise locations under consideration)
- for secondary schools, a new secondary school of between 6 and 10 forms of entry on an identified site in Worley and Turnford, with the extension of other secondary schools in the borough to meet the balance

Further and Higher Education

6.56 There are no higher education establishments within the borough. Further education is provided by Hertford Regional College in Turnford. The college currently has no plans to expand and there are therefore currently no infrastructure needs arising.

Funding

6.57 With the decline in government funding the education sector is heavily reliant on developer contributions to fund growth related education needs across all sectors. The County Council remains the 'funder of last resort' if circumstances arose where there was failure to secure adequate funding through these means.

SECTION 7: TRANSPORT

Introduction

- 7.1** This section considers the need for improvements to both the local and strategic highway network and other forms of sustainable transportation including the railway and bus network, walking and cycling infrastructure. Improvements to the transport network will be crucial in facilitating the growth and development identified in the Broxbourne Local Plan; particularly the delivery of the strategic development sites.
- 7.2** The improvements will need to take place against the background of an ongoing requirement to tackle issues with the existing road network, and alongside the promotion of sustainable means of travel and the minimisation of congestion and emissions in line with national and regional planning policy.
- 7.3** This section contains the following:
- a summary of the transport context in which transportation investment operates
 - the key characteristics of transportation in Broxbourne, which will influence the way in which new infrastructure needs are defined
 - a summary of the Transportation Strategy (2017) as well as the Local Cycling and Walking Infrastructure Plan (2017), which collectively provide a borough focused framework for transportation investment
 - an overview of the relevant policies, strategies and programmes which can support the delivery of transportation infrastructure
 - criteria on which future transportation investments will be based
 - a summary of transportation investment schemes and costs (with full details to be provided within the IDS) which are required to be delivered over the Local Plan period to support the growth contained within it
 - a consideration of the potential funding of the new infrastructure needed.
- 7.4** A full schedule of the transportation investments required, their likely costs, the timing of (and responsibility for) delivery and an identification of potential funding sources to deliver such schemes is set out in the Infrastructure Delivery Schedule (IDS) contained within this IDP.

The overall transport context

- 7.5** A number of important considerations underpin transport in Broxbourne which have a bearing on future infrastructure need. These are set out in Table 7.1 overleaf:

Table 7.1: The overall transportation context for Broxbourne

Main contextual area	Comment
The delivery of housing and economic growth within the Plan period	The starting point of any infrastructure investment will to be to meet the transportation demands arising out of such growth
Due consideration to be given to the underlying transportation issues associated with the movement of people and goods within and beyond the borough	Growth related transportation cannot be considered in isolation. Existing connectivity and capacity issues should also be addressed to ensure we are not simply overlaying growth-related investment on top of existing issues
A recognition that the borough's transportation network does not operate in a vacuum, but that there are also wider strategic considerations	These include the role played by the A10 (including its junction with the M25) and the rail links which serve a much wider catchment than Broxbourne and which provide important linkages with a range of destinations including Central London, Cambridge and Stansted Airport
Future technical, societal and policy changes which will impact on the infrastructure requirements in the future	Infrastructure requirements will change in future as a result in both technical advances (such as the anticipation of vehicle automation) and attempts by policy makers to influence and direct infrastructure demand and supply.

Source: Original research for IDP

Key characteristics of Broxbourne's transportation network

- 7.6** These are considered in detail in both the Transport Strategy and the Local Cycling and Walking Infrastructure Plan (LCWIP) and it is not the intention to restate these in full here. The key characteristics are summarised in Table 7.2 below:

Table 7.2: Key characteristics of Broxbourne's transportation network

Key Characteristic	Commentary
A strong reliance on the car for many journeys by the borough's residents, which is set to increase over time	Current capacity issues on the borough's highway network will be exacerbated by an anticipated 25% increase in vehicle movements at peak times by the end of the Local Plan period
The borough's transportation network is heavily influenced by its location immediately north of London and the M25	The transportation network is therefore not only required to deal with local demand but also movement through, to and from the borough
Capacity issues associated with the A10, which suffers from significant congestion (as does the alternative north-south route, the B176/A1170)	Although not part of the Strategic Road Network, the A10 plays a significant strategic role as well as being the dominant road for movement within the borough. It suffers in particular in the southern part of the borough associated with at-grade junctions with east-west links

Table 7.2: Key characteristics of Broxbourne's transportation network (continued)

Key Characteristic	Commentary
Difficulties associated with east-west connectivity within the borough	Although the M25 provides an important east-west route along the borough's southern boundary, east-west movement within the rest of the borough is limited by the difficulty crossing the A10, particularly where there are at grade junctions. There are no east – west rail links and also limited bus services operating along this alignment
Well used and high capacity rail services (particularly into London) which nevertheless will need investment	The West Anglia Main Line and the Tottenham Hale Spur provide relatively fast, direct and high capacity services to the borough's 5 stations. Notwithstanding this, significant investment will be needed to increase capacity, shorten journey times and improve punctuality as future growth needs to be factored into the underlying long-term increase in patronage
Crossrail 2 and proposed 4 tracking of the West Anglian Main line and the planned improvements to M25 junction 25 will all be significant events	All 3 initiatives but particularly Crossrail 2 - which is proposed to be delivered by the end of the Plan period – will have a significant beneficial effect on the transportation network serving the borough, although there will be associated consequences which will need to be responded to
The borough's strategic sites are significant in terms of both transportation requirements and opportunities	Development allows the opportunity to capture from enhanced development values the ability to secure a range of strategic transportation investments that will be of benefit not only to the developments themselves but to the wider borough
Both bus services and the walking and cycling network are in need of significant enhancement and increased connectivity	Significant investments in these areas can offer a genuine alternative to journeys by car and can be part of a significant modal shift to reduce congestion and encourage more active travel

Source: original research for the IDP, drawing in Transportation Strategy

Policy context

- 7.7** The key policy documents are the emerging Local Plan (2018 – 33); draft Transport Strategy (2017) and the LCWIP (2017).

Broxbourne Transport Strategy

- 7.8** The Strategy proposes a wide range of transport measures it considers are necessary to deliver the Local Plan, which can be categorised as follows:

- 22 highway schemes
- 2 parking measures
- 15 public transport measures
- 7 Smarter Choices investments
- 15 walking and cycling initiatives (drawn from the LCWIP)

The draft Walking and Cycling Infrastructure Plan (2017)

- 7.9** The recommendations of the walking and cycling plan identify both specific and borough wide investments and these have been taken up within the body of the overall Transport Strategy.

Other transport policy and strategy considerations

- 7.10** There are a range of other policy and strategy related initiatives relating to transportation infrastructure need and investment which although not having as great a significance as the Local Plan and the borough council's two strategy documents (The Transport Strategy and the Walking and Cycling Infrastructure Delivery Plan) nonetheless have relevance. These are as follows:

Table 7.3: Other relevant policy and strategy considerations

Policy/Strategy	Summary of main elements
LTP3 (2011 – 31)	The current Hertfordshire Local Transport Plan sets out the County Council's vision and strategy for the long term development of transport in Hertfordshire. It identifies 3 major schemes and 7 other significant projects and programmes, none within Broxbourne
LTP Daughter documents	The general strategy contained within LTP is developed through a series of supporting strategies (daughter documents). These cover themes as diverse as bus travel, speed management, road safety and inter urban routes. Of specific relevance are the countywide Rail Strategy and the two Urban Transport Plans for Broxbourne
LTP 4/The 2050 Transport Vision	<p>The update of LTP3 has seen the creation of a Transport Vision to 2050 looking at long term investment priorities well beyond the timescale of current and emerging Local Plans. This Vision considers the impact of new technology over time, the potential for significant modal shifts away from the car, and how a better relationship can be achieved between land use and transport planning</p> <p>Several strategic schemes have been identified, although none of these in the borough. However, the Vision does acknowledge the likely future improvements within Broxbourne which include Crossrail 2, the West Anglia Main Line 4 tracking and M25 Junction 25 improvements</p> <p>The draft plan comprises an overall strategy, a series of 21 policies a set of Transport proposals. The overall strategy is expected to be firmed up during 2018 with daughter documents covering a series of detailed issues becoming available during 2019.</p> <p>Of interest to Broxbourne are the following are the following:</p> <ul style="list-style-type: none"> - support for potential new stations at Turnford and Park Plaza - Hoddesdon named as a Cycle Infrastructure Improvement Town - The whole borough identified as a Sustainable Travel Town - A multi modal corridor study covering London – Harlow – Stansted – Cambridge which will include the A10 - A Growth and Transport Plan covering Broxbourne (see below)

Policy/Strategy	Summary of main elements
The Hertfordshire Strategic Economic Plan (SEP)	The 2013 published Hertfordshire Strategic Economic Plan (SEP) has a strong transportation significance mainly through providing a conduit for the identification of appropriate schemes in Hertfordshire that can be submitted to a competitive bidding process for nationally held Local Growth Deal Funds. The thrust of the SEP is to focus growth on Hertfordshire's three North - South growth and transportation corridors including the A10/M11 Corridor. This has resulted in the LEP securing a contribution of £6.5m towards a new overbridge at Essex Road. The SEP is currently in the process of being refreshed to provide an investment focus from 2021/22 onwards
Growth and Transport Plans (GTPs)	<p>In 2015, with the emergence of the SEP (and a growing recognition that Urban Transport Plans have too narrow a focus and are insufficiently oriented towards economic growth), Herts County Council confirmed its decision to pursue with local partners the development of Growth and Transport Plans, providing an area driven approach based on the SEP's 3 growth corridors and having as its focus the delivery of the twin agendas of meeting the demands for future growth and promoting economic recovery.</p> <p>A South East Hertfordshire Growth and Transport Plan (linking transportation investment, Local Plans and Infrastructure Delivery and covering South East Hertfordshire including Broxbourne) will be prepared in 2018/19. The borough's own Transport Strategy considers the relationship between growth, economic regeneration and transportation investment as set out in the Local Plan and is considered to address most of the GTP focused issues insofar as they relate to the borough.</p>
Hertfordshire Local Transport Board (Hertfordshire LTB)	<p>The Local Transport Board (LTB) established for Hertfordshire in April 2015 is one of 38 national bodies covering similar areas to Local Enterprise Partnerships. These bodies have the responsibility for establishing, managing, and prioritising a programme of large-scale transportation infrastructure projects (known as 'Local Major Schemes') and ensuring their effective delivery.</p> <p>The Hertfordshire LTB is currently working on 5 priority projects, none of them in Broxbourne.</p>
Highways England Route Strategies	Highways England's management and maintenance arrangements for the Strategic Road Network (SRN) are part of the London to Leeds (East) Route Strategy(2015). There are currently no specific proposals for the A10 although any change in the status of nearby strategic roads would impact on Broxbourne's north – south routes.

2015 I Strategy

7.11 The key principles underpinning direct interventions relating to Broxbourne Borough are the need to:

- address current constraints in the network;
- provide sufficient capacity for cater for additional demand arising from growth
- improve line punctuality and reliability

- provide sufficient capacity for forecast demand to London and other locations
- improve journey times from all stations.

7.12 Key infrastructure improvements which will in part respond to these requirements are currently:

Table 7.4: key rail infrastructure improvements planned

Measure	Consequence
Franchise investments	The current Greater Anglia (GA) franchise to 2025 will bring significant benefits to the GA network The t£1.5bn of total investment will see the entire network fleet replaced by 2020, an increased number of timetabled services and faster journey times. For Broxbourne there will be the additional benefits of extra off peak trains and significant upgrades to both Broxbourne and Cheshunt Stations
Capacity increases	Network Rail has enabled capacity to increase by lengthening platforms to allow 12-car operation at Cheshunt Broxbourne and Waltham Cross and this should take place by 2024
Crossrail 2	Current plans envisage the delivery of Crossrail 2 through to Waltham Cross, Cheshunt and Broxbourne stations (achieved by the doubling of track) in the 2030s. This will bring major improvements in the frequency and speed of services through to London (from the current 6 per hour up to 22 per hour, around half of which will be Crossrail services offering high speed access into central London and connections beyond
West Anglia Main Line 4 tracking	A parallel and supporting initiative to Crossrail 2, promoted by Transport for London (TfL) and the London Stansted Cambridge Consortium (LSCC) is for the 4 tracking of the line between Coppermill Junction in London and Broxbourne station

Source: Original research for the IDP

Modelling the consequences of growth

7.13 A summary of the key modelling and survey work undertaken on existing and future transportation conditions provides additional context to highway infrastructure planning. This modelling forms the basis of the development proposals which are reflected within this IDP as follows:

Table 7.5: Summary of relevant modelling and survey work underpinning the transport interventions

Model Survey	Comment
The Broxbourne Transport Model	A Saturn-based model developed for the borough council to test a number of alternative development scenarios. Three runs of the model have been undertaken to test a range of intervention measures, with later runs refining earlier ones
Hertfordshire COMET model	A partially countywide model to assess the impact of changes across Hertfordshire. For Broxbourne a 'do minimum' and 'do something' scenario were both tested
Hertfordshire Countywide Travel Survey	A regular response based survey last undertaken in 2015, the Travel Survey provides wide ranging evidence of modal shift and journeys both to work and to school

Investment Criteria

- 7.14** It is possible to draw out the following key investment criteria within the IDP to tackle existing transportation issues and support growth.

North-South routes (particularly the A10)

- Measures to tackle current and future growth related congestion issues on the A10, particularly in the south of the borough through improving the grade junctions

Other routes

- Investment to deal with congestion/capacity issues along other corridors, particularly the A121/B198, the old A10 (A1170) and Halfhide Lane

Connectivity and severance issues

- Improving ease of movement by all modes of transport, particularly east-west movements which suffer from partial severance by the A10

Rail lines/stations

- Tackling overcrowding issues for the borough's commuters
- Better interchange facilities and increased passenger transport services at railway stations to reduce reliance on accessing the rail system by car

Buses

- Measures to reduce delays and congestion suffered by bus services

Car Parks

- Improved control over the borough's car parks by the council in order to secure better demand management

Greater self-containment

- Proposals to reduce the necessity of the borough's residents to out commute to access jobs, health services, retail opportunities etc by increasing opportunities for such activities within the borough

Cycling and walking

- Improving and extending cycling and walking routes to encourage much greater use of the network and a substantial modal shift away from cars

Opening up investment opportunities

- Ensuring high quality investment in the infrastructure to serve the borough's strategic sites, particularly Brookfield and Park Plaza

Proposed Schemes

7.15 The Transport Strategy identifies 61 separate interventions across a range of transport modes. In Table 7.6 below the individual schemes and costs are summarised. Full details of the proposals -- are set out in the Transport Strategy and the Walking and Cycling Infrastructure Delivery Plan. In Table 7.12 the potential funding of these interventions is explored, whilst the Infrastructure Delivery Schedule provides details of phasing, responsibilities for delivery and an overall funding package proposal.

7.16 References in Table 7.6 are taken directly from the Transport Strategy.

Table 7.6: Summary of all proposed transportation interventions (from Transport Strategy)

Ref	Location	Details	Cost (£m)
Highway Schemes			
HS.01	Junction 25 of the M25	Capacity improvements	26.9
HS.02	A10 south of A121/B198	Modify junction to provide additional arm to serve Park Plaza North and West	0.5
HS.03	A10 junction with A121/B198	"Hamburger style" junction with N/S priority to improve capacity/flows	7.7
HS.04	B198 Lt Ellis Way	New 4 arm junction to Park Plaza	0.75
HS.05	A10 at College Road	At-grade improvements	1.0
HS.06	A10 at Church Lane	At-grade improvements	1.0
HS.07	Church Lane	Reconfiguration of Church Lane/High St Cheshunt roundabout	0.3
HS.08	Church Lane	Reconfiguration of Church Lane/Flamstead End Road roundabout	0.25
HS.09	Brookfield (Turnford Link Road)	Construction of a Halfhide Lane to Turnford Interchange Link Road	8.0
HS.10	Brookfield (Halfhide Lane Link Road)	New link road, and roundabout	6.0
HS.11	Brookfield Garden Village	New distributor road	5.0
HS.12	Brookfield	Reconfigured junction	0.2
HS.13	Brookfield	Improved capacity at Marriott Roundabout	0.2
HS.14	Goffs Lane	Reconfiguration of Newgatestreet Road/Cuffley Hill/Goffs Lane roundabout	0.25

Table 7.6: Summary of all proposed transportation interventions (from Transport Strategy) (Continued)

Ref	Location	Details	Cost (£m)
Highway Schemes (continued)			
HS.15	Dinant Link Road	New roundabout to serve High Leigh	3.0
HS.16	Dinant Link Road	Sun roundabout improvements	0.15
HS.17	Hertford Road	Hertford Road/Ware Road roundabout improvements	0.15
HS.18	Essex Road	Provision of new bridge	6.5
HS.19	Essex Road	Improvement with roundabout with Dinant Link Road	0.1
HS.20	Various locations	New signage	0.1
HS.21	New Secondary School	Access from south	0.58
HS.22	New Secondary School	Access from north	0.25
Total Highway Scheme Cost = £68.88m			

Parking schemes			
PK.01	Various locations	Parking charges/restrictions around stations	0.5
PK.02	Various locations	Permit schemes in areas of high demand	0.25
Total Parking Scheme Cost = £0.75m			

Passenger Transport Schemes			
PT.01	West Anglia Main Line	Increased capacity through 4 tracking	-
PT.02	New bus service	Between High Leigh and Broxbourne Station via Hoddesdon Town Centre	3.0
PT.03	New bus service	Between Waltham Cross station and Brookfield including key intermediate points	6.0
PT.04	New bus service	Between Park Plaza and Waltham Cross station via Waltham Cross Town Centre	3.0
PT.05	Rerouted bus service	Reroute service 242 to serve new development at Rosedale Park North	-
PT.06	New railway station	Turnford	20.0
PT.07	New station	Park Plaza West	10.0
PT.08	Various locations	New/upgraded bus stops	0.5
PT.09	Specific locations	Selective vehicle detection systems to provide bus priority at key locations	0.08
PT.10	Waltham Cross station	Improved bus shelters	0.025
PT.11	Broxbourne Station	Junction improvements	0.15
PT.12	Various locations	Real Time Information displays at bus stops	0.15
PT.13	Various locations	Real Time Information displays at locations generating a large number of trips (e.g. GP surgeries, railway stations)	0.03
PT.14	General	Promotion of the Intalink mobile app	0.25
PT.15	General	Integrated BUSnet ticket	0.25
Total Passenger Transport Scheme Cost = £43.435m			

Table 7.6: Summary of all proposed transportation interventions (from Transport Strategy) (Continued)

Ref	Location	Details	Cost (£m)
Smarter Choices			
SC.01	Various locations	Area Wide Travel Plans for key employment area	0.04
SC.02	Rail stations	Station Travel Plans	0.1
SC.03	Schools in Broxbourne	Travel Plans	0.1
SC.04	Various target groups	A programme of Personalised Journey Plans	0.5
SC.05	General	Communications Strategy	0.06
SC.06	General	Develop a Car Share scheme	0.25
SC.07	Various locations	Network of charging points for EVs	0.08
Total Smarter Choices Scheme Costs = £1.13m			

Walking and Cycling			
WC.01	Dinant Link Road/Essex Road roundabout	Signalised crossing for pedestrians	0.05
WC.02	Charlton Way	Footpath along W side between Haslewood Avenue and Dinant Link Road	0.025
WC.03	Dinant Link Road	At grade signalised crossing	0.05
WC.04	Lord Street	Widened/improved footway	0.10
WC.05	Cheshunt Station	Improved footpath links with Delamare Road development	0.10
WC.06	Old Pond	Reconfigurations with signalised junction and crossing points for pedestrians	3.0
WC.07	Cycle network	Improvements and new routes/connections	8.1
WC.08	Various locations	Improved signage	0.10
WC.09	Old A10 (A1170)	Measures to encourage walking and cycling	1.0
WC.10	All schools	Creation of School Safety Zones	1.0
WC.11	3 Level Crossings	Closure of at Trinity Lane, Windmill Lane and Slipe Lane crossings	0.75
WC.12	Park Lane	Pedestrian/cycle bridge to Park Plaza North	2.0
WC.13	Park Plaza North and West	Pedestrian/cycle bridge	2.0
WC.14	Various locations	Dropped kerbs with tactile paving	0.25
WC.15	Various locations	Improved cycle parking facilities	0.05
Total Walking and Cycling Scheme Costs = £18.575			

Assumptions

- 7.17** There are various assumptions and factors that need to be acknowledged within the schedule of interventions listed in Table 7.6 above, as follows:

- **Cost estimates do not include land costs:** certain highway schemes will require land to secure their delivery, but at this stage, without many detailed designs, it is impossible to be too precise about these. Such costs are likely to be very significant
- **Scheme costs: with the exception of strategic roads within Brookfield** those internal to new development (e.g. spine roads, connection to the highway network) are not included as these are part of the cost of developing the site
- **Many of the interventions listed are not based on detailed designs:** the Transport Strategy incorporated detailed designs when known (e.g.HS.01, HS.21) but many of the schemes are either indicative designs (e.g. HS.06) or scaleable estimates (WC.07)
- **Any interventions that are uncoded are shown as such for a reason, and a number of additional schemes can be expected to be identified over time and added to future iterations of the IDP**

Table 7.7: Transport interventions not coded/not featuring in the IDP

Schemes uncoded/not featured	Reason
PT.01 West Anglia Main line 4 tracking	The Broxbourne element constitutes part of a much wider regional/national scale investment, and it is difficult to isolate the investment relevant to the borough only
Crossrail 2	
Waltham Cross Town Centre transportation investments	Town Centre and surrounding areas are to be subject to an Area Action Plan (AAP) which will look in detail at the regeneration of the Waltham Cross. The AAP will explore the potential of a multi modal transportation exchange as well as improvements to the Fishpools and 'KFC' roundabouts. Interventions identified through the AAP will be added to future iterations of the IDP

Source: original research for IDP

New Stations at Turnford and Park Plaza

- 7.18** The Transportation Strategy sets aspirations for two new stations at Turnford and Park Plaza. The Strategy estimates that the cost of such stations could be £20m at Turnford and £10m at Park Plaza, with the former's higher cost attributable to the need for longer platforms. No detailed design work has been undertaken but the two schemes collectively make up nearly a quarter of the total anticipated transportation infrastructure bill and are the two largest currently unfunded elements of the proposed transport intervention.
- 7.19** A draft business case prepared by Aecom for the Council (December 2017) estimates the cost of a new station at £15 million, although given the degree of uncertainty around such significant infrastructure projects suggests that an estimate of £20 million for Turnford should allow for cost over-runs. An exploration of similar station developments undertaken in recent years has provided some basis for these estimates, as illustrated in Table 7.8 overleaf:

Table 7.8: Railway stations opened 2015 to 2017 – facilities and construction costs

Location (Date opened)	Facilities	Cost
Cranbrook, Devon (12/2015)	1 single platform (6 car trains)	£5m
Ilkeston, Derbyshire (4/2017)	2 platforms, ticket vending machines, 150 space car park, taxi rank.	£10m
Kirkstall Forge Leeds and Apperley Bridge Bradord (2 stations) (6/2016 and 12/2015)	2 platforms, with a footbridge and lifts, bus stop, 127 parking spaces, secure cycle storage, ticket machines, digital information, PA system, shelter	£15.9m for 2 stations
Ebbw Vale Town (5/2015)	Station buildings, single platform for 6 carriages, shelter and cycle facilities (cost also covers 1 mile railway line extension)	£11.5m
Pye Corner, South Wales (12/2014)	Single platform, ticket machine, CCTV, information board, 70 car parking spaces	£3.5m
Lea Bridge (5/2016)	Station opened after closing in 1985. 2 platforms, new footbridge and lifts, station canopy, ticket machines, Oyster readers, waiting shelters, help points, cycle storage.	£6.5
Coventry Arena (Coventry) and Bermuda Park (Nuneaton) (1/2016)	2 platforms, step free egress, 80 parking spaces at Coventry Arena, 30 at Bermuda Park	£13.6m for 2 stations
Newcourt Exeter (6/2015)	Single platform, passenger shelter, ticket machine, customer information	£4m

Source: original research for IDP

The funding of transportation interventions

7.20 The following section explores the potential to fund the cost of interventions identified in the Transportation Strategy. It is a hypothetical approach depending on a range of variables, bidding and strategies and available sources of funding that are explored in further detail in section 17. It does however demonstrate that there is a strong possibility of all transportation interventions being successfully funded, and what is shown here is just one of a potential wide number of methods to secure such funding.

Total Cost

7.21 This comprises the following:

Table 7.9: Total cost of transportation interventions

Category	Estimated Cost (£m)
Highways	68.88
Parking	0.75
Public Transport	43.435
Smarter Choices	1.13
Walking and Cycling	18.575
Total	132.770

Source: Draft Broxbourne Transportation Strategy

Anticipated funding

7.22 Funding can be anticipated in the following interventions:

Table 7.10: Summary of agreed/anticipated funding of transportation interventions

Funding category	Intervention	Funding anticipated (£m)
Highways England committed scheme	HS.01 M25 junction 25	26.9
High Leigh development s106 contribution	HS.15, HS.16, HS.17, HS.19 - 4 schemes at Dinant Link Road/Hertford Road	3.4
LEP Growth Deal	Essex Road bridge	6.5
Construction costs associated with new secondary school	HS.21, HS.22 - 2 new accesses to north and south of school site	0.83
Park Plaza bus subsidy	PT.04 New bus service between Park Plaza and Waltham Cross Town Centre	3.0
High Leigh bus subsidy	PT.02 Contribution to cost of service between development and Broxbourne Station	0.6
Network Rail agreed funding	WC.11 and WC.12 closures of 3 level crossings and new pedestrian/cycle bridge at Park Lane	2.75
Total		43.98

Source: original research for IDP

7.23 From Table 7.10 it is possible to categorise funded infrastructure as follows:

Table 7.11: Funded transportation infrastructure categorised

Category	Estimated Cost (£m)
Highways	37.63
Parking	0.0
Public Transport	3.6
Smarter Choices	0
Walking and Cycling	2.75
Total	43.98

Source: original research for IDP

7.24 The funded contributions to transport interventions represents just over a third (34%) of the total cost of infrastructure required.

Other Funding Opportunities

7.25 Section 17 considers the potential relevant funding sources that can secure the delivery of the necessary infrastructure to support growth. In this section only the headlines of those funding streams are considered. These are:

- Self funded (as identified in Table 7.11 above)
- Voluntary contributions and capital programmes (e.g. HCC's Capital Block allocation)
- Developer contributions – s106
- Developer contributions – CIL (if introduced)
- Developer contributions – Strategic CIL (if taken forward)
- Developer contributions – a Local Infrastructure Tax (if this is introduced in the place of CIL)
- Local Growth Deal (managed by Herts LEP)
- Housing Infrastructure Fund (a capital grant fund)
- Urban Congestion Fund (a funding programme within the government's Productivity Plan)
- Road Investment Strategy (a government fund relating to investment in the Strategic Road Network)
- New Stations Fund
- Innovation in Cycling and Walking Fund
- Home Building Fund (loans to developers)
- Local Government Bond (established by the UK Bonds Agency)
- A 'Warrington style' Bond (Bond established independently by a local authority)
- Public Works Loan Board (PWLB) fund
- Business Rates Supplements
- Land Value Capture
- The Local Government Pension Scheme
- Other tax changes including Land Value Tax

Funding Strategy

7.26 The table overleaf provides a potential means of funding each item of transportation infrastructure through extracting all 49 schemes that do not currently have funding (shown in Table 7.6) and giving consideration as to how they could be funded. Schemes are grouped together around relevant themes.

Table 7.12: Potential funding for unfunded transportation infrastructure

Ref	Location/details	Cost (£m)	Funding sources
Highway Schemes			
HS.02 and HS.04	Park Plaza associated highway works	1.25	s106 (Park Plaza)
HS.03	A10 junction with A121/B198	7.7	Range of alternative funds – Growth Deal, s106 “Congestion busting” government programme)
HS.05, HS.06	A10 at College Road/Church Lane	2.0	S106 “Congestion busting” government programme, AQMA funding
HS.07, HS.08	Church Lane schemes	0.55	CIL
HS.09 - HS.13	Brookfield (5 schemes)	19.04	Predominantly s106 (Brookfield Riverside) supplemented by Growth Deal, Home Building Fund, Bonds/Loans etc
HS.14	Goffs Lane reconfiguration	0.25	s106
HS.20	Various locations – new signage	0.1	s106/CIL
Parking schemes			
PK.01 and PK.02	Various parking initiatives	0.75	Self-funding
Passenger Transport Schemes			
PT.02 - PT.04	New bus services	9.0	A combination of s106, operator contributions and (potentially) loans/bonds
PT.06 and PT.07	New railway stations at Turnford and Park Plaza East	30.0	A combination of New Stations Fund, s106, Growth Deal Funding and (potentially) bonds/loans
PT.08	Various locations – new/upgraded bus stops	0.5	s106/CIL
PT.09	Specific locations – vehicle detection systems	0.08	s106/CIL
PT.10	Waltham Cross railway station – improved bus shelters	0.025	s106/CIL, AQMA funding
PT.11	Broxbourne Station – junction improvements	0.15	s106/CIL
PT.12 and PT.13	Various locations – Real Time information displays	0.18	s106/CIL
PT.14	Promotion of the Intalink mobile app	0.25	s106/CIL
PT.15	Integrated BUSnet ticket	0.25	s106/CIL

Table 7.12: Potential funding for unfunded transportation infrastructure (continued)

Smarter Choices			
SC.01	Area Wide Travel Plans for key employment area	0.04	s106/CIL
SC.02 and ST.03	Travel Plans	0.2	s106/CIL
SC.04	A programme of Personalised Journey Plans	0.5	s106/CIL
SC.05	A Communications Strategy for all Transport Strategy measures	0.06	s106/CIL
SC.06	Develop a Car Share scheme	0.25	s106/CIL
SC.07	A network of charging points for electric vehicles	0.08	s106/CIL

Walking and Cycling			
WC.01 – WC.04	Various schemes to benefit pedestrians	0.225	CIL, Government programmes for walking and cycling initiatives
WC.05	Cheshunt Station improved footpath links with Delamare Road development	0.1	S106
WC.06	Old Pond reconfigurations	3.0	S106
WC.07 and WC.08	Cycle network improvements and signage improvements	8.2	HCC -LTP4 Growth and Transport Plans, and Sustainable Travel Town fund, CIL, government programmes for walking and cycling initiatives
WC.09	Various locations on old A10 (A1170) – measures to encourage more walking and cycling	1.0	S106, CIL, government programmes for walking and cycling initiatives
WC.10	Schools within the borough	1.0	S106, CIL, government programmes for walking and cycling initiatives
WC.13	Park Plaza North and West pedestrian and cycle bridge	2.0	S106, government programmes for walking and cycling initiatives
WC.14	Various locations – dropped kerbs with tactile paving	0.25	CIL, government programmes for walking and cycling initiatives
WC.15	Various locations – improved cycling facilities	0.05	S106, CIL, government programmes for walking and cycling initiatives

Source: Original research for IDP

Potential funding package

- 7.27** Of the transport infrastructure investment identified, the following schedule shows how a potential funding package could be put together for those schemes which do not currently have infrastructure funding. This is only one of a number of potential funding routes, and the individual contributions from the various sources of funding can be amended or even dropped altogether.

Table 7.13: a potential infrastructure funding package

Funding source	Potential contribution (£m)
Funding secured/anticipated	43.98
Self funding	0.75
S106	28.6
Growth Deal	12.0
CIL	5.738
Government programmes	15.302
Home Building Fund	2.0
Bonds/loans/land value capture	11.4
New Stations Fund	10.0
Bus Operator Contributions	3.0
	132.770

Source: Original research for IDP

- 7.28** The ability of developer contributions (s106 and CIL) to meet these expectations will be explored in Section 17.

SECTION 8: HEALTHCARE

Summary

8.1 This section explores the following:

- the structure of healthcare provision
- healthcare provision – primary and secondary healthcare
- healthcare in Broxbourne
- healthcare needs arising out of future growth as identified in the Local Plan
- other healthcare considerations, including models for future delivery

Healthcare Providers

NHS England

8.2 NHS England has responsibility for the overall health budget and the planning, delivery and day to day operation of health in England. It is directly responsible for commissioning a range of primary care services from self-employed providers such as GPs, dentists, optometrists and pharmacists.

8.3 NHS England is divided into regional teams. Broxbourne falls within the NHS England – Midlands & East (Central Midlands) team.

Clinical Commissioning Groups (CCGs)

8.4 Other healthcare services are commissioned by the 211 Clinical Commissioning Groups (CCGs). Broxbourne is covered by the East and North Hertfordshire Clinical Commissioning Group (ENHCCG).

8.5 ENHCCG commissions a wide range of hospital and community based healthcare from healthcare providers such as Foundation Trusts and Community Health providers (but also, increasingly, private healthcare providers). They commission district nurses, mental health and learning disability services, and urgent, emergency and elective care, much of which is provided in hospitals, although not exclusively so, as CCGs are increasingly moving the delivery of these services out of hospitals and into the community.

8.6 CCGs are led by local clinicians (doctors and nurses) supported by administrators. ENHCCG is currently working on a co-commissioning basis with NHS England. Although ENHCCG is the responsible organisation for commissioning services in the Broxbourne area, an important exception to the commissioning remit of the CCG is that of primary care contracts which currently remains with NHS England.

Hertfordshire County Council

8.7 Public health functions are the responsibility of local authorities (in Hertfordshire's case, the County Council). The county council has a duty to take steps to improve the

health of people in its area, including the provision of information, services or facilities to promote healthy living.

- 8.8** The County Council also has the task of coordinating the local NHS, social care, children's services and public health functions through a new Health and Wellbeing Board (HWB). The Board's aims include the development, interpretation and use of Joint Strategic Needs Assessments (JSNAs) to shape health commissioning and spending plans, as well as the preparation of a health and wellbeing strategy.

Health Assets

- 8.9** Most public assets are in the ownership of either the NHS Property Services, or by health providers such as Community Health Partnerships or the Foundation Trusts.
- 8.10** The majority of GPs in Hertfordshire do not operate out of NHS owned facilities, with GPs owning or leasing their premises and receiving rent and rate reimbursement from NHS England. All acquisitions, disposals and requests for funding are submitted to the Midlands and East (Central Midlands) team by GPs and are considered in conjunction with the relevant GP, NHS England's Five Year Forward View and CCG health and estates strategies.
- 8.11** The majority of GPs in Hertfordshire do not operate out of NHS owned facilities, with GPs owning or leasing their premises and receiving rent and rate reimbursement from NHS England. All acquisitions, disposals and requests for funding are submitted to the Midlands and East (Central Midlands) team by GPs and are considered in conjunction with the relevant GP, NHS England's Five Year Forward View and CCG health and estates strategies.

Primary and Secondary Healthcare

Primary Healthcare

- 8.12** Primary care includes doctors, nurses, dentists, pharmacists, and opticians.
- 8.13** GPs are 'independent contractors'. While they have a contract for service with the NHS, they are not directly employed by them.
- 8.14** Dentists are contracted to the NHS to provide an agreed level of units of dental activity, for which they receive an income. All running costs are charged against this income. A number of dentists also operate privately and do not provide an NHS service.
- 8.15** Pharmacists work under a contractual arrangement with NHS England and receive reimbursement for pharmaceutical services provided. The NHS does not financially support the initial provision or on-going costs of pharmaceutical premises. This is a private sector function.

- 8.16** Opticians (NHS General Ophthalmic Service contractors) provide sight tests and vouchers towards the costs of glasses or lenses or repairs or replacements . They also provide referrals onto specialist services i.e. secondary care.

Secondary Healthcare

- 8.17** Secondary healthcare is treatment provided by specialists to whom a patient has been referred by primary care providers. It covers general **acute care** (typically provided in a hospital), **community healthcare** (short-term support to prevent an admission to hospital) and **mental healthcare** (provided in a range of settings).
- 8.18** Secondary healthcare is provided by NHS trusts, including foundation trusts children's trusts and mental health trusts.
- 8.19** Hospitals and other secondary care have much wider catchment and planning area than primary healthcare.

Healthcare in Broxbourne²⁰

- 8.20** ENHCCG serves approximately 580,000 people registered at 60 GP Practices (operating out of 82 premises) across east and north Hertfordshire. ENHCCG is made up of six locality groups; Lower Lee Valley, North Herts, Stevenage, Stort Valley and Villages, Upper Lee Valley and Welwyn Hatfield.
- 8.21** Each area has an allocated health budget. GPs are elected by the local practices to lead and represent the local area. These elected GPs come together at the CCG Governing Body meetings to make decisions about health services for the whole of east and north Hertfordshire.
- 8.22** Broxbourne sits within two localities; Lower Lee Valley and Upper Lee Valley. The Lower Lee Valley is made up of 8 practices, covering the areas of Waltham Cross, Cheshunt and Broxbourne. They provide care for a population of around 75,000 people with a current budget for of £81.3m. The Upper Lee Valley Locality is made up of 16 practices, covering the area of Hertford, Hoddesdon, Ware and Buntingford. They provide care for a population of over 122,000 with a budget for 2014/15 of £117.5m.
- 8.23** Most of the budget for the Lower Lee Valley and Upper Lee Valley localities is spent on acute hospital care which includes emergency treatment, planned operations, tests and investigations.
- 8.24** There are 12 GP practices in Broxbourne Borough. These practices operate out of 15 premises. Of these 15 premises:

²⁰ The following paragraphs detailing primary and secondary healthcare in Broxbourne are drawn from an e-mail from ENHCC dated 13.4.17

- 8 are at general capacity (fewer than 20 patients per m²)
- 4 are 'constrained' (between 20 - 25 patients per m²)
- 3 are 'very constrained' (25+ patients per m²)

- 8.25** There are 14 dental practices, 24 pharmacies and 14 opticians.
- 8.26** ENHCCG commissions secondary healthcare from a number of bodies.
- 8.27** East North Herts Hospital NHS Trust (ENHHT) is responsible for managing the Lister Hospital in Stevenage. This is the main hospital in east and north Hertfordshire, providing the core location for emergency care, and all patients who need the specialist emergency facilities. It also provides elective care for higher risk patients together with a full range of outpatient and diagnostic services.
- 8.28** ENHHT is also responsible for managing Hertford County Hospital, the new QEII hospital in Welwyn Garden City, and the Mount Vernon Cancer Centre. Patients in east and north Herts also access services from the Princess Alexandra Hospital in Harlow and
- 8.29** Residents in the borough also access facilities at Chase Farm Hospital in Enfield. A major redevelopment of the current hospital (expected to be completed in late 2018) will provide an urgent care centres for both adults and children, outpatient services, day surgery and a range of other facilities.
- 8.30** Mental healthcare in Hertfordshire is provided by the Hertfordshire Partnership NHS Foundation Trust, which provides the majority of health and social care for people with mental ill health and learning disabilities.
- 8.31** The Hertfordshire Community NHS Trust provides community health services across Hertfordshire. These services are targeted at adults and children and young people and range from community nursing to health education.
- 8.32** Cheshunt Community Hospital in Waltham Cross provides a range of services including cardiology, dermatology, ear nose and throat, gynaecology and haematology. It also runs a 'drop in' Minor Injuries Unit.

Calculating healthcare need

- 8.33** There is a well-established formula for calculating need for growth related primary healthcare General Medical Services (GMS) and this is set out in Table 8.1 overleaf:

Table 8.1: Formula for calculating growth related primary care needs and costs

Step	Calculation
Number of new patients in new development	$w \times 2.4 = x$ Multiply the numbers of dwellings in any given development (w) by 2.4 (average dwelling occupancy rate) to give x new patients
Number of additional GPs needed	$x/2000 = y$ Divide the number of patients by 2000 to give the numbers of GPs needed (y) (based on the ratio of 2,000 patients per 1 GP (as set out in the NHS England "Premises Principles of Best Practice, Part 1 Procurement & Development")
Calculate the amount of additional floorspace required	$y \times 199 = z \text{ m}^2$ of additional GMS space Multiply the number of GPs needed by 199 to convert to new GMS space [199 m ² being the amount of floorspace required by each GP again as set out in the NHS England "Premises Principles of Best Practice, Part 1 Procurement & Development"]
Calculate the total build cost per dwelling	$z \times \text{£}2,600^* = \text{£}$ Multiply the floorspace by £2,600 which represents the build cost per m ² (including fit out and fees) to give a total cost (£)
Identify GMS capital contribution for each new dwelling	$\text{£}/\text{number of dwellings in that development} = \text{£}620.88$ (rounded to £621 per dwelling) Dividing the total build cost by the number of dwellings provides a standard contribution required from each new dwelling towards the cost of providing GMS services for that development

Source: NHS England (East and South Midlands Team) formula calculation used in s106 negotiations

- 8.34** It should be noted that the infrastructure capital contribution is towards the provision of new premises, not the GPs or their support staff which are on-going revenue costs met by the NHS. The NHS does not separately seek the cost of the land required to build such facilities.
- 8.35** No costs are identified for opticians, dentists and pharmacists. These are independent contractors who meet their own costs and although some opticians and pharmacists are reimbursed by the NHS for the provision of services, the NHS does not make capital contributions towards the cost of their premises so there is no "infrastructure bill" as such.
- 8.36** For secondary infrastructure costs, work was undertaken in 2014 by Dr Alan Pond, Director of Finance at ENHCCG to calculate such costs. These are considered appropriate for secondary healthcare cost IDP calculations. The calculations were based on an examination of anticipated population growth, cross referencing this with standard admission rates (to areas like elective and non-elective surgery, maternity etc) and then drawing from that the additional health floorspace (wards, consulting

rooms etc) and capital items (MRI and X Ray equipment) to define an overall capital cost per dwelling.

- 8.37** Through this process it is possible to derive a total capital cost per dwelling for the 3 secondary healthcare areas:

Table 8.2: Capital cost per dwelling for secondary care needs

Service area	Cost per dwelling (£)
Acute services	2,600
Mental health services	202
Community Services	272

Source: Dr Alan Pond, Director of Finance, ENHCCG (2014)

Future healthcare requirements

- 8.38** Applying the above formula to the IDPs growth figure of 6166 dwellings (2018 – 2033) gives rise to the following overall health infrastructure needs and costs:

Table 8.3 Growth related health infrastructure needs/costs²¹

Health Infrastructure requirement	Cost
Premises for an additional 7.4 full time equivalent GPs ²²	£3,829,000
Provision of additional acute secondary healthcare services	£16,031,000
Provision of additional mental healthcare services	£1,246,000
Provision of additional community services	£1,677,000
Total	£22,783,000

Source: original calculation for IDP

- 8.39** It is also possible to express those needs according to housing trajectory:

Table 8.4: Infrastructure need trajectory for the IDP over the plan period 2018 - 2033

Time period	2018 - 2023	2023 - 2028	2028 - 2033	Total
Primary Healthcare infrastructure cost	£1.378m	£1.341m	£1.110m	£3.829m
Secondary Healthcare infrastructure cost	£6.823m	£6.634m	£5.497m	£18.954m

Source: Original research for IDP

²¹ Figures in black based on housing growth total of 6,166

²² 1,472 m² of additional GP premises required

8.40 Finally for primary healthcare needs it is possible to express growth related housing infrastructure figures by site characteristic:

Table 8.5: Growth related primary health infrastructure need by site characteristic²³

Characteristic	Total No. dwellings	No GPs (FTE)	Cost
Site allocations including committed sites	5191	6.23	£3.224m
<i>(Of which Strategic Sites)</i>	<i>4429</i>	<i>5.32</i>	<i>£2.75m</i>
Other site allocations/urban capacity sites	419	0.50	£0.260m
Other (Self Build/windfall)	556	0.67	£0.345m
Total	6166	7.4	£3.829m

Source: Original research for IDP

Location of new GP facilities

8.41 The location of new GP facilities for the 7.4 FTE GPs will depend on a number of factors. These include existing levels of capacity, location of anticipated demand and site opportunity. The borough council is exploring the following with the CCG:

- a health centre within the Brookfield development with up to 3 GPs
- the potential for new GP facilities at Cheshunt Lakeside and Rosedale Park, given the scale of development taking place there
- any other new facilities in sustainable locations easily accessible by a range of transport modes, and possibly co-located with other community related activities

8.42 There are a range of factors which will influence the provision of new GP practices:

- GP practices accept patients from within an agreed practice boundary, meaning that the location of new development within a borough will impact on some practices more than others
- healthcare provision has recently moved towards the establishment of larger surgeries, co-located with other health services and covering a greater area
- larger surgeries will have a number of GPs and nurse practitioners. They are sometimes able to pool existing surplus capacity and absorb some new housing

²³ Figures for growth requirement of 6,166 in black

growth. This can be a combination of physical extension of premises, or more intensive use of existing premises.

The future funding and delivery of healthcare provision

8.43 There is considerable expectation that there will be further future changes in healthcare provision which will have considerable implications for health infrastructure planning and delivery. In October 2014 NHS Chief Executive Simon Stevens published the NHS Five Year Forward View to 2020/21 which identifies a range of radical changes considered necessary to make healthcare provision fit for purpose in the future. In addition to calls for an additional injection of public funding and major efficiency savings (which collectively should have the effect of increasing the available budget by £30bn p.a.) the Forward Review calls for:

- a radical upgrade in prevention and public health
- giving patients greater control of their own care
- more care being delivered locally health, and between health and social care, but with some services in specialist centres, organised to support people with multiple health conditions, not just single diseases
- new options to permit groups of GPs to combine with other specialists (e.g. community health services) to create integrated out-of-hospital care
- the redesign across the NHS of urgent and emergency care services to secure better integration
- smaller hospitals being granted new options to help them remain viable, including forming partnerships with other hospitals further afield,
- Clinical Commissioning Groups being given the option of more control over the wider NHS budget
- an improved focus on health technology coupled with expansions in research and innovation

8.44 Whereas the 2012 Health and Social Care Act's primary focus was on the structure of health care provision and its procurement, the Forward Review looks in detail at its operation and as such, stands to revolutionise the way in which such services operate in the district in the future.

Responding to the 5 Year Forward View – Sustainability and Transformation Plans (STPs)

8.45 To assist in meeting these challenges NHS England and others produced in December 2015 *Delivering the Forward View: NHS Planning Guidance 2016/17 - 2020/21*. This requires local NHS teams to produce a five-year Sustainability and Transformation Plan (STP), place-based and driving the Five Year Forward View; as well as a yearly Operational Plan, organisation-based but consistent with the emerging STP.

8.46 The Hertfordshire and West Essex STP was published in December 2016. In seeking future transformative change in the way that health services are provided in the future it seeks to serve the following objectives:

- to maintain people in the community, living as independently as possible
- to support people to manage their own health and well-being
- to reduce the burden of disease
- to reduce the demand on health and social care and provide services at lower cost

8.47 The conclusions from the STP is that in time there will be a much greater emphasis on delivering health services on a more local basis with a shift of emphasis in primary healthcare (through GP surgeries, specialist clinics and health centres) away from large district hospitals. In infrastructure planning terms this provides the planning system with much greater control over securing contributions towards the cost of new health infrastructure although it may in time put pressure on ensuring sufficient funds are directed towards such requirements if there are viability pressures and equally deserving investment priorities (school, transport) to consider.

8.48 In July 2017 the Department for Health announced the first round of capital funding to support the implementation of STPs. A total of £325m was allocated for 25 projects across 15 of England's 44 STPs, and although none of these are in the Herts and West Essex STPs, a further tranche of projects to receive funding will be announced in the autumn 2017 budget.

The Naylor Report (2017)

8.49 Another significant event which will help shape the healthcare provision of the future is the publication of the Review of NHS Property and Estates in April 2017. This wide- ranging review sets out an ambitious new NHS estates strategy focused on delivering improved care, the release of £2bn of assets for reinvestment, and delivery of land for 26,000 homes.

8.50 Naylor's key recommendations are as follows:

- the establishment a new and strategic NHS Property Board at arm's length from Department for Health to act as the primary voice on estates matters
- proposals to integrate the primary and secondary estate within an overarching Estates Strategy, incorporating a long-term vision for the NHS; a clearer understanding of the current estate; clarity on leadership; appropriate governance; and improved skills
- ensuring the Estates Strategy is compatible with the vision of the Five Year Forward View
- improved guidance on building standards to ensure that future capital investment in new facilities is fit for purpose
- An overall £10nb investment in the NHS Estate to render health infrastructure fit for modern purpose

8.51 Of particular significance for primary and secondary healthcare infrastructure investment is the recommendation of Naylor that:

- STPs and health infrastructure providers who develop long term investment plans, and should not be granted access to capital funding either through grants, loans or private finance until they have agreed plans to improve performance against benchmarks
- the Department for Health and the Treasury should provide assurances to STPs that any sale receipts from locally owned assets realised in line with STP plans will not be recovered centrally but retained locally for reinvestment; further, Naylor recommends that the government should provide additional funding to incentivise land disposals through a “2 for 1 offer” in which public funds match disposal receipts;
- NHS England should provide guidance on the roles of healthcare providers and STPs with regard to estate matters;
- NHS England and the NHS Property Board should ensure primary care facilities meet the vision of the Five Year Forward View, and consider linking payments to the quality of facilities and greater use of 'fit for purpose' standards, with the NHS Property Board supporting GPs to meet these standards, making use of the opportunities around private sector investment.
- substantial capital investment is needed to deliver service transformation through STPs plans, with investment needs being met by contributions from three sources; property disposals, private capital (for primary care) and government funding through the Department for Health

Responding to the Naylor Report – the Autumn 2017 Budget

8.52 The government has responded to the £10 billion package of investment recommended by the Naylor Review by providing a further £3.5 billion of new capital funding for the NHS in England, on top of the £425 million already provided at Spring 2017 Budget This will be allocated as follows:

- **£2.6 billion** will be for STPs to deliver **transformation schemes** that improve their ability to meet demand for local services, with more integrated care for patients, more care out of hospital and reduced waiting times. Alongside the Budget, the government has announced the first group of schemes to benefit from this funding, subject to the usual approvals processes
- **£700 million** will support **turnaround plans** in the individual trusts facing the biggest performance challenges, and tackle the most urgent and critical maintenance issues that trusts are facing
- **£200 million** will support **efficiency programmes** that will, for example, help reduce NHS spending on energy, and fund technology that will allow more money and staff time to be directed towards treating patients

8.53 This £3.5 billion will allow the NHS to increase the proceeds from selling surplus NHS land and buildings to at least £3.3 billion, almost doubling the scale of investment available to the NHS, and unlocking land for housing. It will also be accompanied by

private finance investment in the health estate where this provides good value for money.

- 8.54** Additionally it will be complemented by work to review and improve the rules that inform trusts' use of capital funding, to help make sure that they maintain their facilities most effectively.
- 8.55** In a separate announcement, the government confirmed its commitment to parity of esteem between mental health and physical health. In the first action in pursuit of this objective, the government published a Green Paper in 2017 setting out the government's plans to transform mental health services for children and young people.

Overall implications of future changes

- 8.56** Taking the NHS 5 Year View, Sustainability and Transformation Plans, the Naylor Report and the announcements in both the Spring and Autumn 2017 budgets, primary and secondary healthcare infrastructure investment is set to be the subject of significant changes in future years which will have profound implications on where, when and how it is provided. Future iterations of this IDP will be in a position to mark the implications for the district and the growth set out in the Local Plan.

SECTION 9: ADULT SOCIAL CARE

- 9.1 Adult care covers specialist facilities for:
- older people
 - people with learning disabilities
 - those with a physical disability or sensory impairment
 - people with mental health issues within the district

Future requirements for adult care facilities in the Borough of Broxbourne

- 9.2 Table 9.1 below provides details of those services and considers whether there are expected to be additional future needs within the borough:

Table 9.1: Adult social care and future needs within the Borough of Broxbourne

Nature of need	Description	Additional future needs? (Y/N)
1. Older People		
Residential care	To meet the needs of those people who require care but whose needs cannot be met in the home	Yes
Nursing Care	Nursing care in addition to residential care (e.g. to meet the needs of those with dementia)	Yes
Flexicare	Extra care housing on the sheltered housing model but with 24 hour care available	Yes
2. Learning Disability		
Accommodation for independence	Conversion of residential care placements to provide supported living	Yes
Supported Living	Community living for people with complex requirements, often through bespoke solutions	No
Transition services	Accommodation for young people with care requirements moving into adulthood	No
Short breaks	A specialist short break unit for individuals with autism/challenging behaviour	No
3. Physical disability/sensory impairment		
Specialist residential accommodation	A move away from 'traditional' residential services towards alternative housing options with various tenures to promote independence	No
General housing	Adaptation of existing housing to secure a stock of 1/2 bed specialist wheelchair accommodation	No
Specialist provision	Accommodation to meet very specialist needs, including for those with specific neurological conditions	No

Table 9.1: Adult social care and future needs within the Borough of Broxbourne (continued)

4. Mental Health		
Dementia	Specialist services for those with dementia	Yes
Residential Care	To support the move away from traditional residential care/group home settings for people with mental health conditions in favour of alternative housing and support options	No
Recovery Services	Encouraging the housing market to provide properties more suited to those with a mental health condition in order to assist rehabilitation and promote independent living	No
Move-on accommodation	Accommodation for those with a well managed mental health diagnosis to more independent living arrangements	Yes

Source: HCC response on consultation draft Local Plan, summarised

9.3 From Table 9.1 it is possible to identify those adult care services where future needs can be identified, as shown in Table 9.2 below:

Table 9.2: Adult social care services in Broxbourne where specific needs can be identified:

Nature of need	Identified Need
Older People's Residential care	An additional 112 residential care rooms by 2025
Nursing Care	An additional 340 beds by 2025
Flexicare	An increase of 220 flats by 2020
Accommodation for independence for people with learning disabilities	50% of current residential care placements to be converted to meet these requirements by 2019/20
Dementia	80 beds (date to achieve this not specified)
Mental Health Move-on accommodation	Accommodation for 100 people identified (30 who require supported living, 50 who need general needs/independent housing, 20 who require sheltered accommodation)

Source: HCC response on consultation draft Local Plan, summarised

9.4 There are a number of points to consider in the identification of adult social care infrastructure:

- the fact that no infrastructure needs can be identified in 8 of the 14 categories identified in Table 9.1 should not be taken to mean that there are no future requirements; rather, there are needs, but precise requirements have yet to be identified - for instance, in terms of transition services for people with a learning disability, it is known that 130 young people moved into adult social care in 2016/17, and whilst it is recognised that such people need suitable accommodation to make this transition, no specific requirements have yet been identified
- in a number of instances, it is anticipated that the market will provide a significant proportion if not all of these requirements (for instance in residential care, nursing care and mental health recovery services) which means there will be no call for public funds to secure delivery

- these requirements largely relate to existing challenges within adult social care services, and as made clear elsewhere it is not reasonable for future growth to meet the cost of remedying past underinvestment; though new development will add to pressures to the provision of adult social care services, the extent to which it contributes to the cost of the overall provision needs to be proportionate
- although these requirements have been identified by the County Council, some provision will be met by other providers, and the costs of provision of some public facilities will be met by the NHS through the East and North Herts CCG's Mental Health and Community Care investment requirements, which are identified in section 8
- none of the requirements identified in Table 9.2 are extrapolated until the end of the Plan period
- the provision of adult social care services are in a state of some flux, with increasing emphasis in seeking to meet needs in the home; this in the longer term is likely to mean less reliance on standalone specialist facilities which require much higher levels of investment than the adaption of residential accommodation
- finally, however it need to be recognised that overall adult social care needs are arising, with for instance dementia diagnoses projected to increase by 2020 and 34% by 2025

The funding and delivery of adult social care needs

- 9.5** Notwithstanding the clear need for future investment in adult social care identified in Tables 9.1 and 9.2 above, no specific investment and associated costs have been identified by the County Council or any other agency engaged in the provision of such facilities to the extent that such requirements could be included within the Infrastructure Delivery Schedule. Although masterplanning work for the borough's major housing sites all contain the provision of elderly person's accommodation, these are expected to be market led, and not add to the infrastructure costs of delivering such schemes.
- 9.6** This situation is far from satisfactory, but the IDP can only include infrastructure schemes and costs identified in detail by the providers. To remedy this situation, future iterations of the IDP will need to incorporate fully worked up proposals that can be linked to Local Plan growth and have a public infrastructure cost attached to them. The Borough Council will work with HCC and other providers to ensure the development of a detailed infrastructure package. This needs to include scheme details and phasing, delivery responsibilities, and means of funding, including developer contributions and other public purse contributions as deemed appropriate.

SECTION 10: SOCIAL INFRASTRUCTURE - BUILT FACILITIES

Introduction

- 10.1** Social infrastructure is vital for the creation of sustainable and cohesive communities and includes both outdoor and indoor (built) facilities. Built facilities – covered in this section – include indoor sports facilities, community halls and libraries.
- 10.2** This section assesses current provision, anticipated growth-related needs and the means of funding them.

Background evidence

- 10.3** Evidence relating to built sports facilities is provided by the Broxbourne Leisure Facilities Strategy Built Sports document (December 2013). The Strategy runs to 2031 so it has been necessary to extrapolate conclusions to 2033 for IDP purposes. Information concerning libraries is set out in Inspiring Libraries (2014) published by HCC and covering the period 2014 – 24 with further advice by HCC officers. Masterplanning work for the borough’s strategic development locations (see section 5) is also highly relevant and has also been drawn on.

Existing built social infrastructure in Broxbourne

- 10.4** This is currently as follows:

Sports Halls

- 10.5** There are 5 main sports halls in Broxbourne (classified as 4 or more courts of badminton court size) as follows:

Table 10.1: Broxbourne Borough’s major sports halls

Centre	No. of Courts	Ownership (access arrangements)	Year built (refurbished)
Laura Trott Leisure centre	6	Local authority/commercial (pay and play)	1984 (2014)
John Warner Sports Centre	4	School/commercial (pay and play)	2002 (Under Review)
Goffs School Sports and Arts Centre	4	School/commercial (pay and play)	1980 (2017)
Hertford Regional College	4	Further education/in house (Sports Club/Community Association)	2013
St Mary’s Church of England High School	4	School/commercial (Sports Club/Community Association)	2010

Source: Broxbourne Leisure Facilities Strategy Built Sports document (December 2013)

10.6 There are an additional 10 smaller sports halls of 2 courts or fewer offering additional - albeit limited - capacity. The Leisure Facilities Strategy calculates that when account is taken of the limitations of public access (mainly in the school sports halls) the borough has an equivalent of 22.5 courts available for community use. This is below both the national and regional average.

10.7 Sport England have a Sports Facilities calculator from which it is possible to estimate future demand, taking into account, where relevant, estimated levels of underprovision). The Leisure Facilities Strategy calculates the following in terms of sports hall need:

Current provision: 5 major sports halls, 11 further activity halls, available court capacity (when restrictions on use are factored in) = 22.5 courts, equivalent floorspace of 3450m²

Current demand: estimated as 6.5 major sports halls, 26.5 courts or 4000m² of floorspace.

Demand in 2031: (when growth factored in) 7 major sports halls, 28 courts, 4250m² of floorspace.

10.8 Extrapolating need to 2033: (the end of the plan period) the IDP estimates a requirement for 7 major sports halls, 29 courts, 4400m² of floorspace.

10.9 Requirements are somewhat complicated by the availability of sports halls in other districts in close proximity to Broxbourne, but if these are set aside, the overall net additional sports hall requirements over the plan period are an additional 2 new sports halls, expressed as 6.5 new courts and 950m² of additional floorspace. This new sports provision could however take the form of 1 new sports hall and an expansion of an existing facility.

10.10 If the existing shortfall is discounted, then the growth related demand is 0.5 major sports halls, 2.5 courts and 400m² of additional floorspace. Arguably the growth related requirement could be met through the expansion of an existing facility.

Swimming Pools

10.11 There are 8 indoor pools in the borough (of which 5 are main pools and 3 are ancillary/learner/teaching) operating on 6 sites as follows:

- 4 publicly accessible on a pay and play basis
- 2 on school sites, available to clubs and others on a booking system
- 2 for registered members only at private health clubs

10.12 On a pro rata basis Broxbourne is relatively well provided for indoor swimming in regional and national terms. There is no outdoor swimming provision in the borough.

10.13 50% of pool provision is available on an open (i.e. 'pay and play') basis.

10.14 Using the Sport England Sports Facilities calculator the Leisure Facilities Strategy calculates the following in terms of indoor pool need:

Current provision: when restrictions on public use are factored in the provision is 22 lanes, the equivalent of 5.5 x 4 lane pools, water space area of 1150m²

Current demand: estimated as 19 lanes, or nearly 5 x 4 lane pools, or water space area of 1000m² (so there is an overall overprovision)

Demand in 2031: (when growth factored in) 20 lanes, or just over 5 pools and 1075m² of water space area

10.15 Extrapolating need to 2033: (the end of the plan period) the IDP estimates a requirement for 5.5 pools, 21 lanes, and 1100m² of water space area. On this basis, indoor swimming provision is just adequate even when local plan growth is factored in.

Health and Fitness

10.16 There are 9 health and fitness venues providing a total of 341 health and fitness stations, of which 2 venues (228 stations or two thirds of total provision) are for public use on a 'pay and play' basis. Methodology available from the Fitness Industry Association suggests an overall need for 388 stations, so whilst overall provision is adequate, there is a shortfall if the public availability of places are taken into account (although there is also a significant number of venues in neighbouring districts and close to the borough's main settlements.

10.17 A £2.8m improvement plan for the John Warner Centre involves the following investment:

- Extension of the Fit and Well gym/gym changing room refurbishment
- Cycling Studio conversion/mezzanine floor
- Wet side changing room refurbishment
- Reorganisation and modernisation of wet side changing facilities to a changing village, including improved facilities for school groups
- Soft Play refurbishment

10.18 With future growth in population coupled with an expected increase in participation rates there is some justification for an additional health and fitness venue. It is possible that this could be met by an additional privately funded facility where public access is secured, or as an 'add on' to an expanded or new sporting facility such as a sports hall or swimming pool.

Studios

- 10.19** There are 8 studios within Broxbourne, 8 within main sports centres (and available on a 'pay and play' basis) and a further 5 studios within schools, with some availability for wider public use. There is no established methodology to determine overall need, but the 2013 Leisure Facilities Strategy suggested significant spare capacity and no unmet need.

Squash

- 10.20** There are 3 squash venues in the borough with 8 courts available for wider community use. This is almost the average for England and there are a number of alternative venues immediately beyond borough boundaries. Notwithstanding this the Leisure Facilities Strategy suggests that there may be a shortfall of around 1-2 courts in the longer term. There is local evidence that venues are closing and any increase in population will be to a degree countered with an aging population profile. The IDP considers that there is a tentative need – little more than that – for 1 or 2 additional courts, with the potential for this to be met within existing facilities.

Indoor bowls

- 10.21** There is one indoor bowls centre (6 rinks) in the Borough at the Cheshunt Club, although local provision is slightly above the national average. Although there may be sufficient growth related demand for additional bowling capacity this is unlikely to exceed one additional rink within an existing centre.

Indoor Tennis

- 10.22** There are no indoor tennis facilities within Broxbourne, although there are 15 centres in clubs and schools within a 30 minute drive. The Leisure Facilities Strategy is of the view that there is some justification for the provision of a 3 court indoor tennis facility being sited in the Borough, in future, although the IDP considers that there is only limited justification for basing this on future population growth.

Other facilities

- 10.23** The Leisure Facilities Strategy notes the difficult circumstances that several leisure activities operate in at present (gymnastics, indoor netball, table tennis) which range from inadequate space, difficulty in hiring venues, issues with sharing facilities etc). Additionally, there are other sports which would benefit from a strategy that ensures that there are adequate arrangements for meeting the needs of a range activities are within new and refurbished sports facilities. These include indoor cricket, basketball and volleyball.
- 10.24** The strategy draws the conclusion that in an ideal world, the specialist facilities that are provided (which are currently met by private clubs in a less than ideal environment) would benefit from new facilities (or at least in some cases, the ability to leave equipment out permanently). However, it recognises the practicalities

associated with making this happen, and that the main focus needs to be made on better provision of these facilities in a new or expanded general sports hall.

- 10.25** There are also issues relating to the distribution of facilities within the Borough. Waltham Cross (with its high level of deprivation and health related issues) lacks modern, accessible sports facilities that can offer a range of physical activity interventions and sports provision.

Regional scale built sports provision

- 10.26** There are two sports where regional scale provision is of significance, and these are ice rinks and cycling velodromes. The borough has both of these within relatively easy reach, with the Lee Valley Ice Centre and the Velopark within Queen Elizabeth Park (the former Olympic complex). There are no plans for any additional facilities to be provided within the borough.

Community Halls

- 10.27** There are 22 community halls/centres which the Borough Council either owns, leases to third parties or otherwise has an active interest in, as follows:

Table 10.2: Community Centres/Halls in which Broxbourne Borough Council has an interest:

Category	No.	Comments
Council owned and operated	9	(includes 3 facilities in the Bishop's College complex)
Council owned ²⁴ , leased to third parties	11	Lease to a variety of sporting, community, charitable or other uses
Council owned land, separately owned building, not operated by Borough Council	1	The Goodman Centre
Not owned by the Council, but community access agreement in place	1	Holdbrook Community Centre
Total	22	

Source: Broxbourne Borough Council Leisure and Cultural Services

- 10.28** In addition to the above there are a range of venues operated by a variety of other interests, including schools and faith based organisations. Generally speaking these facilities are well distributed around the borough, with only a small area of the northern part of West Cheshunt and the western part of Hoddesdon not falling within a 15 minute walking distance of at least one council run community hall/centre (however if only council run facilities are considered, there are a dearth of such facilities in both Turnford and Broxbourne).
- 10.29** In terms of both existing and future needs, this issue was last examined in some detail by the Borough Council in 2013 at an Informal Cabinet meeting (private and confidential so paper not published). That report concluded:
- there are considerable costs falling on the council in managing the 9 community halls that it directly operates, and a large future maintenance bill falling on the local authority to maintain the quality of these facilities

²⁴ One site not freehold but on 999 year lease

- with one exception utilisation rates for the council run facilities are low, although it was to be hoped at the time of the report that targeted marketing of the venues would go some way to addressing this
- the case for providing additional facilities on two potential sites was examined but not supported
- asset transfer of some council run facilities to others may be a possibility in terms of reducing pressures on the authority's budgets, although the potential to do this will be limited

10.30 Against the background of relatively low utilisation rates, ongoing issues in maintaining existing facilities and the probable limited justification if providing new public venues, there is not felt to be the justification to provide new community halls/centres as a result of the growth identified in the Local Plan. An additional factor to support this is the anticipation of a new secondary school and new primary schools (as identified in section 6) will offer the opportunity for additional venues for public use at evenings/weekends. The position will continue to be monitored, however, and future iterations of the IDP can address any perceived needs that arise.

Cultural Facilities

10.31 Of note is The Spotlight in Hoddesdon, the premier multi-purpose venue in the borough, which functions as a theatre, cinema, conference venue, meeting space, wedding venue and has comprehensive café and catering facilities. Built in 1974, it requires ongoing investment to ensure it remains fit for purpose for the communities needs going forward. The main auditorium is a flexible space that can be set up in various configurations ranging from all seated at 566 to all standing at 1,360.

10.32 An investment plan for the venue was drawn up in 2017. Costed at £1.2m, its aim is to improve utilisation rates, reduce the public subsidy and offer a more contemporary facility with access to the latest technology.

Summary of built sports need

10.33 The following need is based on local plan growth to 2033:

Table 10.2: Summary of additional built facilities sports needs to 2033

Activity	Gross requirements (includes dealing with any current shortfall)	Net requirements (deals with growth related needs only)
Sports Halls	6.5 new courts	2.5 new courts
Swimming Pools	No additional need	No additional need
Health and Fitness	Not precise, but 1 possible new 50 – 70 station facility	Some justification for 1 new 50 – 70 station facility
Studios	No additional need	No additional need
Squash	1 – 2 additional courts	Additional need difficult to justify
Indoor Bowls	1 additional rink	Additional need difficult to justify
Indoor Tennis	1 new 3 court tennis facility	Additional need difficult to justify
Community Halls	No additional need	No additional need
Specialist Facilities	Better provision within new/expanded Sports Halls	Better provision made within new and expanded Sports Halls
The Spotlight venue	Major refurbishment to modern standards	Investment in venue based on future growth difficult to justify

Source: original research for the IDP, drawing on the Leisure Facilities Strategy Built Sports Strategy (2013)

Changing approaches to identifying sports needs

10.34 Recently there has been a modified approach to identifying growth related built sports facility needs– for the following reasons:

- **there is now a greater emphasis on the relationship between personal fitness and health:** i.e. a much greater focus on the public health benefits associated with increased fitness levels
- **the popularity of a number of sports is in continuous flux:** e.g. squash continues its decline, interest in fitness studios is increasing, and it is reasonable to factor this in
- **the private provision of built facilities is an important consideration:** it is possible for communities to “buy into” this provision through costs being subsidised by local authorities
- **sports facilities are regularly provided in new school development:** the proposed new secondary school may have built sports facilities available for public use at certain times for a range of indoor activities²⁵
- **metrics are important:** although demand for a sports hall of 2.5 courts has been identified as the growth related requirements in Table 10.2, in practice it would not be appropriate to provide a facility of such a small size. To operate effectively any new sports hall should be a 6 court facility to provide a quality centre where a wide range of activities can be provided

10.35 The IDP proposes a modified table of leisure requirements:

Table 10.3: Modified additional built sports facilities needs to 2033

Activity	Modified requirements (includes some allowance for current shortfall)
Sports Halls	6 new courts in 1 Sports Hall
Swimming Pools	No additional need ²⁶
Health and Fitness	1 new 50 – 70 station fitness centre plus fitness gym facility
Studios	No additional need
Squash	No additional need
Indoor Bowls	No additional need
Indoor Tennis	No additional need
Specialist Facilities	Better provision within the new Sports Hall

Source: original research for IDP

Commercial leisure facilities

10.36 Proposals for the Brookfield Riverside site include a built leisure facility. It is uncertain exactly what leisure activity is likely to be provided but the Local Plan identified the potential for a cinema and possibly a Ten Pin Bowling. It is anticipated that these will

²⁵ It may possibly have a swimming pool which may be available for public use, but this is currently uncertain

²⁶ But as noted, one may be provided in the new secondary school and may offer some public access

be commercial ventures funded by user charges. There is insufficient detail to include such facilities in the IDP.

Library Services

10.37 Current library provision is as follows:

Table 10.4: Libraries in the Borough of Broxbourne

Library	Comments
Cheshunt	Located in a listed building away from the main shopping area and therefore considered unsuitable for modern service delivery: the Inspiring Libraries Strategy considers it a priority for relocation, possibly involving co-location with another activity
Goffs Oak	A generous sized library for the community it serves – now operates as a community library
Hoddesdon	Large, well located and adequate for the community's needs
Waltham Cross	An appropriate size for the community's needs, as well as being well located

Source: Hertfordshire County Council 'Inspiring Libraries' (2014)

10.38 The library service is operated by HCC, who has indicated that it is not looking to add any additional library service points (new libraries) within the borough arising out of growth, but instead would provide services to new residents through the development of existing libraries, for which S106 or CIL funding is required.

10.39 The form of provision is influenced by a number of factors:

- The ability to provide additional facilities within existing libraries varies across the borough; as noted in Table 10.4 above whilst Goffs Oak, Hoddesdon and Waltham Cross Libraries are considered largely appropriate and adequate for the communities they serve (and so where meeting additional growth related library needs does not necessarily pose any obvious issues), Cheshunt Library does not meet these criteria. Any provision in the Cheshunt area must be considered in relation to any longer term objective of relocation/co-location with other public services, for which there are currently no specific plans
- The IDP assumes that the requirements for the “development of existing libraries” identified by the County Council involves capital costs which include additional library space but also stock and shelving
- The HCC overall strategy document for the service (Inspiring Libraries 2014 – 24) does not identify specific costs for expanding library services within existing facilities, and for this reason it is necessary to make the necessary assumptions

10.40 For the IDP we have calculated the additional library costs associated with Local Plan growth

10.41 A conversion cost of £800/sq.m. to provide for an additional 50m² of library space in each of the borough's 4 libraries (assuming a relocated/collocated facility at Cheshunt involves an existing building) plus another £30,000 a library for fitout costs

(including stock, shelving etc) which would mean a total capital cost of £280,000. This equates to £70,000 per library.

10.42 Provision could be delivered as follows:

- Goffs Oak, Hoddesdon and Waltham Cross in 2023 – 28
- Cheshunt (in relocated/co-located facility) 2028 - 33

10.43 The growth related contribution to £46 per dwelling. In the case of the strategic housing sites, the capital cost has been identified in Section 5 against the individual sites. The remaining provision will be secured through s106 agreements on other sites, or it can be a potential priority for inclusion on the CIL Regulation 123 list if a CIL is introduced.

10.44 Libraries services are provided by Hertfordshire County Council who have indicated that they are not looking to add any additional library service points within the Borough arising out of growth, but instead would provide services to new residents through the development of existing libraries, for which CIL or s106 would be required

Youth Provision

10.45 Hertfordshire County Council Youth Connexions (YCH) provides youth work, information, advice, guidance, work related learning, outdoor education and support for young people aged 13-19 (up to 25 for young people with learning disabilities). It also provides support for young people leaving care up to the age of 21, through the YCH One Stop Shops, of which there is one in Cheshunt. Alongside the voluntary and commercial sectors, it delivers services to young people.

10.46 The focus of YCH is prevention and early intervention. It supports young people by providing high quality informal education opportunities to promote young people's personal and social development, enabling them to make informed decisions, have a place in their community and ultimately, to reach their potential and make a successful transition to adulthood. This will enable young people to:

- Make informed decisions based on the information which is available to them, thereby avoiding risky behaviour.
- Be confident that they can present their views, including those of others, and influence decisions.
- Develop resilience by knowing how they can help themselves and others.
- Recognise when they need support and where they can go to access it.
- Be able to recognise and develop healthy relationships thereby being less vulnerable to child sexual exploitation (CSE).
- Develop a sense of purpose and self-belief, and recognise what they contribute to society thus ensuring a sense of emotional well-being and positive mental health.

- 10.47** Youth Connexions have a venue at Waltham Cross in the south of the Borough, but no comparable facility in the Turnford/Wormley/Brookfield in the north of the borough. If sited in a relatively central location with good transport links (the obvious possibility is the Brookfield Garden Village/Riverside complex) a high quality facility could become the “Youth Hub” for the whole Borough.
- 10.48** It is recognised however that a facility (which could cost potentially around £1.5m of a 1000 sq.m, building) could not expect to have its entire cost funded from new development as its need predates planned growth. New development’s contribution to the need could perhaps equate to £150,000 which would mean that £1.35m would need to be secured through other means.
- 10.49** With no obvious means of achieving this at the present time the provision of a Youth Hub should perhaps be treated as an aspiration rather than a need, and therefore not included at this stage in the Infrastructure Delivery Schedule. Future iterations of the IDP can address this if funding circumstances were to change.

The Funding of Built Sports Facilities

- 10.50** There are a plethora of potential funding sources for new sports halls as follows:
- Capital funding by the borough council
 - Capital funding from 3rd parties – sometimes this can be achieved as part of a leisure management contract (where a third party – most probably a leisure operator) invests in new sports facilities as part of the contract to manage public leisure facilities
 - Commercial investment – particularly significant where user charges can be levied to meet initial investment costs over time
 - Local authority bonds
 - Public funding programmes such as Heritage Lottery Fund, the Sport England’s Community Asset fund (launched December 2016) Big Lottery Fund
 - S106
 - CIL (if introduced)
 - Education funding (for school sports halls in particular)
- 10.51** Unlike other areas of infrastructure it is difficult to make advanced predictions how built sports facilities will be funded, but some sources are easier to discount than others. The following appear the most likely:
- CIL or s106 (although built leisure facilities will be in significant competition with other areas of infrastructure, and s106 contributions will need to be proportionate and necessary for the development
 - Commercial funding (probably the best route for health and fitness facilities)
 - Education funding for school sports halls (probably the best route to this kind of provision, with possibilities including Broxbourne School – where a community leisure hub is planned – and within the proposed new secondary school).

Summary – built sports facilities need

10.52 Taking into account the requirements identified in Table 10.3, costs identified in Sport England’s Facilities Cost Calculator (Q2 2017) and the most likely routes for funding identified in paragraph 10.37, the IDP suggests the following:

Facility	Cost estimate (£m)	Funding route
1 x 6 Court Sports Hall	2.56	Public or commercial funding ²⁷
1 new 50 – 70 station fitness centre plus fitness gym facility	1.36	Public or Commercial funding
Additional library service points	0.28	CIL or s106
Total cost	4.200	

Source: Costs identified from Sport England’s Sports Facility Calculator

²⁷ It is possible that this could be provided as part of the new secondary school; this could also have a 4 lane 25m pool available for community use (estimated cost £3.65m) but this is not certain at present and the cost isn’t included in the IDP

SECTION 11: SOCIAL INFRASTRUCTURE – OUTDOOR RECREATION AND OPEN SPACE

Introduction

- 11.1** Alongside indoor sports facilities outdoor recreation and open space are vital for the health and wellbeing of the Borough's residents and visitors.
- 11.2** This section assesses current levels of provision, anticipated growth-related needs and the means of funding them.

Background evidence – outdoor recreation

- 11.3** Evidence relating to outdoor recreation facilities is provided by the Broxbourne Leisure Facilities Outdoor Facilities document (December 2013), although this is currently under review. This provides an evidence based audit and assessment of current playing pitch provision and anticipated future needs associated with growth anticipated in the borough to 2031 (which the IDP extrapolates to 2033).
- 11.4** Masterplanning for the borough's strategic development locations (see section 5) has also been drawn on, as has the new open space allocations.

Scope of outdoor recreation

- 11.5** The Outdoor Facilities Strategy focuses on 4 main pitch based sporting activities, namely:
- Football
 - Cricket
 - Rugby Union
 - Hockey
- 11.6** Additionally it explores other key areas of outdoor recreation, including outdoor tennis, bowls and netball, athletics and golf. Detailed consideration is also given to Artificial Grass Pitches (AGPs) – which are used for football, rugby and hockey – and Multi Use Games Areas (MUGAs).

Current provision of sports pitches

- 11.7** The 2013 Strategy identified a total of 89 sports pitches in some form of community use and a further 18 pitches where there was no community access, shown in Table 11.1 and Table 11.2.

Sports pitches with public access

Table 11.1: Summary of Broxbourne Borough's publicly accessible sports pitches 2013

Form of use	Total number of pitches	Total Area covered (ha)
Football (Senior/Junior/Youth/Mini)	78	51.2
Cricket Pitches	7	11.2
Rugby Pitches	4	4.8
Total	89	67.2

Source: drawn from Broxbourne Leisure Facilities Outdoor Facilities document (December 2013)

Sports pitches without public access

Table 11.2: Summary of Broxbourne Borough's sports pitches without public access 2013

Form of use	Total number of pitches
Football	6
Cricket Pitches	4
Rugby Pitches	8
Total	18

Source: drawn from Broxbourne Leisure Facilities Outdoor Facilities document (December 2013)

- 11.8** Most of the publicly inaccessible sports pitches are found within the borough's secondary schools. Some schools allow public access and 22 of the 89 accessible pitches are on school sites. The council owns 36 pitches, sports clubs 22 pitches and the remaining 3 are in other forms of ownership.
- 11.9** In terms of the condition, all of the publicly accessible sports pitches were assessed and found to be in either of good or excellent quality.

Artificial Grass Pitches (AGPs)

- 11.10** There are 11 AGPs in the Borough, 5 full size and 6 smaller; 9 out of 11 are floodlit and 7 offer the higher quality 3G (rubber crumb pile) substrate. A further floodlit 3G pitch is being provided at Rosedale Park, bringing the total to 12. Facilities are as follows:

Table 11.3: Summary of Broxbourne Borough's AGPs 2013

Location	Provision	When provided
Broxbourne Sports Club	1 x fullsize	1998/refurbished 2012
Cheshunt FC	1 x fullsize	2015
Goffs School Sports and Arts Centre	1 x fullsize	1998/refurbished 2017
Laura Trott Leisure Centre	2 small	Unknown
John Warner Sports Centre	1 x fullsize, 3 small	1999/2008/fullsize refurbished 2016
Rosedale Park	1 x fullsize	Under construction
The Stewart Edwards Stadium	1 x small	Unknown
Haileybury Turnford School	1 x fullsize	2004
Total	12	

Source: drawn from Broxbourne Leisure Facilities Outdoor Facilities document (December 2013)

Pitch supply when compared to demand

11.11 Assessing supply and demand issues is no simple task for a variety of reasons, including:

- Quality of facilities may influence demand – users may go elsewhere if facilities are of poor quality
- Broxbourne is an ‘importer’ of demand for sports pitches, with more residents of adjoining area accessing the borough’s pitch facilities compared to the borough’s residents going elsewhere (this appears to be a factor of the borough’s relative accessibility)
- The availability of facilities in nearby districts also needs to be considered – some sports teams move onto/off sports pitches in the borough for a variety of reasons
- In football, it is not just demand and supply but also the form it is played – adult, junior and mini provision.
- There is undoubtedly a degree of latent demand – not all teams are able to access sports pitches because of high demand and more would do so if additional pitches were provided
- There is generally a good relationship between pitch provision and settlement size, except at Hoddesdon where there is a clear shortfall (that will be difficult to address because of limited sites)
- The borough lacks one significant centre for grass pitches (the largest facility has 13 pitches) and a plethora of small facilities – this can work against the potential to develop a major sports pitch hub
- Demand for different sports facilities changes over time with some sports coming into/going out of fashion
- Clubs such as Cheshunt Football Club and Rosedale Sports Club both have proposals to expand their current operations, and these operations clearly offer some opportunities to meet future needs
- In a similar vein, at Goffs Lane Bury Field the Local Plan identifies the potential for some sports pitches to be developed for housing. Should such pitches be lost then the IDP needs to ensure that any re-provision of facilities should be considered along with the broader question of future needs

Addressing current shortfalls

11.12 Shortfalls are as identified below:

Table 11.4 Estimate of current shortfall/inadequacies of provision

Activity	Existing shortfall
Adult Football	None – a potential surplus of 20 pitches
Junior Football	Shortfall of 27 pitches
Mini Soccer	Shortfall of 2 pitches
Cricket Pitches	Shortfall of 5 pitches
Rugby Pitches	Shortfall of 4 pitches
Hockey	Current provision broadly appropriate
AGPs	Inconclusive (see 11.3 below) but apparent marginal shortfall

Source: drawn from Broxbourne Leisure Facilities Outdoor Facilities document (December 2013)

Calculating current shortfalls

- 11.13** Table 11.4 summarises current shortfalls. Complexities in defining precise levels of provision include national and local initiatives and targets which may increase participation in sports, other factors such as the quality of changing facilities and clubhouses, and changes such as league qualitative requirements, fashions/trends, and club aspirations to improve their standing.

Calculating growth based demand

- 11.14** The figures in Table 11.4 are a combination of judgements relating to levels of underprovision.
- 11.15** It is important to unpick all these various elements for the IDP which as previously stated, seeks to identify demand relating to the policies within the plan - particularly housing growth - rather than remedy existing deficiencies. A pragmatic approach is required to extrapolate growth related need from the Strategy; but the IDP also considers it appropriate to add in a small element of additional need based on policies which promote greater participation which should in time translate into greater demand.
- 11.16** The outcome is therefore below that which would be dictated by the current shortfall/latent demand identified in 11.4) but above a 'growth related need only' approach. It factors in growth requirements plus those associated with increased participation rates, and also takes into account any lost facilities (such as that anticipated at Goffs Lane Bury Field).
- 11.17** There is also an element of 'pitch facility balancing' in relation to football pitches – conversion costs which will see the number of adult pitches reduced to make way for junior, youth and mini pitches.
- 11.18** From this it is possible to identify need based on local plan growth to 2033:

Table 11.5: Additional growth and participation related sports pitch requirements to 2033

Activity	Growth and participation rate requirements to 2033	Notes
Adult football	No requirements	A number of adult pitches converted to junior/youth and mini pitches
Junior/youth football	20 new pitches	Converted from spare adult pitch capacity
Mini football	2 new pitches	Converted from spare adult pitch capacity
Cricket	2 new pitches	Sites to be identified
Rugby	2 new pitches	Sites to be identified
Hockey	No requirements	Additional need difficult to justify
AGP	1 floodlit fullsize facility	3G substrate

Source: drawn from Broxbourne Leisure Facilities Outdoor Facilities document (December 2013)

- 11.19** The provision will cater for changing sports pitch needs and specifically help with the provision of hockey in the borough as a 3G fullsize pitch – although not suitable for hockey – will take the pressures of the conversion of one or more existing sand filled pitches (suitable for hockey) to 3G.

Specific support for private Sports Clubs

- 11.20** A number of private sports clubs have aspirations to improve the quality and quality of their outdoor sports provision. This IDP currently identifies one such club – Rosedale Sports Club, where it is possible to identify a range of enhanced and extended facilities that will form part of the Rosedale Park strategic site development as defined in section 5. We have identified £2.5m of investment for inclusion in the IDP.
- 11.21** There are a number of other proposals around the Borough for improvements to sports facilities, including, for example, the Hoddesdon Football and Cricket Club, Cheshunt Football Club, Rosedale Bowls Club, and the V&E Club at Bury Green. Further consideration will need to be given to the options for such facilities.
- 11.22** Other outdoor sports considered within the Outdoor Sports Facilities Strategy
- Outdoor bowls: 5 clubs, each with a single green of mostly 6 rinks, with ancillary facilities, with a broad balance between supply and demand
 - Outdoor tennis: 27 tennis courts in general community use (around half of which are floodlit) on 5 sites with a range of surfaces, plus a further 18 courts (mainly tarmac) on education sites, available primarily for school use. A major user of the community courts are the borough's 3 affiliated tennis clubs. There are sufficient courts to meet current and future demand, although investment in ancillary facilities is needed.
 - Athletics track; none in the borough (although 5 within a 20 minute drive). A justification for a track in the borough is not evidenced, but facilities on school sites could be developed and opened for community use
 - Golf; 2 18 hole courses and 1 9 hole course together with one 9 and one 27 bay driving range; a case for expanding golf provision (particularly a driving range) although anything new established would be on a commercial/pay and play basis
 - Outdoor netball; 24 courts on 6 secondary school sites plus 7 courts in 2013 at Wormley playing fields. A new 4 court facility is justified as the sport enjoys considerable popularity in the borough. This will be met through the redevelopment of Broxbourne School.

Multi Use Games Areas (MUGAs)

- 11.23** There are 19 (MUGAs) in the Borough, 3 of which are goal-ends only. 8 MUGAs are floodlit. There are also facilities on education sites for schools use. The level of provision equates to 1 single court facility per c6,000 residents. Distribution is generally good although there are several gaps including Broxbourne and the Hundred Acre estate. Two MUGAs at Canada Fields and Wormley may be lost to redevelopment. If this occurs, arrangements with Hertford Regional College to locate a MUGA on their campus will be necessary.
- 11.24** Any major housing development should incorporate new MUGAs as part of the obligations under the Fields Trust methodology which seeks to ensure that no young

person should walk more than 10 minutes to access a MUGA. These facilities play a key role in the Borough Council's youth diversionary programme including a venue for sports initiatives as an alternative to anti-social behaviour.

Skateparks

11.25 There are 3 skateparks in the Borough – Pound Close Hoddesdon, Station Roads Waltham Cross and Cheshunt Park. All 3 are co-located with MUGAs. Cheshunt Park is floodlit but the other two are over 12 years old and need investment to ensure safe and continued use. Youth surveys undertaken in 2011 and 2016 highlighted the popularity of skateboarding/scootering/BMX'ing and consideration should be given to an additional facility in one of the strategic housing sites.

Other activities

11.26 Walking and cycling is an important recreational activity. In addition to serving a number of other functions; it is covered in detail in section 7 (Transport).

11.27 Extensive angling facilities are also provided within the Lee Valley Regional Park.

11.28 Two other important areas of open air recreation provision in the borough, of high importance are:

- **the Herts Young Mariners Base:** based in Cheshunt, the Herts Young Mariners Base (HYMB) has been delivering high quality outdoor education sessions to adults and young people for over 50 years. They offer a variety of outdoor activities to anyone aged 8 and over including tailored sessions for individuals, schools, colleges and youth groups. Activities include sailing, kayaking, canoeing, climbing, windsurfing and orienteering
- **the Lee Valley White Water Centre:** built for the 2012 Olympics, the Centre offers slalom courses for canoes and kayaks within a parkland setting and a range of additional facilities including a café.

11.29 No specific funding requirements for extending or remodelling these facilities have been identified although it is the intention of the Lee Valley Regional Park Authority to pursue an 'Adrenaline Hub' at the White Water Centre. If and when this and similar investment is needed in time the Borough Council would be strongly supportive.

Open Space

11.30 The creation of open space, landscaping, amenity spaces and areas of ecological interest as part of the development of the borough's sites is a critical part of delivering high quality growth. Of great significance will be the new and enhanced spaces that will be created as part and parcel of the development of the borough's strategic sites:

- **Brookfield Riverside:** retention and enhancement of landscape features, new public spaces and squares, improvements to the New River

- **Brookfield Garden Village:** public open space and woodland including enhancement of Turnford Brook as a green corridor to act as a linear park through the development
- **Cheshunt Lakeside:** landscaped open space
- **Rosedale Park:** landscaped open space and improved amenity
- **Park Plaza West:** a major local greenspace plus enhancement of the New River frontage as a green corridor

11.31 Such investment forms part of scheme development costs and are not therefore within the remit of this IDP.

Parks

11.32 These are provided at both the regional and borough level. At the regional level the Lea Valley Regional Park runs from Hertfordshire to London. Established by Parliament in 1967 the Regional Park was created to meet the recreation, leisure and nature conservation needs of London, Hertfordshire and Essex., 429 hectares of the park land lies within Broxbourne which includes most of the land between the River Lee and the West Anglia railway.

11.33 The Park is home to the Olympic legacy facility of the Lee Valley White Water Centre, the River Lee, the Lee Navigation and a network of lakes, woodlands, wetlands, paths and wildlife habitats. The Council works with the Lee Valley Regional Park Authority to improve the Park as a local and regional amenity; a recreational resource; a public amenity and a habitat for wildlife.

11.34 Borough level parks include:

- Cedars Park – a small but highly significant historical public park located on the edge of Cheshunt and Waltham Cross. The park lies within the ruins of Theobalds Palace and provides formal green space with a diverse variety of wildlife with wild flowers, trees and shrubs. The park provides over nine hectares of parkland and is the highest quality park and garden site in the borough.
- Barclay Park – comprises recreational grassland and a man-made lake.
- Cheshunt Park – a country park providing the largest open space in the borough with the widest range of facilities. The site includes a large children’s play facility and is adjacent to Cheshunt Park Golf Course.
- Whit Hern Park – this is an ornamental park with grassland and established borders, which is situated in the Churchgate conservation area.
- Old Highway Recreation Ground – this community park primarily includes play areas and recreational activities and is a highly valued site within the northern part of the borough serving the Rye Park community.

11.35 Improvement Plans will be prepared for the borough level parks. These will contain costed improvement works, and when these have been identified and can be confirmed as being growth related, these will be added to future iterations of this IDP.

Play Areas

- 11.36** Most new spaces are required as part of a development costs, however some existing spaces are tired and in need of new play equipment. The borough council requires that all new developments of 15 houses or more will be expected to either contribute to the provision of a play space within the immediate area or include children's play areas within the new development. Improvement works to these spaces will be costed in due course and sought via Section 106 contributions, and added to future iterations of the IDP if they can be considered growth related.

Calculating growth based demand

- 11.37** Based on the additional growth of 6,166 new dwellings identified within this IDP, overall future needs are calculated as follows:
- Parks and Gardens: 4.2ha
 - Natural and Semi Natural Spaces: 18.60ha

Allotments

- 11.38** A final consideration concerns allotments. New allotments will be provided within the High Leigh development in Hoddesdon. As part of the Brookfield development a 20 plot allotment at Halfhide Lane will be replaced, a cost which is included within the IDP.

Funding

- 11.39** The funding of outdoor leisure facilities has similar sources to those for new indoor facilities although there is much less emphasis on commercial development opportunities. Education funding of sporting facilities offers fewer opportunities for public casual use than for indoor sports but is an important consideration in relation to MUGAs and AGPs. The main opportunities for funding new investment are:
- Capital funding by the Borough Council
 - Education funding (say for 1 or more MUGA or AGP)
 - Lee Valley Regional Park Authority Funding (for proposals within the Park)
 - Commercial investment where user charges can be levied to meet initial investment costs over time (the most obvious opportunity being golf, but possibly also AGPs)
 - Local authority bonds
 - Public funding programmes such as Heritage Lottery Fund, the Sport England's Community Asset fund (launched December 2016), Parklife Funding (for more intensive use of AGPs)
 - S106
 - CIL (if introduced)

11.40 It is appropriate to downplay schools funding of public outdoor sports pitches as although schools do offer some opportunities for general public use of their facilities, it is limited. At least one MUGA could reasonably be located on a school site however, and opportunities include Broxbourne School as part of a community leisure hub or within the new secondary school.

11.41 Of the remaining funding sources CIL and s106 offer the most significant opportunities as in most circumstances users' contributions for most activities cannot defray the initial investment costs. But one of the public funding programmes identified above could match fund developer's contributions towards a new AGP.

Summary – outdoor sports facilities need

11.42 Taking into account the requirements identified in Table 11.5, costs identified in Sport England's Facilities Cost Calculator (Q2 2017) and the most likely routes for funding identified in paragraph 11.39, the IDP suggests the following investment needs in outdoor sports until 2033:

Table 11.5: Outdoor sports facilities infrastructure needs to 2033

Facility	Cost estimate (£m)	Funding route
22 Youth/Junior football pitches (created from converting fullsize pitches)	0.77	CIL/s106
2 mini football pitches (created from converting fullsize pitches)	0.02	CIL/s106
2 new cricket pitches	0.54	CIL/s106
2 new rugby pitches	0.12	CIL/s106
1 fullsize AGP	0.9	CIL/s106/Commercial/Education
New 4 court tennis facility	0.36	CIL/s106
2 Multi Use Games Areas (MUGA)s	0.29	CIL/s106/Public Funding Programme/Education
1 Skatepark	0.1	CIL/s106
Improvements/extension to Rosedale Park Sports Club	2.5	s106
20 Plot allotment to replace Halfhide Lane	0.2	s106
Total cost	5.7	

Source: original research for the IDP

SECTION 12: PUBLIC REALM

Introduction

- 12.1** The public realm includes all the outdoor places in our towns and cities that are accessible to all. The public realm includes the everyday spaces that we move through, work and play. The public realm should be seen in isolation in the context of its adjacent buildings, their uses and its location in a wider network of public and private space.
- 12.2** Within the overall mantle of public realm, Green Infrastructure (GI) is a network of multi-functional green space, both urban and rural, which is capable of delivering a wide range of environmental and quality of life benefits. Green infrastructure includes street trees, gardens, waterways, river corridors, water systems, woods, public parks and other undeveloped public spaces.
- 12.3** New development increases the demands on our public realm and green infrastructure. As well as new and larger public spaces, growth and development may increase the need for seating; require more durable surfaces such as harder pavers or more resilient grass; necessitate new or replacement trees or alternative greening techniques (e.g. water features where tree planting may not be possible). Such requirements are in addition to the green spaces that are provided as part and parcel of new development, which are considered normal development costs.

Current provision

- 12.4** The borough contains two historic town centres – Hoddesdon and Waltham Cross and the Cheshunt Old Pond district centre. These centres are linked by smaller settlements such as Broxbourne, Wormley and Turnford.
- 12.5** The historic market town of Hoddesdon has recently experienced the successful regeneration of its town centre and is now a vibrant and popular town centre. It is currently subject to an on-going programme of public realm improvements.
- 12.6** Waltham Cross is located between metropolitan London and Hertfordshire. It is an important employment centre within the borough. The centre has some areas of dark and plain paving, dated street furniture, bulky planters and an inactive street frontage. Currently the 'big box' retailers at the northern end of the high street create closure to the pedestrianised core, an issue that needs to be addressed.
- 12.7** Cheshunt Old Pond currently has issues with traffic and a poor street environment. A strategy is being prepared for the centre which aims to improve accessibility, particularly for pedestrians and the public realm.
- 12.8** Broxbourne has the following types of nationally designated heritage assets within the Borough:
- 258 listed buildings and structures;
 - 34 Areas of Archaeological Significance;

- eight Scheduled Monuments;
- six conservation areas; and
- one Grade II Registered Park and Garden at Wormleybury

12.9 There are six Conservation Areas in the Borough: Hoddesdon Town Centre; Broxbourne; New River; Wentworth Cottages; Wormley; and Churchgate. Each of the Borough's conservation areas has its own unique character. The conservation areas of Churchgate and Wormley are on the Heritage at Risk register, with the condition of each described as 'poor' and 'very bad' respectively.

12.10 There are 4 civic space sites in the borough; Hoddesdon Town Centre; Newgatestreet Road; Old Pond; Waltham Cross Town Centre

Policy Context

12.11 The key policy context is as follows:

- HCC Hertfordshire Strategic Green Infrastructure Plan (SIP) (2010). The plan promoted two major GI projects within Broxbourne: the Lea Valley Regional Park Lateral Links and the Woodland Arc. The SIP and the future direction of GI in Hertfordshire is currently being reviewed.
- Hoddesdon Town Centre Strategy (2010): The town centre has been successfully regenerated, through the implementation of the own Centre Strategy, which is up for review within the immediate future.
- The Waltham Cross Town Centre Strategy (2015): This sets the agenda for the regeneration of the town centre over the next 5-10 years. It contains a list of future works in a masterplan and an action plan with detailed projects over the short, medium and long term.

12.12 All neighbourhood and local centres will be subject to a single improvement plan, to be prepared following the adoption of the Local Plan. The Plan will contain an action plan for each centre with a focus on public realm and streetscape improvements.

Future investment areas

12.13 Investment is needed in future in the following public realm typologies:

- **Green Infrastructure:** there are currently good levels of green infrastructure across the borough although permeability throughout the borough could be significantly improved. However there is need for future enhanced provision.
- **Civic spaces:** this includes civic and market squares and other hard surfaced community areas designed for pedestrians with the primary purpose of providing a setting for civic buildings, public demonstrations and community events
- **Town Centres:** to improve their setting, public realm improvements are a key aspect of any town centre regeneration strategy
- **Green links:** a key component of the borough Council's Walking and Cycling Infrastructure Delivery Plan (2017)

Long term proposals to be developed further

12.14 These are identified as:

- Hoddesdon Town Centre Strategy; this will be reviewed in Autumn 2018 and costed projects identified at that time²⁸
- Waltham Cross Southern High Street; improvements to realign road layout and create a pedestrian boulevard with a greater range of street uses and open spaces

Current proposals included in this IDP

12.15 These are as shown in Table 12.1 below:

Table 12.1: Public realm proposals included in the IDP

Location	Works	Estimated cost	Funding
Waltham Cross	A new town square and gateway features	£0.5m	Secured from Waltham Cross Town Centre Northern High Street development
Cheshunt Old Pond	Major public realm works, with final details to be confirmed once a strategy for this location is confirmed in summer 2018	£2.0m	Secured from Cheshunt Lakeside development
Total cost		£2.5m	

Source: Borough of Broxbourne: Waltham Cross Town Centre Strategy (2015)

The funding of public realm works

12.16 Potential sources of funding for public realm works are as follows:

- s106 funds, as identified in Table 12.1 above
- alternatively, funding as part of the Crossrail 2 development, although this is reliant on this as a source the project would be delayed potentially 15+ years
- LEP funding for Waltham Cross as part of the wider economic regeneration of the area

²⁸ Funding for Hoddesdon Town Centre improvements secured from the High Leigh development (committed scheme therefore not featuring in this IDP)

SECTION 13: EMERGENCY SERVICES

Introduction

- 13.1** Emergency services infrastructure covers the police, fire and rescue and ambulance services.

Police

- 13.2** Hertfordshire Constabulary is responsible for policing within the borough. It operates as a combined single Local Policing Command Unit (LPC), underpinned by District/Borough Safer Neighbourhood Policing Teams, one for each of the county's districts
- 13.3** There is a Safer Neighbourhood Policing Team for Broxbourne, made up of Neighbourhood Constables, Police Community Support Officers (PCSOs) and Special Constabulary Officers. Broxbourne is further divided into 3 locality Safer Neighbourhood Policing Teams, covering Cheshunt East, Cheshunt West and Hoddesdon.
- 13.4** The Safer Neighbourhood Policing Team forms part of a Community Safety Partnership (CSP) for the Borough, with partners including Hertfordshire Constabulary, local councils, Hertfordshire County Council, Hertfordshire Fire & Rescue Service, Hertfordshire's Police and Crime Commissioner and representatives from other groups such as housing providers, local voluntary agencies, faith groups, youth groups and Neighbourhood Watch.
- 13.5** Hertfordshire's Police and Crime Commissioner has The Police & Crime Plan which can be viewed on their website.

Existing Provision - Police

- 13.6** Following the closure of Hoddesdon Police Station the sole station within the borough is in Cheshunt. It does not have a front counter, and the nearest with counter facilities is in Hatfield.

Infrastructure Requirements – Police

- 13.7** To meet short and medium term requirements, discussions are taking place Herts Fire and Rescue to locate a police office in Hoddesdon Fire Station. In the longer term, Hertfordshire Constabulary has indicated its wish to relocate its Intervention and Safer Neighbourhood Policing Team from its current location to Brookfield.

- 13.8** The Constabulary's requirements for a new team's base is a 700m² facility with an adjacent and secure 30 space car park²⁹. An assessment of likely costs suggest that such a facility would cost in the order of £1.2m, but no detailed scheme has been prepared and it is possible that some of these costs could be offset through the disposal of the existing site.
- 13.9** For the time being, a figure of £1.2m has been identified in the IDS and the overall schedule of costs, and in section 5 against the costs of developing Brookfield, but this figure could come down. The proposed team base is not expected to form part of the s106 for the development.

Fire and Rescue

- 13.10** Hertfordshire County Council (HCC) is the Fire Authority, known as the Hertfordshire Fire and Rescue Service (HFRS).
- 13.11** There are two Hertfordshire Fire and Rescue Service (HFRS) fire stations in the Borough, at Hoddesdon and Cheshunt. The HFRS does not currently anticipate any changes in the provision of these fire service facilities for the present time. However, the station at Hoddesdon is very old, and replacement in the long term would be advantageous. HFRS has no current plans to do this and is not seeking funding contributions to make this a reality.
- 13.12** The HFRS also require new developments with low quality water supply to install new water mains and hydrants for firefighting
- 13.13** Following the tragic events of the Grenfell Tower fire in June 2017 the government has established a Building Safety Programme to cover high-rise residential buildings over 18 metres, including hotels, to make sure that residents of high rise buildings are safe, both now and in the future. The Herts Fire and Rescue service is supporting this programme to assist building owners in undertaking and steps to undertake any necessary remedial work. Any infrastructure implications will be identified in later iterations of the IDP.

Ambulance Services

- 13.14** There are two ambulance stations located within the borough, one in Cheshunt and the other in Hoddesdon.
- 13.15** Broxbourne is covered by the East of England Ambulance Service NHS Trust (EEAST).
- 13.16** The ambulance service is predominantly demand driven, as opposed to purely population driven. The service's targets are for patients with life threatening conditions to be attended within 8 minutes 75% of the time.

²⁹ Requirements determined in e-mail exchanges with Herts Constabulary December 2017. Costs derived from BCIS

- 13.17** Current operations are essentially 'command and control' with appliances operating out of premises, but in time a more flexible 'hub and spoke' approach may be adopted. This could reduce the number of command centres and, therefore, its property portfolio.
- 13.18** The Trust has not identified the need to provide additional ambulance services within the borough to support housing growth.

SECTION 14: WASTE AND RECYCLING

Introduction

- 14.1** Within Broxbourne, the borough council is the Waste Collection Authority, collecting household waste and a limited amount of household waste. Hertfordshire County Council is the Waste Disposal Authority and has the responsibility for arranging the disposal of the waste collected in the area by the Waste Collection Authority. The Hertfordshire Waste Local Plan provides the policy context for these functions.
- 14.2** The borough council operates the following 12 recycling points, open 365 days of the year:
- Bishops' College Offices, Cheshunt
 - Chaucer Way, Hoddesdon
 - Goffs Oak Library
 - Hammondstreet Road Playing Fields
 - Holdbrook Estate, Waltham Cross
 - Jubilee Gardens (Spinning Wheel), High Street, Hoddesdon
 - Marks & Spencer, Brookfield Centre
 - Sainsbury's, Brewery Road, Hoddesdon
 - Tesco, Brookfield Centre
 - V&E Club, Goffs Lane
 - Waltham Cross High Street Car Park
 - Windmill Lane Car Park, Cheshunt
- 14.3** The County Council operates two Household Waste Recycling Centres (HWRCs) in the borough; one at Brookfield Farm at Turnford (which includes a borough council depot) and one within the Pindar Road Industrial estate in Hoddesdon.
- 14.4** Proposals for the development of the Brookfield Garden Village/Riverside complex (see section 5) envisages the replacement of the HWRC and borough council depot or the equivalent capital contribution to its replacement costs. Based on similar facilities elsewhere the IDP assumes a cost of £1.4m for a replacement facility, a cost to be borne by the Brookfield developers through a s106 agreement.
- 14.5** In the absence advice from Herts County Council on replacement HWRC costs, suitable comparators have been examined. There have been very few newly constructed similar sized operations to the current Brookfield Farm facility, but two have been identified and form the basis for the proposed cost of £1.4m, as follows:

Table 14.1: Replacement Brookfield Farm HWRC comparators

Name of facility	Year	Cost	Comments
Hobsons Lane, Kirkby, Liverpool	2012	£1.1m	15,000 tons/year. Has overhead canopy
Stoneycroft Rise, Eastleigh, Hants	2016	£1.45m	7 double bay bins, 21 waste containers, parking for 22 cars, stacking for 25 cars

Source: original research for IDP

- 14.6 No additional HWRCs are proposed.
- 14.7 The County Council as WDA has produced a Municipal Waste Spatial Strategy which identifies locations within the county for waste treatment and transfer facilities.

Funding and Delivery

- 14.8 The revenue costs of waste disposal and collection (which do not form part of this IDP) are funded through the county council and borough council revenue budget. In terms of new capital facilities, waste disposal, facilities such as HWRCs and Waste Transfer Stations are funded by HCC's capital budget, while waste reprocessing tend to be privately funded and operated.

SECTION 15: UTILITIES

Introduction

- 15.1** Utilities covers water (waste and potable water); gas and electricity supply; renewable energy; flood defences; and broadband.
- 15.2** The provision of the necessary utilities to support the delivery of growth is an important consideration, and is recognised as such by the government, who in December 2014, published *Better Connected*³⁰, setting out the process for securing utility provision for developments from initial scoping to post-development. *Better Connected* sought to provide a shared expectation for utility connections from companies and developers. It also sets out the statutory performance measures already in place, and introduces new voluntary standards for water, sewerage and telecoms.
- 15.3** In the February 2017 Housing White Paper³¹ the government announced its intention to review *Better Connected*, assessing its impact so far, and considering how existing performance standards and penalties are working to support house building at all scales from small and medium sized developments to major sites, and ensuring utilities provision is aligned with local plans to ensure timely connections for new homes.
- 15.4** As part of this review, and depending on the progress that has been made by the utilities sector, the Government will closely monitor performance to ensure house building is not being delayed and, if necessary, will consider obligating utility companies to take account of proposed development.
- 15.5** The position in relation to growth related utility infrastructure requirements is as follows:

Gas Supply³²

- 15.6** National Grid owns, operates and maintains the high pressure transmission system across the country. It does not supply gas, but it does provide the networks through which gas flows.
- 15.7** New gas transmission infrastructure (pipeline) developments are periodically required to meet increases in demand and changes in patterns of supply.
- 15.8** National Grid has not identified any new strategic gas infrastructure that is required within the borough to support housing growth. However on-site gas infrastructure will be required in new developments.

³⁰ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/389772/Better_Connected_Dec14_2.PDF

³¹ <https://www.gov.uk/government/collections/housing-white-paper>

³² Information drawn from response from Cadent Gas Network Supply Team in e-mail 18.12.17

Electricity Supply

- 15.9** National Grid owns, operates and maintains the 400kV and 275kV national electricity transmission network. At a local level UK Power Networks are then responsible for the electricity distribution network in Broxbourne at 132kV. Primary substations in turn feed 11kV circuits to the many secondary substations serving individual streets and local areas.
- 15.10** Electrical supply planning is reactive although demand is modelled to an extent on 'natural growth' in energy demand. UK Power Networks has yet to advise on any specific requirements relating to load increases required within the borough as a result of growth. However, its modelling is updated annually, and this gives an estimate of the future loads in the network and indicates where and when the network may reach capacity and whether further works, such as upgrading of a sub-station, will be required.
- 15.11** Additionally it is known that that UK Power Networks have numerous and ongoing projects currently to expand the existing electricity network infrastructure with a view to increasing capacity and supplying new potential demands. Given the exact infrastructure required to support the delivery of growth is unknown at this stage, this will be taken forward in discussion with UK Power Networks through the planning process.
- 15.12** If a new substation is required, UK Power networks have advised this is likely to cost in the region of £2.5 million and the cabling is likely to cost around £5 million per kilometre. However, this is not currently anticipated.

Potable water³³

- 15.13** The borough is supplied with drinking water by Thames Water. The supply to the area is well reinforced, with a number of local sources, an integrated pipe network and strategic transfers in place to maintain an adequate security of supply.
- 15.14** Water companies are required to produce a Water Resource Management Plan (WRMP) every five years. A WRMP must show how water companies will balance the demand for water with the available supply for the next 25 years. Thames Water published its WRMP (WRMP14) for the period 2015 to 2040 in July 2014.
- 15.15** WRMP14 will be replaced by a new 25 year plan for the period 2020 – 2045 when WRMP19 is published in 2019. The company expects to consult on the draft plan during 2019. Thames Water published regular progress reports on the implementation of WRMP14 and of progress on WRMP19.³⁴
- 15.16** As part of its WRMP Thames Water is required to consider future growth of both the domestic (household) and commercial demand for water. For the domestic demand forecast, it is required to undertake an assessment of the number of new properties as well as the population change over its planning period (25 years).

³³ Information on waste water and potable water obtained from Thames Water Policy team in e-mail 17.11.17

³⁴ <https://corporate.thameswater.co.uk/About-us/Our-strategies-and-plans/Water-resources>

- 15.17** Thames Water predicts no major constraints to supplying the borough with drinking water, although this could change in the future, for example if the Environment Agency enforce further sustainability reductions.
- 15.18** Water companies have a duty to supply water for domestic purposes to customers under Section 52 of the Water Industry Act 1991, and are hence obliged to connect developments to the network once planning permission has been received.
- 15.19** New development can make use of any surplus capacity in the network. However, developers will be required to demonstrate that there is adequate water supply capacity both on and off site to serve the development, and that it would not need to problems for existing or new users (and it may be necessary for developers to fund studies to ascertain this). If this is not the case, then the funding of new infrastructure will be required.
- 15.20** Given the scale of the development proposed in the borough, Thames Water consider that local water infrastructure upgrades to existing supply networks will be required. These are likely to be funded through a combination of standard water developer requisitions (which is a development cost not a public infrastructure cost) and company investment.

Waste Water

- 15.21** Wastewater in Broxbourne borough is collected by Thames Water Utilities Ltd (TWULL) via their network of sewers. There are separate sewerage systems for foul and surface water, although foul systems are often influenced by storm water due to infiltration and mis-connections.
- 15.22** Waste water treatment for the borough is provided by sewage treatment works (STWs) at Rye Meads near Hoddesdon and Deephams in Edmonton, North London.
- 15.23** The company manages its infrastructure investment programme through a rolling 5 year Asset Management Plans. The current AMP (AMP6) covers the period 2015 – 2020; Thames Water are actively planning for AMP7 (2020 – 25) whilst also giving early consideration to AMP8 (2025 – 2030).
- 15.24** Deephams STW is currently undergoing an upgrade to significantly improve the quality of effluent discharged into the River Lee and Salmon's Brook, so that these watercourses meet the environmental standards that enable them to comply with the Urban Waste Water Treatment, Freshwater Fish and Water Framework Directives.
- 15.25** Additionally the upgrade will increase capacity of the works to manage higher amounts of sewage waste that is the consequence of significant housing and employment growth taking place within its within its catchment; in addition to the growth proposed within the Broxbourne Local Plan there are even more significant levels of growth either taking place or proposed within the Upper Lee Valley and at Meridian Water in North London.
- 15.26** The Deephams STW upgrade was granted planning consent in February 2015 and construction is anticipated for completion in summer 2018. Thames Water has advised that the growth identified in the Local Plan will not give rise to any concerns,

although the picture may change if all authorities with catchments that drain into Deephams increase growth numbers.

- 15.27** The Rye Meads STW is currently being upgraded, with works due to be complete during 2018. The main scope of the works is to extend treatment capacity and improve discharge quality standards and enable it to treat an increased volume of incoming flow.
- 15.28** The upgrade will provide the works with a treatment capacity of the equivalent of 447,134 people. Thames Water note that in addition to Broxbourne, other local authorities within the Rye Meads catchment are proposing significant levels of housing growth. Based on current growth forecasts, the company's recent high level assessment indicates that in overall terms, they currently expect the site to have the capacity to deal with sewage flows up until 2036, 3 years beyond the end date of the Broxbourne Local Plan.
- 15.29** The company has however also indicated that it may need to deliver individual upgrades in sludge and storm streams during AMP7 (2020 – 25), although these streams currently appear to have sufficient capacity to 2026 and potentially beyond. Any upgrades will be identified in the company's business plan for AMP7.
- 15.30** Given the scale of development which will have capacity implications for both Deephams and Rye Meads STWs, Thames Water intends monitor growth proposals and model its impact using their hydraulic model which is currently being significantly upgraded. It is understood that model runs using the latest growth inputs are currently taking place, which should establish a modelled view of risk, and future investment priorities being established.
- 15.31** There are two final considerations which relate to the provision of water and sewerage infrastructure. The first of these is the government's requirements to ensure that water and sewerage companies respond in a proactive and timely fashion to the infrastructure needs growth requirements, as covered in 15.2 – 15.4 above, with the potential – through the review of *Better Connected* for them to be obligated to meet such needs. The second consideration is the future publication of the countywide Hertfordshire Water Study – to be published in the near future – which will look at water infrastructure needs to 2051.
- 15.32** Broxbourne is not a partner in this study, but it and the other Hertfordshire authorities stand to benefit from plans to create a stronger link between longer term growth needs and water infrastructure investment. The study is also expected to indicate that there are no 'showstoppers' within the Study area – no locations where issues concerning the provision of infrastructure will render plan related growth difficult if not impossible to secure.

Flood Defences

- 15.33** The Environment Agency is responsible for the delivery of flood defences across the country and has responsibility for managing flood risk from main rivers and reservoirs.

- 15.34** Hertfordshire County Council is the Lead Local Flood Authority (LLFA) and the regulatory body responsible for consenting any works that might affect flow within an Ordinary Watercourse. These powers also include enforcement action where works are undertaken without consent or riparian owners have not fulfilled their riparian duties.
- 15.35** As part of its statutory duties HCC has produced a 'Local Flood Risk Management Strategy for Hertfordshire' and the 'Hertfordshire Interim SuDS Policy Statement' (November 2012).
- 15.36** District Councils are designated as Risk Management Authorities under the Land Drainage Act 1991. District Councils have powers to carry out flood improvement works.
- 15.37** At present a need for new flood defences in the borough has not been identified. However, the provision of flood defences will be reviewed when taking forward the growth proposals set out in the local plan.

Superfast Broadband³⁵

- 15.38** In June 2013 HM Treasury published 'Investing in Britain's Future', which set out the Government's commitment to investing in the growth of the UK's digital economy.
- 15.39** In response to this announcement the Connected Counties programme has been established. After an initial rollout phase, a second contract covering the period 2016 – 2018 is currently under way. By June 2018 nearly 31,000 additional Herts households and businesses will be able to access fibre broadband. An extension of this contract from later this year will extend coverage to an additional 6,473 Hertfordshire premises and a potential future phase would take coverage beyond 97%
- 15.40** Coverage of superfast broadband in Hertfordshire is as follows:
- Superfast UK (>24 Mbps): 99.22% of all households
 - Superfast EU (>30 Mbps): 99.06% of all households³⁶
- 15.41** A Which? Magazine survey of 389 areas in the UK placed Broxbourne as the 10th fastest.³⁷
- 15.42** As can be noted from the above, Broxbourne already has relatively high levels of superfast broadband coverage, but the programme is working to increase coverage in areas which cannot achieve such speeds yet.
- 15.43** Smaller developments represent more of a challenge and fibre broadband availability may depend on the capacity of individual cabinets. This will be reviewed by the programme. The rollout programme will however keep this under review.

³⁵ Information obtained from Connected Counties Broadband Programme Project Manager in e-mail 03.07.17

³⁶ Source : thinkbroadband.com

³⁷ <http://www.cityam.com/267358/best-and-worst-areas-uk-broadband-speeds-revealed->

Summary of funding position - all utilities

15.44 Table 15.2 below summarises the arrangements for funding new infrastructure utilities:

Table 15.2: Summary of funding arrangements for utilities

Utility	Funding
Gas Supply	Where upgrades are required it is anticipated that the costs are likely to be a financial arrangement between the developer and the utility providers, rather than through contributions such as CIL or s106
Electricity Supply	Network enhancements met by UK Power Networks in response to overall demand, with local reinforcements including upgrades and substations through financial arrangements with the developer as for gas supply
Potable Water	Water company has duty to supply, with developer contributions sought if network strengthening required
Waste Water	Strategic investment provided by water companies, with the cost of local connections met by developers through a variety of funding options; no call on contributions such as s106 and CIL
Flood Defences	No infrastructure schemes identified
Broadband	Expectation that government will provide direct funds for any further rollout requirements under the Digital Economy Act

SECTION 16: INFRASTRUCTURE REQUIREMENTS BY PLACE

Introduction

- 16.1** This section list local plan growth and associated infrastructure requirements by the 'Places' identified in the Local Plan, as follows:

Table 16.1: Housing related growth by Local Plan 'Place'³⁸

'Place'	Strategic Sites	Other site allocations	SLAA Sites and Brownfield Register sites	Sub-total
Brookfield	1500	0	0	1500
Broxbourne	0	0	36	36
Cheshunt	2629	589	62	3280
Goffs Oak and St James'	0	193	0	193
Hoddesdon	0	40	244	284
Waltham Cross	300	0	62	362
Wormley and Turnford ³⁹	0	0	0	0
Totals	4429	822	404	5655⁴⁰

- 16.2** An infrastructure proforma for each 'Place' is set out below:

Table 16.2: Brookfield

Place	Brookfield
Key characteristics of infrastructure need	100% of growth is in strategic site of Brookfield Garden Village/Riverside. Substantial development, responsible for 24% of the growth figure tested in this IDP
Summary of infrastructure requirements	Brookfield has over £37m of infrastructure requirements associated with its development including over £24m in education contributions and nearly £1m in GP facilities. Over £7m of transportation investment is expected to be secured, and the development will house a proposed Police Base (£1.2m) and will require the relocation of allotments (£0.2m), a Household Waste Recycling Centre (£1.4m) and a Gypsy and Travellers Site (£1.2m)
Timing of requirements	Development at Brookfield ramps up after 2023 and most of the infrastructure investment is anticipated in the latter 10 years of the Local Plan
Funding and delivery considerations	The anticipation is that the entire infrastructure costs at Brookfield will be met through a s106 for the new development; assuming that can be successfully achieved, infrastructure development should raise no issues

Source: original research for the IDP

³⁸ Additional 'Place' without housing development is Park Plaza – collectively 130,000 sq.m. of business development over the Plan period

³⁹ Although Brookfield is in Turnford and Wormley; it is identified separately and no other development is identified within the Plan for the rest of Turnford and Wormley; consequently there is no separate table for it below

⁴⁰ Windfalls self builds deducted from overall IDP growth figure as cannot be assigned to Local Plan 'place'

Table 16.3: Broxbourne

Place	Broxbourne
Key characteristics of infrastructure need	Very small scale development, representing a tiny proportion of the Local Plan total (0.05%)
Summary of infrastructure requirements	Minimal
Timing of requirements	Of no significance
Funding and delivery considerations	Of no significance

Source: original research for the IDP

Table 16.4: Cheshunt

Place	Cheshunt
Key characteristics of infrastructure need	By far the most significant 'Place' in terms of growth and therefore infrastructure need, responsible for 53% of the proposed growth tested through the IDP. 2 strategic sites, Cheshunt Lakeside and Rosedale Park, comprise 2629 dwellings, nearly 60% of the strategic sites and 42% of the overall IDP tested figure
Summary of infrastructure requirements	Major investment anticipated, including over £43m in education provision, over £1.5m in GP facilities and over £10m in transportation investment. Also notable is £8m in sports facilities and public realm. The non-strategic sites are not without significance – for instance giving rise to nearly £8m of education contributions. Cheshunt is a location where new development can contribute towards the cost of much needed improvements to the A10
Timing of requirements	Development in Cheshunt is generally loaded to the early and middle years of the Plan
Funding and delivery considerations	Both strategic sites are considered to have a good prospect of securing the s106 agreements necessary to fund the associated infrastructure works, although the non-strategic sites are less certain in terms of funding and may be partially reliant on CIL should this be introduced

Source: original research for the IDP

Table 16.5: Goffs Oak and St James'

Place	Goffs Oak and St James'
Key characteristics of infrastructure need	Small scale of development, representing only 3% of the total housing growth assessed for infrastructure needs in this IDP
Summary of infrastructure requirements	Relatively small scale, but of some consideration – for instance nearly 0.4fe of education requirements which is too small for new development to require a new primary school in its own right, but which will still need to be accommodated through the expansion of schools
Timing of requirements	Growth in this location is intended for the early years in the Plan, posing some immediate challenges
Funding and delivery considerations	Not particularly significant, but CIL may play a role if introduced

Source: original research for the IDP

Table 16.6: Hoddesdon

Place	Hoddesdon
Key characteristics of infrastructure need	Small scale of development, representing less than 5% of the total housing growth assessed for infrastructure needs in this IDP
Summary of infrastructure requirements	The High Leigh development is not in this list as a commitment. However, similar considerations as to Goffs Oak and St James' – in this instance nearly 0.6fe of education requirements which is too small to require a new primary school in its own right but which will face some challenges in accommodating this need in schools in this location. Some highway works associated with the Dinant Link Road
Timing of requirements	Growth in this location is intended for the early to middle years in the Plan
Funding and delivery considerations	A plethora of small sites might make s106 agreements challenging to secure major works through multiple schemes given that restrictions on pooling are expected to continue in such circumstances; CIL if introduced may offer opportunities

Source: original research for the IDP

16.7: Waltham Cross

Place	Hoddesdon
Key characteristics of infrastructure need	Contains a strategic site (Town Centre Northern High Street) which supplies the bulk of development, at this location, but small scale; the strategic site is only 300 units and the 362 units in total is less than 6% of the total assessed within this IDP
Summary of infrastructure requirements	The Northern High Street site has been identified within the IDP as contributing nearly £7m of public infrastructure including nearly £5.5m for schools and smaller sums for transportation investment and town centre public realm improvements
Timing of requirements	Growth in this location is intended for the later years in the Plan
Funding and delivery considerations	The funding of the necessary infrastructure may be more challenging in this location when compared to others, as land values are not expected to be high and development sites are expected to be challenging

Source: original research for the IDP

16.7: Park Plaza

Place	Hoddesdon
Key characteristics of infrastructure need	No housing development but instead major employment development on two sites (Park Plaza North and West) totalling 130,000 sq.m. over the Plan period
Summary of infrastructure requirements	No health and education need, but major contributions (in excess of £18m) over the plan period for transportation investment, including highway works, contributions to a new station and a bus service and a new pedestrian/cycle overbridge crossing the A10 and linking the two sites
Timing of requirements	Employment rollout on the two sites is expected to be steadily rolled out over the course of the Plan, albeit that in contrast to housing, it is harder to plan for an orderly progression of development with businesses uses
Funding and delivery considerations	These are two contrasting sites given the nature of employment activities planned at each location, with major contributions from the (anticipated) higher value Park Plaza West, but only limited amount with Park Plaza North, where viability is likely to be a major consideration given the anticipation of relatively low value end uses

Source: original research for the IDP

SECTION 17: THE FUNDING AND DELIVERY OF INFRASTRUCTURE

Summary

17.1 This section explores the following:

- a summary of infrastructure need including by infrastructure category, timing and ‘place’ (as defined in the emerging Local Plan)
- a summary of the potential means of securing the funding for such infrastructure

Defining infrastructure needs

17.2 The infrastructure requirements to support growth are set out in detail in previous sections of this IDP. As a reminder, in seeking to support the emerging Broxbourne Local Plan, the IDP seeks to identify short, medium and long term infrastructure requirements associated with growth to be delivered during the Plan to the end of the Plan period (2033) in a range of different categories (including health, education and transport), over 5-year time periods, and by location.

Methodology and Evidence base

17.3 The methodology used in the infrastructure funding gap calculation is shown in the following table:

Table 17.1: infrastructure funding gap methodology

Calculation of Infrastructure Need	
Key Calculation	Analysis Undertaken
Start date	A start date of 31 st March 2018 was identified in this IDP
Growth on which infrastructure need calculated	Around 6,166 new dwellings between the start date and 2033 plus at least 180,000 sq.m. of new employment space and 33,500 sq.m. of new retail space
Profiling need over time	Calculating infrastructure need over 5 year tranches; namely 2018 - 23; 2023 – 28; 2028 - 33
Profiling need spatially	In accordance with Section 4 (The Local Plan Development Strategy), which categorises growth by development category and also by defined ‘place’
Specific review of infrastructure needs for the borough’s 6 strategic sites (3 housing led, 2 employment led, 1 mixed use)	Identification of the specific infrastructure needs associated with these sites, including costs and timing

Source: original research for IDP

Table 17.1: infrastructure funding gap methodology (continued)

Review of infrastructure funding opportunities	
Key Calculation	Analysis Undertaken
Costs of infrastructure	Supplied by infrastructure providers or in the absence of such data, calculated using BCIS ⁴¹ . Not index linked, but build costs uplift is likely to be matched by similar rises in development values
Review of service providers' capital investment evidence	As provided directly by infrastructure providers and published evidence
Review of potential government funding programmes	Obtained from research – includes direct government programmes and finance available through other bodies (e.g. Herts LEP)
Review of funding likely to be provided by developers through s106 agreements	This has needed to factor in both the April 2015 restrictions imposed on the use of planning obligations and future viability work to be undertaken as part of establishing CIL. This may mean that if a CIL is adopted, the ability to secure funding towards infrastructure through s106 agreements may be diminished if not eliminated on a number of development sites/locations ⁴²
The potential funding generated from a CIL (assuming CIL is introduced)	A calculation of likely revenues generated through CIL over the Plan period ⁴³
Additional public sources of funding beyond those above	Scoping out other potential sources of funding through a review of potential opportunities
Potential sources of private finance	Including bonds and loans

Source: original research for IDP

17.4 Other factors which will have potential implications for future infrastructure provision in the district are as follows:

Table 17.2: factors which may have implications for future infrastructure provision

Potential influencing factor	Comment
Development taking place immediately outside the district during the plan period	Section 4 identifies the growth immediately outside the borough boundary which may have implications for infrastructure provision, the most significant being anticipated development in Cuffley (Welwyn Hatfield) which may have implications for education provision
Limited forward planning timescales of infrastructure providers	Many providers have an infrastructure planning horizon of 3 – 5 years, making it difficult to identify precise requirements over longer periods
Lack of responsiveness amongst some providers (if this proves to be the case)	Some providers have proved reluctant to engage, or have been unwilling to reveal the arrangements for financing new infrastructure, making assessments about long term needs a matter of conjecture
New ways of delivering services	Infrastructure provision is constantly evolving as the needs of users change and new technologies and practices are introduced – this will have an effect, particularly towards the end of the Plan period
The impact of changing demographics	An increasingly aging population and a rising birth rate are also critical factors in infrastructure planning for the future

⁴¹ Building Cost Information Service (operated by RICS)

⁴² There is the additional factor that if an item or type of infrastructure is identified in the authority's Regulation 123 list (the list identifying what infrastructure the authority may seek to fund through CIL) a contribution to the funding of that infrastructure through s106 cannot be sought

⁴³ It should be noted however that all CIL calculations contained within this IDP are very high level assessments and should not be viewed in any way definitive – detailed viability work to be undertaken in future will establish this

Data sources

- 17.5 The analysis of infrastructure need and funding opportunity includes the following sources of information and data identified within this IDP:

Table 17.3: sources of information and data contained within the IDP

Category	Key areas of evidence
Transport	LTP 3 and supporting (daughter) documents. Includes highway schemes, Urban Transport Plans, the Rail Strategy, Walking and Cycling, Bus Strategy
Transport	Transport Vision 2050 (will inform the preparation of LTP4)
Transport	Broxbourne Borough Council Transport Strategy (October 2017)
Transport	Broxbourne Walking and Cycling Infrastructure Delivery Plan (October 2017)
Transport	Urban Transport Plans for Hoddesdon/Cheshunt and Broxbourne/Waltham Cross
Transport	The Roads Investment Strategy 2015/16 – 2019/20 and 2020/21 – 2024/25
Transport	Network Rail Control Period 5 (2014 – 2019) and CP6 (2019 – 24)
Transport	The 2015 Rail Strategy (Herts County Council)
Transport	West Anglia Task Force investment proposals and Crossrail 2
Transport	Local Transport Bodies (Local Major Schemes)
Transport	Greater Anglia Rail franchise and investment announcements
Transport/Economic Development	Herts LEP Strategic Economic Plan (2014) and Growth Deal announcements
Education	Meeting the Rising Demand for School Places (Primary and Secondary) (2017)
Education	Early Years, Primary and Secondary School Planning (written advice provided by Hertfordshire County Council)
Health	NHS Five Year Forward View: NHS Planning Guidance 2016/17 – 2020/21
Health	Herts and West Essex Sustainability and Transformation Plan 2016 – 2021 'A Healthier Future' (December 2016)
Health	Formula for the capital costs associated with primary and secondary healthcare provision from NHS England and East and North Herts CCG
Social Infrastructure	Broxbourne Leisure Strategy Built Sports Facilities Strategy (December 2013) and Broxbourne Leisure Facilities Strategy (Outdoor Sports Facilities) (December 2013)
Social Infrastructure	'Inspiring Libraries' 2014 – 2024 (2014)
Waste and Recycling	HCC's Waste Site Allocations document (2014)
Potable Water	Thames Water's Water Resources Management Plan (WRMP14) 2015 – 2040 (2014)
Waste Water	Thames Water Asset Management Plan AMP6 (2015 – 2020) and emerging AMP7 (2020 – 25)
Broadband	Connected Counties (Herts and Bucks) superfast broadband rollout
General	Masterplanning work associated with the borough's 6 Strategic sites – including estimated costs of onsite and offsite infrastructure (not published)

Source: original research for IDP

Identifying Infrastructure Need, Cost and Timing

- 17.6 This part of the section summarises growth related infrastructure needs (based on the emerging local plan growth strategy and the evidence based contained within this

IDP). It should be read in conjunction with the Infrastructure Delivery Schedule, which sets out further detail on the specific infrastructure schemes.

17.7 The summary Table 17.4 below does this firstly examining need in terms of category and trajectory, and then by terms of location and by category.

17.8 Infrastructure by category with costs (then set out in term of trajectory in 5-year local plan tranches) is as follows:

Table 17.4: infrastructure cost requirements by category over time

Infrastructure Category	Estimated cost of Delivery (£m)	Timescale for Delivery (expressed in expenditure)		
		2018 - 2023	2023 - 28	2028 - 33
Education	91.37	32.85	31.96	26.56
Transport	132.77	59.39	63.28	10.1
Healthcare	22.783	8.201	7.975	6.607
Social Infrastructure – Built Facilities	4.205	1.36	2.775	1.219
Social Infrastructure – Outdoor Recreation and Open Space	5.7	1.755	3.715	0.07
Public Realm	2.0	0	2.0	0
Emergency Services	1.2	0	1.2	0
Waste and Recycling	1.4	0	1.4	0
Gypsy and Travellers Sites	1.5	0	1.5	0
Total Infrastructure Need	263.428	103.556	114.502	44.067

Source: Original research for this IDP

Infrastructure requirements – Strategic Sites

17.9 Infrastructure by category and cost by Strategic Sites is as follows:

Table 17.5: infrastructure by category for Strategic Sites

Infrastructure Type	Estimated cost attributable to Strategic Sites (£m)
Education	73.00
Transport	57.67
Healthcare	2.76
Social Infrastructure – Built and Outdoor Facilities	6.7
Waste and Recycling	1.4
Police Base	1.2
Gypsy and Travellers site	1.5
Public Realm	2.5
Green Infrastructure	9.4
Total	156.13⁴⁴

Source: original research for IDP

17.10 The total infrastructure bill for the strategic sites represents around 49% of the cost of the total infrastructure requirements over the Plan period.

Potential infrastructure funding

17.11 Table 17.6 below examines each of these funding sources in further detail.

Self funded and voluntary Contributions

Table 17.6: Sources of infrastructure funding

Source	Details	What could this source fund?	Relevance
Self funded and voluntary contributions schemes			
Self funded	Any investment that can be repaid in full or in part from revenue streams	The two parking interventions identified in the transport section and also new bus services, where contributions could match the new revenue generated	High
Voluntary contributions and capital programmes	Any capital and revenue contributions towards the interventions	No current borough council capital funding towards infrastructure identified in the IDP, and only very limited potential from HCC's LTP Capital Block allocation set at £4.568m over the next 3 years for the 10 Hertfordshire districts	Low

⁴⁴ This is a much larger sum than that shown in Table 5.8 relating to the strategic sites, as it includes infrastructure items required for the development of the key sites that are either development costs (e.g. highway works at Brookfield) or which cannot be assigned to that development as they are site development opportunities not specifically attributable to that development (e.g. Police Base at Brookfield)

Developer Contributions

Table 17.6: Sources of infrastructure funding (continued)

Source	Details	What could this source fund?	Relevance
Developer contributions			
Developer contributions – s106	Legal agreement to fund (or provide in lieu of payment) new infrastructure	Significant and relevant interventions particularly associated with the strategic sites, covering transport education, health and other infrastructure provision	Very High
Developer contributions - CIL	Floorspace based developer contribution towards the cost of new infrastructure with investment priorities determined by the Borough Council as charging authority	Needs to be introduced by the borough council Can fund a wide range of interventions not fundable by s106 contributions, particularly some of the smaller scale non site specific interventions	High
Developer contributions - 'Strategic CIL'	The potential for a strategic CIL along the lines of the London Mayoral CIL which secured cross authority funding for Crossrail	A possibility for Crossrail 2 in the county (and the new stations) although would require these to be the highest county priority <u>and</u> a Hertfordshire-wide approach	Low at present
Developer contributions – a Local Infrastructure Tax	Not yet introduced to replace a CIL but a possibility – would likely to be a universal charge on all development rather than a partial one like CIL	Much the same as for CIL	Low at present

Programme and Strategy Funding

Source	Details	What could this source fund?	Relevance
Programme and strategy funding			
Local Growth Deal	An ongoing annual funding programme administered by the LEP (albeit the annual renewal of this fund appears suspended). However, A funding programme administered by the LEP which has already successfully achieved Growth Deal 3 funding the new bridge at Essex Road (see section 7)	Could be utilised to fund any scheme where there are economic, employment and skills objectives which would be met – obvious candidates are funding support for the Brookfield and Park Plaza schemes and the two new stations. But there is a question mark around the fund at present with no annual round (Growth Deal 4) yet to take place this year	Medium (given the uncertainty around the fund)

Table 17.6: Sources of infrastructure funding (continued)

Source	Details	What could this source fund?	Relevance
Programme and strategy funding (continued)			
National Productivity Investment Fund (NPIF)	A competitive bidding programme for. An initial £22bn identified in autumn 2016 has now been increased to £31bn in the November 2017 budget, all for programmes running from 18/19 – 2022/23. Significant infrastructure programmes forming part of the NPIF are highlighted below	Any infrastructure but particularly for transport, and more generally to unlock difficult sites	High – this looks like being a major infrastructure funding stream for years to come
NPIF: Housing Infrastructure Fund	A £2.3bn capital grant fund to unlock development and promote growth. Initially confirmed in July 2017 (with the first round of bids submitted by September 2017) this has subsequently expanded in the November 2017 budget by £2.7bn to support growth in high demand area, bringing the total investment available to £5bn	Could be considered for the borough council's strategic housing sites if there is a gap between infrastructure need and scheme viability	High, as this has the appearance of a high value fund which will regularly be refreshed
NPIF: Home Building Fund	A fund administered by Homes England, offering both development finance loans funding and infrastructure finance loans to developers available for draw down up to 31 st March 2021. Initially set at £3bn, this has been expanded to £4.5bn, with extra funds to help SMEs	Not a fund that local authorities have access to but the government seems to place great store by this fund as a way of getting developers and landowners overcome stalled projects that need pump priming investment	High, again a significant fund for funding new infrastructure
National Productivity Plan - Urban Congestion Fund	A competitive bidding programme for Government Funds made available through the National Productivity Plan - £490m from April 2018	Any scheme to ease congestion to improve productivity, unlock economic and job creation potential and enable new housing development (Bids closed June 2017)	Low unless renewed

Table 17.6: Sources of infrastructure funding (continued)

Source	Details	What could this source fund?	Relevance
Programme and strategy funding (continued)			
NPIF: Small sites: Infrastructure and remediation	A £630m grant fund	Infrastructure for some of the smaller urban capacity sites for remediation and infrastructure to accelerate the building of homes	Potentially high - new fund
NPIF: Local Authority house building: additional investment; and Land Assembly Fund	Two funds of £1bn and £1.1bn £1.1bn respectively. Not infrastructure funds in their own right, but will help to secure infrastructure	Two funds of £1bn and £1.1bn £1.1bn respectively. Not infrastructure funds in their own right, but will help to secure infrastructure	Potentially high for authorities who wish to take a proactive role in housing and infrastructure delivery
Road Investment Strategy (RIS) and Roads Programme	The government's funding programme for investment in the Strategic Road Network through RIS 1 (2015 – 20) with research phase on RIS 2 (2020 - 25) ⁴⁵	RIS and the Roads programme has a focus on the Strategic Road Network and apart from the announcement of funding for M25 junction 5 (RIS 1) there are no current schemes identified for the borough	Low unless SRN extended to include the A10
New Stations Fund	A regularly renewed Network fund (£20m 2013, a further £20m 2016) to contribute towards the cost of new stations – has provided funding for 5 of the 12 most recent stations constructed in the UK	A contribution toward the two new stations, assuming the Fund is renewed	Medium to High
Innovation in cycling and walking Fund	Competition for £490,000 of funds to encourage innovative cycling and walking schemes	Any of the cycling and walking proposals in the strategy. Fund is now closed, would be of interest if renewed	Low (High if renewed)

⁴⁵ Unlike RIS1 RIS2 will “map” local and regional housing and growth ambitions and make support for new homes one of the programme's key objectives

Bonds and Loans

Table 17.6: Sources of infrastructure funding (continued)

Source	Details	What could this source fund?	Relevance
Bonds and Loans			
Local Government Bonds	The potential to issue Local Government Bonds, established by the UK bonds agency in July 2016	Any major transportation scheme that scheme where investment repayable through user charges/contributions (the most obvious being Business Rates, so Brookfield and Park Plaza might be high priorities)	Medium
A 'Warrington style' bond	As for Local Government Bonds but by an individual district (Warrington Borough Council issued a bond of £150m in 2015, much of it for town centre regeneration	Similar to the UK bonds. An alternative is the Public Works Loan Board. The borough council does not currently favour borrowing to invest in infrastructure however	Medium
Public Works Loan Board (PWLB) funds	Similar to bonds but government money (through the National Loan Fund). Rates are at an all-time low (50 year loans currently charging around 3.0% p.a)	Any capital projects, but generally those where income can be generated to repay both interest and principal (e.g. fares, enhanced business rates) so major transportation projects (contribution to Northern Line Extension)	Medium
Business Rates Supplements	Allowable under Supplements Act 2009. Max 2p limit on supplement, subject to ballot of those affected	For any economic development purposes, so new stations, Park Plaza and Brookfield are all potential. Possibly tied in with other funding sources (e.g. made a contribution to Crossrail 1) but generally not widely used and small scale	Low to Medium
Land Value Capture	The concept of monetising and capturing for public infrastructure purposes the increase in land values that arise from major public investment (typically major public transport schemes)	Widely used abroad in relation to mass transit schemes (Hong Kong, Beijing, San Francisco) and part funding the Northern Line extension, this could be a consideration in relation to Crossrail 2 in the borough – but much more research would be needed, and it has a patchy record	Low at present

Table 17.6: Sources of infrastructure funding (continued)

Source	Details	What could this source fund?	Relevance
Bonds and Loans (Continued)			
Local Government Pension Scheme	The government has required the 91 Local Government Pension Funds to pool their assets into 8 pools to facilitate greater investment in infrastructure. Pools to be 'live' by 2018	Pools are more likely to be invested indirectly through infrastructure funds or bonds. rather than fund directly. There may be some scope to invest directly in lower risk, well managed larger projects that pass high level due diligence tests	Low to medium post 2018
Other Tax Changes, Land value Tax	Long term possibilities involve the devolution of currently national tax raising mechanisms to local authorities (e.g. income taxes and property taxes, VAT) and/or powers to develop new funding mechanisms ⁴⁶ . The potential of a more general Land Value Tax has also been mooted in some quarters	Most of these are embryonic ideas at the moment and are not initiatives that are considered likely to deliver new infrastructure in the borough. However, they should not be entirely discounted and remain interesting concepts for the future	Low

Multiple Source Infrastructure Funding

Source	Details	What could this source fund?	Relevance
Multiple Source Infrastructure Funding			
Funding of infrastructure through multiple means	The concept of infrastructure being funded from a variety of sources (developer contributions, government funding programmes, bonds and loans)	Increasingly the way the funding of major transportation infrastructure projects is being achieved throughout the UK, although needs strong partnerships and tight governance arrangements	High

17.12 The above list is not entirely exhaustive, but focuses on the main opportunities, although all potential needs to be explored.

Other support for infrastructure investment – the 2017 budget

17.13 The November 2017 budget contained a number of infrastructure related funding pronouncements, some relevant to infrastructure planning in the borough (with others not currently relevant but may become some if the initiatives announced eventually move into the mainstream):

⁴⁶ Appears likely in the first instance to be limited to mayoralities and combined authorities

- **Transforming Cities Fund:** £1.7bn from the NPIF to support intra city transport by improving connectivity, reducing congestion and utilising new technology. For cities and combined authorities with elected metro mayors. but of greater relevance if fund extended to other areas in future
- **Digital Rail upgrades:** £84m for start of the art in cab signaling across a variety of services
- **National Infrastructure Commission Study on Freight:** To be published in 2019, will look at tackling urban congestion, decarbonising and new technologies such as truck platooning
- **5G rollout:** £160m for investment in the next generation of mobile communications
- **Local Full-Fibre Networks:** A £190m Challenge Fund that local areas around the UK will bid for to encourage faster rollout of full fibre networks by industry
- **Sustainable investment in energy:** £557m made available to support low carbon electricity and protect it from energy market volatility through Contracts for Difference (CFD), a private law contract between a low carbon electricity generator and the Low Carbon Contracts Company (LCCC), a government-owned company
- **Improvements in Delivery efficiency:** The government will use its purchasing power to drive the adoption of modern methods of construction such as offsite manufacturing, with a presumption in favour of this construction technique from 2019 where it represents best value for money. Potentially this will drive down infrastructure costs where new buildings are required over time
- **National Infrastructure Commission pipeline of projects:** In December 2017 the NIC set out a 10 year projection of public and private investment of around £600bn over this period
- **Local Infrastructure Rate:** The government is intending to support the offer of up to £1bn of discounted borrowing to local authorities to support infrastructure projects that are high value for money, with rates proposed at gilts (rate government borrows at) + 0.6%, with repayment between 3 – 50 years.

Community Infrastructure Levy (CIL)

- 17.14** The national context to CIL is provided in the National Planning Policy Framework (NPPF) (March 2012).
- 17.15** The Borough Council is seeking to adopt a CIL in 2019/20.
- 17.16** CIL is charged on a £ per m² basis and it is intended to complement mainstream public funding and developer funding of new infrastructure, the latter secured through the well-established system of planning obligations.
- 17.17** In April 2015 a number of restrictions were introduced to restrict the pooling of s106 agreements. However, in November 2017 the government announced the that it is consulting on changes to CIL, the main changes proposed being:

- removing restrictions on Section 106 pooling towards a single piece of infrastructure where the local authority has adopted CIL, in certain circumstances (such as where the authority is in a low viability area or where significant development is planned on several large strategic sites) to remove the complexity that pooling restrictions can generate
- speeding up the process of setting and revising CIL to make it easier to respond to changes to the market, particularly in areas of high value uplift (such as around stations)
- allowing authorities to set rates which better reflect the uplift in land values between a proposed and existing use
- changing indexation of CIL rates to house price inflation, rather than build costs

The nature of government funding programmes

17.18 Although government funding programmes change over time, they are likely to be an enduring means of funding of specific items of infrastructure. Following trends in programmes is important, as is recognising the following:

- they are essentially short term in nature, with many seemingly ‘one off’ programmes (e.g. the Home Building Fund); some are seem arbitrarily announced programmes (e.g. the New Stations Fund); and others are apparently cyclical in nature but which do not look ahead more than 5 years (the Growth Deal, The Roads Investment Strategy).
- Few funds seek to address infrastructure needs in the longer term. This seems unlikely to change in the short term at least.
- Long term infrastructure planning is predicated on the likelihood of a long term programme of government funding initiatives. For the purposes of this IDP, it is assumed that this is likely to be the case. It is possible to assume that funds will be likely to be made available in particular for the following three categories of investment:
 - **ensuring the supply of new housing to support growth:**(in line with the objectives contained within the Housing White Paper and to that end, unlocking any sites that are potentially prevented from being brought forward through issues in delivering infrastructure
 - **dealing with vehicle pollution** funds continuing to be made available over the long term to tackle congestion and delay – and measures that will reduce pollution and ensure the UK is able to deliver its Air Quality Plan
 - **supporting economic development and regeneration and increasing productivity:** so therefore, measures which will promote both the government’s Industrial Strategy and its Productivity Plan

A strategy for funding all the infrastructure identified in this IDP

17.19 When all the above factors are taken into account, the Infrastructure Funding Gap to be filled by public and private funding sources beyond those already identified is as follows:

Table 17.7: The infrastructure funding gap and how it could be bridged (sums rounded to nearest £m)

Factor	Financial figure identified	Reference in the IDP/calculation
Infrastructure Need (£m)		
Total Infrastructure cost	263	Table 17.4
Infrastructure Funding Contributions		
s106 on strategic sites – assumption that entire requirements identified in IDP can be met via this means	127	Section 5 (particularly Table 5.8) and also Table 17.5
CIL contribution – assume £100/sq.m. on 66% of SLAA/urban capacity/windfall sites	9	Assumes £100/sq.m. on 66% ⁴⁷ of SLAA/Urban Capacity/Windfalls dwellings with average dwelling size 80 sq.m.
Transport schemes already with funding	39	See Table 7.10 in section 7 with certain schemes in table removed to avoid double counting
Secondary healthcare costs met by Department for Health	19	See section 8
Overall Total from anticipated funding contributions £194m		
Infrastructure Funding Gap to be bridged	£67m	
Bridging the Gap Variant 1: Government Programmes	Ensuring delivery of housing supply	£22m
	Congestion busting/air quality	£20m
	Productivity improvements	£25m
Bridging the Gap Variant 2: Government programmes + Bonds and Loans	Ensuring delivery of housing supply	£18m
	Congestion busting/air quality	£12m
	Productivity improvements	£12m
	Bond/loan	£25m
Bridging the Gap Variant 3: Bonds and Loans	Bond/loan	£67m

Sensitivity testing

17.20 The above table represents the most likely scenario of delivering the necessary infrastructure but there are possible alternative scenarios which may influence delivery, and it is worth noting them and assigning values to them. Key factors which may influence the headline figures could potentially include the following:

⁴⁷ 33% reduction for exemptions from CIL assumed

Table 17.8: Sensitivity Testing

Area of sensitivity	Nature of potential factor	Potential impact	Likely significance
Education provision	HCC as local education authority is 'funder of last resort'	There is the potential for HCC to make up any funding balance	Low
Education provision	HCC adopts a lower rate of pupil yield – currently this is 1 form of entry per 500 pupils; many other local authorities adopt a lower pupil yield. 1fe/850 dwellings could be considered	Would cut the infrastructure education bill by 40% or around £30m	Medium – possibly some justification for this, but no research has been undertaken
Charging a CIL on the borough's Strategic Sites	The assumption has been made for the IDP that a zero CIL will be charged on these sites on the assumption that s106 requirements will be such as to render a CIL charge unviable. But if viability work suggests that this is not the case a CIL should be charged	Taking into account exemptions, a modest CIL charge of £50/sq.m. on both housing and employment/retail development would raise an additional charge of £19m over the Plan period, or around 7% of the total infrastructure bill	Probably low, as s106 requirements relating to the strategic sites appear reasonably onerous
Residual s106 on non-strategic sites	Again, for the IDP an assumption has been made that s106 agreements will not be entered into on the non-strategic sites if CIL is introduced (on viability grounds); however, it is possible that this is not the case	Experience elsewhere ⁴⁸ suggest some authorities still enter into planning obligations on occasions and for modest amounts with a CIL in place; an assumption of £1,000 a dwelling would net £1.8m over the Plan period	Low – case for doing so is unproven and sums involved are very small
Enhanced s106/CIL rates	Paragraphs 17.21 – 17.24 below considers the ongoing pan Hertfordshire research on developer contributions, which may conclude that developers could make an enhanced contribution to infrastructure costs without threatening viability	If there were a case higher charges, at the rates set out in paragraph 17.24 below then it might be possible to secure an extra £66m of developer contributions (around 25% of the total infrastructure bill) compared to 'conventional' levels of s106/CIL funding	Currently low, but an interesting initiative that is worth following
Switching from secondary to primary healthcare infrastructure	Currently the lion's share of Health infrastructure (87% locally) is secondary healthcare provided on a largely sub-regional basis and funded nationally. A shift provision towards more locally/community based provision then the funding model might be via developer contribution, as for primary healthcare	The IDP estimates that just under £19m of healthcare infrastructure need is secondary healthcare, nationally funded. If a significance proportion of this were needed to be funded locally from developer contributions, then this would put pressure on development finances	Medium – this is something that needs to be watched and factored in if necessary to future infrastructure planning

Source: original research for IDP

⁴⁸ Hertsmere Borough Council for example

Maximising developer contributions

- 17.21** Emerging research commissioned by the County Council on behalf of the pan-Hertfordshire member group on infrastructure planning - HIPP - is due to be published in 2018 and is likely to draw the conclusion that much more can be expected from developers through the contributions they make to the cost of new infrastructure through s106 agreements and CIL.
- 17.22** This emerging work is expected to conclude that developer contributions can be maximised if the following principles are adopted in funding models to establish the financial contributions that can be expected to be secured towards new infrastructure:
- the land value input to the model is based on existing use values plus a modest uplift (of say 20%) rather than other factors such as market value or acquisition price
 - developer profit levels are pegged at say 20% and are taken as profit on scheme cost rather than profit on scheme value
 - efforts are made to reduce build costs, potentially through substituting modern methods of construction (factory built components assembled on site) rather than traditional construction techniques
- 17.23** With these principles in place it is possible to consider elevated levels of developer contributions by way of s106 agreements and CIL.
- 17.24** Viability studies will establish the appropriate level in due course. For sensitivity testing purposes in Table 17.8 above the following average levels of enhanced contributions were proposed:
- s106 agreements: an average of £30,000 per dwelling
 - CIL - £250/sq.m.
 - Employment and retail - £100/sq.m.

Future gazing – revolutionary changes and infrastructure funding

- 17.25** This section concludes with some future gazing, considering what is happening in terms of technological, cultural and behavioural changes that are taking place and how it might affect infrastructure requirements in the future.
- 17.26** We have termed these changes ‘revolutions’ given the fundamental changes in the way we live, work and play that are likely to happen, even if only partially by 2033.

Table 17.9 – Technological, cultural and behavioural changes that are likely to affect future infrastructure planning

'Revolution'	Possible Impact
The Digital Revolution	The 'Queen of Revolutions' making many other changes possible e.g. use of algorithms, virtual offices, doctor's appointments, home learning environments, home shopping etc
The Algorithmic Revolution	Sets up autonomous cars, truck tethering, drone technology for deliveries, roadspace management, in cab train signalling
The Power Revolution	From electric cars (especially when power by new generation lithium-sulphur batteries), micro generation using solar panels, ground source heat pumps etc, rollout of Smart Meters
The Sharing Revolution	Moving away from direct ownership of objects into 'as needed' facilities such as Uber, Airbnb
The Employment Revolution	Changes such as working from home, 3D printing of a range of artefacts, the growth in the 'Gig Economy'
The Internet of Things Revolution	Interconnections via the Internet of computing devices embedded in everyday objects, enabling them to send and receive data

Source: original research for IDP

17.27 Changes in infrastructure planning are not certain or necessarily linear, and as such not guaranteed to reduce requirements in the short term e.g.:

- the move to electric cars may temporarily lead to higher than current levels of home energy use until more efficient home power generation and battery technology reverses this
- in setting up the UK's roads for autonomous driving vehicle engineers may err on the side of caution and set high vehicle separation tolerances, initially actually reducing road space, until the technology is fully proven and roadspace capacity dramatically increases.

17.28 The overall trend in the long term will be the ability to undertake a range of tasks without having to take up space in somewhere other than the home, meaning fewer journeys and less need to occupy a work station, a doctor's surgery or even perhaps a classroom; almost certainly this will either mean a drop in infrastructure requirements, or less pressure on existing facilities.

SECTION 18: GOVERNANCE

Introduction

- 18.1** Given the funding and delivery issues identified in Section 17 it will be important to consider infrastructure governance arrangements – in other words how infrastructure funding it identified, prioritised and overseen to ensure both probity and value for money are secured. No specific governance arrangements have been considered or agreed by Broxbourne Borough Council but the following issues will be considered (including how to manage CIL expenditure if a CIL is introduced).

Table 18.1: Key governance issues

Key Governance Issue	Comment
The body that will make decisions on infrastructure prioritisation and CIL expenditure (if a CIL is introduced) and other infrastructure funding considerations	This could be an existing body within the district (e.g. Cabinet) or a bespoke arrangement, possibly involving outside bodies, although accountability needs to remain with the borough council
The plan/strategy on which infrastructure expenditure decisions (and CIL if introduced) will be based	This could be an overall vision and strategy although it could be more 'business plan' in format to allow for profiling and allocations of infrastructure expenditure. If CIL is introduced the plan/strategy will provide the linkage between actual CIL income expenditure and the CIL Regulation 123 list (the list a CIL charging authority is obliged to published defining what it intends to spend CIL on)
A review mechanism	As infrastructure funding is secured (particularly s106 and CIL expenditure if CIL is introduced) for infrastructure funding not linked to a specific item of expenditure, there is likely to be a rolling programme of receipts and expenditure, a review mechanism will be essential. This could potentially be in the form of an annual delivery plan
An accounting and monitoring mechanism	A means of assessing funding bids for new infrastructure against objectives determined through the business plan/strategy and also a means of ensuring funds made available for new infrastructure are being spent in a timely and appropriate fashion
Appropriate contingency arrangements	The inherent nature of infrastructure planning means that calls for funding for projects not currently identified as investment priorities will most probably arise as well as projects with funding allocated that for some reason not being pursued. It will almost certainly be necessary to build in contingencies into the business plan to allow for such eventualities
A possible project bidding process	Infrastructure providers may need a mechanism to allow them to put forward their projects for funding in a way that allows such bids to be assessed against predetermined criteria and against other bid submissions. This will need to happen on a regular cycle and most probably, this will need to take place on an annual basis

Table 18.1: Key governance issues (Continued)

Key Governance Issue	Comment
Procedural and management Protocols, contracts, memoranda of understanding etc	Various arrangements to enable the body making investment decisions to engage contractually with infrastructure providers and to work with others.
Capacity building for funding programme identification and bidding capability	Further capacity building between the borough council and its partners to identify potential infrastructure funding sources and enhance bidding capabilities for such funds

18.2 Other decisions on governance the borough council considers it will need to make are as follows, particularly if a CIL is introduced:

Table 18.2: Decisions to be made by the borough council on governance issues

Key governance area	Potential decision to be made
Governance body	<ul style="list-style-type: none"> • Will this just comprise representatives of the charging authority? • Or will there be external partners? If so, what will their role be? • Will the governance body be granted formal powers or will it be advisory? • Is it expected that the governance body will develop a role in defining the Regulation 123 list, including subsequent revisions, if a CIL is introduced?
Infrastructure providers	<ul style="list-style-type: none"> • Will infrastructure providers have a formal role as members of the governance body or will they be outside of the process? • Will there be any specific arrangements for the County Council as the major provider of infrastructure?
Scope of governance arrangements	<ul style="list-style-type: none"> • Will governance relate just to the charging authority's administrative area? • Or will there be a potential willingness to develop arrangements across boundaries to deliver sub regional infrastructure? • At the local level will there be a willingness to devolve a greater proportion of CIL revenues (if a CIL is introduced) to the area level?
Funding mechanisms for pooled s106 and CIL (if a CIL is introduced)	<ul style="list-style-type: none"> • Will there be a willingness to consider the deployment of CIL/pooled s106 as part funder of infrastructure with other funding sources? • Will there be a willingness to use CIL/pooled s106 as a pump priming mechanism for stalled projects? • Will there be an expectation that CIL/pooled s106 will be spent in the locality in which they are raised or will there be a willingness to pool CIL/pooled s106 with adjoining charging authorities?

SECTION 19: INFRASTRUCTURE FUNDING IN THE PLAN'S EARLY YEARS

Introduction

- 19.1** Particular attention needs to be given to the planning, funding and delivery of infrastructure for the Plan's first 5 years to March 31st 2023, to ensure that it is secured in a timely fashion and this form a platform for future growth. Over the next 5 years, as identified in Chapter 4, it is estimated that 2171 new dwellings can be expected to be delivered. This represents around 35% of the total overall growth expected over the plan period.

A commitment to the rigorous pursuit of timely and high quality infrastructure

- 19.2** To maximise the delivery of the early infrastructure the borough council will commit itself and the infrastructure providers operating in the borough to the following measures:

Table 19.1: The borough council's commitment in relation to the delivery of timely infrastructure in the local plan's early years

Measure	Comment
The continuous refinement, exploration and updating of precise infrastructure needs will continue	The borough council will not halt its commitment to identify infrastructure needs for its growth strategy with either the publication of this document or the adoption of the local plan. Instead, needs will continue to be kept under review
Ongoing masterplanning work on the strategic sites will develop and refine infrastructure need and its funding	Masterplanning work on these sites has to date defined development principles but such work will be kept under review and enhanced as appropriate in the process of these sites moving through from the planning to the implementation phase
Demands will be made of Infrastructure providers to make their case for need	The dialogue that has been established between the borough council and infrastructure providers will continue
Best use to be made of spare infrastructure capacity	The borough council will push infrastructure providers to make the maximum use of any spare infrastructure capacity in the currently the system through appropriate resource management systems
An early introduction of CIL	The borough council is minded to introduce a CIL and will seek to do so at the earliest opportunity (or should CIL be replaced with a local infrastructure tax, take such steps are as necessary to introduce that measure)
The establishment of appropriate governance arrangements	These will establish at the earliest opportunity to allow the direction of CIL, pooled s106 and other income towards infrastructure investment priorities
Bidding capability for existing and emerging infrastructure funds will be enhanced	The borough council will build capacity within the organisation and with external partners to take the maximum possible advantage of infrastructure funding particularly those which involve a competitive bidding process

Measure	Comment
Pursuing viability work	The borough council needs to undertake its viability work and the emerging county council led study into viability issues (see Chapter 17), particularly if there is strong evidence that other Hertfordshire local authorities have been under ambitious in seeking developer contributions through s106 and in setting CIL rates
Continue to promote work with the Hertfordshire LEP	The borough council will continue to explore the opportunities for securing infrastructure funding through later rounds of the LEP's Growth Deal fund, and likewise, with the forthcoming refresh of the LEP's Strategic Economic Plan, the authority will stress its case for access to growth related infrastructure investment
Promote the case for access to strategic transportation funding	In terms of transport the borough council will press its case for priority to be given to the A10/M11 Growth and Transport Plan, and also advance its priorities with the County Council for its priorities for major transportation projects to be funded through LTP4
Support for innovative infrastructure solutions and funding sources	The borough council will give particular consideration to funding that is outwith the mainstream sources of funding, or more generally any measures that will reduce the overall infrastructure burden without any diminution of quality of services provided to the borough's residents and its businesses
Making the best use of newly emerging technologies in relation to infrastructure provision	Finally, whilst the introduction of new technologies will never be a substitute for the provision of much needed new infrastructure to support existing and emerging communities, every opportunity should be taken to ensure such technologies play their part in keeping down costs of new provision as well as making maximum use of any existing provision

SECTION 20: INFRASTRUCTURE FUNDING IN THE PLAN'S LATER YEARS

Introduction

- 20.1** In addition to the continuation of actions identified in the Plan's earlier years (see Section 19) attention needs to be given at an early stage to the planning, funding and delivery of infrastructure for the Plan's final 10 years from 1st April 2023. Over this period, as identified in Chapter 4, it is estimated that around 3969 new dwellings can be expected to be delivered. This represents around 65% of the total overall growth expected over the plan period.

Specific actions that can be undertaken now to promote growth

- 20.2** The following actions can be explored to help future proof longer infrastructure planning and delivery issues identified in the IDP:

Table 20.1: Longer term actions to promote growth

Longer Term Action	Comment
Encouraging infrastructure providers to think longer term than the immediate future	<p>Progress has been made on longer term visioning in the county, with a 2050 Transport Vision and a Water Study which considers needs to 2051. Other infrastructure providers need to follow suit. Particular targets are expected to be:</p> <p>Network Rail: current Control Period 2014 – 2019, no planning for period 2020 – 24 until 2018, nothing beyond 2024 Roads Investment Strategy (RIS); current RIS1 runs 2015 – 2020, RIS 2 2020 – 25 currently in research phase, nothing currently beyond 2020 NHS 5 year Forward View: runs 2015 – 2020, nothing currently beyond that date Water Utility Companies Asset Management Plans: current AMP period 2015 – 2020, plans for next period 2020 – 25 not to be finalised until 2019</p>
Seeking to move away from standard metrics for determining needs	In the long term defining needs on a standard 'metric' basis (for schools, GP services etc) is likely to be increasingly unsustainable – instead different models based on actual need and factoring in future regulatory changes, innovation and new financial models should represent the way forward

Broxbourne Local Plan 2018 – 2033

INFRASTRUCTURE DELIVERY PLAN:
INFRASTRUCTURE DELIVERY SCHEDULE

R S Regeneration & Markides Associates

January 2018

The following schedule sets out the known infrastructure requirements considered necessary to support the delivery of the Broxbourne Local Plan 2018 – 33. It should be cross referenced with the relevant chapters of the Infrastructure Delivery Plan, which provides further details of how the calculations on infrastructure need were arrived at.

The IDS describes each individual item of infrastructure; the likely cost (at 2018 prices); how that infrastructure will be funded; who is expected to deliver it; and when it is expected to be delivered, defined by cost assigned to one or more of 3 five year tranches.

Infrastructure items identified but for which a cost has yet to be defined are also listed. The IDS will be updated to add further information and evidence as and when it becomes available up until its finalisation Page 142 provides an overall summary of infrastructure need by category and timescale for delivery.

Summary of Growth Related Infrastructure Need, by category and trajectory

Infrastructure Category	Estimated cost of Delivery (£m)	Timescale for Delivery (expressed in expenditure)		
		2018 - 2023	2023 - 28	2028 - 33
Education	91.37	32.85	31.96	26.56
Transport	132.77	59.39	63.28	10.1
Healthcare	22.783	8.201	7.975	6.607
Social Infrastructure – Built Facilities	4.205	1.36	2.775	0.07
Social Infrastructure – Outdoor Recreation and Open Space	5.7	1.755	3.715	0.23
Public Realm	2.5	0	2.0	0.5
Emergency Services	1.2	0	1.2	0
Waste and Recycling	1.4	0	1.4	0
Gypsy and Travellers Sites	1.5	0	1.5	0
Total Infrastructure Need	263.428	103.556	115.805	44.067

Individual Schedules of Infrastructure Need, by Category

A) Education

Infrastructure Category	Infrastructure Item	Estimated cost of Delivery (£m)	Funding Sources	Delivery Partners and mechanisms	Timescale for Delivery (expressed in expenditure)		
					2018 - 2023	2023 - 28	2028 -33
Education including Early Years							
Education (Early Years)	3 new Children's Centres (locations to be determined)	1.44	s106, CIL	HCC, Academy/Free School providers, delivered by developers or providers	0.48	0.48	0.48
Education (Primary)	4 new primary schools (at Brookfield Garden Village, Cheshunt Lakeside) Rosedale Park and Albury Ride)	34.38	s106, CIL	HCC, Academy/Free School providers, delivered by developers or providers	7.64	16.47	7.64
Education (Primary)	Extension of up to 7 existing primary schools to meet balance of primary school needs (precise locations under consideration)	12.62	s106, CIL	HCC, Academy/Free School providers, delivered by developers or providers	9.30	0	6.01
Education (Secondary)	New Secondary School (minimum 6fe illustrated, may be up to 10fe) ⁴⁹	24.36	s106, CIL	HCC, Academy/Free School providers, delivered by developers or providers	0	12.43	12.43
Education (Secondary)	Extension of the Borough's other secondary schools to meet the balance of secondary need (precise locations under consideration)	25.16	s106, CIL	HCC, Academy/Free School providers, delivered by developers or providers	15.43	2.58	0
Total Education				By 5 year tranches	32.85	31.96	26.56
				Grand Total	91.37		

⁴⁹ A 10fe new primary school would cost £38.28m, which if ultimately provided would significantly reduce the need to expand existing schools to just over 2fe at a cost of £10.92m

B) Transport

Infrastructure Category	Infrastructure Item	Estimated cost of Delivery (£m)	Funding Sources	Delivery Partners and mechanisms	Timescale for Delivery (expressed in expenditure)		
					2018 - 2023	2023 - 28	2028 -33
Transport							
Transport (Highways)	Junction 25 of the M25: capacity improvements	26.9	Highways England (Committed scheme)	Highways England	26.9	0	0
Transport (Highways)	A10 south of A121/B198: modify existing junction to provide additional arm to serve Park Plaza North and West	0.5	s106 (Park Plaza North/West)	Broxbourne Borough Council with HCC and developers	0	0.5	0
Transport (Highways)	A10 junction with A121/B198: "Hamburger style" junction with N/S priority to improve capacity/flows	7.7	Range of alternative funds – Growth Deal, s106 (Park Plaza)/"Congestion busting" government programme)	Broxbourne Borough Council with HCC	2.5	5.2	0
Transport (Highways)	B198 Lt Ellis Way: new 4 arm junction to Park Plaza	0.75	s106 (Park Plaza West)	Broxbourne Borough Council with HCC and developers	0	0.75	0
Transport (Highways)	A10 at College Road: at-grade improvements	1.0	"Congestion busting" government programme	Broxbourne Borough Council with HCC	1.0	0	0
Transport (Highways)	A10 at Church Lane: at-grade improvements	1.0	"Congestion busting" government programme	Broxbourne Borough Council with HCC	1.0	0	0
Transport (Highways)	Church Lane: reconfiguration of Church Lane/High St Cheshunt roundabout	0.3	s106/CIL	s106/CIL	0.3	0	0
Subtotal Transport (this page)		£38.15m			31.7	6.45	0

Infrastructure Category	Infrastructure Item	Estimated cost of Delivery (£m)	Funding Sources	Delivery Partners and mechanisms	Timescale for Delivery (expressed in expenditure)		
					2018 - 2023	2023 - 28	2028 -33
Transport (cont)							
Transport (Highways)	Church Lane: reconfiguration of Church Lane/Flamstead End Road roundabout	0.25	s106/CIL	Broxbourne Borough Council with HCC	0.25	0	0
Transport (Highways)	Brookfield (Turnford Link Road): construction of a Halfhide Lane to Turnford Interchange Link Road and associated works	8.0	Predominantly s106 (Brookfield Riverside/Garden Village) supplemented by Growth Deal, Home Building Fund, Bonds/Loans etc	Broxbourne Borough Council with HCC and developers	0	5.0	3.0
Transport (Highways)	Brookfield (Halfhide Lane Link Road): new link road, roundabout and associated works	6.0	Predominantly s106 (Brookfield Riverside/Garden Village) supplemented by Growth Deal, Home Building Fund, Bonds/Loans etc	Broxbourne Borough Council with HCC and developers	0	3.0	3.0
Transport (Highways)	Brookfield Garden Village: new distributor road to serve residential development	5.0	Predominantly s106 (Brookfield Riverside/Garden Village) supplemented by Growth Deal, Home Building Fund, Bonds/Loans etc	Broxbourne Borough Council with HCC and developers	2.0	3.0	0
Transport (Highways)	Brookfield Riverside/Garden Village: reconfigured junction and associated works	0.2	Predominantly s106 (Brookfield Riverside/Garden Village) supplemented by Growth Deal, Home Building Fund, Bonds/Loans etc	Broxbourne Borough Council with HCC and developers	0.2	0	0
Transport (Highways)	Brookfield Riverside/Garden Village: improved capacity at Marriott Roundabout	0.2	Predominantly s106 (Brookfield Riverside/Garden Village) supplemented by Growth Deal, Home Building Fund, Bonds/Loans etc	Broxbourne Borough Council with HCC and developers	0.2	0	0
Subtotal Transport (this page)		£19.65m			2.65	11.0	6.0

Infrastructure Category	Infrastructure Item	Estimated cost of Delivery (£m)	Funding Sources	Delivery Partners and mechanisms	Timescale for Delivery (expressed in expenditure)		
					2018 - 2023	2023 - 28	2028 -33
Transport (cont)							
Transport (Highways)	Goffs Lane: reconfiguration of Newgatestreet Road/Cuffley Hill/Goss Lane roundabout	0.25	s106/CIL	Broxbourne Borough Council with HCC	0.25	0	0
Transport (Highways)	Dinant Link Road: new roundabout to serve High Leigh Development	3.0	Secured s106 (High Leigh development)	Broxbourne Borough Council with HCC and developers	3.0	0	0
Transport (Highways)	Dinant Link Road: Sun roundabout improvements	0.15	Secured s106 (High Leigh development)	Broxbourne Borough Council with HCC and developers	0.15	0	0
Transport (Highways)	Hertford Road: Hertford Road/Ware Road roundabout improvements	0.15	Secured s106 (High Leigh development)	Broxbourne Borough Council with HCC and developers	0.15	0	0
Transport (Highways)	Essex Road: Provision of new bridge	6.5	LEP Growth Deal (Committed scheme)	Broxbourne Borough Council with Herts LEP and HCC	6.5	0	0
Transport (Highways)	Essex Road: Improvement with roundabout with Dinant Link Road	0.1	Secured s106 (High Leigh development)	Broxbourne Borough Council with HCC and developers	0.1	0	0
Transport (Highways)	Various locations: New signage	0.1	s106/CIL	Broxbourne Borough Council with HCC and developers	0.1	0	0
Subtotal Transport (this page)		£10.25m			10.25	0	0

Infrastructure Category	Infrastructure Item	Estimated cost of Delivery (£m)	Funding Sources	Delivery Partners and mechanisms	Timescale for Delivery (expressed in expenditure)		
					2018 - 2023	2023 - 28	2028 -33
Transport (cont)							
Transport (Highways)	New Secondary School: access from south	0.58	Construction costs associated with the provision of a new school	HCC/School providers	0	0.58	0
Transport (Highways)	New Secondary School: access from north	0.25	Construction costs associated with the provision of a new school	HCC/School providers	0	0.25	0
Transport (Parking)	Various locations: parking charges/restrictions around stations	0.5	Self funding	Broxbourne Borough Council with HCC	0.5	0	0
Transport (Parking)	Various locations: parking permit schemes in areas of high demand	0.25	Self funding	Broxbourne Borough Council with HCC	0.25	0	0
Transport (Public Transport)	West Anglia Main Line: increased capacity through 4 tracking	-	Network Rail	Network Rail	-	-	-
Transport (Public Transport)	New bus service Between High Leigh and Broxbourne Station via Hoddesdon Town Centre	3.0	A combination of s106, operator contributions and (potentially) bonds/loans	Broxbourne Borough Council with HCC and Bus Operators	1.5	1.5	0
Transport (Public Transport)	New bus service Between Waltham Cross station and Brookfield including key intermediate points	6.0	A combination of s106, operator contributions and (potentially) bonds/loans	Broxbourne Borough Council with HCC and Bus Operators	3.0	2.0	1.0
Subtotal Transport (this page)		£10.58m			5.25	4.33	1.0

Infrastructure Category	Infrastructure Item	Estimated cost of Delivery (£m)	Funding Sources	Delivery Partners and mechanisms	Timescale for Delivery (expressed in expenditure)		
					2018 - 2023	2023 - 28	2028 -33
Transport (cont)							
Transport (Public Transport)	New bus service Between Park Plaza and Waltham Cross station via Waltham Cross Town Centre	3.0	A combination of s106, operator contributions and (potentially) bonds/loans	Broxbourne Borough Council with HCC and Bus Operators	0.5	1.5	1.0
Transport (Public Transport)	Rerouted bus service Reroute service 242 to serve new development at Rosedale Park North	-	N/A	Broxbourne Borough Council with HCC and Bus Operators	-	-	-
Transport (Public Transport)	New railway station Turnford	20.0	A combination of New Stations Fund, s106, Growth Deal Funding and (potentially) bonds/loans	Broxbourne Borough Council with HCC	0	20.0	0
Transport (Public Transport)	New station Park Plaza West	10.0	A combination of New Stations Fund, s106, Growth Deal Funding and (potentially) bonds/loans	Broxbourne Borough Council with HCC	0	10.0	0
Transport (Public Transport)	Various locations: New/upgraded bus stops	0.5	s106/CIL	Broxbourne Borough Council with HCC	0.5	0	0
Transport (Public Transport)	Specific locations: Selective vehicle detection systems to provide bus priority at key locations	0.08	s106/CIL	Broxbourne Borough Council with HCC	0.08	0	0
Transport (Public Transport)	Waltham Cross railway station: Improved bus shelters at Waltham Cross railway station	0.025	S106/CIL	Broxbourne Borough Council with HCC	0.025	0	0
Subtotal Transport (this page)		£33.605m			1.105	31.5	1.0

Infrastructure Category	Infrastructure Item	Estimated cost of Delivery (£m)	Funding Sources	Delivery Partners and mechanisms	Timescale for Delivery (expressed in expenditure)		
					2018 - 2023	2023 - 28	2028 -33
Transport (cont)							
Transport (Public Transport)	Broxbourne Station: junction improvements	0.15	s106/CIL	Broxbourne Borough Council with HCC	0.15	0	0
Transport (Public Transport)	Various locations: Real Time Information displays at bus stops	0.15	s106/CIL	Broxbourne Borough Council with HCC and bus operators	0.15	0	0
Transport (Public Transport)	Various locations: Real Time Information displays at locations generating a large number of trips (e.g. GP surgeries, railway stations)	0.03	s106/CIL	Broxbourne Borough Council with HCC, bus and train operators, service providers	0.03	0	0
Transport (Public Transport)	General: promotion of the Intalink mobile app	0.25	s106/CIL	Broxbourne Borough Council with HCC	0.25	0	0
Transport (Public Transport)	General: integrated BUSnet ticket	0.25	s106/CIL	Broxbourne Borough Council with HCC	0.25	0	0
Transport (Smarter Choices)	Various locations: Area Wide Travel Plans for key employment area	0.04	s106/CIL	Broxbourne Borough Council with HCC, employers	0.04	0	0
Transport (Smarter Choices)	Broxbourne, Cheshunt and Waltham Cross stations: Station Travel Plans	0.1	s106/CIL	Broxbourne Borough Council with HCC, Tran operators	0.1	0	0
Transport (Smarter Choices)	Schools in Broxbourne: Travel Plans	0.1	s106/CIL	Broxbourne Borough Council with HCC, schools	0.1	0	0
Subtotal Transport (this page)		£1.07m			1.07	0	0

Infrastructure Category	Infrastructure Item	Estimated cost of Delivery (£m)	Funding Sources	Delivery Partners and mechanisms	Timescale for Delivery (expressed in expenditure)		
					2018 - 2023	2023 - 28	2028 -33
Transport (cont)							
Transport (Smarter Choices)	Various target groups: a programme of Personalised Journey Plans	0.5	s106/CIL	Broxbourne Borough Council with HCC	0.5	0	0
Transport (Smarter Choices)	General: a Communications Strategy for all Transport Strategy measures	0.06	s106/CIL	Broxbourne Borough Council with HCC	0.06	0	0
Transport (Smarter Choices)	General: develop a Car Share scheme	0.25	s106/CIL	Broxbourne Borough Council with HCC	0.25	0	0
Transport (Smarter Choices)	Various locations: a network of charging points for electric vehicles	0.08	s106/CIL	Broxbourne Borough Council with HCC	0.08	0	0
Transport (Walking and Cycling)	Dinant Link Road/Essex Road roundabout: signalised crossing for pedestrians	0.05	s106, CIL, Government programmes for walking and cycling initiatives	Broxbourne Borough Council with HCC	0.05	0	0
Transport (Walking and Cycling)	Charlton Way: footpath along W side between Haslewood Avenue and Dinant Link Road	0.025	s106, CIL, Government programmes for walking and cycling initiatives	Broxbourne Borough Council with HCC	0.025	0	0
Transport (Walking and Cycling)	Dinant Link Road: at grade signalised crossing	0.05	s106, CIL, Government programmes for walking and cycling initiatives	Broxbourne Borough Council with HCC	0.05	0	0
Transport (Walking and Cycling)	Lord Street: widened/improved footway	0.10	s106, CIL, Government programmes for walking and cycling initiatives	Broxbourne Borough Council with HCC	0.10	0	0
Subtotal Transport (this page)		£1.115m			1.115	0	0

Infrastructure Category	Infrastructure Item	Estimated cost of Delivery (£m)	Funding Sources	Delivery Partners and mechanisms	Timescale for Delivery (expressed in expenditure)		
					2018 - 2023	2023 - 28	2028 -33
Transport (cont)							
Transport (Walking and Cycling)	Cheshunt Station: improved footpath links with Delamare Road development	0.1	s106/CIL	Broxbourne Borough Council with HCC	0.1	0	0
Transport (Walking and Cycling)	Old Pond: reconfigurations with signalised junction and crossing points for pedestrians	3.0	s106/CIL	Broxbourne Borough Council with HCC	0	3.0	0
Transport (Walking and Cycling)	Cycle network: improvements and new routes/connections	8.1	s106, CIL, government programmes for walking and cycling initiatives	Broxbourne Borough Council with HCC	3.0	3.0	2.1
Transport (Walking and Cycling)	Various locations: improved signage	0.1	s106, CIL, government programmes for walking and cycling initiatives	Broxbourne Borough Council with HCC	0.1	0	0
Transport (Walking and Cycling)	Various locations on old A10 (A1170): measures to encourage more walking and cycling	1.0	s106, CIL, government programmes for walking and cycling initiatives	Broxbourne Borough Council with HCC	1.0	0	0
Transport (Walking and Cycling)	Schools within the borough: creation of School Safety Zones	1.0	s106, CIL, government programmes for walking and cycling initiatives	Broxbourne Borough Council with HCC	1.0	0	0
Transport (Walking and Cycling)	3 Level Crossings: closures at Trinity Lane, Windmill Lane and Slipe Lane crossings	0.75	s106, CIL, government programmes for walking and cycling initiatives	Broxbourne Borough Council with HCC	0.75	0	0
Transport (Walking and Cycling)	Park Lane: pedestrian/cycle bridge to allow access to Park Plaza North	2.0	s106, government programmes for walking and cycling initiatives	Broxbourne Borough Council with HCC, developers	0	2.0	0
Subtotal Transport (this page)		£16.05m			5.95	8.0	2.1

Infrastructure Category	Infrastructure Item	Estimated cost of Delivery (£m)	Funding Sources	Delivery Partners and mechanisms	Timescale for Delivery (expressed in expenditure)		
					2018 - 2023	2023 - 28	2028 -33
Transport (cont)							
Transport (Walking and Cycling)	Park Plaza North and West Pedestrian/cycle bridge	2.0	s106, government programmes for walking and cycling initiatives	Broxbourne Borough Council with HCC, developers	0	2.0	0
Transport (Walking and Cycling)	Various locations Dropped kerbs with tactile paving	0.25	s106, CIL, government programmes for walking and cycling initiatives	Broxbourne Borough Council with HCC	0.25	0	0
Transport (Walking and Cycling)	Various locations Improved cycle parking facilities	0.05	s106, CIL, government programmes for walking and cycling initiatives	Broxbourne Borough Council with HCC			
Subtotal Transport (this page)		£2.30m			0.25	2.0	0
Total Transport				By 5 year tranches	59.39	63.28	10.1
				Grand Total	132.77		

C) Healthcare

Infrastructure Category	Infrastructure Item	Estimated cost of Delivery (£m)	Funding Sources	Delivery Partners and mechanisms	Timescale for Delivery (expressed in expenditure)		
					2018 - 2023	2023 - 28	2028 -33
Healthcare							
Healthcare (Primary Healthcare)	Premises for an additional 7.4 full time equivalent GPs (in locations to be determined)	3.829	S106, CIL	Healthcare consortia overseen by NHS England	1.378	1.341	1.110
Healthcare (Secondary Healthcare)	Provision of acute secondary healthcare services	16.031	Government funding, private finance initiatives	Healthcare providers overseen by Clinical Commissioning Groups	5.613	5.613	4.804
Healthcare (Secondary Healthcare)	Provision of additional mental Healthcare Services	1.246	Government funding, private finance initiatives	Healthcare providers overseen by Clinical Commissioning Groups	0.435	0.406	0.206
Healthcare (Secondary Healthcare)	Provision of additional mental Healthcare Services	1.677	Government funding, private finance initiatives	Healthcare providers overseen by Clinical Commissioning Groups	0.615	0.615	0.487
Total Healthcare				By 5 year tranches Grand Total	8.201	7.975	6.607
					22.783		

D) Social Infrastructure – Built Facilities

Infrastructure Category	Infrastructure Item	Estimated cost of Delivery (£m)	Funding Sources	Delivery Partners and mechanisms	Timescale for Delivery (expressed in expenditure)		
					2018 - 2023	2023 - 28	2028 -33
Social Infrastructure – Built Facilities							
Sports Hall	1 x 6 Court Sports Hall	2.565	s106 CIL or part of new school provision/commercial	Local authority/commercial providers/school provider	0	2.565	0
Libraries	Additional library service points	0.280	S106 of CIL	HCC library service	0	0.21	0.07
Health and Fitness	1 50 – 70 station fitness centre plus fitness gym	1.36	Commercial funding	Commercial operators	1.36	0	0
Total Social Infrastructure – Built Facilities				By 5 year tranches Grand Total	1.36	2.775	0.07
					4.205		

E) Social infrastructure – Outdoor Recreation and Open Space

Infrastructure Category	Infrastructure Item	Estimated cost of Delivery (£m)	Funding Sources	Delivery Partners and mechanisms	Timescale for Delivery (expressed in expenditure)		
					2018 - 2023	2023 - 28	2028 -33
Social Infrastructure – Outdoor Recreation and Open Space							
Football pitches	22 Youth/Junior football pitches converted from fullsize pitches	0.77	s106/CIL/sports clubs	Local authority/sports clubs	0.27	0.27	0.23
Football pitches	2 mini football pitches (created from converting fullsize pitches)	0.02	s106/CIL/sports clubs	Local authority/sports clubs	0.01	0.01	0
Cricket pitches	2 new pitches	0.54	s106/CIL/sports clubs	Local authority/sports clubs	0.27	0.27	0
Rugby pitches	2 new rugby pitches	0.12	s106/CIL/sports clubs	Local authority/sports clubs	0.06	0.06	0
Artificial Grass Pitch	1 fullsize AGP	0.9	s106/CIL/sports clubs/commercial/part of new school development	Local authority/sports clubs/commercial operators/school providers	0	0.9	0
Tennis	New 4 court tennis facility	0.36	s106/CIL/sports clubs	Local authority/sports clubs	0	0.36	0
Multi Use Games Areas (MUGAs)	2 MUGAs	0.29	s106/CIL	Local Authority	0.145	0.145	0
Subtotal Social Infrastructure – Outdoor Recreation and Open Space (this page)		£3.0m			0.755	2.015	0.23

Infrastructure Category	Infrastructure Item	Estimated cost of Delivery (£m)	Funding Sources	Delivery Partners and mechanisms	Timescale for Delivery (expressed in expenditure)		
					2018 - 2023	2023 - 28	2028 -33
Social Infrastructure – Outdoor Recreation and Open Space (cont)							
Allotments	20 plot allotment to replace Halfhide Lane	0.2	s106	Local authority/developers	0	0.2	0
Rosedale Park	Expansion of Rosedale Sports Club	2.5	s106	Sports Club/developers	1.0	1.5	0
Subtotal Social Infrastructure – Outdoor Recreation and Open Space (this page)		0.2			1.0	1.7	0
Total Social Infrastructure – Outdoor Recreation and Open Space				By 5 year tranches Grand Total	1.755	3.715	0.23
					5.7		

F) Emergency Services

Infrastructure Category	Infrastructure Item	Estimated cost of Delivery (£m)	Funding Sources	Delivery Partners and mechanisms	Timescale for Delivery (expressed in expenditure)		
					2018 - 2023	2023 - 28	2028 -33
Emergency Services							
Police	Intervention Safer Neighbourhood Policing Team Base		s106 or CIL	Hertfordshire Constabulary/developers	0	1.2	0
Total Emergency Services				By 5 year tranches	0	1.2	0
				Grand Total	1.2		

G) Waste and Recycling

Infrastructure Category	Infrastructure Item	Estimated cost of Delivery (£m)	Funding Sources	Delivery Partners and mechanisms	Timescale for Delivery (expressed in expenditure)		
					2018 - 2023	2023 - 28	2028 -33
Waste and Recycling							
Household Waste Recycling Centre (HWRC)	HWRC to replace current facility at Brookfield Farm		s106	Hertfordshire County Council/developers	0	1.4	0
Total Waste and Recycling				By 5 year tranches	0	1.4	0
				Grand Total	1.4		

H) Gypsy and Traveller Sites

Infrastructure Category	Infrastructure Item	Estimated cost of Delivery (£m)	Funding Sources	Delivery Partners and mechanisms	Timescale for Delivery (expressed in expenditure)		
					2018 - 2023	2023 - 28	2028 -33
Gypsy and Travellers Sites							
Gypsy and Travellers Sites	Replacement Halfhide Lane Gypsy and Travellers Site	1.5	s106	Hertfordshire County Council/developers	0	1.5	0
Total Gypsy and Travellers Sites				By 5 year tranches	0	1.5	0
				Grand Total	1.5		