

Basildon Borough Local Plan – Infrastructure Delivery Plan (IDP)

October 2018



Contents

00 Financial Assurance Statement	2	09 Public Transport	28
01 Introduction	3	9.1 Infrastructure Needs & Requirements	28
02 Policy Context	5	9.2 Infrastructure Costs	29
03 Methodology	6	9.3 Funding Sources	29
04 Power	8	10 Open Space / Outdoor Sport	31
4.1 Infrastructure Needs & Requirements	8	10.1 Infrastructure Needs & Requirements	33
4.2 Infrastructure Costs	9	10.2 Infrastructure Costs	34
4.3 Funding Sources	9	10.3 Funding Sources	35
05 Water Supply & Flood Defences	11	11 Superfast Broadband	36
5.1 Infrastructure Needs & Requirements	11	11.1 Infrastructure Needs & Requirements	36
5.2 Infrastructure Costs	12	11.2 Infrastructure Costs	37
5.3 Funding Sources	13	11.3 Funding Sources	37
06 Health and Social Care	14	12 Emergency Services	38
6.1 Infrastructure Needs & Requirements	14	13 Conclusions	40
6.2 Infrastructure Costs	17	Appendices	43
6.3 Funding Sources	18		
07 Education	19		
7.1 Infrastructure Needs & Requirements	19		
7.2 Infrastructure Costs	21		
7.3 Funding Sources	22		
08 Traffic / Highways	24		
8.1 Infrastructure Needs & Requirements	24		
8.2 Infrastructure Costs	26		
8.3 Funding Sources	27		

0. Financial

Assurance

Statement

- 0.1.1 The Infrastructure Delivery Plan (IDP) carries its own elements of risk and uncertainty due to the large volume of data required to be provided by external sources around infrastructure plans. These make up a large proportion of the projections within the IDP and therefore we as a Council are reliant on their assumptions being realistic. It is important to note that the external sources are the experts in their field of infrastructure delivery, and will have their own mechanisms for ensuring that any information provided externally is realistic and factually sound.
- 0.1.2 Other authorities have produced IDPs as part of their Local Plans, and many of these include similarly significant future funding 'gaps', based on data from various infrastructure providers, and therefore reassurance can be taken that Basildon Council are not the only ones facing these uncertainties. There is not a requirement for all of the funding for the Local Plan to be identified at the time of inception and therefore should not be seen as a reason to delay commencement.
- 0.1.3 The various streams of finance are subject to a range of external influences and significant risk, particularly in the current economic climate. Officers from Planning and Finance have worked together to scrutinise these assumptions and projections in order to provide some assurance over the validity of the figures used. These discussions identified various areas that potentially required more clarity and therefore further assurances were sought from external infrastructure providers themselves where necessary.
- 0.1.4 Infrastructure plans are reviewed and updated more regularly than the Local Plan itself, and so potential issues impacting on delivery will be more frequently identifiable. However it is important for the Council to take whatever steps it can to

mitigate the gap in funding by maximising the sources of finance it has available to it, such as through the level at which it sets the Community Infrastructure Levy and by being proactive in bidding for infrastructure funding where possible.

- 0.1.5 Taking all of the above factors into account, the Council has considered the cost of infrastructure delivery included in the Local Plan and can provide assurance that the assessment of funding and assumptions made are deemed reasonable. It should however be noted that the information provided to us was taken at a point in time and is therefore subject to change.

I. Introduction

- 1.1.1 An Infrastructure Delivery Plan (IDP) sets out the infrastructure needed to deliver planned growth sustainably, effectively and at the right time. The Council, its partners and other stakeholders then use the document to ensure that the appropriate infrastructure is in place as growth is delivered.
- 1.1.2 Following a consultation on the Draft Local Plan from January to March 2016, the Council has prepared a Submission Local Plan to be examined by the Planning Inspectorate. The Local Plan will be a single development plan for the Borough produced alongside a Community Infrastructure Levy (CIL), and will guide the scale and distribution of new development, the use of land and buildings, and the provision of infrastructure in the Borough up to the year 2034. This document is primarily a review of the Infrastructure Delivery Plan Dec 2015 which supported the Draft Local Plan consultation in 2016, however, additional commentary is included as of October 2018 to reflect alterations to site allocations which have taken place in the preparation of the Revised Publication Local Plan.
- 1.1.3 The infrastructure identified in this study should be deliverable within the plan period and include details of where the funding for this infrastructure will be found (to the extent that this is known). In cases where a gap is found between the identified infrastructure cost and the likely available funding to pay for it, this will be used to support the development of a Borough wide Community Infrastructure Levy (CIL), which can be charged on most new development in the Basildon Borough and used to help pay for infrastructure items which are needed to support growth.
- 1.1.4 The IDP will be reviewed on a regular basis and treated as a 'living' document which will be used to inform decisions on infrastructure delivery, for example the allocation of CIL receipts to specific projects. The IDP can also be used as supporting evidence in bids for external funding and to support proposals for specific sites to be protected for use as new schools for example, or other infrastructure required throughout the plan period.
- 1.1.5 Additional commentary has been added to this 'living document' to reflect the potential impact of changes made to the site

allocations since a Revised Publication Local Plan was approved by the Strategic Planning & Infrastructure Committee on 3 October 2018 for consideration by Full Council. Also, where possible, additional evidence has been gathered to further understand the core implications of these changes in terms of infrastructure provision. The Council will use the Reg. 19 consultation of the Local Plan to determine if there are any subsequent changes required to the IDP prior to the submission of the Local Plan in 2019.

- 1.1.6 Figure 1 shows the data that was shared in order to obtain comprehensive comments from infrastructure providers to determine the required upgrades or new facilities that will be needed to support growth.
- 1.1.7 The changes that have occurred since the Publication Local Plan (March 2018) include:
- The reduction of 300 homes to south west Billericay (area highlighted by the blue circle) on the southern section of the site to the west of Tye Common Road;
 - The removal of the site to the north of Wash Road in Noak Bridge (area highlighted by the yellow circle) reducing total housing numbers by 350 new homes;
 - Housing target of 1,350 new homes set for the Bowers Gifford & North Benfleet Parish Council to be delivered through the preparation of a Neighbourhood Plan;
 - 650 homes to be allocated to the east of Pitsea, which means that the total housing figures proposed to the east of Basildon will remain the same 2,000 homes as contained in the Publication Local Plan (March 2018);
 - Two broad locations have been included as areas of search for potential site allocations when the Revised Publication Local Plan reaches its first review. As these sites are not specific allocations at this stage, no additional commentary has been made in relation to these areas as part of the IDP review October 2018;
 - Alterations to the configuration of the allocation to the west of Basildon to assist in the delivery of a link road. The site is still proposed to deliver around 300 new homes;
 - The employment allocation to the east of Basildon has increased from 32ha to 48ha, increasing the total number of jobs that are likely to be delivered over the plan period.

1.1.8 The main alterations made as part of the Revised Publication Local Plan are unlikely to have a significant impact on the overall infrastructure requirements to support growth. In terms of housing growth, this has been reduced in a couple of areas and is therefore unlikely to result in any additional infrastructure requirements not accounted for in the previous version of the IDP, although it would mean a smaller quantum of development is available to make contributions.

1.1.9 For Billericay, following a steer from the previous Infrastructure, Growth & Development Committee back in December 2017; the Council asked infrastructure providers to comment on a possible development in this area of between 1,700 to 2,000 new homes. As the Strategic Planning & Infrastructure Committee decided to reduce the development size by 300 units in this area, it has reduced the overall allocation from 2,000 to 1,700. This means that the proposal is still in line with the lower estimate previously provided by infrastructure providers. Additional advice has been sought from the education authority and Essex Highways in relation to the major infrastructure requirements to ensure these are still justified following the reduction in housing numbers.

1.1.10 For Bowers Gifford and North Benfleet, the total number of homes remains the same as contained in the Publication Local Plan (March 2018) and even though there may be a difference in terms of the location of growth within the defined Neighbourhood Area, this is still within a broadly similar growth location for the Borough as a whole. Additional advice has been sought from the education authority and Essex Highways, as this is where the funding gap is identified as being most acute, to ensure the infrastructure can still be delivered when housing is proposed as part of separate Development Plans;

1.1.11 The removal of the site to the north of Wash Road in Noak Bridge may have implications for the provision of primary education places in the locality given the previous advice of the education authority. Therefore, additional advice has been sought from the education authority and this is presented in Chapter 07. In addition, due to the reduction in housing numbers this will cause for the Basildon settlement as a whole, this may reduce some of the pressures on existing infrastructure previously cited by infrastructure providers.

Engagement with Infrastructure Providers

1.2.1 The Council has embarked upon a significant amount of engagement with infrastructure providers as the Local Plan has emerged. This has included the Infrastructure Baseline Study 2013 to support the consultation on the Core Strategy Revised Preferred Options Report 2014, and the Infrastructure Delivery Plan 2015, which accompanied the consultation on the Draft Local Plan in 2016.

1.2.2 The new Infrastructure Delivery Plan 2018 has shared data including various potential allocation sites that were previously agreed in principle as part of the Publication Local Plan, March 2018. This is the most recent data shared with infrastructure providers and is shown in Figure 1, which includes the following:

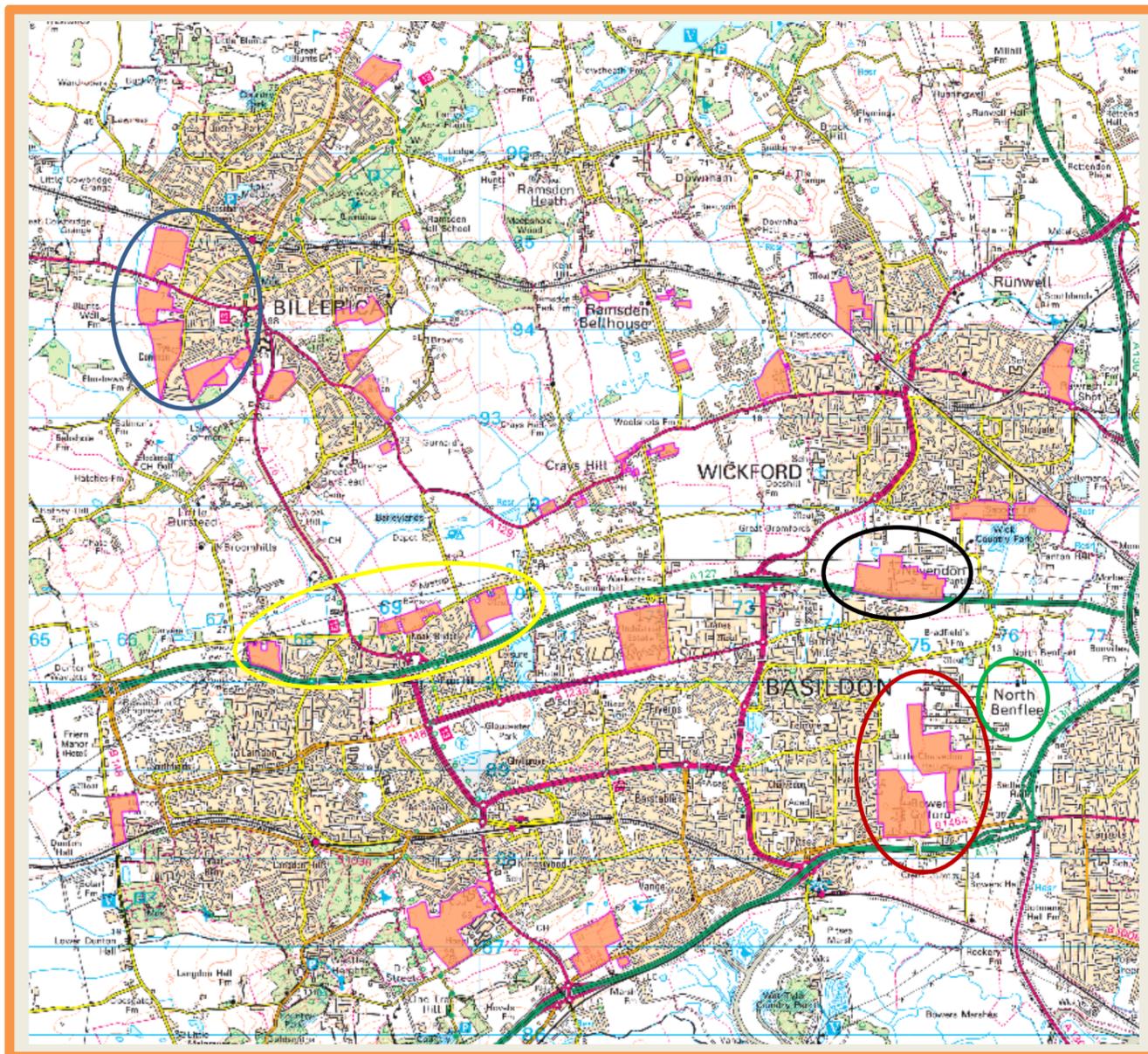


Figure 1: Pre-submission local plan data shared with infrastructure providers and areas of change in Revised Publication Local Plan 2018

1.2.3 **Billericay:** 3,000 to 3,300 new dwellings are proposed as part of the Basildon Borough Local Plan shared between the following locations:

- H17 – 255 new homes on land north of Potash Road in north Billericay;
- H18 – South West Billericay will include 1,700 to 2,000 new dwellings. This will include various sites included within the blue circle in Figure 1;
- H19 – 300 new dwellings on land south of Windmill Heights;
- H20 – 400 new dwellings on land east of Greens Farm Lane;
- H21 – 190 new dwellings on land east of Southend Road;
- H22 - 32 new dwellings to be built as part of various self-build allocations around the town;
- H23 - 39 new dwellings to be located in the serviced settlement of Ramsden Bellhouse;
- H24 - 65-70 new dwellings to be located in the serviced settlement of Crays Hill.

1.2.4 **Wickford:** Approximately 3,100 new dwellings are proposed as part of the Basildon Borough Local Plan in the Wickford settlement, shared between the following locations:

- H13 – 1,100 new dwellings on land south of Wickford;
- H14 – 280 new dwellings on land north of Southend Road, Shotgate;
- H15 – 540 new dwellings on land south of Barn Hall;
- H16 – 300 new dwellings on land north of London Road;
- Already committed developments within the urban area and town centre regeneration will bring forward a further 880 new dwellings.

1.2.5 **Dunton:** The amount of dwellings in this area has been reduced since the last version of the Basildon Local plan from a maximum of 2,350 dwellings to a total of 300 dwellings. This is located on one site known as:

- H10 – 300 dwellings on land west of Basildon

1.2.6 **Pitsea:** Land Between Pitsea and Bowers Gifford has been identified for potential development on the following scale:

- H12 – 2,000 to 2,500 new dwellings on land to the east of Basildon. Several sites contribute to this total. The two sites circled in red make up the 2,000 homes, and there is another potential area circled in Green which could provide an additional 500 dwellings if required.

1.2.7 **Hovefields & Honiley** – The site outlined in black on the map above is being investigated as to whether or not this would present a sustainable site for inclusion in the final version of the Basildon Borough Local Plan. Therefore, the site may or may not be included to provide a potential 500 dwellings. Advice has been sought on the infrastructure requirements in the Wickford and Basildon area with or without this site being included.

1.2.8 **Vange and Noak Bridge:** The total amount of new dwellings in the Vange area has increased since the Draft Local Plan from 55 new dwellings delivered as part of a development on both sides of London Road. However, the site will now be expanded to the following allocation:

- H7 – 650 new dwellings on land north and south of London Road, Vange

The amount of land allocated at Noak Bridge has been increased. The allocations now include sites outlined in Yellow and include the following:

- H9 – 245 new dwellings on land west of Steeple View;
- H10 – 350 dwellings on land east of Noak Bridge;
- H11 – 480 dwellings on land at Noak Bridge, north of Wash Road

1.2.9 **Gardiners Lane South:** This site is located along the A127 Corridor to the north of Basildon and has the following allocation proposed:

- H5 – 790 dwellings on land west of Gardiners Lane South.

1.2.10 The remaining development of 3,850 dwellings in the Basildon settlement will be delivered through either committed developments or vacant land that is being promoted for development in the urban area of Basildon. Also through the regeneration of Basildon and Laindon town centres.

1.2.11 The total amount of housing for the whole Borough is approximately 15,650 – 16,500 new dwellings between 2016-2034. Therefore, the total included here does not include the amount of new dwellings which have been delivered as part of the Local Plan since 2014 as these sites have already secured new infrastructure provision through S106 etc. agreements. The total housing need for the Borough over the plan period is approximately 20,000 new dwellings but due to land constraints and build rates etc. it is envisaged that the allocated sites will only meet a total housing requirement of 18,000 new dwellings in

total, and of these only 15,000 are likely to be delivered within the plan period up to 2034.

1.2.12 It should be noted that the total number of dwellings that have been delivered in the Basildon Borough has increased since the IDP was last updated in March 2018. However, these figures have not been updated as part of the October review 2018.

2. Policy Context

2.1.1 Local infrastructure provision is a key element of making development sustainable, as outlined in the National Planning Policy Framework (NPPF). It states that Local planning authorities should work with other authorities and providers to:

- Assess the quality and capacity of infrastructure for transport, water supply, wastewater and its treatment, energy (including heat), telecommunications, utilities, waste, health, social care, education, flood risk, and coastal change management, and its ability to meet forecast demands; and
- Take account of the need for strategic infrastructure including nationally significant infrastructure within their areas.

2.1.2 The NPPF states that where practical, Community Infrastructure charges should be worked up and tested alongside the Local Plan. The Community Infrastructure Levy should support and incentivise new development, particularly by placing control over a meaningful proportion of funds raised with the neighbourhoods where development takes place.

2.1.3 The NPPF states It is equally important to ensure that there is a reasonable prospect that planned infrastructure is deliverable in a timely fashion. To facilitate this, it is important that local planning authorities understand district-wide development costs at the time Local Plans are drawn up. For this reason, infrastructure and development policies should be planned at the same time, in the Local Plan. Any affordable housing or local standards requirements that may be applied to development should be assessed at the plan-making stage, where possible and be kept under review.

2.1.4 The Localism Act 2011 sets out a legal requirement for prescribed organisations to co-operate with one another during plan making to address strategic cross boundary matters, which include amongst other things infrastructure requirements. The NPPF sets out how the duty to co-operate should be met across boundaries and between organisations on planning issues. The infrastructure needs of an area, as identified within the Local Plan, should therefore be deliverable by those public and private bodies

charged with their delivery; and should be planned for alongside similar infrastructure requirements of neighbouring authority areas to ensure effective outcomes and efficient use of resources. Co-operation with external and internal bodies, as characterised by the preparation of the Local Plan, should continue throughout the plan period. Such co-operation will ensure that the IDP remains deliverable, or is otherwise amended to ensure changing circumstances or infrastructure requirements are identified and planned for.

2.1.5 The Government has also published national Planning Policy Guidance (PPG) which provides guidance on how infrastructure needs should be identified through a Local Plan. This requires early discussion with infrastructure and service providers, and the Local Enterprise Partnership to understand the prospect for investment in infrastructure.

2.1.6 Practice Guidance states that, for at least the first five years of a plan, infrastructure needs should be identified with detail on how it will be funded and how this fits with the development in the Local Plan. “The detail concerning planned infrastructure provision can be set out in a supporting document such as an infrastructure delivery programme that can be updated regularly. However, the key infrastructure requirements on which delivery of the plan depends should be contained in the Local Plan itself”.

2.1.7 In order to create sustainable communities in Basildon Borough, and provide new development opportunities for housing and employment, there is also a need to make provision for the necessary supporting physical, social, and green infrastructure in the appropriate location and at the right time to meet the needs of the community, whether this is by using current spare capacity in existing infrastructure or bringing forward new infrastructure where necessary.

2.1.8 Alongside other information already held by the Council, this Infrastructure Delivery Plan has been taken into account in the preparation of the Local Plan and has informed the Council’s development of the housing and employment allocations that are included within it. They will also inform the overall direction and approach to development based on existing capacity and deliverable improvements to the Borough’s infrastructure.

2.1.9 Planning Practice Guidance states how the Community Infrastructure Levy relates to infrastructure planning in that:

- Charging Authorities must identify the total cost of infrastructure they wish to fund wholly or partly through the levy. In doing so, they must consider what additional infrastructure is needed in their area to support development, and what other sources of funding are available, based on appropriate evidence.

- Information on the Charging Authority area’s infrastructure needs should be drawn from the infrastructure assessment that was undertaken as part of preparing the Local Plan. This is because the plan identifies the scale and type of infrastructure needed to deliver the area’s local development and growth needs.

- In determining the size of its infrastructure funding gap, the Charging Authority should consider known and expected infrastructure costs and the other possible sources of funding to meet those costs. This process will help the charging authority to identify a levy funding target.

- The Government recognises that there will be uncertainty in pinpointing other infrastructure funding sources, particularly beyond the short-term. Charging Authorities are therefore expected to focus on providing evidence of an *aggregate funding gap* that demonstrates the need to put in place the levy.

2.1.10 Basildon Borough Council first determined that it would produce a CIL in November 2011 as part of the Borough’s Local Development Scheme (LDS) 2011-2016. A CIL has featured in all revisions of the LDS since and the Council’s CIL Preliminary Draft Charging Schedule will be subject to consultation at the same time as the Basildon Borough Publication Local Plan. In accordance with the NPPF, the Basildon Borough CIL should support and incentivise new development, particularly by placing control over a meaningful proportion of the funds raised within the neighbourhoods where development takes place.

3. Methodology

3.1.1 This IDP has been informed by contemporaneous contact with the Borough’s main infrastructure providers to seek their views on the implications of various potential ‘Strategic Sites’ in the Borough (see Appendix 1), from which the site allocations in the Local Plan have been derived. The potential ‘Strategic Sites’ were identified by the Council using information from its Housing & Employment Land Availability Assessment (HELAA) 2016-17, alongside other known land constraints (e.g. Flood Zone 3b), and the emerging evidence base (e.g. Green Belt Review, Landscape Study etc.) Infrastructure providers were sent a standard letter (see Appendix 3) and provided with a map of the ‘Strategic Sites’, including the potential level of development that could be accommodated in each area based on the results of the evidence base.

3.1.2 To ensure this IDP covers all matters necessary for the successful delivery of the Local Plan, all the infrastructure providers listed in Table 1 were contacted.

Table 1: Infrastructure Providers Contacted

Infrastructure area	Infrastructure provider (* Substantive response received by Feb 2018)
Power and Renewables	National Grid *
Water	Anglian Water Services *
	Essex and Suffolk Water *
	Environment Agency *
	Essex County Council (as LLFA) *
Health	NHS Basildon and Brentwood Clinical Commissioning Group *
	Basildon and Thurrock University Hospitals NHS Foundation Trust *
	Essex Partnership University NHS Foundation Trust *

Infrastructure area	Infrastructure provider (* Substantive response received by Feb 2018)
	NHS England *
	Essex Public Health Officer for Basildon*
	East of England Ambulance Service NHS Trust *
Education (Colleges)	South Essex College
Education (Schools)	Essex County Council *
Highways	Essex County Council*
Public Transport	Network Rail *
	Arriva Southern Counties
	First Group
	c2c Rail *
	Greater Anglia *
Communications	Open Reach New Sites*
	Virgin Media
	Essex Superfast Team*
Fire	Essex Fire and Rescue Service*
Police	Essex Police*
Defence	Defence Infrastructure Organisation

3.1.3 The IDP has also been informed by a number of existing studies carried out by Basildon Council that together provide a more complete picture of infrastructure provision in the area. These include:

- South Essex Water Cycle Study 2012
- South Essex Surface Water Management Plan 2012
- Strategic Flood Risk Assessment Level 2 2011
- Ringway Jacobs Highway Impact Assessment 2018
- Ringway Jacobs Highway Mitigation Modelling 2018

- Basildon Borough Housing & Employment Land Availability Assessment (HELAA)
- PPG17 Open Space Assessment Part 1 and Part 2 2010

3.1.4 All infrastructure providers are, or will be, planning their future infrastructure investment on the basis of the most appropriate growth forecast. Whilst the majority of providers, in particular national companies, will have their own operational planning strategies, the emerging Local Plan will have implications for how they plan future provision.

3.1.5 Throughout the preparation of this IDP the Council has sought where possible to set up a dialogue with the relevant authorities/providers. By building relationships with established contacts within partner organisations, the aim has been to supplement and update information which the Council already holds on current and future infrastructure provision.

3.1.6 It is not possible to foresee every single possible infrastructure requirement. Therefore this IDP will continue to be updated and should not be read as an exhaustive assessment of infrastructure requirements at one moment in time.

59 Key Actions

3.2.1 52 key actions were approved as part of the Statement of Consultation at the Council’s cabinet meeting on the 29th September 2016, in order to address the concerns raised as part of the Local Plan consultation from Jan – Mar 2016. Amongst these actions were several in relation to infrastructure provision:

- **Actions 13, 36, 37, 38** – Engage with service commissioners and providers to ensure infrastructure provision is sufficient to meet the needs arising from the growth proposed.
- **Action 49** – Prepare a financial statement to accompany the publication Local Plan setting out how infrastructure provision required to support growth will be secured.

3.2.2 Following the 52 key actions approved with the Statement of Consultation on the Draft Local Plan in early 2016, a further 7 actions were approved following the consultation on the New & Alternative Sites in late 2016. Amongst these actions were:

- **Action 57:** Further engagement with Anglian Water is required to investigate the extent and quantum of development that could occur in Alternative Site 4 in light of the additional information provided regarding land ownership and its proximity to Billericay Water Recycling Centre.
- 3.2.3 The Infrastructure Delivery Plan 2018 has therefore included a process of re-engagement with all infrastructure providers to understand the infrastructure requirements of growth proposed in the Basildon Borough Publication Local Plan, March 2018. However, it should be noted that the Infrastructure Delivery Plan is a living document and will be regularly updated throughout the Local Plan period to ensure relevant infrastructure upgrades are brought forward to support development once the proposed allocations move forward in the planning process through the application stage and subsequently into the built form.
- 3.2.4 A subsequent update has been carried out in October 2018 and whilst infrastructure providers were not consulted as part of this update, additional evidence has been obtained, where possible, in relation to specific changes made as a result of the Revised Publication Local Plan, October 2018, which has been used to inform this update of the IDP.

4. Power

- 4.1.1 National Grid has indicated that specific development proposals within the Basildon Borough Council area are unlikely to have a significant effect upon its gas and electricity transmission infrastructure. It is unlikely that extra growth will create capacity issues for National Grid given the scale of the gas and electricity transmission networks. The existing networks are therefore expected to be able to cope with additional demands.
- 4.1.2 For electricity supply, National Grid have previously stated that, from the Strategic Sites, two of the development locations 4 and 27 (Shotgate in Wickford and land east of Bowers Gifford / North Benfleet respectively) are crossed by National Grid's high voltage overhead transmission lines. National Grid does not own the land over which the overhead lines cross, and it obtains the rights from individual landowners to place their equipment on that land. Potential developers of the sites should be aware that it is National Grid policy to retain their existing overhead lines in-situ. Because of the scale, bulk and cost of the transmission equipment required to operate at 400kV National Grid only supports proposals for the relocation of existing high voltage overhead lines where such proposals directly facilitate a major development or infrastructure project of national importance which has been identified as such by central government. Therefore they advise developers and planning authorities to take into account the location and nature of existing electricity transmission equipment when planning new developments.
- 4.1.3 National Grid prefers that buildings are not built directly beneath its overhead lines. This is for two reasons:- a) the amenity of potential occupiers of properties in the vicinity of lines and b) because National Grid needs quick and easy access to carry out maintenance of its equipment to ensure that it can be returned to service and be available as part of the national transmission network. Such access can be difficult to obtain without inconveniencing and disturbing occupiers and residents, particularly where properties are in close proximity to overhead lines.
- 4.1.4 The statutory safety clearances between overhead lines, the ground, and built structures must not be infringed. To comply with statutory safety clearances the live electricity conductors of National Grid's overhead power lines are designed to be a minimum height above ground. Where changes are proposed to ground levels beneath an existing line then it is important that changes in ground levels do not result in safety clearances being infringed. National Grid can, on request, provide to developers detailed line profile drawings that detail the height of conductors, above Ordnance Datum, at a specific site.
- 4.1.5 National Grid seeks to encourage high quality and well planned development in the vicinity of its high voltage overhead lines. Land beneath and adjacent to the overhead line route should be used to make a positive contribution to the development of the site and can for example be used for nature conservation, open space, landscaping areas or used as a parking court.
- 4.1.6 UK Power Networks has recently published Regional Development Plans (RDP's) for the Eastern Power Networks (EPN) area as part of their submission to OfGEM for the review period between 2015 and 2023.
- 4.1.7 The Rayleigh/Tilbury RDP, which includes the Basildon area, draws on a range of information from government based sources, industry specific consultants, development organisations, historical trends and local knowledge. The RDP will be reviewed on an on-going basis to ensure UK Power Networks investment plans are still appropriate and meet the demands placed on their 33kV and 132kV networks. The RDP contains a list of projects with indicative dates. These projects aim to reinforce the network, and provide replacement of assets where their condition is expected to require it. These asset replacement projects often also provide additional capacity that assists in managing the demand placed on the network. The RDP's make allowances for growth in the domestic housing market but is unable to speculate on industrial and commercial growth in loads. The latter are often self-financing with the developer having to fund the additional network required to service their site.
- 4.1.8 The Rayleigh/Tilbury RDP does not match the plan period for the Basildon Borough Local Plan but there is sufficient information available to make informed comments on the sites identified as development areas. Setting aside the potential commercial and industrial growth, the comments below reflect the position of UK Power Networks in respects of proposed growth.
- 4.1.9 Billericay would be supplied mainly from two primary substations to the east and west of the town. UK Power Networks does not expect there to be any need for further works in this area to support growth. If necessary beyond 2023, the substation at Gooseberry Green can be reinforced by an Increase in Transformer Capacity (ITC).
- 4.1.10 Wickford is supplied mainly from one primary substation known as Wickford Primary. This is a heavily loaded substation and it is planned that a new Primary Substation at Nevendon Grid will also provide support to Wickford via new 11kV circuits connecting the two substations. This is expected to be sufficient to meet the number of new dwellings indicated, though if necessary the transformers at Wickford can also be replaced along with the circuits to the substation.
- 4.1.11 The east of Basildon is currently supplied from one primary substation known as Chalvedon Primary Substation. This is a heavily loaded substation. Therefore, in order to meet the demands of a large development in this area, a new primary substation within the development will be required. This should be supplemented with additional 33kV circuits at either the South Benfleet or Rayleigh substations.
- 4.1.12 The south of Basildon is supplied from one primary substation known as Basildon Local Primary Substation. Whilst this substation is heavily loaded, additional development can be accommodated by sharing of the loads with adjoining primary substations. This would enable development to take place without major reinforcement works.
- 4.1.13 The west of Basildon is supplied from a variety of Primary Substations including the newly built Langdon Primary Substation located on the Lower Dunton Road, The Limes Primary Substation, and the proposed new substation at Nevendon Grid. These are expected to be capable of meeting the predicted level of growth in the Local Plan.
- 4.1.14 The comments made by UK Power Networks can be represented diagrammatically to show where in the Borough the most likely mitigation is to be required. Figure 2 shows each of the proposed site allocations in the Council's Local Plan in a Red, Amber, Yellow, Green format, where Red represents a high level of mitigation required, which may have implications for the viability or sustainability of development, and Green represents a situation

where growth would require no mitigation whatsoever due to the spare capacity already available.

4.1.15 As shown in Figure 2, growth in Billericay will not require any further upgrades to existing primary substations in this area and reinforcement would still be possible in 2023 if required. This is therefore shown as 'Green' in the RAG assessment as no mitigation will be required.

4.1.16 To the knowledge of Basildon Borough Council at the time of the completion of this IDP, Wickford has not yet benefitted from the planned upgrade to the main primary substation that serves the settlement. However, this has expected funding secured, is due to be completed imminently, if not already, and further upgrades would be possible if necessary. It is therefore shown as 'Yellow' as minimal mitigation is still potentially required to be completed. This would not, however, be at any cost to the developer.

4.1.17 The west of Basildon is served by a variety of substations including a newly built station in Langdon. Therefore, they are expected to be able to cope with the increased growth and is shown 'Green' in Figure 2.

4.1.18 The south of Basildon is served mainly by one primary substation and whilst this is heavily loaded, development could be accommodated by sharing the load between two primary substations in the area which would not require any major reinforcement but as some mitigation is required, the sites are shown as 'Yellow'.

4.1.19 The south of Basildon is served mainly by one primary substation and whilst this is heavily loaded, development could be accommodated by sharing the load between two primary substations in the area which would not require any major reinforcement and is shown as 'Yellow' in the RAG assessment.

4.1.20 The east of Basildon is served by one primary substation which is heavily loaded, therefore to meet demands of development in

this area a new primary substation is required and the developer would be expected to make significant contributions towards this. Therefore, the relevant site allocations are shown in 'Amber' as whilst the mitigation required is not insurmountable, it may require higher development contributions than normal.

4.1.21 Clarification is being sought as to whether the Strategic Site at Gardiners Lane South would be served by substations in east or west Basildon.

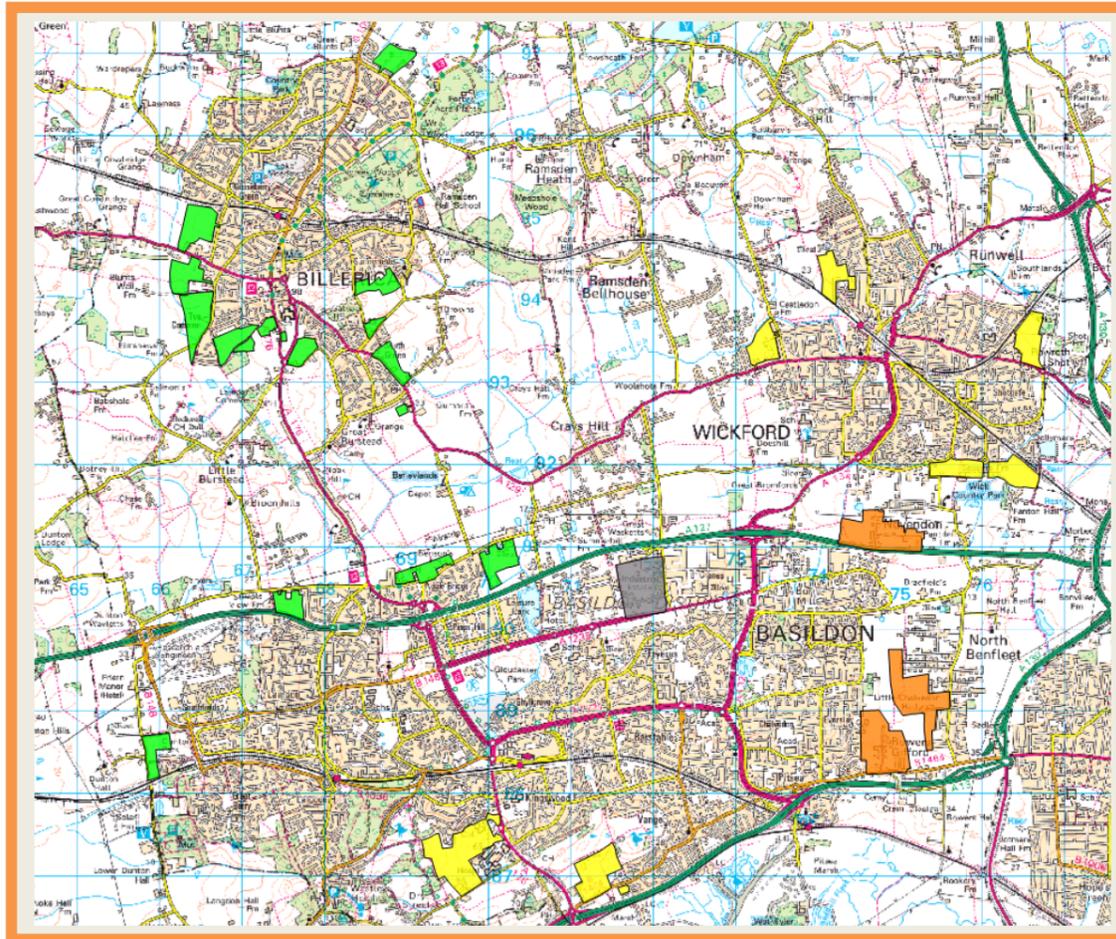


Figure 2: RAG Assessment of Power Infrastructure Requirements

Infrastructure Costs

4.2.1 Appendix D of the Regional Development Plan (RDP) for Rayleigh & Tilbury Eastern Power Network identifies detailed costs of recommended network upgrades in order to meet growth up to

the year 2023. This shows where investment is likely to be required in the first 9 years of the plan period.

4.2.2 The development to the east of Basildon would be served by a heavily loaded substation; the works required to upgrade the facility are not currently identified within UK Power Networks plans and it is likely that any developer would need to make a significant contribution to the cost of these works, and development will need to be phased so that the provision of the new substation is aligned with growth.

Funding Sources

4.3.1 The costs identified within the RDP are funded by regulatory allowances from OfGEM and not by developers. However, projects will only proceed if a need exists. The projects are reviewed annually by UK Power Networks to assess if the network reinforcement is still justified or can be deferred to a later date.

4.3.2 When new development is proposed, the impact of the development on network demand is assessed again. Where demand would stimulate the need for a planned project to be brought forward, or where a new project is required to support the development, the developer would be expected to contribute to the project costs. Depending on the individual circumstances of the project, the costs may be apportioned with UKPN if there is benefit to the customers already connected to the network. If there is capacity available on the network, developers can access it for the cost of the connection only.

4.3.3 It is expected that the RDP will be reviewed to reflect the latest OfGEM directions regarding network investment and maintaining network security.

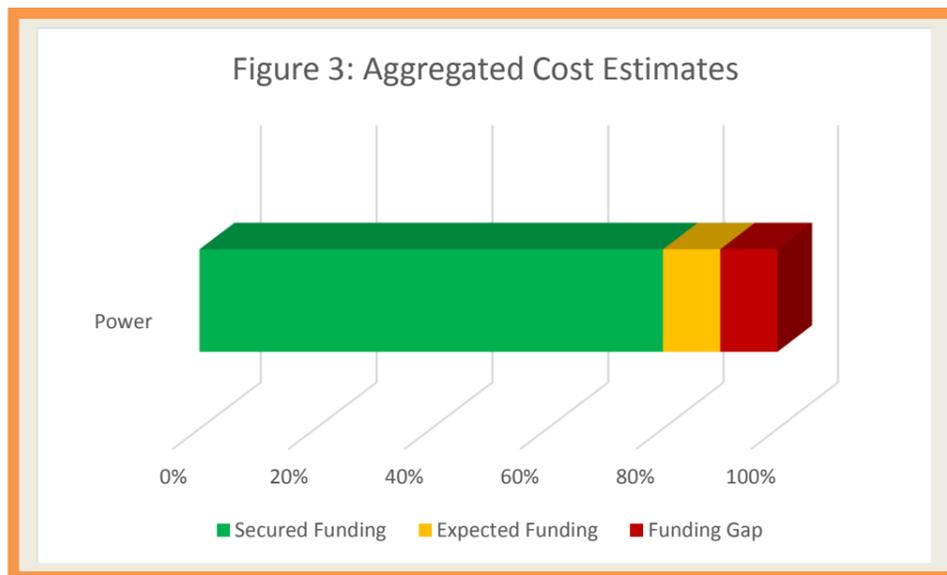
4.3.4 UK Power Networks have identified a number of changes to the network that are currently being progressed through the Rayleigh & Tilbury (EPN) RDP. These include:

1. Rayleigh Main 132kV GIS – Asset replacement of 132kV AIS switchgear - (Completed – some dismantlement required);
2. Basildon Local 33/11kV Primary Substation – Asset replacement of 11kV switchboard (2000A) - (Completed);
3. Rayleigh Local 132/33kV Grid Substation – replace 33kV switchgear (2000A) - (Completed);

4. Wickford 33/11kV Primary Substation – Asset replacement of 11kV switchboard (2000A) - (Completed);
5. Rayleigh Local 132/33kV Grid Substation – Reinforcement 132/33kV ITC (2 x 90MVA) - (Completed);
6. Rayleigh Local 132/33kV Grid Substation – Asset replacement of 33kV switchgear (2000A) - (Completed);
7. Tilbury Local 33/11kV – Reinforcement 11kV Interconnection to Selwyn Road (Planned delivery 2017) - (Completed);
8. Fleethall – Burnham 33kV OHL – Asset Replacement rebuild P1 – P49 - (Completed);
9. Nevedon 132/33kV Grid Substation – Replace 33kV Switchgear (Fault Level) - (Planned delivery 2016/17).

by UK Power Networks (Amber) and one scheme which is not accounted for as part of UK Power Networks’ strategy (Red).

4.3.5 As stated by the response provided by UK Power Networks, most areas proposed to come forward as part of the Council’s Local Plan would likely be accommodated by the current network albeit with some minor upgrades. The schemes mentioned above have already been completed or have funding secured. However, the site to the east of Basildon is likely to require major reinforcement with a new primary substation, which will require significant contributions by the developer and as this has not yet been secured or expected to be funded by UK Power networks, this represents the current funding gap.



4.3.6 The cost estimate shown in Figure 3 is based on the number of improvement schemes mentioned above and how many of these have been completed or secured funding (Green), schemes that have not commenced by 2016-17, but are expected to be funded

5. Water Supply & Flood Defences

- 5.1.1 There are several components to water infrastructure. There is water supply infrastructure as supplied by Essex and Suffolk Water, there is foul drainage infrastructure as supplied by Anglian Water, and there is surface water drainage infrastructure which is the responsibility of a range of organisations including but not limited to Anglian Water. Essex County Council is the Lead Local Flood Authority, and is responsible for coordinating surface water drainage management. There is also infrastructure that prevents flooding from tidal and fluvial sources. Again, there are a range of infrastructure providers in this regard. The Environment Agency is responsible for coordinating the management of flood risk from fluvial and tidal sources, and is also responsible for many of the infrastructure assets in this regard. Due to this complex arrangement of organisations involved in water infrastructure, it has been necessary to coordinate and cross-check the responses of the different organisations involved to ensure all constraints have been appropriately identified and addressed within this IDP.
- 5.1.2 This IDP identifies specific infrastructure constraints in relation to waste water disposal, surface water management, and flood risk management. Specific waste water constraints identified in relation to the Strategic Sites identified for potential development (see Appendices I and II) are set out in Appendix III.
- 5.1.3 **Water Supply:** Essex and Suffolk Water has indicated that they have sufficient overall water resources available to serve the maximum levels indicated by the Council in its broad locations work, and ‘could easily satisfy a much higher level of growth’. From a potable water perspective, the areas of development are not a concern to them. Discussions with developers in the early planning stages would be held and, if necessary, additional water mains, or enhanced capacity to existing water mains, are dealt with directly between the two parties. The water industry has its own mechanism for funding growth, mainly by developer charges which are well established. Essex and Suffolk Water would not be seeking any funding from the Basildon Borough Community Infrastructure Levy.
- 5.1.4 **Waste Water:** Anglian Water has indicated that Strategic Sites 4 (land at Shot Farm, Southend Road, Wickford) and 11 (land between Outwood Farm Road and Sunnymede) are proposed in close proximity to existing Water Recycling Centres (formerly known as Sewage Treatment Works). Nuisance may be caused by noise, lighting and traffic movements but its most prevalent source will be odours, unavoidably generated by the treatment of sewerage.
- 5.1.5 Similarly, sites 18 (land west of South Green, Billericay), 23 (land to the west of Lower Dunton Road) & 24 (land to the east of Lower Dunton Road) have been shown to be within close proximity to existing pumping stations. It may be that the layout of these sites can be adjusted so as not to encroach on the protection zone. It is advised that development should therefore be located a minimum of 15 metres from pumping stations.
- 5.1.6 The foul (or used water) flows from future growth will have an impact on the existing foul sewerage network. The foul infrastructure requirements will be dependent on the location, size and phasing of the development. All sites will require a local connection to the existing sewerage network which may include the need for network upgrades. However, the need for potential upgrades should not be seen as an objection to the allocation of these sites, as Anglian Water has advised it can work with the Borough Council to ensure development is phased correctly.
- 5.1.7 The Environment Agency (EA) has provided comments on the Strategic Sites, and stated that the level of development allocated in the Billericay area would be extremely close to the available capacity at the area’s Water Recycling Centre. However, it may be possible to connect some of the development to other sewage catchments and there is the possibility of expanding this treatment facility, but investment would be required. New development in Wickford could be connected to treatment facilities in Wickford or Basildon and there should be sufficient capacity to cope with the increased flows envisaged. The level of development in Basildon could however prove to be a challenge unless phased correctly to enable necessary upgrades to the relevant Water Recycling Centres. The Borough Council will therefore need to work with both the EA and Anglian Water to determine the correct phasing of Local Plan development to ensure that these upgrades can occur in a timely fashion.
- 5.1.8 **Flood Risk:** Anglian Water have advised that the appropriate management of flood risk and the consideration of climate change is critical for long term resilience. Whilst fluvial flooding is a significant constraint to the location of development, other forms of flooding such as surface water should also be a consideration. Therefore all developments should seek to reduce flood risk and incorporate Sustainable Drainage Systems (SuDS).
- 5.1.9 The Environment Agency (EA) as the competent authority for the implementation of the Water Framework Directive (WFD) has also highlighted the requirements of the WFD, which is an ecology-driven European Directive aimed at improving the condition of watercourses. The Directive is enshrined in UK law under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2003 and is supported by other legislation, such as the Water Resource Act 1991 (Amendment) (England and Wales) Regulations 2009.
- 5.1.10 Where an activity has been established as having the potential to be in breach of the Directive, a WFD compliance assessment is necessary to determine whether that activity will cause deterioration or prevent the achievement of good ecological status/potential. Although the impetus is on the applicant to demonstrate compliance, the EA will advise on whether an assessment is required and also what questions that assessment needs to answer. Most fundamentally, the applicant must show that the planned activity will not be in contravention of the legislation.
- 5.1.11 In most instances designed mitigation and alterations to proposals can ensure that activities within the proximity/catchment area of water bodies are compliant with the WFD. Such mitigation would need to be secured through the development management planning application process.
- 5.1.12 According to the EA, the developments at the following Strategic Sites are likely to require a WFD assessment by the developer:
- Site 8 is located close to Haverings Grove Brook. This brook has an overall classification of Moderate due to failing phosphate levels. This failure has been attributed to diffuse sources both

urban and rural which could be exacerbated by additional development nearby;

- Sites 1, 4 & 14 span the River Crouch, which also has an overall classification of Moderate. Invertebrate and phosphate failures are attributed to point source pollution arising from Water Recycling Centre.

5.1.13 The EA have also identified strategic sites that partially lie in Flood Zone 3 areas, with the highest possibility of flooding from fluvial sources. Development proposals at these locations will need to be accompanied by a Flood Risk Assessment in accordance with the requirements set out in the Planning Practice Guidance and Flood Risk and Coastal Change:

- Site 1 following the course of the River Crouch
- Site 4 north east of Enfield Road to the A130
- Site 14 following the course of the River Crouch
- Site 15 to the north and east edges of the site
- Site 21 the south east corner Pantile Farm to A127

5.1.14 In accordance with the sequential approach to flood risk, development within these locations should seek to avoid those parts of the site at greatest risk of flooding i.e. those parts of the sites within Flood Risk Zone 3. Additionally, measures to reduce or mitigate the flood risk arising from the development at these locations, or elsewhere, will be secured through the development planning process. Flood Defence and Land Drainage Consents may also be required.

5.1.15 Essex County Council as the Lead Local Flood Authority has also considered each of the Strategic Sites and identified that approximately one third of the sites would require standard mitigation to ensure that any development actions on these sites do not exacerbate the existing risk of surface water flooding. It expects that flood management infrastructure will be installed alongside development to accommodate any additional development.

5.1.16 For the remaining sites, some additional mitigation would be required, with four sites in need of more significant upgrades. Site 3 would require the provision of surface water flood storage such

as detention basins, on-site flood storage and/or rainwater harvesting. Sites 22, 23, 24 (land west of Basildon), and site 25 (Vange) are considered to be in areas where the flood risk management infrastructure currently in place is struggling to cope putting at risk critical infrastructure, such as a local school. Therefore additional flood management infrastructure would need to be provided, or significantly upgraded, as part of any development proposal.

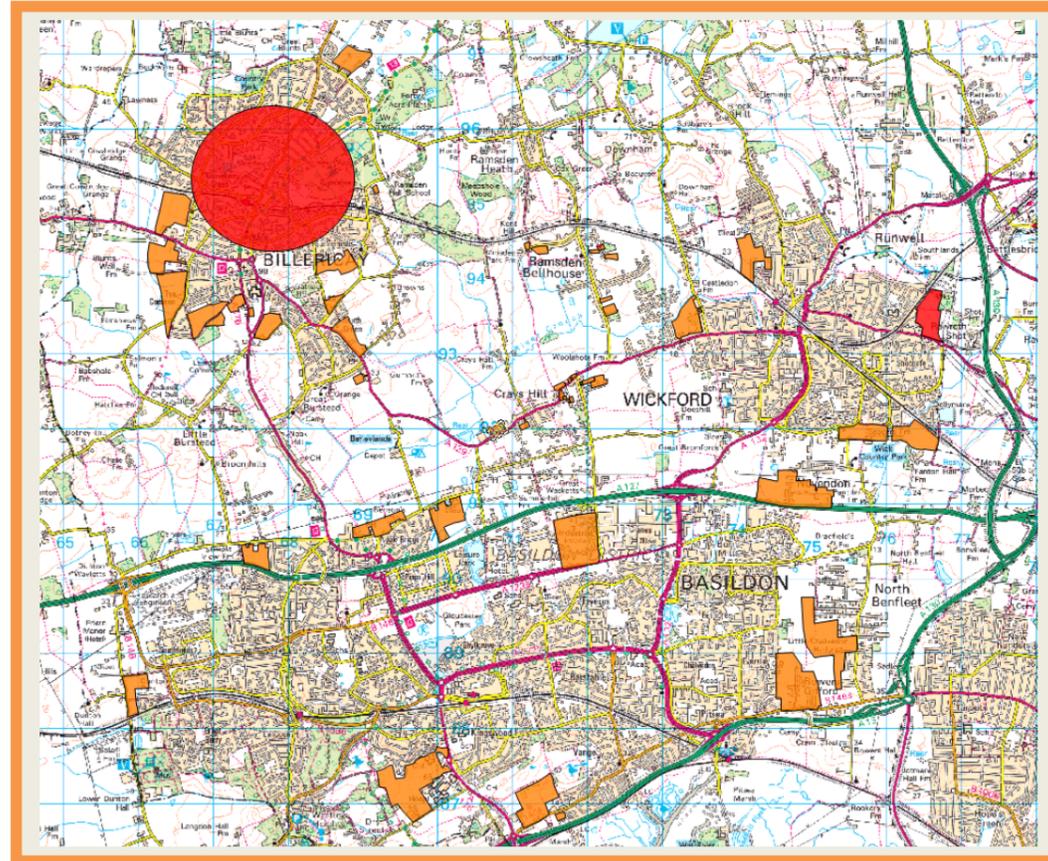


Figure 4: RAG Assessment of Water and Flood Defence Infrastructure Requirements.

5.1.17 Anglian Water provided a Red, Amber, Green assessment of various sites across the Basildon Borough (Appendix III) and Figure 4 shows how this assessment applies to the site allocations in the Basildon Borough Publication Local Plan. Red is applied to sites where the level of mitigation required is more than normal but may not be insurmountable if the required mitigation can be met by the developer, Amber is applied where site will require some form of mitigation and Green is applied where existing

infrastructure would be able to cope with the increase in growth and therefore no mitigation would be required.

5.1.18 Figure 4 shows quite clearly that all sites that are proposed in the Local Plan will require some form of mitigation to occur. This is perhaps unsurprising given that new development will require access to the water supply, to the foul network, and will need to provide appropriate management of flood risk and climate change. Only two locations have been assessed as 'Red' and these are the urban area in the settlement of Billericay, where there is already very limited development opportunities and land at Shotgate to the north east of Wickford.

5.1.19 For Billericay, the 'Red' assessment is in relation to **Waste Water** due to the fact that treatment capacity needs improvement but may not be an issue due to limited amount of development actually proposed in Billericay urban area. The site tested at Outwood Common Road would have also required improvements to the water recycling centre which were considered to be abnormal, but this site has not been included in the Revised Publication Local Plan.

5.1.20 For Wickford, **Waste Water** is also the issue as the water recycling centre is in close proximity to the proposed site allocation near Shotgate in Wickford. This issue has been addressed through a reduction in the numbers of houses proposed in this location from 400 to 280 in order to provide a larger open land buffer between the housing and the water recycling centre to mitigate the potential negative impact on future residents through odour plume etc.

5.1.21 In terms of the **Water Supply** there are no issues with the level of development proposed and Essex and Suffolk Water could cope with even more growth if required.

5.1.22 In terms of **Flooding**, sites to the west of Billericay are close to Haverings Grove Brook and sites to the east and west of Wickford are in close proximity to the river Crouch. Therefore, these sites would require additional fluvial flood risk mitigation as part of their design, but this is not considered abnormal.

Infrastructure Costs

5.2.1. Anglian Water are unable to provide average costs of waste water infrastructure, per person, or per dwelling, as these are

dependent upon the location of any proposed development and whether mitigation within the foul sewerage network is required.

5.2.2. The Environment Agency did not identify the need for the provision or upgrade of any assets, and therefore there are no known costs associated with fluvial or tidal flood risk management within Basildon Borough at this time.

5.2.3. Essex County Council as the Lead Local Flood Authority has identified the following estimated costs for additional surface water flood risk management infrastructure from the South Essex Surface Water Management Plan (2012):

Table 2: Flood Risk Management Infrastructure Requirements

Critical Drainage Area	Preferred Options	Estimated Costs
BAS 1 (NW Billericay)	Flood storage and attenuation	£400,000*
BAS 3 (Stock Road)	Attenuation	£350,000*
BAS 4 (Sunnymede)	Flood storage	£440,700**
BAS 5 (South Green)	Flood bunds and detention basins	£300,000*
BAS 6 (South fields)	Rain gardens, reed beds and flood attenuation	£350,000*
BAS 15 (Chalvedon/Felmores)	Detention basins	£450,000*
BAS 16 (Bowers Gifford)	Detention basins	£400,000*
BAS 18 (Vange)	Flood bunds	£300,000*
BAS 21 (Bromfords)	Detention basins, flood storage and rainwater harvesting	£450,000*
TOTAL		£2,744,700

*Based on estimates, to be confirmed upon completion of initial assessments

** Based on completed initial assessment

*** These are based on the South Essex Surface Water Management Plan (Capita, 2012). For more information on any revisions to the Critical Drainage Areas in Basildon, please contact the LLFA at floods@essex.gov.uk

Funding Sources

5.3.1. In general, Water Recycling Centre upgrades, where required to provide for additional growth are wholly funded by Anglian Water through their Asset Management Plan.

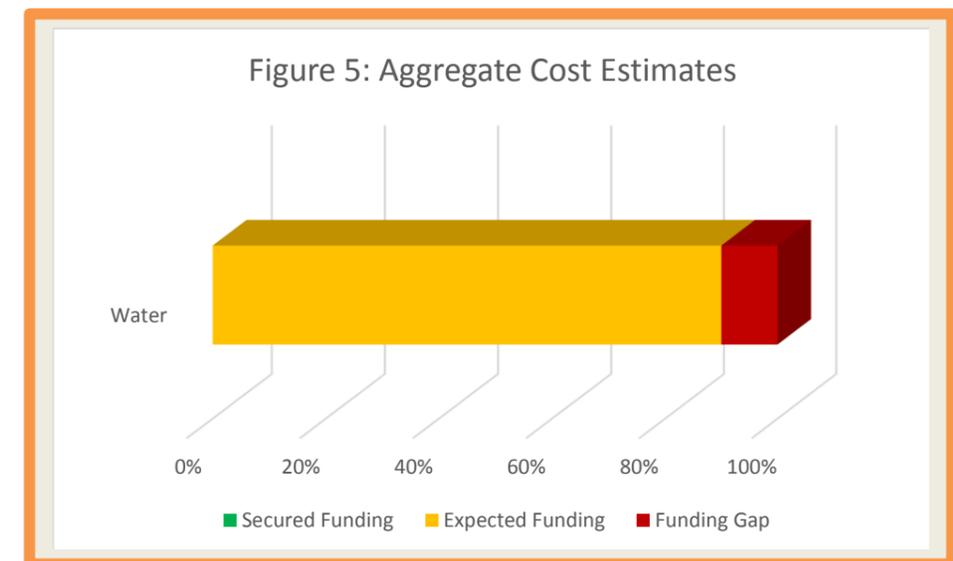
5.3.2. Foul network improvements (on-site and off-site) are generally funded/part funded through developer contribution via the relevant sections of the Water Industry Act 1991. The cost and extent of the required network improvement are investigated and determined when Anglian Water are approached by a developer, and an appraisal is carried out. There are a number of payment options available to developers, including deducting the revenue that will be raised from the newly connected dwellings (through the household wastewater charges) over a period of twelve years off the capital cost of the network upgrades. The developer then pays the outstanding sum directly to Anglian Water.

5.3.3. Anglian Water seek contributions directly from developers in accordance with the provisions of the Water Industry Act 1991. Therefore, Anglian Water would not expect there to be provision within S106 planning obligations or the Council's CIL for foul water infrastructure.

5.3.4. The majority of funding for flood risk management infrastructure would come from either Essex County Council, or the Environment Agency, based on the outcomes of cost-benefit analysis. However, ECC have indicated that they would be seeking developers to make contributions of at least 20% of the cost of any surface water flood risk management scheme from which that development would benefit. These developer contributions could determine whether or not a surface water flood risk management scheme is delivered.

5.3.5. However, not all of the flood alleviation schemes would be required to successfully bring forward the strategic sites identified in the Publication Local Plan. For example, no development is proposed in NW Billericay. Therefore, the overall shortfall in funding is likely to be in the region of £688K - £748K for the Borough as a whole, and that cost would need to be borne by the developers.

5.3.6. The cost estimate shown in Figure 5 have been calculated using various assumptions. As funding associated with water recycling centres is generally paid for through Anglian Water's Asset Management Plan, this funding is assumed to be expected as Anglian Water have not provided details of how they receive this funding or when it is received. For foul network upgrades, this is secured directly from developers through provisions of the Water Industry Act 1991 and therefore this funding is considered to be expected as the developer will pay this once the water is connected to the new dwellings. The only source of funding where a funding gap may exist is for flood defences, where ECC have suggested that the developer pays 20% of the costs where a development would benefit. It is assumed that Water makes up 50% of the total costs and Flood Defences the other 50%. As developers will be required to contribute 20% of the costs of flood defences, this is assumed to be 10% of the overall costs for both water and flood defences.



6. Health and Social Care

Mid and South Essex Sustainability Transformation Plan

- 6.1.1 Health and care services and the way they are organised both from a commissioner and provider perspective will change over the lifespan of this plan. It is therefore practical at this stage to describe the additional demand that the population growth will require into the different traditional sectors that we currently have and recognise – such as GP services, hospitals, social care etc. However, a range of constraints means that this current model cannot be sustained and will transition over the lifespan of this IDP.
- 6.1.2 The complexity and level of demand will mean that for health and care services to meet those needs a much more integrated approach will need to be taken with blurring of the lines between different sectors within health and those across health and social care and between physical and mental health. This will include those agencies who manage the wider determinants of health including housing, employment and environment. The Mid and South Essex Sustainability and Transformation Plan describes the journey that the Basildon system has begun to make this a reality in the short-term. It is expected that new models of care for our communities over the lifespan of the IDP, combined with technological advances will lead to more effectively integrated and technologically advanced models of care for our local population.
- 6.1.3 This approach will have an impact on not only estate, infrastructure and digital planning but the way the system will need to plan its workforce requirements in the future.
- 6.1.4 In future public-sector planning will need to continue to move to considering demand as a system rather than an individual organisation and plan for the delivery of these services

accordingly, making the most of the advances that are available to maximise the provision of care to our changing population.

- 6.1.5 For the purposes of the IDP, health and social wellbeing services consists of the following:
- General Practitioner (GP) services
 - Hospitals
 - Ambulance Services
 - Social care
 - Public health
- 6.1.6 This analysis does not take into account specific wider primary care service needs such as dentists, pharmacies, opticians, community health (health visiting, school nursing, midwifery, district nursing, etc). All of these services will be impacted by demand from growth. [The NHS remains the commissioning body for these services and requirements must be judged by the commissioning intentions of the appropriate NHS body].
- 6.1.7 The Health and Social Care Act 2012 has radically changed the way in which health care services are planned and organised. These are primarily provided by the Clinical Commissioning Groups (CCGs) The CCG is responsible for planning and buying ('commissioning') local health care services.
- 6.1.8 Sustainability and Transformation Plans (STPs) are being prepared for wider areas that incorporate several CCG areas. Draft STP's were, published in October 2016, summarising the work to date and outlining how system-wide plans can be delivered across organisations. Like the IDP, this is an iterative document and will be reviewed periodically.
- 6.1.9 Public health services are commissioned by Essex County Council in partnership with the respective local authorities. These services are primarily focused on prevention and early intervention, specifically developing measures that help to reduce illness and to tackle the causes of poor health at source. This includes initiatives to increase activity and healthy living, such as cycling and walking, as well as provision of green space within developments. The strategic overview of the STPs includes consideration of these issues.
- 6.1.10 Priorities for Public Health within spatial planning include supporting access to quality open and green/blue space, healthy

diets including improving access to local and fresh food, improving community cohesion and reducing social isolation, supporting air quality, increasing active living through movement and play across all ages and supporting good quality housing design across the life course. Reducing health inequalities underpins their work.

- 6.1.11 Local data on Public Health is published annually by a number of national organisations including Public Health England and the NHS. This includes the local Health Profiles and the Public Health Outcomes Framework.
- 6.1.12 Assessment of Public Health and Wellbeing need will be supported by the Health Impact Assessment processes, local evidence base and current Public Health Policy.

Primary Care Services

- 6.1.13 The Primary Care Strategies of the CCG's focus on the following key areas:
- General Practice to be provided at scale aligned to defined neighbourhoods.
 - The creation of a neighbourhood multi-disciplinary primary care workforce embedded in the Care Closer to Home model of care. This will provide General Practice that is fully integrated; including the local authority and voluntary sectors.
 - Improved use of technology in General Practice.
 - Improved quality of care and safety of General Practice.
 - Increased patient access Fit for purpose estate for the delivery of modern General Practice.
 - Supporting the development of a resilient General Practice workforce.
 - Improved GP Training Facilities
- 6.1.14 A particular focus of the STPs is bringing simple diagnostics into communities. The CCG is also looking at more prevention-based and integrated service provision with social care.
- 6.1.15 This growing focus on bringing care provision into the community may see the creation of health care 'hubs'/networks.
- 6.1.16 In addition, there may be a need to increase estate, or investment into buildings and infrastructure to make them fit for purpose. New facilities do not have to be stand-alone buildings.

6.1.17 There are also STP priorities related to increased use technology including, but not limited to:

- Our patients and citizens can receive the care and support they need to live healthier, happier lives
- We provide the information and tools to allow our population to take responsibility for their own health and wellbeing
- Our professionals are supported in delivering that care; digital capability must enhance our working lives, not add unnecessary challenge, duplication or distraction
- Our respective organisations have the technology solutions to operate in an efficient and cost effective way which supports continued high performance and future sustainability
- We work as a system to provide joined up health and care to our populations

6.1.18 This in turn will provide alternative methods for patients and the wider community to receive and contribute to care using technologies that most appropriately meet their needs.

Hospitals

6.1.19 The STPs envisage that, hospital services will be reconfigured and transformed, with new models of care meaning more care will be provided as close to people's homes as possible. In particular, Basildon, Southend and Broomfield Hospitals will build on their partnership work. This will include a range of significant clinical reconfiguration projects, centralisation of services and programmes to improve quality, safety and patient experience. It is likely that there will be changes to where some services are delivered.

6.1.20 In line with Primary Care Strategies and shifting care closer to home where possible, it is envisaged that the impact on the acute sector will culminate in the greater complexity and health needs of patients presenting in the acute sector. Hospitals will need to be redesigned to treat the patients of the future, with specific redesign based upon:

- Greater community based care for less acute patients
- Ageing population

- Hospital facilities which maximise the potential to treat the most needy in the most efficient manner possible, centralising services and maximising economies of scale
- Greater treat and discharge models of care, linking to increased community and social care provision
- Move to designated day-case and ambulatory models of care and settings
- Increased health needs/acuity of those patients presenting in the Acute sector
- Provision of the transfer of patients to less acute settings as soon as clinically appropriate, providing patients with care closer to home as soon as possible
- The centralisation of support functions and services, such as Pharmacy, enabling the greater provision of community healthcare whilst maintaining the most acute patient care within the acute setting
- Return of patients from specialist centres outside the local area back to local services as soon as appropriate.

Ambulance Services

6.1.21 East of England Ambulance Service NHS Trust (EEAST) Estates Strategy (2017-2022) summary position is outlined as below:-
A range of national initiatives are underway aimed at improving performance and sustainability within the NHS. There is widespread agreement from the stakeholders sponsoring these initiatives about the changes required within ambulance services and across the wider urgent and emergency system. Addressing these changes requires the Trust to develop revised operating models and strategies for all aspects of its services, including operational support services such as the Estates Service. A key component of this process has been to establish the Trust's future Operating Model and to commence planning for the resulting transformation of support services.

6.1.22 It is proposed that transformation of estate takes place in accordance with the following strategy:

- Configuration of the estate as necessary to meet a vision to provide cost effective and efficient premises of the right size, location and condition to support the delivery of clinical care to the community served by the Trust.

6.1.23 A resulting Regional estate configuration which consists of:

- A network of 18 ambulance 'hubs'
- Each 'hub' will support a 'cluster' of community ambulance stations, tailored to meet service delivery and patient response specific to their local area

6.1.24 EEAST Estates & Development plans includes some allowance for growth in demographics of population changes and therefore any increase in requirements to meet these changes will require modelling to account for the required increased workforce. EEAST are currently participating in an independent service review commissioned by healthcare regulators to better understand what resources are needed to meet patient demand.

Social care

6.1.25 Social care for both adults and children is provided by Essex County Council (ECC). This covers a range of functions and services and is provided by a range of different providers.

6.1.26 ECC can make specific provision of built infrastructure for care services, e.g. extra care.

Public health

6.1.27 Responsibility for public health was moved out of the NHS into local government in April 2013. Health and Wellbeing Boards (HWBs) promote co-operation from leaders in the health and social care system to improve the health and wellbeing of their local population and reduce health inequalities.

6.1.28 HWBs are responsible for producing a Joint Health & Wellbeing Strategies (JHWS), Joint Strategic Needs Assessments (JSNA) and Pharmaceutical Needs Assessments (PNA) for the Basildon Borough.

Existing provision

6.1.29 Figure 6 shows the location of existing General Practitioner (GP) surgeries.

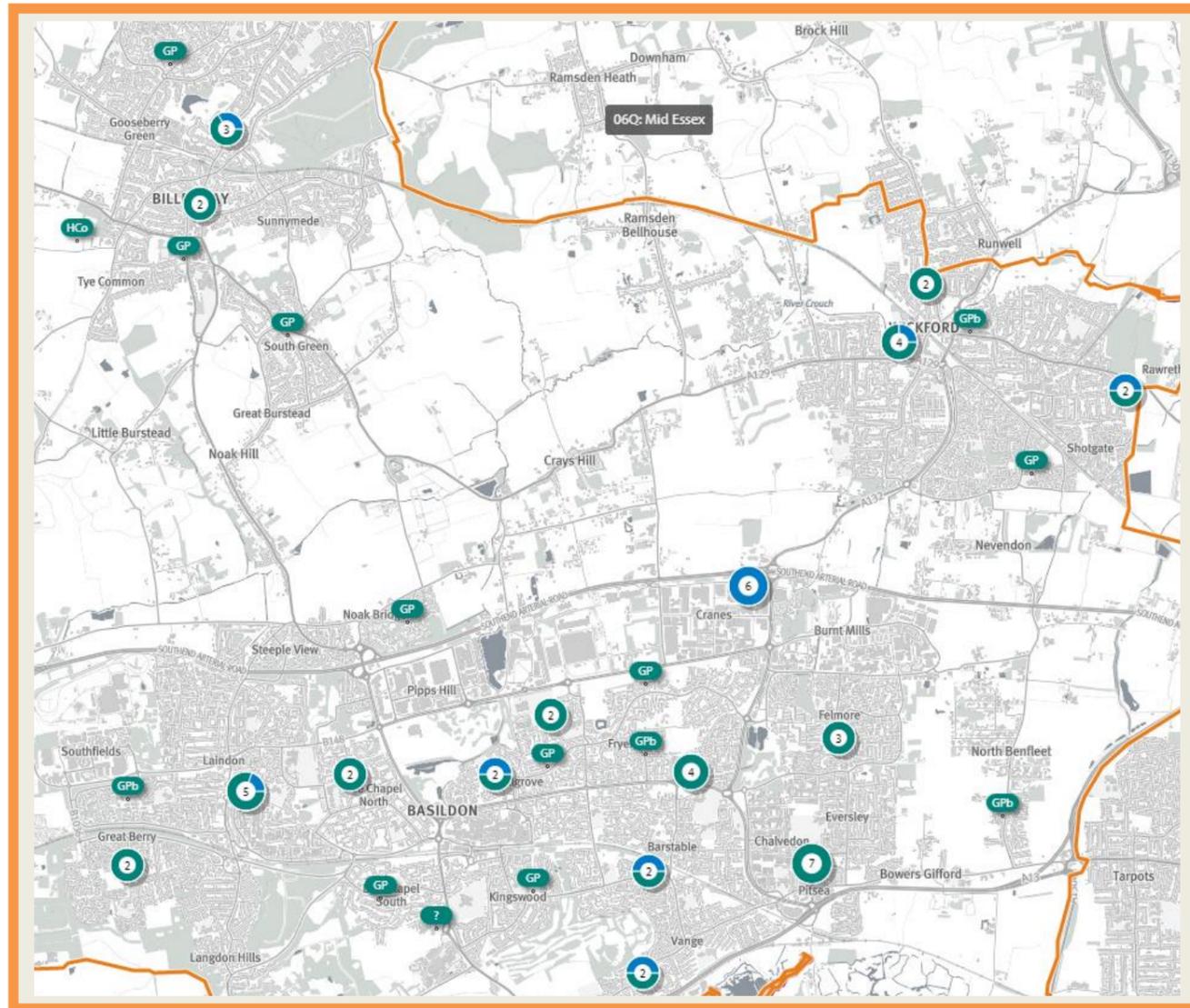


Figure 6: Location of existing GP surgeries in Basildon Borough

Needs

- 6.1.30 Generally, the NHS policy locally is to attempt to accommodate growth wherever possible within the current premises envelope, though this is likely to require capital works to adapt facilities over time, and only to seek new premises where this is demonstrably necessary.
- 6.1.31 It is not possible to accurately determine the build cost or size of new health facilities at this stage. This will depend on a large number of complex and inter-related factors that can only be

resolved at a more advanced stage in the planning process. It will not be the case that each new health facility would be a fixed size or would have a fixed range of services.

- 6.1.32 Clinically there are circumstances where co-location of GP and other NHS or social care functions are desirable and would be considered or sought.
- 6.1.33 The proposed growth in Basildon Borough may require provision of a New Health Care infrastructure.

Table 3: Health Care Requirements - Publication Local Plan

Proposed Site	Anticipated Mitigation
Wickford	
H14a&b The Paddock, east of Cranfield Park Road, Larks Wood Park, Tresco Way (1,100 dwellings)	Increased capacity for Wickford Health centre by means of new infrastructure.
H15 Land north of Southend Road, Shotgate (280 dwellings)	
Wickford Town Centre Redevelopment and other developments committed within the urban area (880 dwellings)	
H16 Land south and north of Barn Hall, land north and east of Station Avenue, The Wickford education centre (540 dwellings)	
H17 Downham View Farm, Castledon Road, London Road (300 dwellings)	
Basildon	
H7 Land west of Gardiners Lane South (790 dwellings)	Contribution towards increasing capacity for local primary care facilities, by means of extension or possible new build and relocation of an existing practice
H8 Land north of Dry Street (725 dwellings)	Contributions towards increasing capacity for local primary care facilities by means of extension, refurbishment, reconfiguration or possible new build and relocation of an existing practice(s)
H9a/H9b Land north and south of London Road, Vange (650 dwellings)	
H10 West Basildon urban extension (300 dwellings)	Contribution towards a new build facility within the area. Should there be the development of a Garden Village settlement in the Brentwood Borough it would be expected that joint mitigation would deliver infrastructure to accommodate the needs of the combined sites, phased to meet the housing trajectory for both developments
H11 Land west of Steeple View (245 dwellings)	Contribution towards a new build facility and increasing capacity for primary care by means of extension, reconfiguration or
H12 Land at Noak Bridge, north of Wash Road & Land south of Wash Road (830 dwellings)	

Laindon Town Centre (200-300 new dwellings)	refurbishment of existing premises
Land east of Basildon (2,000 new dwellings)	Contribution towards new build infrastructure
Basildon Potential Area – North Benfleet (Potential for an additional 500 new homes)	Contribution towards new build infrastructure
Basildon / Wickford Potential Area – Hovefields & Honiley (Potential for 500 new homes)	Contribution towards increasing capacity for local primary care facilities, by means of extension or possible new build and relocation of an existing practice
Billericay	
H19 Land north of Potash Road (255 dwellings)	Contribution towards increasing capacity for local primary care facilities by means of extension, refurbishment or reconfiguration
H20 land at Curds Farm, Land east of Tye Common Road, land at Kingsmans Farm (660)	Contribution towards increasing capacity for local primary care facilities, by means of extension or possible new build and relocation of an existing practice
H21 Land south of London Road, Land west of Heath Road, Billericay Cricket Club, Land north of Mayflower House (290 dwellings)	
H22 Land west of Mountnessing Road (540 dwellings)	
H23 Land east of Frithwood Lane (524 dwellings)	
H24 Land south of Windmill Heights (212 dwellings)	
H26a&b Land east of Greens Farm Lane Snails Hall, Greens Farm Lane (280 dwellings)	
H27 Thatched Cottage, Southend Road, Southend farm, Great Burstead (190 dwellings)	
Ramsden bellhouse	
H28 Ramsden Bellhouse (39 dwellings)	Contribution towards increasing capacity for local primary care facilities by means of extension, refurbishment or contribution to one off recruitment costs
Crays Hill	
Crays Hill (83 dwellings)	Contribution towards increasing capacity for local primary care facilities by means of extension, refurbishment or contribution to one off recruitment costs

Timing and nature of future provision

- 6.1.34 The provision of appropriate primary healthcare facilities to support growth is a critical item. The necessary provision should be delivered as new growth comes forward to ensure that health care impacts are appropriately mitigated.
- 6.1.35 Where any on-site provision is required, this may need to be phased to reflect the time period over which growth is expected, or to accommodate service requirements. The IDP identifies a series of infrastructure requirements, either in the form of expansion or improvement to existing, or provision of new health care facilities. The exact quantum of space and the nature of the requirement will need to be discussed at the point of the development of specific proposals.
- 6.1.36 Health care services and models of care are consistently under review and are likely to change significantly.
- 6.1.37 Over the plan period, health care provision will need investment. It is likely it will be in very different forms than the buildings that have traditionally been developed. It will be important that requirements are reviewed regularly as part of the IDP iterative process. It is important that local authorities and developers liaise with health commissioners at the earliest possible stage in order to understand what type of provision will fit most appropriately with local needs.

Infrastructure Costs

- 6.2.1 NHS England has warned against the use of standard cost estimates as part of Local Plans as costs can rise over time and can be out of sync when it comes to delivering the infrastructure on the ground. Whilst the Infrastructure Delivery Plan has used standard cost estimates in order to gauge the overall funding requirements to improve capacity in health services to support the level of growth anticipated through the Local Plan, the IDP is intended to be a ‘living’ document that will be updated over the lifetime of the Local Plan and therefore the costs contained in this section come with the caveat that they may be subject to change over time, and are based on a traditional cost of buildings, which we know the NHS will no longer be following in the future.

However, in the absence of any examples of costs for past delivery of such services, average build costs have been used in this version of the IDP to illustrate the potential need for capital funding over the plan period.

- 6.2.2 The CCG has previously provided details of optimal space requirements for a number of Practices, Clinics and other CCG Premises in the Borough, including details of the capital required to create additional floor space at each one. This cost averages out at approximately £2,300 per square metre to create additional floor space. If all the space requirements to meet existing capacity deficits were to be completed, this would require approximately £13.18m. For the Strategic Sites identified in the Local Plan, if we take the CCG’s traditional assumptions for provision of buildings that for every additional 1,750 people, additional space of 100sqm is also required, therefore the costs for the upgrades identified by the CCG would be as follows:
- **Billericay:** 7,800 new residents would require additional floorspace of 535m² at a cost of £2,300 per square metre is a total cost of £1.2m.
 - **Wickford:** 9,058 new residents would require the expansion of all practices in the Wickford area, totalling approximately 621m² of space. At £2,300 per square metre, the total cost is £1.4m.
 - **Basildon:** The expected expansion in population associated with the proposed plan would require additional capacity to be provided. Combined this would be an increase in the population of approx. 21,660 and cost approximately £3.4m based on a cost of £2,300m².
- 6.2.3 These costs are estimated costs associated with the potential upgrades to facilities that would be required to meet the needs of growth in the Borough through Local Plan development proposals. However, the standard mechanism for calculating costs for new NHS facilities does not perfectly fit the way in which the NHS Mid and South Essex Sustainability Transformation Plan envisages services will be provided in the future. Therefore, whilst we can use the standard mechanism for calculating costs to provide an estimated funding gap, this does not necessarily mean that a new or extended building will be provided on each and every new development allocation.

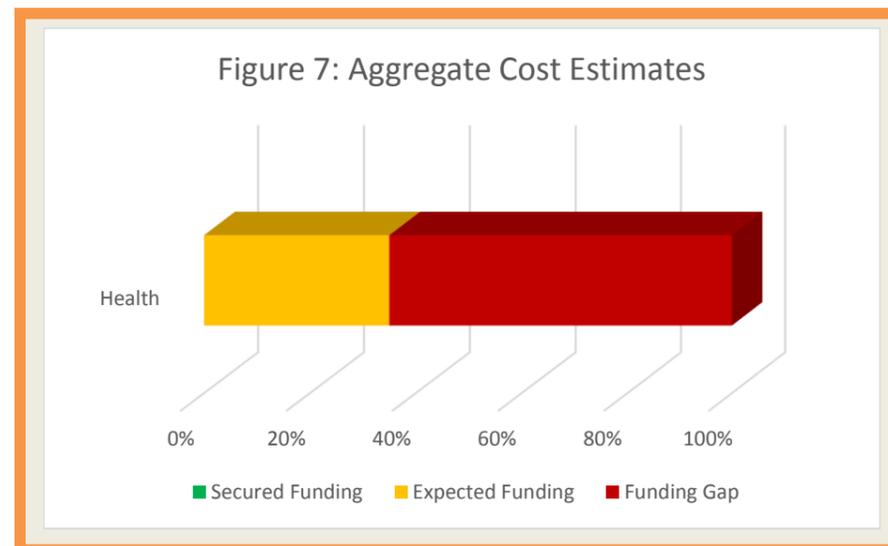
- 6.2.4 Due to the increase in population, Basildon Hospital will need to expand their specialist services across the acute footprint to accommodate this predicted growth. The infrastructure costs are estimated at £39m (over the plan period) based on 2.4 people per dwelling (Census) and at a cost of £3,013 per dwelling. This figure calculated using current infrastructure costs per size of population. BTUH will be seeking developer contributions to provide funding for this.
- 6.2.5 Owing to the fact that the NHS has provided comments on the potential health care improvements required to support growth shown in Table 3 above, the costs estimates should be considered as a worst-case scenario. This is because the figures in Table 3 contain housing numbers which are now not proposed as part of the Revised Publication Local Plan, October 2018. This includes the additional 300 homes to the south west of Billericay, the additional 350 homes at Noak Bridge and a potential area to the east of North Benfleet for 500 new homes which was recommended by the High Level Development Framework produced by Pell Frischmann. However, the Strategic Planning and Infrastructure Committee chose to take an alternative option by setting the Parish Council a housing target to deliver through their Neighbourhood Plan. This target was more in line with the total figure contained in the Publication Local Plan, where the previous Infrastructure, Growth & Development Committee determined not to include these 500 homes in the plan also. Whilst the overall requirements for infrastructure improvements such as new and improved facilities are unlikely to change significantly, the overall cost could be considered a high estimate given the figures used in the generic calculation.

Funding Sources

- 6.3.1 NHS capital funding is extremely limited. For the provision of new health care facilities there are various non-NHS capital funding options, for which the NHS would be responsible for the revenue consequences.
- 6.3.2 Revenue consequences of any infrastructure works would need to be carefully considered and all primary care estates projects are subject to the NHS England prioritisation and approval process.

- 6.3.3 Shared facilities may necessitate the need for individually leased areas and separate revenue funding streams.
- 6.3.4 Delivery of and contributions to, new health care facilities will be sought from developers as part of mitigation and is a prerequisite to delivery of sustainable development.
- 6.3.5 There are numerous options for capital funding for health projects via public or private sector investment. The key issues with regards to increasing capacity by means of physical infrastructure is revenue affordability and workforce. It is also important to consider growth in light of planned strategic projects for the whole local health economy. Basildon Borough Council will continue to work closely with the Basildon & Brentwood CCG to establish additional funding requirements. The total cost of additional health facilities and expansion of existing facilities to support growth identified in the strategic locations within the Publication Local plan based on current formula is approximately £39m for the acute sector and £6m for primary and community settings.
- 6.3.6 Given the capacity requirement of the existing population for healthcare services, and costs associated with providing infrastructure to meet those needs, it is likely that the costs associated with growth as identified in the Publication Local Plan (£45m) will need to be met in full through planning contributions in order to ensure sufficient acute, primary and community care facilities in the Basildon Borough for the Local Plan period to 2034.

6.3.7 The aggregate cost estimate percentages have been calculated using the thresholds provided by NHS England, who also provided the local planning authority with a list of schemes which they expected to receive funding for through their own estates strategy to provide an optimal service to the current population. Using the thresholds provided, Basildon Borough Council has calculated that the schemes required to support growth in the Local Plan would cost £45m and as the schemes would be expected to be delivered as part of funding secured through development, this is therefore not secured or expected funding and represents a funding gap to which the Community Infrastructure Levy could be charged. This is, however, an estimated cost and only represents a potential target for the level of contributions that the CIL could provide.



7. Education

proposed expansion but could prove problematic if an academy does not wish to expand.

7.1.1 Essex County Council, as the Local Education Authority, has provided comments on the implications of potential growth for education provision which are set out below. The analysis has been produced by undertaking a desk top exercise to examine the current site areas of the schools in the Borough to assess whether, or not, there is any scope to expand them. Essex County Council are committed to working with Basildon Borough Council to provide more detailed consideration of site constraints such as site gradients, configuration of existing buildings, site access, traffic impact etc. once we reach the appropriate stage in the planning process.

7.1.2 Their comments have been provided on the basis of the strategic sites shown in Appendix 1, and the number of extant permissions in each school catchment. The figures set out below are an upper end estimate of pupil numbers based on the assumption that most new dwellings in the Plan will be built as houses. The advice provided by the Education Authority should therefore be considered as initial estimates. Where the need for a new school is identified, any reference to the number of forms of entry (fe) it will accommodate should be taken as purely indicative. The site area requirement is the most important figure. This will always be set to provide sufficient flexibility to ensure peaks in demand over and above the figure indicated can be accommodated and thereby ensure the Plan is sound.

7.1.3 A significant number of the schools in Basildon Borough have converted to academy status and are, therefore, no longer local authority maintained schools. Whilst the County Council has the role of “commissioner of school places” it is not in a position to publish proposals to expand academies. As a consequence any expansion of an academy would require the agreement of the Academy Trust and the Secretary of State. This is not a major obstacle when all parties concerned agree on the benefits of a

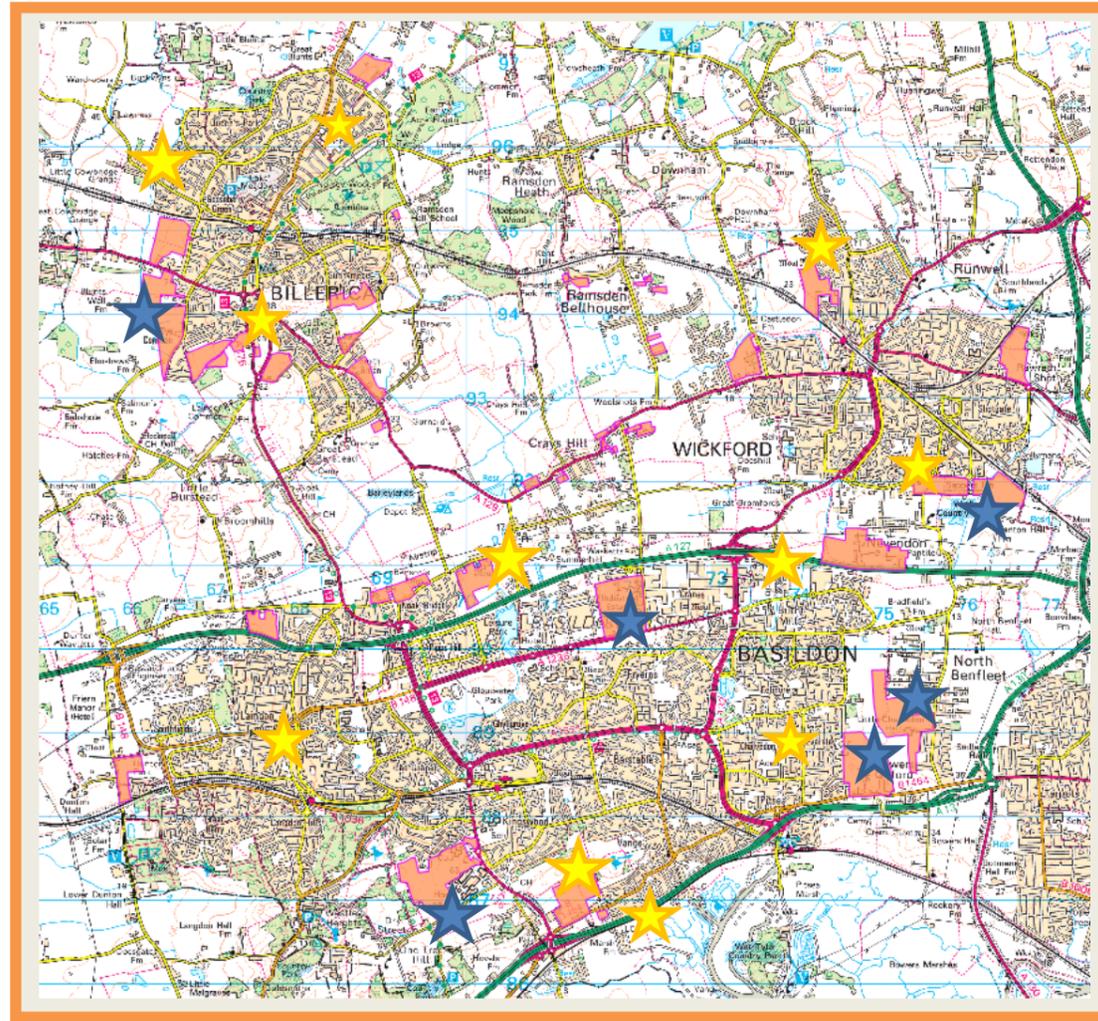


Figure 8: Approximate locations of new school requirement across the Borough where a blue star represents a new school and a yellow star represents the expansion of an existing school.

Primary Schools

7.1.4 Primary schools in Billericay are close to capacity and are forecast to remain so over the course of the next 5 years. Any significant housing development will, therefore, require the provision of additional school places either through the expansion of existing schools and/or the establishment of new schools. The need for primary school places as a result of Local Plan growth comes out at slightly under 4 forms of entry (fe). The education authority has already identified the need for a 1fe expansion at Brightside Primary in their ‘Ten Year Plan’ and the remaining places are

expected to be provided at a new school located on a 2.9ha site allocated for D1 use to the south west of Billericay.

7.1.5 Primary schools in Wickford are also forecast to fill over the course of the next 5 years. Any significant housing development will, therefore, require the provision of additional school places either by the expansion of existing schools and/or the establishment of new schools. Development in Wickford would require 2.1ha of educational land to be provided as part of the allocation to be located on land south of Wickford. The scope of other potential expansion projects will also need to be determined once the Local Plan is adopted.

7.1.6 For Basildon, forecasts for the next 5 years indicate that there will be a need for additional primary school places. Taking into account planned 1fe expansions of both Ryedene & Merrylands, shown in the education authority’s ‘Ten Year Plan’, and the option of a 2fe new school on the new development taking place at Nethermayne, the additional need as a result of Local Plan growth would be around 4fe. Around 2.9ha of educational land will be allocated on the site at Gardiners Lane South, which would provide sufficient flexibility to meet the needs of the centre and west of the town. The demand in Noak Bridge would be approximately 1fe. Therefore, the Noak Bridge primary school will require expansion to accommodate the additional demand, and as this is on a restricted site, it may require more significant development contributions than usual. Following the reduction of 350 homes in the area to the north of Wash Road, the education authority has considered that the site to the west of Steeple View would actually be better suited to be contained within the Noak Bridge Primary catchment area so that pupils are not required to cross the A127 to get to school. Therefore, this site could assist in the delivery of the school expansion, however, this would need to be verified through the submission of a satisfactory viability appraisal given the higher than usual cost.

7.1.7 The proposed development around Vange can be supported subject to the expansion needs of Vange Primary School being met as part of the adjacent development.

7.1.8 For Laindon/Langdon Hills, and the development of circa 300 new homes to the west of Basildon, that community will be best served by existing schools and/or in conjunction with proposals for a Dunton Hills Garden Village adjacent to the Borough boundary in Brentwood.

7.1.9 Primary schools in Basildon East / Pitsea / Bowers Gifford are forecast to fill over the next 5 years. Development in this area will create a need for over 2fe of additional primary provision. Therefore, 2.1ha of land for educational need should be allocated for a new primary school. Expanding Northlands Primary School by a half form of entry is also an option in the education authority's 'Ten Year Plan' and this may play a part in providing the total capacity needed to serve the area.

schools and this is likely to increase pressure for additional school places in Basildon.

Specific arrangements should be discussed with the childcare provider/school.

7.1.13 The pattern of provision in Wickford is complicated by the fact that part of the town lies in Chelmsford City Council's area. There is a planned development of 600 dwellings currently being built at the former Runwell Hospital site which is also placing pressure on Secondary School provision. Some limited expansion of the Wickford schools may therefore be necessary.

7.1.19 Early Years and Childcare provision includes full day care, pre-schools, crèches, childminders, breakfast, after-school and holiday clubs and nursery classes in schools. This multiplicity of provision, working in partnership with the private and voluntary sectors, enables a wide range of childcare options to be available.

7.1.20 The Essex County Council Developers' Guide to Infrastructure Contributions determines how the need for additional Early Years and Childcare provision is assessed. All residential developments of twenty or more dwellings will be assessed to see if a developer contribution is necessary. Commercial developments that will employ fifty or more people may also be expected to contribute. The child yield from qualifying houses (total number of dwellings minus any 1 bed flats, student or elderly persons accommodation that is unlikely to generate a requirement for early years or childcare provision) is nine children per one hundred homes (0.09 per dwelling) with half this number expected from qualifying flats i.e. 0.045 per flat. As the exact number of flats is unknown at this stage, the estimates have been based on the dwelling standards of 0.09 places per dwelling and is therefore to be considered a 'worst-case' scenario).

7.1.21 When estimating the number of Early Years & Childcare places that a new employment proposal will require, a factor of four places per one hundred employees is used.

7.1.22 Based on the strategic sites contained in Appendix 1, and the total urban capacity of development in each settlement, this would result in the following requirements:

Billericay

7.1.23 For sites in Billericay as a whole, qualifying properties would result in a requirement for an additional 253 places for EY&C as a result of the development proposed in this area. There are already 48 current settings for EY&C, however, 6 of these are running at 80% capacity or more. In total, there are 55 surplus places available for 2yr olds and 105 surplus places for 3/4yr olds. Therefore, it is likely that upgrades will need to be secured through development.

Secondary Schools

7.1.10 Basildon town currently has a significant surplus of secondary school places. This surplus is forecast to reduce over the next 7 years, as higher pupil numbers feed through from primary schools. The level of new housing development proposed in the Publication Local Plan will require the provision of additional school places either through the expansion of existing schools and/or the establishment of a new school. Overall there will be an estimated need in the Basildon Borough for just under 11fe of additional capacity. A 10ha site will be allocated on land to the east of Basildon as part of housing allocation H12 for the provision of a new secondary school. There is also the potential for a new secondary school to be provided as part of the Dunton Hills Garden Village proposal in the Brentwood Borough which according to Essex County Council could play a role in meeting educational need in west Basildon.

7.1.11 Both of the secondary schools in Billericay, The Billericay School and the Mayflower School, are currently operating at capacity. A proportion of the pupils attending these schools live outside the priority admissions areas for the schools. Pupils coming from new housing in Billericay will, thereby, reduce the opportunity for children living outside the area to attend these schools and increase pressure for additional school places in Basildon, as discussed above. Some limited expansion of the existing schools in the area may be necessary.

7.1.12 Both of the secondary schools in Wickford, Beauchamps and The Bromfords, are forecast to fill as a result of the housing proposed in the Publication Local Plan. A proportion of the pupils currently attending these schools live outside of their priority admissions areas. As in Billericay, new housing in Wickford will reduce the opportunity for children living outside the area to attend these

Early Years and Childcare Provision

7.1.14 The Childcare Act 2006 places a range of duties on local authorities regarding the provision of sufficient, sustainable and flexible childcare that is responsive to parents' needs. Local authorities are required to play a lead role in facilitating the childcare market within the broader framework of shaping children's services in partnership with the private, voluntary and independent sector.

7.1.15 Section 6 of the Act defines 'sufficient childcare' as sufficient to meet the requirements of parents in the area who require childcare in order to enable them to take up, or remain in, work or undertake education or training which could reasonably be expected to assist them to obtain work.

7.1.16 Section 7 sets out a duty to secure free early years provision for preschool children. The current regulations prescribe that every child aged three or four is entitled to 15 hours per week free early years provision for 38 weeks of the year. This provision must also be provided to disadvantaged two year olds (currently around 40% of children).

7.1.17 From September 2017, the Childcare Act 2016 increased this entitlement for eligible working parents by an additional 570 hours for three to four year olds. Please see the following link for eligibility criteria: www.childcarechoices.gov.uk.

7.1.18 These additional hours will support working parents who are struggling with childcare costs and who may be looking to increase their working hours. The hours are also flexible, depending on what would suit a family's particular needs, meaning all, or some, of the free 30 hours a week can be used.

Wickford

7.1.24 For sites in Wickford as a whole, an additional requirement of 220 places would result from the proposed development, with 23 current settings, however 6 of these are running at over 80% capacity, providing 18 surplus places for 2yr olds and 32 surplus places for 3/4yr olds. Therefore, it is likely that the increased requirement for places will result in the need to upgrade facilities or provide a new setting in the general vicinity. However, upgrades are expected to be brought forward through S106 on existing proposals in Runwell and Bruce Grove which could also serve the development sites to the north-east and north-west of Wickford. The need for additional provision in this location will therefore need to be re-assessed at the point at which any application for residential development is made. To the south of Wickford, there are no current plans to increase capacity in this area and it is likely that upgrades will need to be secured through development.

Basildon

7.1.25 For sites to the east of Basildon, the larger level of development proposed in this area would result in an additional requirement for 640 places for EY&C. There are already 69 settings in this settlement, of which 41 are running at over 80% capacity. These settings have 62 surplus places for 2yr olds and 235 surplus places for 3/4yr olds. This would leave an unmet requirement for 343 places. There is therefore, a requirement for significant additional provision of EY&C places within this location to meet the needs arising from development. It may be appropriate to secure some of this provision alongside new primary schools also required in this location.

7.1.26 The majority of employment provision is to be located in the Basildon settlement along the A127 corridor and is now anticipated to generate approximately 14,150 B-class jobs. This would result in an overall requirement for 566 places. The largest employment site will be brought forward as part of the east Basildon urban extension and therefore it may be appropriate for a new setting to be provided in this location.

7.1.27 Where possible the Early Years and Childcare service would seek to place provision adjacent to school provision, but where this is

not possible, Essex County Council would wish to seek appropriate land as per the Developers Guide.

7.1.28 It is important to note that the figures above could be significantly affected by the new Extended Funding Entitlement Offer introduced in September 2017, therefore it is possible that there could be a further need for Early Years and Childcare places. This will need to be investigated as the IDP evolves throughout the Local Plan period 2014-2034.

Infrastructure Costs

7.2.1 The cost of additional school places are set out in 'The Essex County Council Developers' Guide to Infrastructure Contributions Revised Edition 2016'. This states that the approximate costs (Index linked to April 2016 prices), of extending an existing primary school can be estimated at in the region of £12,200 per place. The equivalent costs for secondary places is circa £18,500.

7.2.2 With an extension scheme it is often unnecessary to expand all the common areas used by a school such as the staff room, toilets or the hall. The cost of major works and new schools is therefore higher. Costs for new primary schools are based on a cost per place of £14,887 (index linked to April 2016 prices) as shown in the example provided in the appendices to the 2016 Essex County Council Developers' Guide to Infrastructure Contributions. Costs for secondary schools are likely to be £21,500 per place (index linked to April 2016) depending on the size of the school required.

7.2.3 Land and site preparation costs are excluded. As per the 2016 ECC Developers Guide to Infrastructure Contributions, it is expected that the developer will provide free, fit-for-purpose sites that are fully serviced and remediated.

Table 4: Primary School Provision (excluding EY&C)

Settlement	Project	Approximate Cost	Indicative Timing	Potential Funding Sources
Billericay	Brightside Primary School 1fe Expansion	£3.8m	2019	Basic Need / Extant s106

	New school at 2.9ha allocation on sites H20-23	£9.8m	Linked to development	s106
Wickford	Planned reorganisation & expansions at Hilltop & I&Js; Wickford CE; and Wickford I&Js	£2.3m	2020	Basic Need
	Various Expansion projects	£3m	2021 onwards	s106
	New school at 2.1ha allocation on Larks Wood Park (Tresco Way)	£6.3m	Linked to development	s106
Basildon	Ryedene Primary School 1fe Expansion	£3m	2019	Basic Need
	Merrylands Primary School 1fe Expansion	£1.7m	2020	Basic Need / Extant s106
	Noak Bridge Primary School 1fe Expansion	Await Viability	Linked to development	s106
	New school on 2.1ha allocation at Dry Street/Nether mayne	£6.3m	Circa 2025 (tbc)	S106 including partial funding from extant agreement for site.
	New school at 2.9ha allocation on Gardiners Lane South	£9.8m	Linked to development	s106
Pitsea / Bowers Gifford	Northlands Primary School half fe expansion	£1.3m	Circa 2022 (tbc)	Basic Need / s106
	New school at 2.1 ha allocation on site H13	£6.3m	Linked to development	s106

The addition of a 56 place EY&C facility to a new primary school would add circa £1.1m to the cost of each.

7.2.4 The costing data shown in Tables 4 and 5 is index linked to April 2016 prices and does not include land acquisition and preparation costs.

Compliance Study report that a developer must submit with any planning application that includes land for a new school.

7.2.2 A number of these school places will be accommodated by surplus capacity within existing schools throughout the Borough. However, as established above there will be a need to expand some existing schools and a need to provide additional new schools in some areas. The breakdown is as follows:

Billericay

7.2.3 The overall requirement in Billericay is for one additional primary school at a cost of approximately £9.8m. An expansion of Brightside Primary has also been identified by the Education Authority and will cost approximately £3.8m.

7.2.4 For Early Years and Childcare, the overall requirement is for an additional 93 places. The largest allocation to the south west of Billericay is therefore a prime location for a potential new 56 place setting, which could be associated with the new primary school and would have a cost of £19,014 per place. The remaining 37 places are likely to be provided through expansion of existing facilities at a cost of £13,500 per place for a total cost for Billericay of £1.6m.

Wickford

7.2.1 Planned reorganisation and expansions at various primary schools in Wickford will cost approximately £5.3m in total. Also, the addition of one new primary school to be located on land to the south of the settlement will cost approximately £6.3m.

7.2.2 For Early Years and Childcare provision, the overall requirement is for an additional 170 places. As there are at least three allocations in this settlement providing upwards of 250 dwellings, three new 56 place facilities are assumed to come forward with one to the south of Wickford potentially associated with the new primary school. This would result in a total cost of £3.2m.

Basildon

7.2.3 The requirement in Basildon central includes the expansions of both Ryedene & Merrylands as identified in the education authority's 'Ten Year Plan', which combined would cost £4.7m. There is also the option of a new 2.1ha school on the new development taking place at Nethermayne which has already been partially secured at £6.3m. The additional need as a result of Local Plan growth would require a new primary school allocated on the site at Gardiners Lane South at a cost of approximately £6¼m.

7.2.4 Assuming that not all of the development in Noak Bridge would create an educational need, such as one bed or elderly person's accommodation, the expansion of Noak Bridge Primary School would be required, however, as the school is located in a restricted site, it is likely to incur more significant contributions in order to expand the school facilities.

7.2.5 A new primary school is also required to support the proposed development to the east of Basildon at a cost of approximately £6.3m. The expansion of Northlands Primary School has already been identified in the Education Authority's 'Ten Year Plan' and would cost approximately £1.3m based on the standard cost estimates.

7.2.6 Development in the Basildon Borough as a whole would require the need for one new secondary school to be located to the east of Basildon which would cost in the region of £30m, and when combined with other potential expansions of existing secondary schools in the Borough, could cost in the region of £38.4m in total.

7.2.7 For Early Years and Childcare, the overall requirement is for an additional 343 places. Again several sites are expected to bring forward upwards of 250 dwellings and three additional primary schools have also been identified as being required, which could have EY&C associated with them. Therefore, if we assume that at least 4 new 56 place facilities are provided, this would result in a total cost of approximately £5.9m.

7.2.8 The total cost for education provision including primary (£53.6m), secondary (£38.4m), and early years provision (£11m) would be approximately £103m for the Basildon Borough as a whole.

Table 5: Secondary School Provision (excluding 6th form)

Project	Approximate Cost	Indicative Timing	Potential Funding Sources
Existing School Expansion	£2.8m	Circa 2023 (TBC)	Basic Need / Extant s106
Existing School Expansions	£5.6m	Linked to development	s106
New school at 10ha allocation on site H13	£30m	Linked to development	s106

The addition of sixth form provision would add a minimum of 20% to the cost of each secondary school project.

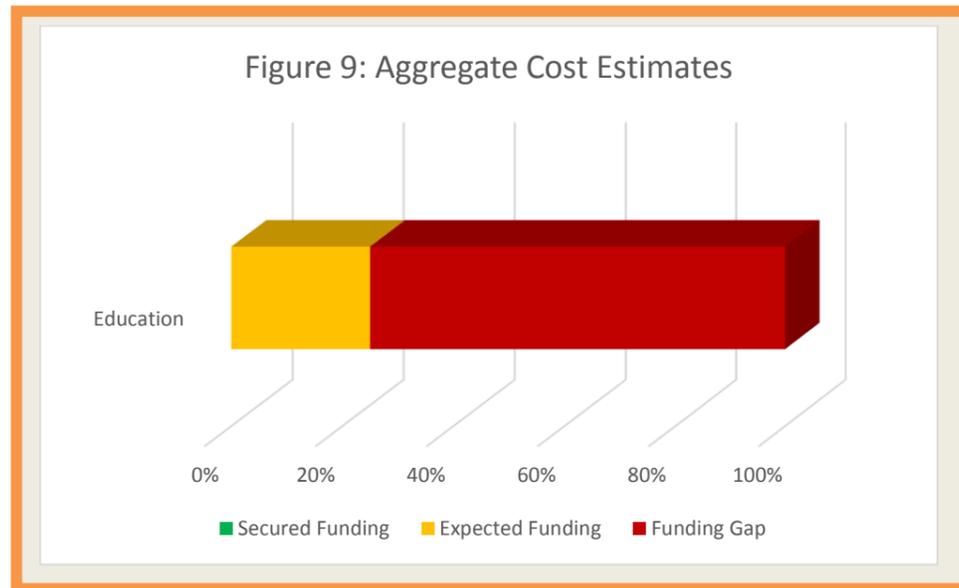
7.2.5 For Early Years & Childcare provision, the cost of each project and, thereby, any appropriate developer contribution must be considered on a case by case basis. By a way of guidance, however, the expansion of existing facilities has in the past cost around £13,500 per place according to the Essex County Council Guide for Developer Contributions 2016 (index linked as of April 2016). The cost of a new build 56 place facility is also estimated in this guide as costing more than an expansion at £19,014 per place.

7.2.6 The Essex Guide for Developers states that financial contributions for EY&C may be sought to help extend existing provision or provide a new facility. Up to five developments may be earmarked to contribute through S106 if a cumulative impact is identified. Larger groups of development (upwards of 250 dwellings or 500 employees) are most likely to trigger the need for a new setting and in such circumstances a land contribution is also required. For a standard 56 place nursery, around 0.13ha of land is needed.

7.2.1 It should be noted that the precise cost of projects will be determined by Essex County Council after reviewing the Land

Funding Sources

7.3.1 The main funding stream for education capacity to accommodate housing growth is developer contributions (S106/CIL). The Education Authority also receives 'Basic Need' grant to build capacity for forecast population growth, however, this should not be relied upon to meet demand generated by Local Plans, and the onus will always be on the developer to provide the required pupil places to support their development proposals.



7.3.2 The aggregate costs estimates have been based on the potential funding sources shown in tables 3 and 4. Where a source of funding is known and has an indicative timing for the delivery of the new or upgraded school, this is shown to be 'expected funding' in the aggregate cost estimates. Where this is to be secured through developer contributions, this is assumed to be the funding gap as no known sources of funding have yet been secured. As all Early Years and Childcare provision is expected to be paid for through development, this is also considered to contribute to the funding gap.

8. Traffic/Highways

Highway Impact Assessment & Mitigation Modelling

- 8.1.2 Basildon Borough Council in partnership with Essex County Council commissioned Ringway Jacobs to carry out transport modelling on a number of growth scenarios in the Basildon Borough in the form of a Highway Impact Assessment and Mitigation Modelling to inform the chosen Site Allocations in the Publication version of the Basildon Borough Local Plan. This follows on from the highway modelling produced for the previous version of the plan including the Core Strategy Preferred Options Report 2012, the Core Strategy Revised Preferred Options Report 2014, and the Draft Local Plan 2016.
- 8.1.3 The Mitigation Modelling element of the work, looks at the major junctions throughout the Borough to determine whether or not junction improvements to the highway network could successfully mitigate the negative impact of future growth on the Borough's roads. A high level costing exercise has been carried out to determine how much the junction improvements would cost, and to inform which funding streams would need to be explored in order to ensure development is viable. Full details of the results of these studies and the highway improvements that have been identified will be discussed later in this chapter.
- 8.1.4 The 'A127 Corridor for Growth: An Economic Plan' was developed by Essex County Council in partnership with Southend Borough Council and adopted by both authorities in March 2014. The document sets out the current issues with the A127 corridor, including congestion, safety and maintenance, along with outline proposals for improvements. This document is to be reviewed to take account of work and further studies undertaken over the last year.
- 8.1.5 A Route Based Strategy is also being developed for the A13, to identify issues and options for corridor improvements. This document will link with the A127 Corridor for Growth to provide a cohesive approach to managing the strategic highway network in the Basildon Borough.

- 8.1.6 The 2018 Highway Impact Assessment Report sequentially assesses a series of scenarios to illustrate the traffic impact of different growth assumptions and packages of highway interventions. These are as follows:
- **Scenario 0: 2014 Base** – This scenario aims to represent the situation on the road network at the start of the plan period in 2014. This is based on various traffic counts carried out between the years 2011-2013. This base data is then uplifted where appropriate to reflect conditions in 2014.
 - **Scenario 1: 2034 Reference Case** – This scenario considers the impact of 'background growth', which excludes any Local Plan growth or mitigation, but does include potential growth in the Borough's urban areas, and growth in neighbouring Boroughs and Districts. This is a 'Do-minimum' scenario which assesses the future year impact if there is no local authority intervention.
 - **Scenario 2: 2034 Local Plan Growth 'No mitigation'** – This scenario presents the future year situation if 'background growth' is added to growth in the Local Plan but if no mitigation of the highway network is secured.
 - **Scenario 3: 2034 Local Plan Growth 'Mitigation light'** – This scenario is a continuation of Scenario 2 but with the addition of initial pre-identified junction and highway mitigation interventions.
 - **Scenario 4: 2034 Local Plan Growth 'Mitigation max'** – This is a continuation of Scenario 3 but with the addition of more substantial junction and highway mitigation interventions including new link roads.
- 8.1.7 In the results of the assessment, a junction is generally considered to be operating efficiently where results are less than 0.85. Where results exceed 1.00, the junction is exceeding

theoretical capacity with periods of traffic congestion, which potentially requires mitigation. Results in excess of 1.15 highlight significant congestion and the need for physical improvements. The following colour bands have been applied to highlight the RFC/DoS¹ values for ease of reference:

- **Green** < 0.85: junction within capacity;
- **Yellow** 0.85 - 1: junction approaching capacity;
- **Amber** 1 - 1.15: junction is marginally over capacity, sustainable transport mitigation recommended;
- **Red** > 1.15: junction is over capacity, junction design or significant flow reduction recommended.

- 8.1.8 The results shown in table 4 overleaf illustrate, at the strategic level at least, that Local Plan growth can be mitigated to a similar level of network operation as the forecast reference case scenario where no Local Plan growth or transport improvements are delivered. A comparison of these two scenarios (1 & 4) is also provided in Figures 10 and 11⁹ on page 28.
- 8.1.9 The results of Scenario 2 and Scenario 3, where the Local Plan growth is delivered with either no mitigation or a limited package of improvements, show that the local BBC highway network would struggle to accommodate the additional traffic with up to 25 junctions exceeding capacity in either peak.
- 8.1.10 It should therefore be noted that the proposed mitigation package tested in Scenario 4 is considered as an initial set of interventions required to ideally mitigate the network back to the current level of observed performance or at the very least provide betterment over the modelled level of performance under the 'Do-Minimum' situation in Scenario 1. Individual developers would be expected to consider this package as minimum and, where appropriate, identify potential for further improvements.
- 8.1.11 It should also be noted that the results of the junction modelling shown overleaf do not take account of the added journey benefits of installing MOVA (Microprocessor Optimised Vehicle Actuation) at signal junctions. Research has shown that MOVA is effective at reducing journey time delays and can improve junction efficiency by up to 13%. Also, the VISUM² model that has been used to

¹ RFC is the Ratio of flow to capacity which provides the results shown in Table 4. DoS is the Degree of Saturation which provides similar results

but expressed as a percentage. For example, an RFC value of 0.85 would be a DoS value of 85%.

² An area-wide assignment modelling package which has been used to build a 'skeleton' model of the urban and strategic road network across

Junction ID	Junction Location	Existing Junction Type	Performance Summary							
			2014 Base		2034 Background Growth		2034 Final Growth Scenario No Mitigation		2034 Final Growth Scenario With Mitigation	
			AM	PM	AM	PM	AM	PM	AM	PM
Basildon										
Ba1	A127 / A176 Noak Bridge Interchange North	Standard rbt	0.80	1.05	0.95	1.17	1.31	1.38	1.06	1.24
Ba2	A127 / A176 Noak Bridge Interchange South	Standard rbt	0.63	0.71	0.71	0.82	0.89	0.90	0.78	0.79
Ba4	A127/A132 Nevendon Interchange Junction	Signal rbt	0.99	0.90	1.00	0.89	1.03	0.97	0.50	0.37
Ba5	Cranes Farm Road / A176 Upper Mayne / St. Nicholas Lane	Standard rbt	0.99	0.97	1.26	1.11	1.52	1.27	1.27	1.16
Ba7	Broadmayne / South Mayne / Ashlyns	Standard rbt	0.97	0.84	1.18	0.99	1.52	1.13	1.05	0.81
Ba14	B1464 London Road / High Road / Clay Hill Road	Mini rbt	0.93	1.22	1.04	1.34	1.05	1.38	0.88	1.07
Ba15	Cranes Farm Road / A132 East Mayne	Standard rbt	1.04	0.85	1.11	0.90	1.24	1.04	0.99	0.62
Ba16	A127 / B148 West Mayne (Dunton) Interchange	Large rbt	0.45	0.49	0.52	0.55	0.96	0.80	0.84	0.74
Ba19	High Road / West Mayne / St. Nicholas Lane	Standard rbt	0.71	0.63	0.81	0.72	0.91	0.84	1.00	1.21
Ba20	High Road / Somerset Road / Laindon Link	Standard rbt	0.36	0.48	0.40	0.52	0.43	0.56	0.44	0.56
Ba23	A176 Nether Mayne / Hospital Access	Signal rbt	0.86	0.91	0.81	0.91	0.79	0.90	0.83	0.85
Ba24	A13/A176 Five Bells Interchange North	Standard rbt	1.37	1.19	1.67	1.36	1.93	1.71	1.16	1.21
Ba25	A13/A176 Five Bells Interchange South	Standard rbt	0.45	0.60	0.50	0.65	0.58	0.65	0.56	0.77
Ba26	A13/A132 Pitsea Interchange	Standard rbt	1.18	1.05	1.49	1.31	1.48	1.66	0.82	0.89
Ba27	A132 East Mayne / Whitmore Way / Felmores	Standard rbt	0.75	0.71	0.84	0.81	0.99	0.94	0.90	0.82
Ba28	A176 Nether Mayne / Dry Street	T-junction	0.18	0.42	0.30	0.70	0.51	X	0.76	0.92
Ba29	B148 West Mayne / Mandeville Way	Standard rbt	0.88	0.66	1.01	0.71	1.11	0.79	1.12	0.93
Ra1	A1245 Chelmsford Road / A129 London Road	Standard rbt	0.76	0.95	0.86	1.14	0.86	1.09	0.66	0.91
Billericay										
Bi1	B1007 Stock Road / Queens Park Avenue / Potash Road	Standard rbt	0.83	0.87	0.97	0.99	1.11	1.14	0.88	1.23
Bi2	B1007 Stock Road / Radford Way	Mini rbt	0.92	1.13	1.03	1.26	1.04	1.26	0.69	1.02
Bi3	Mountnessing Road / Perry Street / Radford Way	Standard rbt	0.75	0.73	0.84	0.82	0.88	0.89	0.92	1.10
Bi4	B1007 High Street / Norsey Road / Western Road	Signal (4-arm)	0.91	0.83	1.01	0.94	1.05	0.96	0.60	0.84
Bi5	A129 London Road / High Street / Sun Street	Standard rbt	1.10	1.26	1.23	1.41	1.31	1.54	0.81	0.85
Bi6	A129 Sun Street / Chapel Street	Standard rbt	0.78	0.81	0.85	0.89	0.90	0.90	0.98	1.13
Bi7	A129 London Road / Tye Common Road / Western Road	Signal (4-arm)	1.22	0.95	1.65	1.58	1.41	1.41	0.51	0.54
Bi8	A129 Southend Road / A176	Standard rbt	0.75	1.00	0.84	1.11	0.95	1.13	0.52	1.17
Bi9	A176 / Kennel Lane / Laindon Road	Standard rbt	0.74	0.48	0.84	0.52	1.00	0.53	0.73	0.68
Bi10	A129 London Road / Mountnessing Road	Priority (3-arm)	0.70	1.00	0.89	1.14	1.67	X	2.36	0.54
Bi12	A129 Southend Rd / Outwood Common Road	Priority (3-arm)	0.77	0.73	0.94	0.80	1.23	0.85	0.82	0.78
Bi13	A129 Southend Rd / Hickstars Lane	Priority (3-arm)	0.57	0.58	0.64	0.63	0.69	0.64	0.87	0.62
Wickford										
W1	A132 Runwell Road / A132 / Runwell Road	Standard rbt	1.07	1.07	1.19	1.34	1.42	1.48	1.12	0.74
W2	A132 Golden Jubilee Way / Radwinter Avenue / A129 London Road	Standard rbt	0.81	0.85	0.96	1.00	1.02	1.11	1.04	1.16
W3	A132 Runwell Road / Church End Lane	Priority (3-arm)	0.57	1.34	1.86	X	X	X	1.06	1.13
W4	A129 London Road / Nevendon Road / High Street	Signal (4-arm)	0.88	0.73	1.00	0.90	1.15	0.99	0.92	0.75
W5	A132 / Cranfield Park Road / Nevendon Road	Standard rbt	0.80	0.63	0.77	0.69	0.87	1.03	0.41	0.34

Table 6: Highway Modelling Junction Analysis

the Borough. Similar to SATURN in functionality, for this study the model software has been used to assign Local Plan development traffic to the

assess the highway network assumes an ‘all or nothing’ scenario, where the maximum number of vehicles will reassign to the mitigated route regardless of available capacity. In reality, however, traffic would even itself out between the different available routes, using an alternative route when congestion occurs. This is known as ‘network resilience’. Therefore, several junctions are anticipated to perform at a better level than suggested in the Scenario 4 results.

8.1.12 For example, it is reasonable to assume that the full level of Western Relief Road reassignment would not be realised in every instance and that some of the localised junction delays experienced in Scenario 4, including Junction Bi8 A129 Southend Road / A176 in the PM and Junction Bi10 A129 London Road / Mountnessing Road in the AM, would be reduced by a lower level of eventual reassignment with traffic rebalancing and using spare capacity elsewhere on the network.

8.1.13 As mentioned above, Figures 10 and 11 overleaf show a diagrammatical comparison of the results of Scenario 1 and Scenario 4 on the highway network in the Basildon Borough. These diagrams only show the AM peak period for reference and it should be noted that different junctions across the Borough will be affected in the PM peak period.

8.1.14 Figure 10 shows that if there is no Local Plan growth and no improvements to the highway network, that several junctions would be over capacity in the AM peak, with particular

fastest route determined by applied average speed data taken from the Trafficmaster database.

congestion occurring at Sun Corner and London Road / Mountnessing Road in Billericay, along the A132 in Wickford and at various junctions in Basildon. These include A176 Upper Mayne / St. Nicholas Lane, at Five Bells Interchange and at Pitsea Interchange.

8.1.15 Figure 11 which shows the future year including Local Plan Growth and mitigation of junctions and new link roads, shows that the introduction of the Relief road in Billericay in addition to local junction improvements is successful at mitigating the impact of growth such that the Sun Corner junction and junctions around the High Street would perform better than if there was no Local Plan growth whatsoever.

8.1.16 Similarly, figure 11 shows how the new junction on the A127 alleviates the impact of Local Plan growth to the extent that junctions to the east of Basildon and in Wickford would overall perform better in the future year than the scenario where no Local Plan growth and no mitigation would come forward.

8.1.17 The Junction at A176 Upper Mayne / St. Nicholas Lane in Basildon would remain over capacity in the future year even after mitigation options are applied, however, a separate study being carried out by the Highway Authority is looking at potential improvements to the Fortune of War junctions which are also expected to provide improvements to the St. Nicholas Lane junction as suggested by the Highway Impact Assessment in 2014.

8.1.18 In Billericay, the A129 London Road / Mountnessing Road and the A129 Southend Road / Outwood Common Road junctions would remain over capacity. However, as explained earlier the VISUM

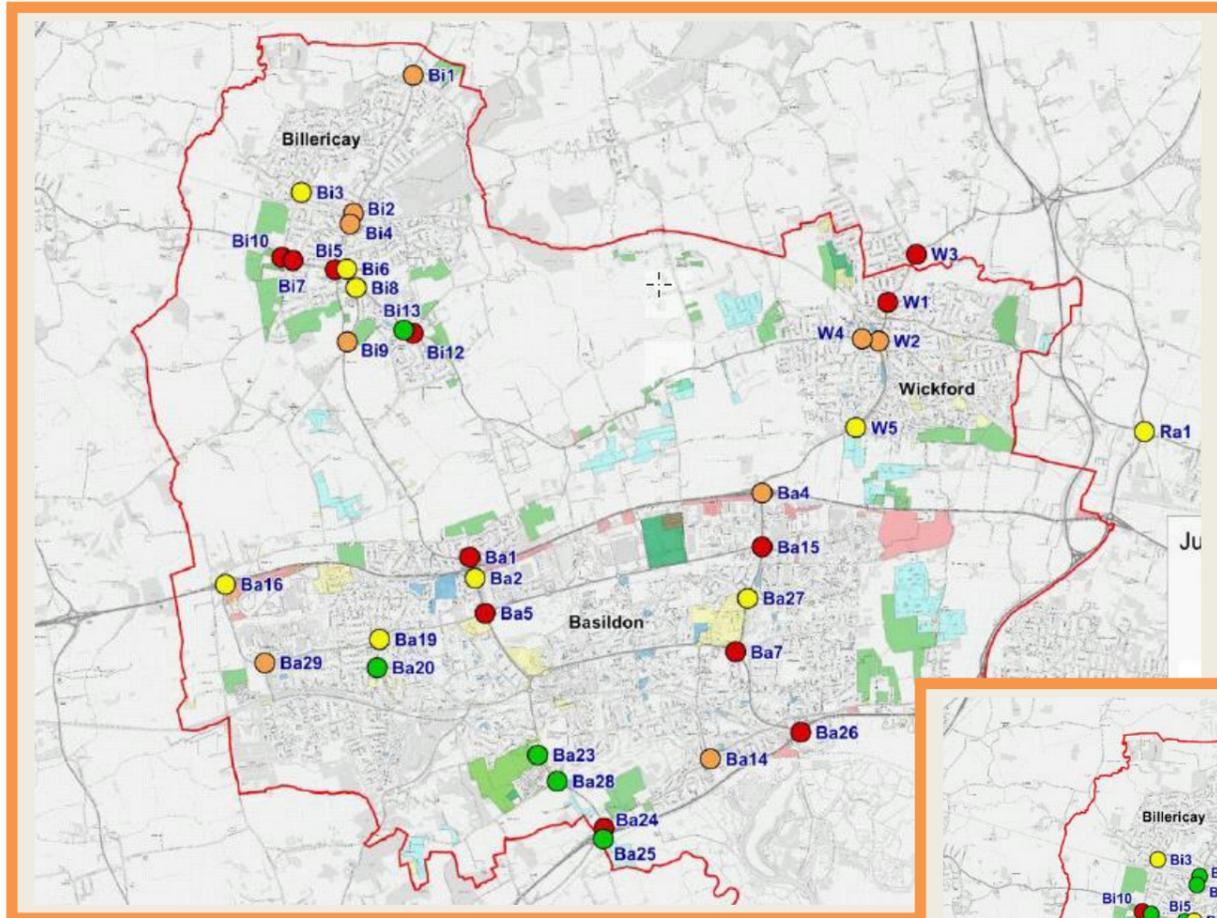


Figure 10: Scenario 1: Reference Case 'Do minimum' (AM)

model represents a 'worst-case' scenario where all traffic is assumed to reassign to alternative routes due to the network improvements and in reality, it is expected that traffic will even itself out between the different routes available. There is also the possibility of introducing MOVA on all signalised junctions, or to introduce a County wide strategy for improving use of sustainable transport modes to improve capacity further.

8.1.19 The potential impact of using more sustainable modes of transport should not be underestimated and the transport modelling suggests that junctions which are considered to reach

an RFC value of up to 1.15 are considered to be able to be successfully mitigated with the use of schemes which encourage greater use of sustainable modes of transport.

Infrastructure Costs

8.2.1 The Local Plan Highway Mitigation Modelling includes a number of potential road improvements, which represent some short-term and long-term options, with some other options that are a possible response to mitigating the impact of future growth on the highway network, but may not be justifiable if they in turn make the potential growth proposals unviable. Therefore, as there are a range of options available, the total cost of mitigating the impact of the chosen allocations could range from a minimum

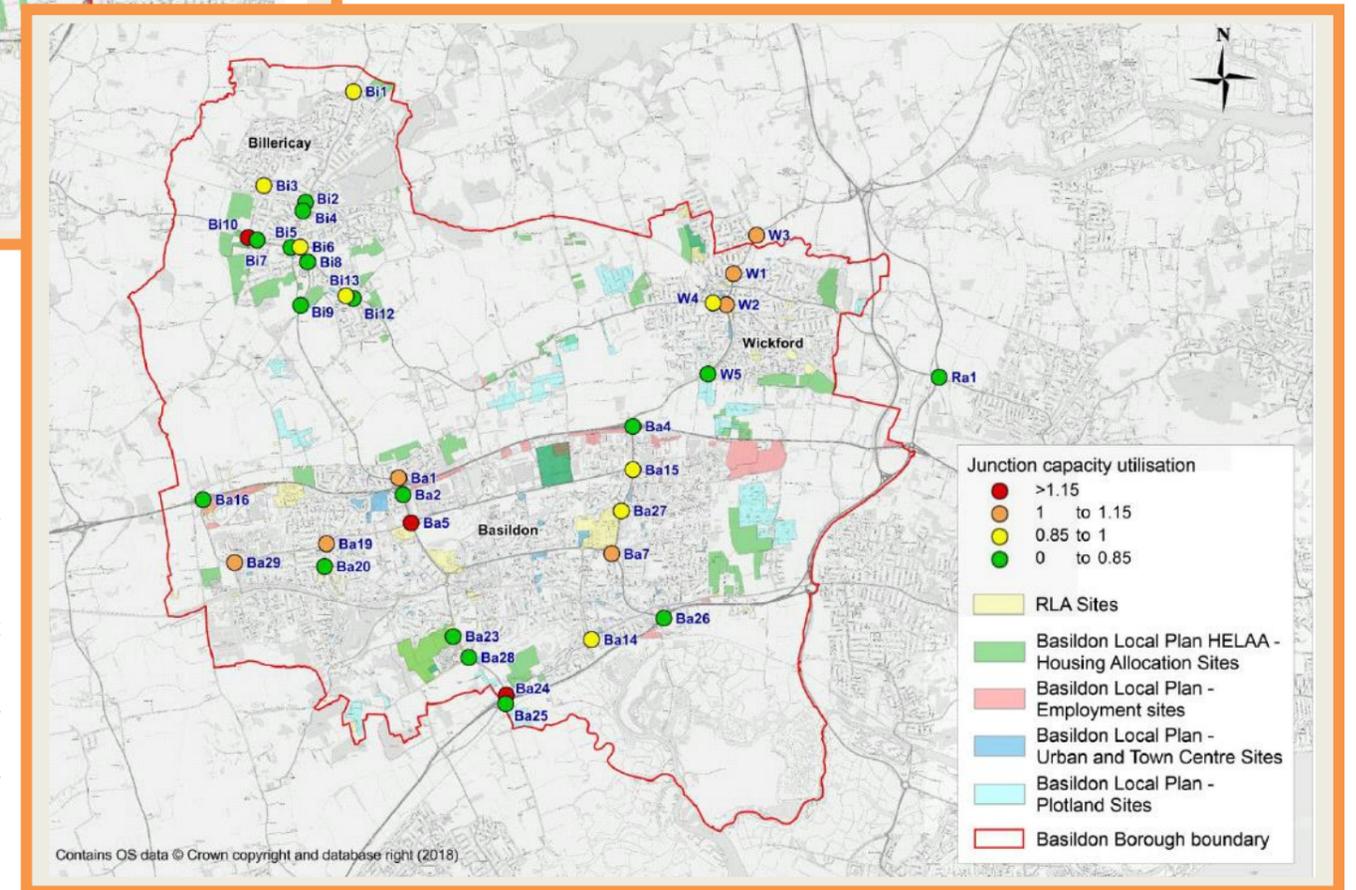


Figure 11: Scenario 4: Local Plan Growth with Full Mitigation Package (AM)

of £51m to a maximum of £234.2m. However, the Mitigation Modelling options do not represent a comprehensive list of works required, with localised improvements also likely to be required in association with most of the development locations. Therefore, the true cost of highways mitigation will not be known until the development is forthcoming and detailed modelling and design work is undertaken.

- 8.2.2 The Highways Mitigation options result in a large cost range which needs to be considered in more depth. Whilst the lower end of the range could be argued to mitigate the impact of development, this would include a large proportion of short-term options that would not result in long term resilience within the highway network. As such, relying on these options alone, will bring the Local Plan under scrutiny, with particular regard to paragraph 32 of the NPPF. This states that development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are 'severe'. There is no specific definition of 'severe' in the NPPF or the PPG. However, it would be difficult to defend a plan which only provides for short-term mitigation and knowingly allows for long-term harm to the resilience of the highway network.
- 8.2.3 Similarly, whilst the maximum cost would be the most effective in terms of mitigating the impact of development on the highway network, it could be argued to be over and above a level that could be reasonably justified in viability terms. This would be contrary to paragraph 008 of the PPG, which states that the cumulative costs of CIL, Section 106 and Section 278 agreements should not cause development types or strategic sites to be unviable. Therefore, the actual recommended cost of the required options to improve the road network as set out in the mitigation modelling is likely to be between £118m - £198m, depending on whether a short-term or longer term solution is preferred.
- 8.2.4 Full details of all potential highway improvements and the potential overall cost of bringing these forward can be found in the Basildon Publication Local Plan 'Highway Impact Assessment' and 'Mitigation Scheme Costs' technical notes. These documents contribute to the evidence base to support the Pre-submission version of the Basildon Borough Local Plan.
- 8.2.5 Additional advice was sought from Ringway Jacobs following the subsequent changes to the Revised Publication Local Plan and this

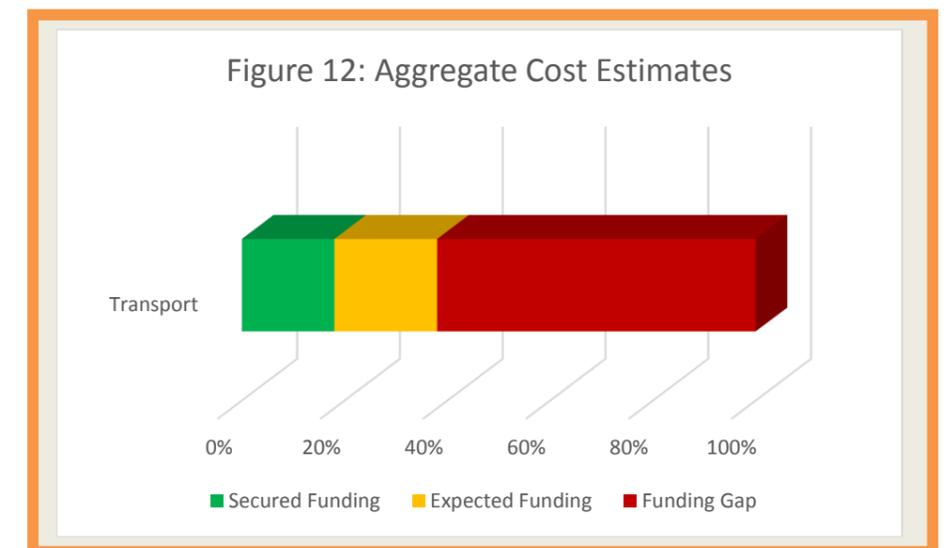
was prepared as a technical addendum to the previous highway testing of the Publication Local Plan 'Final Growth Scenario'. It provides a high level assessment of the highway impacts expected from the following modifications:

- South East Billericay – a reduction of 300 residential units within the Billericay area, located adjacent to the proposed western relief road;
- Noak Bridge – a reduction of 300 residential units within the Basildon area located north of the A127/A176 Noak Bridge Interchange North (Junction Ba1); and
- East Basildon Urban Extension – relocation of development proposals and revisions to the transport network and access routes within the Bowers Gifford & North Benfleet (BG&NB) Neighbourhood Area, located to the east of Basildon, as detailed within the proposed Draft Masterplan.

- 8.2.6 For Billericay, although the change will result in a reduction of trips, which will generate a lower impact in the Billericay area, alleviating the level of traffic congestion forecasted for the local road network, it is considered the introduction of the Western Relief Road is still required to mitigate the overall impact of growth in Billericay.
- 8.2.7 For Noak Bridge, the junction modelling results show that the junction, even with reduced development trips continues to operate at a similar level than previously tested, with the decrease in trips resulting in a minimal impact on junction performance, albeit a minor overall improvement. Nonetheless, the junction continues to exceed capacity, and therefore presents justification to proceed with the mitigation option proposed.
- 8.2.8 For East Basildon, two alternative potential development options were proposed as part of a Draft Masterplan for the Bowers Gifford & North Benfleet Neighbourhood Plan. These two options propose a broadly similar arrangement to that previously proposed as part of the Publication Local Plan. These alterations are therefore expected to have a minimal impact on the wider road network, given the likeness in terms of the origin and destination of trips to be produced by the proposed developments.
- 8.2.9 Full details of the assessments can be found in the Basildon Local Plan – Part 2 Transport & Highway Impact Assessment (March 2018) Addendum.

Funding Sources

- 8.3.1 Since 2011, and in relation to Basildon, the Essex Transport Strategy has secured major investment into the Borough's transport network including the new £63m junction upgrade on the A13/A130 at Sadlers Farm, Pitsea (completed 2013) and the £5m highway works to improve capacity in the A127 Enterprise Corridor (completed 2011). More recently, £3m pinch-point funding from the Department for Transport (DfT) was secured to widen a key part of the A176 between Basildon Hospital and Basildon Town Centre, to support expansion of the Town Centre and address congestion of this link.
- 8.3.2 Funding has also been secured from SELEP to fund various improvements along the A127 Corridor including £27m for improvements to the A127/A130 Fairglen Interchange. A further £13m has also been secured for the Basildon Integrated Transport Package which will help deliver public transport improvements, highway changes required by the Basildon Town Centre Masterplan and improved access to Basildon Hospital.
- 8.3.3 Basildon Borough Council will continue to work with Essex County Council as the Highway Authority to make bids to the South East Local Enterprise Partnership, which is an important source of funding for highway improvement projects. The Councils can also explore other funding options for transport such as through the Department for Transport (DfT), particularly given that there has been a route announcement for the new Lower Thames Crossing, a Nationally Significant Infrastructure Project, which will provide



connections close to the Basildon Borough, including to the A13 and a new junction on the M25 before the junction with the A127.

- 8.3.4 Owing to the high costs associated with highway infrastructure improvements, it is likely that there will be a significant gap in funding. Therefore, significant contributions from developers through S106, S278, S34 and/or CIL will be expected to come forward so that the impact of development on the highway network can be successfully mitigated.
- 8.3.5 The aggregate cost estimates shown in Figure 12 are based on the high level cost analysis of the highway mitigation that would need to take place in order to alleviate the impact of local plan growth. The secured funding element has been provided to us by Essex County Council as the highway authority showing how much they have secured through the Local Enterprise Partnership for upgrades to the A127 etc. and is shown in Green. The expected funding is a conservative estimate as to the potential additional funds that is expected to be secured through the LEP for the A127 bid review and a route management strategy for the A13. Therefore, the remaining cost of mitigation options outside of the highway improvements that have funding secured or expected makes up the funding gap. This funding gap is quite significant and is not anticipated to be borne entirely by the developer. Once the Local Plan has been adopted, these schemes will be expected to be accompanied by further bids to the LEP, and any other Government funding initiatives that come forward within the plan period.

9. Public transport

- 9.1.1 Network Rail is responsible for the safe operation, maintenance, renewal and long-term enhancement planning of the UK's railway infrastructure. This includes everything trains need to run safely including tracks, signals, bridges etc. They are also responsible for some of the largest 'managed' stations such as London Liverpool Street.
- 9.1.2 Smaller Local Stations are operated by the Train Operator Companies (TOC) in which they lease the property from Network Rail. Enhancements may still require engagement with Network Rail, however, to ensure asset protection of the operational railway.
- 9.1.3 Network Rail's System Operator (SO) function is responsible for long-term strategic planning of the network, preparing analysis and forecasting of demand, and working with stakeholders to identify, fund, and develop solutions within a public sector business case framework. Train & Freight Operator Companies (TOCs & FOCs), Strategic Planning Authorities, Devolved Transport Bodies may also engage with strategic planning, but will need to engage with SO to understand feasibility within the wider railway system.
- 9.1.4 The current train operator for the London Fenchurch Street line is c2c, following a successful bid to be the franchisee holder in November 2014, and the franchise will run until 2029. This was originally operated by National Express until c2c was acquired by Trenitalia in February 2017. The franchise will include a total premium of £1.5bn paid to Government over the lifetime of the franchise. The passenger benefits of such a premium include:
- 22% increase in number of trains;
 - £33m station investment programme;
 - Automatic compensation for customers starting after just 2 mins delay;
 - Improved staffing and commercial offers.
- 9.1.5 The extra new trains are scheduled to arrive in three waves with eight new carriages due in 2019, sixteen new carriages in 2022,

- and another sixteen new carriages in 2024. This plans follow the twenty new carriages already delivered as part of the franchise.
- 9.1.6 In terms of station upgrades across the route over the next two years:
- **Basildon:** significant work likely with potential for new second entrance;
 - **Laindon:** possible redesign of current layout of booking hall;
 - **Pitsea:** mostly cosmetic improvements
- 9.1.7 Other future improvements include updated platform boards, which informs customers where seats are likely to be on busy trains, and provides late arrival time at each stop. A new ticket buying system will be introduced with all ticket machines being replaced and equipment updated in ticket offices. New web-based and mobile based ticket sales system will also be added.



Figure 13: New platform boards showing where likely seating is available on each carriage.

- 9.1.8 Smart ticketing is a particular improvement which has been identified by c2c with the Smartcard launched in 2014, with approximately 54% of all c2c journeys now made via smart tickets or contactless cards. This provides automatic compensation for delays to trains of up to 50% if a train is delayed by 30 minutes plus.
- 9.1.9 Several new forms of tickets are being introduced with Flexi-season tickets, advance tickets, and senior rover tickets all

offering various discounts and wifi is now available at all stations and on-board all trains.

- 9.1.10 The current franchise puts c2c in a strong position to forecast what future changes will be possible to increase capacity on the route and is committed to working with the Borough Council and developers to improve more sustainable forms of travel to stations including cycling and walking, and to increase parking infrastructure at stations where appropriate.
- 9.1.11 In regards to the potential development taking place in the Brentwood Borough at Dunton Hills Garden Village in addition to development proposed to the west of Basildon, c2c have advised that Laindon Station should be considered the preferred railway link for future residents in this area, and therefore a high-quality public transport link to the station should be a priority.
- 9.1.12 The franchise for the Liverpool Street line has been secured in October 2016 by Abellio Greater Anglian and will run until 2025. It also has a significant investment programme contributing £1.4bn to boost rail services and in order to increase capacity over the lifetime of the franchise. These include:
- Over 1,100 extra services a week and notable journey time improvements;
 - 55% more seats in the morning peak to London;
 - 4 trains an hour off-peak from Southend to London;
 - £60m station investment;
 - Extra 20 x 4 carriage train for London commuter services;
 - Ticket vending machines and customer information screens for all stations;
 - All stations refreshed or refurbished, more station travel plans;
 - 1800 extra car parking spaces, 4000 extra cycle parking spaces;
 - Smart ticketing and carnets.
 - Replacement of the entire fleet of trains with 1,043 brand new carriages;
 - More services and faster journeys across the network including four 'Norwich in 90' trains each way per day and average journey times to Ipswich falling from 73 to 64 minutes;
 - Working with Network Rail to implement specific schemes to drive up performance and reliability throughout the franchise;
 - 30 trains were refurbished in the first year and more than 70 additional carriages were introduced in Jan 2017.

9.1.13 In order to ensure the railway can cope with future growth, the Council will work with ECC, Network Rail, the Railway Executive and rail franchise operators to secure investment in services which accommodate growth in rail travel, and secure onward journeys by sustainable means, including public transport, walking and cycling. Abellio Greater Anglia also intend to cut journey times cut by 10%, provide free wifi, automatic 'delay repay' for season and advance purchase tickets, insert tough new performance targets of 93%, and a host of new ticket initiatives including offers for part time users.

9.1.14 By 2021 there will be more than 32,000 seats on services arriving at London Liverpool Street, while the franchise will introduce 1,144 additional weekday services to stations including Cambridge, Norwich, Stanstead Airport, Lowestoft, Southend, and London Liverpool Street.

9.1.15 Until the new fleet of trains arrives, Greater Anglia have recently completed a £3.8m refurbishment of more than 50 Class 321 commuter trains. They have been transformed with new carpets and vinyl flooring, panels and seat covers. An extra four seats per four-carriage train have also been created by de-commissioning an extended first class seating area.

9.1.16 The new fleet of trains, the Class 720 Outer Suburban Fleet, which will include 89 x 5 car units and 22 x 10 car units, will allow for an increase in capacity in terms of the number of seats from 22% to 45% when compared to the current fleet of trains. This is shown in detail in Table 7.



Figure 14: Greater Anglia New Class 720 Fleet

9.1.17 Table 5 shows the comparison in capacity of the new trains versus the current fleet. A unit is considered to be a 5 car train, which is

the equivalent of a 6 car train in the current fleet. Two 5 car trains can be joined together to make a 10 car train but this has slightly less capacity than a 10 car unit.

Existing Fleet	Number Seats	New Fleet	
		New 5-car Unit (per 10-car)	New 10-car Unit
Class 317	270 (810)	544 (1088) (22%-42% increase)	1,146 (26%-45% increase)
Class 321	283 (849)		
Class 360	278 (834)		
Class 379	209 (627)		

Table 7: Comparison of Greater Anglia's new fleet of trains versus existing capacity

9.1.18 Other future improvements include a Job Seekers support scheme where six free tickets will be made available to job seekers attending job interviews and if successful, Greater Anglia will provide two months free travel once starting their new job.

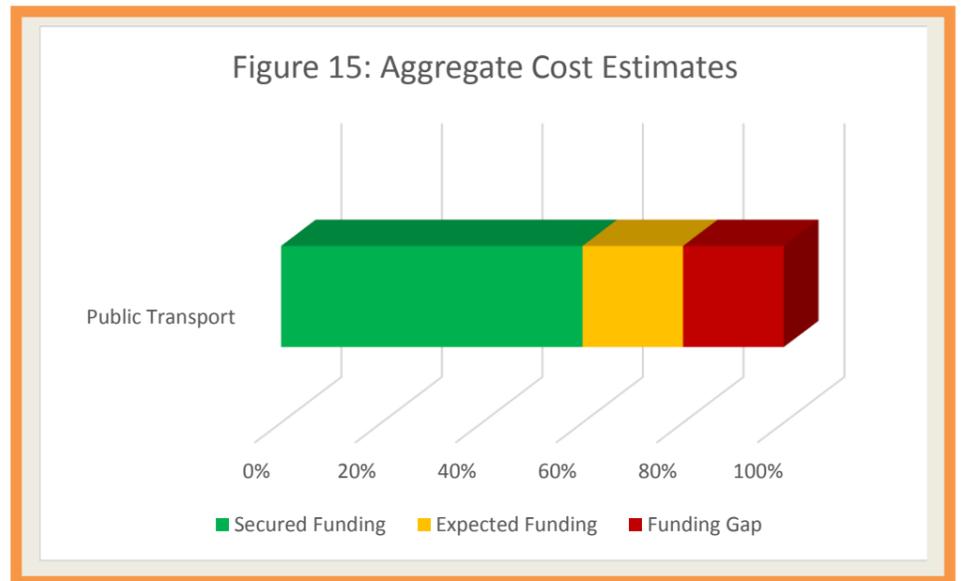
Infrastructure Costs

9.2.1 No information has been provided on the costs associated with increasing railway capacity in Basildon Borough due to the commercially sensitive nature of the information. However, the level of investment which has been provided as part of the two rail franchise holders is known and how they calculate how they need to improve capacity over the lifetime of the franchise.

Funding Sources

9.3.1 Funding is available from Network Rail and the rail service providers who currently holds the franchises for the Thameside and Greater Anglia Railway lines. However, without full details of the costs associated with improving capacity at stations and on lines serving Basildon residents due to the commercial sensitivity of this information, it is difficult to identify if there is a shortfall that would need to be met through planning contributions as part of development.

9.3.2 However, it is safe to assume that if any development proposal requires the expansion of an existing railway station, the construction of a new one, or the creation of additional line capacity through additional lines or services, that significant contributions will be required by the developer to either meet those costs, or to provide contributions to the relevant network provider to increase capacity for rail travel.



9.3.3 If we are to carry out a fairly basic calculation, the investment proposals for both railway lines only cover the franchise periods up to 2025 on Liverpool Street line and 2029 on the Fenchurch Street line. If you split the difference between the two franchise periods, this covers 12 years, or 60% of the 20 year Local Plan period. It is expected that a new franchise will also contribute financially to capacity upgrades but the rail industry base their estimates on standard baseline population projection figures.

The difference between the baseline figure and the Council's objectively assessed need for housing is an approximate uplift of 20-25%, and therefore an assumed funding gap of 20% is applied for upgrades to line capacity or station upgrades that would be associated with the extra development contained in the Basildon Borough Local Plan. The remaining 20% is therefore considered to be the expected funding from the new franchise once bid for in 2025 and 2029 respectively.

10. Open Space / Outdoor Sports Facilities

- 10.1.1 Open space, which includes all open space of public value, can take many forms, from formal sports pitches to open areas within a development, linear corridors and country parks. It can provide health and recreation benefits to people living and working nearby; have an ecological value and contribute to green infrastructure³
- 10.1.2 Whilst the introduction of the NPPF changed the national policy context under which the Council’s Open Space Assessment was carried out in 2010, replacing PPG17: Open Space, Sport and Recreation, the essence of PPG17 is retained within the NPPF. The NPPF still states that “*Planning policies should be based on robust and up-to-date assessments of the needs for open space, sports and recreation facilities and opportunities for new provision*” although there is no requirement as to how this assessment should be achieved.
- 10.1.3 Sport England is the organisation which provides the strategic lead for sport in England, and encourages local planning policy to protect, enhance and provide for sports facilities based on robust and up-to-date assessments of need. Sport England encourages local planning authorities to carry out assessments of need and demand.
- 10.1.4 Basildon Borough Council is charged as Local Planning Authority (LPA) with setting a quantity standard for each appropriate type of open space in the Borough. These standards will be used to identify where the Council needs to target its attention on securing open space in the future, including as part of the planning application process.

- 10.1.5 Quantity Standards are expressed as an area of land available for open space purposes per 1000 population. For open space this standard is 5.7ha per 1,000 population broken down into 2.6ha of Natural Green Space and 3.1ha of Urban Park & Garden. For outdoor sports provision, the Basildon Borough Council ‘Playing Pitch Strategy Review 2011’ sets a requirement of 1.5ha per 1,000 population.
- 10.1.6 Based on the average occupancy of 2.38 people per dwelling as set out in the 2011 Census, an additional 16,500 homes within the Basildon Borough from 2016-2034 would result in an increase in population of approximately 39,270. This would result in a requirement, based on the Council’s standards set out in the PPG17 Open Space Assessment Parts I and II, for approximately 224ha of additional open space provision and approximately 59ha of outdoor sports and recreation facilities.
- 10.1.7 The standard has been applied to each Settlement Area in order to identify where an increase in the quantity of open space provision may be required to meet the requirements of the current population. The specific differences between supply and demand in each Settlement Area is as follows:

Table 8: Quantity of Open Space that Contributes to Generic Accessible Provision based on Current Population

Settlement	Quantity Available (ha) (Supply)	Difference from the Standard (ha) (Demand)
Standard	5.7	
Billericay & Burstead	5.42	-0.35
Noak Bridge & Ramsden	3.32	-2.45
Basildon	6.85	+1.08
Wickford	3.1	-2.67

- 10.1.8 Realistically the distribution of open space typologies around the Borough is not even, and will never be so. However, where there is an identified deficiency of open space provision, or an opportunity to create an open space, the quantity standards should be used to inform the amount and type of open space sought alongside new development.

- 10.1.9 Strict control over the quantity of each type of open space may not always be appropriate, due to the local context, but the Council should endeavour to apply the standards and redress deficiency in each Settlement Area.
- 10.1.10 The PPG17 Open Space Assessment Part I adopted by Basildon Borough Council recommends some alternative standards that can be applied to redress the deficiency in open space to the north of the Borough. These standards are as follows:
- 6.2m² of Amenity Green Space and 2.7m² of Urban Parks and Gardens, totalling 8.9m² per person for the Billericay & Burstead area;
 - Noak Bridge and Ramsden should seek to increase the Natural & Semi-Natural green space provision to 4.8m² per person, and increase the provision of Urban Parks & Gardens to 14.6m² per person. Where the catchment cannot sustain an Urban Park or Garden site, an increase in the provision of Amenity Green Space at 8.2m² per person would redress the balance;
 - For Wickford, an increase in the provision of Natural & Semi Natural Green Space at 20.5m² per person is recommended, along with an increase in the provision of Outdoor Sports Facilities by 11.5m² per person to a total of 26.5m² per person;
 - There is no recommended minimum increase for the Basildon settlement area.
- 10.1.11 Therefore, taking the recommended standards to redress some of the deficiencies in different open space typologies and outdoor sports provision, the requirements for each of the strategic sites shown in Appendix 1 are as follows:
- **Billericay:** According to the strategic sites around Billericay, the growth associated with these sites would result in a maximum of approximately 3,000 additional homes in this area. At an average occupation rate of 2.38 people per dwelling as set out in the 2011 Census, this would result in an additional population of 7,140 people. At a requirement of 5.7ha per 1,000 population would result in a total requirement of approximately 41ha of additional open space provision. However, as a deficiency in amenity green space has been identified in the Billericay area, if we apply the recommended standards from the Open Space Assessment 2011 to address this deficiency, this would result in a requirement for

³ See National Planning Policy Framework paragraphs 6-10).

44.2ha of amenity green space and 19.3ha of Urban Parks & Gardens.

- However, it may not be possible for some of the smaller sites to bring forward additional open space provision due to the lack of available land, and therefore for the purposes of this assessment, only sites of more than 150 dwellings as set out in the strategic sites are likely to be able to redress the balance of under-provision of Amenity Green Space by providing over and above the Borough wide standard of 5.7ha per 1,000 population.
- With these assumptions applied the total requirement for Amenity Green Space would be approximately 40ha and the requirement for urban parks and gardens would be 18ha, for a total of 58ha. The requirement for outdoor sports provision would be 11ha. There is also a deficiency of allotment gardens in the Billericay area that should be addressed through the development of one or more of these strategic sites.

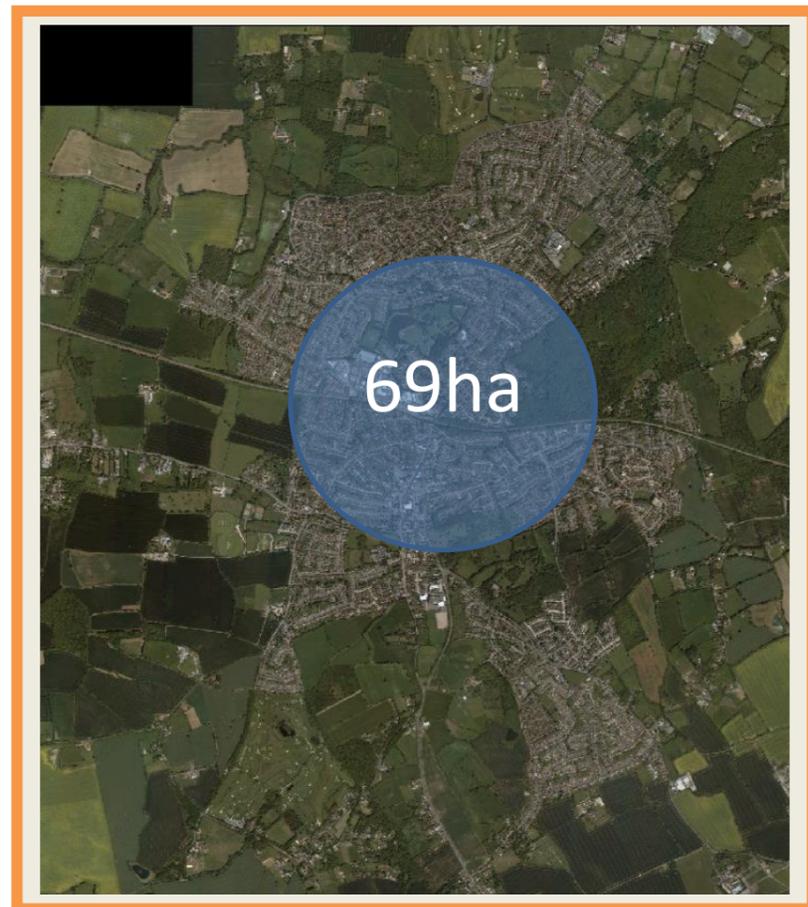


Figure 16: Total Open Space Requirement for Billericay

- It is accepted that these are broad assumptions with regards to the level of open space that could be brought forward on each site. Therefore, a breakdown of the requirements for each of the strategic sites is set out below in accordance with the recommended quantity standards set out in the Basildon Council PPG17 Open Space Assessment Part I:
- Site H17: Development of 255 dwellings on land north east of Potash Road would result in a total requirement for 3.5ha of open space to be provided. If the deficiency were to be addressed on this site as recommended this would result in a requirement for two additional hectares of open space, broken down as follows: 3.8ha Amenity Green Space and 1.6ha of Urban Parks & Gardens. Outdoor sports provision of one hectare would also be required.
- Site H18: Development on these sites to the west of Billericay would result in a total requirement for approximately 23ha of open space. However, as all of these sites are located adjacent to each other and delivering in total 1,700 to 2,000 dwellings, this is a significant development site that would present an opportunity to address some of the open space deficit experienced in the Billericay area. The total requirement under these circumstances would be for approximately 36ha of open space split between 25ha of Amenity Green Space and 11ha of Urban Park and Gardens, and for approximately 6ha of outdoor sports provision.
- Site H19: Development of 200 dwellings on land south of Windmill Heights would require the provision of 2.7ha of open space. In order to address the deficiency in the Billericay area, this would result in a total of approximately 4.2ha, split between 3 hectares of Amenity Green Space and 1 and a quarter hectares of Urban Park & Garden.
- Site H20: Development on land east of Greens Farm Lane would deliver 400 new dwellings and generate a requirement for 5.4ha of open space to support development. However, to address the deficiency in Billericay, this would result in a total requirement of approximately 8.5ha of open space; 6ha of Amenity Green Space and 2.5ha of Urban Park & Garden. There is the potential to create a large semi-natural open space in this location on elevated land forming part of land between the two allocations. This would provide an extension to the Mill Meadow Nature Reserve, and could incorporate areas of Amenity Green Space for informal play. In addition, there would be a requirement for approximately 1.4ha outdoor sports provision.
- Site H21: Development of 190 dwellings on land east of Southend Road, South Green would generate a Borough wide requirement for 2.6ha of open space to support the development. However, to address the deficiency in Billericay, this would result in a total requirement of approximately 4ha of open space; 2.8ha of Amenity Green Space and 1.2ha of Urban Park & Garden. In addition, there would be a requirement for approximately 0.7ha outdoor sports provision.
- **Wickford:** The growth associated with Wickford of approximately 3,100 new dwellings would result in an increase in population of approximately 7,378 additional people. At a requirement of 5.7ha per 1,000 population, this would result in a requirement for approximately 42ha of new open space provision. However, Wickford, like Billericay, has also been identified as an area where there is a deficiency. For Wickford this deficiency is for Natural & Semi Natural Open Space and Outdoor Sporting facilities. If the recommended standards to address these deficiencies were to be adopted for strategic sites around Wickford, that would be a total of 34ha of Natural & Semi Natural open space and 19ha of Outdoor Sports facility provision. When added to the requirement for Amenity Green Space of 23ha, there is a total of 76ha required to meet open space deficits in this settlement.
- It is accepted that this is a significant deficit and would require a large amount of land to be available to address the current lack of open space and outdoor sports provision in this area. It may therefore, be unreasonable to expect that this entire deficit can be addressed through strategic development sites brought forward in the Council's Draft Local Plan. However, the presence of the Country Park and the football facilities at Shotgate, and the Country Park, represent an opportunity for the expansion of the open space and outdoor sports in order to address some of the deficiencies experienced in Wickford.
- It is accepted that these are broad assumptions with regards to the level of open space that could be brought forward on each site. Therefore, a breakdown of the requirements for each of the strategic sites is set out below in accordance with the recommended quantity standards set out in the Basildon Council PPG17 Open Space Assessment Part I:
- Site H13: The development of 1,100 new dwellings at Larks Wood Park, around the Wick Country Park would be the largest



Figure 17: Total Open Space Requirement for Wickford

proposed allocation in Wickford and would result in a requirement for approximately 15ha of open space. The large amount of available land in this area and the presence of the Country Park represents a real opportunity to address some of the deficiencies experienced in the Wickford area. Therefore, a much larger percentage of open space with a total of 20ha. Natural & Semi Natural open space would be expected to be the largest provision in this area with 12ha required. There would be a greater provision of outdoor sports facilities of just short of 7ha expected also. The requirement of amenity green space would be 8ha.

- Site H14: Development of 280 dwellings on land north of Southend Road would result in a requirement for just short of 4ha of open space provision and 1ha of outdoor sports provision. The quantity of development proposed to be located in this area and availability of land would suggest that some of the deficiencies experienced in Wickford should be addressed in this area. Therefore, the requirement should be for a total of 5ha of open space, split between 2ha of amenity green space and 3ha of

Natural & Semi-Natural open space. Outdoor sports provision should be increased to 1.7ha.

- Site H15: The development of 540 new homes on land south of Barn Hall would require a total of 7ha of open space and 2ha of outdoor sports provision. However, in order to address the deficiencies experienced in the Wickford settlement, the requirement would be for 10ha of open space, split between 6ha of natural & semi-natural open space and 4ha amenity green space. There would also be a requirement for 3.3ha of outdoor sports provision.
- Site H16: Development of 300 dwellings on land north of London Road would require a total of 4ha of open space and 1ha of Outdoor Sports provision. In order to address the deficiency significantly more would be required. However, there is limited availability of land in this area and there are constraints such as the river crouch to the north of the site and it is unlikely that this level of deficiency could be addressed on-site. Opportunities could be explored with regard to opening up the wooded areas on the site as semi-natural open spaces;

- **Basildon:** The growth associated with Basildon would result in an increase in population of approximately 21,646 additional people. At a requirement of 5.7ha per 1,000 population, this would result in a requirement for approximately 123ha of new open space provision and 32ha of outdoor sports provision. There are no recommended minimum increases in the concentration of open spaces for this settlement area except in Noak Bridge. The requirements for each of the strategic sites is therefore in accordance with the recommended quantity standards set out in the Basildon Council PPG17 Open Space Assessment Part I as set out below:

- Site H8: Development of around 300 dwellings to the west of Basildon would result in a requirement for approximately 4ha of open space, split between 1.8Ha of Natural Green Space and 2.2ha of Urban Park & Garden or Amenity Green Space. The provision of facilities for outdoor sport would require a further 1ha but an additional sports hub is required in this area to replace the sports facilities that will be moved from the Gardiners Lane South site in accordance with the requirements of the playing pitch relocation study.



Figure 18: Total Open Space Requirement for Basildon

- Site H9: For development of 245 dwellings on land west of Steeple View, there would be a requirement for 3.3ha of open space with an approximate split of 1.5ha of Natural Green Space and 1.8ha of Urban Park & Garden or Amenity Green Space. It would also require just short of 1ha for outdoor sports provision.
- Sites H10 (Noak Bridge): Development at Noak Bridge would result in a total requirement for approximately 5.4ha of open space provision and nearly 1.4ha of land to be used for outdoor sporting activities. However, Noak Bridge has a deficiency in Natural and Semi-natural open space and given the amount of land available in this area, the final requirement would be for a total of 7.5ha of open space, split between 4.5ha of Natural Green Space and 3ha of Urban Park & Garden or Amenity Green Space.
- Site H7: Development of 650 dwellings on land north and south of London Road in Vange would result in a requirement for approximately 9ha of open space, split between 4ha of Natural Green Space and just short of 5ha of Urban Park & Garden or Amenity Green Space. It would also have a requirement for 2.3ha of land for outdoor sports provision.
- Site H12: Development to the east of Basildon would be the largest proposed allocation of land at 2000+ dwellings, and would result in a total requirement of approximately 27ha of open space, split between 12ha of Natural Green Space and 15ha of Urban Park & Garden or Amenity Green Space. It would also result in a requirement for the provision of approximately 7ha for outdoor sports activities/facilities.
- Site H6: Development of 725 new dwellings on land north of Dry Street has already obtained planning permission and open space will have been required in accordance with the Council's open space standards.
- Site H5: Gardiners Lane South will include the delivery of 790 new dwellings but this site has a number of sites which provide outdoor sports provision that would need to be relocated if development is to occur on this site. Therefore, the 'Gardiners Lane South Playing Pitch Relocation Study' seeks to determine viable options for the relocation of sports clubs adjacent to potential development sites elsewhere in the Borough to the west of Basildon, whilst retaining a sustainable and integrated level of sport and recreation provision. The requirement for open space provision is a total of almost 11ha, split between just short

of 5ha of Natural Green Space and just short of 6ha of Amenity Green Space.

Infrastructure Costs

- 10.2.1 All costs for the provision of new or improvements to open space / sports facilities / play areas will be secured through planning obligations as part of the planning application process. This will either be through the provision of open space by the developer either on or off-site, or as a commuted sum for alternative on or off-site provision as deemed appropriate on a case by case basis.
- 10.2.2 The following costs shown in Table 9 are for the development of community sports and play facilities and are based on the costs of providing good quality sports facilities for the 1st Quarter 2015. These rounded costs are based on typical schemes funded through the Lottery and CAD layouts developed in accordance with Sport England DGNs current at 1st Quarter 2015.

Table 9: Facilities Costs First Quarter 2015

Facility Type/Details	Facility Details	Area (m ²)	Capital Cost (£)
Changing Rooms/Club House/Pavilion	2 Team Changing Room plus officials	75	275,000
	4 Team Changing Room and Club Room	252	745,000
Football AGP	U9/U10 Football/Training	2,623	405,000
	U9/U10 Football/Training 3G	2,623	430,000 – 445,000
	Senior Football	7,420	845,000
	Senior Football 3G	7,420	915,000 – 980,000
Football Turf Pitch	U8/U7 Mini Football	1,419	20,000
	U16/U15 Youth Football	5,917	65,000
	Senior Football	7,420	75,000
Outdoor Tennis Court	2 Court Macadam, Fenced, Sports Lighting	1,227	180,000
	4 Court Macadam, Fenced, Sports Lighting	2,342	320,000
	6 Court Macadam, Fenced, Sports Lighting	3,456	420,000
Hockey AGP	Hockey Pitch (Sand dressed or filled, Fenced, Sports Lighting)	6,388	745,000 - 780,000
	Hockey Pitch (Water Based, Fenced, Sports Lighting)	6,388	950,000

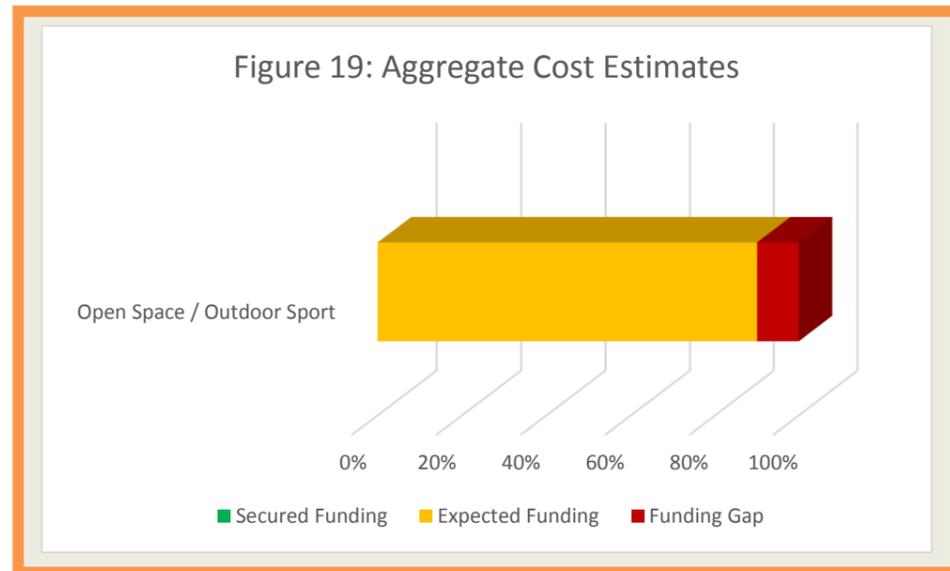
Facility Type/Details	Facility Details	Area (m ²)	Capital Cost (£)
Rugby League AGP	Rugby League 3G	9,028	1,240,000
Rugby Union AGP	Rugby Union 3G	10,400	1,375,000
Cricket Pitches	1 Bay Cricket Practice Cage (macadam base)	96	30,000
	Match Cricket Pitch (macadam base)	96	15,000
	Natural Turf Pitch (8 pitch square and 2 winter sport pitches)	20,649	245,000
Multi Use Games Area	Macadam, Fenced, Sports Lighting	782	130,000
Athletics Track	6 lane Sports Lighting, 110 straight both sides, grass infield, artificial throws, jumps and end fans		1,255,000
	8 Lanes		1,365,000
Skate Park	40 x 18 Fenced, with Sports Lighting	720	135,000

- 10.2.3 The cost of new provision of outdoor turf pitches is approximately the same as the cost per square metre of £10 as set out in the 'Playing Pitch Strategy Review 2011 – Technical Addendum'. The standard requires 15m² per person for outdoor space provision. This would result in a contribution of £150 per person. Based on an occupancy rate of approximately 2.38 people per household, this would be an average contribution of £357 per additional home.
- 10.2.4 A standard of 0.24m² per person has been identified for synthetic pitches. The costs for different types of synthetic pitches are set out below:
- Sand-based:** Cost/ m² £118 Contribution £67 per home
 - Water-based:** Cost/ m² £149 Contribution £85 per home
 - 3G:** Cost/ m² £142 Contribution £81 per home
- 10.2.5 In addition, a commuted sum will need to be negotiated with a developer to manage and maintain new or upgraded sports pitches for a period of 10 years following practical completion and adoption by the Council. The commuted sum may be calculated as 1% of the capital cost for a period of 10 years, allowing for inflation at 2.5% per annum, or as otherwise agreed.
- 10.2.6 Actual costs of upgrading pitches would be assessed according to local circumstances and the size and quality of provision required. Guidance costs are provided on Sport England and Football Foundation websites.

Funding Sources

- 10.3.1 Sources of funding will be acquired through S106 agreements made as part of the planning application process. Alternatively, funding can be secured through the Community Infrastructure Levy (CIL), if the Council were to include open space provision within the Schedule 123 list, which details all contributions to be charged through the Levy, if a funding gap is justified. Therefore, it could be argued that all funding for open space provision could fall within the 'expected funding' category as it can be secured through S106 in accordance with the Council's open space standards and policy requirements. However, as this is not a source of funding that is currently available, it could equally be argued that the funding falls entirely within the 'funding gap' category.

as it would not be required to make the development acceptable in planning terms. Therefore, this element of the open space and outdoor sports provision is considered to be a funding gap and may require external sources of funding other than through development in order to ensure deficiencies in open space provision are met.



- 10.3.2 The aggregate cost estimates in Figure 19 are based on the assumption that funding will be secured through development in accordance with Local Plan policies and the Council's Open Space Strategy document and therefore 90% of funding is considered to be 'expected' as it will be secured using these means. However, there is an additional amount of open space and outdoor sports facilities that will need to be provided in order to address current deficiencies in certain parts of the Borough. This goes over and above the standard open space requirements as set out in the Council's open space strategy and whilst they may be achievable in some areas, it may cause an issue with regards to the viability of development in some other areas. This would make insistence of the provision difficult in policy terms and may be unreasonable

11. Superfast Broadband

- 11.1.1 Access to high quality broadband has fast become one of the 'must haves' for businesses and residents. For some, it is seen as the fourth utility. The NPPF supports this notion stating that advanced, high quality communications infrastructure is essential for sustainable economic growth. The development of high speed broadband technology and other communications networks also plays a vital role in enhancing the provision of local community facilities and services.
- 11.1.2 Essex County Council's Superfast Essex programme was originally set up as part of a national programme to enable 95% of the Essex population to be able to access Superfast broadband (speeds of 24Mbps – recently revised to 30Mbps for future implementations and above) by 2020.



Figure 20: Superfast Essex Logo

- 11.1.3 Whilst the details of the 'Superfast' broadband programme are referenced as part of this IDP for the purposes of identifying some of the committed funding which is available for this type of infrastructure provision, this comes with the caveat that the Council acknowledges the current rollout programme is "Superfast Broadband", however for the provision of future broadband infrastructure this term should also be considered to refer to "Ultrafast Broadband" to reflect the Governments next roll out initiative, thereby providing longevity in the draft Local Plan, and to distinguish the standards for new provision from the "standard broadband" which is not considered fast enough.
- 11.1.4 The first phases of the Superfast contract were setup with "gainshare" – whereby if take-up of services exceeded projection levels then re-investment money would be available. Take-up was higher than anticipated, so much so, that a third phase of intervention was commissioned and would increase coverage levels to 96% in Basildon Borough. This would leave approximately 3,300 premises without any plans for Superfast Broadband.
- 11.1.5 The view from Superfast Essex was that public investment would be required to deliver further intervention beyond the 96%. It was anticipated that for premises to be superfast enabled, it would be an estimated cost of £500 per premises. So to deliver intervention to 3,300 premises in the Borough, a projected total investment of around £1.65m was the anticipated requirement.
- 11.1.6 Superfast Essex have now finalised their Phase 3 contract and following approval by the Essex County Council Cabinet in September 2017, launched its Phase 4 project. Phase 4 will see the Borough benefit from infrastructure delivery which will enable businesses and residents in the Borough to be able to access Superfast broadband speeds (upwards of 30Mbps).
- 11.1.7 With investment from Basildon Council to help pump-prime, the target of Phase 4 is to ensure that we will be able to achieve near 100% Superfast coverage connectivity across the Borough within the next three years.
- 11.1.8 Whilst intervention through the superfast programme will seek to address existing building stock, new proposed planning policies are to be put in place to secure broadband infrastructure as part of new developments prior to occupation, to enable new residents and businesses to be connected to the facility as soon as they move in. This will depend to a degree on the willingness of statutory undertakers to install their networks to the same timescale. Discussions are continuing with broadband providers (principally BT & Virgin) and Superfast Essex to ensure better access can be provided through plan making and intervention.

- 11.1.9 Both Virgin Media and BT Open Reach in their responses to the Council state that provision of broadband is provided wherever there is a demand and BT Open Reach will supply fibre to the premise superfast broadband for free on any development proposals of 30 dwellings or more. This means that the majority of sites contained within the Basildon Borough Local Plan will be provided with Superfast broadband without the need for additional intervention or investment.



Figure 21: BT Open reach have stated that they will supply fibre to the premise superfast broadband for free on any development proposals of 30 dwellings or more.

Infrastructure Costs

- 11.2.1 Based on the anticipated cost assumptions made by the Superfast Essex programme, this would be a cost of £500 per premises. However, these are premises that require intervention as they do not already have access to superfast broadband and in many cases are considered to be hard to reach areas and therefore this cost is likely to be much less for new premises associated with growth in the Basildon Borough Local Plan. Actual costs have not been supplied by the providers themselves (BT or Virgin), perhaps due to the commercial sensitivity of such information
- 11.2.2 Therefore, if we assume that it will cost £500 per premises like the assumptions of the Superfast Essex programme, for a total development of 20,000 new dwellings this would result in a requirement of £10m to supply all premises with Superfast broadband.

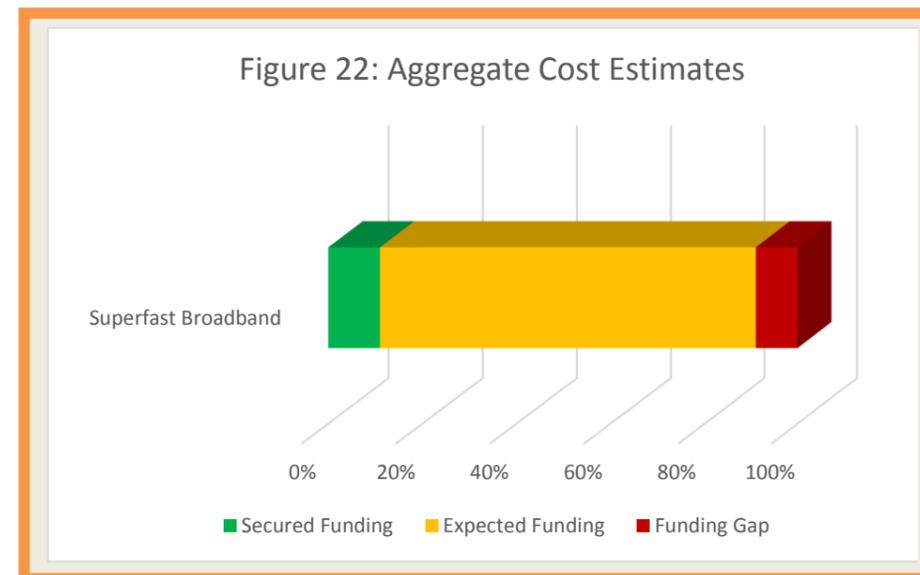
Funding Sources

- 11.3.1 In January 2017, Superfast Essex approached Basildon Council with an opportunity to secure funding made available from Broadband Delivery (BDUK). Funding would enable further intervention to be delivered across the Borough. Funding would be unlocked by the Local Authority providing a monetary contribution which would attract £ for £ match funding.
- 11.3.2 Whilst agreement in principal from Basildon Borough Council to allocate funding - £250,000 – in support of future intervention in the Borough – was made, greater clarification needed to be sought on the location of circa 3,300 premises that did not have access to superfast providers – how many were located within business areas and how many were cited in residential areas. This would clarify the extent of the investment required.
- 11.3.3 Following an extensive piece of work by Basildon Council officers to verify data and the Superfast Essex public consultation in August 2017, a revised figure on the number of premises that require intervention has been reached.
- 11.3.4 A total of 2,118 premises (both key business locations and residential across the Borough) have been identified through the programme as having sub Superfast broadband speeds (less than 30Mbps) and are in need of intervention.
- 11.3.5 The strategic objective for Phase 4 is to reach near 100% connectivity in the Borough. A total of £636,000 of public funding is being offered in order to achieve this , broken down as shown in the table below:

Essex County Council	£136,000
Basildon Borough Council	£250,000
DCMS	£250,000
Total public funding	£636,000

Table 10: Total public investment in Superfast Broadband

- 11.3.6 It is difficult to predict whether this amount of subsidy will achieve the strategic coverage target, as the deployment is now moving into harder to reach areas, and the deployment cost is dependent on the specific geographic and network connectivity conditions in the individual post-code area. However, it is expected that there may be competitive pressure among different potential bidders, which may drive down the need for subsidy. The public funding allocation in the tender has been set with the above considerations in mind.
- 11.3.7 As the broadband providers have responded to state that they will meet future demand for Superfast broadband and for BT Open reach, this will be for free on all development proposals over 30 dwellings, we can assume that there will be a significant amount of expected funding that will contribute to the provision of new infrastructure. If we take the assumption that BT Open Reach’s pledge applies to all development in the Local Plan, this means that fibre to the premise superfast broadband will be provided on all but 1,781 new dwellings as the vast majority of sites contained in the Local Plan are proposed for 30 dwellings or more. The funding for those 1,781 new dwellings which will come forward on sites of less than 30 dwellings cannot be relied upon, therefore it is not expected, and is considered as part of this IDP to be a potential funding gap.



- 11.3.8 As the actual cost of delivering new Superfast broadband is uncertain, the aggregate cost estimates shown in Figure 22 are based on the percentage of premises out of a total of 20,118

(Maximum Local Plan growth of 18,000 plus 2,118 premises eligible for intervention through committed public investment). Therefore, the 2,118 premises which are eligible for intervention make up 11% of the total number of dwellings and has secured funding to bring forward this element of the broadband infrastructure provision. 1,781 dwellings to be brought forward on sites of less than 30 dwellings in total makes up approximately 9% of the total and this is considered to be the funding gap. The remaining majority makes up 80% of the premises that will require superfast broadband and it is expected that the infrastructure provider will supply this infrastructure for free on these development sites.

12. Emergency Services

Ambulance Services

- 6.1.1 As mentioned in section 6 with regards to the East of England Ambulance Service NHS Trust (EEAST) Estates Strategy (2017-2022), the NHS summary position is outlined as below:-
A range of national initiatives are underway aimed at improving performance and sustainability within the NHS. There is widespread agreement from the stakeholders sponsoring these initiatives about the changes required within ambulance services and across the wider urgent and emergency system. Addressing these changes requires the Trust to develop revised operating models and strategies for all aspects of its services, including operational support services such as the Estates Service. A key component of this process has been to establish the Trust's future Operating Model and to commence planning for the resulting transformation of support services.
- 6.1.2 It is proposed that transformation of estate takes place in accordance with the following strategy:
- Configuration of the estate as necessary to meet a vision to provide cost effective and efficient premises of the right size, location and condition to support the delivery of clinical care to the community served by the Trust
- 6.1.3 A resulting Regional estate configuration which consists of:
- A network of 18 ambulance 'hubs'
 - Each 'hub' will support a 'cluster' of community ambulance stations, tailored to meet service delivery and patient response specific to their local area
- 6.1.4 EEAST Estates & Development plans includes some allowance for growth in demographics of population changes and therefore any increase in requirements to meet these changes will require

modelling to account for the required increased workforce. EEAST are currently participating in an independent service review commissioned by healthcare regulators to better understand what resources are needed to meet patient demand.

Fire Service

- 6.1.5 The 'Basildon Borough Local Plan 2017' was viewed and discussed by the Service Fire Safety department, Emergency Planning Officers and the Fire Service 2020 Project team. As a service they also carry out future planning assessments in line with their 2020 projects and careful consideration of local expansion and trends has been taken into consideration in relation to fire cover in and around the county.
- 6.1.6 Through future planning Essex County Fire and Rescue service considers all aspects of fire cover across the county and, through their Global GIS system they are able to plot fire cover and response times to all areas of the county to ensure they provide a rapid preventative response to rural, domestic and commercial premise. Community expansion is already being monitored across the county and therefore it is not envisaged that the proposed development plans contained in the Basildon Borough Publication Local Plan will place any additional resource requirements on the service or risk to the public at this moment in time. The Fire Service is committed to prevention and protection and therefore the largest resource challenge for the fire service in relation to domestic expansion of this size would be within their community safety department.
- 6.1.7 The usual concerns for any Fire Service in relation to development, would be in the areas of water supplies and access. The Fire Service is confident that all the relevant areas would be dealt with through more advanced planning stages including as part of planning applications and therefore do not pose any additional concerns at this moment in time.
- 6.1.8 Commercial business growth across the county is a necessity for economic expansion and is therefore accepted as natural progression by the Fire Service. In general Commercial property size and use do not pose any additional Fire cover concerns however, consultation should always be sort if there are plans to include any COMAH sites (Control of Major Accident Hazards) within the borough. It should be noted that although the fire service do not provide a fire appliance response to commercial

premise fire alarm activations unless a fire can be confirmed, all confirmed fires within this type of premise do stretch fire service resources due to the level of cover required.

- 6.1.9 It is accepted by the Fire Service that commercial industry growth brings with it additional Heavy Goods Vehicle movements within the county and as such certain considerations surrounding congestion that effect Fire Service response times may need to be discussed through the planning and development stages.
- 6.1.10 The expansion of communal sleeping accommodation such as sheltered housing does have an effect on the resources that the fire service provide as unlike commercial premise, all unwanted fire alarm activations within sleeping accommodation is met with a Fire appliance response. An increase in the number and type of sleeping premise would be a consideration for the fire service future planning and would be assessed and addressed through the Essex County Fire Service Integrated Risk Management Plan (IRMP). Further information will be sought from the Fire Service once exact number, type and location of these premises is known as part of the evolution of the IDP throughout the plan period. In general, fires within this type of premise place additional pressure on fire service resources due to non-ambulant or non-compliant occupancy.
- 6.1.11 One of the largest areas of concern over recent years for all Fire Services has been an increase in flood related incidents due to development and climate change. This is an area that is always focused upon within IRMP and is widely discussed between the service Emergency Planning department and the 2020 project team. Pre-planning and consultation with the fire service would be a benefit regarding the building and expansion of properties near to or across known flood plains.
- 6.1.12 The Fire Service has advised that consideration should be given to expansion that includes the demise of natural open water courses. It should be noted that the fire service rely on additional known open water courses to provide additional firefighting water within rural areas.
- 6.1.13 Essex Police accept that the proposals for housing and opportunities for work and play must be developed to sustain a

Police Service

healthy and vibrant society. Essex Police also has a duty to raise the issues of any developments impacting on policing. Crime has a carbon footprint and like other negative environmental impacts we must all seek to make this impacts as small as possible if not negate them entirely.

- 6.1.14 To this end, Essex Police would seek the councils support by way of planning conditions at full planning to ensure security and safety measures have been considered and acted upon. Secured by Design and Park Mark are both ACPO crime prevention initiatives proven to reduce opportunities of crime and anti-social behaviour. Essex Police have requested that these are promoted as best practice on all new developments, housing, commercial, educational, leisure and health.
- 6.1.15 Whilst the Council has met with Essex Police to discuss potential development sites and is aware of the need for policing to change the way it operates in the future, including the potential long-term plans to share station facilities with other emergency services, a formal written response has not yet been provided to the Council and further details will be updated in the IDP, including infrastructure costs and available funding, once known.

13. Conclusions

Greater Essex Growth and Infrastructure Framework (GIF) 2016-2036

13.1.1 To better understand the scale of the infrastructure challenge, the Essex Planning Officers Association (EPOA) commissioned AECOM to prepare a Growth and Infrastructure Framework (GIF) for the county. The framework presents an overview of forecast growth patterns and the infrastructure projects needed to support such growth, its costs, how much funding has already been secured, or is expected towards delivery, and the current funding gap for the period up to 2036.

13.1.2 The GIF provides a “snap-shot” reflecting the position in October 2016. It is not intended to supersede or replace local studies, some of which use different metrics that may better reflect local circumstances. Its findings are based on common funding and cost assumptions and modelling work that may differ from those used in individual IDPs. Therefore, this IDP aims to build on the strategic assumptions made in the GIF and refine the conclusions through more detailed engagement with infrastructure providers.

13.1.3 However, the GIF provides a useful overview of infrastructure capacity within Greater Essex, and identifies particular pressures on education, health, and transport infrastructure. The study also highlights constraints to the provision of new and improved infrastructure in the form of environmental, landscape and natural assets. Acute water stress in the region, for example, may result in higher than average development costs in order to mitigate the impact future growth would otherwise have. There is also uncertainty with regards to longer-term infrastructure requirements with a number of major infrastructure projects taking place in Greater Essex, including the

new Lower Thames Crossing, as well as major development in East Herts and the Thames Gateway, and major programmed upgrades to the M25, M11, A12, A14.

13.1.4 It is clear from this strategic assessment that existing funding will not be sufficient to deliver the scale of infrastructure investment identified as being necessary in the GIF. Developer contributions (whether s106, s278 and CIL), local authority capital programmes or current public sector funds and grants will fall short. Therefore, the GIF recommends that all local authorities in Essex will need to work better together to devise an integrated package of funding sources and delivery mechanisms that meet the needs of different areas and types of infrastructure at different times.

13.1.5 Figure 1 in this IDP (Figure C below), which is taken from the GIF shows the estimated levels of secured funding, expected funding and funding gaps for each of the authorities across Essex in 2016, highlighting the extent of the funding challenge to address infrastructure constraints over the respective plan periods.

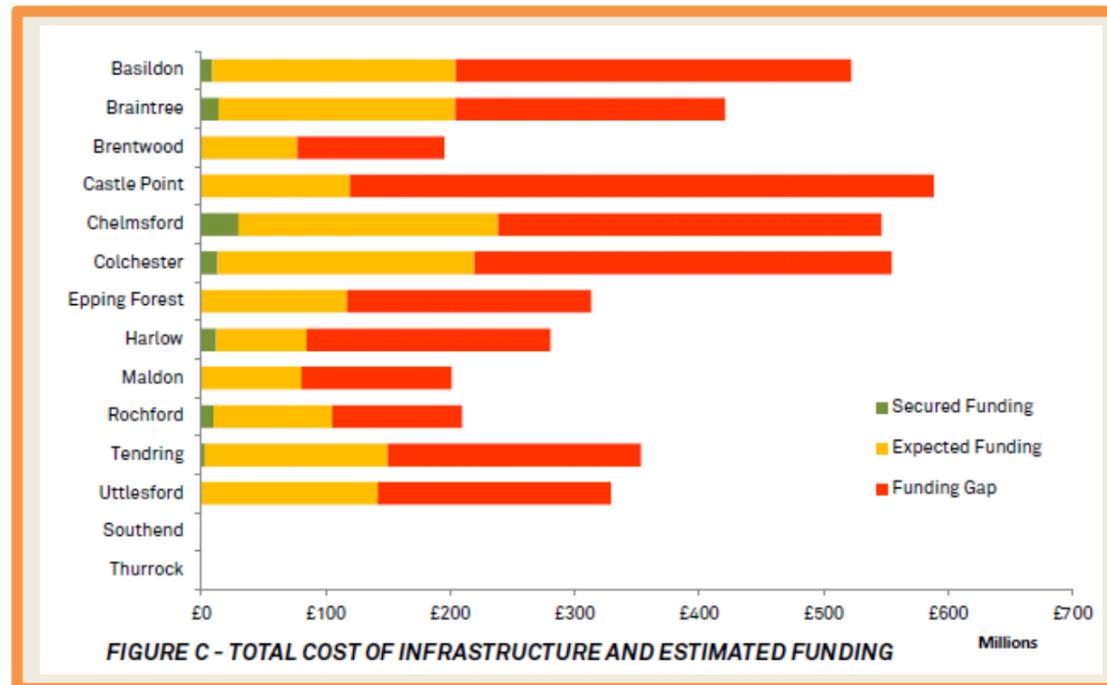


Figure 23: Estimated Cost of Infrastructure and Level of funding in the GIF 2016-2036

13.1.6 The challenge will need to be met in part through approaches that achieve meeting the demands of residents and businesses through more innovative services that require less capital investment. This change has already begun across many sectors,

through more integrated services, technological advances and redirecting service demand, for example to more cost effective solutions such as community healthcare and outpatient services to relieve pressure on acute hospitals.

13.1.7 The GIF recognises the invaluable work undertaken by the local authorities, the Local Enterprise Partnership (LEP) and its partners across Greater Essex to produce its latest Growth Bid and the level of work required to arrive at a ‘shortlist’ of priority projects chosen to facilitate growth and deliver the greatest returns on investment. The GIF suggests that this approach may be one model to follow when determining priorities for infrastructure investment which will have the greatest impact.

Funding Estimates in the Basildon Borough IDP 2018

13.2.1 This Infrastructure Delivery Plan follows extensive contact, research and engagement with all infrastructure providers for the Basildon Borough to identify specific infrastructure priorities, and to understand the potential funding streams currently available, or expected to be available through the public or private sector to bring them forward. Also, there is a need to determine if there are any funding gaps where the Council will need to take a more proactive role in sourcing additional funding through alternative routes such as the Local Enterprise Partnership, as well as understand the role developer contributions such as s106 and CIL will have to play in the future.

13.2.2 Figure 2 shows the combined estimated costs for each type of infrastructure and presents a percentage of the total costs of infrastructure provision which is currently secured, expected and where the main funding gaps are likely to occur over the plan period. This is presented in the IDP as a percentage, as often, specific costs are difficult to estimate due to the changing nature of how services could be provided in the future, the commercial sensitivity of some costs which are incurred by competing private sector providers, and the need to provide flexibility when negotiating the provision of infrastructure upgrades as part of a planning proposal. For example, one proposal may provide the infrastructure on-site, whereas another proposal may be able to be brought forward through a financial contribution to the provision of infrastructure off-site.

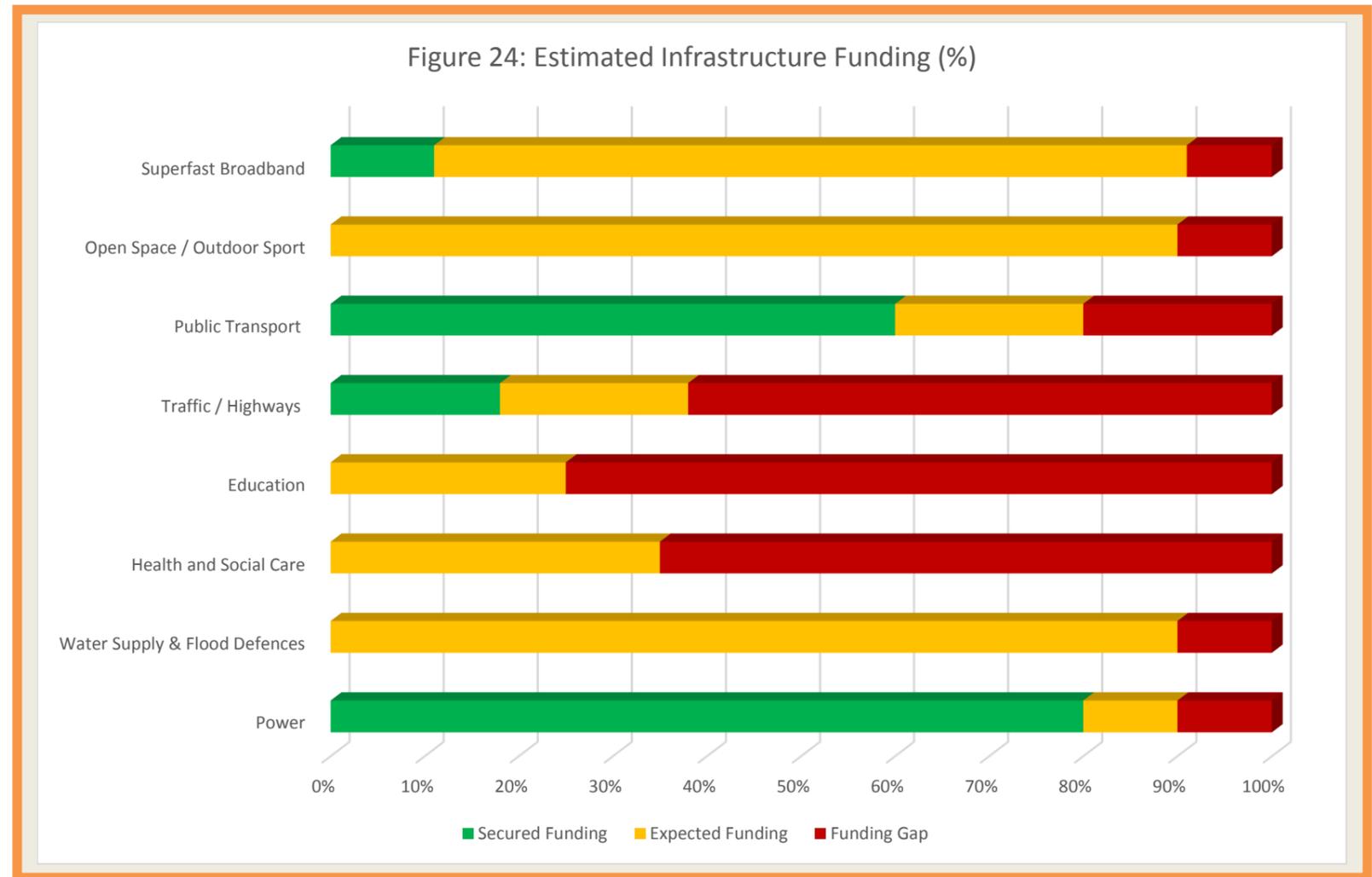
13.2.3 Therefore, an aggregate funding gap is provided in accordance with paragraphs 162 and 177 of the NPPF and in accordance with planning practice guidance relating to the Community Infrastructure Levy (CIL) where potential charging authorities must identify a funding gap for a particular type of infrastructure if it aims to charge the levy to help pay for it.

13.2.4 The aggregated funding gap shown in Figure 2 has been calculated following extensive engagement with infrastructure providers to determine the level of infrastructure required to support Local Plan growth, to obtain as much information as possible about the potential cost of such infrastructure, and to find out if there is any existing funding available to either cover cost of the infrastructure in full or in part. The assumptions used in regards to funding are discussed in greater detail as part of chapters 4-12 of this study.

13.2.5 Figure 1 shows that there are quite significant funding gaps that will be experienced by all authorities across Greater Essex when trying to deliver new and improved infrastructure, and the assessment in the IDP 2018 reflected in Figure 2, shows that the specific types of infrastructure where the funding gap is likely to be most acute falls within the Highways and Education sectors, where significant contributions from developers, and the potential need for external funding will need to be sourced in order to assist in their delivery. This includes such upgrades as a new relief road in Billericay, a new junction on the A127 to serve Basildon and Wickford, five new primary schools and one new secondary school to be delivered alongside the expansion of several other schools in the Borough. However, whilst Figure 2 provides a useful illustration of where the largest gaps in infrastructure funding are likely to occur, this only tells part of the story as funding is not always the most significant constraint to infrastructure delivery.

13.2.6 Public Transport also suffers from a larger funding gap than many of the other infrastructure types, but this is largely due to the fact that the public transport providers use baseline population projections to calculate their need to increase capacity. Therefore, there is likely to be some growth contained in the Council's Local Plan which is not accounted for, as the objectively assessed needs for housing and employment growth is higher than baseline projections. However, public transport also has the

13.2.7 Health and Social Care infrastructure may not be shown in Figure 2 to have as large a funding gap as some of the other infrastructure types, however, we know that this is one of the collection of infrastructure providers which are changing how they provide services, so that less capital investment is required as secondary issues such as difficulties in recruiting NHS qualified staff is presenting other challenges to the delivery of

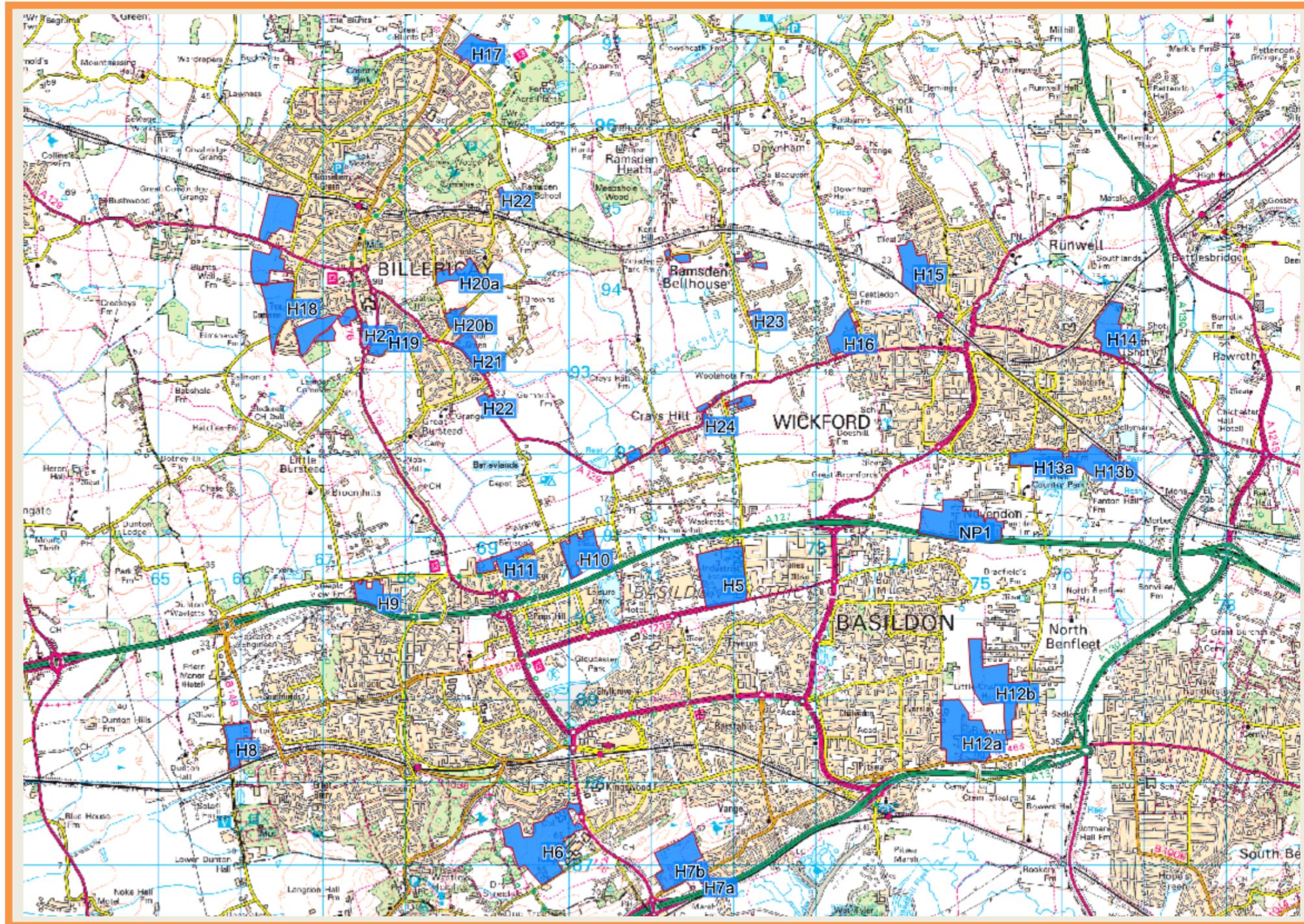


largest amount of secured funding as the award of franchises on the Liverpool Street and Fenchurch Street rail lines has included a significant investment commitment from both franchisee holders early on in the plan period. These companies also hold the franchise for a period of time shorter than the Local Plan period, and it is assumed that a new franchise will make additional funding available to increase capacity in the future (even if this is the same provider), and this is captured in the expected funding.

infrastructure capacity that funding alone will not be able to improve.

13.2.8 It could be argued for Open Space / Outdoor Sports that as there are no current funding streams available for its provision that there is a 100% gap in the level of funding available. However, the Council has an adopted Open Space Assessment which makes it clear what the requirements of development are through specific standards, and this funding/provision is expected to be provided through policy requirements in the Local Plan. Therefore, the funding gap shown in Figure 2 represents the amount of open space provision that would be required to meet the current shortfalls experienced in the settlements of Billericay and Wickford when compared with open space standards. In these circumstances contributions are less certain, and may require additional intervention to secure, either through CIL or some other source of funding.

Appendix I – Site Assessment 2018



Strategic Sites

Green Belt Sites

Site Reference	Site Address	Total Number of Dwellings
H7	London Road, Vange	645
H8	West Basildon Urban Extension	300
H9	Land West of Steeple View, Basildon	245
H10	Land East of Noak Bridge, Basildon	400
H11	Land North of Noak Bridge, Basildon	350
H12	East Basildon Urban Extension	2,000
H13	Larks Wood Park, South Wickford	1,100
H14	Land at Shotgate, Wickford	280
H15	Barn Hall, Wickford	540
H16	Land North of London Road, Wickford	300
H17	Land North of Potash Road, Billericay	255
H18	South West Billericay urban extension (several sites)	2,000
H19	Land South of Windmill Heights, Billericay	200
H20	Extension to Mill Meadow, Billericay	400
H21	Land East of Southend Road, South Green, Billericay	190
H22	Self-Build sites, Billericay	32
H23	Ramsden Bellhouse (several sites)	39
H24	Crays Hill (several sites)	70
Green Belt Infill	Various sites across the Borough	145
Total		9,491

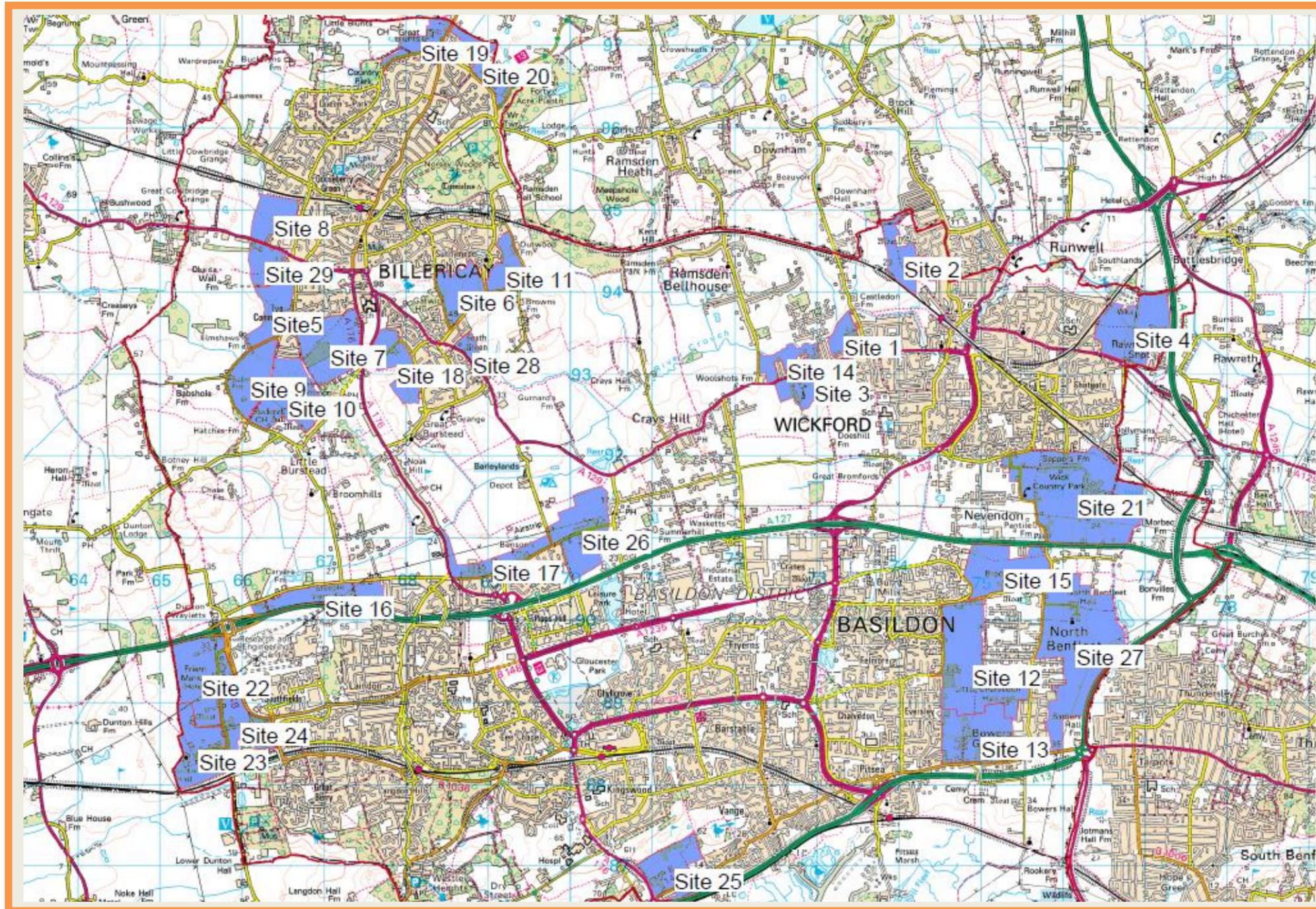
Other Sites

H5	Gardiners Lane South, Basildon	790
H6	Dry Street, Nethermayne, Basildon	725
Town Centres	Basildon, Billericay and Wickford	1,112
Urban Area	Basildon, Billericay & Wickford (Various development sites with planning permission but with houses yet to be constructed),	1,885
Urban Area	Basildon, Billericay & Wickford (Various sites being promoted for development in the HELAA but not yet secured planning permission).	1,268
Windfall	Various sites unknown at this time	960
Total		6,740

The Council has already delivered 1,899 new homes during the plan period 2014-2034.

The site labelled NP1 stands for Neighbourhood Plan 1, which is the potential development being proposed by the Hovefields & Honiley Neighbourhood Planning Forum. The Infrastructure, Growth and Development Committee voted to investigate the potential of the Hovefields & Honiley site and as such, infrastructure providers were asked to comment on the potential infrastructure requirements of the Borough with or without this site included. For the purposes of the Infrastructure Delivery Plan it was assumed that the site had the potential to bring forward an additional **500** dwellings if needed.

Appendix II – Site Assessment 2015



Strategic Sites

Green Belt Sites

Site Ref	Site Address	Maximum Number of Dwellings
Site 1	Land rear of 200 London Road, Wickford	246
Site 2	Land south and north of Barn Hall (Area of Special Reserve BAS S3) & Allocation S3 & R3	350
Site 3	Land South of London Road, from west of Tudor Way to east of Ramsden View Road, Wickford	165
Site 4	Land at Shot Farm, Southend Road, Wickford	403
Site 5	Land at Kingsmans Farm, Billericay	162
Site 6	Land east of Greens Farm Lane, west of Outwood Common Road, north of Outwood Farm Road	0
Site 7	Land east of Frithwood Lane	330
Site 8	Land west of Mountnessing Road, north of London Road and South of the railway line, Billericay	144
Site 9	Land east of Tye Common Road and west of Wiggins Lane, Little Burstead (Salmons Farm/Richdan Farm)	0
Site 10	Land north of Clockhouse Road/Tye Common Road, east of Wiggins Lane, west of Little Burstead Common	0
Site 11	Land between Outwood Farm Road and Sunnymede, Billericay	180
Site 12	Land east of Tyefields, south of Burnt Mills Road, Basildon	606
Site 13	Land north of London Road, east of Ilfracombe Avenue and west of Pound Lane, Bowers Gifford	549
Site 14	Land east of Brackendale Avenue, Pitsea, south of the A13, north of railway line	210
Site 15	Land at Bradfields Farm, Burnt Mills Road, North Benfleet	0
Site 16	Land south of Dunton Road, Laindon	138
Site 17	Land at Bensons Farm, north of Wash Road	0
Site 18	Land west of South Green, Billericay	60

Site 19	Land north of Billericay, west of Stock Road	0
Site 20	Land north east of Potash Road	183
Site 21	Land south of Wickford	872
Site 22	Land to the west of Lower Dunton Road (north)	1,224
Site 23	Land to the west of Lower Dunton Road (south)	0
Site 24	Land to the east of Lower Dunton Road	822
Site 25	Land at Hannakins Farm	30
Site 26	Land east of Noak Bridge	360
Site 27	Land east of Bowers Gifford	70
Site 28	Land east of South Green	219
Site 29	Land west of Billericay, south of London Road and north of Blunts Wall Road	174
Total		7,497

Other Sites

Nethermayne	Dry Street, Basildon	725
Plotland	To be shared between 13 Sites around the Borough as infill development	375
Town Centres	Basildon, Billericay & Wickford	1,349
Gardiners Lane South	Basildon	664
Serviced Settlements	Bowers Gifford, Crays Hill & Ramsden Bellhouse	200
Urban area	Basildon, Billericay & Wickford (Various development sites with planning permission but with houses yet to be constructed, please email carl.glossop@basildon.gov.uk if you require further details of these sites)	2,245
Total		5,558

The Council has already delivered 1,419 dwellings since the start of the plan period 2014-20

Appendix III

Location	Strategic Site Ref.	Area (ha) / Potential Housing nos. ⁴	Summary of study findings (RAG – Red/Amber/Green) ⁵
Billericay	Site 5	/162	This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Site 6	/0	This site has an amber RAG rating, as it has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Site 7	/330	This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Site 8	/144	This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Site 9	/0	This site has an amber RAG rating, as it has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Site 10	/0	This site has an amber RAG rating, as it has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Site 11	/180	This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has surface water network capacity issues that would need to be

Location	Strategic Site Ref.	Area (ha) / Potential Housing nos. ⁴	Summary of study findings (RAG – Red/Amber/Green) ⁵
			addressed through the use of SUDS. It also is at risk of encroachment with the Billericay Sewage Treatment Works.
	Site 19	/0	This site has an amber RAG rating, as it has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Site 20	/183	This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Site 29	/174	This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Urban Area		This site has a red RAG rating. This is mainly due to the fact that treatment capacity may require enhancement. Issues may not be as severe as first thought in this instance due to the limited number of dwellings likely to come forward in the urban area of Billericay.
Wickford	Site 1	/246	This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Site 2	/350	This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Site 3	/165	This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has

⁴ Figures derived from Basildon Borough Housing & Economic Land Availability Assessment (HELAA) Report 2014/15

⁵ Anglian Water classifications i.e. Red - Major Constraints to Provision of infrastructure and/or treatment to serve proposed growth/ Amber - Infrastructure and/or treatment upgrades required to serve proposed growth or diversion of assets may be required/ Green - Capacity available to serve the proposed growth/ NA - Outside Anglian Water's boundary of water supply and / or service for sewerage treatment purposes.

Location	Strategic Site Ref.	Area (ha) / Potential Housing nos. ⁴	Summary of study findings (RAG – Red/Amber/Green) ⁵
			surface water network capacity issues that would need to be addressed through the use of SUDS.
	Site 4	/403	This site has a red RAG rating, mainly due to the potential encroachment of development on the Wickford Sewage Treatment works and a development exclusion zone is advised.
	Site 12	/606	This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Site 13	/549	This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Site 14	/210	This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Site 15	/0	This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Site 21	872	This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Site 27	70	This site has an amber RAG rating, as it has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Serviced Settlements		This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Urban Area		This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has

Location	Strategic Site Ref.	Area (ha) / Potential Housing nos. ⁴	Summary of study findings (RAG – Red/Amber/Green) ⁵
			surface water network capacity issues that would need to be addressed through the use of SUDS. Sites in the urban area may also require enhancement to treatment capacity.
Basildon	Site 16	/138	This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Site 17	/0	This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Site 18	/60	This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Site 22	/1,224	This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Site 23	/0	This site has an amber RAG rating, as it has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Site 24	/822	This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Site 25 (Pitsea)	/30	This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Site 26	/360	This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has surface water network capacity issues that would need to be addressed through the use of SUDS.

Location	Strategic Site Ref.	Area (ha) / Potential Housing nos. ⁴	Summary of study findings (RAG – Red/Amber/Green) ⁵
	Site 28	/219	This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Nethermayne	/725	This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Gardiners Lane South	/660	This site has an amber RAG rating, as it has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Town Centres	/1,349	This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Plotland	/375	This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has surface water network capacity issues that would need to be addressed through the use of SUDS.
	Serviced Settlements		This site has an amber RAG rating, as it has the potential to require upgrades to foul sewerage network capacity and has surface water network capacity issues that would need to be addressed through the use of SUDS.