



EMERGING INFRASTRUCTURE DELIVERY PLAN FOR THE ENFIELD LOCAL PLAN

LONDON BOROUGH OF ENFIELD

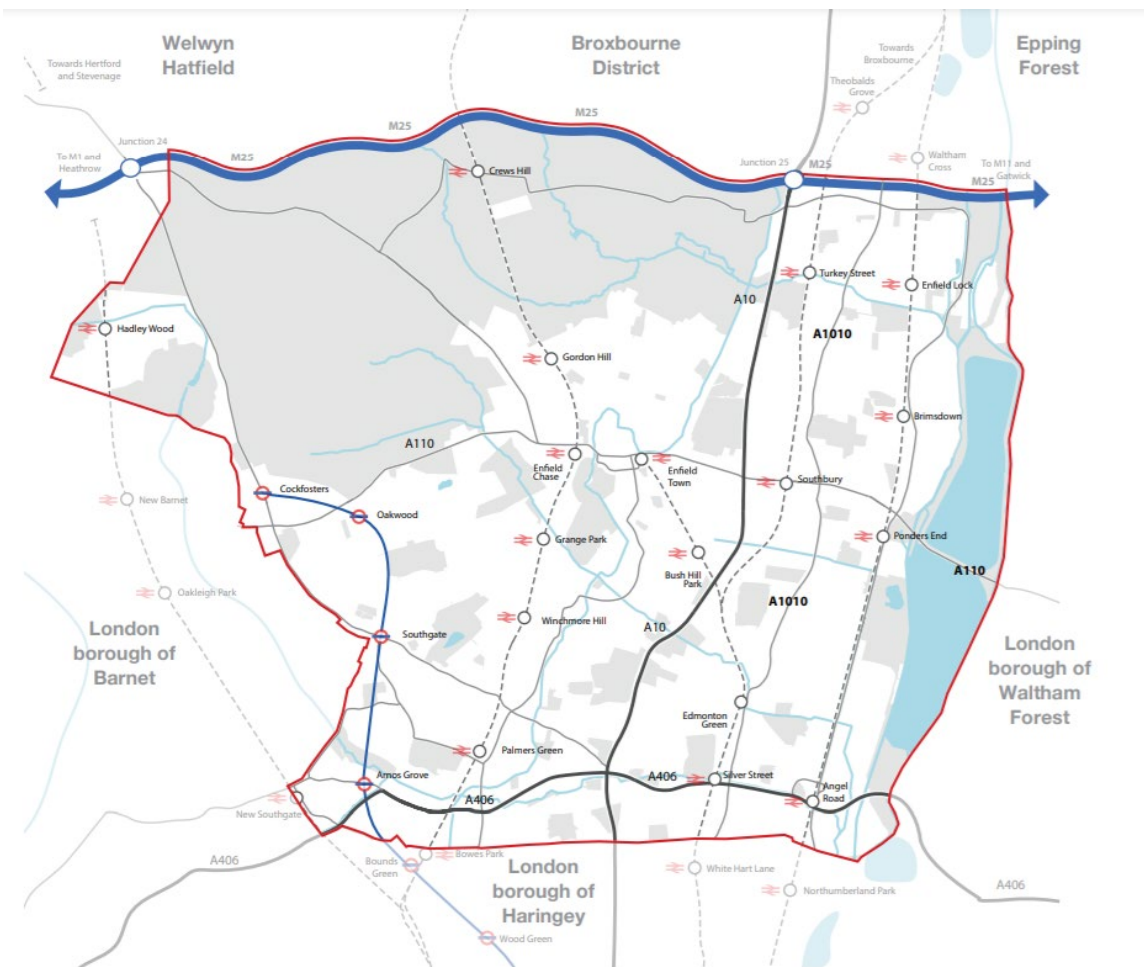
Contents

1	INTRODUCTION	3
2	SUMMARY OF INFRASTRUCTURE ASSESSMENT BASELINE.....	5
3	FUTURE INFRASTRUCTURE REQUIRED FOR THE LOCAL PLAN.....	16
4	FUNDING AND DELIVERY OF INFRASTRUCTURE	29
5	APPENDIX 1: HOUSING TRAJECTORY	35
8.	APPENDIX 2: ESTIMATED CIL INCOME	36

1 INTRODUCTION

1.1. The Council has produced this draft Infrastructure Delivery Plan (IDP) to identify the infrastructure necessary to support the delivery of the emerging Enfield Local Plan to 2041. This IDP is subject to consultation along with other relevant documents as part of the Regulation 19 Publication Stage of the Local Plan. The information within the IDP is still emerging along with the evidence base and the more detail information related to specific site allocations. The IDP will be updated further prior to the submission of the Local Plan to the Secretary of State.

1.2. The IDP covers the Borough of Enfield as identified below:



1.3. The National Planning Policy Framework (NPPF) and Planning Practice Guidance (PPG1) require local plans to include strategic policies which set out the strategy for growth in the area to meet local needs and objectives for a minimum of 15 years from the date of adoption, and to make sufficient provision for the delivery of new infrastructure which supports the proposed levels of growth. The NPPF states that local plans should set out the infrastructure required to support growth, and the contributions required from developers and other organisations to support the delivery of new infrastructure.

1.4. For the purposes of this IDP, 'infrastructure' is defined as physical, social and green/blue infrastructure required to enable sustainable development. IDPs can consider a range of infrastructure suitable to the needs and aspirations of the identified area, and the particular circumstances of the proposed development sites and stage of preparation of the local plan. As such, this IDP considers infrastructure in an Enfield context, and seeks to:

- assess the existing provision of strategic and local infrastructure provision throughout the Borough;
- identify what additional infrastructure and/or improvements may be required to support the planned growth (site allocations) in the Local Plan;
- identify whether provision is expected to be on or off-site, and/or whether a financial contribution may be sought to enable improvements;
- identify potential sources of funding, such as the Community Infrastructure Levy (CIL), that the Council and its partners may use to deliver infrastructure;
- establish priorities for each of the infrastructure projects identified.

1.5. This IDP has been developed using a baseline of existing information and consultation with statutory consultees on the various topics identified in the Plan.

1.6. Developers and landowners are expected to use the IDP to help identify the infrastructure requirements they need to consider providing over the plan period. It is expected that the details of infrastructure provision will be confirmed at planning application stage in order to meet the needs of each site allocation. For sites that deliver over several phases, the provision of infrastructure is expected to reflect the level of development and its associated impacts in each phase. Detailed technical assessments undertaken by developers through consultation with relevant infrastructure providers and the Council when preparing planning applications, such as a Transport Assessment/Statement will confirm the infrastructure sought for each allocation/phase of development.

1.7. It is therefore not possible at this stage to identify the details of each infrastructure item required or the specific costs of each infrastructure item. This is acknowledged by national PPG. Such details will be monitored annually through the Council's Infrastructure Funding Statement.

Structure of the IDP

1.8. To establish the existing capacity of infrastructure, an Infrastructure Assessment (IA) of infrastructure in the Borough has been produced and is a separate document to this IDP. However, a summary of the IA is provided in Section 2 of this document. The infrastructure required to support planned growth in the Local Plan is set out in Section 3 and the potential funding and delivery mechanisms is outlined in Section 4.

2 SUMMARY OF INFRASTRUCTURE ASSESSMENT BASELINE

- 2.1. As part of the preparation for the Local Plan, AECOM have produced a detailed Infrastructure Assessment (IA). The IA assess the future infrastructure needs arising from new housing and new employment space growth in the borough. The IA will assess what infrastructure is required, where it is required and when it is required. A key objective of the IA is to assess the infrastructure needs associated with a range of spatial growth scenarios, and inform the identification of the preferred spatial option. The selection of the preferred option will be determined by a multi-criteria assessment, drawing on information from other evidence base studies, and consultation. The process and selection of the preferred option will be council-led.
- 2.2. The IA is being developed in parallel with the rest of the Local Plan evidence base and an Integrated Impact Assessment (IIA)¹ process. The IA will inform decision making alongside the Local Plan as it is developed, providing more detail on infrastructure needs as the plan progresses to submission. Once the preferred option has been agreed, output from the IA will be used to develop the Infrastructure Delivery Plan (IDP) which is a key evidence base document that supports the Local Plan.
- 2.3. This document represents the first stage in developing the Infrastructure Assessment: an overview of the existing provision of infrastructure within the borough to identify any existing capacity, constraints and gaps in provision. The report is structured by individual topic areas which are summarised below.

ELECTRICITY

- 2.4. The existing electrical infrastructure in the borough currently has around 124MVA of spare demand capacity at the distribution level. This is a relatively limited amount of headroom that could still be used to support new housing and employment space. However, the spare capacity is not distributed equally, and a number of individual substations are operating near capacity.
- 2.5. The local network is maintained and operated at the transmission level by NG and at the distribution level by UKPN. Early engagement with these stakeholders will be required as high-level coordination and in-depth feasibility assessments will be crucial to ensure the electrical infrastructure does not constrain development.
- 2.6. Evolving consumer demand patterns offer significant opportunity for the development of more adaptable modernised utilities, in particular on larger scale projects. This is a very active area of investment as it will become central to the electrical infrastructure of the next decade.
- 2.7. Regulatory frameworks currently in place make it difficult for DNOs and the TSO to 'invest ahead of need'. Depending on the size of the proposed developments this could become a significant challenge.
- 2.8. There is an expected rapid growth in electrical demand which will be driven by the uptake of EVs and the electrification of heat. This will likely put a heavy stress on grid and trigger a number of reinforcements across the network depending on the rate of uptake.

¹ The IIA brings together into a single document a number of assessments which are required to assess the social, environmental and economic impact of the emerging Local Plan.

London is expected to lead this uptake at a large scale. Careful consideration should be given to such demand pressure and its impact on future projects. Higher demand will likely drive reinforcements cost up, but it is also an opportunity to introduced innovations that optimise the available assets.

- 2.9. As we enter the RIIO-ED2 period, the reinforcement schedule for the borough should be carefully monitored and local plans development should be as far as possible aligned with the Local Plan in order to minimise expenditure and delays linked to electrical infrastructure reinforcement.

GAS

- 2.10. The distribution networks serving customers within Enfield are sufficiently resilient to supply all proposed developments that currently have planning consent and Cadent have been made aware of. There is expected to be minimal change in gas demand through to 2028, and in the longer term.
- 2.11. Clean gases will need to be integrated into the existing network for gas to remain a viable energy source for the long term. Further investigation and trials would be necessary to prove alternatives can deliver energy as reliably as natural gas, whilst significantly reducing the associated carbon emissions.

RENEWABLE ENERGY

- 2.12. Based on publicly available information, there are approximately 800 renewable energy installations located in the borough, including a large number of small-scale solar PV arrays, a sewage gas plant, a municipal solid waste incineration plant, a heat network and various other renewable heat technologies, such as air source heat pumps and biomass technologies. Enfield London Borough Council plans to expand the heat network, and a new 77 MW energy recovery facility is planned at the Edmonton Eco Park.
- 2.13. In order to meet the UK's climate change commitments and reach net zero emissions by 2050, as well as Enfield's own climate emergency declaration and commitment to be carbon neutral by 2040, it will be necessary to significantly increase the supply of local renewable energy. This will need action from Enfield London Borough Council to both enable and encourage delivery but also manage potential constraints such as spatial requirements and pressure on local grid infrastructure.

DIGITAL INFRASTRUCTURE

- 2.14. In general, the majority of the borough's urban areas have good connectivity to higher broadband speeds, with the highest density of low speeds isolated to the east of the borough. Government Building Digital (BDUK) phase two called for 95% of the UK to have superfast broadband (Speeds >28Mbps) coverage; and data shows that circa.97% of homes and business in the borough have access to superfast broadband services. New developments within the borough should meet a minimum broadband speed connection target of 28Mbps.
- 2.15. We have, however, highlighted areas within the borough with low broadband speeds under the 28Mbps benchmark: these include the industrial corridor in the east and smaller residential areas. Any future development within these areas would therefore need to consider additional investment to reach the preferred speeds.
- 2.16. In terms of cellular reception, it is clear that there is some variance in service quality across the borough depending upon the supplier selected. The poorest quality cellular

reception is experienced in the north and north east of the borough, which is less densely populated. EE does, however, show that it has 4G/LTE reasonable connectivity across the majority of the borough compared to other providers. This could indicate that the geographical characteristics, and presence of tall structures are not a contributing factor to weak signal reception. This may indicate that issues and gaps in cellular reception are caused by lack of infrastructure, such as having fewer masts, or the placement of masts.

WATER

- 2.17. The potable water supply for the borough is delivered predominantly by the TWUL London WRZ and a small proportion in the Hadley Wood are delivered by AWL WRZ3.
- 2.18. The study area is amongst the most 'water stressed' parts of the UK, having lower than average rainfall and higher than average temperatures, and climate change is predicted to increase the water supply challenge in this region.
- 2.19. There is limited potential for new local surface water abstraction and a significant lack of water resource availability to support major site development at a local level in order to protect the status of waterbodies.
- 2.20. Baseline supply/demand is currently in deficit and will increase over the medium and long term with no interventions.
- 2.21. The preferred plans for TWUL and AWL include demand management schemes to reduce water demand, including smart metering, leakage reduction, water efficiency schemes and incentive schemes.
- 2.22. The preferred plan for TWUL includes short, medium and long-term supply management measures that include water trading, removal of network constraints, development of groundwater and surface water resources including the SERSO and in the long term a Severn Thames transfer scheme. These supply management measures alongside demand management measures, will remove the forecast deficit and create a balance over the long term to 2100.
- 2.23. The preferred plan for AWL Central Supply Zone that includes WRZ3 includes the optimisation of existing groundwater abstractions and an increase capacity of the AWS bulk transfer from 2030. AWL have also developed a long-term strategy to improve connectivity and enable more flexible movement of water within the Central Supply Zone by 2040, called the 'Supply 2040' strategy. These schemes, along with demand management schemes, will produce a surplus of water across the AWL Central Supply Zone over the long-term to 2075.
- 2.24. The proposed supply and demand measures will provide a balance over the long term. However, at a local level, the supply of water to areas of new development and future growth will require upgrades and/or new water distribution mains.
- 2.25. TWUL are the statutory undertaker for wastewater services throughout the borough. Current wastewater discharges alongside a range of other sources are already affecting WFD status of local watercourses. Deephams WwTW has recently had major infrastructure upgrades to improve final effluent quality, increase treatment capacity and reduce odour issues and is considered to be able to accommodate growth in the short to medium term and wastewater network upgrades are likely to be required in specific locations, although this is generally not considered a major barrier to growth. An adaptive pathway approach is being adopted by TWUL to allow flexibility and a range of interventions to be implemented given

the complexities associated with long term planning and uncertainties with growth, climate change and new technologies.

FLOOD RISK MANAGEMENT AND SUSTAINABLE DRAINAGE

Blue-green Infrastructure and Natural Flood Management

- 2.26. Enfield London Borough Council takes a holistic approach to flood management in the borough, delivering it as part of a wider water cycle management philosophy within an overall catchment-based approach.
- 2.27. Flood management and sustainable drainage schemes promoted by the council and its partners look to offer multiple benefits through focus on using nature-based approaches (natural flood management), which also delivers water resource protection, biodiversity gain, water quality improvement and place making benefits. Blue-green infrastructure delivery is therefore an integral part of providing flood management and sustainable drainage in the borough.

Surface Water Management and Ordinary Watercourses

- 2.28. Enfield London Borough Council has delivered a range of retrofit SuDS throughout the borough to reduce surface water runoff rates and volumes, promote infiltration and contribute to a reduction in fluvial flood risk from the ordinary watercourses and main river systems. In particular, it looks for opportunities to install retrofit systems in conjunction with the other functions and services which it provides, including:
- 2.29. regeneration projects, traffic calming and footway schemes: through enhancements to public space and highway verges and changes to raised planted areas (e.g. installation of permeable paving, and introduction of rain gardens); refurbishment of large estates; and school projects (installation of measures in extensive external spaces and hard standing areas, providing additional educational benefit).
- 2.30. The watercourses team within Enfield provide the lead local flood authority (LLFA) function for the borough and are in the process of delivering (or have already delivered) several NFM based schemes to provide flood risk reduction from a combination flood sources for which the LLFA is the statutory risk management authority. This includes sources of surface water, fluvial risk from ordinary watercourses, and groundwater sources. This NFM approach also has significant benefits to fluvial flood risk from the main river systems for which the Environment Agency is the risk management authority (Salmons Brook, Turkey Brook, Pymmes Brook and the River Lee system).

Main Rivers and Fluvial Flooding

- 2.31. The borough flood map in Appendix H of the SFRA shows the extents of all the Flood Zones in the London Borough of Enfield including the functional floodplain. It also shows the locations of the Area Action Plans that are to be prepared as part of the Council's Local Plan. These are also shown in Figure 1.1 in the first chapter while Figures 3.1 to 3.5 on the following pages indicate the areas that are at risk of fluvial flooding.
- 2.32. Analysis of the Flood Zone maps across the borough reveal that the areas at risk of flooding are primarily in the Lee valley. During pre-industrial times this whole area would have been natural functional floodplain. The river channels and surrounding landscape have now been so extensively engineered that most of the valley is fairly well defended. The standard

of protection of the existing flood defences on the Lee and its tributaries is generally above 2% annual probability of failure but is as low as 5% in some areas.

- 2.33. Consequently, the functional floodplain in Enfield is mainly restricted to green spaces outside the Lee valley, including Enfield Golf Course, Whitewebbs Park, Firs Farm Wetlands, Arnos Park and other constructed wetlands. There are however significant areas of existing residential and commercial developments within Flood Zones 2 and 3, particularly in the south-east corner of the borough. It is critical that the relevant local planning authorities for the areas of the Lee catchment upstream of Enfield work in partnership with the Environment Agency to ensure that flood risk in the Lee valley is not increased in the future by the inappropriate development or intensification of sites.
- 2.34. There are considerable stretches of land within the Central Leaside, North East Enfield and North Circular Area Action Plans that are at risk of flooding. As these areas consist largely of existing brownfield sites, future developments will present opportunities to substantially reduce flood risk, both on site and in the surrounding areas. The updated model refines the data available regarding flood risk and emphasises the flood risk in river corridors primarily the Lee Valley and particularly in the south-east of the borough at the confluence of main rivers. Where the requirement is identified as part of the Sequential Test, these locations will be analysed more thoroughly in the increased scope Level 2 SFRA mentioned previously.
- 2.35. An ordinary watercourse is a passage through which water flows, such as a stream, ditch or drain, that does not form part of a main river. Prior to the introduction of the Floods & Water Management Act (2010) the Environment Agency identified all ordinary watercourses that could be considered to place large numbers of people and property at risk of flooding and classified them as full main rivers. Most remaining ordinary watercourses are therefore deemed to represent local flood risk, rather than wide-scale flood risk, and have therefore been considered together with surface water flooding. The exceptions are the Moore Brook and Saddlers Mill Stream (the upper part of the catchment in the Enfield Town area is an ordinary watercourse, not a main river). As these two ordinary watercourses are associated with welldefined flood extents that impact a significant area it is proposed to treat them as fluvial flood risk and include their flood outlines in the Flood Zones. It is proposed that this allocated flood zone associated with these watercourses are treated in the same way as the wider flood zones for planning purposes.

EDUCATION PROVISION

- 2.36. **Early years education** provision in the borough currently appears strong. The 60 private nurseries or pre-schools and nine children's centres account for the majority of provision, supported by 46 primary schools providing education to 2,774 children under 5 years old in the borough. Total capacity data is not available for early years providers but supply typically adapts to meet demand requirements as private providers react to market needs. However, despite this, the ability to deliver new early years facilities is becoming increasingly difficult. Local strategies are displaying the need for more co-location of early years provision with primary schools, secondary schools or other compatible uses.
- 2.37. **Primary education** provision currently meets its demand requirements as the 72 primary schools in the borough have a total surplus of 2,159 places, when the desired 95% occupancy rate is planned for. However, there are spatial disparities in the level of supply across the borough, resulting in some areas becoming under increasing pressure and requiring the need for some temporary provision. The One Degree Academy, when established on its new site at Chase Farm Hospital, will alleviate some of the concern as its

total capacity can be utilised. Future trends indicate the south-west area is likely to have a gap in provision towards 2022/23 which should be carefully monitored, where opportunities to redevelop existing sites or reuse redundant sites potential solutions in undersupplied or deprived areas.

2.38. **Secondary education** provision in the borough is currently adequate, with a surplus of 2,308 school places at the 20 secondary schools when the desired 95% occupancy rate is applied. However, it is likely to become slightly constrained as large cohorts of primary school children move into secondary education. Future capacity of secondary schools in Enfield, particularly in the already undersupplied north-west area, depends on the provision of an additional 6FE (900 pupils) through the Wren Academy for 2021/22. This area requires new capacity to serve the projected needs of the population. Most of the rest of the borough appears well positioned to meet future demand requirements, although officers are planning to discuss opening additional temporary classes to mitigate any gaps in provision. This arrangement would help prevent any potential oversupply in the future, as is desired in local strategies.

2.39. **Special educational needs and disabilities (SEND)** provision in the borough has been strengthened over the last year with multiple deliveries and extensions however; local strategies suggest the growing demand for these facilities means existing supply could become strained. Despite the seven dedicated special schools and 12 mainstream schools with ARP, some out of borough placements are still required to meet existing demand. Although not the preferred solution, more of these placements may be needed if future provision cannot be secured. A greater priority for mainstream primary and secondary schools is likely to be accommodating this provision.

2.40. **Further education and higher education** provision in the borough appears to be adequate for the existing demand. There are two substantial colleges, in addition to the sixth forms at secondary schools, that provide wide-ranging courses to children aged 16-18 as well as some higher education provision. No strategy documents suggest this provision is under pressure from demand, but large cohorts of secondary school children are expected to move into further education. There is no dedicated university in the borough which could be considered a gap in provision however, London's extensive higher education supply caters for students in Enfield if they desire to progress their qualifications.

HEALTHCARE

2.41. GP provision in the borough appears to be under pressure, with the level of service for existing residents above the maximum recommended level for England. Most facilities are considerably oversubscribed, particularly in the east and south of the borough, whilst those facilities with capacity are likely to be filled from committed developments or population growth. The east and south of the borough is expected to deliver new developments amongst some of the borough's residential opportunity areas, further increasing the demand on the existing supply. In addition, these areas are amongst the most deprived in the borough, with a worse health level and life expectancy compared to areas in the west of the borough. Therefore, it appears that new provision will be needed to accommodate future population needs, particularly in the east and south of the borough as future facilities should aim to reduce inequalities.

2.42. Dentists and mental health facilities also have a potential lack of facilities in the north-east of the borough, where there is a concentrated residential population. Given the

aforementioned health issues in the east of the borough, new provision should ensure these residents do not suffer from a lack of access to facilities.

2.43. Planned expansions and upgrades at North Middlesex University Hospital will help meet the service demands of the borough's future population. However, the growing elderly population challenge is likely mean the health system needs to be able to adapt to changing demands, whilst a lack of land supply means the solution is not straightforward. Projects that better utilise existing assets to meet the demands of the borough's ageing population should be encouraged.

2.44. Older persons facilities are better distributed across the borough. This provision appears suitable in terms of locations for the existing population. However, the ageing population challenge that is apparent across the borough is likely to increase demand for these facilities. Therefore, the supply of the older persons facilities should be monitored closely against the growing demand.

OTHER COMMUNITY INFRASTRUCTURE

2.45. Provision of emergency services infrastructure in the borough has been impacted by austerity measures. Overall, there has been a reduction in the number of emergency services facilities within the borough (particularly police services). The existing fire, police and ambulance emergency services facilities are located in three of the borough's key town centres (Enfield, Edmonton and Southgate). Having been recently streamlined, no forthcoming emergency services infrastructure has been identified within the borough.

2.46. Enfield's library service has recently been modernised, with the aim of making the service fit for future purpose. Ponders End library is in the process of being rebuilt and Fore Street Library will benefit from high-street upgrades through the Good Growth Fund. In line with local policy , any new library facility will need to be located in a local centre or town centre, enabling the facility to be accessed by a greater number of potential users.

2.47. Enfield has a broad range of community centres, including youth and community centres and community halls. Ponders End Community and Youth Centre is in the process of being rebuilt and two new council housing community halls are set to be built on sites at Alma Road and Shepcot House.

GREEN INFRASTRUCTURE

2.48. This information is currently been collated and will be published in due course.

CULTURE

2.49. Enfield benefits from easy proximity to central London whilst being located on the rural edge of Hertfordshire and Essex. This diverse setting brings the associated benefits of a varied landscape to be inspired by and in which to experience culture. A substantial amount of green space and a network of water courses make up over 40% of the borough and much cultural activity takes place in the many parks and historic buildings. The strong local heritage of farming and market gardens continues today, while new housing and employment is growing in town centres and on former industrial land. New creative industries and workspace are developing, diversifying the borough's enterprise opportunities which are welcomed. Enfield has a rich base of community cultures, with unique heritage stories and creativity which shapes the borough's cultural identity. This can be made more visible through the town centres and new development areas, adding character and interest for everyone of all ages.

The music, food and traditions of the borough's diverse communities are celebrated through community festivals and events that take place year round.

- 2.50. Enfield Council manages a range of venues and programmes, as well as performing a critical role as a cultural development catalyst and a cultural champion. The council's cultural venue portfolio provides essential infrastructure to enable a wide range of activities which reach a broad cross-section of communities. This is complemented by relatively few independent cultural providers.. A music hall tradition is part of Enfield's performing arts heritage that has shaped the borough's cultural offer.
- 2.51. There are no NPO organisations (National Portfolio Organisations are regularly funded by Arts Council England) based in and regularly delivering activity locally. Enfield's cultural venue hubs work hard to plug this gap and, as well as presenting diverse programmes of professional theatre, poetry, music and comedy, critically operate as points of interaction for diverse communities' activity and outreach and enable access to historic buildings. All are well used and host creative activities that work hard to balance diverse community uses with high quality arts content that reflects and appeals to different audiences across the borough. Some venue spaces in the borough have been lost in recent years. Whilst the existing venues are much valued locally, provision is also wanted within town centres, in particular to the east of the borough where traditionally there has been less on offer. Gaps do exist in current provision. For example, there is no London-scale venue for music or performance, few artist studios and there is huge scope for greater creative enterprise activity.
- 2.52. In Enfield's regeneration areas, including Meridian Water, some housing estates and in some town centres, plans can be shaped to ensure new cultural and creative enterprise provision is included which meets local community need and supports growth of the creative economy. This can include both the kinds of spaces which are flexibly used for culture and creative facilities, some with specific physical or technical needs, as well as through investment in cultural projects and activity; with, for and by local communities. This focus on rebalancing the local cultural ecology creates the chance to cultivate Enfield's cultural identity through planning, to consider specific sector and community needs and what will draw people from within and from beyond borough boundaries. The green landscape and spaces across the north of the borough contrast with the rest of Enfield's more urban character and present an exciting opportunity to develop a unique curated natural destination, opening access to heritage for Enfield residents and people from further afield
- 2.53. In particular there is scope in North East London to build on the emerging large scale film and TV production facilities and support services with the associated employment and training these bring. Below: Mapping Film and Television Production Studios within M25 The OMA Film Studio complex is one such new space in Enfield that is already doubling film rental space in London, whilst many productions have used the borough as a base. Additional opportunities are around the games and interactive entertainment industry which according to UKIE (the relevant UK trade body) is experiencing an entrepreneurial boom, with growth in the number of companies of 22% year on year. London is one of several UK game making hubs, with a push underway to make London the world's games capital. 'the games industry benefits from colocation with other creative sectors, and highlights the importance of a strong broadband and talent infrastructure for the development of games hubs.'

TRANSPORT PROVISION

Public Transport

- 2.54. Enfield's accessibility across different modes of travel varies widely. Enfield is bounded by the M25 motorway to the north and is dissected by two trunk roads – the A10 (London to Cambridge) and A406 (London's North Circular Road). These are supplemented by several key A-roads including the A1055 Bullsmoor Lane/Mollison Avenue/Meridian Way (north south link), the A1010 Hertford Road (north south link) and the A110 (east west link).
- 2.55. In terms of rail access, Enfield has five train lines, including the Piccadilly (Underground) line in the west of the borough connecting to Kings Cross St Pancras and Heathrow Airport and Uxbridge and Cockfosters, National Rail and London Overground connections are available to London King's Cross, Moorgate and Liverpool Street stations, and outside of London towards Welwyn Garden City, Letchworth, Stevenage (via Hadley Wood); Hertford North (via stations including Palmers Green, Enfield Chase and Gordon Hill); and Hertford East, Cheshunt, Stansted Airport and Cambridge (via the West Anglia Main Line route through stations including Meridian Water and Brimsdown, or the London Overground Southbury Loop and Enfield Town branch line via stations including Edmonton Green).
- 2.56. Bus coverage varies widely across the borough. Edmonton Green and Enfield town centre have very good coverage with 12 routes serving the latter including services connecting to neighbouring London boroughs (the SuperLoop, 34, 102, 144, 149, 307, 377, 217, 231, 259, 279, 299, 121, 192, 313, 318, 349, 444, W3 and 329) and a few services extending into Hertfordshire (including the 491, 217, 279, 313, 231 and 317).
- 2.57. Enfield's public transport accessibility varies greatly, with Enfield Town, Edmonton and the areas served by the Piccadilly Line (Southgate, Oakwood and Cockfosters) being highly accessible, and remaining areas of the borough relying on lower frequency rail/overground and buses. This is the case with the Upper Lee Valley in particular which has experienced a large amount of development in recent years which has resulted in increased demand on public transport.
- 2.58. However public transport quality is poor in terms of public transport accessibility along the Lee Valley corridor despite the presence of the West Anglia Main Line, as this suffers from low service frequencies and relatively poor station multimodal access. Similarly, the Great Northern Line serving the Central-Western neighbourhoods of the borough (Crews Hill, Gordon Hill, Enfield Chase, Grange Park, Winchmore Hill and Palmers Green) along the Moorgate-Stevenage line could support further growth but currently offers four trains per hour in the peak only towards Central London.
- 2.59. The existing capacity constraints on the public transport network will be compounded by the planned growth which will present a greater challenge. The London Plan (2021)³ sets out proposals for large-scale development at key areas through Opportunity Areas in the Lee Valley (Meridian Water) and New Southgate which are due to support thousands of new homes, jobs and supporting facilities. It is recognised that in order to achieve the additional growth the transport infrastructure of these areas must be transformed, with a focus on improved public transport accessibility and connectivity.
- 2.60. The Edmonton Leaside Area Action Plan sets out that further growth in both housing and employment is planned for the Upper Lee Valley, Picketts Lock, Angel Road Retail Park, Edmonton EcoPark and Deephams Sewage Treatment Works. Growth will put pressure on the existing public transport network in the more peripheral areas of the borough, which are

capacity constrained or are not particularly well served in terms of coverage by public transport at present. Public transport improvements across the borough will be required to support the planned growth as set out in the London Plan and aspire to fill the gaps in accessibility and capacity constraints.

2.61. Current aspirational improvements set out in the Enfield Transport Plan (last issued 2019 – currently under review) 4 include, more frequent rail services, the four tracking of the London-Stansted line, and a more frequent and comprehensive bus service. Improving accessibility to public transport for areas of new growth is therefore critical to delivering sustainable growth and supporting the borough's economy.

Highways

2.62. Enfield is linked to major road corridors including the A10, A110 and A406. At present there is a lack of connectivity between strategic east-west and north-south highway links across the borough, which limit movement and access to jobs and services. Nearly half of individuals living in the borough travel to work by car, compared to 34% across all London boroughs⁵. The volume of traffic using the network is placing increasing pressure on the available capacity. Planned growth in the new Local Plan will need to consider and mitigate highway capacity constraints with more emphasis on making space available within the highway for attractive routes for active travel and efficient public transport services.

2.63. The following routes have historically had capacity issues: M25 (junction 25), A10 Great Cambridge Road, A406 North Circular Road, A110 Southbury Road, A1010 (Hertford Road) and A1055 (Mollison Avenue/Meridian Way). With few east west links due to physical severance from reservoirs in the east of the borough, motorists wanting to cross the borough from Brimsdown and Ponders end to Loughton (Epping Forest District) or Chingford (Waltham Forest) are directed towards the pinch point between the King George's and William Girling reservoirs where the A110 (Lea Valley Road) passes through. The upgrade of east west links in the borough are required for all modes and as such there is an opportunity to develop multimodal east-west links across the borough.

2.64. Businesses reliant on bulk freight movement tend to be located in the east of the borough, particularly on key routes such as Mollison Road, Meridian Way and Great Cambridge Road. Current policies⁷ in the borough seek to manage the location of freight generating development and to improve key highway corridors that carry freight traffic in order to reduce the existing capacity issues. Accommodating future growth (both housing and employment) in the borough will require strategic and local network capacity issues to be resolved in order to unlock growth.

Walking and Cycling

2.65. Enfield has approximately 64 kms of public footpaths ranging from heritage trails to long distance routes. These include the following:

- London Loop - circular walking route across the capital and covering 15 kms in the north of the borough from Cockfosters to Enfield Lock;
- Lee Valley Walk – which runs through the east of the borough alongside the river 12 kms;
- New River Path - runs through the borough from Bullsmoor through to Bowes.

2.66. Levels of active travel account for 37% of mode share and are on a positive trend albeit still tracking below London average. Circa 2%8 of total trips are made by bicycle, compared to 3% average in London as a whole, walking however represent nearly 35% of mode share against London wide average of 40%. Enfield has been identified as one of five outer London boroughs as having the greatest potential for cycle trips as 30% of all car trips in Enfield are less than 2 kms. There are significant barriers to walking and cycling in Enfield and areas where walking and cycling provision is poor:

- The A406 North Circular forms a barrier to north south movement on foot and by bicycle through Meridian Water and the rest of Edmonton Leaside;
- The A1055 along with the industrial estates and the Lee Valley reservoirs form a significant barrier to east west active travel movement;
- The railway lines (running north south to Brimsdown and Ponders End) form a barrier for east west movement for pedestrians and cyclists, increasing travel distances away from desire lines;
- Various cycling and walking routes highlighted in the North East Area Action Plan and Edmonton Leaside Area Action Plan are narrow, unlit, unsegregated and of poor quality.

2.67. Where these barriers do not exist, for example around the railway stations and along the Lee Valley Regional Park corridor, there are higher levels of walking and there is greater potential to increase these levels.

2.68. The council has embarked on a medium-to-long term programme of large-scale cycle routes and complementary improvements such as cycle parking, priority junctions and speed restrictions, including improved links to other parts of London and parts of Hertfordshire. A series of improvements are set out in the borough's Journey and Places Programme that aims to improve the current walking and cycling provision on a neighbourhood level, building on the Mini-Holland10 programme which delivered, for example, the A1010 and A105 cycle routes.

2.69. Building on the Enfield programme the proposed West Anglia Main Line improvements will develop provision for east west pedestrian and cycle connectivity over the railway through the Upper Lee Valley. The proposed improvements alongside the promotion of active travel modes will help to increase the uptake of these modes and in turn reduce the pressure on both public transport and the road network.

3 FUTURE INFRASTRUCTURE REQUIRED FOR THE LOCAL PLAN

- 3.1. The Local Plan identifies the need for around 25,000 new homes and around 56 hectares of employment development over the plan period, amongst other transport, green and social infrastructure. In accordance with the spatial strategy, this development will be focussed within the more sustainable locations across the Borough.
- 3.2. To accommodate this development, the following site allocations will be the focus of housing and employment development over the plan period. The allocations below only include those without planning permission. All other employment site allocations have planning permission, so the infrastructure required to support their delivery has been agreed through the development management process.
- 3.3. The allocations are large in scale - providing 50+ homes. There are 52 sites within the urban area, and a further 25 outside the urban area (See Policy Map).
- 3.4. Key areas of development include the following, though it is worth noting that not all development will be delivered in the plan period to 2041 (e.g., Meridian Water).

Site Allocation Reference	Site allocation name	Proposed land use(s)
HOUSING AND MIXED-USE SITES		
Enfield Town (PL1)		
SA1.1	Palace Gardens Shopping Centre	Residential-led Mixed-Use
SA1.2	Enfield Town Station and Former Enfield Arms	Residential-led Mixed-Use
SA1.3	Tesco, Southbury Road	Residential-led Mixed-Use
SA1.4	Enfield Civic Centre	Residential-led Mixed-Use
SA1.5	St Anne's Catholic High School for Girls	Housing
SA1.6	100 Church Street	Housing
SA1.7	Oak House, 43 Baker Street	Housing
Southbury (PL2)		
SA2.1	Colosseum Retail Park	Residential-led Mixed-Use
SA2.3	Morrisons, Southbury Road	Residential-led Mixed-Use
SA2.4	Southbury Leisure Park	Residential-led Mixed-Use
SA2.5	Tesco, Ponders End	Residential-led Mixed-Use
SA2.6	Sainsburys, Crown Road	Residential-led Mixed-Use
Edmonton Green (PL3)		
SA3.1	Edmonton Green Shopping Centre	Residential-led Mixed-Use (1423 dwellings)
SA3.2	Chiswick Road Estate	Housing
Angel Edmonton (PL4)		
SA4.1	Joyce Avenue and Snells Park Estate	Housing
SA4.2	Upton Road and Raynham Road	Housing

Site Allocation Reference	Site allocation name	Proposed land use(s)
SA4.3	Langhedge Lane Industrial Estate	Residential-led Mixed-Use
SA4.4	South-east corner of the North Middlesex University Hospital Trust	Residential-led Mixed-Use
SA4.5	Public House, 50-56 Fore Street London	Residential-led Mixed-Use
Meridian Water (PL5)		
SA5.1	Meridian Water Phase 1	Residential-led Mixed-Use
SA5.2	Meridian Water Phase 2	Residential-led Mixed-Use
SA5.3	Former IKEA, Meridian Water	Residential-led Mixed-Use
SA5.4	Tesco Extra, Meridian Water	Residential-led Mixed-Use
SA5.5	Meridian 13 (also known as Teardrop)	Residential-led Mixed-Use
SA5.6	Meridian East (also known as Harbet Road)	Residential + light Industrial in new LSIS + intensified SIL area
Southgate (PL6)		
SA6.1	Southgate Office Village	Residential-led Mixed-Use
SA6.3	Minchenden Car Park & Alan Pullinger Centre	Housing
New Southgate (PL7)		
SA7.1	Former Gasholder, New Southgate	Residential-led Mixed-Use
SA7.2	Aldi, New Southgate (Formerly Homebase)	Residential-led Mixed-Use
SA7.3	Ladderswood Estate	Housing
SA7.4	Arnos Grove Station Car Park	Housing
SA7.5	Coppice Wood Lodge	Housing
Palmers Green (PL8)		
SA8.1	Morrisons, Palmers Green.	Residential-led Mixed-Use
SA8.2	Lodge Drive Car Park	Housing
SA8.3	Corner of Green Lanes and the North Circular	Residential-led Mixed-Use
SA8.4	Travis Perkins Palmers Green	Residential-led Mixed-Use
Chase Park (PL10)		
SA10.1	Land at Chase Park	Housing (with supporting non-residential uses such as social infrastructure) - large scale urban extension.
SA10.2	Arnold House (66 Ridgeway) & Land to the rear of 66 The Ridgeway (west)	
SA10.3	Chase Park North East	
SA10.4	Chase Park North West	
Crews Hill (PL11)		
SA11.1	Land North of Cattlegate Road	Housing (with supporting non-residential uses such as social infrastructure) - large scale new settlement
SA11.2	Land South of Cattlegate Road	
SA11.3	Land South of M25	
SA11.4	Land North and South of Cattlegate Road	
SA11.5	Land East of Theobalds Road Park	
SA11.6	Land South West of Theobalds Park Road	
Other proposed site allocations outside of the place making areas (urban areas)		
URB.01	Land known as Brimsdown Sports Ground	Housing (with supporting non-residential uses to support open space)
URB.02	Cockfosters Station Car Park	Housing
URB.03	Former Chase Farm Hospital	Housing
URB.04	Blackhorse Tower, Cockfosters Road	Housing
URB.05	New Avenue Estate	Housing
URB.06	Former Middlesex University, Trent Park	Housing
URB.07	Sainsburys Green Lanes	Residential-led Mixed-Use
URB.08	Hoe, Eastfield, Cherry and Bouvier Estates	Housing
URB.09	Exeter Road Estate	Housing

Site Allocation Reference	Site allocation name	Proposed land use(s)
URB.10	Alma Estate	Housing
URB.11	The Former Royal Chace Hotel	Housing (including Older person's)
URB.12	241 Green Street	Residential-led Mixed-Use
URB.13	Hertford Road, Archers and Roman Way, Larksfield Grove Caterhatch, Lytchet Way and Sherbourne Avenue Estate,	Housing
URB.14	Four Hills Estate, Lavender Hill	Housing
URB.15	Kettering Rd Estate	Housing
URB.16	188-200 Bowes Road	Housing
URB.17	Main Avenue Site	Housing
URB.18	Land at Ritz Parade	Residential-led Mixed-Use
URB.19	Albany Leisure Centre and Car Park	Housing
URB.20	Cuckoo Hall Lane Estate	Housing
URB.21	Moorfield Health Centre	Housing
URB.22	Oakwood Station Car Park	Housing
URB.23	Stoneleigh Avenue Estate	Housing
URB.24	Fore Street Estate	Housing
URB.25	Peveny Avenue	Housing
URB.26	Fords Grove Car Park	Housing
URB.27	South Street	Housing
	Other proposed site allocations outside of the place making areas (outside urban areas)	
RUR.01	Land opposite Enfield Crematorium (known as The Dell). Great Cambridge Road	Housing
RUR.02	Land between Camlet Way and Crescent West, Hadley	Housing
INDUSTRIAL SITES		
	Southbury (PL2)	
SA2.2	Heritage House	Industrial
SA2.7	Crown Road Lorry Park	Industrial
SA2.8	Land and buildings north of Lincoln Road	Industrial
	Meridian Water (PL5)	
SA5.7	Ravenside Retail Park	Industrial
SA5.8	Kenninghall Metals and Waste	Industrial
SA5.6	Meridian East (Harbet Road)	Industrial-led Mixed-Use
	Other sites outside the place making areas	
URB.32	Claverings Industrial Estate	Industrial
URB.28	Land and Buildings South East of Stockingswater Lane	Industrial
URB.29	Land to the south of Millmarsh Lane, Brimsdown Industrial Estate	Industrial
URB.33	6 Morson Road	Industrial
URB.30	Montagu Industrial Estate	Industrial
URB.31	Snowbird Foods extension	Industrial
URB.35	Riverwalk Business Park	Industrial
URB.34	5 Picketts Lock Lane	Industrial
RUR.03	Land West of Rammey Marsh	Industrial
RUR.04	Land East of Junction 24	Industrial
RUR.05	Land to the North West of Innova Park	Industrial
ALL OTHER USES		
	Southgate (PL6)	
SA6.2	Barnet and Southgate College	Education and complementary uses
	Other sites outside the place making areas (urban)	

Site Allocation Reference	Site allocation name	Proposed land use(s)
URB.36	Church Street Recreation Ground	Burial
Other sites outside the place making areas (rural)		
RUR.06	Land at Picketts Lock	Sporting / Leisure
RUR.07	Whitewebbs Golf Course	Nature Recovery
RUR.08	Sloemans Farm	Burial
RUR.09	Land at and within the vicinity of Tottenham Hotspur Football Club Training Ground, Hotspur Way, Whitewebbs Lane.	Sporting

3.5. The IA identifies those types of infrastructure where there is not expected to be a need for additional capacity over the plan period. It also identifies those types of infrastructure where the provider has indicated new or improved infrastructure may be required so that the growth identified within the Local Plan can be delivered sustainably.

3.6. The IA covers all infrastructure types, although not all of these infrastructure types are necessary to include within this IDP. These include:

- Energy
- Flood Risk
- Water
- Broadband
- Renewable Energy
- Culture

3.7. Any direct improvements to these infrastructure types will likely come through onsite infrastructure development and identified as a 'development cost' in the Whole Plan Viability Assessment².

3.8. The focus of the rest of the IDP will therefore be on the following types of infrastructure that are expected to have capacity issues as a consequence of the site allocations, and where infrastructure may be required to mitigate impacts of the development:

- a) Education Provision
- b) Health Provision
- c) Community Facilities Provision
- d) Transport Provision
- e) Green Infrastructure and Open Space Provision

3.9. The delivery of infrastructure will vary to reflect infrastructure providers' needs, but is informed by the housing trajectory which sets out the anticipated

² Viability and CIL Assessment 2021

delivery timeframe for each housing site over the period to 2041 (See Appendix 1).

GAPS EDUCATION PROVISION

Early Years Provision

- 3.10. It is considered that future provision will require innovative use of land and floorspace to secure enough early education provision in appropriate locations to meet future needs. The co-location of early education and care facilities with compatible uses is likely to be an efficient approach. Compatible uses would include primary and secondary schools as well as office buildings.
- 3.11. Enfield should also aim to direct future early education facilities towards areas of deficiency to help close the educational gap between learners in deprived communities and their peers. The Enfield Early Years Intervention and Support Strategy sets out that they will continue to offer the best possible outcome for children and their families in the borough, especially those who are vulnerable and disadvantaged.
- 3.12. The mapping of the facilities indicates most children's centres are located to the east and south of the borough, with none located in Southgate or Enfield town centres. The spatial distribution of primary schools with nurseries is also focussed to the east and south of the borough in the more densely populated areas. Private nurseries are distributed evenly across the borough with facilities in Enfield, Southgate and Edmonton town centres, and, unlike children's centres and schools with nurseries, in the north west of the borough nearby to the less densely populated neighbourhoods of Enfield Chase and Trent Park. From this analysis, the borough has a good coverage of early years education.

Primary School Provision

- 3.13. the borough. However, sub-local differences in the existing primary education provision mean some areas have an oversupply of places whilst others are likely to become pressured. Current trends suggest a need for additional places by 2022/23 in the south west of the borough signalling a gap in existing provision. Opportunities to redevelop existing sites or reuse redundant sites could be exploited to provide additional provision in undersupplied areas.
- 3.14. London's SHLAA and GLA population forecasts indicate that pupil demand is set to peak in the 2022/23 academic year, before declining due to a lower birth rate. These forecasts suggest the additional need for places could be temporary however, this potential gap in provision should be carefully managed. The strategy for delivering pupil places sets out that officers will annually monitor the southwest of the borough for growing demand beyond existing provision and provide temporary bulge classes where necessary.

3.15. The gap analysis reiterates this sub-local disparity in capacity. A large proportion of schools in the south-east of the borough, around Ponders End and Edmonton, have over 100 spare places when assessed at 95% occupancy. On the other hand, as recognised in local strategies, the south-west of the borough around Southgate has several primary schools that are oversubscribed (when assessed at 95% capacity) and few schools with spare capacity, confirming the potential gap in primary school provision. Only one facility (Hadley Wood Primary School) is located in the north-west of the borough, although this reflects the lower population living in this area.

Secondary School Provision

3.16. There is a large and growing primary school population in the borough. As successive larger primary education cohorts transfer to the secondary education sector, there will be inevitable pressure on existing provision which is expected to become critical in 2021. At this point, there will be a requirement for an additional 5 forms of entry based on current trends. New facilities such as the Wren Academy (6FE) will need to be opened by 2021 to prevent a shortage of places. Officers will be discussing with other secondary schools the potential for opening additional temporary classes to mitigate this gap in provision as care must be taken in delivery of additional permanent places to prevent an oversupply in the future.

3.17. At present, the greatest concern for secondary school place capacity lies within the north east of the borough (including Enfield Town) where demand already exceeds existing capacity in the area. The surplus in other parts of the borough helps alleviate the current issue of placing secondary school children from the area. However, the demand within this area is forecast to increase in the short-term. Therefore, the north west of the borough is dependent on the additional capacity from the new Wren Academy facility, which will be delivered into the locality, to prevent the gap in provision worsening.

3.18. Schools to the west of Enfield town centre have no spare school places spaces when assessed at 95% capacity. There is also a cluster of schools in the south of the borough that are all overcapacity at 95% occupancy. On the other hand, secondary schools in the north-east of the borough, between Ponders End and Waltham Abbey, all have over 100 spare school places when assessed at 95% capacity. This analysis suggests that future provision needs to be focussed in the west of the borough, as indicated in the local strategies, and to the south of the borough around Edmonton.

Special Education Needs and Disabilities

- 3.19. The current SEND facilities are distributed evenly across the borough, with a concentration in the north-west that meets the demand in this residential area. Special schools are typically located around the main centres, with facilities near to Ponders End, Enfield and Cockfosters. Southgate is potentially the only centre where there could be a lack of facilities, although there is provision to the north and south of the town centre.
- 3.20. Despite the new and ongoing developments bringing forward additional supply of SEND places, they are not considered sufficient to meet the rising demand for special school places. If further developments cannot be brought forward in the borough, there will be a requirement for additional out of borough placements. Due to this, the strategy for delivering pupil places will be actively looking for additional accommodation to reduce the need for out of borough placements. This represents a gap in existing and planned provision. Therefore, officers will continue to bring forward proposals for capital projects to increase the number of special school places.
- 3.21. The Strategy and Approach to Delivering School Places sets out mainstream primary and secondary schools are likely to have a greater focus on special provision and delivering places for these children.

Further and Higher Education

- 3.22. Secondary schools with sixth form colleges are distributed fairly evenly across the borough, whilst two major colleges have a total of four campuses across the borough, distributed in Enfield Town, Southgate and Edmonton. The south-east of the borough could lack provision to accommodate future residents, considering the substantial population expected at Meridian Water. The nearest facility to this site is Barnet and Southgate College's Edmonton Green Campus aimed at improving community cohesion. The need for any new provision depends on the type and scale of Meridian Water's education facilities.
- 3.23. It is also worth noting that demand for facilities is projected to rise as large cohorts of children move from secondary education into further and higher education therefore, meeting this demand will require planning and working across boroughs. There are no formal universities in the borough and therefore delivering a new facility could be an aspiration for the borough. In terms of capacity however, there is a wealth of university facilities and other post-19 education opportunities available in London which are accessible to the population of the borough. No local strategy documents suggest there to be any constraints on the existing further and higher education facilities in the borough.

GAPS IN HEALTH PROVISION

GP Surgeries

- 3.24. The existing provision of GP practices appears to be under constraint, with the majority of GP practices in Enfield shown to be oversubscribed when assessed against Department of Health's recommended maximum target of 1,800 registered patients per full-time equivalent (FTE) GP. Whilst some practices in the borough have capacity, around Enfield town centre and Cockfosters, this capacity can likely be expected to be filled as the population in the borough increases.
- 3.25. GPs are particularly oversubscribed along the east and south of the borough. Centres have practice list sizes over 5,000 patients to one FTE GP in this area, meaning patients may receive an inadequate service due to excess waiting times in the system. In addition, deprivation is particularly evident in the east and south of the borough, with a stark difference in life expectancy and health levels in these areas compared to the west of the borough. According to local policy, future health services and primary care facilities should look to tackle health inequalities through better access to provision. New facilities should be located in the east of the borough to address the existing supply constraint and provide for residential opportunity areas such as Meridian Water.

Dentists

- 3.26. Provision of dental services and dentists in the borough is strong, as it is above the recommended level of provision for England, which the HUDU states should be one FTE dentist per 2,000 registered patients. However, population growth and planned future developments will put additional strain on existing dental services, meaning that the overall quality and capacity of the borough's dentist facilities may need to be increased.
- 3.27. The majority of dental surgeries are located in the southern portion of the borough, with a particular concentration around Southgate to the south west. The north east of the borough has comparatively few dental practices which suggests potential under provision in this area.

Hospitals

- 3.28. Planned expansions and upgrades at North Middlesex University Hospital will help meet future service demands however, there is an ageing population in the borough that continues to grow. The health care system will need to adapt to ensure it best meets the changing needs of the population as it becomes more elderly and demand for health services increases. A particular supply issue in North London is a severe shortfall of nursing beds in care homes which are falling year-on-year whilst demand is ever-increasing. The principal barrier to the delivery of more nursing beds to address this supply gap is the cost and availability of land. Due to this, efficiently using existing assets is more achievable than delivering new facilities. Therefore, consolidation and expansion of existing estates and the reuse of surplus buildings has been cited as a priority to existing address supply gaps.

3.29. Hospital facilities in the borough are concentrated around Enfield town centre, with Chase Farm Hospital and BMI Cavell Hospital lying to the north west of the town centre, and inHealth North London Diagnostics Centre to the east. North Middlesex University Hospital, the only hospital in the borough with an accident and emergency (A+E) department in the borough, is located on the southern border of the borough near to Edmonton.

Mental Health Facilities

3.30. Mental health facilities are distributed across mostly the southern portion of the borough. Clusters of facilities exist around Enfield Town, Edmonton and Southgate, which are three of the largest town centres within the borough. There are no mental health facilities located in either the north east or north west corners of the borough. Given that the north east of the borough has a relatively large residential population, this suggests a gap in provision in this area.

Older Persons Facilities

3.31. Older persons care facilities are distributed evenly across the borough, with the exception of the north west where mainly agricultural land lies on the former Enfield Chase royal hunting ground. Concentrated clusters of older persons care facilities exist to the south west of the borough, nearby to Southgate.

GAPS COMMUNITY FACILITIES PROVISION

Emergency Services

3.32. No forthcoming emergency services infrastructure has been identified within the borough. Over the last decade, due to austerity measures, public spending cuts have been made to reduce the UK government's budget deficit. As a result, emergency services infrastructure has been streamlined, meaning that many smaller emergency services facilities in the borough have been closed and that emergency services are now provided from more concentrated larger facilities within the borough's town and district centres.

3.33. Enfield Fire Brigade, part of the London Fire Brigade, has previously indicated that the existing fire stations at Edmonton, Enfield Town and Southgate are well located to serve the planned growth within the borough.

Libraries

3.34. Enfield's library service has been modernised in recent years. Enfield's Library Development Strategy explains how the future of the service will be designed to meet customer needs which are being increasingly influenced by technology demands. Enfield London Borough Council is committed to ensuring that its library facilities are fit for purpose in the future; two developments to the library service have been planned in the following locations:

- Ponders End Library (a temporary library) will be replaced by a new facility opening in 2021. The new library is part of the £50million Electric Quarter regeneration programme. Further details regarding this new library are not currently available.
- Fore Street Library in Edmonton has been awarded £1.1 million funding from the Mayor of London's Good Growth Fund, focussed on enhancing the vitality and viability of the high street, comprising an 'urban room' for community engagement, the creation of low-cost office and retail space in disused garages and a laundry yard, as well as public realm improvements at targeted spots along Fore Street.

Community Centres and Halls

3.35. Following consultation with property and estates officers from Enfield London Borough Council, the following future community centre and hall developments have been identified:

- Ponders End Community and Youth Centre is in the process of being rebuilt and was expected to open in September 2020. Due to the UK outbreak of coronavirus (covid-19), it is likely that this opening date will occur later as a result of delayed works.

3.36. As part of regeneration schemes, two new council housing community halls will be built on Alma Road and at Shepcot House. At this stage, no further details of these developments are available.

GAPS TRANSPORT PROVISION

3.37. The Local Plan set a target for homes to be delivered over the next 20-plus years, in line with GLA targets and the Transport Assessment of the Local Plan growth has found the Enfield network is largely fit for purpose provided the Local Plan policies, Mayor Transport Strategy and NPPF sustainable transport objectives can be achieved.

3.38. To enable this, a constraint and gap analysis was carried out benchmarking the coverage, operation and capacity of the borough network to accommodate the Local Plan growth. The TfL strategic modelling suite including a forecast demand model (MoTioN) and highway assignment model (LoHAM) and public transport model (Railplan) have been interrogated to ascertain the future capacity constraints and gaps in the transport network. The work carried out was assured by TfL and outputs shared and discussed with stakeholders (National Highways, Network Rail, adjoining local planning and highway authorities).

3.39. The transport network capacity to cope with the Local Plan demand has been benchmarked comparing the Future Baseline and Local Plan scenarios. Some constraints and gaps have been identified on the multi-modal transport network across all scenarios. On balance the committed and planned future infrastructure and transport programmes described in this review, alongside the

continued Council investment in sustainable transport initiatives such as new infrastructure, road safety, noise and air quality management and public transport improvements working alongside TfL and Network Rail will provide the basis to facilitate a modal shift and safe operation of the transport network, supporting the Local Plan growth.

GAPS GREEN INFRASTRUCTURE AND OPEN SPACE PROVISION

3.40. The quantity of public open space varies throughout the borough. The following wards achieve or exceed the proposed quantity standard, with all other wards falling below:

- Chase
- Cockfosters
- Enfield Highway
- Enfield Lock
- Southgate Green
- Winchmore Hill

3.41. The total population in Enfield is forecast to 361,677 by 2041. This is likely to mean that there will be a deficiency in public open space borough-wide based on the proposed standard. However, all wards that are currently above the proposed standard are likely to remain above the standard up to 2041.

Allotment or community gardens

3.42. The following wards fall below the proposed quantity standard for allotments:

- Cockfosters
- Enfield Highway
- Enfield Lock
- Lower Edmonton
- Southgate Green
- Town
- Winchmore Hill

3.43. It is expected that the proposed quantity standard for allotments will still be achieved (when applied borough wide) up to 2041.

Deficiencies and surpluses

3.44. Where wards achieve or exceed the proposed quantity standard, it should not be assumed that there is a 'surplus' of open space. Consideration should also be given to the performance of surrounding wards against the proposed quantity standard. Wards which are above the proposed standard may be important in helping to address shortfalls in provision within surrounding wards.

3.45. In aiming to identify areas with deficiencies and surpluses, consideration should be given to the significant variation in the amount by which wards exceed the proposed standard. Enfield Highway ward exceeds the standard by 0.15 ha per 1,000 population, whereas Cockfosters Ward exceeds the standard by 11.1 ha per 1,000 population.

3.46. Relative changes in quantity provision also vary significantly across wards up to 2041. Cockfosters will reduce by 1.05 ha per 1,000 up to 2041, compared to Winchmore Hill ward which will reduce by 0.02 ha per 1,000 population.

3.47. Clusters of wards which fall below the proposed quantity should be prioritised for interventions that mitigate against deficiencies in the quantity of open space. Further recommendations for addressing future needs are provided in.

Metropolitan parks and gardens

3.48. The majority of the western part of Enfield has access to three metropolitan sized parks and gardens: Trent Park, Wrotham Park and Alexandra Park (the latter two of which are outside Enfield). However, the eastern part of the borough is deficient in access to metropolitan parks and gardens.

District parks and gardens

3.49. There are seven district sized parks and gardens in Enfield, five of these sites are of high quality and value, the remaining two (Hilly Fields and Oakwood Park) have been assessed to be of high quality but low value. There is good access to district parks and gardens along the north, south and west edges of Enfield, although there is some deficiency in the north-west. There is also a deficiency in access to district parks and gardens in central and east Enfield.

Local parks and gardens

3.50. Access to local parks and gardens varies across Enfield, and most wards have areas with access and areas deficient in access. There is deficiency in access in the east, centre and north-west of Enfield. Whilst many of the sites are of high quality, there are five sites with low quality, clustered in Upper Edmonton ward in the southeast and in Turkey Street and Enfield Lock wards in the northwest. Similarly, many of the sites are of high value, however there are six sites of low value. These are clustered in Chase ward in the north and in Southgate ward in the west. The sites recorded as being on both low quality and low value are Soham Road Recreation Ground and Wilbury Way Open Space.

Small local parks and gardens

3.51. Similarly, to local parks and gardens, access to small local parks and gardens varies across Enfield. Most wards have some areas that are deficient

in access to this typology and level of the size hierarchy. There are small clusters of sites with low quality and/or value in Upper Edmonton ward and Haslebury ward in the south, and also in Enfield Lock ward and Turkey Street ward in the northeast. Cambridge Gardens is the only small local park and garden to be recorded as of both low quality and low value.

4 FUNDING AND DELIVERY OF INFRASTRUCTURE

4.1. National Planning Practice Guidance identifies a range of costs to be considered as part of a Local Plan viability assessment. Those relevant to the IDP include:

- build costs;
- site-specific infrastructure costs, which might include access roads, sustainable drainage systems, certain green infrastructure, connection to utilities and decentralised energy; and
- the total cost of all relevant policy requirements including contributions towards affordable housing and infrastructure, Community Infrastructure Levy charges, and any other relevant policies or standards.

4.2. Infrastructure partners have identified that several site allocations should plan for significant on-site infrastructure. The most effective way to secure such infrastructure is via section 106 planning obligations.

4.3. The Whole Plan Viability Assessment provides a general cost per dwelling based on the size of the proposed allocations, as identified below:

- **Small (1-9 units)** £2,500 per unit
- **Medium (10 -99 units)** £5,000 per unit
- **Large (100-249 units)** £7,500 per unit
- **Very Large (250 units)** £9,000 per unit
- **For the strategic sites** £50,000 per unit

4.4. These costs do not include the expected CIL liability. The IDP reflects this approach, but also builds in the expected CIL liability for each (CIL liable site). The likely S106 contribution is a percentage of this overall cost per site. When assessing the overall likely development cost per site (as per viability estimated costs) the cost of delivering the development in the Local Plan would be in the region of the hundreds of millions.

4.5. **Appendix 2** identifies the general likely development cost of each site, excluding any CIL liability.

How will the Council achieve the necessary income to help meet the costs of the Local Plan?

4.6. Following the identification of infrastructure expected to be required to support growth allocated in the Local Plan, the Council has identified, in consultation with relevant infrastructure partners, likely delivery mechanisms and funding sources primarily via Section 106 contributions and CIL payments.

4.7. The NPPF notes that developer contributions should not be so significant to render a potential development site financially unviable. The Whole Plan Viability Assessment considers the implications of proposed developer contributions and where relevant CIL on the financial viability of site allocations in the Local Plan. Expected income via developer contributions is unknown at this stage.

4.8. It identifies three value density areas:

	Higher				Medium			
Affordable %	35%	40%	45%	50%	35%	40%	45%	50%
Greenfield	£50,000	£50,000	£50,000	£50,000				
High Density	£40,000	£35,000	£30,000	£20,000	£0	£0	£0	£0
Medium Density	£45,000	£40,000	£30,000	£25,000	£20,000	£20,000	£10,000	£10,000
Low Density	£50,000	£45,000	£35,000	£25,000	£35,000	£30,000	£20,000	£10,000
BTR	£10,000	£5,000	£0	£0	£0	£0	£0	£0
	Lower				Meridian Water			
Affordable %	35%	40%	45%	50%	35%	40%	45%	50%
Greenfield								
High Density	£0	£0	£0	£0	£0	£0	£0	£0
Medium Density	£0	£0	£0	£0	£0	£0	£0	£0
Low Density	£0	£0	£0	£0				
BTR	£0	£0	£0	£0	£0	£0	£0	£0

Source: HDH (April 2021)

4.9. This analysis highlights the differences between viability across the Borough.

4.10. In the Higher value area (the western and northern areas of the Borough (Chase, Cockfosters, Highlands, Grange, Palmer's Green, Southgate, Winchmore Hill)) the greenfield sites are likely to be able to bear both higher levels of affordable housing of up to 50%, and substantial levels of developer contributions of at least £50,000/unit, in addition to the current rates of CIL, (£50,000/unit is the maximum amount tested).

4.11. The other types of mainstream housing represented by the higher, medium and lower densities can bear £40,000/unit, in addition to the current

rates of CIL, or so in developer contributions at the minimum affordable housing requirement of 35%. At 50% affordable housing these typologies are able to bear at £25,000/unit or so, in addition to the current rates of CIL, in developer contributions. The Council can be confident that development that is planned for in this area will be deliverable and forthcoming.

4.12. In the Medium value area (the areas not included in the higher and lower values) the medium and lower density typologies, being those that exclude tall buildings, are able to bear £10,000/unit, in addition to the current rates of CIL, in developer contributions at 50% affordable housing. At 35% affordable housing these sites can bear at least £20,000/unit, in addition to the current rates of CIL, in developer contributions.

4.13. Tall building represented by the high-density typologies are likely to be deliverable at 35% affordable housing, but would have limited capacity to bear developer in addition to CIL. Build to rent development, when tested against the requirements of the London Plan is not shown as viable. In this regard the PPG includes specific guidance with regard to viability and it is anticipated that the viability of such development will be tested at the development management stage. The Council can be confident that development that most development types in this area will be deliverable and forthcoming.

4.14. In the Lower value area (the eastern part of the Borough running from Enfield Lock in the north, to Upper Edmonton in the south) delivering development has been challenging historically. Whilst there are numerous sites that have delivered a policy compliant scheme, of both 35% affordable housing and CIL, there are sites where it has been necessary to flex the policy requirement when considering specific planning applications.

4.15. At 35% affordable housing about half the typologies are shown as being viable. Development in this area may be relatively slow coming forward (which has been the case with Meridian Water). On the larger schemes it is likely that there will continue to need to be a degree of intervention by the Council and the wider public sector (including the GLA).

4.16. that the level of developer contributions sought by site allocations within part of the lower density area and Meridian Water to be so significant that such proposals should be exempt from CIL. This is consistent with national Planning Practice Guidance which states that zero CIL rates may be appropriate where plan policies require significant contributions towards housing or infrastructure through planning obligations and this is evidenced through the viability assessment.

Estimated CIL Receipt Income

4.17. As of January 2024, Enfield has a CIL balance of:

- SCIL allocated = £13, 726,092
- SCIL drawdown spend = £8,667,903
- SCIL allocated balance (unspent) = £5,461,727
- SCIL available Balance = **£510,986**

4.18. An estimation of CIL receipts to 2041 (the Plan period) has been calculated in Appendix 1. It is important to note that until the CIL is secured, it is only an estimate, based on an average residential unit of 90sqm internal floorspace (as identified by the Whole Plan Viability Assessment 2022).

4.19. It does not take into account the instalment policy, so in practice there will be a time delay in the CIL money being collected, particularly for larger schemes.

4.20. No account has been taken of CIL receipts that might be collected from windfall housing sites or retail developments, because these projects are speculative and do not have a delivery timeframe.

4.21. Expected CIL income over the Plan period is estimated to be in the regi:
£116,000,000

Other Funding Streams

4.22. Strategic infrastructure can have wider benefits across the Borough, as well as cross boundary within neighbouring authorities and in the wider region. Given this, and the complexity of planning and designing such infrastructure and viability considerations, it is expected that other wider funding streams will contribute towards strategic infrastructure identified as required to support the cumulative impact of Local Plan growth.

4.23. There are many potential funding options available to the Council and its partners to use to provide infrastructure during the Plan period. These include:

- Local Implementation Plans
- Transport for London Funding
- Government Departments/agencies
- Borough Council Capital Spend

4.24. It is expected that other funding streams through partner investment through the Greater London Authority will come forward within the Local Plan period that will contribute towards delivery of strategic infrastructure.

4.25. In addition, there may be an opportunity to seek 'specialist funds' for topic specific projects, for example, seeking funding from the Department for Transport. The appropriateness of these potential funding sources depends on

the project being considered, the amount of funding available through the sources, and the amount of funding required for the project.

Estimated Funding Gap

4.26. This information is unknown at this stage and will be updated in future versions of the IDP.

Delivery Mechanisms

4.27. Based on the current viability evidence, it is expected that a significant element of the infrastructure costs associated with the proposed strategic sites will largely be funded through developer contributions. These are usually secured via Section 106 Agreements, which will be subject to indexation together with the associated legal, management and monitoring fees from the relevant Local Authorities which are likely to include the Borough and others.

4.28. There may be a need for prioritisation of developer contributions along with the use of CIL and/or exploration of external funding opportunities as identified above with infrastructure partners and organisations.

4.29. Appendix 2 sets out the site-specific infrastructure requirements for each of the site allocations/or parcel allocations within the Local Plan, informed by Sections 2-4 of this IDP. It categorises infrastructure based on when provision will be needed, as follows:

Essential	Is defined as a project which is essential to enable growth and is a prerequisite to unlock any future works to facilitate the delivery of strategic sites. Thereby, essential in ensuring that the impact of the new development does not have a significant detrimental impact on existing infrastructure, services and facilities.
Important	is defined as a project which is necessary to mitigate the impact of new development i.e. must happen so that development does not have a significant adverse impact on existing infrastructure. These are usually identified through the sustainability appraisal and other evidence base documents as necessary to make a proposed development acceptable in planning terms.
Desirable	is defined as a project which is unlikely to prevent development taking place but would benefit place making.

4.30. Additionally, the Council will work with developers to ensure innovative approaches to financing development maximise opportunities for infrastructure delivery. This is particularly important for those sites expected to build out over a number of years and through a number of phases. Strong

partnership working arrangements with infrastructure partners and developers will help ensure that proportionate infrastructure delivery is secured alongside each phase of development.

- 4.31. When seeking funds from these sites through developer contributions, provision will need to reflect the relevant legislative CIL tests and the content of national policy relating to viability.
- 4.32. The Highways Authority preferred method for the delivery of highway infrastructure is through planning conditions under Sections 38 and 278 of the Highways Act 1980. Where the need for improvements to education provision are identified the Department for Education will seek contributions.
- 4.33. In areas where Neighbourhood Plans are made, it is expected that funds will be secured for infrastructure both through developer contributions and through the Council's Community Infrastructure Levy. In these cases, 25% of any CIL funds will be transferred to enable the local parish to use on local priorities, expected to be those identified as needed to support development within the relevant Neighbourhood Plan. Elsewhere, local CIL monies will be used in line with the district council spending strategy, with infrastructure partners given over funds in line with identified local infrastructure priorities.

5 APPENDIX 1: HOUSING TRAJECTORY

5.1 The latest housing trajectory has been published alongside other documents as part of the Regulation 19 Publication consultation. It can be viewed using the following link:

https://www.enfield.gov.uk/_data/assets/excel_doc/0035/54899/HELAA-2023-Appendix-Planning.xlsx

8. APPENDIX 2: ESTIMATED CIL INCOME

		0-5 years					6-10 years					11-15 years					16-19 years						
		22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	37/38	38/39	39/40	40/41			
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19			
LBE Housing Trajectory (Annual)		598	775	1295	1692	1771	2212	2310	2462	2560	2660	1760	1624	1624	1624	1624	1493	1493	1493	1493			
LBE Housing Trajectory (5 yearly)		6131					12,202					8,256					5972						
Site allocations: Assessed Sites (HELAA 2021)																							
		0-5 years					6-10 years					11-15 years					Beyond the Plan period						
		22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35	35/36	36/37	Plan period total		Total				
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15							
CIL Charging Zone		CIL Rate (per m2)		CIL rate (Indexed Z1/Z2) per m2																			
Nil Rate		£0.00	£0.00	1129				2217				1654				0		5000		5000			
Lower Rate		£40.00	£49.19	616				5292				2988				1240		8896		10136			
Intermediate Rate		£60.00	£73.77	0				205				38				0		205		205			
Higher Rate		£120.00	£147.56	200				4660				4278				464		9138		9602			
Totals by 5 year period		1945					12374					8920					Total				23239	24943	
Housing Mix & unit estimates		Studio (0%)		1b (11%)		2b (29%)		3b (42%)		4b (19%)		Studio (0%)		1b (11%)		2b (29%)		3b (42%)		4b (19%)			
median GIA (m2) +20% assumption for general circulation space		N/A	59	84	107	128	N/A	59	84	107	128	N/A	59	84	107	128	N/A	59	84	107	128		
Nil Rate		N/A	120	323	475	211	N/A	235	634	933	415	N/A	175	473	696	309	N/A	175	473	696	309		
Lower Rate		N/A	65	176	259	113	N/A	561	1514	2228	990	N/A	317	855	1258	559	N/A	317	855	1258	559		
Intermediate Rate		N/A	0	0	0	0	N/A	22	59	86	38	N/A	0	0	0	0	N/A	0	0	0	0		
Higher Rate		N/A	21	57	84	37	N/A	494	1333	1962	871	N/A	453	1224	1801	800	N/A	453	1224	1801	800		
Estimated CIL liability		Studio (0%)		1b (11%)		2b (29%)		3b (42%)		4b (19%)		Studio (0%)		1b (11%)		2b (29%)		3b (42%)		4b (19%)			
Nil Rate		£0.00	£0.00	0		0		0		0		0		0		0		0		0			
Lower Rate		£40.00	£49.19	£188,860	£727,952	£1,362,420	£727,552	N/A	£1,622,482	£6,253,771	£11,704,423	£6,250,335	N/A	£916,095	£3,531,041	£6,608,620	£3,529,101	N/A	£916,095	£3,531,041	£6,608,620		
Intermediate Rate		£60.00	£73.77	£0	£0	£0	£0	N/A	£94,258	£363,311	£679,966	£363,112	N/A	£0	£0	£0	£0	N/A	£0	£0	£0		
Higher Rate		£120.00	£147.56	£183,942	£708,996	£1,326,942	£708,607	N/A	£4,285,858	£16,519,614	£30,917,752	£16,510,537	N/A	£3,934,528	£15,165,431	£28,383,293	£15,157,098	N/A	£3,934,528	£15,165,431	£28,383,293		
Estimated total CIL liability by unit type				£372,803	£1,436,948	£2,689,362	£1,436,159	N/A	£6,002,597	£23,136,696	£43,302,141	£23,123,983	N/A	£4,850,623	£18,696,471	£34,991,912	£18,686,199	N/A	£4,850,623	£18,696,471	£34,991,912		
Estimated total CIL liability (per 5 year period)							£5,935,272										£77,225,205						
Estimated total CIL liability (Plan Period)																						£178,725,895	
Estimated CIL relief (35% Affordable Housing)		Studio (0%)		1b (11%)		2b (29%)		3b (42%)		4b (19%)		Studio (0%)		1b (11%)		2b (29%)		3b (42%)		4b (19%)			
Nil Rate		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Lower Rate		N/A	£66,101	£254,783	£476,847	£254,643	N/A	£567,869	£2,188,820	£4,096,548	£2,187,617	N/A	£320,633	£1,235,864	£2,313,017	£1,235,185	N/A	£320,633	£1,235,864	£2,313,017	£1,235,185		
Intermediate Rate		N/A	£0	£0	£0	£0	N/A	£32,990	£127,159	£237,988	£127,089	N/A	£0	£0	£0	£0	N/A	£0	£0	£0	£0		
Higher Rate		N/A	£64,380	£248,149	£464,430	£248,012	N/A	£1,500,050	£5,781,865	£10,821,213	£5,778,688	N/A	£1,377,085	£5,307,901	£9,934,152	£5,304,984	N/A	£1,377,085	£5,307,901	£9,934,152	£5,304,984		
Estimated total CIL relief by unit type				£130,481	£502,932	£941,277	£502,656	N/A	£2,100,909	£8,097,844	£15,155,749	£8,099,294	N/A	£1,697,718	£6,543,765	£12,247,169	£6,540,170	N/A	£1,697,718	£6,543,765	£12,247,169		
Estimated total CIL relief (per 5 year period)							£2,077,345										£27,028,822						
Estimated total CIL relief (Plan Period)																						£62,554,063	
Total estimated CIL income after relief							£3,857,927										£50,196,384						
Total income during Plan Period																						£116,171,834	
Site Allocation (Total units)																						21947	