Southend-on-Sea
Infrastructure Delivery Plan
New Neighbourhood Annex

June 2025

1 Introduction

1.1 Purpose of this Infrastructure Delivery Plan Annex

1.1.1 This Annex to the Southend Infrastructure Delivery Plan (IDP) will consider separately the infrastructure impacts associated with potential Local Plan growth options for strategic growth to the north of the City. The Council is considering the amount and location of growth that will be included within the next Regulation 18 version of the draft Local Plan. While it is likely that a large proportion of proposed growth allocations will be located within the existing urban extent of Southend as considered within the main IDP document, in order to provide a greater quantum of new housing in the area during the plan period, it is possible that the Council may consider allocating growth in appropriate undeveloped greenfield locations (on land designated as Green Belt) outside the current built up areas of the City.

1.1.2 The Council must examine and investigate reasonable options and alternatives when preparing a new local plan and associated growth strategy. This includes assessing all sites that have been promoted for development as part of this process. A number of sites have been promoted for strategic scale development to the north of Southend on land designated as Green Belt. The Council has not come to a conclusion on whether exceptional circumstance exist to review the Green Belt and allocate such sites. Therefore, the consideration of infrastructure impacts associated with this strategic scale growth is being presented within this separate Annex to the IDP.

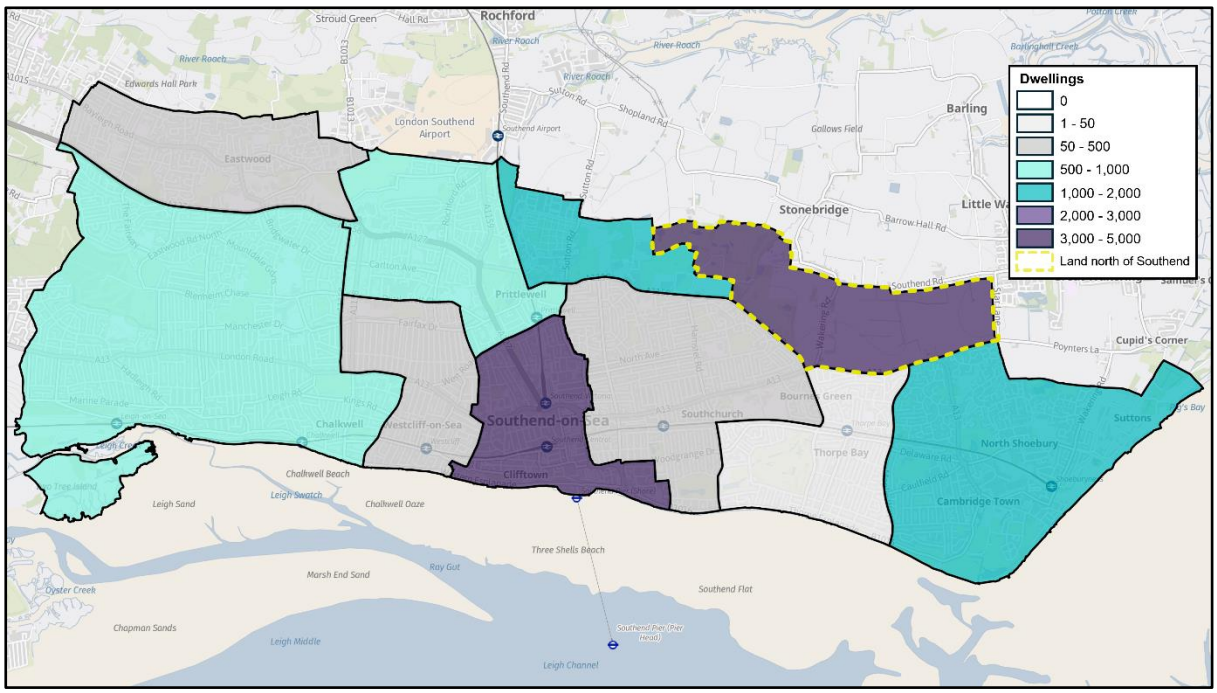
1.1.3 Where any strategic growth is taken forward as a preferred growth option within the emerging Local Plan, the information contained within this Annex may instead be presented and progressed within the main sections of future versions of the IDP produced to support the Regulation 19 version of the Local Plan.

Summary of the potential new neighbourhood growth scenarios

1.1.4 Through the production of the emerging Local Plan to date, the Council has developed a range of draft growth scenarios which are being considered as options to meet locally identified needs during the Plan period. The scenarios present proposed additional dwellings to be delivered between 2023-2040 within neighbourhood areas across Southend-on-Sea. Scenarios 1, 2 and 3 present the potential for the delivery of between 6,000-10,000 dwellings within the existing neighbourhood areas of Southend, and Scenario 4 introduces the option of significant growth on undeveloped land to the north of Southend within the administrative area for an additional 4,000-5,000 dwellings.

This growth scenario includes undeveloped land within the Southend-on-Sea administrative boundary north of the neighbourhood areas of Southchurch, Thorpe Bay and Shoeburyness.

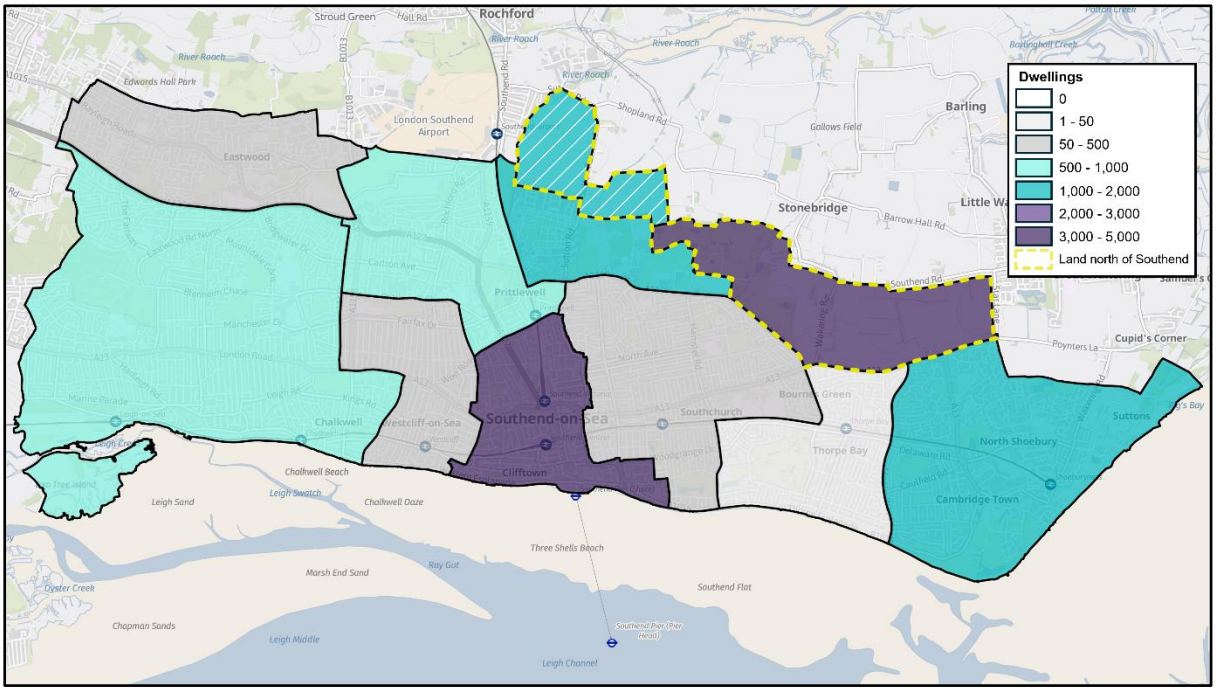
Figure 1.1.1: Scenario 4 - Potential Growth in Southend PLUS land north of Southend (windfall + permissions + opportunity sites + land north of Southend).



1.1.5 Growth scenarios 5a and 5b present potential growth scenarios within Rochford District, outside of the Southend Council administrative boundary. Scenario 5a presents the potential for an additional 1,600 dwellings on the northern edge of Fossetts, and Scenario 5b presents a larger option of an additional 5,100 dwellings north of Fossetts and adjacent to the strategic growth area included in Scenario 4.

1.1.6 These are sites being assessed by Rochford District Council (RDC) which are located adjacent to the Southend administrative boundary. While these sites would, if considered appropriate by RDC, be allocated for development through the emerging draft Rochford Local Plan, there is the potential that they could have infrastructure impacts upon Southend City.

Figure 1.1.2: Scenario 5a - Potential Growth in Southend PLUS Land north of Southend (windfall + permissions+ opportunity sites + land north of Southend + within Rochford District Council)



1.1.7 The total dwelling numbers for the growth scenarios being considered within this Annex are presented within Table 1.1.1. The main IDP document is assessing approximately 10,000 dwellings being proposed within Southend City existing neighbourhood areas, therefore the focus of this Annex is on the addition of 4,000 – 5,000 dwellings through Scenario 4, a total of 6,000 additional dwellings through Scenario 5, and a total of around 10,000 additional dwellings through Scenario 5b.

Figure 1.1.3**: Scenario 5b - Potential Growth in Southend PLUS land north of Southend (windfall + permissions + opportunity sites + land north of Southend + within Rochford District Council)**

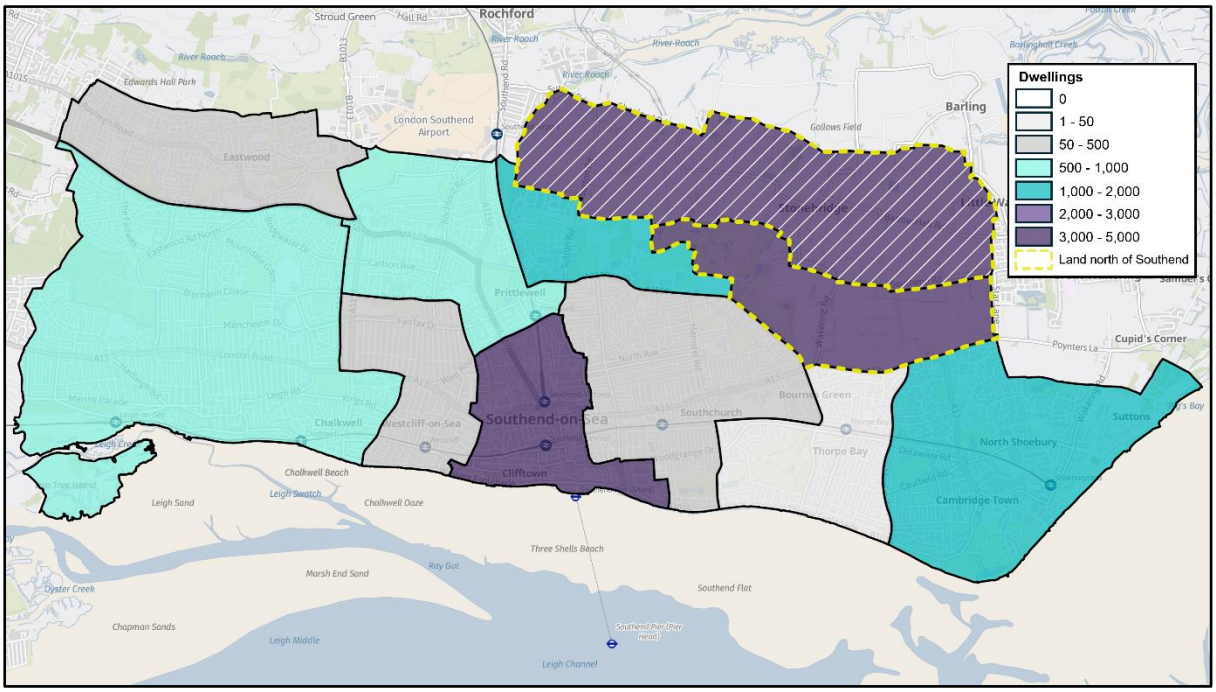


Table 1.1.1: Proposed dwelling numbers for growth scenarios 4, 5a and 5b[1]

	Growth within Southend City existing Neighbourhood areas	Additional Growth on Land north of Southend			Total Dwellings
Authority	Southend Administrative Area		Rochford District		
Existing Land Use Description	Urban Area	Green Belt Land			
Scenarios 1-3	9,000 – 10,000				9,000 – 10,000
Scenario 4	9,000 – 10,000	4,000 – 5,000			13,500 – 14,500
Scenario 5a	9,000 – 10,000	4,000 – 5,000	1,600		15,100 – 16,100
Scenario 5b	9,000 – 10,000	4,000 – 5,000		5,100	18,600 – 19,600

Information contained within this Annex

1.1.8 The infrastructure identified within this Annex required to support growth relates only to the additional needs of Scenarios 4, 5a, and 5b. This Annex does not include or consider needs for Scenarios 1-3. Therefore, where any scenarios considered within this Annex are taken forward as allocations in the Local Plan, the overall City-wide infrastructure needs and costs would be those identified in the main IDP relating to Scenarios 1-3, plus any needs identified within this Annex.

1.1.9 Information contained within this Annex is produced in collaboration with relevant infrastructure providers, such as the NHS, the Environment Agency, Anglian Water, Essex and Suffolk Water, Sport England, and National Grid, and neighbouring authorities, and is therefore subject to change and regular updates as the various organisations undertake further assessment work and produce new information.

1.1.10 Note that many infrastructure requirements and contributions within this Annex have been calculated using standard forward planning formulas, and can therefore only provide an indication of infrastructure requirements and costs associated with each scenario. The actual requirements and costs will be calculated in detail based on the specific needs of the area to support the proposed development at the time of a planning application.

1.1.11 Any identified infrastructure requirements, costs, and timescales contained within this Annex represent the best information available at this time. This information may therefore be amended and refined as further details become available and the Local Plan growth strategy is finalised.

Structure

1.1.12 Chapter 2 of this New Neighbourhood Annex presents the infrastructure assessment for potential growth scenarios 4, 5a and 5b, considering the potential impacts on existing infrastructure of bringing forward strategic scale growth to the north of Southend through the

[1] Note that all dwelling numbers presented within this document are emerging high-level estimates subject to change. The figures presented show the total number tested within this Annex at this time. Future versions of the IDP will present more accurate dwelling estimates following further assessments for sites that are confirmed to be included within the Local Plan growth strategy.

potential growth scenarios. New or improved infrastructure that may be required to support the delivery of the potential growth scenarios is also included where possible.

1.1.13 Chapter 3 summarises all the infrastructure requirements identified for growth scenarios 4, 5a and 5b in this Annex.

2 Infrastructure Assessment

2.1 Introduction

2.1.1 The main IDP document presents the IDP 'baseline assessment' for all infrastructure types in the authority area, outlining the existing provision of infrastructure and any existing issues which may need to be addressed in the future. The IDP also includes an 'infrastructure assessment' for each infrastructure type, which presents our understanding of the potential infrastructure related impacts of growth scenarios being considered, and where known outlines infrastructure projects which are likely to be required to support the growth scenarios.

2.1.2 This Annex provides the IDP infrastructure assessment specifically for potential growth scenarios 4, 5a and 5b. This section will consider the potential impacts on existing infrastructure of bringing forward strategic scale growth to the north of Southend through the potential growth scenarios. Where possible, this section will also outline what new or improved infrastructure may be required to support the delivery of the potential growth scenarios.

2.1.3 Given that the Council is still at a preparatory stage in considering the appropriateness of potential growth scenarios, the information presented within this section is based on high level assumptions, desktop analysis, experiences from other areas, and initial feedback where provided by infrastructure providers. Where the potential growth scenarios may be taken forward as agreed strategic allocations in the Local Plan, further assessment work will be undertaken with relevant infrastructure providers to consider in greater detail the specific infrastructure demands required to support the new development proposals.

2.2 Transport

2.2.1 This section of the New Neighbourhood Annex sets out the infrastructure assessment for potential growth scenarios 4, 5a and 5b on transport, including highways, public transport and active travel.

Highways

Infrastructure Assessment	**Scenario 4** (4000-5000 dwellings)	**Scenario 5a** (6,000 dwellings)	**Scenario 5b** (10,000 dwellings)
Potential impacts of the growth scenarios on existing infrastructure	• Increased use of the surrounding highways network by residents of the new development. • Need for appropriate highways access to the new development from the existing highways network. • The scale of development could have a detrimental impact upon congestion levels on the wider strategic road network.	• Increased use of the surrounding highways network by residents of the new development. • Need for appropriate highways access to the new development from the existing highways network. • The scale of development could have a detrimental impact upon congestion levels on the wider strategic road network.	• Increased use of the surrounding highways network by residents of the new development. • Need for appropriate highways access to the new development from the existing highways network. • Scale of development would be more likely to have a detrimental impact upon congestion levels on the wider strategic road network on the A13 and A127, potentially requiring some capacity increase.
Estimated impacts on future need/demand for infrastructure, and the need for new or improved infrastructure to support growth	• Need for junction improvements on A1159, A13, and B1017 for site access. • Need for increased capacity on the surrounding highway network, particularly on the A1159, A13, and B1017 and the wider strategic network (A127) • Increased highways capacity where possible on the strategic road network (A127 and A13). • New road network across the growth area connecting where appropriate to the existing highways network in	• New or improved infrastructure identified in Scenario 4. • Need for new junctions on existing surrounding road network. Dependent on the layout of the new development, new junctions are likely to be required on Sutton Road and Southend Road. • Need for junctions on new roads within Scenario 4. • Increased highways capacity where possible on the strategic road network (A127 and A13) to mitigate any	• New or improved infrastructure identified in Scenario's 4 and 5a. • Need for new junctions on existing surrounding road network. Dependent on the layout of the new development, new junctions are likely to be required on Sutton Road and Southend Road. • Need for junctions on new roads within Scenario 4. • Increased highways capacity where possible on the strategic road network (A127 and A13) to mitigate

Infrastructure Assessment	**Scenario 4** (4000-5000 dwellings)	**Scenario 5a** (6,000 dwellings)	**Scenario 5b** (10,000 dwellings)
	Prittlewell, Fossetts, Southchurch, Thorpe Bay, and Shoeburyness. • Highways improvements being tested within the draft Transport Assessment (see below for further details).	potential increase in congestion as a result of the new development. • New road network across the new development, connecting to new development in Scenario 4 and the surrounding road network. • Highways improvements being tested within the draft Transport Assessment (see below for further details).	any potential increase in congestion as a result of the new development. • New road network across the new development, connecting to new development in Scenario 4 and the surrounding road network. • Highways improvements being tested within the draft Transport Assessment (see below for further details).
Likely cost of infrastructure projects required to support growth (estimates categorised based on high/medium/low)	• Subject to the conclusions of the Transport Assessment currently being produced as part of the Local Plan evidence base. • Subject to the conclusions of LTP4 which is currently being produced. Estimated project costs: • Junction improvements on A1159, A13, and B1017 – **High**. • Increased capacity on the surrounding highway network, particularly on the A1159, A13, and B1017 – **High.** • New road network across the growth area – **Medium, normal development costs.** • Highways improvements being tested within the draft Transport Assessment – **Unknown at this stage**	• Subject to the conclusions of the transport assessments being produced to support the production of local plans for both Southend and Rochford. • Subject to the conclusions of LTP4 which is currently being produced. Estimated project costs: • Junction improvements / new junctions on Sutton Road, Southend Road, and to the new development in Scenario 4 – **High.** • Increased highways capacity where possible on the strategic road network (A127 and A13) – **High.** • New road network across the new development – **Medium, normal development costs.**	• Subject to the conclusions of the transport assessments being produced to support the production of local plans for both Southend and Rochford. • Subject to the conclusions of LTP4 which is currently being produced. Estimated project costs: • Junction improvements / new junctions on Sutton Road, Southend Road and to the new development in Scenarios 4 and 5a – **High.** • Increased highways capacity where possible on the strategic road network (A127 and A13) – **High.** • New road network across the new development – **Medium, normal development costs.**

Infrastructure Assessment	**Scenario 4** (4000-5000 dwellings)	**Scenario 5a** (6,000 dwellings)	**Scenario 5b** (10,000 dwellings)
		• Highways improvements being tested within the draft Transport Assessment – **Unknown at this stage**	• Highways improvements being tested within the draft Transport Assessment – **Unknown at this stage**
Funding source	• Developer contributions • Infrastructure constructed directly by the developer	• Developer contributions • Infrastructure constructed directly by the developer	• Developer contributions • Infrastructure constructed directly by the developer
Prioritisation (essential, needed, desirable)	All projects essential.	All projects essential.	All projects essential.
Delivery timescales	Dependent upon Local Plan timetable, how the site is proposed to be developed, and when the transport assessment has identified that capacity upgrades may be required to accommodate growth.	Dependent upon how the site is proposed to be developed and when the transport assessment has identified that capacity upgrades may be required to accommodate growth.	Dependent upon how the site is proposed to be developed and when the transport assessment has identified that capacity upgrades may be required to accommodate growth.
Delivery partners	• Southend-on-Sea City Council • Rochford District Council • Essex County Council / Essex Highways • Rochford District Council	• Southend-on-Sea City Council • Essex County Council / Essex Highways • Rochford District Council • National Highways	• Southend-on-Sea City Council • Essex County Council / Essex Highways • Rochford District Council • National Highways

Public transport

Infrastructure Assessment	**Scenario 4** (+4000 - 5000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (10,000 dwellings)
Potential impacts of the growth scenarios on existing infrastructure	• Increased use of existing public transport services (bus and rail) and associated facilities in Fossetts, Southchurch, Thorpe Bay, Shoeburyness and Rochford by residents of the new development.	• Increased use of existing public transport services (bus and rail) and associated facilities in Southchurch North, Southchurch, and Rochford.	Increased use of existing public transport services (bus and rail) in the surrounding area, however in comparison to the other scenarios, any increase will be limited due to the scale of the development enabling the provision of more on-site services.
Estimated impacts on future need/demand for infrastructure, and the need for new or improved infrastructure to support growth	• Extensions to existing bus services in Fossetts, Southchurch, Thorpe Bay, and Shoeburyness to connect to the new development. • An increase in existing bus services which are likely to be used by residents of the new development in Fossetts, Southchurch, Thorpe Bay, and Shoeburyness. • New bus services and associated bus stop facilities from the new development connecting to key destination points across the City. • Improvements to rail station facilities where required to accommodate additional passenger numbers arising from the new developments. • Improved public transport connections to rail stations, potentially including the creation of new public transport hubs.	• Extensions to existing bus services in Fossetts and Rochford to connect to the new development. • An increase in existing bus services which are likely to be used by residents of the new development in Fossetts and Rochford. • New bus services and associated bus stop facilities from the new development connecting to key destination points. • Improvements to rail station facilities where required to accommodate additional passenger numbers arising from the new developments. • Improved public transport connections to rail stations, potentially including the creation of new public transport hubs. • Public transport improvements being tested within the draft Transport	• Extensions to existing bus services in the area to connect to the new development. • An increase in existing bus services in the surrounding area which are likely to be used by residents of the new development. • New bus services and associated bus stop facilities from the new development connecting to key destination points. • Improvements to rail station facilities where required to accommodate additional passenger numbers arising from the new developments. • Improved public transport connections to rail stations, potentially including the creation of new public transport hubs. • Public transport improvements being tested within the draft Transport

Infrastructure Assessment	**Scenario 4** (+4000 - 5000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (10,000 dwellings)
	• Public transport improvements being tested within the draft Transport Assessment (see below for further details).	Assessment (see below for further details).	Assessment (see below for further details).
Likely cost of infrastructure projects required to support growth	Estimated project costs: • Extensions to existing bus services – **Medium** • An increase in existing bus services – **Medium** • New bus services and associated bus stop facilities – **High** • Improvements to rail station facilities – **Low** • Public transport improvements being tested within the draft Transport Assessment – **Unknown at this stage**	Estimated project costs: • Extensions to existing bus services – **Medium** • An increase in existing bus services – **Medium** • New bus services and associated bus stop facilities – **High** • Improvements to rail station facilities – **Low** • Improved public transport connections to rail stations – **Medium** • Public transport improvements being tested within the draft Transport Assessment – **Unknown at this stage**	Estimated project costs: • Extensions to existing bus services – **Medium** • An increase in existing bus services – **Medium** • New bus services and associated bus stop facilities – **High** • Improvements to rail station facilities – **Low** • Improved public transport connections to rail stations – **Medium** • Public transport improvements being tested within the draft Transport Assessment – **Unknown at this stage**
Funding source	• Developer contributions • Southend City Council	• Developer contributions • Southend City Council	• Developer contributions • Southend City Council
Prioritisation (essential, needed, desirable)	All projects essential. New and improved services to be introduced as early as possible to service new residents and to create habits of using sustainable modes of transport.	• All bus service projects essential. New and improved services to be introduced as early as possible to service new residents and to create habits of using sustainable modes of transport. • Rail station improvements desirable. It is assumed that the stations would remain capable of accommodating additional passengers if needed.	• All bus service projects essential. New and improved services to be introduced as early as possible to service new residents and to create habits of using sustainable modes of transport. • Rail station improvements desirable. It is assumed that the stations would remain capable of accommodating additional passengers if needed.

Infrastructure Assessment	**Scenario 4** (+4000 - 5000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (10,000 dwellings)
Delivery timescales	Bus service projects within the early stages of the development.	• Bus service projects - early stages of the new development. • Rail station improvements – Prior to the completion of the development.	• Bus service projects - early stages of the new development. • Rail station improvements – Prior to the completion of the development.
Delivery partners	• Southend-on-Sea City Council • Essex County Council / Essex Highways • Rochford District Council • Public transport operators • Network Rail	• Southend-on-Sea City Council • Essex County Council / Essex Highways • Rochford District Council • Public transport operators • Network Rail	• Southend-on-Sea City Council • Essex County Council / Essex Highways • Rochford District Council • Public transport operators • Network Rail

Active travel

Infrastructure Assessment	**Scenario 4** (+4000-5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+10,000 dwellings)
Potential impacts of the growth scenarios on existing infrastructure	• Increased use of existing pedestrian and cycle networks in Fossetts, Southchurch, Thorpe Bay, Shoeburyness and Rochford by residents of the new development. • Potential increased demand for new pedestrian and cycle routes to allow new residents to access existing services and facilities within the surrounding area.	• Increased use of existing pedestrian and cycle networks in Fossetts and Rochford by residents of the new development. • Potential increased demand for new pedestrian and cycle routes to allow new residents to access existing services and facilities within the surrounding area.	• Increased use of existing pedestrian and cycle networks in the surrounding area. • Potential increased demand for new pedestrian and cycle routes to allow new residents to access existing services and facilities within the surrounding area.
Estimated impacts on future need/demand for infrastructure, and the need for	• Create new pedestrian and cycle connections to the existing areas of Fossetts, Southchurch, Thorpe Bay, and Shoeburyness based on expected	• Create new pedestrian and cycle connections to the existing areas of Fossetts and Rochford based on expected desire lines to provide access	• Create new pedestrian and cycle connections to surrounding areas, including new development within Scenario 4, based on expected desire

Infrastructure Assessment	**Scenario 4** (+4000-5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+10,000 dwellings)
new or improved infrastructure to support growth	desire lines to provide access to existing services and facilities and links to existing connections across the City. • Provide new pedestrian and cycle routes and associated facilities to key destination points within the City. • New network of pedestrian and cycle connections across the growth area connecting where appropriate to the surrounding areas of Fossetts, Southchurch, Thorpe Bay, and Shoeburyness. • Active travel improvements being tested within the draft Transport Assessment (see below for further details).	to existing services and facilities and links to existing connections. • Provide new pedestrian and cycle routes and associated facilities to key destination points within the surrounding area. • New network of pedestrian and cycle connections across the growth area connecting where appropriate to the surrounding areas of Southchurch North and Rochford. • Active travel improvements being tested within the draft Transport Assessment (see below for further details).	lines to provide access to existing services and facilities and links to existing connections. • Provide new pedestrian and cycle routes and associated facilities to key destination points within the surrounding area. • New network of pedestrian and cycle connections across the growth area connecting where appropriate to the surrounding areas. • Active travel improvements being tested within the draft Transport Assessment (see below for further details).
Likely cost of infrastructure projects required to support growth	Estimated project costs: • Create new pedestrian and cycle connections to surrounding areas – **Low, normal development cost** • New pedestrian and cycle routes to the wider City – **Medium** (depending on proposed routes) • New network of pedestrian and cycle connections across the growth area – **Low, normal development cost** • Active travel improvements being tested within the draft Transport Assessment – **Unknown at this stage**	Estimated project costs: • Create new pedestrian and cycle connections to surrounding areas – **Low, normal development cost** • New pedestrian and cycle routes to the surrounding area – **Medium** (depending on proposed routes) • New network of pedestrian and cycle connections across the growth area – **Low, normal development cost** • Active travel improvements being tested within the draft Transport Assessment – **Unknown at this stage**	Estimated project costs: • Create new pedestrian and cycle connections to surrounding areas – **Low, normal development cost** • New pedestrian and cycle routes to the surrounding area – **Medium** (depending on proposed routes) • New network of pedestrian and cycle connections across the growth area – **Low, normal development cost** • Active travel improvements being tested within the draft Transport Assessment – **Unknown at this stage**
Funding source	• Developer contributions • Southend City Council	• Developer contributions • Southend City Council	• Developer contributions • Southend City Council

Infrastructure Assessment	**Scenario 4** (+4000-5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+10,000 dwellings)
	• Government funding towards active travel • Department for Transport	• Government funding towards active travel • Department for Transport	• Government funding towards active travel • Department for Transport
Prioritisation (essential, needed, desirable)	All projects essential. Active travel connections to be introduced as early as possible to service new residents and to create habits of using sustainable modes of transport.	All projects essential. Active travel connections to be introduced as early as possible to service new residents and to create habits of using sustainable modes of transport.	All projects essential. Active travel connections to be introduced as early as possible to service new residents and to create habits of using sustainable modes of transport.
Delivery timescales	Within the early stages of the development.	Within the early stages of the development.	Within the early stages of the development.
Delivery partners	• Southend-on-Sea City Council • Essex County Council / Essex Highways • Rochford District Council • ForwardMotion / South Essex Active Travel • Sustrans	• Southend-on-Sea City Council • Essex County Council / Essex Highways • Rochford District Council • ForwardMotion / South Essex Active Travel • Sustrans	• Southend-on-Sea City Council • Essex County Council / Essex Highways • Rochford District Council • ForwardMotion / South Essex Active Travel • Sustrans

Conclusions and next steps for infrastructure type

2.2.2 At this early stage it is difficult to estimate the extent and costs of new and improved roads, junctions, public transport, and pedestrian and cycle route projects that will be required to support growth associated with Scenarios 4, 5a and 5b.

2.2.3 The Transport Assessment is testing the following multi-modal area wide projects, highways improvements, bus service improvements, and cycling and walking related projects which are intended to mitigate the impacts of growth scenarios 4, 5a, and 5b. These projects are being included for consideration at this time, however following the completion of the Transport Assessment and engagement with the Southend City Council Transport Team, future versions of the IDP will confirm if these projects are needed to mitigate the impacts of growth. Note that the table below includes emerging projects from draft versions of the LTP4 and LCWIP which have not yet been finalised and are therefore subject to change.

Scheme Type	Mitigation Measure	Scheme origin[2]	Description
Multi-modal area wide measures	Land north of Southend (LNOS) Growth Zone Masterplan	Draft Transport Assessment	Multi-modal Infrastructure improvements to drive modal shift away from car to scheme number 205, 304, 307, 401, 404, 405, 406, 501, 506, 507, 601.
	LNOS Growth Zone Masterplan connections to existing highway network	Draft Transport Assessment	New junctions to connect highway corridors through Growth Zone to existing highway network.
Highways measures	A1159 Royal Artillery Way new junction and link road	Draft Transport Assessment	New signal controlled junction between A1159 Royal Artillery Way and Wakering Road with associated link to route traffic to and from the west away from Bournes Green Roundabout.
	Bournes Green roundabout	Draft Transport Assessment, Draft LCWIP	Signalisation of all roundabout approaches including pedestrian / cycling crossing facilities as part of new cycle routes.
	New highway connection between development sites and Fossetts Way	Draft Transport Assessment	New link road between main highway route through Growth Zone sites and existing two-arm roundabout junction on Fossetts Way.
	Warners Bridge connection	Southend City Council	New connection between main highway route through Growth Zone sites and Harp House roundabout
	Junction at Eastwoodbury Cres/ Lane & Eastwoodbury Cres/Rochford Rd	Southend City Council	Junction improvement scheme.
	Transport hub and access East of London Southend Airport Rail Station	Southend City Council	Eastern access to London Southend Airport Rail Station, Transport Hub, Bus priority linked to new Warners bridge

[2] Note that projects from draft emerging versions of the LTP4 and LCWIP are included, which have not yet been finalised and are therefore subject to change.

Scheme Type	Mitigation Measure	Scheme origin[2]	Description
	West of Nestuda way link to A127	Southend City Council	Dedicated left link from A127 towards St Laurence Road roundabout.
Bus services	Travel hub in LNOS Growth Zone	Draft Transport Assessment	Start point for 3 new bus services into Southend City Centre
	BRT through LNOS Growth Zone	Draft Transport Assessment	Bus priority links with bus stops located centrally in new development areas
	New service: LNOS Growth Zone route 1 to City Centre / Shoeburyness	Draft Transport Assessment	New service: Growth Zone Travel Hub to Southend-on-Sea City Centre via Warners Bridge (for Airport) and Victoria Avenue
	New service: LNOS Growth Zone route 2 to City	Draft Transport Assessment	New service: Growth Zone to Southend-on-Sea City Centre via Wakering Rd and A13
	Extend Route 6	Draft Transport Assessment	LNOS Growth Zone Travel Hub via Leisure Centre, Royston Ave and Sutton Rd
	DRT - Rural on-demand bus service in periphery of Southend and Rochford	Draft Transport Assessment	Proposed to fill in the gaps in residual gaps in the bus network
Cycling and Walking measures	High quality "Spine" cycling routes from Southend Airport Railway Station through LNOS Growth Zone.	Draft Transport Assessment	East to west segregated cycling route through Growth Zone sites with segregated southbound connections and as far as and over Eastern Avenue/Royal Artillery Way/A13 to Shoeburyness. Connections to countryside for leisure cycling.
	Bournemouth Park Road cycling improvements	Draft Transport Assessment	Improved cycling infrastructure on Bournemouth Park Road towards Southend-on-Sea city centre.
	Segregated cycle paths along proposed highway corridors in LNOS Growth Zone sites.	Draft Transport Assessment	New highway corridors through Growth Zone sites (inc. Warners Bridge) assumed to have segregated cycle paths included in design.

Scheme Type	Mitigation Measure	Scheme origin[2]	Description
	Expand proposed Bike Share scheme to Growth Zone	Draft Transport Assessment	Bike Share scheme cited in draft LTP4, to include ebikes, will provide access to bikes for trips to the City and to fill in residual gaps in the bus network.
	New Eastern Pedestrian and Cycle Access to Southend Airport Rail Station	Draft Transport Assessment	New Eastern Pedestrian and Cycle Access to Southend Airport Station and associated pedestrian and cycle connections to Growth Zone sites

2.2.4 There are some transport related documents currently in production which will provide additional infrastructure related information. Future updates to the IDP will therefore take into account the following additional information when it is available:

- Local Transport Plan 4, which is due to be completed in 2025.
- The final version of the LCWIP, which is expected to be completed in 2025.
- The draft Southend Local Plan transport assessment. Initial outputs from transport modelling provided in 2025.

2.2.5 In addition, the Council will continue to liaise with Rochford DC regarding any potentially useful available outputs of transport and infrastructure related evidence being undertaken to support the production of the Rochford Local Plan.

2.3 Community Infrastructure

2.3.1 This section of the New Neighbourhood Annex sets out the infrastructure assessment for potential growth scenarios 4, 5a and 5b on community infrastructure, including community halls, allotments and libraries.

Community halls, allotments, libraries

Infrastructure Assessment	**Scenario 4** (+4,000 – 5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (10,000 dwellings)
Potential impacts of the growth scenarios on existing infrastructure	• Based on 2.4 people per household, 4,000 – 5,000 new dwellings would result in a population increase of 10,560 people. • This population increase will result in an increase in the demand for and use of community services and facilities which new residents will need to support their mental and physical wellbeing. To enable a good quality of life for the residents of the new development, they will need the provision of easily accessible community services and facilities. • The IDP Baseline Assessment identified that there is limited existing provision of community centres and libraries within the surrounding areas of North Shoebury, Thorpe Bay, and Prittlewell, and limited provision of allotments within Southchurch, Prittlewell and Thorpe Bay. However, generally the surrounding neighbourhoods do offer a range of existing community services and facilities which could potentially be used by residents of the new	• Based on 2.4 people per household, 6,000 new dwellings would result in a population increase of 14,400 people. • This population increase will result in an increase in the demand for and use of community services and facilities which new residents will need to support their mental and physical wellbeing. To enable a good quality of life for the residents of the new development, they will need the provision of easily accessible community services and facilities. • The IDP Baseline Assessment identified that there is limited existing provision of community centres and libraries within the surrounding areas of North Shoebury, Thorpe Bay, and Prittlewell, and limited provision of allotments within Southchurch, Prittlewell and Thorpe Bay. However, generally the surrounding neighbourhoods do offer a range of existing community services and facilities which could potentially be used by residents of the new development. However, large areas of	• Based on 2.4 people per household, 10,000 new dwellings would result in a population increase of 22,800 people. • This population increase will result in an increase in the demand for and use of community services and facilities which new residents will need to support their mental and physical wellbeing. To enable a good quality of life for the residents of the new development, they will need the provision of easily accessible community services and facilities. • The IDP Baseline Assessment identified that there is limited existing provision of community centres and libraries within the surrounding areas of North Shoebury, Thorpe Bay, and Prittlewell, and limited provision of allotments within Southchurch, Prittlewell and Thorpe Bay. However, generally the surrounding neighbourhoods do offer a range of existing community services and facilities which could

	development. However, large areas of the proposed growth area will be beyond a reasonable walking distance from existing services and facilities within the surrounding area. For example, Southchurch Library would be a 30 minute walk from the centre of this proposed growth area. • In addition, there is a risk that the scale of the proposed development could create a demand which may overwhelm existing services and facilities within the surrounding area.	the proposed growth area will be beyond a reasonable walking distance from existing services and facilities within the surrounding area. For example, Southchurch Library would be a 30 minute walk from the centre of this proposed growth area. • In addition, there is a risk that the scale of the proposed development could create a demand which may overwhelm existing services and facilities within the surrounding area.	potentially be used by residents of the new development. However, large areas of the proposed growth area will be beyond a reasonable walking distance from existing services and facilities within the surrounding area. For example, Southchurch Library would be a 30 minute walk from the centre of this proposed growth area. • In addition, there is a risk that the scale of the proposed development could create a demand which may overwhelm existing services and facilities within the surrounding area.
Estimated impacts on future need/demand for infrastructure, and the need for new or improved infrastructure to support growth	• Therefore, given the size and scale of the proposed development within this scenario, and the distance from the centre of the growth area to existing surrounding community services and facilities, it is assumed that the new development will require the provision new community services and facilities located within the growth area. • Community facilities which could be provided as part of the new development proposals include: ○ A community hall (also referred to as a village hall or community centre) which offers a facility which can have multiple uses. An appropriately flexible and well provisioned	• As explained within the Scenario 4 section, given the size and scale of the proposed development, and the distance from the centre of the growth area to existing surrounding community services and facilities, it is assumed that the new development will require the provision of new community services and facilities located within the growth area. • As described in the Scenario 4 section, this could include: ○ A community hall / hub ○ Library facilities ○ Allotments. Scenario 5a would require a provision of 1.87ha[2].	• As explained within the Scenario 4 section, given the size and scale of the proposed development, and the distance from the centre of the growth area to existing surrounding community services and facilities, it is assumed that the new development will require the provision of new community services and facilities located within the growth area. • As described in the Scenario 4 section, this could include: ○ A community hall / hub ○ Library facilities ○ Allotments. Scenario 5b would require a provision of 2.96ha[2].

	facility could be used for a family centre, youth and elderly services, clubs and groups, indoor sporting activities, meeting rooms and halls for hire / functions rooms. ○ A 'community hub', which could be part of the community hall building, providing multiple necessary services such as a library, Council services, banking services, and healthcare facilities etc. ○ If not forming part of a 'community hub', a new library. ○ Allotments. Based on a standard allotment provision of 0.13ha per 1,000 population[3], this would require a provision of 1.36 hectares. ○ Cemetery provision. Based on a standard provision of 0.375ha per 1,000 population[4], 4ha of additional cemetery provision.	○ Cemeteries. Scenario 5a would require 5.4ha of additional cemetery provision[3].	○ Cemeteries. Scenario 5b would require 8.6ha of additional cemetery provision[3].
Likely cost of infrastructure projects required to support growth	Estimated project costs:	Estimated project costs:	Estimated project costs:

[3] Based on standard allotment provision of 0.13ha per 1,000 population as used in Open Space Study's in other areas.
[4] Based on a standard provision of 0.375ha per 1,000 population as used in other areas. No locally specific standard provided by Southend City Council.

	• Community hall / Community hub, dependant on the size and types of facilities provided – **Medium** • The provision of extended or new library facilities, including fitting out and stocking the library, would be around £419 per dwelling[5]. For this scenario, this would therefore require a contribution of around £1.84m. • Based on a standard allotment provision cost of £24,494 per hectare[6], this would therefore require a contribution of £33,312. • Cemetery provision - **Low**	• Community hall / Community hub, dependant on the size and types of facilities provided – **Medium** • The provision of extended or new library facilities would require a contribution of around £2.514m[4]. • Allotment provision, Scenario 5a require a contribution of £45,804[5]. • Cemetery provision - **Low**	• Community hall / Community hub, dependant on the size and types of facilities provided – **Medium** • The provision of extended or new library facilities would require a contribution of around £3.980m[4]. • Allotment provision, Scenario 5b section, would require a contribution of £72,600[5]. • Cemetery provision - **Low**
Funding source	Developer contributions	Developer contributions	Developer contributions
Prioritisation (essential, needed, desirable)	Needed	Needed	Needed
Delivery timescales	To support the creation of a community, and to seek to ensure a good quality of life for new residents, facilities would need to be provided within the early stages of the development.	To support the creation of a community, and to seek to ensure a good quality of life for new residents, facilities would need to be provided within the early stages of the development.	To support the creation of a community, and to seek to ensure a good quality of life for new residents, facilities would need to be provided within the early stages of the development.
Delivery partners	• Southend City Council • Integrated Youth Support Services (IYSS) • Providers / organisers of local community services and facilities	• Southend City Council • Rochford District Council • Essex County Council • Integrated Youth Support Services (IYSS)	• Southend City Council • Rochford District Council • Essex County Council • Integrated Youth Support Services (IYSS)

[5] Based on calculation of around £419 per dwelling within the Essex County Council (ECC) Developers Guide to Infrastructure Contributions, ECC, 2024. This information has been used because a locally specific approach has not been provided by Southend City Council.

[6] Based on a standard allotment provision cost of £24,494 per hectare and BCIS estimates across a period from 2017-2021, adjusted to reflect recent experience from other areas, and including a Sout East regional variation adjustment factor of 0.98.

		• Providers / organisers of local community services and facilities	• Providers / organisers of local community services and facilities

Conclusions and next steps for infrastructure type

2.3.2 Given the size and scale of development proposed within scenarios 4, 5a and 5b, and the distance to existing surrounding community services and facilities, it is assumed that the new development will require the provision of new community services and facilities located within the growth area.

2.3.3 Facilities would need to be provided by the developer within the early stages of the development and may include a community hall, a 'community hub', allotments and cemetery provision.

2.3.4 The assumptions used and estimates of requirements and developer contributions are based on examples from other areas, as no information was provided by representatives at Southend City Council. This section should therefore be considered further by Southend City Council to ensure that all assumptions and estimates used are appropriate for the area.

2.4 Education

2.4.1 This section of the New Neighbourhood Annex sets out the infrastructure assessment for potential growth scenarios 4, 5a and 5b on education, including early years, primary, secondary, post 16 and Special Educational Needs and Disability education.

Early Years

Infrastructure Assessment	**Scenario 4** (+4,000 – 5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+10,000 dwellings)
Potential impacts of the growth scenarios on existing infrastructure	• Increase in the demand for and use of early years and childcare (EY&C) places within the immediate surrounding area. • Assuming that around 37% dwellings will be flats[7] which will generate a lower number of children requiring EY&C places, a development of this size has the potential to generate a need for around 261 places. • This is calculated based on a places product of 0.045 for flats and 0.09 for houses[8].	• Increase in the demand for and use of early years and childcare (EY&C) places within the immediate surrounding area. • Scenario 5a has the potential to generate a need for around 356 places[6,7].	• Increase in the demand for and use of early years and childcare (EY&C) places within the immediate surrounding area. • Based on the same assumptions and calculations as those presented within the Scenario 4 section, a development of this size has the potential to generate a need for around 564 places.
Estimated impacts on future need/demand for infrastructure, and the need for new or improved infrastructure to support growth	• August 2024 childcare sufficiency data demonstrates that there is limited available capacity for EY&C places within the surrounding areas of Southend City. Available capacity is as follows: ○ Shoeburyness – 18 childcare vacancies	• As presented within the Scenario 4 section, there is limited available capacity for EY&C places within the surrounding areas of Southend City. As a result, it is assumed that all EY&C places required to meet the needs of the new development will be provided through the provision of new facilities.	• As presented within the Scenario 4 section, there is limited available capacity for EY&C places within the surrounding areas of Southend City. As a result, it is assumed that all EY&C places required to meet the needs of the new development will be provided through the provision of new facilities.

[7] The South Essex Housing Needs Assessment (Turley, June 2022).

[8] Places product has been calculated as set out in the ECC Developers Guide to Infrastructure Contributions, ECC, 2024. This formula has been used because no locally specific approach has been provided by Southend City Council. The formula assumes that 37% of the dwellings allocated will be flats.

Infrastructure Assessment	**Scenario 4** (+4,000 – 5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+10,000 dwellings)
	○ Southchurch – 27 childcare vacancies ○ St Lukes – 3 childcare vacancies ○ St Laurence – 23 childcare vacancies • Due to the limited vacancies within the surrounding area, it is assumed that all EY&C places required to meet the needs of the new development will be provided through the provision of new facilities. • New facilities are usually provided through the following: ○ A 56 place EY&C facility co-located with a new primary school; or ○ a 56 place (0.13ha) standalone facility; or ○ a 30 place (0.069ha) standalone facility. • Assuming that new facilities will be provided through a combination of the above options (50% co-located, 25% 56 place standalone, and 25% 30 place standalone), and based on the amount of places being generated, it can be estimated that the new development proposed through this scenario will require the following new EY&C facilities:	• Adopting the same methodology as within Scenario 4, it can be estimated that the new development proposed through Scenario 5a will require the following new EY&C facilities: ○ 3 x 56 place EY&C facility co-located with a new primary school ○ 1 x 56 place EY&C facility ○ 3 x 30 place EY&C facility	• Adopting the same methodology as within Scenario 4, it can be estimated that the new development proposed through Scenario 5b will require the following new EY&C facilities: ○ 5 x 56 place EY&C facility co-located with a new primary school ○ 3 x 56 place EY&C facility ○ 5 x 30 place EY&C facility

Infrastructure Assessment	**Scenario 4** (+4,000 – 5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+10,000 dwellings)
	○ 2 x 56 place EY&C facility co-located with a new primary school ○ 1 x 56 place EY&C facility ○ 2 x 30 place EY&C facility		
Likely cost of infrastructure projects required to support growth	• Based on a cost of £23,865 per place for the construction of a new facility[9], a development of this size may need to provide EY&C contributions of around £6.238m.	• Based on the costing approach outlined within the Scenario 4 section, a development of this size may need to provide EY&C contributions of around £8.507m.	• Based on the costing approach outlined within the Scenario 4 section, a development of this size may need to provide EY&C contributions of around £13.470m.
Funding source	Developer contributions	Developer contributions	Developer contributions
Prioritisation (essential, needed, desirable)	The provision of all identified new facilities is essential.	The provision of all identified new facilities is essential.	The provision of all identified new facilities is essential.
Delivery timescales	• Based on the limited current vacancies within the surrounding area, the provision of a new facility will be required within the early stages of the development. • The delivery of other new facilities should be aligned to the housing delivery trajectory for the site.	• Based on the limited current vacancies within the surrounding area, the provision of a new facility will be required within the early stages of the development. • The delivery of other new facilities should be aligned to the housing delivery trajectory for the site.	• Based on the limited current vacancies within the surrounding area, the provision of a new facility will be required within the early stages of the development. • The delivery of other new facilities should be aligned to the housing delivery trajectory for the site.
Delivery partners	• Southend City Council • EY&C providers in Southend City	• Southend City Council • Rochford District Council • EY&C providers in Southend City • EY&C providers in Rochford	• Southend City Council • Rochford District Council • EY&C providers in Southend City • EY&C providers in Rochford

[9] Required developer contributions have been identified from the ECC Developers Guide to Infrastructure Contributions, ECC, 2024. This source has been used because no locally specific approach has been provided by Southend City Council.

Primary

Infrastructure Assessment	**Scenario 4** (+4,000 – 5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+10,000 dwellings)
Potential impacts of the growth scenarios on existing infrastructure	• Increase in the demand for and use of primary education within the immediate surrounding area. • Assuming that around 19% dwellings will be one-bedroom properties[10] which will not generate children requiring school places, a development of this size has the potential to generate a need for around 871 pupils. • This is calculated based on a pupil product of 0.15 for flats and 0.3 for houses[11].	• Increase in the demand for and use of primary education within the immediate surrounding area. • Scenario 5a has the potential to generate a need for around 1,188 pupils[9,10].	• Increase in the demand for and use of primary education within the immediate surrounding area. • Scenario 5b has the potential to generate a need for around 1,881 pupils[9,10].
Estimated impacts on future need/demand for infrastructure, and the need for new or improved infrastructure to support growth	• The primary sector currently has a small surplus. It is anticipated that if births in the area continues to remain low, there should be adequate existing capacity within the system up to 2028. • Beyond 2028, subject to the Local Plan housing trajectory once finalised, it is likely that additional capacity will be required to support new development. • Based on the scales of development proposed within Scenario 4, it is likely that the majority of this development will be built beyond 2028. Existing capacity within the system is therefore	• As explained within the Scenario 4 section, it is assumed that all primary education provision required to meet the needs of the new development in this Scenario will be provided through the development of new schools located within the growth area. • It can be estimated that Scenario 5a will require 3 new 2 form primary schools[11].	• As explained within the Scenario 4 section, it is assumed that all primary education provision required to meet the needs of the new development in this Scenario will be provided through the development of new schools located within the growth area. • It can be estimated that Scenario 5b will require 4 new 2 form primary schools[11].

[10] The South Essex Housing Needs Assessment (Turley, June 2022) proposes that 19% of dwellings will be one-bedroom properties.

[11] Pupil product has been calculated as set out in the ECC Developers Guide to Infrastructure Contributions, ECC, 2024. This formula has been used because a locally specific approach has not been provided by Southend City Council. In accordance with the South Essex Housing Needs Assessment (Turley, June 2022) it is assumed that 37% of dwellings will be flats.

Infrastructure Assessment	**Scenario 4** (+4,000 – 5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+10,000 dwellings)
	likely to be used by growth proposed through Scenarios 1, 2, and 3. • It is therefore assumed that all primary education provision required to meet the needs of the new development in Scenario 4 will be provided through the development of new schools located within the growth area. • A standard 2 form entry primary school can accommodate 420 pupils, covering a site area of 2.234ha[12]. Based on the pupil product being generated, it can be estimated that the new development proposed through this scenario will require 2 new 2 form entry primary schools.		
Likely cost of infrastructure projects required to support growth	• Based on a cost of £23,865 per place for the construction of a new school[13], a development of this size may need to provide primary education contributions of around £20.795m. • The expectation is, however, that the developer will deliver onsite facilities to meet the needs of residents rather than providing these contributions.	• A development of this size may need to provide primary education contributions of around £28.358m[12]. • The expectation is, however, that the developer will deliver onsite facilities to meet the needs of residents rather than providing these contributions.	• A development of this size may need to provide primary education contributions of around £44.900m[12]. • The expectation is, however, that the developer will deliver onsite facilities to meet the needs of residents rather than providing these contributions.
Funding source	Developer contributions	Developer contributions	Developer contributions
Prioritisation (essential, needed, desirable)	The provision of all identified new facilities is essential.	The provision of all identified new facilities is essential.	The provision of all identified new facilities is essential.

[12] As set out in the ECC Developers Guide to Infrastructure Contributions, ECC, 2024. This standard has been used because no locally specific approach has been provided by Southend City Council.

[13] Based on a cost of £23,865 per place for the construction of a new school set out in the DfE National Scorecard (Q1, 2024)

Infrastructure Assessment	**Scenario 4** (+4,000 – 5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+10,000 dwellings)
Delivery timescales	• Based on the limited projected available capacity in the primary sector post 2028 within the surrounding area, the provision of a new facility will be required within the early stages of the development. • The delivery of the schools should be aligned to the housing delivery trajectory for the site.	• Based on the limited projected available capacity in the primary sector post 2028 within the surrounding area, the provision of a new facility will be required within the early stages of the development. • The delivery of the additional schools should be aligned to the housing delivery trajectory for the site.	• Based on the limited projected available capacity in the primary sector post 2028 within the surrounding area, the provision of a new facility will be required within the early stages of the development. • The delivery of the additional schools should be aligned to the housing delivery trajectory for the site.
Delivery partners	• Southend City Council • Primary schools in the surrounding area • The Department for Education - Education Funding Agency	• Southend City Council • Rochford District Council • Essex County Council • Primary schools in the surrounding area • The Department for Education - Education Funding Agency	• Southend City Council • Rochford District Council • Essex County Council • Primary schools in the surrounding area • The Department for Education - Education Funding Agency

Secondary (years 7-11)

Infrastructure Assessment	**Scenario 4** (4,000 – 5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (10,000 dwellings)
Potential impacts of the growth scenarios on existing infrastructure	• Increase in the demand for and use of secondary education within the immediate surrounding area.	• Increase in the demand for and use of secondary education within the immediate surrounding area.	• Increase in the demand for and use of secondary education within the immediate surrounding area.

Infrastructure Assessment	**Scenario 4** (4,000 – 5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (10,000 dwellings)
	• Assuming that around 19% dwellings will be one-bedroom properties[14] which will not generate children requiring school places, a development of this size has the potential to generate a need for around 581 pupils. • This is calculated based on a pupil product of 0.1 for flats and 0.2 for houses[15].	• Scenario 5a has the potential to generate a need for around 792 pupils[13,14].	• Scenario 5b has the potential to generate a need for around 1254 pupils[13,14].
Estimated impacts on future need/demand for infrastructure, and the need for new or improved infrastructure to support growth	• The secondary sector across Southend City is currently under strain, and without significant investment forecasting indicates a continued and prolonged shortage of places. • It is therefore assumed that all secondary education provision required to meet the needs of the new development in Scenario 4 will be provided through the development of a new school located within the growth area. • Secondary schools can be provided as follows[16]: ○ 6 form entry, 900 pupils, 7.9ha	• As explained within the Scenario 4 section, it is assumed that all secondary education provision required to meet the needs of the new development in this Scenario will be provided through the development of a new school located within the growth area. • Based on the pupil product being generated, it can be estimated that Scenario 5a scenario will require a new 6 form entry secondary school, to be located within the growth area. This can potentially be provided by a through school[15].	• As explained within the Scenario 4 section, it is assumed that all secondary education provision required to meet the needs of the new development in this Scenario will be provided through the development of a new school located within the growth area. • . • Based on the pupil product being generated, it can be estimated that Scenario 5b will require a new 8 form entry secondary school, to be located within the growth area. This can

[14] The South Essex Housing Needs Assessment (Turley, June 2022) proposes that 19% of dwellings will be one-bedroom properties.

[15] Pupil product has been calculated as set out in the ECC Developers Guide to Infrastructure Contributions, ECC, 2024. This formula has been used because a locally specific approach has not been provided by Southend City Council. In accordance with the South Essex Housing Needs Assessment (Turley, June 2022) it is assumed that 37% of dwellings will be flats.

[16] As set out in the ECC Developers Guide to Infrastructure Contributions, ECC, 2024. This standard has been used because no locally specific approach has been provided by Southend City Council.

Infrastructure Assessment	**Scenario 4** (4,000 – 5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (10,000 dwellings)
	○ 8 form entry, 1,200 pupils, 10.1ha ○ 10 form entry, 1,500 pupils, 12.4ha • Based on the pupil product being generated, it can be estimated that the new development proposed through this scenario will require a new 6 form entry secondary school, potentially provided by a through school[17].		potentially be provided by a through school[15].
Likely cost of infrastructure projects required to support growth	Based on a cost of £28,912 per place for the construction of a new school[18], a development of this size may need to provide secondary education contributions of around £16.796m.	Based on the costing approach outlined within the Scenario 4 section, a development of this size may need to provide secondary education contributions of around £22.904m.	Based on the costing approach outlined within the Scenario 4 section, a development of this size may need to provide secondary education contributions of around £36.264m.
Funding source	Developer contributions	Developer contributions	Developer contributions
Prioritisation (essential, needed, desirable)	The provision of all identified new facilities is essential.	The provision of all identified new facilities is essential.	The provision of all identified new facilities is essential.
Delivery timescales	Based on the limited projected available capacity in the secondary sector within the surrounding area, the provision of a new facility will be required within the early stages of the development.	Based on the limited projected available capacity in the secondary sector within the surrounding area, the provision of a new facility will be required within the early stages of the development.	Based on the limited projected available capacity in the secondary sector within the surrounding area, the provision of a new facility will be required within the early stages of the development.
Delivery partners	• Southend City Council • Secondary schools in the surrounding area • The Department for Education - Education Funding Agency	• Southend City Council • Rochford District Council • Essex County Council • Secondary schools in the surrounding area	Southend City Council Rochford District Council Essex County Council • Secondary schools in the surrounding area

[17] A 'through school' combines both primary and secondary education under one administrative structure, often within the same buildings or site.
[18] Based on a cost of £29,912 per place for the construction of a new school set out in the DfE National Scorecard (Q1, 2024)

Infrastructure Assessment	**Scenario 4** (4,000 – 5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (10,000 dwellings)
		• The Department for Education - Education Funding Agency	• The Department for Education - Education Funding Agency

Post 16 (years 12 and 13)

Infrastructure Assessment	**Scenario 4** (+4,000-5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+10,000 dwellings)
Potential impacts of the growth scenarios on existing infrastructure	• Increase in the demand for and use of post 16 education within the immediate surrounding area. • A development of this size has the potential to generate a need for around 135 students. • This is calculated based on a pupil product of 0.01 per one bed flat, 0.02 per 2+ bed flat, 0.04 per house[19].	• Increase in the demand for and use of post 16 education within the immediate surrounding area. • Scenario 5a section has the potential to generate a need for around 184 students[17].	• Increase in the demand for and use of post 16 education within the immediate surrounding area. • Scenario 5b has the potential to generate a need for around 292 students[17].
Estimated impacts on future need/demand for infrastructure, and the need for new or improved infrastructure to support growth	• Higher demand for post 16 places is expected as a large cohort of secondary students enter post 16 education. Additional capacity will therefore be required to meet the need for post 16 education. • It is therefore assumed that post 16 provision required to meet the needs of the new development in Scenario 4 will be provided as part of the required new secondary school (see above).	• It is assumed that post 16 provision required to meet the needs of the new development in Scenario 5a will be provided as part of the required new secondary school.	• It is assumed that post 16 provision required to meet the needs of the new development in Scenario 5b will be provided as part of the required new secondary school.
Likely cost of infrastructure projects required to support growth	Based on a cost of £28,865 per place for the construction of new post 16 education provision[20], a development of this size may need to provide post 16 education contributions of around £3.905m.	Scenario 5a may require post 16 education contributions of around £5.325m[18].	Scenario 5b may require post 16 education contributions of around £8.432m[18.]
Funding source	Developer contributions	Developer contributions	Developer contributions

[19] Pupil product has been calculated as set out in the ECC Developers Guide to Infrastructure Contributions, ECC, 2024 (0.01 per one bed flat, 0.02 per 2+ bed flat, 0.04 per house) (as no assumptions are yet provided on number of bedrooms in flats, average of 0.015 is used for all flats.) Unlike other forms of education, post 16 qualifying flats and houses include one bed dwellings. This formula has been used because a locally specific approach has not been provided by Southend City Council.

[20] Based on a cost of £28,865 per place as set out in the DfE National Scorecard (Q1, 2024)

Infrastructure Assessment	**Scenario 4** (+4,000-5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+10,000 dwellings)
Prioritisation (essential, needed, desirable)	The provision of all identified new facilities is essential.	The provision of all identified new facilities is essential.	The provision of all identified new facilities is essential.
Delivery timescales	To be provided alongside new secondary school provision. Therefore, see proposed timescales for the provision of new secondary school education.	To be provided alongside new secondary school provision. Therefore, see proposed timescales for the provision of new secondary school education.	To be provided alongside new secondary school provision. Therefore, see proposed timescales for the provision of new secondary school education.
Delivery partners	• Southend City Council • Post 16 education providers in the surrounding area • The Department for Education - Education Funding Agency	• Southend City Council • Rochford District Council • Essex County Council • Post 16 education providers in the surrounding area • The Department for Education - Education Funding Agency	• Southend City Council • Rochford District Council • Essex County Council • Post 16 education providers in the surrounding area • The Department for Education - Education Funding Agency

Special Educational Needs and Disability (SEND)

Infrastructure Assessment	**Scenario 4** (+4,000 – 5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+10,000 dwellings)

Potential impacts of the growth scenarios on existing infrastructure	• The increase in children and young people in the area arising from the growth scenarios will result in an increased demand for SEND services. • A development of this size has the potential to generate a need for around 4 places. • This is calculated based on a pupil product of 7 per 1,000 new dwellings[21].	• The increase in children and young people in the area arising from the growth scenarios will result in an increased demand for SEND services. • Scenario 5a has the potential to generate a need for around 6 places[19].	• The increase in children and young people in the area arising from the growth scenarios will result in an increased demand for SEND services. • Scenario 5b has the potential to generate a need for around 10 places19.
Estimated impacts on future need/demand for infrastructure, and the need for new or improved infrastructure to support growth	• The level potential need for additional SEND places would not be sufficient to warrant a new standalone SEND facility. Therefore, where needs for extended and new mainstream schools have been identified as outlined above, it is expected that specialist resource provisions (SRP) will be included within these proposals.	• As explained within the Scenario 4 section, it is assumed that SRP required to meet the needs of the new development in this Scenario will be provided as part of the required new mainstream schools.	• As explained within the Scenario 4 section, it is assumed that SRP required to meet the needs of the new development in this Scenario will be provided as part of the required new mainstream schools.
Likely cost of infrastructure projects required to support growth	Based on a cost of £79,956 per place for SRP to be provided within mainstream schools[22], a development of this size may need to provide SEND education contributions of around £319,824.	Scenario 5a may require SEND education contributions of around £479,736[20].	Scenario 5b may require SEND education contributions of around £799,956[20].
Funding source	Developer contributions	Developer contributions	Developer contributions
Prioritisation (essential, needed, desirable)	Essential	Essential	Essential
Delivery timescales	To be provided alongside new mainstream school provision. Therefore, see proposed	To be provided alongside new mainstream school provision. Therefore, see proposed	To be provided alongside new mainstream school provision. Therefore,

[21] Pupil product has been calculated on the basis of a pupil product of 7 places per 1,000 new dwellings as set out in the ECC Developers Guide to Infrastructure Contributions, ECC, 2024. This formula has been used because a locally specific approach has not been provided by Southend City Council.

[22] Required developer contributions based on DfE guidance 'Securing developer contributions for education' (November 2019) which recommends that developer contributions for special or alternative school places are set at four times the cost of mainstream places. This leads to an estimated cost of £79,956 per place.

	timescales for the provision of new education infrastructure.	timescales for the provision of new education infrastructure.	see proposed timescales for the provision of new education infrastructure.
Delivery partners	• Southend City Council • The Department for Education - Education Funding Agency	• Southend City Council • Rochford District Council • Essex County Council • The Department for Education - Education Funding Agency	• Southend City Council • Rochford District Council • Essex County Council • The Department for Education - Education Funding Agency

Conclusions and next steps for infrastructure type

2.4.2 The assumptions used and estimates of requirements and developer contributions have gone beyond the information and guidance provided by education representatives at Southend City Council, instead predominantly using guidance contained within the ECC[23] Developer Contributions Guide. This section should therefore be considered further by Southend City Council to ensure that all assumptions and estimates used are appropriate for the area.

2.4.3 Additional engagement with post 16 education representatives for Southend-on-Sea is required, as no feedback has been provided during the most recent engagement on the IDP.

2.4.4 A detailed assessment of education provision and needs within Rochford District has not been undertaken. Should these Scenarios be taken forward within the Local Plan growth strategy, further liaison will be required with Rochford District Council to take into account the current and future education infrastructure situation within the area, and how could impact upon the infrastructure to be required to support the delivery of growth within these scenarios.

2.5 Emergency Services

2.5.1 This section of the New Neighbourhood Annex sets out the infrastructure assessment for potential growth scenarios 4, 5a and 5b on emergency services, including ambulance, police and fire services.

[23] Essex County Council (ECC) Developers Guide to Infrastructure Contributions, ECC, 2024.

Ambulance

Infrastructure Assessment	**Scenario 4** (+4,000 -5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+10,000 dwellings)
Potential impacts of the growth scenarios on existing infrastructure	The increase in population resulting from the growth scenarios will increase the local demands placed upon emergency services.	The increase in population resulting from the growth scenarios will increase the local demands placed upon emergency services	The increase in population resulting from the growth scenarios will increase the local demands placed upon emergency services
Estimated impacts on future need/demand for infrastructure, and the need for new or improved infrastructure to support growth	• The East of England Ambulance Service has advised that, due to the levels of growth being considered, all growth scenarios would result in the need for additional ambulances, paramedics, support staff and call handlers, and associated space needs at ambulance stations and hubs for facilities and parking. • Scenario 4 has the potential to generate a need for 1 new ambulance[24] (£160,000), additional paramedics and an additional ambulance response post.	• Scenario 5a has the potential to generate a need for 2 new ambulances (rounded up from 1.4 ambulances at a cost of £320,000)[22]; space for parking at hub stations for new vehicles, paramedics, support staff and call handlers; an additional response post; and additional paramedics.	• Scenario 5b has the potential to generate a need for 3 new ambulances (rounded up from 2.4 ambulances at a cost of £480,000)[22]; space for parking at hub stations for new vehicles, paramedics, support staff; an additional response post; and additional paramedics.
Likely cost of infrastructure projects required to support growth	• The East of England Ambulance Service recommends S106 developer contributions of £355 per new 2.3 person dwelling[25]. • This would result in developer contributions of £1.562m for Scenario 4.	Scenario 5a would require developer contributions of £2.130m[23].	Scenario 5b would require , developer contributions of £3.372m[23]
Funding source	Developer contributions	Developer contributions	Developer contributions

[24] The East of England Ambulance Service NHS Trust has advised that an additional ambulance/rapid response vehicle/mental health vehicle is required for approximately 10,000 residents.

[25] The East of England Ambulance Service NHS Trust recommends s106 developer contributions of £355 per new 2.3 person dwelling.

Infrastructure Assessment	**Scenario 4** (+4,000 -5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+10,000 dwellings)
Prioritisation (essential, needed, desirable)	Essential	Essential	Essential
Delivery timescales	Prior to the completion of 50% of the growth area.	Prior to the completion of 50% of the growth area.	Prior to the completion of 50% of the growth area.
Delivery partners	East of England Ambulance Service NHS Trust (EEAST)	East of England Ambulance Service NHS Trust (EEAST)	East of England Ambulance Service NHS Trust (EEAST)

Police

Infrastructure Assessment	**Scenario 4** (+4,000 – 5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+10,000 dwellings)
Potential impacts of the growth scenarios on existing infrastructure	• Both the construction and operational / occupation phases of residential development can lead to an increase in the incidence of criminal activity. • The increase in population resulting from the growth scenarios will increase the local demands placed upon emergency services. • Major new housing developments therefore give rise to significant additional resource needs and implications for LPTs (Local Police Teams).	As outlined in Scenario 4.	As outlined in Scenario 4.
Estimated impacts on future need/demand for infrastructure, and the need for new or improved infrastructure to support growth	• Essex Police will require developer contributions towards the following infrastructure required to support large scale growth: ○ Additional or enhanced police station (LPT) floor space and facilities, including fit out and refurbishment; ○ Custody facilities; ○ Mobile Police Stations; ○ Communications including ICT; ○ Speed Camera/ Automatic Number Plate Recognition Technology; ○ Police vehicles.	As outlined in Scenario 4.	As outlined in Scenario 4.

Infrastructure Assessment	**Scenario 4** (+4,000 – 5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+10,000 dwellings)
Likely cost of infrastructure projects required to support growth	• Essex Police estimate a funding requirement of £630,520 for Scenario 4.[26] • In addition, Essex Police would require funding for Automatic Number Plate Provision (£12,000 per site) and PCSO Provision (£237,090 per site).[27]	• Essex Police estimate a funding requirement of £859,800 for scenario 5a.[24] • In addition, Essex Police would require funding for Automatic Number Plate Provision (£12,000 per site) and PCSO Provision (£237,090 per site).[25]	• Essex Police estimate a funding requirement of £1.361mn for scenario 5b.[24] • In addition, Essex Police would require funding for Automatic Number Plate Provision (£12,000 per site) and PCSO Provision (£237,090 per site).[25]
Funding source	Developer contributions	Developer contributions	Developer contributions
Prioritisation (essential, needed, desirable)	Essential	Essential	Essential
Delivery timescales	Early – mid phases of the development.	Early – mid phases of the development.	Early – mid phases of the development.
Delivery partners	Essex Police	Essex Police	Essex Police

[26] This is based on developer contributions of £143 per dwelling. Scenario 4 is based on the delivery of 4400 dwellings.
[27] The costs for APNR and PCSO are excluded from the estimated funding requirement as these costs cannot be determined until draft site allocations are made.

Fire

Infrastructure Assessment	**Scenario 4** (+4,000 – 5,000dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+10,000 dwellings)
Potential impacts of the growth scenarios on existing infrastructure	• The increase in population resulting from the growth scenarios will increase the local demands placed upon emergency services. • The baseline fire and rescue service resources within Southend are operating at capacity, and would be significantly impacted by growth levels being considered in the emerging Local Plan.	As outlined in Scenario 4.	As outlined in Scenario 4.
Estimated impacts on future need/demand for infrastructure, and the need for new or improved infrastructure to support growth	• The Essex County Fire and Rescue Service (ECFRS) will require developer contributions towards the following infrastructure required to support large scale growth: ○ Additional or enhanced fire station floor space and facilities, including fit out, refurbishment and extension; ○ Fire service plant and equipment, including hydrants, specialist pump/ hose appliances, turntable ladder aerial appliances, cutters, spreaders, rams, stretchers, lifting air bags, toolbox, winch, ventilation fans, lighting appliances, thermal imaging cameras, dry suits, uniforms, breathing apparatus, defibrillators, first aid kit and	As outlined in Scenario 4.	As outlined in Scenario 4.

	personal protective equipment (PPE); ○ Fire and rescue vehicles, inflatable boats, rescue sled, ice path, drones & electric vehicle (EV) charging points; ○ Funding for additional staff resources, incorporating the recruitment, training, equipping and tasking of Community Safety, Community Wellbeing and Fire Safety Officers, and recruitment, training and equipping of firefighters. • The quantum of these facilities will be considered against existing facilities and the level of growth.		
Likely cost of infrastructure projects required to support growth	• Essex Fire and Rescue Service estimate a funding requirement[28] of £1.540mn for scenario 4 (4400 new dwellings)	• Essex Fire and Rescue Service estimate a funding requirement of £2.1mn for scenario 5a.	• Essex Fire and Rescue Service estimate a funding requirement of £3.5mn for scenario 5b.
Funding source	Developer contributions	Developer contributions	Developer contributions
Prioritisation (essential, needed, desirable)	Essential	Essential	Essential
Delivery timescales	Early – mid phases of the development.	Early – mid phases of the development.	Early – mid phases of the development.
Delivery partners	ECFRS	ECFRS	ECFRS

Conclusions and next steps for infrastructure type

2.5.2 The information provided by the emergency services are high-level estimates based on existing standards.

[28] This is based on a standard charge of £350 per dwelling.

2.5.3 Essex Police have confirmed that there are further (and potentially significant) costs associated with Automatic Number Plate Recognition Technology (APNR) and PCSO funding which cannot be determined until the draft site allocations are made. APNR costs are triggered by developments of 250 dwellings and PCSO costs are triggered by developments of 500 dwellings and above.

2.5.4 Essex Fire and Rescue have confirmed that once decisions are made regarding the scale of development, they will undertake an assessment of the risk to communities and their operational capacity across the Prevention, Protection and Response functions. The resource and infrastructure required to accommodate risks created through development will depend on the building type (low rise, high-rise, tall buildings etc), infrastructure design (roadways, rail network, drainage and supporting utilities and demographics of the population.

2.5.5 Further detailed consideration of provision needed based on existing facilities and impacts of specific sites will therefore be undertaken in future versions of the IDP.

2.6 Healthcare

2.6.1 This section of the New Neighbourhood Annex sets out the infrastructure assessment for potential growth scenarios 4, 5a and 5b on healthcare.

Infrastructure Assessment	**Scenario 4** (+4,000 – 5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+10,000 dwellings)
Potential impacts of the growth scenarios on existing infrastructure	• Based on 2.4 people per household, 4,000 -5,000 new dwellings would result in a population increase of 10,560 people. • This population increase will result in an increase in the demand for and use of primary healthcare services within the immediate surrounding area, and an increase in the demand for and use of acute care services at Southend Hospital.	• Based on 2.4 people per household, 6,000 new dwellings would result in a population increase of 14,400 people. • This population increase will result in an increase in the demand for and use of primary healthcare services within the immediate surrounding area, and an increase in the demand for and use of acute care services at Southend Hospital.	• Based on 2.4 people per household, 10,000 new dwellings would result in a population increase of 22,800 people. • This population increase will result in a significant increase in the demand for and use of primary healthcare services within the immediate surrounding area, and a potentially large increase in the demand for and use of acute care services at Southend Hospital.
Estimated impacts on future need/demand for infrastructure, and the need for new or improved infrastructure to support growth	• Almost all GP surgeries across Southend City are operating over their designed capacity. The provision of primary healthcare across Southend is therefore significantly less than acceptable standards set by the NHS. • In particular, existing GP provision in the Southend neighbourhoods surrounding the growth area are some of the most oversubscribed surgeries in the City. • Therefore, any significant increase in population as a result of new development is likely to require the provision of new GP surgeries.	• Based on the existing capacity constraints for primary healthcare within the surrounding area outlined within the Scenario 4 section, and the size and scale of growth proposed through Scenario 5a, the NHS have advised that two new primary healthcare facilities would be required to manage the increase in demand for healthcare services. • This level of growth may require improvements to be made to Southend Hospital, potentially including an increase in acute care service provision costing around £1.73 - £7.85 million.	• Based on the existing capacity constraints for primary healthcare within the surrounding area outlined within the Scenario 4 section, and the size and scale of growth proposed through Scenario 5b, it is likely that three new primary healthcare facilities would be required to manage the increase in demand for healthcare services. • Given the existing quality and capacity challenges at Southend Hospital, it is possible that this level of growth may require improvements to be made to Southend Hospital, potentially including an increase in

Infrastructure Assessment	**Scenario 4** (+4,000 – 5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+10,000 dwellings)
	• The IDP Baseline Assessment noted that Southend Hospital was rated (in July 2023) by the Care Quality Commission as requiring improvement. The existing hospital site is constrained and has insufficient car parking facilities. • Acute healthcare provision is already stretched within Southend. This level of growth may therefore require improvements to be made to Southend Hospital, potentially including an increase in acute care service provision costing around £1.73 - £7.85 million. • The NHS have advised that a development of this size would require two new primary healthcare facilities. • Based on an NHS formula to calculate general medical services GP provision and costs used in other areas[29] (see below for further details), the additional healthcare provision which may be sought for a development of this size would be as follows: ○ 5 new GPs (general practitioners, within this document referring only to a doctor and not a surgery) based within 2 surgeries.	• Based on an NHS formula to calculate general medical services GP provision and costs used in other areas (see Scenario 4 section for further details), the additional healthcare provision which may be sought for a development of this size would be as follows: ○ 7 new GPs based within 2 surgeries. ○ 1,432m2 of additional primary healthcare space.	acute care service provision costing around £1.73 - £7.85 million. • This scale of growth and availability of land could present an opportunity to build a new hospital. • Based on an NHS formula to calculate general medical services GP provision and costs used in other areas (see Scenario 4 section for further details), the additional healthcare provision which may be sought for a development of this size would be as follows: ○ 11 new GPs based within 3 surgeries. ○ 2,268m2 of additional primary healthcare space.

[29] Provided by the NHS Hertfordshire and West Essex Integrated Care Board in December 2023

Infrastructure Assessment	**Scenario 4** (+4,000 – 5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+10,000 dwellings)
	○ 1,050m2 of additional primary healthcare space. • This has been calculated as follows: ○ Number of patients = number of dwellings x 2.4 (average number of residents per dwelling) ○ Number of GPs required = number of new patients / 2,000 (ratio of 2,000 patients per GP) ○ Additional space required = number of GPs required x 199m2 (ratio of 199m2 required per GP)		
Likely cost of infrastructure projects required to support growth	Estimated project costs: • A new 700sqm primary healthcare facility • Based on an NHS formula to calculate general medical services GP provision and costs used in other areas (see below for further details), the developer contributions which may be sought for a development of this size are £7,355,040. • This has been calculated as follows: ○ Cost of facility = additional space required x £7,000 (standard m2 build costs including land, fit out, and fees)	Estimated project costs: • A new large primary healthcare facility • Based on an NHS formula to calculate general medical services GP provision and costs used in other areas (see below for further details), the developer contributions which may be sought for a development of this size are £10,029,600. • This has been calculated as follows: ○ Cost of facility = additional space required x £7,000 (standard m2 build costs including land, fit out, and fees) • Improvements / expansion of Southend Hospital – **High**	Estimated project costs: • A new large primary healthcare facility or 2 small facilities • Based on an NHS formula to calculate general medical services GP provision and costs used in other areas (see below for further details), the developer contributions which may be sought for a development of this size are £15,880,200. • This has been calculated as follows: ○ Cost of facility = additional space required x £7,000 (standard m2 build costs including land, fit out, and fees)

Infrastructure Assessment	**Scenario 4** (+4,000 – 5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+10,000 dwellings)
			• Improvements / expansion of Southend Hospital / development of a new hospital – **High**
Funding source	Developer contributions	• Developer contributions • NHS • Government funding	• Developer contributions • NHS • Government funding
Prioritisation (essential, needed, desirable)	Primary healthcare – essential.	Primary healthcare – essential. Southend Hospital improvements / expansion – desirable. It is assumed that the existing Hospital would remain capable of providing an adequate level of service to an increased population.	Primary healthcare – essential. Southend Hospital improvements / expansion – desirable. It is assumed that the existing Hospital would remain capable of providing an adequate level of service to an increased population.
Delivery timescales	Primary healthcare - Given existing capacity constraints within existing GP surgeries in the area, delivery of a new facility would be required in the early stages of the development.	Primary healthcare - Given existing capacity constraints within existing GP surgeries in the area, delivery of a new facility(s) would be required in the early stages of the development. Southend Hospital improvements / expansion – Prior to the completion of the development to accommodate the increased population.	Primary healthcare - Given existing capacity constraints within existing GP surgeries in the area, delivery of a new facility(s) would be required in the early stages of the development. Southend Hospital improvements / expansion – Prior to the completion of the development to accommodate the increased population.
Delivery partners	• Basildon and Brentwood Clinical Commissioning Group • Mid and South Essex Integrated Care Board • Mid and South Essex NHS Foundation Trust • Essex Partnership University NHS Trust • Southend City Council	• Basildon and Brentwood Clinical Commissioning Group • Mid and South Essex Integrated Care Board • Mid and South Essex NHS Foundation Trust • Essex Partnership University NHS Trust • Southend City Council	• Basildon and Brentwood Clinical Commissioning Group • Mid and South Essex Integrated Care Board • Mid and South Essex NHS Foundation Trust • NHS Essex Partnership NHS • Southend City Council

Infrastructure Assessment	Scenario 4 (+4,000 – 5,000 dwellings)	Scenario 5a (+6,000 dwellings)	Scenario 5b (+10,000 dwellings)
		• Rochford District Council • Essex County Council	• Rochford District Council • Essex County Council

Conclusions and next steps for infrastructure type

2.6.2 The NHS noted that given the large number of practices and the pattern of their catchments, it is not feasible at this time to consider what precise impact the various growth scenarios might have on individual practices. However, as the growth options are developed and allocations become more certain, the ICB will be able to consider where investment in existing surgeries would be appropriate and where new facilities will be needed as well as the estimated cost of these options.

2.6.3 The Council will continue to liaise with Rochford DC regarding any potentially useful available outputs of healthcare related evidence being undertaken to support the production of the Rochford Local Plan.

2.7 Green Infrastructure and Open Space

2.7.1 This section of the New Neighbourhood Annex sets out the infrastructure assessment for potential growth scenarios 4, 5a and 5b on green infrastructure and open space.

<table>
<tr><th>Infrastructure Assessment</th><th>Scenario 4 (+4,000 – 5,000 dwellings)</th><th>Scenario 5a (+6,000 dwellings)</th><th>Scenario 5b (+10,000 dwellings)</th></tr>
<tr><td>Potential impacts of the growth scenarios on existing infrastructure</td><td>• Overall Southend City recommended standards for the provision of accessible natural greenspace and open space provision below.
• Growth proposed through Scenario 4 will increase the use of existing green infrastructure and open space throughout the City.</td><td>As outlined in Scenario 4.</td><td>As outlined in Scenario 4.</td></tr>
<tr><td>Estimated impacts on future need/demand for infrastructure, and the need for new or improved infrastructure to support growth</td><td colspan="3">• Based on existing the existing identified deficits of existing green infrastructure and open space in the City, and also taking into account the distance of existing green infrastructure and open space from the growth area, it is expected that new green infrastructure and open space will be provided within the growth area to meet the identified increase in needs.
• The table below presents the green infrastructure and open space needs identified for Scenarios 4, 5a and 5b.</td></tr>
</table>

Growth scenario	Cemetery and Burial provision (ha)(1)	Amenity greenspace(2) (ha)	Natural and semi natural greenspace(3) (ha)	Children and young people play space (4) (ha)	District Parks (no.) (5)	Local Parks (no.) (6)	Neighbourhood Parks (no.) (7)
4	4.0	8.45	31.68	2.64	0.47	1.19	2.78
5a	5.4	11.52	43.20	3.6	0.63	1.62	3.79
5b	8.6	18.24	68.40	5.70	1.00	2.57	6.00

Notes:

(1) 0.375 hectares per 1000 population (standard used in other areas, no locally specific standard identified for Southend)
(2) 0.8ha per 1,000 new population (Southend IDP 2015)
(3) 3ha per 1,000 new population (Natural England standard – provided in response to IDP baseline consultation)
(4) 0.25ha per 1,000 new population (Fields in Trust)
(5) Southend Greenspace Strategy 2005
(6) Southend Greenspace Strategy 2005

Infrastructure Assessment	**Scenario 4** (+4,000 – 5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+10,000 dwellings)
	(7) Southend Greenspace Strategy 2005		
Likely cost of infrastructure projects required to support growth	New green infrastructure items - **Low**	New green infrastructure items - **Low**	New green infrastructure items - **Low**
Funding source	Developer contributions	Developer contributions	Developer contributions
Prioritisation (essential, needed, desirable)	Essential	Essential	Essential
Delivery timescales	To support the creation of a community, and to seek to ensure a good quality of life for new residents, facilities would need to be provided within the early - mid stages of the development.	To support the creation of a community, and to seek to ensure a good quality of life for new residents, facilities would need to be provided within the early - mid stages of the development.	To support the creation of a community, and to seek to ensure a good quality of life for new residents, facilities would need to be provided within the early - mid stages of the development.
Delivery partners	• Southend-on-Sea City Council • Association of South Essex Local Authorities • Essex Wildlife Trust • Natural England • Environment Agency	• Southend-on-Sea City Council • Association of South Essex Local Authorities • Essex Wildlife Trust • Natural England • Environment Agency	• Southend-on-Sea City Council • Association of South Essex Local Authorities • Essex Wildlife Trust • Natural England • Environment Agency

2.8 Sports, Indoor and Built Facilities

2.8.1 This section of the New Neighbourhood Annex sets out the infrastructure assessment for potential growth scenarios 4, 5a and 5b on sports, indoor and built facilities.

<table>
<tr><th>Infrastructure Assessment</th><th>Scenario 4 (+4,000 – 5,000 dwellings)</th><th>Scenario 5a (+6,000 dwellings)</th><th>Scenario 5b (+10,000 dwellings)</th></tr>
<tr><td>Potential impacts of the growth scenarios on existing infrastructure</td><td>Increase in the demand for and use of sport facilities within the immediate surrounding area.</td><td>Increase in the demand for and use of sport facilities within the immediate surrounding area.</td><td>Increase in the demand for and use of sport facilities within the immediate surrounding area.</td></tr>
<tr><td colspan="4">Table continued on following page</td></tr>
<tr><td>Estimated impacts on future need/demand for infrastructure, and the need for new or improved infrastructure to support growth

Likely cost of infrastructure projects required to support growth</td><td colspan="3">

Based on existing surplus provision and the distance of existing sports facilities from the growth area, it is expected that demand for sports facilities will be met through both the expansion of existing nearby facilities and the provision of new facilities within the growth area.
The tables below are based on the outputs of the Sport England Sports Facilities Calculator and Playing Pitch Calculator, presenting the calculated needs for Scenarios 4, 5a and 5b.

<table>
<tr><th>Growth Scenario</th><th>Pools (sqm)</th><th>Pools</th><th>Halls (courts)</th><th>Halls</th><th>Indoor Bowl</th><th>Indoor Bowl (rinks)</th><th>Tennis Courts (number)</th><th>Tennis Courts (£)</th><th>Total indoor sports facilities costs (£)</th></tr>
<tr><td>Scenario 4</td><td>112</td><td>£2.331m</td><td>2.92</td><td>£2.106m</td><td>0.2</td><td>£88,474</td><td>1.39</td><td>£133,156</td><td>£4.658m</td></tr>
<tr><td>Scenario 5a</td><td>153</td><td>£3.179m</td><td>3.98</td><td>£2.871m</td><td>0.28</td><td>£120,647</td><td>1.89</td><td>£181,576</td><td>£6.352m</td></tr>
<tr><td>Scenario 5b</td><td>242.69</td><td>£5.033m</td><td>6.30</td><td>£4.546m</td><td>0.44</td><td>£191,024</td><td>3.00</td><td>£287,496</td><td>£10,058m</td></tr>
</table>
<table>
<tr><th>Growth Scenario</th><th>Natural Grass Pitches (number)</th><th>Natural Grass Pitches (£)</th><th>Changing rooms (number)</th><th>Changing rooms (£)</th><th>Total outdoor sport pitches and changing room facilities costs (£)</th></tr>
<tr><td>Scenario 4</td><td>13.28</td><td>£1.415m</td><td>16.87</td><td>£3.377m</td><td>£4.792m</td></tr>
<tr><td>Scenario 5a</td><td>18.10</td><td>£1.93m</td><td>23.01</td><td>£4.605m</td><td>£6.535m</td></tr>
<tr><td>Scenario 5b</td><td>28.67</td><td>£3.056m</td><td>36.43</td><td>£7.291m</td><td>£10.347m</td></tr>
</table>
</td></tr>
<tr><td>Funding source</td><td>Developer contributions</td><td>Developer contributions</td><td>Developer contributions</td></tr>
</table>

Infrastructure Assessment	**Scenario 4** (+4,000 – 5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+10,000 dwellings)
Prioritisation (essential, needed, desirable)	Essential	Essential	Essential
Delivery timescales	To support the creation of a community, and to seek to ensure a good quality of life for new residents, facilities would need to be provided within the early - mid stages of the development.	To support the creation of a community, and to seek to ensure a good quality of life for new residents, facilities would need to be provided within the early - mid stages of the development.	To support the creation of a community, and to seek to ensure a good quality of life for new residents, facilities would need to be provided within the early - mid stages of the development.
Delivery partners	• Southend-on-Sea City Council • Sport England • Active Essex • Football Association	• Southend-on-Sea City Council • Sport England • Active Essex • Football Association	• Southend-on-Sea City Council • Sport England • Active Essex • Football Association

2.9 Flood Management

2.9.1 This section of the New Neighbourhood Annex sets out the infrastructure assessment for potential growth scenarios 4, 5a and 5b on flood management.

Infrastructure Assessment	**Scenario 4** (+4,400 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+9,500 dwellings)
Potential impacts of the growth scenarios on existing infrastructure	The area within the Land North of Southend falls within Flood Zone 1 and so has a low probability of flooding from rivers and sea.	The area highlighted within this Scenario falls within Flood Zone 1 and so has a low probability of flooding from rivers and sea.	The area highlighted within this Scenario falls within Flood Zone 1 and so has a low probability of flooding from rivers and sea.

Conclusions and next steps for infrastructure type

2.9.2 At the next stage of Local Plan preparation, the Council will be developing a Strategic Flood Risk Level 2 Assessment, which will be prepared as allocations are identified and will apply sequential and exception tests if required.

2.10 Utilities

2.10.1 This section of the New Neighbourhood Annex sets out the infrastructure assessment for potential growth scenarios 4, 5a and 5b on utilities, including electricity, potable water and wastewater management.

Electricity

2.10.2 UKPN, the lead agency for electricity, stated that for each scenario, the level of growth proposed would need to be assessed on a case-by-case basis depending on the specific requirements being considered and interactions with localised customer connection works within the area.

Potable Water

2.10.3 Essex and Suffolk Water state that for development over Scenarios 1, 2 and 3, growth would need to assess the proposed phasing of development to accommodate any necessary new or improved infrastructure. Therefore, Scenarios 4, 5a and 5b will need further consideration if they are pursued.

2.10.4 The scale of growth in all the growth scenarios 1-5b would hugely impact the potable water network, given Hanningfield Reservoir does not have the capacity (as existing) for the projected growth. The strategic mains system already experiences capacity issues, particularly during emergency works. The proposed growth will exacerbate this.

2.10.5 Across all growth scenarios, new and improved infrastructure would be required to support the level of growth. This would include expansion of an existing service reservoir or a new, additional reservoir with a pumping station, as well as replacement of strategic mains (as these would be undersized) and major network reconfiguration at distribution level for security of supply throughout Southend.

2.10.6 Funding to deliver the new / improved infrastructure would be via infrastructure charges which are collected by water and sewerage companies when new or redeveloped properties connect to their networks.

Wastewater Management

Infrastructure Assessment	**Scenario 4** (+4,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+10,000 dwellings)
Potential impacts of the growth scenarios on existing infrastructure	• Growth in the Southend Water Recycling Centre (WRC) catchment (which covers the whole Southend-on-Sea area) would increase the use of this service and would therefore be likely to impact upon network capacity.	Growth in the Southend Water Recycling Centre (WRC) catchment (which covers the whole Southend-on-Sea area) would increase the use of this service and would therefore be likely to impact upon network capacity.	Growth in the Southend Water Recycling Centre (WRC) catchment (which covers the whole Southend-on-Sea area) would increase the use of this service and would therefore be likely to impact upon network capacity.
Estimated impacts on future need/demand for infrastructure, and the need for new or improved infrastructure to support growth	• Growth proposed within Scenario 4 is unlikely to present a direct risk to storm overflows in the existing northern areas of the City, provided the new development connects directly to the WRC. This would avoid adverse impacts on the combined sewer network system within the City. • Anglian Water have planned investments between now and 2030 to address network attenuation and reduce storm overflow spills.	• Growth proposed within Scenario 5a is unlikely to present a direct risk to storm overflows in the existing northern areas of the City, provided the new development connects directly to the WRC. This would avoid adverse impacts on the combined sewer network system within the City. • Anglian Water have planned investments between now and 2030 to address network attenuation and reduce storm overflow spills.	• Growth proposed within Scenario 5b is unlikely to present a direct risk to storm overflows in the existing northern areas of the City, provided the new development connects directly to the WRC. This would avoid adverse impacts on the combined sewer network system within the City. • Anglian Water have planned investments between now and 2030 to address network attenuation and reduce storm overflow spills.
Likely cost of infrastructure projects required to support growth	Assume normal development costs associated with wastewater management system additions and upgrades as required (see Utilities section below for further details) – **Low**, subject to further assessment by Anglian Water when the Local Plan growth options are confirmed.	Assume normal development costs associated with wastewater management system additions and upgrades as required (see Utilities section below for further details) – **Low / medium**, subject to further assessment by Anglian Water when the Local Plan growth options are confirmed. It is assumed that a lager development will incur more substantial wastewater infrastructure costs.	Assume normal development costs associated with wastewater management system additions and upgrades as required (see Utilities section below for further details) – **Medium**, subject to further assessment by Anglian Water when the Local Plan growth options are confirmed. It is assumed that a lager development will incur more substantial wastewater infrastructure costs.

Infrastructure Assessment	**Scenario 4** (+4,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+10,000 dwellings)
Funding source	Charges to the developer managed by Anglian Water Investments.	Charges to the developer managed by Anglian Water Investments.	Charges to the developer managed by Anglian Water Investments.
Prioritisation (essential, needed, desirable)	Essential	Essential	Essential
Delivery timescales	At the start of the development, with any necessary upgrades in place prior to the completion of any new dwellings.	At the start of the development, with any necessary upgrades in place prior to the completion of any new dwellings.	At the start of the development, with any necessary upgrades in place prior to the completion of any new dwellings.
Delivery partners	Anglian Water Services Essex and Suffolk Water MMO	Anglian Water Services Essex and Suffolk Water MMO	Anglian Water Services Essex and Suffolk Water MMO

Conclusions and next steps for infrastructure type

2.10.1 The impact of these scenarios would be dependent on further modelling relating to redirection of flows and knock-on network capacity. It will also be dependent on how the developer chooses to address wastewater infrastructure, which could, for example, for a site of this size, be through a NAV (New Appointments and Variations). Should these sites be taken forward, further engagement would be required with Anglian Water to determine the extent of local upgrades required.

2.11 Waste Management

2.11.1 This section of the New Neighbourhood Annex sets out the infrastructure assessment for potential growth scenarios 4, 5a and 5b on waste management.

Infrastructure Assessment	**Scenario 4** (+4,000 – 5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+10,000 dwellings)
Potential impacts of the growth scenarios on existing infrastructure	Scenario 4 would result in the creation of a new neighbourhood requiring waste collection services. This would result in an increase on the demand for Council waste services.	Scenario 5a would result in the creation of a new neighbourhood requiring waste collection services, however Scenario 5a is located outside of Southend City Council's administrative area.	Scenario 5b would result in the creation of a new neighbourhood requiring waste collection services, however Scenario 5b is located outside of Southend City Council's administrative area.
Estimated impacts on future need/demand for infrastructure, and the need for new or improved infrastructure to support growth	Additional / extended services will be required to address the additional demand for regular collection services, as well as cleansing services in the area.	• Scenario 5a has not been factored into the Southend Waste Contract as it is outside of the Council's administrative area. • There may be an impact on the use of Household Waste Recycling Centres from an increased population, or where the growth is occurring outside Southend, there may be increased fly-tipping (where access to the HWRC's is restricted to Southend residents only). • Likely increased littering and flytipping to manage through investment in cleansing and litter bins.	• Scenario 5b has not been factored into the Southend Waste Contract as it is outside of the Council's administrative area. • There may be an impact on the use of Household Waste Recycling Centres from an increased population, or where the growth is occurring outside Southend, there may be increased fly-tipping (where access to the HWRC's is restricted to Southend residents only). • Likely increased littering and flytipping to manage through investment in cleansing and litter bins.
Likely cost of infrastructure projects required to support growth	An additional resource of £155,000 annually will be required, which would need to be identified from the Council's budget or reserves.	Local authority costs to manage waste services, however direct costs to Southend City Council are unlikely given this growth scenario is located outside of the authority.	Local authority costs to manage waste services, however direct costs to Southend City Council are unlikely given this growth scenario is located outside of the authority.

Infrastructure Assessment	**Scenario 4** (+4,000 – 5,000 dwellings)	**Scenario 5a** (+6,000 dwellings)	**Scenario 5b** (+10,000 dwellings)
Funding source	Southend City Council	Rochford District Council	Rochford District Council
Prioritisation (essential, needed, desirable)	Essential	Essential	Essential
Delivery timescales	At the start of the development, with any necessary additional equipment in place prior to the completion of any new dwellings.	At the start of the development, with any necessary additional equipment in place prior to the completion of any new dwellings.	At the start of the development, with any necessary additional equipment in place prior to the completion of any new dwellings.
Delivery partners	Southend-on-Sea City Council Essex County Council Private sector waste industry Environment Agency	Rochford District Council Essex County Council Private sector waste industry Environment Agency	Rochford District Council Essex County Council Private sector waste industry Environment Agency

3 Conclusions

3.1 Summary of identified infrastructure requirements for each scenario

3.1.1 The table below summarises the infrastructure requirements identified for growth scenarios 4, 5a and 5b in Chapter 2 of this New Neighbourhood Annex.

Infrastructure type	**Scenario 4** (+4,000 – 5,000 dwellings)		**Scenario 5a** (+6,000 dwellings)		**Scenario 5b** (+10,000 dwellings)	
	Infrastructure items	**Estimated costs**	**Infrastructure items**	**Estimated costs**	**Infrastructure items**	**Estimated costs**
Transport, Highways	Junction improvements on A1159, A13, and B1017	High	Junction improvements / new junctions on Sutton Road, Southend Road, and new development in Scenario 4	High	Junction improvements / new junctions on Sutton Road, Southend Road and to the new development in Scenarios 4 and 5a	High
Transport, Highways	• Increased capacity on the surrounding highway network, particularly on the A1159, A13, and B1017 • Increased highways capacity where possible on the strategic road network (A127 and A13)	High	Increased highways capacity where possible on the strategic road network (A127 and A13)	High	Increased highways capacity where possible on the strategic road network (A127 and A13)	High
Transport, Highways	New road network across the growth area	Medium	New road network across the new development	Medium	New road network across the new development	Medium
Transport, Highways	Highways improvements being tested within the draft Transport Assessment	Unknown at this stage	Highways improvements being tested within the draft Transport Assessment	Unknown at this stage	Highways improvements being tested within the draft Transport Assessment	Unknown at this stage

Infrastructure type	**Scenario 4** (+4,000 – 5,000 dwellings)		**Scenario 5a** (+6,000 dwellings)		**Scenario 5b** (+10,000 dwellings)	
	Infrastructure items	**Estimated costs**	**Infrastructure items**	**Estimated costs**	**Infrastructure items**	**Estimated costs**
Transport, public transport	Extensions to existing bus services	Medium	Extensions to existing bus services	Medium	Extensions to existing bus services	Medium
Transport, public transport	An increase in existing bus services	Medium	An increase in existing bus services	Medium	An increase in existing bus services	Medium
Transport, public transport	New bus services and associated bus stop facilities	High	New bus services and associated bus stop facilities	High	New bus services and associated bus stop facilities	High
Transport, public transport	Improvements to rail station facilities	Low	Improvements to rail station facilities	Low	Improvements to rail station facilities	Low
Transport, public transport	Improved public transport connections to rail stations	Medium	Improved public transport connections to rail stations	Medium	Improved public transport connections to rail stations	Medium
Transport, public transport	Public transport improvements being tested within the draft Transport Assessment	Unknown at this stage	Public transport improvements being tested within the draft Transport Assessment	Unknown at this stage	Public transport improvements being tested within the draft Transport Assessment	Unknown at this stage
Transport, active travel	Create new pedestrian and cycle connections to surrounding areas	Low	Create new pedestrian and cycle connections to surrounding areas	Low	Create new pedestrian and cycle connections to surrounding areas	Low
Transport, active travel	New pedestrian and cycle routes to the wider City	Medium	New pedestrian and cycle routes to the wider City	Medium	New pedestrian and cycle routes to the wider City	Medium
Transport, active travel	New network of pedestrian and cycle connections across the growth area	Low	New network of pedestrian and cycle connections across the growth area	Low	New network of pedestrian and cycle connections across the growth area	Low
Transport, active travel	Active travel improvements being tested within the draft Transport Assessment	Unknown at this stage	Active travel improvements being tested within the draft Transport Assessment	Unknown at this stage	Active travel improvements being tested within the draft Transport Assessment	Unknown at this stage

Infrastructure type	**Scenario 4** (+4,000 – 5,000 dwellings)		**Scenario 5a** (+6,000 dwellings)		**Scenario 5b** (+10,000 dwellings)	
	Infrastructure items	**Estimated costs**	**Infrastructure items**	**Estimated costs**	**Infrastructure items**	**Estimated costs**
Community infrastructure	Community hall / Community hub	Medium	Community hall / Community hub	Medium	Community hall / Community hub	Medium
Community infrastructure	Library facilities (extended or new)	£1.84m	Library facilities (extended or new)	£2.514m	Library facilities (extended or new)	£3.980m
Community infrastructure	Allotments	£33,312	Allotments	£45,804	Allotments	£72,600
Community infrastructure	Cemetery provision (4ha)	Low	Cemetery provision (5.4ha)	Low	Cemetery provision (8.6ha)	Low
Education, early years	New EY&C facilities: • 2 x 56 place EY&C facility co-located with a new primary school • 1 x 56 place EY&C facility • 2 x 30 place EY&C facility	£6.238m	New EY&C facilities: • 3 x 56 place EY&C facility co-located with a new primary school • 1 x 56 place EY&C facility • 3 x 30 place EY&C facility	£8.507m	New EY&C facilities: • 5 x 56 place EY&C facility co-located with a new primary school • 3 x 56 place EY&C facility • 5 x 30 place EY&C facility	£13.470m
Education, primary	2 x 2 form entry primary schools	£20.795m	3 x 2 form entry primary schools	£28.358m	4 x 2 form entry primary schools	£44.900m
Education, secondary	A new 6 form entry secondary school	£16.795m	A new 6 form entry secondary school	£22.903m	A new 8 form entry secondary school	£36.263m
Education, post 16	Post 16 provision provided as part of the new secondary school (see above)	£3.905m	Post 16 provision provided as part of the new secondary school (see above)	£5.325m	Post 16 provision provided as part of the new secondary school (see above)	£8.432m
Education, SEND	SEND education contributions	£319,824	SEND education contributions	£479,736	SEND education contributions	£799,956
Emergency Services, Ambulance	Additional ambulances, paramedics, support staff and call handlers, and	£1.562m	As outlined in Scenario 4, with further ambulances.	£2.130m	As outlined in Scenario 4, with the addition of additional ambulance response posts,	£3.372m

Infrastructure type	**Scenario 4** (+4,000 – 5,000 dwellings)		**Scenario 5a** (+6,000 dwellings)		**Scenario 5b** (+10,000 dwellings)	
	Infrastructure items	**Estimated costs**	**Infrastructure items**	**Estimated costs**	**Infrastructure items**	**Estimated costs**
	associated space needs at ambulance stations and hubs for facilities and parking.				further ambulances, further additional ambulance response posts, and additional paramedics.	
Emergency Services, Police	• Additional or enhanced police station (LPT) floor space and facilities, including fit out and refurbishment; • Custody facilities; • Mobile Police Stations; • Communications including ICT; • Speed Camera/ Automatic Number Plate Recognition Technology; • Police vehicles.	£630,520	As outlined in Scenario 4	£859,800	As outlined in Scenario 4	£1.361m
Emergency Services, Fire	• Additional or enhanced fire station floor space and facilities • Fire service plant and equipment • Fire and rescue vehicles Funding for additional staff resources	£1.540m	As outlined in Scenario 4	£2.1m	As outlined in Scenario 4	£3.5m
Healthcare	A new 700sqm primary healthcare facility	£7,355,040	2 new primary healthcare facilities	£10,029,600	3 new primary healthcare facilities	£15,880,200

Infrastructure type	**Scenario 4** (+4,000 – 5,000 dwellings)		**Scenario 5a** (+6,000 dwellings)		**Scenario 5b** (+10,000 dwellings)	
	Infrastructure items	**Estimated costs**	**Infrastructure items**	**Estimated costs**	**Infrastructure items**	**Estimated costs**
Healthcare	Improvements / expansion of Southend Hospital	High £1.73-£7.85m	Improvements / expansion of Southend Hospital	High £1.73-£7.85m	Improvements / expansion of Southend Hospital / development of a new hospital	High £1.73-£7.85m
Green Infrastructure and Open Space	Green infrastructure and Open Space provision: • 4ha cemetery • 8.45ha amenity greenspace • 31.68 natural and semi natural greenspace • 2.64ha children and young people's play space • 0.47 district parks • 1.19 local parks • 2.78 neighbourhood parks	Low	Green infrastructure and Open Space provision: • 5.4ha cemetery • 11.52ha amenity greenspace • 43.20ha natural and semi natural greenspace • 3.6ha children and young people's play space • 0.63 district parks • 1.62 local parks • 3.79 neighbourhood parks	Low	Green infrastructure and Open Space provision: • 8.6ha cemetery • 18.24ha amenity greenspace • 68.40ha natural and semi natural greenspace • 5.70ha children and young people's play space • 1 district parks • 2.57 local parks • 6 neighbourhood parks	Low
Sports, indoor and built facilities	Indoor sports facilities • 112sqm of swimming pools • 2.92 halls/courts of sports halls • 0.2 rinks of indoor bowls facilities • 1.39 tennis courts	£4.658m	Indoor sports facilities • 153sqm of swimming pools • 3.98 halls/courts of sports halls • 0.28 rinks of indoor bowls facilities • 1.89 tennis courts	£6.352m	Indoor sports facilities (for Scenarios 1-5b): • 242.69sqm of swimming pools • 6.30 halls/courts of sports halls • 0.44 rinks of indoor bowls facilities • 3 tennis courts	£10.058m

Infrastructure type	**Scenario 4** (+4,000 – 5,000 dwellings)		**Scenario 5a** (+6,000 dwellings)		**Scenario 5b** (+10,000 dwellings)	
	Infrastructure items	**Estimated costs**	**Infrastructure items**	**Estimated costs**	**Infrastructure items**	**Estimated costs**
Sports, indoor and built facilities	Outdoor sports pitches: • 13.28 natural grass pitches • 16.87 changing rooms	£4.792m	Outdoor sports pitches: • 18.10 natural grass pitches • 23.01 changing rooms	£6.535m	Outdoor sports pitches: • 28.67 natural grass pitches • 36.43 changing rooms	£10.347m
Utilities, Potable Water	• Expansion of an existing service reservoir or a new, additional reservoir with a pumping station • Replacement of strategic mains and major network reconfiguration	High	• Expansion of an existing service reservoir or a new, additional reservoir with a pumping station • Replacement of strategic mains and major network reconfiguration	High	• Expansion of an existing service reservoir or a new, additional reservoir with a pumping station • Replacement of strategic mains and major network reconfiguration	High
Utilities, wastewater management	Wastewater management system additions and upgrades	Low	Wastewater management system additions and upgrades	Low / Medium	Wastewater management system additions and upgrades	Medium
Waste Management	Additional / extended services	£155,000 annually	Additional / extended services	Direct costs to Southend City Council are unlikely given this growth scenario is located outside of the authority.	Additional / extended services	Direct costs to Southend City Council are unlikely given this growth scenario is located outside of the authority.