Tendring Colchester Borders Garden Community Development Plan Document

Infrastructure Delivery, Phasing and Funding Plan

Final Report – February 2023

Colchester City Council

Tendring District Council

Essex County Council

Contents

Section		Page
Executive Summary		**ii**
1	**Introduction**	**1**
1.1	Background	1
1.2	Structure of this plan	2
2	**Policy Context**	**3**
2.1	National Policy Context	3
2.2	Local Policy (Section 1 & 2 Local Plans)	4
2.3	Draft Tendring Colchester Borders Garden Community Plan	4
2.4	Submission Version Plan	5
2.5	Key Related Evidence Base Studies	6
3	**Phasing & Delivery Assumptions**	**9**
4	**Infrastructure Context, Requirements and Phasing**	**12**
4.1	Transport	12
4.2	Utilities	17
4.3	Social and Community Infrastructure	24
4.4	Environment and Waste	34
4.5	Open Space and Green Infrastructure	35
4.6	Other Infrastructure	37
5	**Funding and Future Delivery**	**39**
5.1	Developer Contributions	39
5.2	Infrastructure Providers	40
5.3	Other Public Sector Funding	43
6	**Conclusions and Next Steps**	**44**

Note: Document Version 2: February Document as considered by the Tendring Colchester Borders Joint Committee, with minor updates to Table 1 and the Summary Table set out in the Executive Summary Section.

Executive Summary

The North Essex Authorities' Shared Strategic Section 1 of respective Local Plans set out a spatial strategy for the Tendring and Colchester local authority areas over the period 2013-2033. This was adopted by Tendring District Council (TDC) in January 2021 and by Colchester Borough Council (now Colchester City Council) (CCC) in February 2021.

The Examination in Public and adoption of Section 1 was followed by the respective Section 2 Local Plans, which set out local level policies and were adopted in January 2022 by TDC and July 2022 by CCC.

The Local Plans were supported by considerable background work on infrastructure, phasing and delivery which was tested over the period 2018-2020, found sound (with modifications) and adopted.

As set out in the adopted Section 1, the Councils are now taking forward a Development Plan Document (DPD) specific to the Tendring Colchester Borders Garden Community. Section 1 also included a strategic policy relating to infrastructure and connectivity which identified that the DPD must be accompanied by "*An infrastructure delivery strategy and phasing plan that sets out how infrastructure, services and facilities will be provided. Infrastructure delivery will align with each development phase and be supported by suitable mechanisms to deliver the infrastructure both on and off-site*" (Policy SP6, Part A.1 (a))

This **Infrastructure Delivery, Phasing and Funding Plan** (the Plan) addresses the requirement of SP6 and draws all the information together on the range of infrastructure requirements needed to support future development and growth relating to the Garden Community. It includes commentary on its phasing, funding and responsibilities for delivery. It performs the role of the **Infrastructure Delivery Plan (IDP**) that is referred to in the Submission Version Plan.

This Plan has been prepared to take account of changes in context and provides an up-to-date position and evidence base to inform decision making. Certain infrastructure proposals have moved forward since the preparation of previous studies, and the wider circumstances have changed not least due to the recent COVID-19 pandemic and more recent challenges in respect of energy supply and high inflation.

Scope of Infrastructure

The importance of infrastructure is highlighted in national planning policy and guidance. The National Planning Policy Framework states that strategic policies should make provision for a range of infrastructure, and that policy makers should engage with infrastructure providers.

The term "infrastructure" includes a number of components. For the purposes of this Plan information is provided on infrastructure across the following six broad categories:

- Transport.
- Utilities.
- Social and Community Infrastructure (including Community Space, Education, Health, and Emergency Services).
- Environment and Waste.
- Open Space and Green Infrastructure.
- Other Infrastructure.

Infrastructure Requirements and Costs

Each infrastructure category has been examined in turn identifying the specific infrastructure requirements to support sustainable growth at the Garden Community. This Plan reflects the latest available inputs and data as of February 2023. It seeks to provide the most accurate picture of infrastructure requirements and costs possible at this point in time and potential sources of funding.

Effort has been made to provide costing for all requirements but where such data is not available this is made clear in this Plan. The information set out should be considered as a 'snapshot in time'. It will be reviewed and updated as more detailed design and planning work is undertaken to define proposals, consider impacts and mitigation measures in relation to future planning applications.

Work undertaken for Section 1 provides a thorough baseline position of infrastructure needs. A range of additional evidence has been gathered by the Councils to support the DPD, including the preparation of a Strategic Masterplan and additional topic based studies for example to consider issues such as transport and modal shift. All this material has informed the preparation of this plan alongside further engagement with key agencies and infrastructure providers.

Overall, **£585m million** of infrastructure projects have been identified at February 2023 as being required to support the Garden Community. This value includes circa £100m of works being covered by the Housing Infrastructure Fund, leaving £485m to be funded by other means (equivalent to £64,000 per home). This is an increase from the previous assumed requirements considered as part of the Examination of Section 1 (Total £407.5m, equivalent to £54,000 per home). This is due partly to the impact of inflation, but also through a more refined assessment and additional evidence gathering. Costs quoted in this Plan exclude additional allowances for risk/contingency, which have been considered as part of a separate viability assessment.

Table 1: Overall Infrastructure Costs

Category	Assumed Costs
Transport	£209.7m
Utilities	£209.6m
Social and Community	£109.5m
Environment and Waste	£5.3m
Open Space and Green Infrastructure	£27.9m
Others	£23.2m
Total	**£585.2m**

Whilst the overall amount and cost of infrastructure has increased, no specific infrastructure issue has been identified that would prevent development taking place across the Garden Community. The increased cost has also been considered through the separate DPD viability assessment which concludes the scheme (including its related infrastructure requirements) to be viable and deliverable.

Infrastructure Phasing

Given the scale of development at the Garden Community, there will be a long timescale of implementation with development coming forward over a period of circa 30-40 years. For the purposes of this plan, the consideration of phasing has been informed by the Councils preparation of a 'Strategic Masterplan' which sets out an illustrative proposed spatial layout and anticipated approach to phasing of development. This enables each category of infrastructure to be considered in terms of when it is anticipated to be needed.

There is a general requirement for infrastructure to be in place at the time it is needed and aligned with each phase of development. This leads to a general front-loading of requirements to ensure that the impacts of growth can be satisfactorily accommodated, and that certain services and facilities are available to people from when they are needed.

A series of neighbourhoods are anticipated, each of which will need to be supported by a range of local and strategic infrastructure. Each separate 'phase' of the Garden Community is anticipated to contain between circa 1,500 and 2,500 homes allowing for a sequential approach to ensure that local services and facilities can be provided as the development and local population increases.

Further masterplanning will be needed and the detailed approach to phasing will be a matter to be considered as planning applications come forward in whole or part of the site, and how these address policy requirements and mitigate against their impacts over time.

Infrastructure Funding

The primary source for funding infrastructure will be from the developers and landowners of the Garden Community through legal agreements accompanying the grant of planning permission. Such developer contributions are secured through the use of Section 106 Agreements (and s38 or s278 agreements for highways works) to provide infrastructure related to specific proposals. Alongside site specific Section 106 contributions, the Councils will consider the use of other potential measures to secure developer contributions, such as the proposed Infrastructure Levy as set out in the Levelling Up and Regeneration Bill to secure broader contributions towards infrastructure from a wide range of development activity.

Beyond funding to be provided by developers/landowners and other stakeholders, there are a variety of potential funding sources available for the provision of strategic and site-based infrastructure to address future requirements. Sources include Government agencies and competitive funding rounds such as the Levelling Up Fund, Towns Fund, Housing Infrastructure Fund, and topic specific programmes such as Bus Back Better, and others. The list of potential sources is not exhaustive as other funding streams will appear over time.

Certain types of infrastructure will be delivered by other bodies. Given the overall timescale of development, not all funding will yet in place for all the identified infrastructure. This circumstance is recognised by current national planning policy, in that a degree of uncertainty is inevitable and not unusual, as the funding programmes across the various stakeholders involved do not stretch out over the full period.

Going Forward

The information in this Plan will need to be monitored, reviewed and updated as the policy framework evolves over time (at both local and national levels), and as planning applications come forward. The actual scope and scale of infrastructure requirements will be subject to change as a result of more detailed consideration of specific proposals and their impacts, changes in the wider context and ways of living, and potential changes to plans/strategies or priorities provided by infrastructure providers.

The schedule of infrastructure requirements should therefore be treated as "live" to be updated regularly as more information becomes available from a range of infrastructure providers and will be further refined through the planning application process. Accordingly, data on infrastructure requirements has been produced in a format that can be easily monitored and updated over time. This will also help the Councils to provide a basis for the preparation of an annual Infrastructure Funding Statement.

Summary Table: Total Infrastructure Requirements and Phasing of Delivery

	Phase 1	Phase 2	Phase 3	Phase 4
Units per Phase (as per Strategic Masterplan assumptions)	1,750	1,750	2,500	1,500
Population per Phase (based upon circa 2.3 per unit as per Masterplan)	4,000	4,000	5,750	3,500

Infrastructure	Requirement / Commentary	Cost	*Phase 1*	*Phase 2*	*Phase 3*	*Phase 4*
Transport		**£209.7m**	**£155.2m**	**£35.2m**	**£17.3m**	**£2.0m**
A133/East Colchester Package	Various measures to promote active travel, extension of the RTS across the Garden Community, traffic management and increased highways capacity.	29.3	*49%*	*27%*	*24%*	
Bromley Road package	Various measures to promote active travel and create a sustainable transport corridor along Bromley Road.	3.9		*27%*	*73%*	
University – Hythe package	Improvements to public transport facilities and active travel measures within Hythe area.	1.7		*100%*		
Ipswich Road package	Various measures to promote active travel, improve traffic management and increase highways capacity.	2.1	*100%*			
City Centre package	Various measures to promote active travel and improve traffic management within and on entry to the city centre from the Garden Community.	6.7	*31%*	*69%*		
Greenstead package	Various measures to promote active travel in the Greenstead area.	2.9	*57%*	*43%*		
Parsons Heath / Fox Street package	Various measures to promote active travel.	2.9	*71%*	*29%*		
Wivenhoe package	Various measures to promote active travel.	4.2	*100%*			
Elmstead Market package	Various measures to promote active travel.	1.7	*50%*	*50%*		
A120/A12 corridor	Contributions to improve traffic management at A12 Junction 29.	10		*100%*		
A120/A133 Link Rd	New dual carriageway link. Secured funding via the Housing Infrastructure Fund. Contributions to enable delivery of the Link Road (to supplement secured HIF monies).	90.3	*100%*			

RTS (off site)	Establishment of a Rapid Transit System linking the Garden Community into the Colchester urban area and key destinations. Funding Secured via the Housing Infrastructure Fund.	30.8	*100%*			
Public Transport (operations)	Contributions to provision of Rapid Transit vehicles and revenue funding to support services.	12	*33%*	*33%*	*34%*	
Travel planning	Various measures to support sustainable transport use.	£11.2m	*25%*	*27%*	*30%*	*18%*
Utilities		**£209.6m**	**£57.5m**	**£53.8m**	**£61.9m**	**£36.4m**
On site enabling works	As per Section 1 Local Plan evidence. Allowance for onsite works in relation to providing serviced plots (site preparation, strategic road network, utilities).	£179m	*23%*	*23%*	*34%*	*20%*
Energy - connection to network	As per Section 1 Local Plan evidence. 132Kv connection to Primary Substation from Colchester Grid Station.	£11.9m		*100%*		
Energy - Electricity diversion	As per Section 1 Local Plan evidence. Allowance for diversion works.	£1.9m	*100%*			
Potable Water – connection to network	As per Section 1 Local Plan evidence. Connection to closest feasible source	£5.3m	*100%*			
Potable Water - lowering water main	As per Section 1 Local Plan evidence. Budget cost to lowering of 12” AC distribution water main.	£0.3m	*100%*			
Wastewater - upgrades	As per Section 1 Local Plan evidence. Upgrades to water course discharges and allowance for environmental enhancement.	£1.3m	*100%*			
Wastewater connection to network	As per Section 1 Local Plan evidence. Connection to wastewater treatment works via new pumping station (circa 5km).	£6.8m	*100%*			
Telecoms	As per Section 1 Local Plan evidence. Allowance for suitable ducting, access chambers, and necessary diversions.	£3.1m	*23%*	*23%*	*34%*	*20%*
Social and Community		**£109.5m**	**£19.9m**	**£58.1m**	**£19.9m**	**£11.6m**
Primary Schools	10 Form Entries required (an increase from 8FE as considered in the Section 1 Local Plan evidence). Provision via 5 2FE Primary Schools (420 places). Each to include 56 place Early Years. Primary School to be included in each phase alongside first completions, with additional school assumed to be required by Phase 3.	£92.9m	20%	20%	40%	20%
Secondary School	10 Form Entries required (an increase from 8FE as considered in the Section 1 Local Plan evidence). Provision assumed via a 10FE Secondary School. To include 6th Form provision. Secondary School assumed to be required in Phase 2.			100%		

Early Years Facilities	2 additional standalone 26 place Early Years facilities (in addition to those provided at each Primary School).		50%		50%	
Health space	As per Section 1 Local Plan evidence. Requirement for (equivalent of) 10 General Practitioners (GP). 1,650 sqm overall (based on 165sq.m. per GP)	£16.6m	50%		50%	
Dentist Space	As per Section 1 Local Plan evidence. Demand for (equivalent of) up to 11 dentists. 550sqm overall (based on 50 sqm per dentist)		50%		50%	
Community Centres and Library space	As per Section 1 Local Plan evidence. Demand arising 540 sqm library space and 1,080 sq.m community space, circa 90 sqm per 1,000 persons.		50%		25%	25%
Sports Centre	As per Section 1 Local Plan evidence. Note excludes sports facilities for University of Essex.		50%		50%	
Swimming Pool	As per Section 1 Local Plan evidence. Note excludes sports facilities for University of Essex.		100%			
Environment and Waste		**£5.3m**	**£1.2m**	**£1.2m**	**£1.8m**	**£1.1m**
Waste	As per Section 1 Local Plan evidence. Allowance for noise and waste mitigation. Costs profiled with housing trajectory.	£4.3m	23%	23%	34%	20%
RAMS	Offsite mitigation measures to prevent habitat disturbance from recreational activities based on tariff per unit. Costs profiled with housing trajectory, payable at start of each phase.	£1m	23%	23%	34%	20%
Open Space and Green Infrastructure		**£27.9m**	**£6.4m**	**£6.4m**	**£9.5m**	**£5.6m**
Open Space	As per Section 1 Local Plan evidence. Allowance for provision of variety of open spaces across the site. Costs profiled with housing trajectory.	£27.9m	23%	23%	34%	20%
Others		**£23.2**	**£9.6m**	**£1.7m**	**£10.4m**	**£1.5m**
Stewardship allowance	As per Section 1 Local Plan evidence. Allowance for establishment and operation of a suitable stewardship body.	£15.7m	50%		50%	
Economic / Employment Allowance	As per Section 1 Local Plan evidence. Allowance for measures to support local business and economic growth. Costs profiled with housing trajectory.	£7.5m	23%	23%	34%	20%
Totals		**£585.2m**	**£249.8m**	**£156.4m**	**£120.8m**	**£58.2m**
% by Phase			***43%***	***27%***	***21%***	***10%***

1 Introduction

1.1 Background

New and improved infrastructure plays a key role in achieving economic, social and environmental objectives. Infrastructure is important for the sustainable growth of an area and in supporting thriving neighbourhoods and successful places. The importance of infrastructure to the delivery of development sites and the overall achievement of sustainable development is promoted and expected in national and local policy.

Infrastructure planning will always be subject to change due to the influence of wider societal and economic impacts, and as such should be an ongoing 'live' process. For example, the COVID-19 pandemic has provided an illustration of the increasing importance of active travel and travel choices, and the need for good provision of open space in and around our built-up areas.

Technologically advanced, sustainable and resilient infrastructure is seen as important for paving the way for an inclusive post-COVID 19 economic recovery and addressing other matters such as the more recent energy supply, inflation and cost-of-living crisis, and the achievement of a range of climate change objectives. The role of investment in infrastructure has had longstanding recognition for its potential impact on providing for the needs of society, achieving better outcomes such as in health and well-being, and creating more successful and prosperous places.

Section 1 of respective Colchester and Tendring Local Plans sets out a range of strategic policies relating to the future development of the area and promotes sustainable development. It covers the period 2013 – 2033 and includes policies relating to a cross boundary Garden Community at Tendring Colchester Borders. Section 2 Local Plans set out further information across a range of policies and smaller scale allocations specific to each local planning authority. Collectively, the plans set out how much new development is needed, where it should go and when it should happen.

In accordance with Section 1, the Councils are currently taking forward the preparation of a DPD for the Tendring Colchester Borders Garden Community, including more refined land use policies to allocate specific areas for development, and a range of additional policies. This builds on the work outlined in Section 1, which included detailed consideration of needs relating to the Garden Community (alongside other Garden Communities being proposed at the time). This work was considered to be thorough and robust at the time it was prepared, leading to Section 1 being found sound[1]

As proposals have evolved further and time has progressed, the consideration of infrastructure requirements needs to be brought up to date to reflect the current overall context, the policy approach set out in the DPD, and further engagement with infrastructure providers and key stakeholders. This Plan addresses the need set out in Section 1 to prepare an infrastructure delivery strategy and phasing plan, and ensures that the Councils have an up-to-date evidence base and relevant information to inform decision making.

This Plan should be considered as an important part of the evidence base supporting the DPD. It is consistent with other key supporting material including work on a Strategic Masterplan and specific topic based studies (such as on transport and modal shift). It performs the role of the **Infrastructure Delivery Plan (IDP**) that is referred to in the Submission Version Plan

[1] https://www.colchester.gov.uk/local-plan/inspectors-report/

1.2 Structure of this plan

Following the introduction, this plan covers the following elements in turn:

- Consideration of the current context and main changes in relation to the work done for the adopted Section 1 and 2 Local Plans, including an overview of work done to prepare the DPD, the more recent masterplanning work and other related evidence base studies (Chapter 2).
- An overview of the overall anticipated phased delivery of the Garden Community (Chapter 3).
- Updates to the background context for each infrastructure category where any changes have implications for infrastructure planning for the Garden Community. This includes information on current assumptions on requirements, phasing, and milestones relating to its delivery (Chapter 4).
- Consideration of the approach to funding and delivery for the required infrastructure (Chapter 5).

Finally, the report sets out overall conclusions (Chapter 6) including an overview of all infrastructure requirements and costs relating to the Garden Community. It sets out some key next steps and suggestions as to how the information set out in this plan could be used to track the delivery of the required infrastructure for the site over the period and to inform the preparation of annual Infrastructure Funding Statements.

2 Policy Context

2.1 National Policy Context

The Government's **National Planning Policy Framework (NPPF)** was (at the time of preparing this Plan) last updated in June 2021. Infrastructure is an important thread throughout the document, for both plan making and determining planning applications. The NPPF sets out that the purpose of the planning system is to contribute to the achievement of sustainable development. This involves meeting the needs of the present without compromising the ability of future generations to meet their own needs. Infrastructure is an important component in meeting the economic, social and environmental objectives of sustainable development and reflecting the character, needs and opportunities of an area.

The NPPF requires that strategic policies in plans should make sufficient provision for infrastructure for transport, telecommunications, security, waste management, water supply, wastewater, flood risk and coastal change management, and the provision of minerals and energy (including heat) and community facilities (such as health, education and cultural infrastructure). Infrastructure providers are identified as relevant bodies in the NPPF. Effective and on-going joint working between strategic policy-making authorities and relevant bodies is integral to the production of a positively prepared and justified strategy.

The **Planning Practice Guidance** provides detailed guidance for the requirements set out in the NPPF. Paragraph: 058 Reference ID: 61-058-20190315 (Revision date: 15 03 2019) addresses "How can the strategic policy-making authority demonstrate that a plan is capable of delivering strategic matters, including the provision for housing and infrastructure?". This promotes joint working with a range of stakeholders from an early stage in the plan-making process. A collaborative approach is expected to be taken to identifying infrastructure deficits and requirements, and opportunities for addressing them.

In preparing a plan, strategic policy-making authorities are advised to use available evidence of infrastructure requirements to prepare an **Infrastructure Funding Statement**. This will include the anticipated funding from developer contributions, and the choices local authorities have made about how these contributions will be used.

Of key relevance to this plan, the Planning Practice Guidance recognises (Paragraph: 059 Reference ID: 61-059-20190315) that where plans are looking to plan for longer term growth through new settlements (such as the Garden Community), there may not be certainty and/or the funding secured for necessary strategic infrastructure at the time the plan is produced. In these circumstances strategic policy-making authorities are be expected to demonstrate that there is a 'reasonable prospect' that the proposals can be developed within the timescales envisaged.

The Guidance goes on to state (Paragraph: 060 Reference ID: 61-060-20190315) that policy-making authorities will need to demonstrate they have engaged with infrastructure providers, ensuring that they are aware of the nature and scale of such the proposals, and work collaboratively to ensure that the infrastructure requirements are not beyond what could reasonably be considered to be achievable within the planned timescales. Policy-making authorities are advised to use subsequent plans and plan reviews as an opportunity to provide greater certainty about the delivery of the agreed strategy.

The requirements of an annual funding statement are set out in the Community Infrastructure Levy (Amendment) (England) (No. 2) Regulations 2019. PPG Paragraph: 015 Reference ID: 61-015-20190315 (Revision date: 15 03 2019) also highlights that effective cooperation should enable

strategic policy-making authorities and infrastructure providers to establish whether additional strategic cross-boundary infrastructure is required.

2.2 Local Policy (Section 1 and 2 Local Plans)

In 2021, TDC and CCC adopted the Shared Strategic Section 1 which, amongst other things, identified the broad location of the Garden Community, set out a range of strategic policies and the overarching requirements and expectations that the Garden Community will need to meet.

The Garden Community was identified to be located within a 'broad area of search' straddling the administrative boundaries of Colchester and Tendring. It was to contain between 7,000-9,000 new homes, 25 hectares of employment and a range of other services and uses. Policy SP8 of Section 1 set out how the new Garden Community would be designed and delivered in phases. Policy SP9 includes principles and requirements for the design, development, and delivery of the Garden Community under the themes of; Place-Making and Design Quality, Housing, Employment and Jobs, Transportation and Community Infrastructure.

Significant work was undertaken by the Councils in relation to Section 1, which considered in detail the overall and topic specific infrastructure requirements related to the Garden Community. This included original evidence and substantial additional work on infrastructure that was prepared between the first phase of examination Hearings in 2018 and the final Hearings in 2020. This work included (amongst others) initial baseline work on **North Essex Garden Communities Concept Feasibility** (Examination document reference EB/008), and additional more detailed assessments and studies including a **Rapid Transit Study** for North Essex (EB/077), **Modal Share Strategy** (EB/080), detailed infrastructure costing information set out in the **Infrastructure Order of Costs Estimate** (EB/087) and an overall summary, including review of spatial concept masterplanning drawn together into an **Infrastructure Planning, Phasing and Delivery** study (EB/088). This work was undertaken in partnership with a range of key stakeholders and infrastructure providers.

After detailed consideration the Inspector for Section 1 determined that the scope and costings for most items of infrastructure were arrived at in a consistent and logical manner and were generally reasonable. The Inspector recommended a series of main modifications which enabled the policies relating to infrastructure (amongst other matters) to be found sound.

In addition to the Section 1 Local Plan, CCC and TDC each have Section 2 Local Plans, which contain policies and allocations specific to each Council area. Both Section 2's were adopted in early 2022 by the respective Council. Section 2 Local Plans were supported by additional plan wide **Infrastructure Delivery Plans**, produced separately for CCC and TDC, and subject to various updates. This combined information relating to infrastructure for the Garden Communities in Section 1, together with wider needs relating to growth proposals elsewhere across each administrative area. Inspectors considered these Section 2's separately, and both were considered sound with main modifications.

The previous work on infrastructure for Sections 1 and 2 has created a patchwork of assessments, covering different areas and timescales. This Infrastructure Delivery, Phasing and Funding Plan is intended to provide a comprehensive current overview based upon the best available present day information and supersedes work done previously.

2.3 The Draft Tendring Colchester Borders Garden Community Plan

A Draft version (Regulation 18) of the DPD was subject to formal consultation in March 2022. This set out more detail about the Garden Community and refined the overall proposed quantum of development from the 7,000-9,000 homes in Section 1 to between 7,500-8,000 homes. This included a range of proposed policies including infrastructure requirements. Representations were received by

the Councils from a wide range of interested parties and stakeholders. These have helped to evolve the policy approach and refine the supporting evidence.

A number of service and infrastructure providers were re-consulted to provide an opportunity to update their position on infrastructure requirements and ensure requirements are understood across the Garden Community. Providers were also able to advise of any new evidence base needs assessments or of changing models of delivery and preferred implementation plans.

2.4 Submission Version Tendring Colchester Borders Garden Community Plan

The Submission Version DPD is proposing 7,500 homes. The scale of development is to the same as that which formed the basis of the evidence base gathered and tested via the Section 1 Examination in Public.

The DPD sets out policies across a number of 'themes' which emerged from the main requirements for the Garden Community set out in Section 1, the main topics of interest raised and discussed during public engagement activities and wider evidence gathering. Within these themes and the related policies, various categories and specific infrastructure requirements are referred to, which are drawn together into this document. In summary the DPD contains information on:

- **Chapter 2: Vision**: sets out a vision for what it is hoped the Garden Community will be like in the future and a set of specific principles and objectives.
- **Chapter 3: Land Uses and Spatial Approach**: confirms the boundary of the Garden Community, and sets out the wide range and broad location of different land uses.
- **Chapter 4: Nature:** sets out the Councils' expectations and its policy on nature within the Garden Community – including various open space and green infrastructure requirements.
- **Chapter 5: Buildings, Place and Character:** includes the policy expectations for creating unique and distinctive places, buildings and neighbourhoods whilst respecting the character of nearby towns, villages, and heritage assets.
- **Chapter 6: Economic Activity & Employment**: sets out policy expectations for employment areas and creating appropriate job opportunities.
- **Chapter 7: Community and Social Infrastructure:** includes the infrastructure requirements relating to community services and facilities of the right type in the right location, including schools and sports facilities, access to health services and how the development will incorporate measures to encourage inclusive, healthy, and happy lifestyles.
- **Chapter 8: Movement and Connections**: includes the infrastructure requirements to promote active travel, walking, cycling and rapid public transport facilities as well as additional investment in highways.
- **Chapter 9: Sustainable Infrastructure:** includes measures aimed at tackling climate change, minimising carbon emissions and climate change adaptation.
- **Chapter 10: Infrastructure Delivery, Impact Mitigation and Monitoring.** The final Chapter sets out the mechanisms for securing developer contributions towards infrastructure. It also sets out a draft framework of 'indicators' that the Councils' will use as measures to periodically monitor the progress and success of the Garden Community and to determine whether any changes in approach are required when the DPD is reviewed.

2.5 Key related evidence base studies

This Plan is an assimilation of data, information and assumptions drawn from a wide range of themes provided across a number of technical specialisms. The following related studies have been particularly significant.

2.5.1 North Essex Garden Communities Concept Feasibility (AECOM, 2016)

As part of the initial investigation and analysis of the Garden Communities opportunity and its application and suitability to North Essex, the Councils (at that stage involving Colchester, Tendring, Essex and Braintree) commissioned AECOM to undertake a 'Garden Communities Concept Feasibility Study'. This considered a number of potential sites for Garden Communities across the North Essex area including the Tendring Colchester Borders Garden Community. The outcome of the work was presented in four volumes:

1. Baseline Compendium – containing information on the local and regional context of each site.
2. Opportunities and Constraints.
3. Options and Evaluation.
4. Garden Communities Charter.

Volume 3 – Options and Evaluation set out a number of site options for each proposal including consideration of capacity and infrastructure requirements enabling initial consideration of site deliverability matters. This work informed the Councils initial proposals for Garden Communities set out in the Submission Version Local Plans that was then subject to Examination in Public from 2018-2020.

2.5.2 North Essex Garden Communities Infrastructure Planning, Phasing and Delivery report (AECOM, 2019)

This evidence base document was prepared by the Councils subsequent to initial findings set out by the Planning Inspector in June 2018, through which the Councils were asked for additional information in relation to the proposed Garden Communities. The work updated initial concept masterplanning work for each site, provided an indicative view of scheme phasing and set out more detail on strategic infrastructure provision. This work formed a key part of the further evidence prepared by the Councils for the Shared Section 1 Local Plans that was considered at the Examination in Public hearings in 2020.

The study included an assessment of the Tendring Colchester Borders Garden Community, set out an indicative masterplan and land use budget, a review of movement and connectivity, utilities, and detailed infrastructure requirements by phase. Many elements set out in this work remain valid and have been drawn across into this plan, updated where appropriate by new information.

2.5.3 North Essex Garden Communities Order of Cost Estimate (Gleeds, 2019)

This study provided a detailed cost assessment of the cost of infrastructure works associated with each of the proposed Garden Communities in North Essex, including those relating to the Tendring Colchester Borders proposals. It was prepared alongside the Infrastructure Planning, Phasing and Delivery report to profile out the anticipated costs relating to the scheme's infrastructure requirements by phase.

The cost estimating process was undertaken collaboratively with other consultants, also referring to other relevant sources of information such as the Essex County Council Developers' Guide to Infrastructure Contributions document. It also incorporated ECCs guidance on education requirements, UCML guidance on utilities provisions, and Essex Highways guidance on Rapid Transit System requirements. The report included cost benchmarking to consider education and health facilities costs. The costings were based on prices at Q4 2018.

2.5.4 Tendring Colchester Borders Garden Community Strategic Masterplan (Prior + Partners, 2023)

The Councils have prepared a Strategic Masterplan, which provides further definition to the scale and form of development that is proposed on the Garden Community. This Strategic Masterplan considers proposals across the same themes as set out in the DPD. The work includes consideration of related infrastructure (primarily relating to land use and spatial implications, for example the number and location of new schools, centres, access routes and movement corridors), and of how the Garden Community could be developed to create a series of linked neighbourhoods in a phased manner. Figure 2.1 below illustrates the overall approach.

Figure 2.1: Strategic Masterplan Framework

The Strategic Masterplan has been prepared by the Councils as background evidence to show how the development could come forward. It is separate to the DPD and will remain illustrative in nature until such time as conclusions can be drawn from the examination of the DPD (which may result in modifications to policies, land uses or areas) and/or via the preparation and consideration of masterplans and planning applications by the developer.

The Strategic Masterplan and related policies in the DPD do not set out precise details of design, layout and appearance of the new buildings and spaces that will be delivered. This level of detail will

be progressed by the site developers, who will now take forward more detailed masterplan work to inform the preparation of planning applications for the site.

2.5.5 Transport Evidence Base Parts 1 & 2 (ITP and Jacobs, 2023)

Evidence has been prepared to consider the approach to achieving defined mode share targets, including setting out the range of associated measures to promote use of public transport (including RTS), walking, cycling, and other active modes; and to ensure the Garden Community mitigates any impact. This has been prepared by consultants Jacobs and ITP, working closely with ECC.

Part 1 of the work considers the approach to modal shift and promoting sustainable movement on and beyond the Garden Community. Part 2 of this work has established the scope and scale of all transport related infrastructure requirements that have been referenced in this plan.

2.5.6 Viability Assessment (Gerald Eve, 2023)

Gerald Eve have prepared a viability assessment of the scheme. The viability assessment relates in part to previous viability work undertaken as part of the evidence base for Section 1, updated to reflect current day costs and values, and amended to align with the outcomes of the Strategic Masterplan and other topic based evidence gathering. The infrastructure requirements and phasing as set out in this plan have been applied in the Gerald Eve study.

3 Phasing and Delivery Assumptions

As required by Section 1 policy, the consideration of infrastructure requirements must include information on phasing to ensure that the development overall and its separate phases include all necessary infrastructure improvements and mitigation.

As context, the Examination of Section 1 considered the issue of the timing of delivery and likely build out of the Garden Community. The Councils undertook research to consider the issues and set out the outcome of the research in a 'Build Out Rates Topic Paper' (North Essex Authorities, 2019). The Inspector considered all the evidence and concluded that it would be prudent to plan on the basis of the site delivering an annual average of 250 dwellings per annum. The Inspector also considered that housing delivery could start within four or five years from the adoption date of Section 1, but also that this would need to be kept under review.

The Councils have updated work on the start date and trajectories to reflect the current circumstances. The current assumption is for homes to start being delivered in 2025/26 with the trajectory to accord with the 250 per year (maximum) figure. This means that the Garden Community will be delivered over a 30+ year period.

The Strategic Masterplan has reviewed the approach to spatial design and layout, and promotes the development of a series of linked neighbourhoods across the site. The latest work proposes four key phases. The masterplan also considers the typology of housing and potential population that would be accommodated on site. Based upon circa 2.3 people per household, and assuming a 7,500 home development, this equates to circa 17,000 people.

Figure 3.1 shows the anticipated phasing of the Garden Community and Figure 3.2 sets out a breakdown of units completed and population growth by year and phase.

Figure 3.1: TCB Garden Community Indicative Phasing

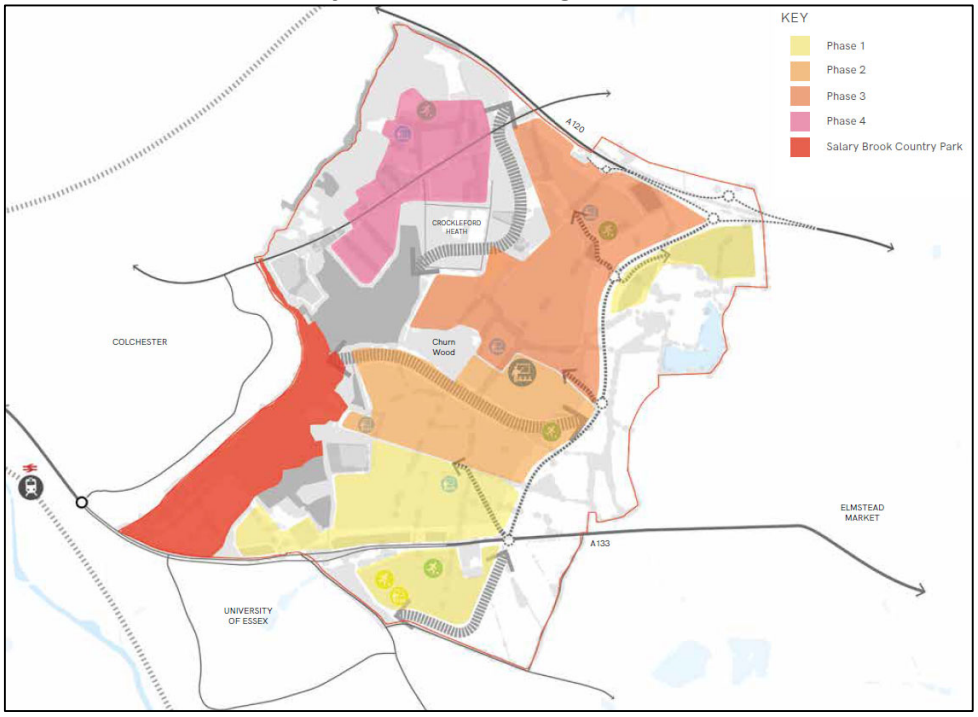


Figure 3.2: TCB Garden Community Housing Trajectory (by Year and Phase)

PHASE 1	25/26	26/27	27/28	28/29	29/30	30/31	31/32
	Yr1	Yr2	Yr3	Yr4	Yr5	Yr6	Yr7
Units (per year)	200	200	250	250	250	250	250
Units (cumulative)	*200*	*400*	*650*	*900*	*1,150*	*1,400*	*1,650*
Total population	460	920	1,495	2,070	2,645	3,220	3,795

PHASE 2	32/33	33/34	34/35	35/36	36/37	37/38	38/39
	Yr8	Yr9	Yr10	Yr11	Yr12	Yr13	Yr14
Units (per year)	250	250	250	250	250	250	250
Units (cumulative)	*1,900*	*2,150*	*2,400*	*2,650*	*2,900*	*3,150*	*3,400*
Total population	4,370	4,945	5,520	6,095	6,670	7,245	7,820

PHASE 3	39/40	40/41	41/42	42/43	43/44	44/45	45/46	46/47	47/48	48/49
	Yr15	Yr16	Yr17	Yr18	Yr19	Yr20	Yr21	Yr22	Yr23	Yr24
Units (per year)	250	250	250	250	250	250	250	250	250	250
Units (cumulative)	*3,650*	*3,900*	*4,150*	*4,400*	*4,650*	*4,900*	*5,150*	*5,400*	*5,650*	*5,900*
Total population	8,395	8,970	9,545	10,120	10,695	11,270	11,845	12,420	12,995	13,570

PHASE 4	49/50	50/51	51/52	52/53	53/54	54/55	55/56
	Yr25	Yr26	Yr27	Yr28	Yr29	Yr30	Yr31
Units (per year)	250	250	250	250	250	250	100
Units (cumulative)	*6,150*	*6,400*	*6,650*	*6,900*	*7,150*	*7,400*	*7,500*
Total population	14,145	14,720	15,295	15,870	16,445	17,020	17,250

The following chapter of this Plan provides commentary on each infrastructure theme and when certain elements will be required in relation to the 4 four phases set out in Figures 3.1 and 3.2.

There will be many influences on the actual rate of delivery and housing trajectory for a scheme of this size and nature. It will essentially be dictated by the rate of sales that developers are able to achieve in light of site conditions, business strategies and wider market demand. The key influences include:

- The location, nature, and scale of the site, as well as its layout and phasing approach. This will influence how many separate housebuilders can be active on site at any one time.
- The overall scale of demand within the wider housing market. This will in turn be influenced by general economic conditions such as job security and job mobility, and general consumer confidence about buying/moving, as well as mortgage availability.
- The type and variety of products (multiple tenures, types and sizes being brought to the market), pricing, and extent of competition from other properties for sale both within the site itself and wider geographic area.
- The business strategy and physical capacity of the development model and key stakeholders. This includes the approach to strategic infrastructure, the provision of serviced development plots to the market, as well as the individual approaches of housebuilders and plot developers in the local area set against wider business plans and strategic land portfolios.

The majority of the site is now under the control of Latimer Developments working in partnership with Mersea Homes. As of January 2023, the developers are assembling their technical team including masterplanners and intend to work on preparing more detailed proposals throughout 2023 to be submitted via planning applications in 2024.

It is envisaged that Latimer will act as a ‘master-developer’, bringing the site forward, investing in strategic infrastructure, and enabling housing and development to be delivered by both themselves, Mersea Homes and by other housebuilders and developers.

Latimer Development are the development arm of Clarion Housing, which is the UK’s largest housing association, owning and managing 125,000 homes. This will enable them to deliver strategic infrastructure and a wide range of housing tenures.

The landowners and promoters will have a critical role to considering and establishing a more detailed approach to phasing, albeit subject to the approval of the local planning authority. The phasing information set out in this Plan should therefore be viewed as a starting point for the process of preparing and agreeing a Detailed Phasing Plan (as required by the policies set out in the DPD). The indicative phasing proposals and the draft heads of terms will evolve as the master planning and approval processes progress, and as new information becomes available.

Whilst detailed phasing proposals will be resolved through development management decision-making, this Plan sets out the expectations around essential infrastructure and when it will be needed. In effect, the policies set out in the DPD and the evidence that supports will provide a framework through which ongoing detailed planning and negotiations will be undertaken. The approach needs to be sufficiently clear and robust, but also appreciating that further work will be required and the precise scope, scale and timing of requirements may be subject to change.

The content of this plan provides a framework for evolving further detailed work and to underpin negotiations. For each category and type of infrastructure, the anticipated phasing of provision is set out.

4 Infrastructure Context, requirements and phasing

This section provides an overview of the different forms of infrastructure examined through this plan. It sets out any relevant updates to the context, reflecting any significant changes or new information since the Section 1 evidence base was prepared and found sound, and summarises what is required and when. The commentaries set out below are grouped under the following five category headings:

- Transport.
- Utilities.
- Social & Community (including community facilities, education, health, emergency services).
- Environment and Waste.
- Open Spaces and Green Infrastructure.

4.1 Transport

Updates and current context

In addition to the measures identified through the Local Plans (Sections 1 and 2) transport evidence base, CCC has been working with ECC to prepare a Colchester Future Transport Strategy. Consultation which was undertaken in early 2021. The strategy is being led by ECC as the Highway Authority and sets out the overall approach to current transport issues and opportunities. It provides a strategy to improve health and wellbeing and tackle climate issues through transport planning. It will assist in supporting future allocation and bidding for funding for transport projects in the city. The strategy outlines measures that are consistent and build upon mitigation outlined in the Local Plan evidence base and the Section 1 and Section 2 policies. It aims to shape Colchester city's future transport network and achieve the vision of prioritising active and safe sustainable travel to bring about health, environmental and economic benefits. The strategy looks to positively address the different challenges and reasons why people travel, setting out zones that recognise the need to support those making short journeys through the town and those living in the surrounding areas making longer journeys. The strategy provides a framework to enable potential schemes to be identified and proposals to be assessed against.

The Councils commissioned ITP and Jacobs to prepare an updated transport evidence report for the Garden Community which has reviewed and updated the approach to modal shift, and set out a number of transport infrastructure packages needed to address the impacts of the Garden Community. The identified packages and measures have been summarised in this Plan.

Highways

A Colchester Transport Model was used to inform previous work on Local Plans and their IDP's. This identified junctions and links that were overcapacity as a result of development proposed in the (now adopted) Local Plans. The modelling remains valid. However, many site-specific and strategic mitigation solutions have progressed since the Plans were submitted and adopted, and have been, or are currently being delivered by ECC as the Highway Authority. An updated strategic model (Colchester Transport Model) has been built by ECC and their transport consultants Jacobs. This model includes a Variable Demand Model, which allows trip patterns to alter in response to the creation of a significant new development at the Garden Community and allows trip makers to switch between car use and public transport use. Car demand is then assigned to the highway network using the VISUM software package and public transport demand assigned to the public transport network using EMME software. An out of model process using the Colchester Parking Model is also carried out which adjusts demand in response to park and ride services and the availability of parking in

Colchester. The model will benefit and support the evolution and consideration of detailed proposals for the Garden Community that will be brought forward by developers through planning applications.

ECC, working with CCC and TDC, were successful in attracting funding under the Housing Infrastructure Fund (administered by Homes England) for the delivery of the A120-A133 Link Road, and the offsite sections of the Rapid Transit System. The awarding of the funding has been made on the basis that this transport infrastructure unlocks housing growth at the Garden Community. In accordance with the conditions of the funding agreement with Homes England, the Councils will seek to maximise the recovery of this funding from the Garden Community as it is developed. The mechanism for the recovery of funding will be secured by legal agreement between the Councils and the developer(s), with the level of recovery informed by regular reviews of development viability so that an appropriate financial contribution towards recovery is set which takes into account other policy requirements and contributions required of the developer(s).

The A120-A133 Link Road received planning permission in 2021 and is scheduled to open in 2026. Its objective is to support growth at the Garden Community, manage congestion in this wider locality and improve connectivity. It will comprise a new 2.4km road between the existing A120 and A133 in the east of Colchester; a new grade separated junction at the A120; and a new roundabout at the junction with the A133, to join into the existing highway network. Two intermediate roundabouts will also be provided along the Link Road for the Garden Community. Walking, cycling and horseriding provisions associated with the Link Road have been designed to provide new networks, permeability, and connections across the Link Road for existing and future land users, linked to existing or diverted Public Rights of Way.

Public Transport

As identified in the Colchester Future Transport Strategy, to reduce car use, improve air quality and improve health across the town centre and wider Colchester area, schemes will focus on:

- Public transport improvements: e.g. Rapid transit, Park and Ride, bus lane enforcement, smart ticketing and travel information.
- Park and Choose: allowing residents, workers and visitors to park their vehicles and choose a sustainable alternative mode.
- Access improvements: e.g. improved access and parking at rail stations and parking strategies.
- The creation of quality partnerships: e.g. inter-urban coach partnerships and freight partnerships.
- Travel change initiatives: e.g. car clubs, personal and business travel planning and car sharing

As set out above ECC, working with CCC and TDC, secured funding to deliver infrastructure works on a new Rapid Transit System to link the Garden Community into Colchester and key destinations throughout the city. The focus for improvements have been along key corridors beyond the boundary of the Garden Community, with an expectation that further improvements will be required over time both within and beyond the Garden Community. The Rapid Transit System will be in place to connect the Garden Community with the University of Essex, Colchester City Centre, Colchester Railway Stations, Colchester Hospital, Community Stadium, Colchester Sports Park and the existing Park and Ride site in north Colchester. This will provide a high frequency, efficient public transport system with priority over general traffic within the Garden Community. The route, which will run alongside the A133 Clingoe Hill via the Knowledge Gateway, will link into the Garden Community. Phase 1 or the Rapid Transit System from the Park and Ride to the City Centre has received planning permission and is currently being implemented by ECC. Subsequent phases will be out for tender in 2023 and the route through the Garden Community will be confirmed through the developer masterplanning and planning application process. The Rapid Transit System will be operational on first occupation of homes in the Garden Community.

ECC has published its Bus Service Improvement Plan (BSIP) for 2021 - 2026. ECC is to follow the Enhanced Partnership (EP) approach between the Local Transport Authority (LTA) and Bus Operators to provide a new, high quality and reliable bus network and it is anticipated that one District Enhanced Partnership will be progressed per year. The Improvement Plan describes the current bus network and the action that ECC will take in partnership with bus operators and others to improve services. On 31 March 2022, ECC made the EP with bus operators. This includes a set of commitments for both ECC and bus operators which will start to deliver the Improvement Plan. The first annual review of the Improvement Plan has been published. A Bus Network Review has been undertaken for Colchester. The Review forms an important source of data and makes recommendations for a number of activities including potential service enhancements, highway network enhancements, ticketing schemes etc. It is intended to be a 'live' document listing schemes to be considered for progression but should not be interpreted as a prescriptive list of actions/projects that will be progressed and are already funded. Relevant information regarding the BSIP can be viewed here.

Active Travel

ECC are leading an Active Travel Essex programme, with £7m secured from Government to invest in local improvements. Colchester is one of the locations where work is ongoing to look at how people can be encouraged to make more journeys by walking or cycling. ECC supports measures that reduce the need for travel by private cars as reflected in the DPD policies and the updated Garden Community transport evidence base. This is consistent with the ECC wider behaviour change programme to help drive the Safer, Greener, Healthier ambition - to make it as easy as possible for Essex residents to travel more sustainably, especially for shorter journeys by walking, cycling, e-scootering or taking the bus or train for longer journeys. The ambition is to create a road environment that is Safer, encouraging more residents to cycle or walk, especially for shorter journeys; work up sustainable transport solutions to ensure that Essex reduces carbon emissions and delivers long-term Greener benefits; and deliver long-term public health benefits so that our residents become healthier. To achieve these aims, ECC is introducing, supporting and funding various projects, which will encourage and make it easier for people to walk, cycle or scoot more, especially for shorter journeys.

Work is ongoing on a Colchester Local Cycling and Walking Infrastructure Plan (LCWIP) and the increase in cycling through the COVID-19 pandemic, investment in active travel modes has been given increasing importance across the city area. A key route proposed within the LCWIP is to connect Colchester City Centre with the University and Greenstead, both adjacent to the Garden Community. The importance of this was recognised in the Council's successful Town Deal bid, which saw the council receive funding for a number of projects, including the LCWIP Route, new cycle parking in the city centre and a planned bike loan scheme in Greenstead. The route was also identified through the Government's Active Travel Fund initiative, recognising that the route will build on other proposed walking and cycling infrastructure.

Transport - requirements

Additional work has been undertaken by the Councils to review the approach to transport and movement, with a focus on defining and identifying necessary measures to secure modal shift to reduce reliance on the private car. This is set out in the Transport Evidence Base (Parts 1 & 2, February 2023), which provides a detailed overview of the transport and movement implications of the Garden Community and includes a comprehensive mitigation strategy that has been developed to maximise opportunities for active and sustainable travel through:

- Inclusion of a range of measures on the Garden Community site and its immediate environs– both in relation to its overall design approach to create walkable neighbourhoods with good access to services and facilities, but also through the inclusion of measures to promote active travel and use of public transport, including provision of Rapid Transit; and

- Measures on key connecting routes and integration with wider transport and movement networks and strategies.

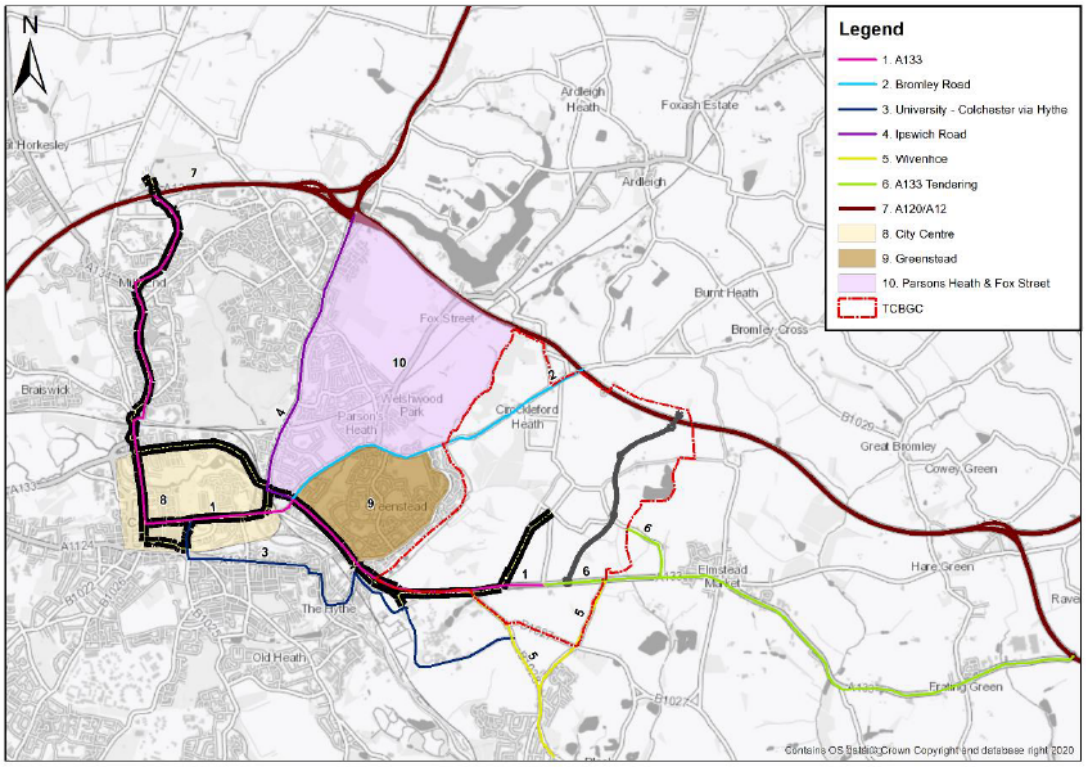
The identified mitigation measures have been selected to align with the emerging Colchester Future Transport Strategy and Active Travel Essex programme. The measures included have been classified into five, not mutually exclusive, categories of schemes:

- Active travel.
- Public transport.
- Traffic management.
- Highway capacity.
- Travel planning.

It is recognised that combinations of measures would need to be used together to mitigate impacts. Hence a series of 'route and area' packages have been developed which are aligned to the evidence on the unmitigated impact of the Garden Community. In this way, it is easier to establish the connection between packages of measures and severe transport impact.

The routes and areas are shown in Figure 4.1

Figure 4 1: Routes and areas outlined in the Garden Community Evidence Base report



In addition to specific measures on identified routes, corridors and areas, there are wider cross-cutting measures that fall outside route and area packages. Each package includes proposed mitigation measures and improvements. The key transport packages and requirements are:

1. **A133/East Colchester Package**: various measures to promote active travel, extension of the RTS across the Garden Community, traffic management and increased highways capacity.
2. **Bromley Road package:** various measures to promote active travel and create a sustainable transport corridor along Bromley Road.
3. **University – Hythe package**: improvements to public transport facilities and active travel measures within Hythe area.
4. **Ipswich Road package**: various measures to promote active travel, improve traffic management and increase highways capacity.
5. **Wivenhoe package:** various measures to promote active travel and improve connectivity from the Garden Community across the A133.
6. **A133 (Tendring) Elmstead Market package:** various measures to promote active travel.
7. **A120/A12 corridor:** contributions to improve traffic management at A12 Junction 29.
8. **City Centre package**: various measures to promote active travel and improve traffic management within and on entry to the city centre from the Garden Community.
9. **Greenstead package:** various measures to promote active travel in the Greenstead area.
10. **Parsons Heath / Fox Street package:** various measures to promote active travel.

Other packages of measures and transport improvements relate to:

- **A120/A133 Link Rd**: new dual carriageway link: Secured funding via the Housing Infrastructure Fund. Contributions to enable delivery of the Link Road (HIF monies with gap funding via developer contributions).
- **Rapid Transit System (off site):** establishment of a Rapid Transit System linking the Garden Community into the Colchester urban area and key destinations (off site improvements funding secured via the Housing Infrastructure Fund).
- **Public Transport (operations):** contributions to provision of Rapid Transit vehicles and revenue funding to support services.
- **Travel planning:** various measures to support sustainable transport use.

Further detail on the individual measures and improvements including costs and phasing of each are set out in the Tendring Colchester Garden Community Transport Evidence Base report (ITP, ECC/Jacobs, February 2023).

Table 4.1: Transport Infrastructure Packages – cost and phasing

Transport Package	Estimated Funding Requirement by 'mitigation phase'			Total by Package (without contingency)	Total by Package (with contingency)
	£mil	£mil	£mil	£mil	Total
Public Transport Subsidy	4.0	4.0	4.0	**12.0**	**12.0**
A133	20.0	11.0	10.0	**29.3**	**41.0**
Bromley Road		1.5	4.0	**3.9**	**5.5**
University - Hythe - Town		2.0		**1.7**	**2.0**
Ipswich Road	2.5			**2.1**	**2.5**
Wivenhoe	5.0			**4.2**	**5.0**
A133 Tendring	1.0	1.0		**1.7**	**2.0**
A12/A120		10.0		**10.0**	**10.0**
City Centre	2.5	5.5		**6.7**	**8.0**
Greenstead	2.0	1.5		**2.9**	**3.5**

Parsons Heath and Fox Street	2.5	1.0		**2.9**	**3.5**
GC Travel Plan and Wider Measures	4.0	4.0	4.0	**11.2**	**11.2**
TOTAL COST	***43.5***	***41.5***	***22.0***	***89.0***	***106.5***

Note: Costs are taken from the Transport Evidence Base report.

Transport measures – phasing of provision

The Tendring Colchester Garden Community Transport Evidence Base report provides detail in relation to when measures are anticipated to be required. This profiles out the measures across three broad 'mitigation phases', aligned to the likely trajectory and phasing of the Garden Community. The 'mitigation phases' indicate measures that will be required:

- Mitigation Phase 1 aligned with first completions in 2026 through to the end of the Local Plan period in 2033, with measures required broadly in line with Phase 1 of the Garden Community. This also includes delivery of the HIF & developer funded A120-A133 Link Rd and wider RTS works.
- Mitigation Phase 2 aligned to the subsequent period 2033 to 2041, broadly aligned with delivery of Phase 2 of the Garden Community.
- Mitigation Phase 3 aligned to the subsequent period 2041 to 2050, broadly aligned with the delivery of Phase 3 of the Garden Community.
- Additional measures likely to run beyond the end of Mitigation Phase 4, albeit most measures are expected to be in place prior to Phase 4 of the Garden Community.

4.2 Utilities

Electricity, gas and water supply are regulated industries. Each provider has a duty to connect future developments to their network as they are built, subject to cost and timing within the scope of its asset management plan, where applicable, and regulations laid down by Ofgem.

Providers are subject to various statutory duties and requirements to meet the needs their local populations as they grow and change over time. Each provider has a five-year investment programme of maintenance and expansion. This means that it is not possible to fully define future specific capital investment over longer timescales.

As part and subsequent to the consultation on the Draft Plan (Regulation 18), the main utility companies including National Grid, Northern Powergrid, Cadent, Anglian Water and Affinity Water were contacted to check for any relevant updates. As the broad location and scale of development had not materially changed from that set out in the adopted Section 1 Local Plans, the position across the utility network and related requirements will be similar to that previously considered.

4.2.1 On site enabling works

On site enabling works - requirements

A broad range of works will be required to prepare the land for development and create serviced development plots. This was assessed and set out as part of the work done for Section 1 and includes allowances for the following measures.

- Site preparation and earthworks, including general demolition and site clearance; strategic earthworks cut and fill. Applied over full site area.

- Primary and secondary road network on site.
- Drainage: on site foul and surface water network.
- Waste management facilities on site.
- Energy: including 33 11kV to 400V distribution substations; 7 11Kv ring circuits from primary substations to distribution substations;400V LV circuits from distribution substations to end users; residential electricity connections.
- Potable water: including New network of distribution pipework; Water mains, connections and infrastructure charges.
- Wastewater: including new network of collection pipework; plot connections for all properties to wastewater distribution network.
- Gas: including Low Pressure Residential Connections.

For section 1 the cost for the above site enabling work amounted to £139m, based upon circa £18,500 per residential unit (and calculated on the basis on 7,500 units). This cost has been updated to £179m (circa £24,000 per unit) based upon inflation to present day prices.

Site wide enabling costs – phasing of provision

As these costs relate to the provision of serviced plots for the subsequent and immediate delivery of development, they would be phased throughout the build programme.

4.2.2 Gas

Gas – relevant updates and current context

National Grid Gas plc (NGG) owns and operates the high-pressure gas transmission system across the UK. In the UK, gas leaves the transmission system and enters the UK's four gas distribution networks where pressure is reduced for public use. National Grid is responsible for the management of adopted infrastructure and the emergency response to non-adopted infrastructure - all other asset responsibilities, including management of third-party gas distribution pipelines, lie with other utility infrastructure providers. National Grid Ventures (NGV) is separate from National Grid's core regulated businesses. NGV develop, operate and invest in energy projects, technologies, and partnerships to help accelerate the development of a clean energy future for consumers across the UK, Europe and the United States.

New gas transmission infrastructure developments (for example pipelines and associated installations) are periodically required to meet increases in regional demand and changes in patterns of supply. Developments to the network occur as a result of specific connection requests, for example power stations, and requests for additional capacity on the network from gas shippers.

The 2021 Gas Ten Year Statement provides an update on current and future changes that impact the gas national transmission system. National Grid's most up to date gas transmission business plan covers the 2021-2026 regulatory period (RII0-2) and sets out how it will invest in its services and network as well as how it will help to deliver the UK's net zero carbon target.

Cadent provides gas connections throughout Colchester city and Tendring district and is the gas distribution network operator for the Garden Community area. The current Cadent business plan also covers the RII0-2 regulatory period from 2021 to 2026.

The Government's Heat and Building Strategy published in October 2021 sets out an ambition to phase out the installation of natural gas boilers as part of wider strategy to decarbonise buildings. This, together with the intent to move towards a 'Future Homes Standard will influence how gas infrastructure is planned with an intent to potentially exclude the need for new homes to be connected to the gas grid from 2026 (with non-domestic buildings not connected from 2024).

Gas - requirements

As set out above there is an expectation to phase out the installation of natural gas boilers. For the purposes of this plan, as this position is not yet fixed, it has been considered prudent to maintain allowances as were included in previous work.

There is currently capacity on the medium pressure system to address the needs during the plan period. Growth beyond the plan period would be considered via the ongoing preparation and updating of Asset Management Plans which will consider options for reinforcement to the network.

All capacity requests would go through an economic test to see if the load requested and the reinforcement works required are economic for Cadent. Where they are not, the developer would fund, or partly fund, the reinforcement works, although in practice a large proportion of reinforcements are fully funded by Cadent.

An allowance was included as part of the work done for Section 1 the following measures.

- Extension to Medium Pressure network (based upon a 2 km pipeline).
- 1 No. Medium to Low Pressure reducing station.
- Re-routing of 12" Medium Pressure Gas Main through the new on-site road network.

Gas – phasing of provision

Off site works to connect the site into the local gas network would be required as part of Phase 1.

4.2.3 Electricity

Electricity – relevant updates and current context

National Grid Electricity Transmission plc (NGET) owns and maintains the electricity transmission system in England and Wales. The energy is then distributed to the electricity distribution network operators, so it can reach homes and businesses. National Grid's most up to date electricity transmission business plan covers the 2021-2026 regulatory period (RII0-2) and sets out how it will invest in its services and network as well as how it will help to deliver the UK's net zero carbon target.

The electricity supplies for new developments are the responsibility of the development and will be paid for by the developer. If reinforcement is required, the costs are apportioned between the developer and the Distribution Network Operator (DNO).

National Grid does not distribute electricity to individual sites and premises directly. It is the role of local distribution companies to distribute electricity to homes and businesses. The local distribution network operator is responsible for operating the local electricity distribution network which supplies electricity from the national electricity transmission system direct to sites and premises. If new infrastructure is required in response to an increase in demand across the local electricity distribution network the operator may request improvements to an existing National Grid substation or a new grid supply point.

The Garden Community's electricity DNO is UK Power Networks, who distributes the electricity supply throughout Colchester city and Tendring district. They are responsible for reliability, capacity and maintenance (and emergency response) and also for the operation and maintenance of its own infrastructure.

The current UK Power Networks business plan covers the 2015-23 regulatory period and sets out how it will invest in its services and network in ED1. UK Power Networks is also preparing its business plan for the next regulatory period RIIO-ED2, which will address investment in the network for 2023-2028 (ED2). Inputs to the Business Plan include the National Grid Future Energy Scenarios (FES) which will ultimately help form a "best view" centralised planning forecast of future requirements.

Electricity – requirements

Requirements for electricity infrastructure will depend on when sites come forward for a connection and local conditions, Future long term growth requirements would be considered via the ongoing preparation and updating of Asset Management Plans which will consider options for reinforcement to the network.

Initial consideration is that the existing infrastructure is expected to be able to meet the requirement for Phase 1 although reinforcement of the local 11kV network with cables and switchgear may be required. The growth beyond Phase 1 is likely to require a new 33/11kV substation in the area of the site. This would require new 33kV circuits from the 132/33kV Lawford Grid substation to a suitable site on or near the proposed development. In order to provide capacity for the latter phases, there may also be a need to replace the Grid Transformers (132/33kV) at Lawford with larger units, and the proposed additional primary substation might need larger transformer units or potentially a 3rd transformer. The developer may have to participate in cost apportionment associated with reinforcement projects. UK Power Networks notes that the cost of new network and extensions is often borne solely by itself and so there would be no cost to the developer.

Note that there are some assumptions which will depend on the type of heating required and any on site energy generation capacity. There may be scope for the developer to consider, evolve and implement alternative approaches such as through the provision of on-site energy hubs linked to renewables/other power sources and provided either at area or building scale.

For the purposes of this plan, allowances for electricity infrastructure cover the elements set out in the background work done for Section 1, namely the following:

- 132 kV connection to Primary Substation from Colchester Grid substation.
- Adoption of existing overhead electricity transmission infrastructure.
- Electricity Diversion Works.

Electricity – phasing of provision

Off site works to connect the site into the electricity network would be required as part of Phase 1.

The developer may evolve a site wide, neighbourhood or building specific approach to energy/power in which case new power generation capacity could come forward in phases across the site. This will need to be considered and assessed as part of considering planning applications.

4.2.4 Potable Water

Potable Water – relevant updates and current context

Affinity Water and Anglian Water are the DNOs for potable water supply and distribution networks, and for water resources and treatment for the Garden Community area.

The latest Water Resources Management Plans (WRMPs) for Affinity Water and Anglian Water were both published in 2019 and provide a long-term view of future challenges in the region. They ensure that the DNOs can continue to meet customer demand in the future and incorporate future pressures on water supply and demand due to predicted changes to the climate. They look at future changes in population, housing, water use and metering trends in the area. Both DNOs are currently drafting updated WRMPs for 2025 onwards.

The most up to date business plans for Affinity Water and Anglian Water cover the period 2020-2025. They outline how the DNOs will deliver potable water and waste water services over the next 5 years.

The potable water supply network currently comprises the Brett and South Essex Water Resource Zones and the areas of growth within the Garden Community all fall within both of these. The provider of drinking water services to Colchester city is Anglian Water and the provider of drinking water services to Tendring district is Affinity Water.

Affinity Water have set out a 'Strategic Direction Statement' which sets out long-term ambitions to 2050. This is taking a long term view and amongst other things aims to ensure a resilient supply of water for customers.

Affinity Water, in common with all water companies in England, already has a mechanism in place to ensure they are able to fund their infrastructure needs associated with growth from new development. This is a combination of general investment funding from customers' bills and charges to new developers. In the case of the latter, developers are only expected to contribute towards costs where any reinforcement is required or would be benefitted from.

Every five years, Affinity Water produces a WRMP which addresses these future challenges and provides a roadmap for a reliable, resilient, sustainable, efficient and affordable water supply, whilst taking care of the local environment. The actions include reducing customer demand, driving leakage down further than ever before, smart metering and significant investment in new infrastructure for new sources of water - working across the water industry to plan and share resources regionally. The plan aims to make the region's water supplies more resilient to droughts. A consultation version of the 2024 WRMP indicates that the scale of water resource need will need to be met by working with other water companies and third parties and sets out a range of 'Strategic Reserve Options' being considered.

New rules for charging for new water and sewerage connections became effective from April 2022. Developer Customers seeking connections to local water infrastructure will have to pay an agreed charge for any necessary network reinforcement. This can be arranged on a per phase basis. The new arrangements also make provision for Developer Customers to work with a New Appointment and Variation ("NAV"), or a new service provider operating within the geographical area of an existing Water Company. The idea being that a NAV might assume responsibility for providing water services to a strategic development. Under the 2022 rules new water and sewerage connections will be agreed between developers and Affinity Water (or a NAV) on a phase-by-phase basis.

Affinity Water has confirmed that, for a domestic (residential) development, it would carry out the reinforcement work and would recover the costs via its standard infrastructure charges to the

developer. If additional lengths of water main are required, it is expected that these would be funded by the developer as a site-specific cost.

It is important to note that Ofwat have also been consulting on the structure and scope of charges for developer services, with a particular focus on the balance of costs recovered from developers and other customers (the balance of charges) and incentives for better outcomes for the environment and society (environmental incentives). Ofwat are proposing to retain the current arrangements that developers do not contribute to the costs of strategic assets but do more to promote environmental objectives. This could include discounts to provide sustainable drainage systems, or to encourage building homes away from water-scarce zones or areas with capacity constraint. As such the precise level of developer contributions for specific infrastructure will be subject to change based on the outcome of the consultation.

Potable Water - requirements

The position remains unchanged from previous infrastructure planning work for the adopted Section 1 and 2 local plans. In response to the Regulation 18 consultation on the DPD, Affinity Water noted that "supply may be limited without substantial reinforcements to the network", although also acknowledged that the scale and location of development has already been established through the adopted Section 1 Local Plans. Resources are either currently available and/or plans are in place to increase resources where necessary. Future long term growth requirements would be considered via the ongoing preparation and updating of Asset Management Plans which will consider options for reinforcement to the network.

Any new development would be funded by the developer in accordance with the requirements of the Water Industry Act. In reality, the actual payments made by the developer for any on-site water main would be significantly less than the cost of the asset. Any new service connection would be charged in accordance with standard rates and standard infrastructure charges would also apply.

Affinity Water has confirmed that, for a domestic (residential) development, it would carry out reinforcement work and would recover the costs via its standard infrastructure charges to the developer. Where additional lengths of water main are required, it is expected that these would be funded by the developer as a site-specific cost.

For the purposes of this plan, allowances for potable water infrastructure cover the elements set out in the background work done for Section 1, namely the following:

- Connection to closest feasible supply source with capacity (e.g. trunk main or reservoir).
- Budget cost per lowering of the Affinity Water 12" AC Distribution Water Main to accommodate a site entrance.

Potable Water – phasing of provision

Off site works to connect the site into the potable water network would be required as part of Phase 1.

4.2.5 Wastewater

Wastewater – Current Context and current context

The provider of wastewater services in the area is Anglian Water Services (AWS). The requirements for used water provision relate to the network for delivering used water (i.e. the sewerage pipes) and the facility at which it is treated, i.e. the Water Recycling Centre (WRC).

Every five years Anglian Water prepare a Water Resources Management Plan (WRMP) which sets out how AWS will manage the water supplies in the region to meet current and future needs over a minimum of 25 years. The current Plan, published in 2019, covers the period from 2020-2045 and AWS are now developing our next Plan (WRMP24) for the period 2025 – 2050.

Wastewater - requirements

Similar to water supply, it is the service provider's responsibility to pay for the cost of additional capacity in sewage treatment works. Developers would generally only be responsible for paying for the cost of the main required to reach a suitable connection point in the system.

Although there are areas that are known to have sewerage constraints, none of these areas are anticipated to present a barrier for future development at this time. They will however mean that further investigation is required as detailed proposals come forward. This may potentially result in capacity improvements being required. It is recommended that both the Councils and developers engage further with Anglian Water as more detailed site information becomes more certain to initiate the necessary assessment and subsequent improvements where required.

In respect of the Garden Community, a connection to the foul sewerage network would be required. This will be located a distance from the existing network so additional network infrastructure will be required. Capacity enhancements will also be required at the Colchester Water Recycling Centre (WRC) and this continues to be assessed as part of Anglian Water's 25-year Drainage and Wastewater Management Plan.

The developers may seek to pursue an alternative approach for managing the additional wastewater from the Garden Community by employing an inset water company to manage the wastewater instead of the using the existing Colchester WRC. This would require the installation of the applicable infrastructure to provide this.

For the purposes of this plan, allowances for wastewater infrastructure cover the elements set out in the background work done for Section 1, namely the following:

- Upgrades to water course discharges (Allowance for environmental enhancement / EA regulations).
- Connection to existing wastewater treatment works via new pumping station - primary and secondary collection networks Pumped to Colchester WRC (5.2 km pipeline).

Wastewater – phasing of provision

Off site works to connect the site into the wastewater network would be required as part of Phase 1.

4.2.6 Telecommunications and Broadband

Telecommunications and Broadband –relevant updates and current context

CCC were awarded £3.24 million from the Government's Local Full Fibre Network to upgrade the town's data distribution networks and complete a new, high-capacity data link to London. A new partnership between Colchester Amphora Trading and Swedish fibre operator VX Fiber is responsible for delivering the network.

The new network uses FTTP broadband technology – a dedicated future-proof connection where the fibre optic cables are laid all the way into residential and commercial properties. Colchester Amphora

Trading is leading the project's delivery on behalf of the Council as part of its mission to provide full fibre broadband to the area.

In March 2020, the government announced new legislation would be introduced that would see Building Regulations 2010 amended to place an obligation on developers to install gigabit-capable full fibre broadband in new residential sites, although there are no current timescales published. This update to Building Regulations does not cover new commercial sites.

Telecommunications and Broadband - requirements

It is the responsibility of the developer to ensure their new sites are connected and they are advised to engage with infrastructure providers at the earliest opportunity, to ensure the most cost-effective solution. In many cases the infrastructure can be provided free of charge, depending on the size of the development.

Therefore, in order to address this issue and ensure that a consistent approach is maintained across the area all major applications will be subject to planning conditions requiring the provision of gigabit-capable full fibre broadband, for both commercial and residential development.

The commercial rollout of FTTP demonstrates that network capacity should not be an issue in the future, due to increased choice available to customers.

Gigabit-capable, full fibre infrastructure is required in all new developments through the inclusion of relevant planning conditions and developers are responsible for ensuring that their new sites are connected, benefitting from the current roll out of fibre by local providers.

An allowance was included as part of the work done for Section 1 the following measures.

- Development of access chambers for BT Telecoms network, BT Openreach fibre optic network and private telecoms network throughout development.
- Allowances for diversion works and associated highways works.

Telecommunications and Broadband – phasing of provision

Diversion works anticipated as part of Phase 1. Provision of access chambers and cutting phased throughout the build out.

4.3 Social and Community Infrastructure

4.3.1 Community Facilities

Community Facilities – relevant updates and current context

There is significant variation between local planning authorities on standards for community meeting space provision (i.e. where such standards are in place).The separate Infrastructure Delivery Plans for the CCC and TDC contained differing standards. This is in part due to the local context and existing level of provision, but also in light of what potential range of community services may be delivered through any dedicated space.

The approach as set out in the DPD is to provide multi-functional community space which can accommodate a wide range of activities, subject to the needs of the local neighbourhoods and communities as they come forward.

One element to be accommodated is provision of library services. Libraries and their provision is changing significantly. Partly this is due to reducing budgets but also due to the growth of information technology and the population's needs of a core community information service.

Since the previous Section 1 and Section 2 infrastructure work was prepared, ECC, the provider of library services in Colchester city and Tendring district, has approved the 'Essex Future Library Services Strategy 2019-2024 (approved in July 2019). This lays out the strategy for library provision over the early part of the plan period. The Strategy's focus is to focus on:

- developing an investment plan to improve libraries prioritising, initially, larger libraries; and
- working with and supporting community groups or other partner organisations to set up community run libraries, with the aim of ensuring a library service is retained in every current location.

In respect of library buildings, the Strategy envisages that by 2024, most library services will be in shared spaces with other public services. The ECC Developers' Guide for Infrastructure Contributions 2020 has contribution requirements of £244.92 per dwelling for new library provision. A requirement specific to the Garden Community will need to be informed on a case-by-case basis at the time that individual planning applications are received, with any required contributions secured through a Section 106 agreement.

In terms of future provision, opportunities for the co-location of services and maximising the use of existing buildings will be encouraged, to respond to the increasingly integrated models of service provision and provision for multi-purpose facilities. There is increasing emphasis on the integration of other forms of community infrastructure, such as libraries and community spaces. New provision is likely to be in the form of expansion of the existing community hub/library facilities. This will be dependent on the demography of that population, along with the service requirements of future library provision.

Community Facilities - Requirements

An allowance was included as part of the work done for Section 1 the following measures.

- Demand arising 540 m^2 of Library Space & 1,080m^2 of Community Space totalling 1,800 m^2 overall flexible community space.

Community Facilities - phasing of provision

It is expected that each neighbourhood would contain a suitable community building/hub providing flexibility for a range of local services to be delivered. These would be provided as part of:

- Phase 1 (within or close to the Southern neighbourhood centre)
- Phase 3 (within or close to the Northern neighbourhood centre)
- Phase 4 (within or close to the Crockleford neighbourhood centre)

4.3.2 Education

Education – relevant updates and current context

The Garden Community will need to provide an appropriate a mix of types of schools to address needs generated by the new population. ECC has statutory duties to facilitate Early Years and Childcare (EYCC) provision within the county and ensure sufficient primary and secondary school places are available.

There are two stages to assessing the need for new school places/new schools within an area. First, it must be determined what the likely demand for school places is based on changes in population and development, and second, the current capacity of schools in the area needs to be determined.

At a national level, the Department for Education (DfE) produced a document 'Education provision in garden communities" (April 2019) to provide guidance as to how to approach planning for new schools as part of planning new garden communities nationwide. ECC have also published a guidance note on "Garden Communities and Planning School Places" (January 2022). This aims to seeks to describe how new mainstream state funded statutory age range schools, serving new Garden Communities in Essex, will be established to be in relation to the type and scale of such proposals, and the relationship to wider Garden City principles.

16-18 education in Essex is mainly delivered via School Sixth Forms, Sixth Form Colleges, Further Education (FE) Colleges, or private training providers. There are 56 School Sixth Forms in Essex funded by the Education and Skills Funding Agency (ESFA) to deliver training to 16-18 year olds. There are also some special schools delivering Post 16 provision. A number of learners (resident in Essex) travel to School Sixth Forms outside of Essex, including schools in surrounding Local Authorities. There are also a number of independent schools in Essex offering Post-16 courses.

Colchester Institute is the largest FE provider serving North Essex, including Colchester city. The Institute has campuses in the towns of Colchester and Braintree, as well as the Harwich Energy Skills Centre in Tendring. A separate campus in Clacton was closed in 2019. The Institute has made significant improvements to its Colchester campus to better focus on growth and priority areas and resources to support Engineering, Construction and Digital Media.

The funding of new EYCC facilities and schools and additional classroom capacity to support new housing growth is expected to be secured through developer contributions. Typically, the value of the contribution is calculated through a formulaic approach dependent upon the number of new dwellings and child yield. At present this is then subject to a Section 106 agreement and a contribution made by the developer to the Councils, where ECC is then tasked with delivering the additional education capacity.

The other principal funding source available to ECC for school improvements is the Basic Need Fund allocated by the DfE to local authorities to contribute towards a sufficiency of school places in areas of need, and where no other funding sources are available. ECC would expect that funding for addressing education infrastructure needs would be dependent on developer contributions.

Education - requirements

The Garden Community will need a range of Early Years Childcare options and ECC advised during the preparation of the Draft Plan that it will need to provide of a minimum of 12 facilities. This requirement for new EYCC facilities is set out in Policy 7 of the DPD. These would be co-located with each primary schools, with additional facilities located convenient to new housing and neighbourhoods. The ECC Developers' Guide to Infrastructure Contributions sets out costs for early years provision.

In relation to primary schools, ECC consider that up to five new primary schools are required. This requirement for new primary schools is set out in Policy 7 of the DPD. As mentioned above, each of these would be co-located with a 56-place EYCC facility. The ECC Developers' Guide to Infrastructure Contributions sets out costs of primary school places.

ECC have advised that at least one and up to two secondary schools may be required – when considering the overall scale of the Garden Community. As the Submission Version is now proposing

7,500 new homes and based upon the projected population and tenure mix, the current requirement is anticipated to be between 10-11 Forms of Entry. This is more likely to be delivered through a single secondary school, as otherwise two separate secondary schools would not be of an appropriate size. Secondary education should be co-located with (and/or in close proximity to) one of the primary schools to provide the option of an all through school and will require sixth form provision. The ECC Developers' Guide to Infrastructure Contributions sets out costs of secondary school places.

The need for additional sixth form provision in Essex is assessed on a case-by-case basis, so that contributions are only required where necessary. However, the funding formula is outlined in the ECC Developers' Guide to Infrastructure Contributions and as a guide, commensurate costs for sixth form are an additional 20% to the cost of new secondary school provision.

The scale of the Garden Community will require the provision of new education facilities that are comparable with the total number of homes built and the housing mix delivered. Garden Communities by their nature are unique developments and the precise level and pattern of demand for school places may differ from the norm that has been observed on other developments. Therefore, as proposals are prepared by the developer, it is important that the planning of new schools is informed from the outset by bespoke demographic studies commissioned by the developer to provide a consistent evidence base for the planning of all social and community infrastructure, and to confirm exact requirements against those contained in the DPD.

An allowance was included as part of the work done for Section 1 for all related education requirements. This was based upon an assessment of education needs at that time which equated to 8 Forms of Entry for primary and 8 forms of entry for secondary. Early years provision was added to each primary school with an additional 5 early years centres accounted for. Costs of schools were considered through a benchmarking exercise of the actual costs of comparable schools.

For the purposes of this plan, these costs have been carried forward and uplifted to present day costs that account for cost inflation since the previous assessment. Whilst the overall quantum of homes remains the same as previously assessed (7,500), latest projections of child yields consider that the need could be up to 10 forms of entry for both primary and secondary. As such the previous costs have also been updated by 25% to equate for this potential increase.

Education infrastructure - phasing of provision

It will be important to ensure that new residents on the site have early access to on-site primary education. As such the first new primary school (and associated early years) will be required shortly after commencement, early in Phase 1.

Additional primary schools (and early years provision) will need to be provided for each subsequent phase with appropriate and specific trigger points to be negotiated and resolved through subsequent negotiations on planning obligations.

The new secondary school will anticipated to be needed to be delivered before circa 1,500-2,000 homes are occupied. This equates to it being delivered early in Phase 2 which also aligns with a sequential approach to the development of the Garden Community, with the potential secondary school being in a central location between the Southern and Northern neighbourhoods.

4.3.3 Emergency Services

The three main emergency services, Police, Fire and Rescue and Ambulance, are responsive organisations with a duty to serve the population within their area, and so the deployment of resources is based on response times to serve this population. These services are not a significant driver or barrier to growth and will generally deploy their resources to serve the scale and location of new development.

Police – relevant updates, current context and requirements

Previous work on Colchester's IDP for Section 2 reported that Essex Police did not require any site-specific new infrastructure to address the needs arising from growth. Rather, it required the refurbishment of the existing police estate from which police staff can operate. The specific nature of any requirements would need to be assessed on a case-by-case basis. Moving forward, Essex Police intends to gather evidence relating to the demands placed on its services that are directly attributable to growth. The intention is that this evidence will be sufficient to justify the use of developer contributions to part fund specific, identified refurbishments of the police estate.

The Police service does not receive sufficient central capital funding for new growth-related development. The funding allocated to the Police and Crime Commission via Home Office grants, Council Tax precept and other specific limited grants is generally insufficient to fund requests for capital expenditure whilst there is a time lag associated with the Police receiving operational funding.

Moving forward, Essex Police intends to gather evidence relating to the demands placed on its services that are directly attributable to growth. The intention is that this evidence will be sufficient to justify the use of developer contributions to part fund specific, identified refurbishments of the police estate. At the present time it is not in a position to set out specific levels of developer contribution towards meeting these needs. Any requirements would need to be considered as planning applications are developed, submitted and assessed.

Fire Service – relevant updates, current context and requirements

Developer contributions towards new fire service infrastructure facilities may be requested where a specific need arising from a development is identified. Any contribution will be calculated to be proportionate to the development, given that contributions cannot be required to remedy existing deficiencies. Contributions may be by way of land provision and/or financial contributions towards new infrastructure.

The assessment of need for new infrastructure will factor in the location of facilities in relation to planned developments and response times to deal with emergencies. Alternatives to developer contributions can also be explored, for example: the fitting of new buildings with sprinkler systems (where not a requirement of building regulations); smart meters in houses; or other facilities.

New development may require the provision of fire hydrants and associated infrastructure. Where fire hydrants and associated infrastructure are required, then developers will need to agree a scheme with the Water Authority and County Fire Service, and assume responsibility for funding this provision.

The initial response from the fire service only seeks contributions in relation to the developer bearing the costs for any new fire hydrant installations deemed necessary by the Fire Authority where the new development exceeds 10 dwellings. In addition to the above, the fire service has the following specific requirements:

- Use of any community space for fire service prevention teams to deliver Fire Safety and Education visits, with the shared use of an electric charging point.
- Installation of smoke alarms and/or sprinkler systems throughout each building.

Essex County Fire and Rescue Service state that they welcome the opportunity to continue conversations as the development progresses to ensure opportunities to reduce risk and improve the emergency service provision are realised.

Ambulance – relevant updates, current context and requirements

Demand for emergency and urgent care continues to rise nationally and in Colchester, the Ambulance Service has outgrown its current site. Plans are in place to build a larger hub subject to funding and governance processes. These hubs are part of a programme involving significant investment in modernising ambulance services across the region. A hub requires a site of between 1.5 and 2 acres and would be funded in line with EEAST's Estates Strategy. The current programme aspires to have a new hub development in operation in Colchester by 2025.

The East of England Ambulance Service Trust (EEAST) is currently working with the Suffolk and North East Essex Integrated Care System on responding more effectively to planning applications and local plans. EEAST requires knowledge of large-scale developments (over 250 dwellings) so that it can model staff and ambulance resources to ensure statutory response times to, from and through the new development area can be met. Response times can be affected by increased construction traffic, road closures or highway works related to a development. It is with this in mind that EEAST are working with the local planning authorities in the area on all local plans and as a statutory consultee during the planning process.

In April 2022, the Draft DPD representation from the health stakeholders that set out a number of potential contributions. Whilst the material set out a number of potential financial requirements, it did not fully provide an assessment of impact and mitigation related to the requested monies.

Moving forward, EEAST will make representations on planning applications that will have an effect on the service (large scale developments and cumulative effects from smaller applications) and will be requesting developer contributions as part of this process to ensure that the infrastructure (systems, vehicles and premises) is in place to meet the demands of the service and its statutory obligations

The working assumption is that any necessary financial contributions towards other emergency services infrastructure could be resolved in due course through determination of planning applications and associated section 106 agreement(s).

4.3.4 Health

Health – relevant updates and current context

Healthcare in England is provided by a range of organisations under the umbrella of the Department of Health and Social Care (DHSC) which has the responsibility for strategic leadership of both the health and social care system.

The National Health Service (NHS) in England commissions specialised services (for example, cancer, renal and forensic mental health services) and some primary care such as dentistry, ophthalmology, offender healthcare and some services for the armed forces. NHS England also has a number of roles including funding local Integrated Care Boards (ICBs) to commission services for their communities and ensures that they do this effectively. These are groups including local GPs with commissioning responsibilities that took over responsibility for commissioning local health services following the abolition of Clinical Commissioning Groups (CCGs) in July 2022

The NHS Long Term Plan, published in January 2019, had objectives to improve the quality of patient care and health outcomes and sets out the expectation of modern, resilient primary care supported by excellent community care including mental health and an integrated service model which ultimately reduces reliance on hospital-based services.

Primary care networks build on the core of current primary care services and enable greater provision of proactive, personalised, coordinated and more integrated health and social care. Clinicians describe this as a change from reactively providing appointments, to care more proactively for the people and

communities they serve. Primary care networks are based on GP registered lists, typically serving communities of around 30,000 to 50,000 people.

The creation of these networks has resulted in many more additional roles in general practice, and a greater number of services being delivered in the community as opposed to hospital-based care. This allows care to be delivered closer to home, and by clinicians people know and trust.

The primary care estate is a mix of NHS owned and leased property, privately owned and leased property, and privately owned property. As primary care funding is provided per capita at the point of patient registration, the ICB has identified that it will not be possible to plan to meet the increasing demand created by developments without external funding contributions to infrastructure costs.

The COVID-19 pandemic has affected the way general practice delivers primary care services - telephone and video consultation are now more mainstream and could continue in that vein in future. This reduces the need for consultation rooms as clinicians can operate from anywhere, theoretically. This new way of working does have the potential to ease the existing pressure on estate capacity, but patients still often need to be physically seen, and expansion is still much needed to provide the required standard of patient care whilst accommodating the growing number of roles in general practice.

Electronic prescribing will also assist patients to make requests for their regular medication and collect it direct from the pharmacy of their choice, removing the unnecessary step of travelling to and from the practice itself in the future. This is part of a national drive to further remote and electronic access to primary care services.

Primary care is adopting a Digital First approach to primary care investment. An agreed Integrated Care System Road map for Suffolk and North East Essex was introduced in 2019, many of the initiatives were brought forward as a result of the response to Covid 19 and have already proven successful. GP practices, care homes and community service providers have been using telephone/video consultations, and smartphone applications to enable patients to request prescriptions and appointments. Practices within Primary Care networks will enable digital first options to improve fast access to primary care, reducing waiting and travelling time for patients, services will include outpatient follow up appointments and medication reviews. Consequently, the need for high speed broadband access and flexibility in terms of the provision of digital health infrastructure to any new housing development is crucial in order to ensure the success of the Digital First approach.

Guidance on Garden Communities and Healthy places

The NPPF makes clear that creating high quality buildings and places is fundamental to what the planning and development process should achieve. The National Design Guide, and the National Model Design Code and Guidance Notes for Design Codes illustrate how well-designed places that are beautiful, healthy, greener, enduring and successful can be achieved in practice. This national policy and guidance has outlined the importance of 'health' with it being identified as one of ten key characteristics of well-designed places.

As part of the consideration of garden communities across North Essex, the Councils were part of the NHS: Putting Health into Place : Healthy new towns programme. This programme was a collaboration led by the NHS and a number of other organisations which worked with 10 demonstrator sites and drew out key lessons which are shared in a series of published good practice guides in 2019.

Furthermore, Homes England curated Building for a Healthy Life as a design tool to help improve the design of new and growing neighbourhoods. It was produced in 2020 by Homes England in partnership with NHS England and integrates the findings from the Healthy Towns Programme. It has

been created as a design code to allow a broad range of people to use it easily. It is organised across 3 headings and contains 12 considerations to think about the qualities of successful places and how these can be best applied to the individual characteristics of a site and its wider context.

In light of the importance of health and wellbeing to the proposals, a separate Topic Paper has been prepared which considers how health and wellbeing has been considered in the planning and strategic masterplanning process to date.

Health Infrastructure - requirements

The anticipated population growth on the Garden Community (of circa 17,000 people, based upon 7,500 homes and proposed mix of houses/flats) will generate a need for new and enhanced health facilities. Whilst there is no specific or recommended number of full-time (or whole-time) equivalent (F/WTE) GPs per total number of patients, a working assumption for the purposes of previous infrastructure assessment work carried forward into this plan is a requirement for 1 GP for approximately 1,800 patients, which would lead to a need for new provision of circa 10 GPs.

The actual health needs would however need to be considered carefully through the preparation of a Health Impact Assessment for each phase of development and related Health Strategy. Work on these would need to consider the overall development strategy for the site and include matters of how healthy design principles have been integrated, scheme phasing and make up of the new onsite population. This approach will be needed to inform subsequent discussions with relevant stakeholders about all aspects of health care provision.

In response to the Regulation 18 consultation on the Draft DPD, Lawson Planning on behalf of the East Suffolk and North Essex NHS Foundation Trust (ESNEFT) sought recognition for the Garden Community that DHSC funding alone is not sufficient to meet acute healthcare infrastructure needs directly and that S106 and/or CIL contributions are needed to mitigate the additional impacts.

NEECCG suggested a need to explore innovative ways of enabling provision of community hub spaces that would be flexible to enable health and wellbeing services to access, for example social prescribing opportunities, space that can be used flexibly as clinical space when required i.e. vaccination services and the provision and operation of multifunctional community buildings and spaces, which could include the use, and co-location of services such as schools, libraries, and health and wellbeing services.

NEECG noted a move to health hubs incorporating health and wellbeing teams delivering a number of primary and secondary care services including mental health professionals, were being developed. The Acute hospitals will be focussing on providing specialist treatments and will need to expand these services to cope with additional growth. Any services which do not need to be delivered in an acute setting will look to be delivered in the community, closer to people's homes.

ESNEFT also noted that hospital services are to be reconfigured and transformed, with new models of care, meaning more care will be provided as close to people's homes as possible. This focus on bringing care provision into the community may see the creation of health care 'hubs'/networks and greater integration of services and shared assets.

NEECCG would seek to review any Health Impact Assessment for the Garden Community when it is developed and seek appropriate mitigation in support of provision of healthcare services, including those requirements but not exclusively for Primary Healthcare, Ambulance Services, Mental Health and Secondary Care Services.

For the purposes of this Infrastructure Delivery, Phasing and Funding Plan, an allowance has been included for the provision of additional dedicated healthcare facilities as part of the Garden

Community, with developer contributions assumed towards its provision. Noting that this is just a working assumption to be further refined via work on a Health Impact Assessment and Health Strategy, and that the actual nature of provision and its specific location will be subject to more detailed work on masterplanning and planning applications. In addition, further consideration would be given to how such facilities are provided within or alongside wider flexible community space to enable related community facilities and services to be provided in an effective and joined up way.

The following assumptions have been adopted from the work initially undertaken as part of the evidence for the Garden Community, as considered and found sound via the Examination in Public on the Section 1.

- Assumes a total new population of circa 17-18,000 people on the Garden Community
- Assumes 1,800 people per GP (as per Social Infrastructure Standards considered at Section 1).
- Assumes 165m2 of healthcare space per GP (as per the 'Infrastructure Planning, Phasing & Delivery Study' prepared by AECOM for Section 1)
- Costs based upon cost benchmarking (as per the Gleeds 'Infrastructure Order of Cost' report, with prices updated to present day).

The above assumptions generate a need for 1,650sqm of dedicated healthcare space. An additional allowance for dentist space has also been included (550 sqm – also included in the Section 1 work).

This level of provision is a preliminary assessment only and will need to be reviewed against the outcomes from further work to consider the Health Impact Assessment and the Health Strategy. This may result in a wider range of requirements with different costs.

Policy 1 sets out the key land use assumptions for the Garden Community, including the need for a dedicated health & wellbeing hub alongside other flexible community space. Policy 7 provides more information on health matters related to the policy on Social and Community matters. This includes land to be reserved for general medical use, to enable the future development of primary health care hub/s. In effect, the DPD takes a pragmatic approach to the need for additional primary health care floor space, recognising that onsite provision will be required but allowing for a degree of flexibility on potential delivery solutions.

Health infrastructure - phasing of provision

The actual provision of primary health care, including its phasing is a complex issue, not least because it requires further more detailed assessment, involves various stakeholders and approval processes both in relation to capital funding and to how such services would ultimately be provided. At this stage in the process it is not practicable to resolve the optimum delivery solution in advance of the preparation of a HIA and Health Strategy. The details would ultimately be resolved through preparation of this material and the consideration and determination of future planning applications and associated section 106 agreement(s).

It is clear that needs of a future growing population would be required as part of the first phase, as part of a wider and strategic long term approach to create suitable facilities at the appropriate size/scale and level of services to be provided. Health and well being services will need to be provided from Phase 1 to meet the needs of first residents, and be expected to grow over time as the on site population increases.

4.3.5 Indoor Sports & Leisure

Indoor Sports & Leisure – relevant updates and current context

The Councils have undertaken additional work on sports and leisure requirements as part of the updated evidence base. The 'Colchester & Tendring Open Space, Playing Pitch, Outdoor Sports and Built Facility – Overarching Strategy' (KKP, January 2023) has reviewed overall provision across the City and District areas, and also assessed the needs of the Garden Community

In addition, the Strategic Masterplan has considered sports and playing pitches as part of the approach to open space and community facilities provision, which has informed the Policies Map and land uses being proposed in the Submission Version DPD.

The Open Space, Playing Pitch, Outdoor Sports and Built Facility Overarching Strategy' notes that providing combined facilities – indoor sports, swimming and fitness are more attractive to users and aligns with current fitness trends. The combination of health and fitness and swimming is also more attractive to potential members seeking a gym and swim option – which tends to be of higher value than a standalone gym alternative. This has the potential to give the venue a competitive edge when competing with local commercial fitness operators which cannot match this offer.

Developing a sports centre within the Garden Community presents an opportunity to also co-locate sports facilities with other community/health provision in the development area. Good examples of this from elsewhere across England are referenced as comparables, including the Chiltern Lifestyle Centre (Amersham) and Orford Jubilee Neighbourhood Hub (Warrington). These look to meet community need by locating community services such as pharmacy, GP surgery, library, nursery, theatre, education, children's and adult social care provision and more at the same venue.

Development of Garden Community provides an opportunity to resolve some specific local needs in respect of sports hall sports and swimming pool provision. It has the potential to be an exemplar facility in the context of its gearing to provide opportunity and actively attract and cater for people with significant health needs and those from the two authorities' most deprived communities for whom price and aspiration are key barriers. It enables the indoor sports (which are already popular and for which interest already straddles both authorities) the opportunity to thrive as part of the Garden Community reducing reliance on facilities in neighbouring authorities.

Indoor Sports & Leisure – requirements

Sport England's The Sports Facilities Calculator (SFC) helps to estimate the level of demand for key community sports facilities generated by a given population. It is hosted on the Active Places Power website. Based on the projection that the Garden Community will have a population of circa 17,000 people, the facilities required as assessed via the calculator are set out in Table 4.2.

Table 4.2: Sport England Sports Facilities Calculator

Sports halls		Swimming pools	
Courts	4.5	Lanes	3.3
Halls	1.1	Pools	0.8

Note: these values exclude needs related to the University of Essex

Indoor Sports & Leisure – phasing of provision

It is assumed that the provision of built sports facilities would be best located as part of the proposed Sports & Leisure Park, and to be provided as a combined facility to also serve the additional needs of the University of Essex. As the University have set out needs for additional space over the short term, it is anticipated that this facility would be provided as part of Phase 1.

4.4 Environment and Waste

Waste – relevant updates and current context

Existing and emerging national legislation and policy (including the Waste and Resource Strategy for England and other measures in the Environment Act 2021) seeks to deal with waste more sustainably by reducing the amounts of waste being generated and managing it in a manner to reduce environmental impacts. This will require the adoption of Circular Economy principles where waste is designed out of systems, and resources and products are kept in use for as long as possible. This will lead to the adoption of more effective reuse, recycling and composting systems and a shift away from the more environmentally impactful waste treatment and disposal methodologies. As a result, these measures will all contribute positively to the net zero carbon commitment and the service will be looking to focus on these aspects more in the future.

ECC is the Waste Disposal Authority (WDA) covering the Colchester and Tendring local authority areas and provides waste handling, treatment, and disposal infrastructure to ensure waste generated by households, and other wastes collected by Councils in Essex is effectively managed. The WDA also provides facilities accessible by the public for the collection of waste prior to onward treatment or disposal. CCCC and TDC are the Waste Collection Authorities and are responsible for the collection of waste from properties and elsewhere. This includes household waste and any other wastes collected by, or on behalf, of councils, including street cleansing, and commercial and industrial waste.

The major waste treatment and disposal infrastructure currently in place for managing local waste has considered the anticipated waste growth levels resulting from the adopted Local Plans. This infrastructure is secured through contracting arrangements with private operators and is not operated or provided directly by ECC as the WDA. This approach is subject to periodic review and may change in the future leading to a need for additional waste infrastructure being provided directly by ECC.

The Waste Transfer Station (WTS) serving Colchester and Tendring is located off the A120 near Ardleigh. The site provides for both the Colchester and Tendring areas and has a permitted design capacity of 115,000 tonnes p.a.

Although residents of the Colchester City area are permitted to use any of the 21 recycling centres provided by the WDA, most will access the facility closest to home. ECC provides two facilities within the Colchester City area, these are used almost exclusively by the residents of Colchester. These are located at Shrub End and West Mersea. ECC provides four facilities within the Tendring District area which are used almost exclusively by Tendring residents. These are located at Clacton, Kirby Le Soken, Lawford and Dovercourt. A smaller number of residents on the fringes of the district are also likely to make use of facilities located in the Braintree, Maldon, Tendring and Chelmsford areas.

Waste – requirements

Considering the current usage of existing facilities and anticipated future waste arisings it is anticipated that there is sufficient capacity for the growth without the need for major investment in the network or the establishment of new bulking capacity to serve the local area. This position is predicated on the current per capita waste arisings and collection system architecture remaining unchanged.

Changes to services and consumer behaviour can lead to increased waste. Headroom capacity of local facilities will be reviewed periodically during the plan period to ascertain sufficient capacity remains to continue to meet the growth proposals, or whether per capita waste arising growth necessitate further investment in waste infrastructure.

Should upgrading of the current network be necessary, this could be delivered by either increasing the peak vehicle handling capacity of existing sites through infrastructural upgrade, or the development of larger replacement sites.

The Essex Joint Municipal Waste Strategy will be subject to review and update. This work will include a review of existing Recycling Centres for Household Waste capacity levels and the infrastructure improvements required to maintain acceptable service levels. The output of this work will form the evidence base for future investment requirements for the waste services and facilities.

Any potential requirements for waste matters could be resolved in due course through determination of the planning applications and associated section 106 agreement(s).

4.5 Open Space and Green Infrastructure

Open Space and Green Infrastructure - relevant updates and current context

The Councils have undertaken additional work on open space as part of the updated evidence base. The 'Colchester & Tendring Open Space, Playing Pitch, Outdoor Sports and Built Facility – Overarching Strategy' (KKP, January 2023) has reviewed overall provision across the City and District areas, and also assessed the needs of the Garden Community

The Strategic Masterplan sets out an extensive green and blue infrastructure network of accessible greenspaces and natural habitats both within and around the Garden Community. These include parks, recreation grounds, playing fields, woodland, street trees, allotments, informal open green spaces, and woodlands.

The proposals will also need to address the requirements of the Essex Coast Recreational Disturbance Avoidance and Mitigation Strategy (RAMS). This aims to deliver the mitigation necessary to avoid significant adverse effects from 'in-combination' impacts of residential development that is anticipated across Essex; thus protecting the Habitats (European) sites on the Essex Coast from adverse effect on site integrity. All new residential developments within the evidenced Zone of Influence where there is a net increase in dwelling numbers are included in the Essex Coast RAMS

Natural England recommend a strategic approach to mitigation along the Essex and through a partnership approach. This ensures maximum effectiveness of conservation outcomes and cost-efficiency. In recognition of this, the 'Essex Coast Recreational disturbance Avoidance and Mitigation Strategy Supplementary Planning Document (SPD) - May 2020' required a contribution of £122.30 per dwelling towards mitigating the impact of disturbance on sensitive and important habitats. The contribution is index linked and the 2022/23 tariff is £137.71 per dwelling. All dwellings within Colchester city and Tendring district are liable for the charge. 7,500 dwellings would result in a cost of £1m.

In their response to the Draft Plan, Natural England (NE) welcomed the landscape-led approach to the masterplanning of the Garden Community. NE also referenced an expectation of 'Sustainable Alternative Natural Greenspace' (SANG). NE made clear that this is not a formal requirement with respect to the need for SANG related to the Thames Basin Heaths Special Protection Area but instead it is a desire to achieve the guidelines and principles of including accessible local greenspace. The impact on relevant designated sites is addressed through the RAMS contribution.

Green Infrastructure - requirements

For open spaces, provision standards are used to calculate need. The quantity standards from the CBC Infrastructure Delivery Plan (2021) are used to determine the open space provision requirements as part of the Garden Community. The relevant standards are set out in Table 4.3.

Table 4.3: Open Space Requirements

Typology		Quantity Standards (ha per 1,000 population)
Parks & gardens		1.76
Natural & semi-natural greenspace		5.00
Amenity greenspace		1.10
Allotment and community gardens		0.20
Provision for children & young people	Children's play	0.25
	Young people (dedicated)	0.30

On the basis of 7,500 homes, Table 4.4 sets out the overall open space requirements for the Garden Community.

Table 4.4: Garden Community Open Space Requirements

Open Space Requirement (ha)					
Parks	Natural	Amenity	Allotment	Play	MUGA
30.2	85.8	18.9	3.4	4.3	5.1

With regard to sports and playing pitches, future demand is translated into teams likely to be generated, rather than actual pitch provision required. The Sport England Playing Pitch Calculator (PPC) considers the likely demand generated for pitch sports based on housing and population increases and converts the demand into match equivalent sessions and the number of pitches required. These figures can be used to understand demand for new provision associated with development. The results of the PPC identify an indicative need for 16-17 grass football pitches, one senior rugby union pitch, one cricket square and one full size third generation (3G) pitch. There is no identified need for either new dedicated rugby league provision or for hockey suitable artificial grass pitches. The Strategic Masterplan has calculated the overall requirement to be around 21 hectares, with provision suggested across a number of hubs, including a combined facility south of the A133 as part of the proposed 'Sports & Leisure Park'.

The latest work on sports and playing pitches indicates that supplying all provision on one site is unlikely to be operationally viable. As such, a multi-site offer is likely to be the most suitable approach. This can include provision at new education sites, but it must have secured community use. It is more likely that dedicated community sports hubs would provide better outcomes, provide better quality maintenance opportunities and be more accessible for residents and user groups, particularly across daytime hours.

In the case of the Garden Community, as there is a significant need for associated sports provision there is an opportunity to consider the development of one or more sporting hubs which are separate to any educational sports provision (albeit these could overlap in terms of shared use of facilities).

The Sport England PPC requirements for the Garden Community could also partially be met through off site contributions, improving sites within the locality of the development to increase capacity and user experience.

Green Infrastructure - phasing of provision

In terms of dependencies, it is assumed that the delivery of primary green infrastructure areas tracks residential occupations. insofar as this is consistent with a landscape-led approach to design. It is therefore envisaged that green infrastructure will be delivered within all four phases.

A multi-functional network of primary green spaces and corridors will be created as the development progresses to provide optimum benefits in terms of amenity and ecology. The delivery of strategic green infrastructure components will be concentrated at certain points during the implementation period; i.e. where this is in the best interests of delivering the optimum overall network of green spaces. This will include:

- Early delivery of additional open space associated with creating the new Salary Brook Country Park as part of Phase 1.
- Advance planting and early provision of sports and leisure uses as part of the Sports and Leisure park located on land south of the A133, as part of Phase 1, initially anticipated to include additional sports provision for University purposes and the first residents of the Garden Community.
- Green corridors to distinguish between the three neighbourhoods, with the east-west corridor delivered late in phase 1/early phase 2, and the northern corridor between the northern neighbourhood and Bromley Rd Neighbourhood late in phase 3/early phase 4.
- The provision of sports and leisure facilities for the northern neighbourhood (phase 3) and Bromley Road neighbourhood (phase 4).

When it comes to local open spaces and facilities there will be an appropriate distribution of various types of facilities across the development, to ensure that provision remains in sync with housing delivery.

The RAMS contribution would be payable in line with the requirements of the Supplementary Planning Document and throughout the delivery all phases.

4.6 Others

Whilst not strictly defined as ‘infrastructure’ the proposals including additional allowances for economic development and stewardship.

4.6.1 Economic Development

Economic Development - requirement

An allowance for developer contributions to help attract new businesses and create jobs on the site was included in the costing and viability work undertaken for Section 1. This amounted to a cost of circa £750 per residential unit. The precise use of such funding is not pre-determined, but could be used to help subsidise the provision of appropriate business space, including potential start-up and incubator types of uses. It could also support with capital and rental costs should these be a barrier to attracting the types of occupiers to the proposed employment sites on the Garden Community.

This value has been retained as an ongoing assumption.

Economic Development – phasing of provision

Contributions towards local economic development have been phased throughout the delivery of the Garden Community to ensure an ongoing proactive approach to local job creation..

4.6.2 Stewardship

Ensuring the long term management, governance and stewardship of assets is a key component of a garden city type of development, a key element to distinguish such schemes from traditional forms of development. Given the scale of the Garden Community, it is anticipated that some form of new body would be created to assume responsibility for a host of community development activities, in addition to managing and maintaining a wide range of community assets. It could eventually have a sizeable team of permanent staff members, in addition to a group of volunteers.

Any stewardship body will be influenced by a number of important considerations, many of which will only become more defined as more detailed proposals start to emerge via discussions with a range of stakeholders including the developers, and alongside more defined proposals for physical development on the site via future planning applications. At the present time no fixed view has been taken on any specific stewardship model, the extent of community assets that it will take on, it's overall operational costs and income streams.

It is anticipated that there would be phased provision with an appropriate model established and potentially evolved as the development comes forward. The stewardship body could be based within some of the community facilities or other commercial mixed use space, with a presence expected as part of Phase 1. This could be temporary related to how any permanent provision may be best located considering the full build out and extent of the Garden Community.

Stewardship – requirements

An allowance for developer contributions to support the establishment and operation or a stewardship model was included in the costing and viability work undertaken for Section 1. This amounted to a cost of circa £2,000 per unit which had been derived from an assessment of potential maintenance costs of open space and community facilities over a defined time period. This value is comparable to other similar assumptions used for other projects and has been retained as an ongoing assumption.

The calculation generates an overall sum, albeit it would be expected to be refined as part of more detailed understanding of the nature of any final preferred model, it's asset base, operational costs and potential income streams. This would need to be confirmed via the preparation of a business plan, aligned with the consideration and determination of planning applications.

Stewardship – phasing of provision

It is anticipated that the stewardship allowance would be payable in a manner that can be used to generate sufficient income streams to ensure that the stewardship model is financially viable. For the purposes of this Plan and the separate viability work, it is assumed as 2 equal payments, one at the start of Phase 1 (to enable a model to get operational) and the second at Phase 3 (to align with additional community assets being taken into the arrangement).

5 Funding and Future Delivery

There are a variety of potential funding sources available for the provision of strategic and site-based infrastructure. This chapter provide a list of relevant sources of funding – it is not exhaustive and additional funding streams may also be available, or will do so over time.

5.1 Developer Contributions

Developers will be asked to mitigate any adverse impacts arising form proposals and provide contributions for infrastructure in several ways.

Local authorities should consider whether otherwise unacceptable development could be made acceptable through the use of conditions or planning obligations. Developers will have to comply with any conditions attached to their planning permission. Conditions would only imposed where they are necessary, relevant, enforceable, precise and reasonable.

Planning obligations, in the form of section 106 agreements and section 278 agreements, can also be used where it is not possible to address unacceptable impacts through a planning condition. Developers may also contribute towards infrastructure by way of the 'Community Infrastructure Levy' which is a fixed charge levied on new development to fund infrastructure.

It must also be acknowledged that at the time of preparing this plan, there is a review being undertaken as part of the Levelling Up and Regeneration Bill and wider planning reform proposals. The Government have set out an intention to consider a new and simplified national 'Infrastructure Levy' to replace or work alongside current approaches.

5.1.1 Planning Conditions

Planning conditions attached to a planning permission enable development proposals to proceed where it would otherwise have been necessary to refuse planning permission, by mitigating the adverse effects of development. This may include the provision of infrastructure. Planning conditions should meet the policy tests set out in national planning policy in that they are necessary, relevant to planning and to the development to be permitted, enforceable, precise and reasonable in all other respects.

5.1.2 Section 106

The main source of funding is developer contributions is secured through a Section 106 Agreement to provide infrastructure related to a specific site. In order to ensure that developments are acceptable to the wider community and do not place excessive additional pressure on local services and facilities, planning obligations or financial contributions are sought to fund enhancement or mitigations to services from the site developer as part of the planning permission. These Section 106 requirements must be relevant and reasonable and therefore are subject to the following tests:

- Necessary to make the development acceptable in planning terms;
- Directly related to the development; and
- Fairly and reasonably related in scale and kind.

In some cases, the developer will be required to provide the infrastructure or facility as part of their development, and in other events it will be necessary for the developer to pay a contribution to the Council for them to commission the necessary works.

5.1.3 Section 278 Highway Agreements

A Section 278 highway agreement made under Section 278 of the highways Act 1980 (as amended) is an agreement between a highway authority (in this case, Essex County Council) and a person who agrees to pay all or part of the cost of highway works.

5.1.4 Infrastructure Levy

CIL legislation was introduced in 2010 and is a charge that can be levied by local authorities on certain new development to help to pay for infrastructure that is needed to support the impact of development in an area. The charge is set by a local authority through the preparation and adoption of a CIL Charging Schedule. Once in place, CIL largely replaces the use of section 106 (S106) developer contributions, although these can still be used for site-specific infrastructure and to provide affordable housing.

Planning Practice Guidance defines the Community Infrastructure Levy (CIL) as 'a tool for local authorities in England and Wales to help deliver infrastructure to support the development of their area.' The basis for CIL was introduced through the Planning Act 2008 and it can into force on the 6th April 2010 through the Community Infrastructure Regulations 2010.

Once the CIL rates have been set through a charging schedule, all relevant development will have to pay the levy, which is expressed as pounds (£) per square metre (m2). In setting the levy, the charging authority should strike an appropriate balance between the desirability of funding infrastructure and the potential impact upon economic viability of development across the area. The levy is due on the date that chargeable development commences

CIL funding is never expected to be able to fund all infrastructure projects because the levy at which it is set must ensure that new developments remain viable.

Neither Colchester City Council nor Tendring District Council (the charging and collecting authority) have adopted CIL and therefore other approaches to secure obligations via conditions and S106/S278 agreements will apply to the Garden Community.

The Levelling Up and Regeneration Bill (May 2022) sets the framework for government to introduce a new Infrastructure Levy that would principally replace the current system of developer contributions. Compared to CIL, the focus is shifted for rate setting towards the capture of land value uplift. The levy will be charged on the value of property when it is sold and applied above a minimum threshold. The rates will be set as a percentage of gross development value rather than based on floorspace.

The details around a new Infrastructure Levy are not yet clear. It is anticipated that there would be transitional arrangements before any new approach is introduced. It is also anticipated that the new Levy may not completely replace other approaches such as the use of S106 agreements, which may well be retained for use in specific circumstances, such as for strategic proposals like the Garden Community, to ensure mitigation of impacts in the specific local area.

5.2 Infrastructure Providers

A wide range of lead agencies for the provision of infrastructure have been identified in this Plan related to the various infrastructure themes. For example, these include ECC, the Environment Agency (EA), Affinity Water, Anglia Water Services, Cadent Power, NHS Suffolk and North Essex Integrated Care Board (ICB), Essex Police, Essex Ambulance Service, telecoms providers, developers; and other stakeholders.

It is widely recognised that key stakeholders will have a fundamental role to play in the delivery of all necessary infrastructure identified in this Plan. The challenge, however, is how to pay for the costs of providing new facilities and infrastructure and ensure that they are delivered in a timely manner to enable developments to proceed and occupation to commence. The Councils and its Asset Management teams, Transport and Highways teams, Waste Management, Open Space and Education functions are all experienced in exploring avenues for other public sector funding and to seek options for prudential borrowing where possible or appropriate.

5.2.1 Transport Funding

Transport funding is broadly made available across three different funding streams:

- National agency settlements;
- Local transport settlements; and
- Competitive bidding rounds.

In the case of the former, funding is usually made available to national agencies such as National Highways (previously known as Highways England) (for the Strategic Road Network -SRN) and Network Rail, covering five-year funding cycles – the latest covers Road Investment Strategy 2 (2020-2025) for the former and Control Period 6 (2019-2024) for the latter. In advance of each settlement determination, the Government will normally specify the outcomes that it wishes to see across the five-year period, against which the national agencies will prepare an outline programme and a broad cost envelope, which forms the basis of the final determination settlement.

The agencies will then set out confirmed five-year programmes of major schemes in the Roads Programme and the Rail Network Enhancements Pipeline (RNEP), although in both cases, there are also some smaller designated funding allocations within each programme for use on smaller scale improvements.

Complementary to the SRN programme agreed with National Highways, there is also a programme of improvement schemes across the local road network, agreed by Government on the recommendation of sub-national transport bodies.

Therefore, any works on the road or the rail network that is seeking funding from these sources in the future will need to follow this process, or any replacement process that Government sets out.

There is the opportunity for the Councils to access funding for some of the more local transport improvements in a similar way that has been done recently via the Local Growth Fund. Finally, there are often competitive funding rounds initiated by Government, such as the Transforming Cities Fund (for active travel and public transport improvements) and the Housing Infrastructure Fund. There are also various initiatives relating to promoting public transport (Bus Back Better) and active travel which continue to provide access to funding to implement local projects,

Given the importance of enabling future economic growth and the significance of the Garden Community, it is likely that some form of funding programmes will continue and emerge which could be accessed for any transport improvements required.

5.2.2 Utilities Funding

Electricity, gas and water supply are regulated industries, and providers have a duty under regulations to ensure that all new developments are connected to their network as build out progresses.

Local utilities providers levy a connection and infrastructure charges on developers that broadly reflects the expected additional load placed on a utility network by the connection of premises not previously connected to it. Infrastructure charges do not relate to the costs of reinforcing, upgrading or otherwise modifying existing network infrastructure to address pre-existing deficiencies in capacity or in capability.

Providers are required to maintain a balance between the contribution developer customers make and household customers for the provision of infrastructure. To maintain that balance, some providers offer an income offset that is applied to reduce the charge for developer customers on the basis that new household/users would be paying as customers of new supply.

Regulators apply different approaches, and Ofwat have been consulting on the structure and scope of charges for developer services, with a particular focus on the balance of costs recovered from developers and other customers (the balance of charges) and incentives for better outcomes for the environment and society (environmental incentives). Ofwat are proposing to retain the current arrangements that developers do not contribute to the costs of strategic assets but do more to promote environmental objectives. This could include discounts to provide sustainable drainage systems, or to encourage building homes away from water-scarce zones or areas with capacity constraint

5.2.3 Health Funding

The NHS long-term plan sets out key ambitions for health and care over the next 10 years. The plan builds on the policy platform laid out in the NHS five year forward view which articulated the need to integrate care to meet the needs of a changing population and commits, amongst other things, to reducing pressure on A&E departments, establishing primary care networks and to developing fully integrated community-based health care.

Set within a context of an aging population, with increasing incidence of complex health issues, the NHS budget is already under pressure. Where population growth is planned through new housing being delivered the Integrated Care Board (ICB) is seeking to meet the increasing demand created by these developments and will explore all options for funding to meet local needs arising.

Future necessary expansion of community-based health care accommodation will require all funding options to be considered to meet needs arising. Match funding support for Central Government funding bids will need to be explored.

In order to reduce the overall impact on the healthcare system and its infrastructure, it is essential that health and wellbeing is at the heart of the masterplanning strategy for the whole Garden Community.

To this end the ICB and system partners want a Health Strategy to be prepared, and are requesting to work proactively alongside the local authorities and the developers to ensure appropriate healthcare services and facilities can be made available. The purpose of the health strategy will be to ensure the Garden Community is designed and delivered in ways that will enhance the quality of people's lives both from the outset and in the long term by positively addressing and innovatively responding to the fundamental elements that influence the social determinants of health and wellbeing. This Strategy can provide the basis for identifying specific projects and preparing business cases to secure new and additional investment in new provision.

5.3 Other Public Sector Funding

Homes England is an executive non-departmental public body, sponsored by the Department for Levelling Up, Housing and Communities. Homes England is the Government's housing accelerator, tasked with building better homes faster and seeking to drive positive market change. Alongside a requirement to release public sector land for new housing development, the agency also has significant annual budgets targeted at unlocking further land for housing development. In the past this has included specific programmes for supporting affordable housing delivery and providing critical infrastructure.

To be well placed to access Homes England funding, a local authority needs to build a good case, with a strong evidence base underpinning any new infrastructure or gap funding request. This Plan will be a valuable tool to identify key infrastructure projects that will unlock development potential, and to continue dialogue with Homes England as and when new funding streams become available.

It is critical for public sector partners to work together to prioritise and collaborate on joint funding bids from Government and through devolution funding programmes such as the Levelling Up and Towns Fund. Local Enterprise Partnerships are well placed to articulate business needs and broker negotiations and discussions on behalf of the private sector with local authorities, Government and other key partners such as the utility providers to identify, budget for and lobby for funding to support infrastructure delivery. The LEPs will be integrated into combined authorities by 2030, tracking the pace of the Government's devolution agenda.

There may also be funding opportunities arising from a devolution deal, if this takes place, between Essex authorities and Government.

6 Conclusions and Next Steps

Infrastructure provision in and for the Garden Community will be essential for accommodating policy expectations established in Section 1 and presented in the DPD.

Previous infrastructure assessment work in support of Section 1 has provided useful background information which has been updated as appropriate in light of additional evidence gathering and the preparation of the DPD.

This Plan provides an overall position on the scope, scale and phasing of infrastructure requirements, enabling the Councils to understand the priority of key and critical items which will have significant impact on delivery, and making decisions on planning applications.

Overall Infrastructure Costs

This Plan highlights a wide range of infrastructure provision that will be needed to deliver development and growth – and help to deliver economic recovery, address climate change and plan effectively for a post-COVID-19 world. All the infrastructure identified in this Plan has an important role to play in delivering and supporting sustainable communities and making successful places.

The overall costs by theme are set out in Table 6.1

Table 6.1: Infrastructure Costs

Infrastructure Type	Cost of Infrastructure
Transport	£209.7m
Utilities	£209.6m
Social and Community	£109.5m
Environment and Waste	£5.3m
Open Space and Green Infrastructure	£27.9m
Others (employment & stewardship)	£23.2m
Total	**£585.2m**

As a current estimate, around £585m of infrastructure projects are identified. This is a large number but is not necessarily unusual given the scale and nature of the proposals.

The majority of funding for the infrastructure is expected from developers/landowners in light of policy requirements and the need to mitigate impacts of the future proposals.

It should be expected that there will be a variety of funding sources and delivery arrangements relating to different type of infrastructure. Certain types of infrastructure may well be delivered through a combination of funding sources over time. The award of £100m via the Housing Infrastructure Fund illustrates that other sources will be relevant to the delivery of specific items.

No infrastructure issue has been identified through this plan that would prevent development taking place across the Garden Community. There may be infrastructure related phasing issues to address over time, transport and utilities infrastructure are usually linked to triggers controlling the commencement of development activity. This includes essential services that are required to be delivered in advance of residential/commercial development.

Going Forward

The information set out in this plan should be treated as ‘live’ and will be used by the Councils as part of ongoing/future liaison with stakeholders and the regular monitoring of progress across all infrastructure areas.

A full scope of the expected infrastructure schemes, timeframes and costs has been set out in this plan. The specific elements listed will be subject to ongoing review and is likely to change. Continued engagement with key stakeholders will help to support collaborative approaches for infrastructure delivery and to raise the profile of particular funding challenges as well as opportunities where additional funding could be secured, and different funding streams could be combined.

It will be important to carry out a detailed review of infrastructure projects identified in this plan as part of the formulation and consideration of more detailed proposals through the developer preparing masterplans and planning applications. This work will include more detailed assessment of the impacts of development proposals, and what will be needed to mitigate impacts and deliver on policy requirements. It is inevitable that such more detailed work will inform both the specific requirements, their costs, funding responsibilities as well as their phasing implications.

Joint working with the developers will be key, as the majority of infrastructure will be required to address issues and needs arising from their proposals. Early and ongoing engagement will be needed between the Councils and developers to consider the overall list of items set out in this plan, and ensure that appropriate measures and solutions come forward to deliver on the needs and expectations.

In addition, all of this work can help to build a case for bidding for future funding opportunities. In particular, for programmes such as the Government Housing Infrastructure Fund or any new, successor funding programmes. Opportunities will also arise across various topic and thematic areas for example with specific programmes relating to transport works, such as those promoting active travel, especially where it is essential to demonstrate that an allocation like the Garden Community will accelerate the construction of new homes at scale. Other opportunities will undoubtedly arise with respect to address climate change and promoting sustainable development. This Plan can help inform the development of Strategic Business Cases for specific interventions, which can define and refine individual schemes to deliver the policy requirements and overall ambitions.