

NORTH ESSEX GARDEN COMMUNITIES

West of Braintree

CONCEPT FRAMEWORK

MAY 2017

NORTH ESSEX GARDEN COMMUNITIES

West of Braintree

CONCEPT FRAMEWORK
FINAL REPORT

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This chapter sets out the project objectives and the purpose of this report.

01 Introduction

- 1.1 About this report
- 1.2 Previous studies
- 1.3 Key findings

1.1 About this report

AECOM has been commissioned by Braintree District, Colchester Borough, Tendring District, Uttlesford District and Essex County Councils to produce a Concept Framework for the proposed Garden Community for West of Braintree.

Audience and baseline

The North Essex Councils are assessing the potential for a Garden Community at West of Braintree and are the intended audience for this report. In that respect, it assumes a high level of background knowledge and does not repeat the baseline analysis contained in previous reports, most notably the 'Concept Feasibility Study'. This was prepared by AECOM during the first half of 2016 to help inform the Councils' selection of Garden Communities to take forward through Preferred Options consultation. It drew together opportunities and constraints, capacity analysis, infrastructure appraisal, deliverability and viability assessments. The study process also included the preparation of a North Essex Garden Communities (NEGC) Charter, which sets out the level of ambition and key guiding principles that should underpin the further evolution of proposals. The evidence base documents that have led directly to this report are shown in Figure 1.

Spatial scope

The emerging policy for a Garden Community West of Braintree had assumed that, in addition to the homes planned for the area in Braintree District, a number may also be planned for in an adjacent area in Uttlesford District. However, work on the Uttlesford Local Plan has been paused whilst the evidence base is reviewed and so this report only considers land in Braintree. This has a number of implications for the planning and concept design of a Garden Community West of Braintree.

Status of findings and further work

The content of this report is high level and intended to offer an initial evidence base to determine the appropriateness of a Garden Community in this location.

Other studies have been commissioned alongside this work and must be read in conjunction with conclusions drawn. These include:

- Transport: the findings will need to be tested and verified by Jacobs, the County Council's retained transport consultants, including high level traffic modelling and an exploration of the potential for Bus Rapid Transit along the A120 corridor that will influence options for sustainable travel.
- Economy: SQW and Cambridge Econometrics have been appointed to make recommendations to provide a basis for the employment land elements of the Concept Framework.

Report Structure

The Concept Framework is set up across the following report structure:

1.0 Introduction	2.0 Approach and Concept	3.0 Concept Framework	4.0 Delivery	5.0 Stakeholder Engagement
<p>The Concept Framework will support the Councils in the preparation of a sound evidence base and inform the ongoing preparation of Local Plans in respect of the Garden Communities and their defence at Examination in Public in 2017.</p> <p>This chapter provides context to the commission with a demonstration of the supporting evidence base.</p>	<p>Provides a synthesis of existing contextual baseline analysis as well as key design drivers.</p> <p>A re-assertion of the North Essex Garden Communities Charter and the vision / ambition of the North Essex Councils.</p> <p>A synthesis of existing context and baseline findings that influence the direction of the Concept Framework.</p> <p>A demonstration of the key design drivers that combine to deliver the framing principles and overall concept.</p>	<p>A clear spatial illustration of the Framework, together with a suite of accompanying guiding framework plans and principles.</p> <p>Land use, capacity and placemaking illustrating the proposed broad disposition of land uses including preferred locations for housing; jobs and employment; new schools and other community facilities; new mixed use district/local centres; formal/informal open space typologies and provision.</p> <p>Access and movement setting locations for proposed vehicular access, routes and key footpaths, cycle tracks and/or bridleways as well as guidance on how these routes will align through and around the site connecting to surrounding settlements.</p> <p>Infrastructure and sustainability proposals to demonstrate the new community would be appropriately serviced.</p> <p>A green and blue infrastructure network to demonstrate the incorporation of key landscape and site features, proposed landscape buffers, watercourses and an open space hierarchy are incorporated.</p> <p>A consideration of phasing and deliverability of site specific proposals consistent with Garden City Principles.</p>	<p>Breakdown of proposed option phasing and associated impacts on infrastructure and draft policy.</p> <p>Indicative infrastructure associated with the preferred option.</p> <p>A review of how current proposals would impact on Policy SP10 of the draft Local Plan.</p>	<p>A summary of initial engagement with the local communities, community action groups and key stakeholders on the nature, scale and key design parameters of the Garden Community.</p> <p>A review of consultation responses received under the consultation period of the draft Local Plan and specifically associated to Policy SP10.</p> <p>A synthesis of key findings at an early workshop with Local Authority representatives.</p> <p>A summary of the two engagement events held with Local Parish Councils and other stakeholders.</p>

1.2 Previous studies

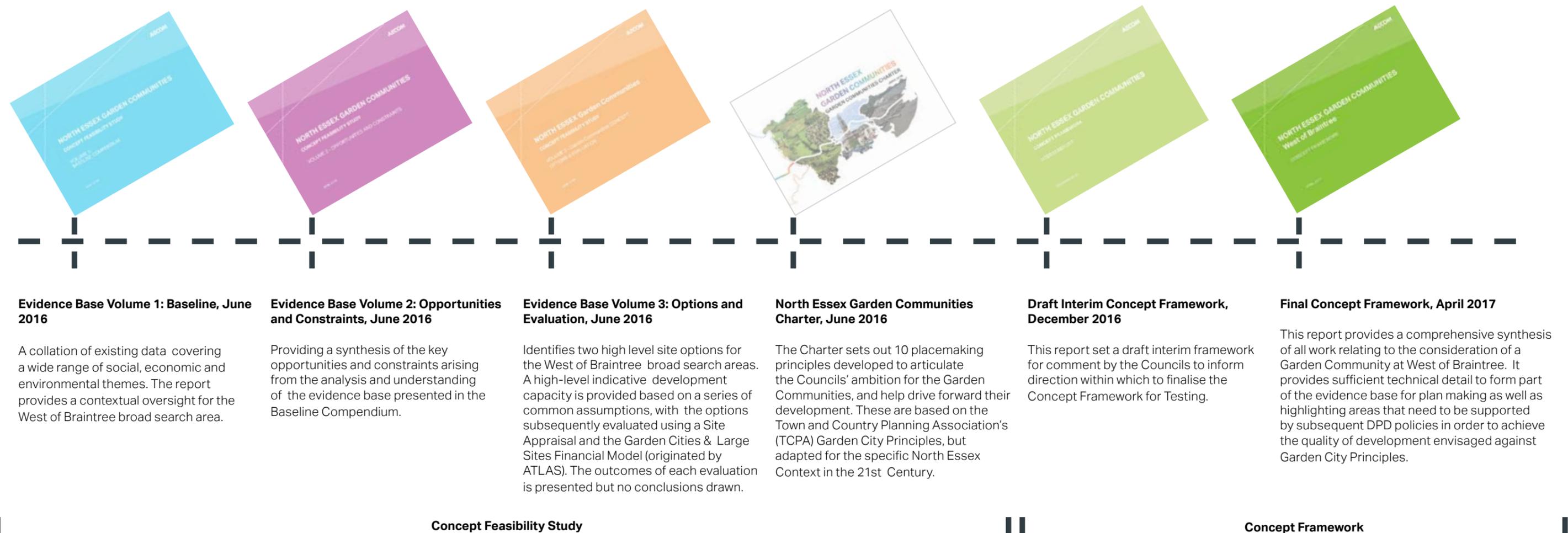
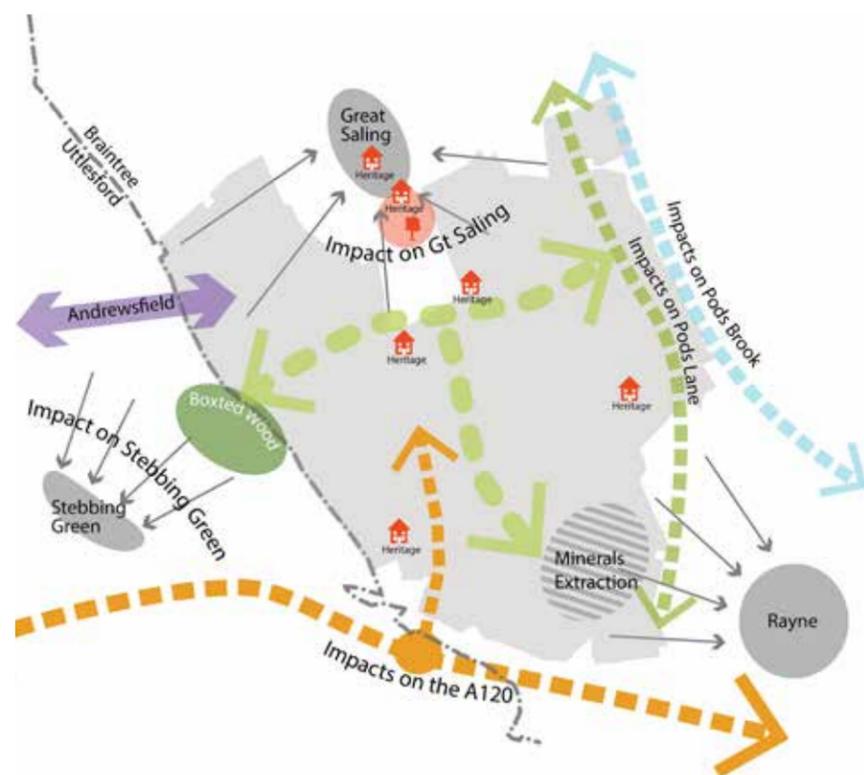


Figure 1: North Essex Garden Communities- Previous Studies

1.3 Key findings

Design drivers

There are a series of design drivers and framing principles that influence the proposed concept design approach, particularly in terms of extent and scale of development. These are the outcome of a considered approach towards existing context and character, informed by community views, whilst ensuring a focus on setting appropriate development potential that can achieve a high quality built and natural environment.



Consideration of alternatives

The Concept Framework has been formulated through an iterative process. Three options were prepared within the context of the integrated structure, with each option resulting in a different spatial configuration with implications for setting, land take, green infrastructure, movement and utilities. This focused on three options:

1. A 'Northern Scheme', that delivered 9,000 dwellings across a land take of 599 ha and the potential provision of a Country Park on the Mineral Extraction site.
2. A 'Northern Scheme reduced' that delivered 7,900 dwellings across a land take of 573 ha and sought to intensify the use of land and establish greater landscape buffers to the edge of development that encroached north under option 1.
3. A 'Southern scheme' that delivered 9,300 dwellings across a land take of 489 ha and develops the mineral extraction site such that a more consolidate new community is formed around a central key centre.

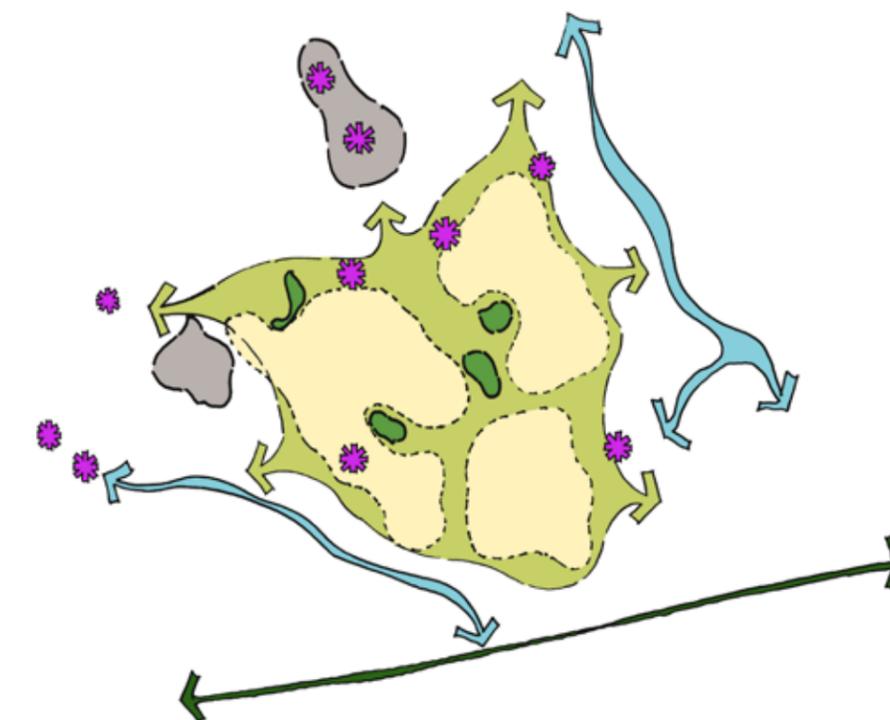
A qualitative assessment of the options has been undertaken using selection criteria based upon the Sustainability Objectives for Colchester, Tendring and Braintree alongside TCPA Garden City Principles. This confirmed that Option 3 - the Southern Scheme provided the most beneficial approach because:

- This option offers multiple points of access afforded through the southern most development parcel and simultaneously reduces potential deliverability issues, increases phasing options essential to commercial viability and reduces the confluence of access points shown in Option 1 and 2.
- Furthermore, the employment land shown in Option 3 provides more sustainable access routes to existing settlements and reduces potential traffic flows around the site.
- This design also represents the most efficient use of land, producing the largest amount of housing delivery from the smallest land take. This therefore supplements the intrinsic sensitivity to protected areas, notably Boxted Wood and the Great Saling Conservation Area, reducing the overall impact from the new Garden Community.

Preferred Option framing principles

The preferred option has been informed by a number of framing principles. These comprise an appreciation of:

- Boundaries and strategic views / vistas
- Sensitive landscapes, habitats, listed buildings, registered parks and gardens and conservation
- Transport infrastructure
- Economy / employment
- Utilities infrastructure
- Mineral extraction



Preferred spatial structure

The key findings of the Concept Framework are:

- The most appropriate size for a new community, assuming that only land in Braintree is considered, is **up to 9,300 homes**, based on 3 principal neighbourhood blocks
- This preferred scale has been arrived at based on a number of factors, including:
 - Landscape capacity
 - The need to preserve historic assets, including villages and gardens, and their setting
 - The desire to maintain an element of rural openness and agriculture
 - The need to protect designated habitats and links between them
 - An assumption that existing plan policy could be varied and the mineral extraction site developed.
 - A population large enough to support a new secondary school, community services, excellent public transport and meaningful levels of employment to reduce the need for out-commuting
 - Neighbourhood blocks with district centres at their core that are on a very walkable scale
 - The need to manage traffic impacts
- All or most of the above points were raised by respondents to the Preferred Options Local Plan consultation in summer 2016 – **the preferred spatial structure responds directly to the concerns raised.**
- The Concept Framework applies the principles in the North Essex Garden Communities Charter to present a vision that is of a **deeply green** community, defined by **self-sufficiency** and in which residents are able to take **sustainable travel choices** well beyond those expected in other places.
- Pod's Brook, Pod's Lane and the woodland blocks including Boxted Wood will be free from development, as will the setting of Saling Grove.
- Homes, plus employment and the necessary infrastructure can be delivered within the forthcoming plan period.
- The report makes recommendations about how the draft West of Braintree New Garden Community policy can be updated as a result of the analysis undertaken.

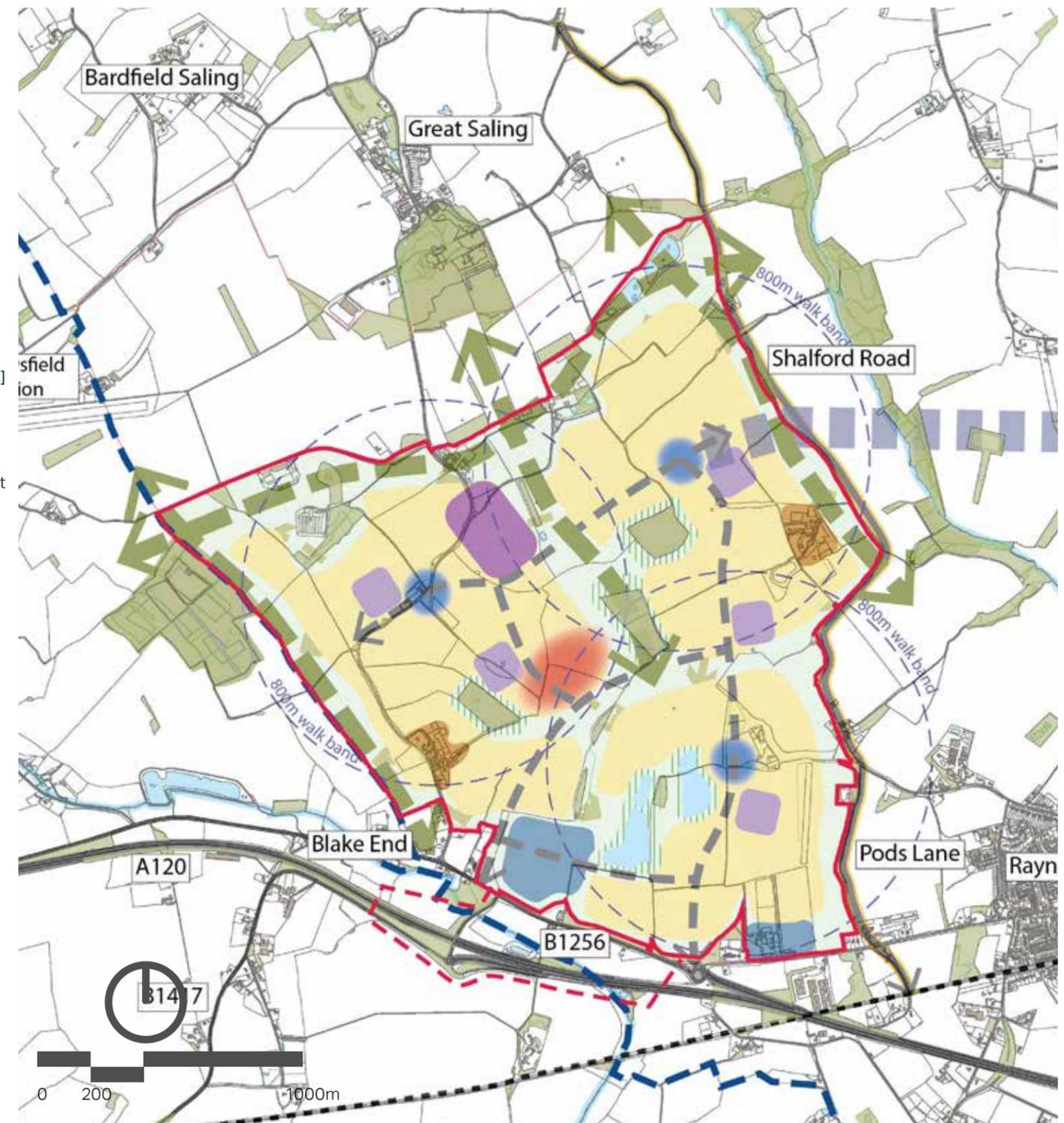


Figure 2: Preferred spatial structure

This chapter sets the key aspects and drivers that influence the concept framework.

02 Development Principles

- 2.1 The ambition and vision
- 2.2 Existing site context
- 2.3 Key design drivers
- 2.4 Consideration of alternatives

2.1 The ambition and vision

Braintree District Council, Colchester Borough Council and Tendring District Council are collaborating, alongside Essex County Council, to identify an agreed strategic approach to the allocation and distribution of large scale housing led mixed use development, including employment opportunities and infrastructure provision, in the form of Garden Communities.

Why a Garden Community?

The area has seen significant growth in recent years and this is forecast to continue. In response the authorities have come together because of their shared desire to promote, plan and deliver sustainable strategic growth at scale and over the long-term; providing the housing, employment and necessary supporting infrastructure needed to ensure the best outcomes for current and future communities of North Essex.



The Garden Communities Charter

The Garden Communities Charter is framed by three key themes:

Theme 1 - Place and Integration - Created from a comprehensive and integrated approach to placemaking, the Garden Communities will be amazing places to live, work and spend leisure and recreation time.

Theme 2 - Community - A sense of community and active participation will be at the heart of the Garden Communities and central to their planning, development and long term management.

Theme 3 - Delivery - The ambition of the Garden Communities to create something special, unique and lasting for North Essex will be supported by a delivery structure that embraces collaboration, a common sense of purpose, commitment and vision and where risk and reward is shared.

As set out in Figure 3 these themes are further framed by 10 placemaking principles developed to articulate the Councils' ambition for the Garden Communities, and to drive forward their development.

They are based on the TCPA Garden City Principles, but adapted for the specific North Essex Context in the 21st Century. The TCPA Garden City Principles provide a good starting point because they were developed to shape the sustainable development of new communities, using the opportunity and economies of scale to innovate and create high-quality places that put people at the heart of developing new communities.

This contributes to a community that is holistically and comprehensively developed with a distinct identity that responds directly to its context, and is of a sufficient scale to incorporate a range of homes, employment, green space and other uses to enable residents to meet the majority of their day to day needs, reducing the need for out commuting.

Designed for the 21st Century, a Garden Community will seek to reflect and respond to the opportunities afforded to: place-making, living and working, from technology and data, together with addressing the needs of climate change and climate resilience.

Notably, different from standard development approaches, the planning, promotion and development of the Garden Communities will be led by the Councils in partnership with existing and new communities and the private sector, with risks and rewards shared.



The Garden Communities will be designed and delivered to attract residents and businesses who value innovation, community cohesion and high quality environment, and who will be keen to take an active role in managing the garden community to ensure its continuing success. Residents will live in high quality innovatively designed, contemporary homes, accommodating a variety of needs and aspirations. These will be set within a network of leafy streets and green spaces, incorporating and enhancing existing landscape features, and providing areas for leisure and recreation.

North Essex Garden Communities Mission Statement





Figure 3: North Essex Garden Communities Charter - Themes and Principles

2.2 Existing site context

The site is located adjacent to the A120 dual trunk road within the A120 Corridor; approximately 5km west of the centre of Braintree and 10km east of the M11 corridor and Stansted Airport, accessed directly to the west along the A120. The area is broadly defined by the village of Rayne and Pods Brook to the east, the village of Great Saling to the north, the villages of Stebbing and Stebbing Green to the west and to the south a combination of the B1256, A120, Fitchway and the village of Rayne. Principal access into the site is provided by the A120 via the B1256, with the A120 providing connectivity east to Colchester and beyond to the international sea ports of Harwich and Felixstowe.

The vast majority of the land is in productive agricultural use with a small number of detached residential/commercial properties, often associated with farming, located within the rural landscape. These are connected by a limited network of country lanes that pass through the site centrally and to its periphery, connecting to settlements beyond. The landscape is typically flat and open in character with medium to large fields divided by hedgerows and some areas of woodland copse. There are a number of mature woodland blocks, which together with Pods Brook and Pods Lane are the areas of highest ecological value.

KEY

- | | | | |
|---|-------------------------------------|---|---------------------------|
|  | Site study area |  | District/borough boundary |
|  | Extension for transport improvement |  | Main road network |
|  | Urban area |  | Protected Lane |
|  | Woodland |  | Fitch way |
|  | Water body | | |

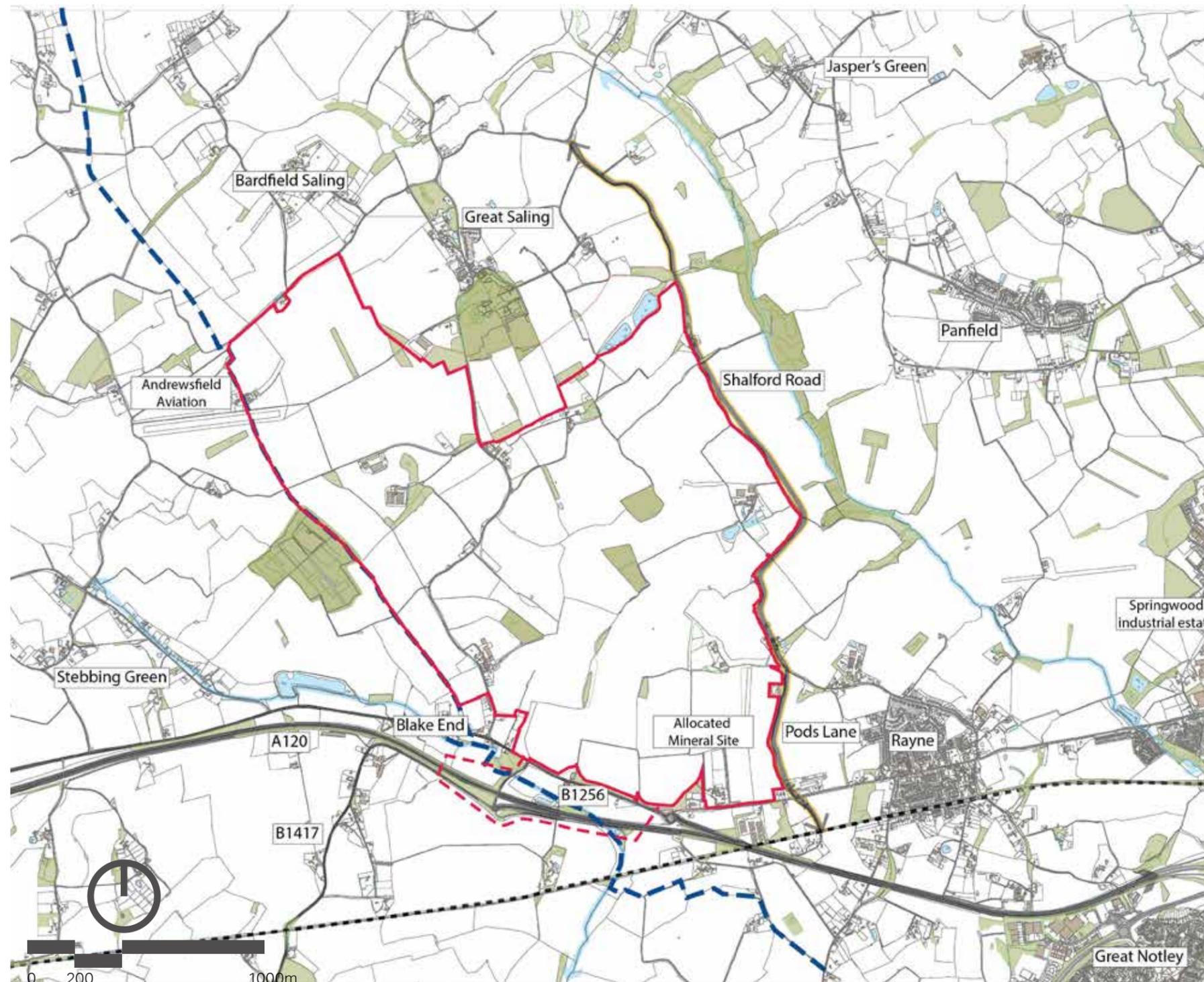


Figure 4: West Braintree Context

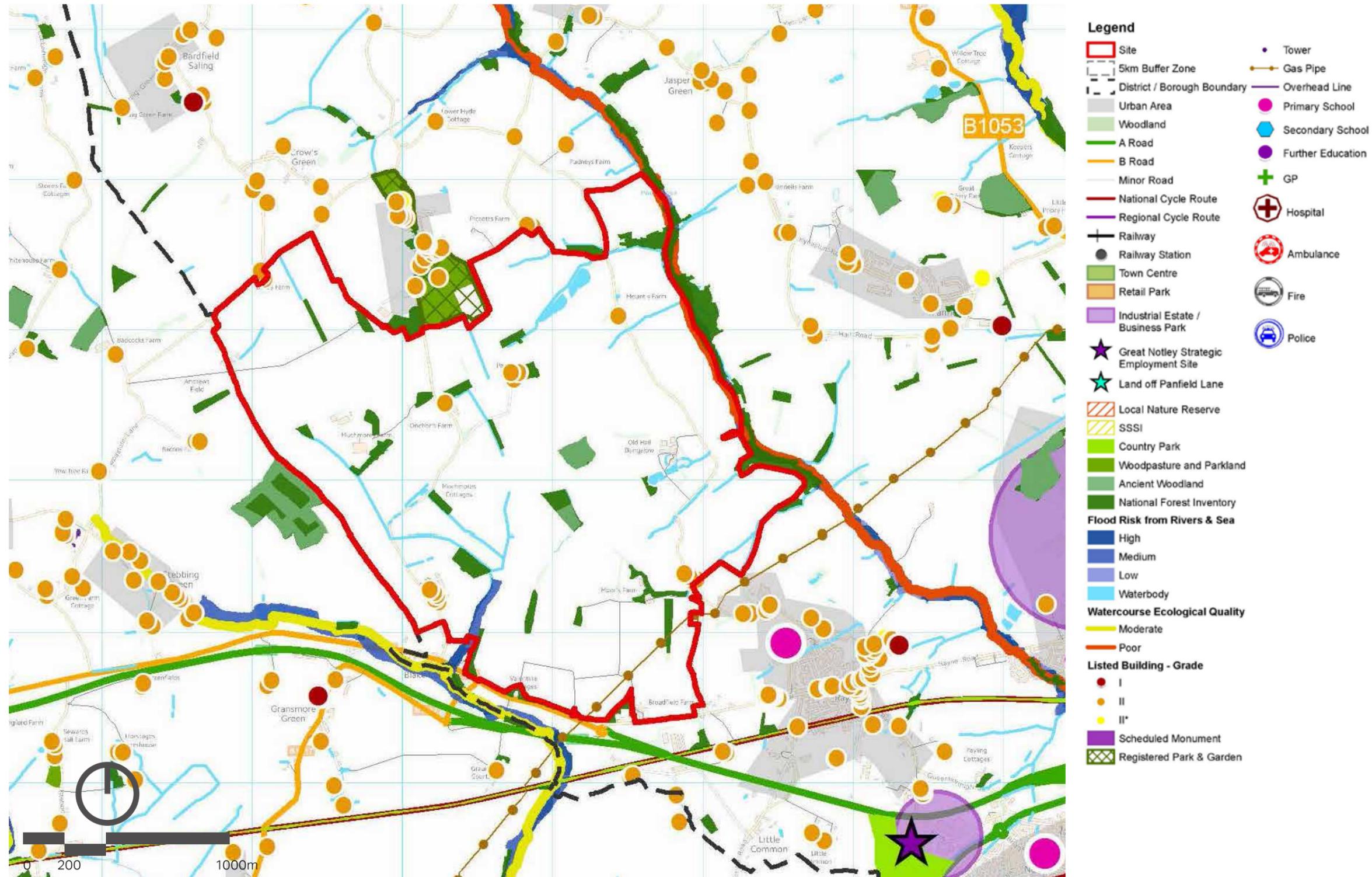
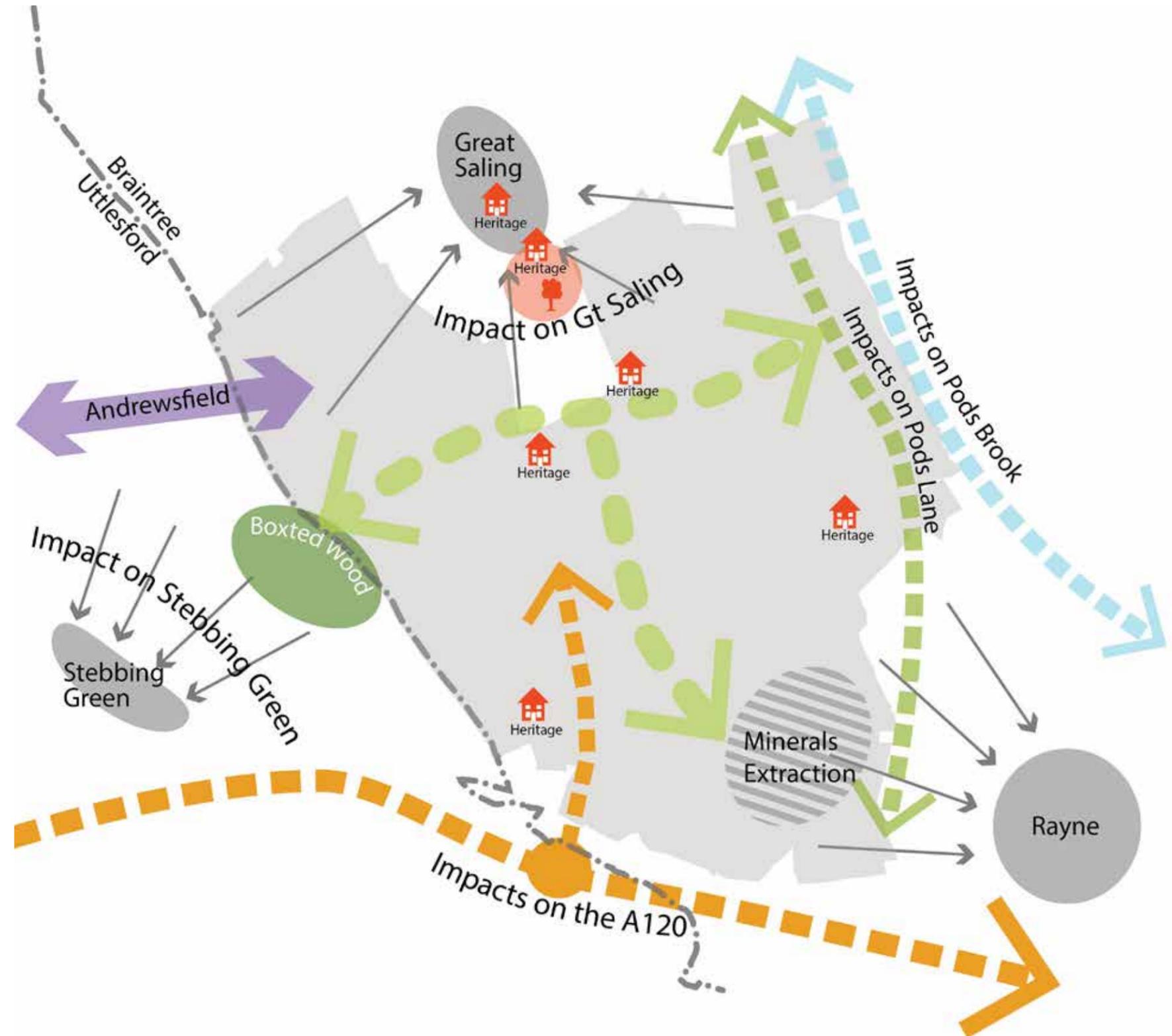


Figure 5: West Braintree Baseline Analysis

2.3 Key design drivers

The plan opposite illustrates how the design drivers and framing principles have been mapped and how they influence the proposed concept design approach, particularly in terms of extent and scale of development. These are the outcome of a considered approach towards existing context and character, informed by community views, whilst ensuring a focus on setting appropriate development potential that can achieve a high quality built and natural environment.

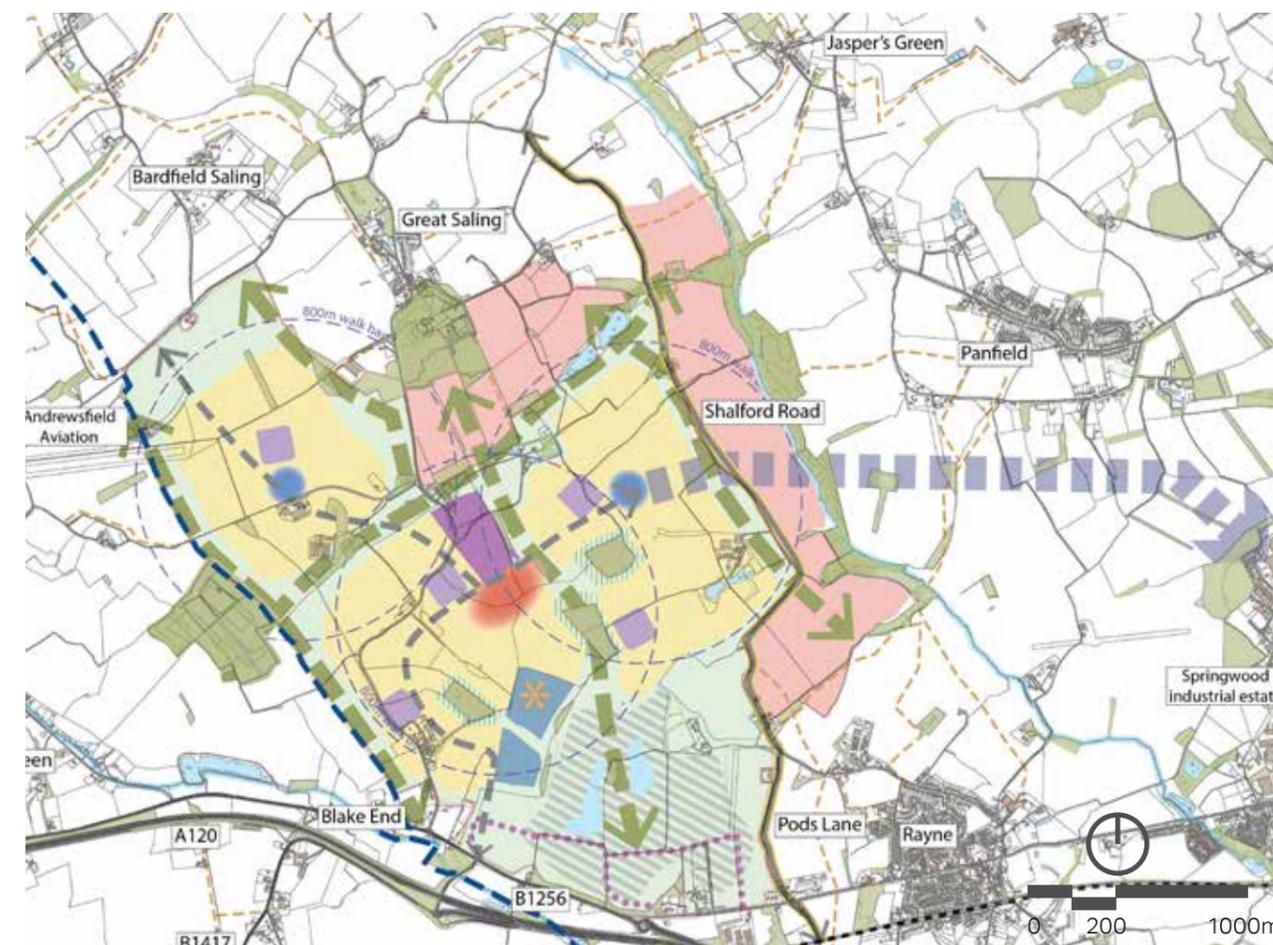
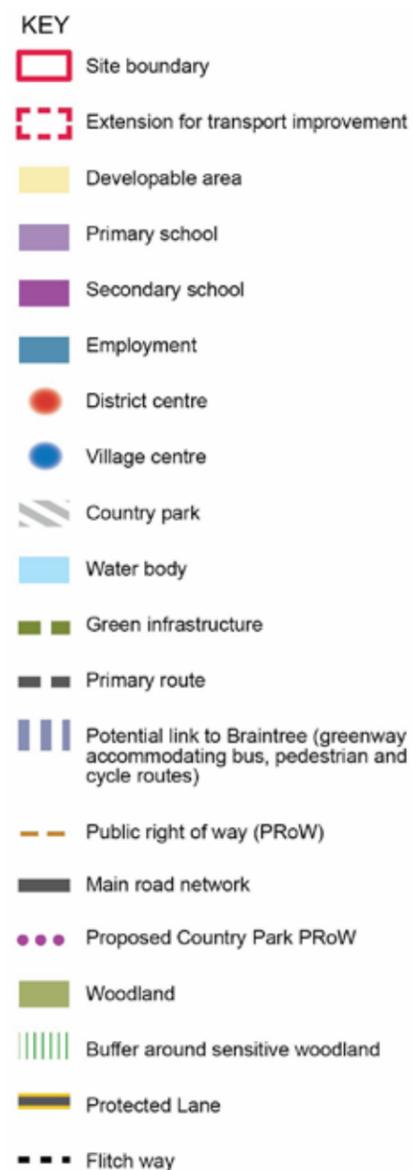




The landscape character, both at a strategic level and a more local, intimate scale, is one of the main elements affecting decisions about where development might be located. Another key consideration is the relationship that new development might have with existing settlements, including Great Saling, Stebbing Green and Rayne, among others.

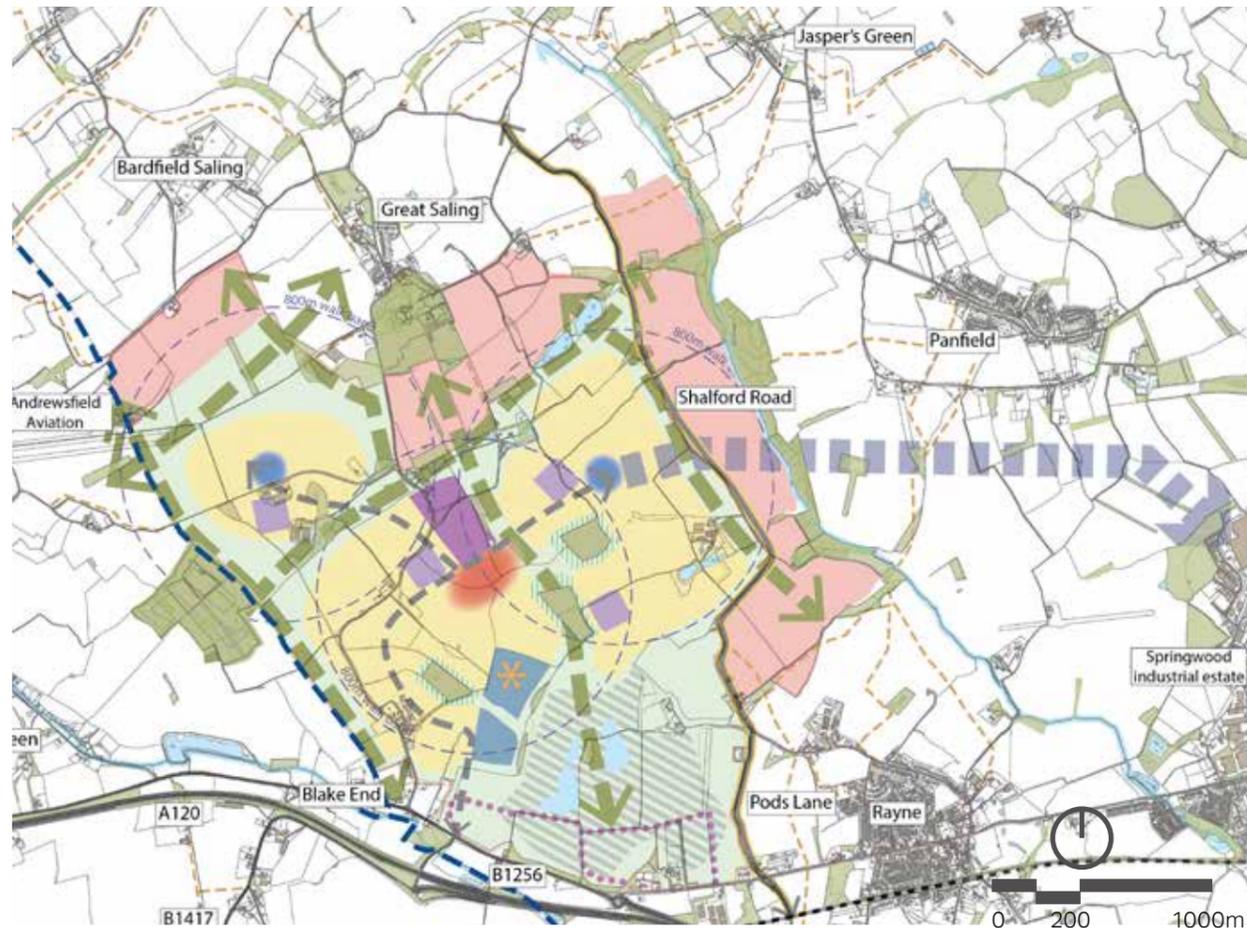
2.4 Consideration of alternatives

The Concept Framework has been formulated through an iterative process. Three options were prepared within the context of the integrated structure, with each option resulting in a different spatial configuration with implications for setting, land take, green infrastructure, movement and utilities. A qualitative assessment of the options has been undertaken using selection criteria based upon the Sustainability Objectives for Colchester, Tendring and Braintree alongside TCPA Garden City Principles. A full outline of the criteria used is included as Appendix 1.



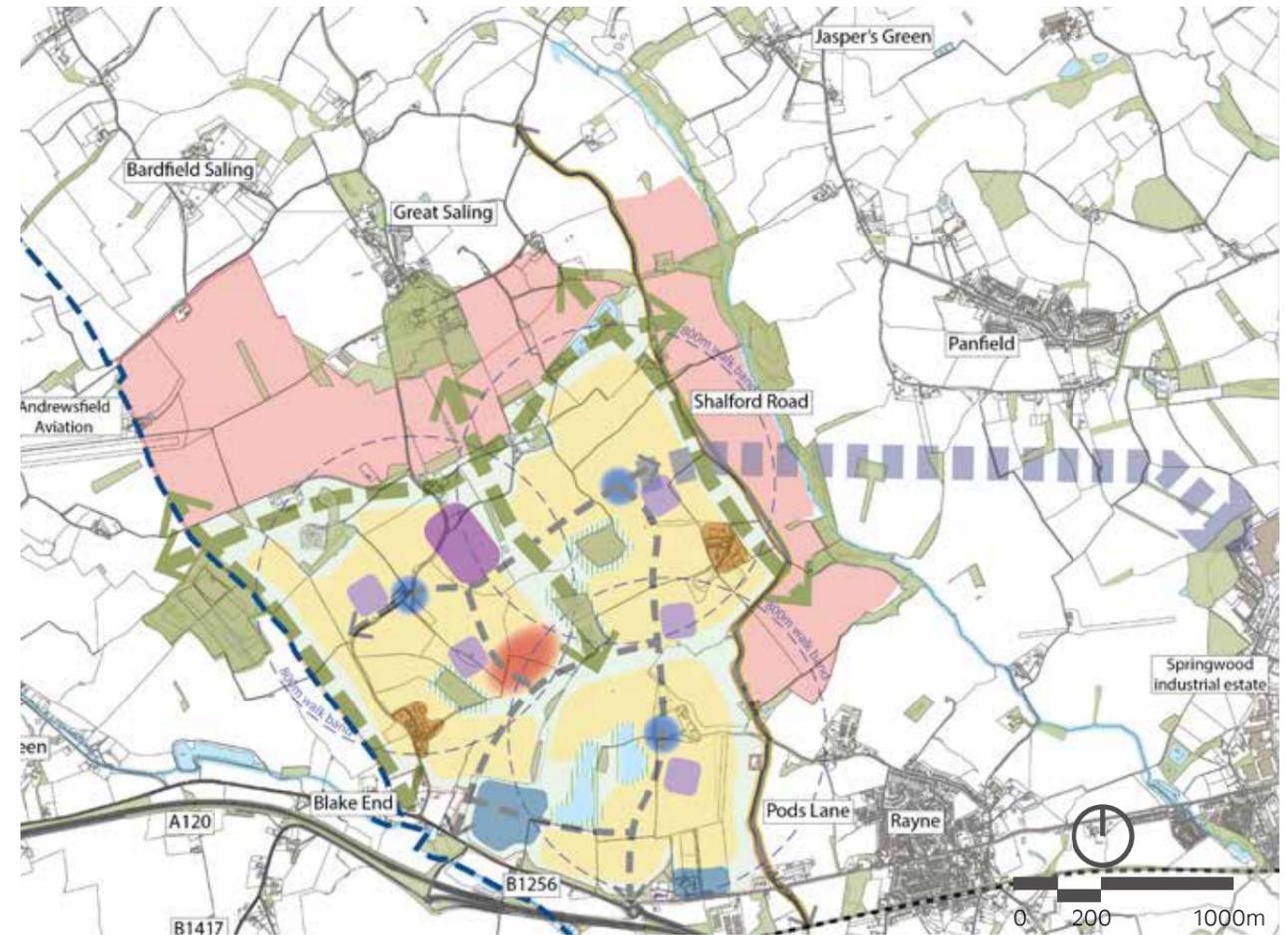
Option 1: Northern Scheme

- 599 ha / 1,481 acres
- 9,000 dwellings
- 237 ha open space (10.98ha per 1,000 population)
- 57 ha Country Park might also be provided on Mineral extraction site (post extraction)
- 12 ha of employment land



Option 2: Northern Scheme (Reduced)

- 573 ha / 1,416 acres
- 7,900 dwellings
- 197 ha open space (10.40 ha per 1,000 population)
- 57 ha Country Park might also be provided on Mineral extraction site (post extraction)
- 12 ha of employment land



Option 3: Southern Scheme

- 489 ha / 1,067 acres
- 9,300 dwellings
- 170 ha open space (7.58 ha per 1,000 population)
- 14 ha of employment land

	Options			Comparative Observations
	Option 1	Option 2	Option 3	
1. Physical Limitations	A	A	A	<p>Due to the existing context of the proposed site, all three options are assessed as relatively low against the established criteria as they would all require mitigation measures. To deliver a development of this size against Garden Community principles would require significant time and investment with enabling infrastructure critical to underpin future development on the site.</p> <p>Despite the need for mitigation in all options, the physical limitations of the options are different. Option three is deemed to represent the most efficient use of land according to town density measures. This establishes the amount of units compared with the overall land required to deliver them in relative terms. Option three simultaneously uses the lowest amount of total land (489 ha) and yields the largest amount of homes (9,300) and thus scores most positively with a town density of approximately 19 dph, compared to the lower figures for option one (15) and option two (14). As a result, option three is considered to have the least impact on the proposed site and therefore the most positive development option.</p>
2. Impacts	R	R	A	<p>Each of the proposed options has sought to maintain an appropriate buffer to prevent a detrimental impact on surrounding areas of value and importance, such as Pods Brook and Boxted Wood. However, the red line boundary is also informed by development viability, overall housing need and attempts to minimise any inefficient use of land.</p> <p>Option three is considered as the most positive option as it provides the most significant buffer to the Great Saling Registered Park and Garden and the wider conservation area.</p>
3. Environment / Amenity	A	G	G	<p>The scale of land proposed for development in all options remains significant and all would create similar impacts on the visual amenities of neighbouring settlements, drainage patterns and agricultural land losses despite it being concluded that option three represents the most efficient use of land. These negative impacts are potentially offset by the associated improvements in community offer in areas such as transport, employment and cultural amenities. As a result, the proposed settlement could be regarded as likely to have an acceptable relationship with the neighbouring settlements due to the improved facilities it could provide them access to.</p> <p>Option one is considered the least positive option because it impinges upon Bardfield Saling the most. Option two pulls back the red line boundary in the north western corner of the site and thus scores more positively.</p> <p>As with the previous section, option three is regarded as the most positive option because it provides a larger distance between the proposed settlement and the smaller villages of Bardfield Saling and Great Saling. The proximity to Rayne is also seen as less detrimental due to the presence of a buffer between the south eastern development parcel and Pods Lane, combined with the overall larger size of existing settlement.</p>
4. Transport	A	A	A	<p>Given the existing nature of the site, there are little immediate transport networks with capacity to support development at this scale. As a result, all three options would require investment to achieve integrated and sustainable transport systems. In line with the Garden Community principles, the transport strategy for the site focuses on public transport provision and reducing opportunity costs associated with active modal travel. This is clearly demonstrated by the eastern connection to Braintree. However, it is still crucially important that access to the site is provided via the A120 and the B1256.</p> <p>Option one and two provide access to the site via the central development parcel from the B1256 but pose potential deliverability issues for Blakes End Road improvements. This would however concentrate access into a small area and limit potential to achieve greater trip distribution onto the network as well as limiting phasing and delivery options. Option one and two also potentially sterilise the land parcel between the development and the B1256 as there is a need to buffer the area from open space allocations.</p> <p>In contrast, option three performs more positively because it generates the opportunity for multiple points of access into the development via the southern edge and strategic road network. Furthermore, this option achieves better access to the primary employment land and reduces the impact of in-commuting of residents of surrounding settlements into the new development. As a result, option three is the most consistent with existing transport systems and the equal development parcels contribute to a more efficient internal road network.</p>
5. Resilience	A	A	A	<p>The scale of the development proposed on the site will undoubtedly have a significant impact on the surrounding settlements. However as a planned Garden Community it can be assumed that all infrastructure and service provision to mitigate the impact of development will be provided in advance of its requirement so as to ensure no undue pressure on existing and established local services. All of the options posed present a sufficient critical mass to support a number of community facilities which can also provide for surrounding settlements such that the new community becomes an integrated new centre within the area. All three of these options are deemed to perform equally well in this regard, even if the nature of the area may be altered as part of the process.</p>

	Options			Comparative Observations
	Option 1	Option 2	Option 3	
6. Housing	A	A	G	The critical mass of housing proposed in all three options is sufficient to support a wide array of housing typologies, tenure mixes and associated infrastructure. As a result, all options are seen as contributing significantly to the housing provision in the local area. Option three is viewed as the most positive not only because it yields the largest amount of homes but also because of the improved access in the south west corner. This is important for housing delivery as it aids in the phased delivery of homes by providing a greater number of outlet that will enhance delivery rates and support future marketing of diverse tenures and housing products.
7. Employment Opportunities	A	A	G	<p>The self-sufficient nature of the Garden Community design principles aim to provide a level of employment significant enough to reduce the impact on surrounding settlements and prevent the development from acting as a residential suburb. Despite this, it is too early in the process to accurately define the mix of jobs the settlement will provide. Due to this and the settlements self-contained design ethos, the settlement performs relatively poorer against the criteria, which extols sustainable access to local jobs in the wider area, than first imagined. However, option three performed the best in this regard because of the increased transport links this design poses between the employment sites and the strategic road network.</p> <p>Furthermore it is also recognised that this location has potential to be used as a residential base to commute to existing centres of employment, such as Stansted and Braintree, and may be too rural to attract businesses at first. However, the proposed plans and the SQW draft employment report indicates significant potential for an increased local offer, notably home working, localised employment hubs and supporting services within the Garden Community. These would all be within sustainable transport access and active mode travel, shown by the 800m walking bands.</p>
8. Mixed-Use Opportunities	G	G	G	As outlined above, the critical mass of housing proposed in each of the three options provides sufficient capacity to support the viability of the neighbourhood centres. This is because a development of this size, consistent with the Garden Community principles, allows for the co-provision of amenities; encouraging self-sufficiency but also contributing to existing local services. As a result, all three options are viewed as contributing positively to the mixed use opportunities for both the proposed and existing communities.
9. Environment Quality and Sustainability	G	G	G	All of the proposed options are above the open space requirements enforced by the emerging draft Local Plan and promote the distribution of green infrastructure in line with Garden Community principles. Whilst it may seem that option three would include less open space due to the loss of the south eastern green parcel, this green space is distributed around the entire site. Furthermore, all of the options are seen to conform to the most positive category due to the sensitive inclusion of existing green assets within the site.
10. Developability	A	A	A	<p>To achieve a development of this size will require significant enabling infrastructure which does not currently exist on the site, with all three options therefore outside the established criteria for the most positive category. Despite this, all three of the options are ultimately deemed deliverable within the first phase of development and the current plan period. This is because the prerequisite infrastructure will be provided at the commencement stage, along Garden Community Principles, utilizing an increase in land values to fund the development's infrastructure requirements such as school and improved access.</p> <p>The land ownership of the site is partially fragmented but focuses on a number of key land holders and the site is being brought forward on a local development vehicle. Option three is rated more positively, although in the same category, due to the option's multiple and therefore diffused points of access which contribute to the commercial viability of the site. It must also be noted that option three marks a deviation from an existing Minerals and Waste Policy which outlines the typical remediation process following extraction of materials.</p>

Figure 6: Evaluation of alternatives. Criteria details are detailed at Appendix 1.

Option 3 performs most positively against the criteria and is therefore established as the preferred option for the site. The multiple points of access afforded through the southern most development parcel simultaneously reduces potential deliverability issues, increases phasing options essential to commercial viability and reduces the confluence of access points shown in Option 1 and 2. Furthermore, the employment land shown in Option 3 provides more sustainable access routes to existing settlements and reduces potential traffic flows around the site. Crucially however, this design also represents the most efficient use of land, producing the largest amount of housing delivery from the smallest land take. This therefore supplements the intrinsic sensitivity to protected areas, notably Boxted Wood and the Great Saling Conservation Area, reducing the overall impact posed by the new Garden Community.

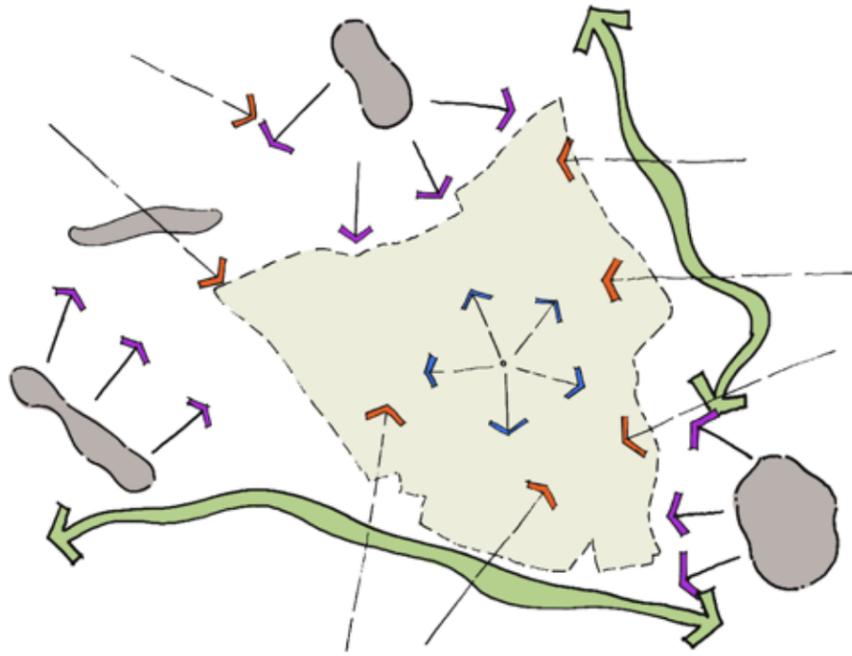
This chapter provides a series of integrated framework plans for the site. They are the thematic layers which collectively comprise the Concept Framework.

03 The Concept Framework

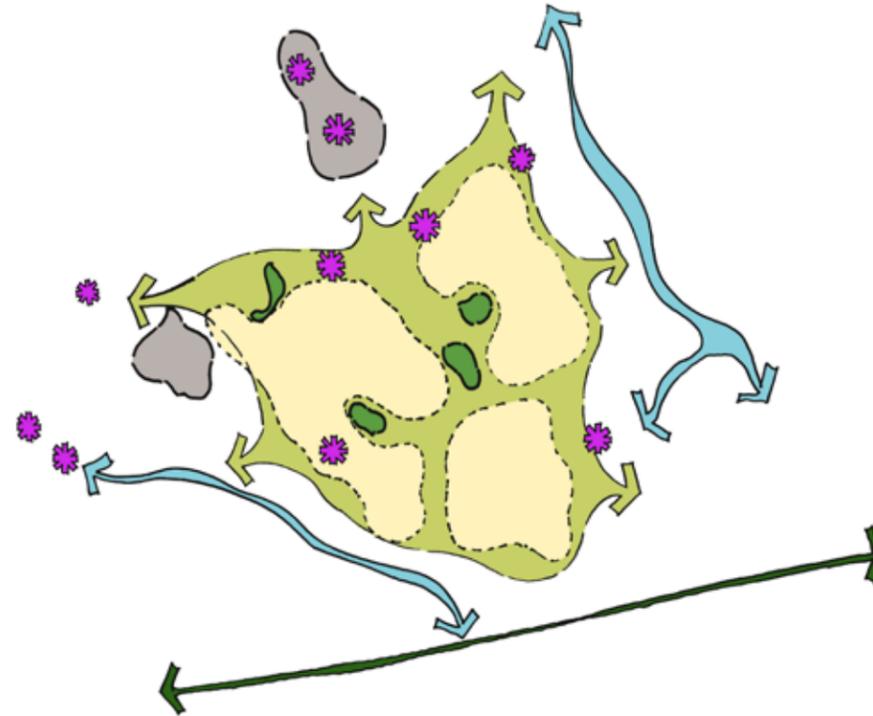
- 3.1 Framing principles leading to a preferred option**
- 3.2 Preferred spatial structure**
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3.1 Framing principles leading to a preferred option

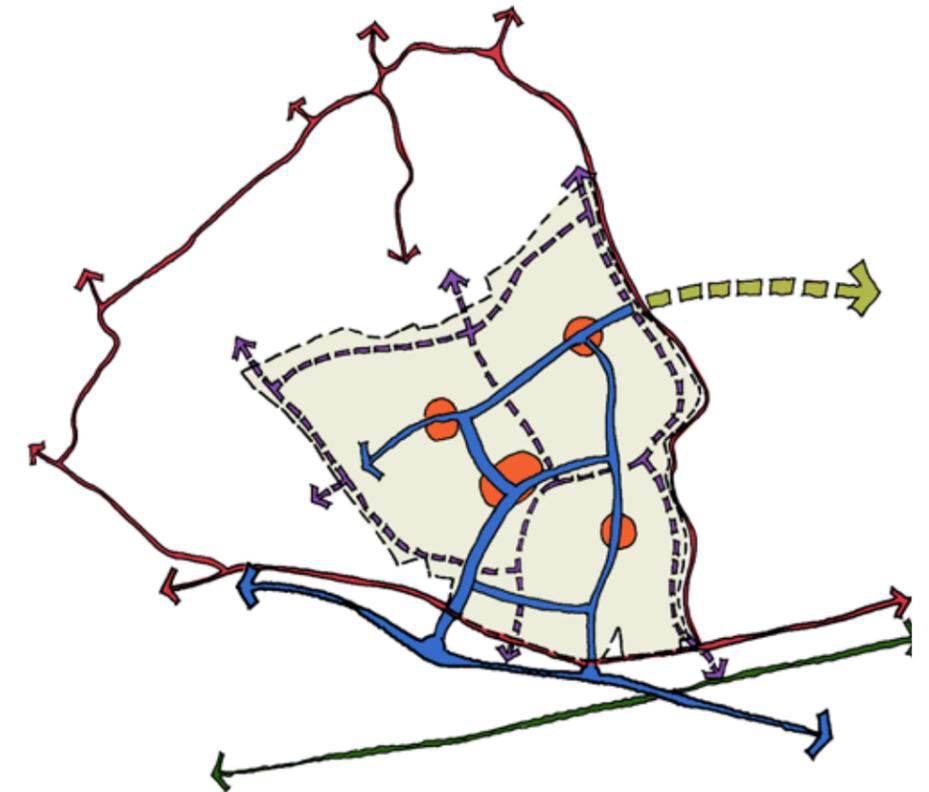
Boundaries and strategic views / vistas



Sensitive landscapes, habitats, listed buildings, registered parks and gardens and conservation areas



Transport infrastructure

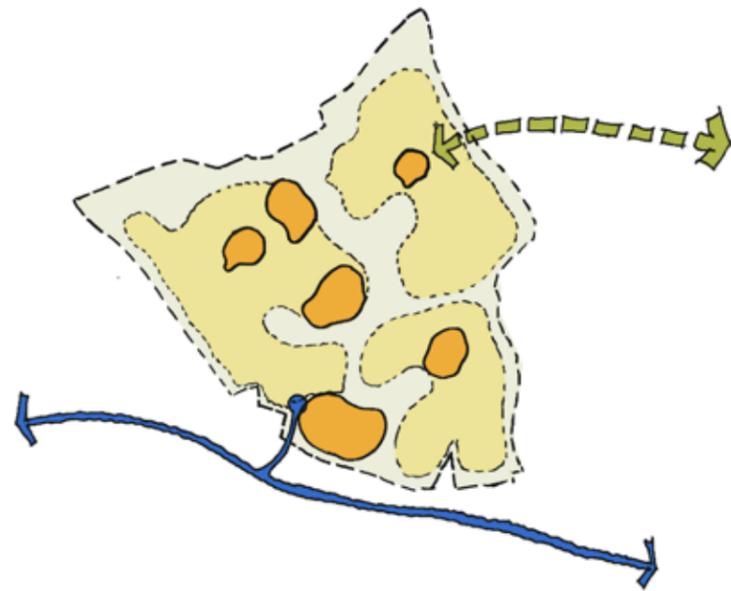


- The open farmland plateau with gently sloping topography to the south means that there are long distance views into the site from the surrounding rural areas. There are a number of sensitive receptors associated with the surrounding settlement and large scale development of the site would impact on the rural character of the small settlements surrounding the site.
- The area around Great Saling Hall which has been classified as a Conservation Area and includes the historic parks and gardens designations associated with the Hall's grounds and the Church cemetery are particularly sensitive.
- Southern boundary – defined by the A120, B1256 and River Ter. The Primary route of the A120 represents a defining southern boundary with agricultural land beyond. This boundary should be respected in setting a southern most limit with no further consideration of expansion south.
- Eastern boundary - The village of Rayne lies approximately 600m to the south east of the area of investigation. The northern extent of the eastern boundary is defined by Pod's Brook which is considered to set a sensible physical limit to growth.
- Western boundary - The western boundary is set by field ownership lines. Although not a clear edge, measures have been taken to prevent encroachment on the existing hamlets of Stebbing and Stebbing Green.
- Northern boundary - The northern boundary is also set by field ownership lines. The existing settlement of Great Saling is afforded a clear buffer, consistent with its statutory protections.

- There are a number of important areas of deciduous woodland, which is a priority habitat, scattered across the site. Of particular importance are the significant areas of ancient woodland, including the adjacent 19 ha Boxted Wood and at Golden Grove and Rumley Wood. These areas support potentially sensitive ecology which would be impacted upon by new development.
- The Pods Brook valley provides a natural edge to the potential development. Enhancement and active management of the vegetation in and around the Brook and reinstating the natural route of the water course could help establish a green corridor that both the ecological and water quality whilst providing flood protection and recreation opportunities.
- There is an area of good quality semi-improved grassland and priority mixed habitat around Stebbing Green.
- Active management of existing woodland assets and the creation of new areas of planting could create an attractive green network to enhance ecology, manage storm water and provide an attractive environment for the future settlement.

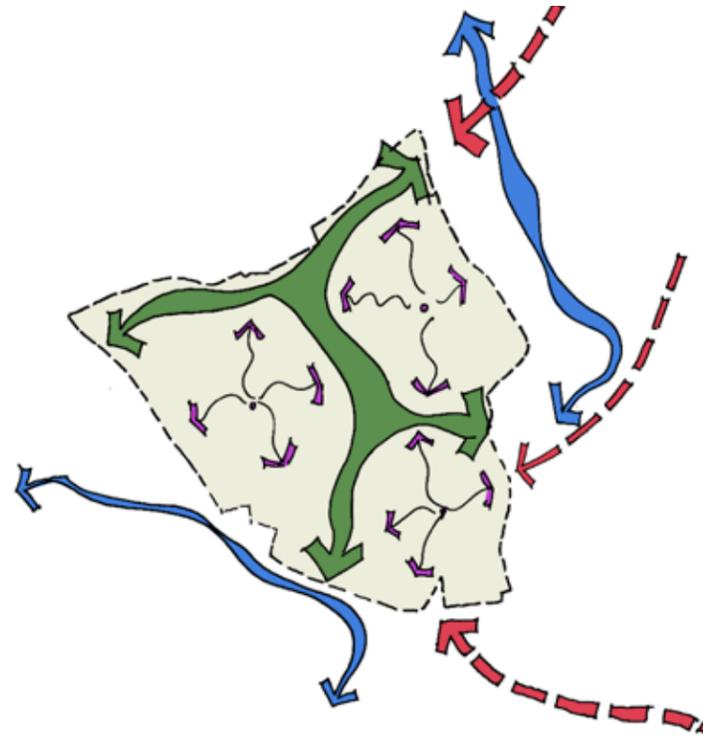
- The location of the site bounded by the A120 to the south, offering direct east-west connectivity with the M11 and Stansted and the A12. Current congestion issues on the A120 mean connectivity along this route to the east is likely to be constrained now and in the future without the proposed A120 improvement scheme.
- The site offers limited synergy with the established settlement and the local employment and commercial centres, such as Skyline 120. These distances also limit the case for active modes of transport. The rail stations at Braintree and Braintree Freeport provide access to the rail network, the stations however, are located on the Braintree Witham branch line connected with the GEML, providing a limited service frequency and therefore wider connectivity.
- Development of a non-car-dependant scheme will be a challenge without major bus and rail infrastructure links. Pedestrian and cycle links are likely to need to be focused on movements within the site and to local employment centres with, connections to the existing settlement of Braintree likely to be leisure-based rather than for commuting purposes.

Economy / employment



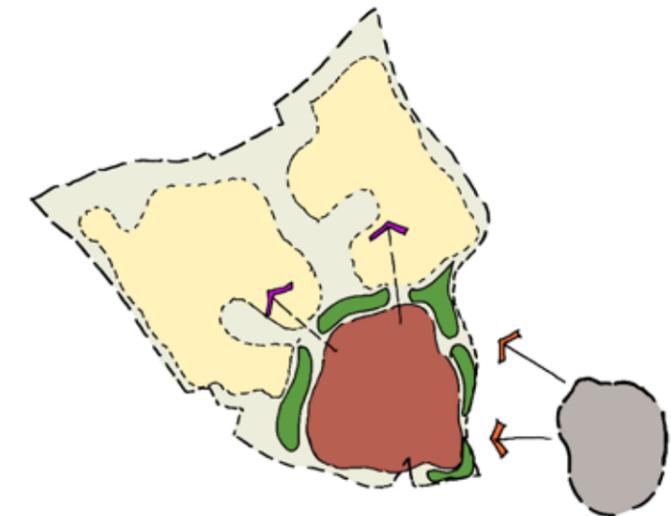
- Employment within the Garden Community is likely to be focused towards smaller incubator, start-up units and grow-on space that benefits from the proximity to major economic hubs but are not necessarily able to base themselves within such centres. Furthermore, the connectivity provided by the A120 dual carriageway should be used to attract businesses, creating new localised employment opportunities. Direct access to the A120 means that logistics and distribution businesses could contribute to the employment opportunity of the Garden Community. These should be sited where their large bulk and form can be used positively in the development to buffer noise from the A120 corridor. Whilst these employment opportunities will create external road based transport movement, as employment destinations they should be sustainably connected with the wider Garden Community.
- The site is located approximately 4km west of Braintree Town Centre and 6km west of Braintree Freeport. A development on the scale of the Garden Community could have the potential, if not appropriately planned and managed, to develop as a competitor location and thus impact the resilience of established centres, especially with regard to Braintree Town Centre. It will therefore be important for the Garden Community to develop an economic strategy that compliments Braintree Town Centre and Braintree Freeport, but which avoids the Garden Community itself becoming a dormitory residential suburb.
- This location is considered to have good potential access to local jobs, for example in Braintree, Braintree Freeport, Witham, Chelmsford and at Stansted Airport. These locations would be within easy commuting distance of the new Garden Community, but the challenge will be to ensure that they can be reached using modes of travel other than the car.

Utilities infrastructure



- The existing network of drainage ditches provide the framework for a sustainable drainage network. The underlying geology and soil structure favour attenuation Sustainable Drainage Systems (SuDS) that could be used to create attractive ponds on site that could be both an ecological resource or used to store water for reuse on site.
- The green infrastructure network could be used to provide the necessary improvements to run-off water quality before discharge. This would reduce both the need for new surface water sewer infrastructure and the pressure on the existing waste water networks. Alternative non-potable water supplies are likely to be increasingly important in this water scarce area.
- All the electrical networks west of Braintree are 11kV rural supplies, consisting mainly of overhead lines. These would have limited capacity to supply new development and overhead lines are inherently less reliable than underground cables, as they are more susceptible to storm damage. A new primary substation will have to be established early in the development phase. Preliminary discussion with UKPN would suggest that this would be connected into the 33kv network from existing overhead lines to the south of the A120.
- There is capacity in the medium pressure gas network in the region, but local low pressure upgrades will be required.

Mineral extraction



- The Broadfield Farm site to the west of Rayne is allocated for mineral extraction in the Essex Minerals Plan, and is subject to a planning application. It is acknowledged that the planning context for the area is changing with the potential allocation in the emerging Braintree Pre Submission Local Plan of a new Garden Community. The emerging Concept Framework has considered a range of potential uses for the 'Quarry site' post extraction, including types of green infrastructure uses, development and other infrastructure. Any development would require a noise and environmental buffer zone from built development, between the potential Garden Community and neighbouring villages, although the distance is yet to be determined. As a result, in the long term there is potential for restored landscape/wetland/parkland and built development.

3.2 Preferred spatial structure

Building on the North Essex Garden Communities Charter and appreciation of the site specific context, the West of Braintree Concept Framework defines a spatial option for the long term delivery of a Garden Community in this location. The Councils can use this articulation as evidence to inform future decisions on the appropriateness of such a development.

The approach has sought to establish a multi-layered response and defines the West of Braintree Garden Community across a number of thematic plans set out across this chapter. These include:

- Land use, capacity and placemaking - spatially illustrating the key areas of activity and land uses across the site.
- Access and movement - spatially identifying aspects such as key access points, movement corridors and connections.
- Infrastructure and sustainability - spatial identification of the social, education and community infrastructure to support the new community as well as a response to the provision of utilities including energy, water and waste.
- Green / blue infrastructure - a site specific green and blue infrastructure framework that sets a coordinated approach to open space, landscape and green assets. This includes formal and informal open space, key structuring landscape principles and proposals, as well as the relationship with surrounding context and overall setting.
- Phasing and delivery - an informed position on how the development could be phased and delivered within the site constraints and opportunities, including key infrastructure requirements and delivery commentary.

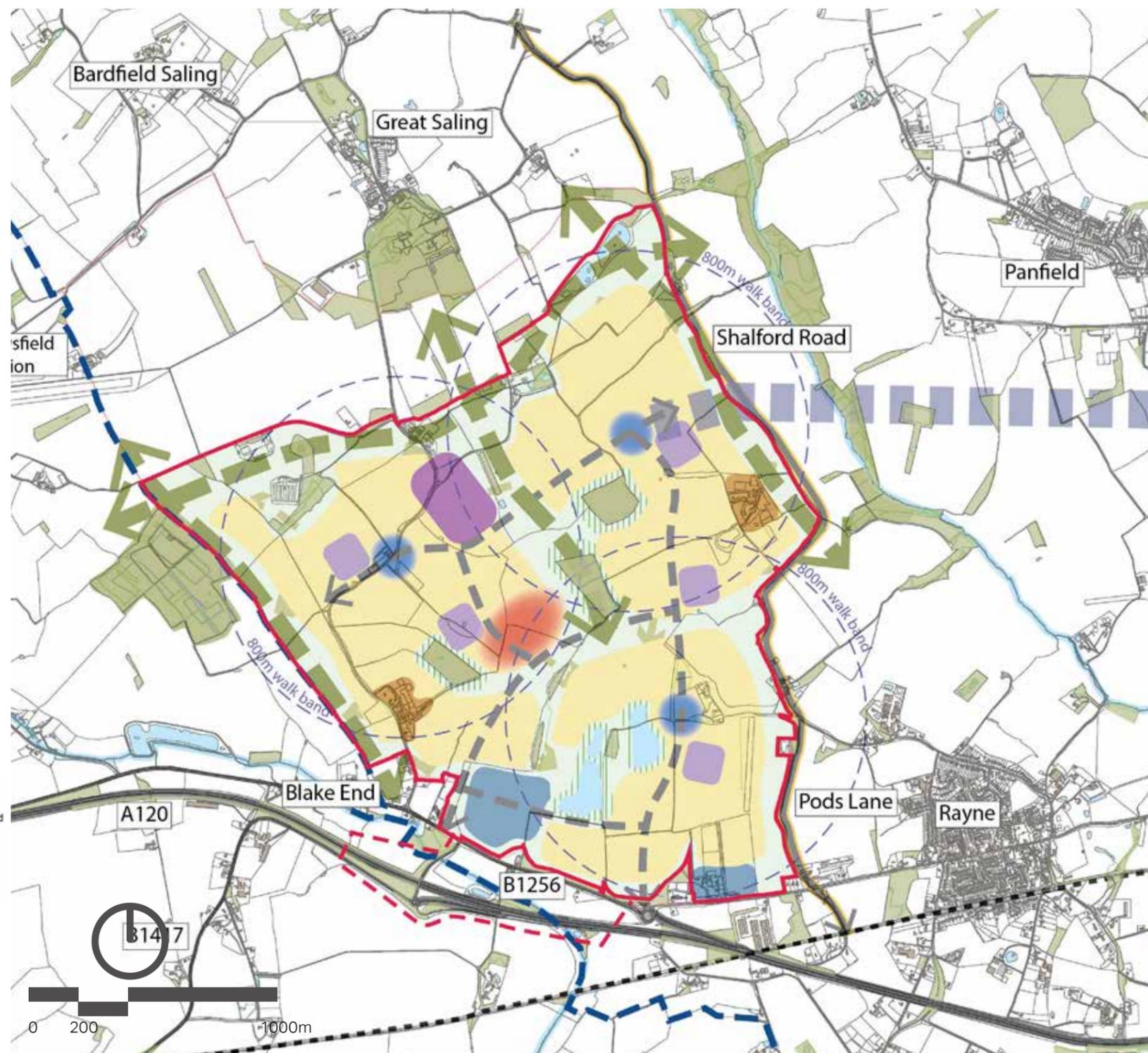
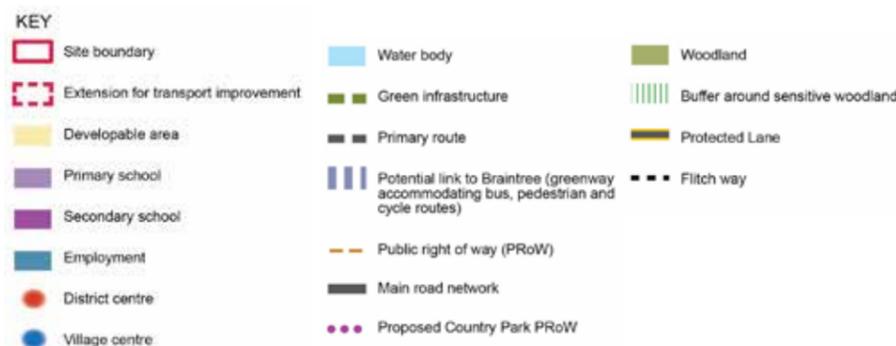


Figure 7: Preferred spatial structure



9,300
New homes



14 ha / c.50,000 sqm GFA
Employment and commercial land



173 ha
Open space

Figure 8: West of Braintree illustrative graphic.



22,500
Approximate Population



35 dwellings per hectare
Average development density



6 new schools
1 secondary and 5 primary

3.3 Land use, capacity and placemaking

Spatial Structure

The proposal is for a new Garden Community of approximately 9,300 homes, set within a landscape framework that provides access to a wide range of different types of open space, together with high levels of access to social infrastructure and local employment opportunities embedded within the development.

Residential

The development structure is characterised by a fine-grained network of streets and public spaces that is both attractive, efficient and permeable. The movement network allows for flexibility of use and occupation, making for a characterful urban form with a healthy balance of public and private spaces, which are clearly identifiable as such.

The pattern of development, described above, is predicated on a rich mix of house types and tenures (intermingled with other uses, including retail, education, communality used and employment), which positively addresses a range of street types providing linkages via attractive routes that promote active forms of movement and a healthy lifestyle. It also creates individual neighbourhoods which are clearly characterised by a combination of built form, movement hierarchy and public open space.

Mixed Use Centres

A town centre will sit at the heart of the new development, providing a wide range of jobs, cultural and community facilities, services and amenities. Secondary and tertiary centres, at the district and neighbourhood level, will provide more local services that meet the everyday needs of residents.

Employment

A significant quantum of employment land is provided and located such that it benefits from immediate access to the main route into the site, via the new junction on the A120/B1256. Local service provision, located primarily within the various mixed use centres, will also provide significant employment opportunities for residents, who will also be able work from home as a consequence of high speed broadband and detailed design of buildings that promotes home-working.

Open Space

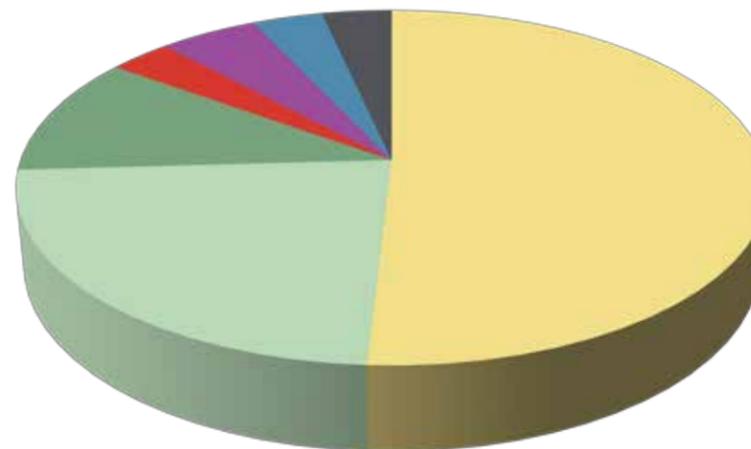
The development described above will sit within a strategic framework of open space comprising core open space (parks, sports pitches, allotments, habitat, etc.) and strategic landscape buffers.

Land Budget

The plan delivers up to 9,300 homes, plus considerable open space, employment and education assets, all set within a landscape structure which enables development to respect and complement existing landscape context.

Total site area: 496ha

- Residential: 254ha
- Development parcels
 - Parcel A - 99ha/ 3,724 homes
 - Parcel B - 91ha/ 3,289 homes
 - Parcel C - 64ha/ 2,340 homes
- Core open space provision: 116ha
- Landscape buffer (to Shalford Road/Pods Brook, Pods Lane, etc.): 54ha
- Mixed use centres: 16ha
- Education (comprising a secondary and five primary schools): 25ha
- Employment: 14ha
- Primary road infrastructure: 17ha



Character Areas

Three development parcels, each with the capacity to accommodate approximately 3,000 homes, allow for phased delivery and the creation of a variety of character areas across the site.

Given the timeframe for delivery of the first phase (the plan period up to 2033), and the potential for subsequent phases to be delivered over one or two plan periods after that, there is ample opportunity to plan for each of the development parcels having its own character, sense of place and ambience. This variation in character is, typically, what one would expect within a town of 9,300 homes - one would not anticipate a commonality of approach, whether it be layout, built form, or open space and landscape. Once the principal components are in place, it is reasonable to expect a number of different approaches to these different components of the built environment, not only across the three parcels, but also within each parcel.

Parcel A, the first phase of delivery might well see a more dense, urban form especially around the entrance, close to the town centre and along the principal movement corridors. Thereafter, one would expect density to decrease and a more open character to prevail, especially around the edges of the parcel where there is an interface with the strategic open space. Given the size of this first phase, by the time it gets to its 'middle years', it is conceivable that there might be as many as three outlets active at any one time, each working to an overall set of design guidance (a design code, perhaps), but with sufficient autonomy and scope for variation in design detail, to variety of character areas.

The same rules apply to the second and third phases of delivery, which might, roughly, be located in Parcels B and C, respectively, in terms of chronology. However, there is also the interesting possibility that delivery in Parcels B and C might overlap with each other and, indeed, Parcel A, meaning that there will be a potential synchronising of character types (partly as a consequence of when, in the programme, different areas are delivered) across the three development parcels. Again, this is typically what you might expect to find in a medium-sized market town, with pockets of Victorian, modern, Georgian, etc., housing intermingled. The variation between character areas will, to some extent be mediated by the strategic and local landscape which both frame/separate and connect parcels of built development.

In terms of the qualities of the character areas, it makes sense to define them, in outline, at the beginning of the process, but allow for modification and updates as the development context changes over time. For example, it would be extremely helpful to prepare a design code, setting out guidance in terms of key components of the built fabric and public realm, but make it a 'live' document that has planned updates, say every five years, built into the process to allow it to reflect what has gone before and respond to changes in technology, building standards and the prevailing design and planning climate.

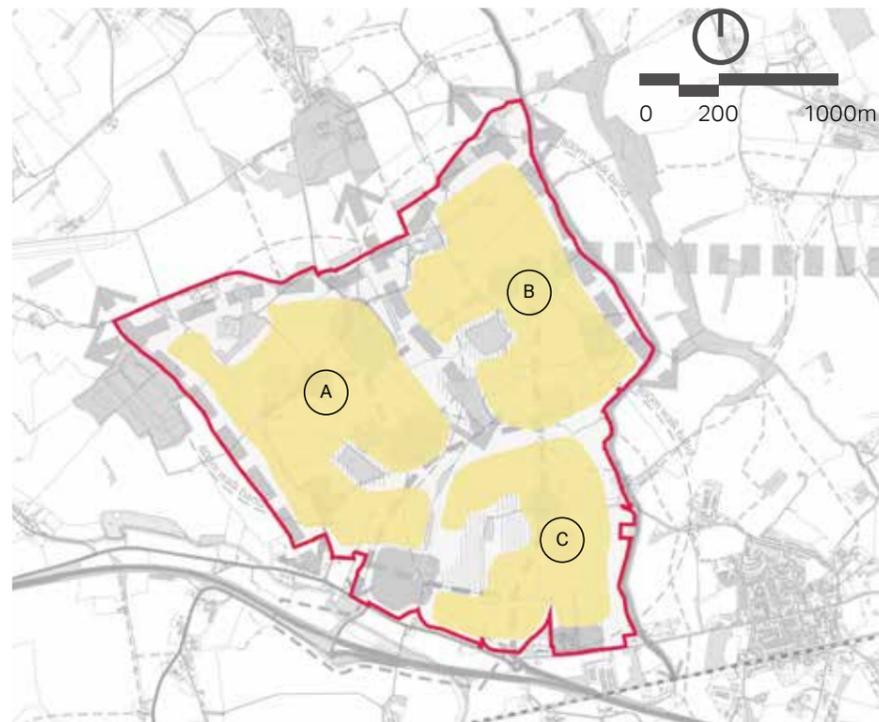


Figure 9: Development parcels

- KEY**
- Site boundary
 - Development parcels



Figure 10: Green infrastructure

- KEY**
- Site boundary
 - Water body
 - Woodland
 - Green infrastructure
 - Buffer around sensitive woodland
 - Strategic open space

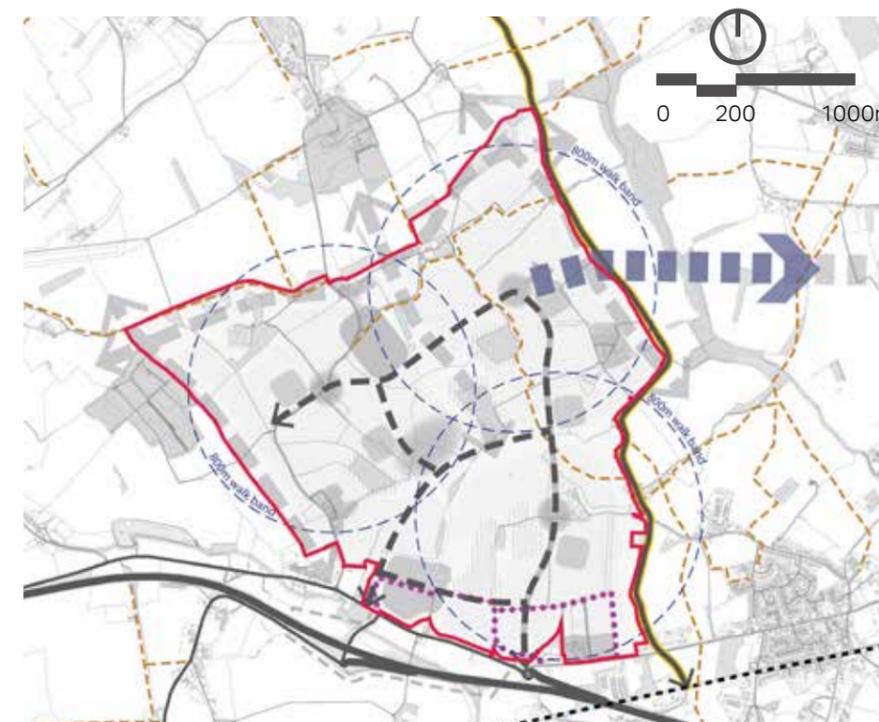


Figure 11: Access and movement

- KEY**
- Site boundary
 - Primary route
 - Potential link to Braintree
 - Existing Public right of way (PRoW)
 - Main road network
 - Proposed PRoW
 - Protected Lane
 - Flitch way

Employment

Cambridge Econometrics (CE) and SQW have been commissioned to determine the likely demographic profile of each Garden Community to inform future service provision planning, developing quantified scenarios for future employment growth and to inform job creation targets.

The demographic scenarios show the impact of alternative assumptions (the key ones being timing of the build-out of the settlements, and the gender/age profile of in- and out-migration for each settlement) on the demographic profile of each settlement.

The 'most likely' scenario assumes a build-out rate to reach 2,500 dwellings by the end of the plan period (2033), with envelopment continuing to rise at similar annual rates thereafter until completion of the Garden Community settlement.

In order to anticipate the likely creation of employment opportunities, and in order to achieve the one job per dwelling aspiration, a framework was developed for considering future employment growth, and a series of alternative economic scenarios identified and quantified (using CE's Local Economy Forecasting Model, LEFM).

This confirmed that the Garden Community would likely to be associated with significant jobs growth, where jobs linked to exogenous growth processes are presumed to be physically on site, those linked to homeworking will be physically associated with the homes of residents and therefore also on site, and those related to the consumption of local services may or may not be on site, but all will be reasonably "local". This would achieve the Garden Community charter aspiration of "one job per house".

It is caveated that the scenarios are quite ambitious and their achievability depends on many different factors, some of which are very difficult to influence, but the likelihood of achieving them will increase if there is a proactive economic growth plan in place across North Essex and the Garden Community is delivered in a manner which itself is proactive, visionary, managed and appropriately resourced.

Source: SQW and Cambridge Econometrics.

KEY

- Site boundary
- Employment
- Primary school
- Secondary school
- Community hub
- District centre
- Village centre
- ✱ Utility hub

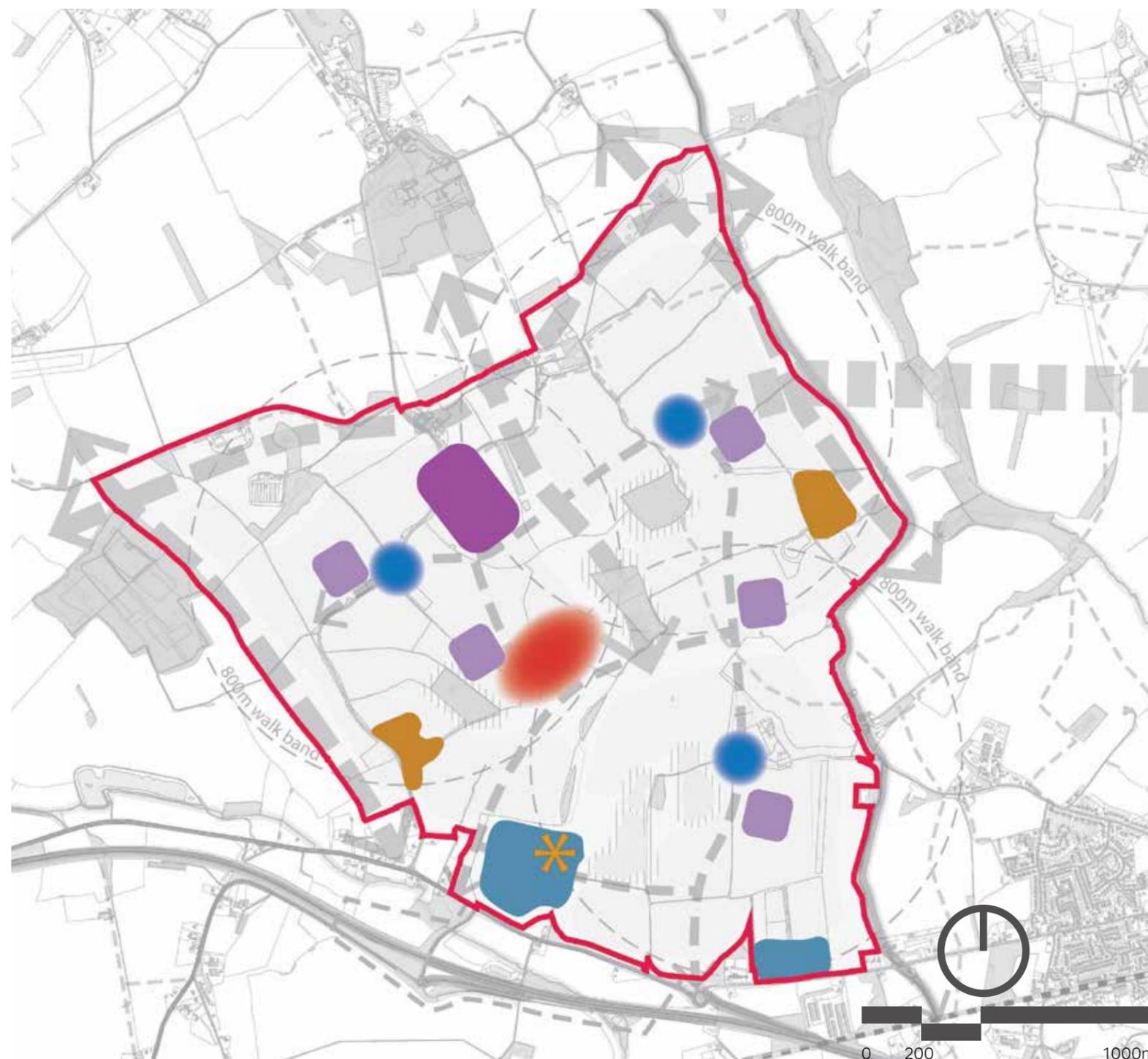


Figure 12: West Braintree Employment centres Source: AECOM

Centres Strategy and Settlement Hierarchy

The Garden Community will be developed upon the basis of a centres strategy that is distributed across a clear network and focusses on co-located social infrastructure.

The current rural context of the site and surrounding area means the population is relatively sparsely distributed. The urban area of Braintree has the highest concentration of population and activity and is approximately 5km to the east while the market town of Great Dunmow (located within Uttlesford District Council) is approximately 6km to the west with a modest population and local key service provision. The village of Rayne sits in close proximity to the east but provides relatively limited economic activity. There is little connection to any major urban settlements to the north or south.

As a result the Garden Community will need establish a major new centre at its heart to focus the predominant interaction and exchange of social and economic capital within the Garden Community. This will likely comprise of large groups of shops containing at least one supermarket and a range of non-retail services such as banks, cafés and restaurants. It will also contain co-located strategic community facilities such as secondary education and leisure facilities.

Additional and supporting local centres will be strategically located in proximity to new neighbourhoods and along the transport spine in order to establish a walkable environment with sustainable travel links. These local centres will contain smaller groups of convenience shops and services as well as localised community facilities, such as primary schools and health care provision.

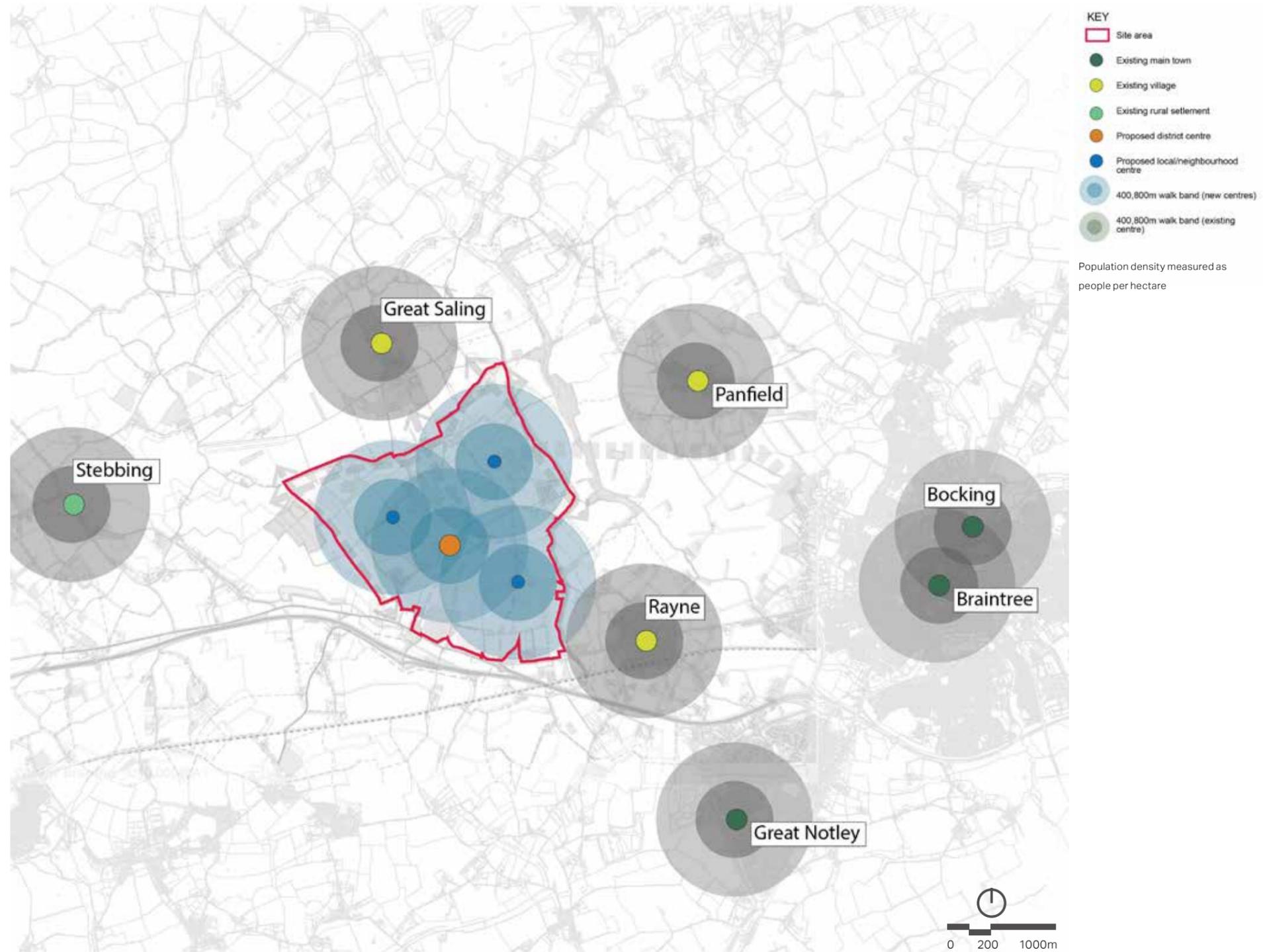


Figure 13: West Braintree Settlement Hierarchy. Source: AECOM

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Diverse housing models promoting mixed type and tenure

This site is well placed for residential uses which serve the major economic drivers in the region. It will be important to consider where investment and forward funding could unlock, accelerate and de-risk housing delivery. A successful Garden Community must seek to ensure the type and tenure of housing product is expanded beyond what the market would deliver and the number of residential outlets increased or accelerated.

Housing typologies and tenures could seek to consider custom-build, self-build, starter homes, co-housing, older persons housing (including retirement communities, supported living and extra care), housing for vulnerable and disabled people as well as the Private Rented Sector (PRS).

Investment will need to be explicitly linked to an agreed rate of delivery and completion and ensure that it delivers a higher quality and level of innovation that creates a diverse supply, addressing local housing and demographic needs.



Social Infrastructure

A wide range of social infrastructure will be co-located alongside the key service centres. This will include the community, health, education, cultural, and recreational facilities that provide for the needs of a cohesive community. These facilities will “anchor” the Garden Community, providing a range of facilities in close proximity to people’s homes. Typically these will be positioned on a transport spine thereby facilitating the creation of walkable neighbourhoods as well as allowing easy access for residents across the Garden Community.

It will be critical that the provision of social infrastructure is delivered at the earliest possible stages of development in order to advance the establishment of a community and ensure that early residents are adequately served by new facilities, avoiding placing undue pressure on existing provision.

Social infrastructure provision required to mitigate the impact of development and establish strong communities adequately served by necessary services are set out in Chapter 4.

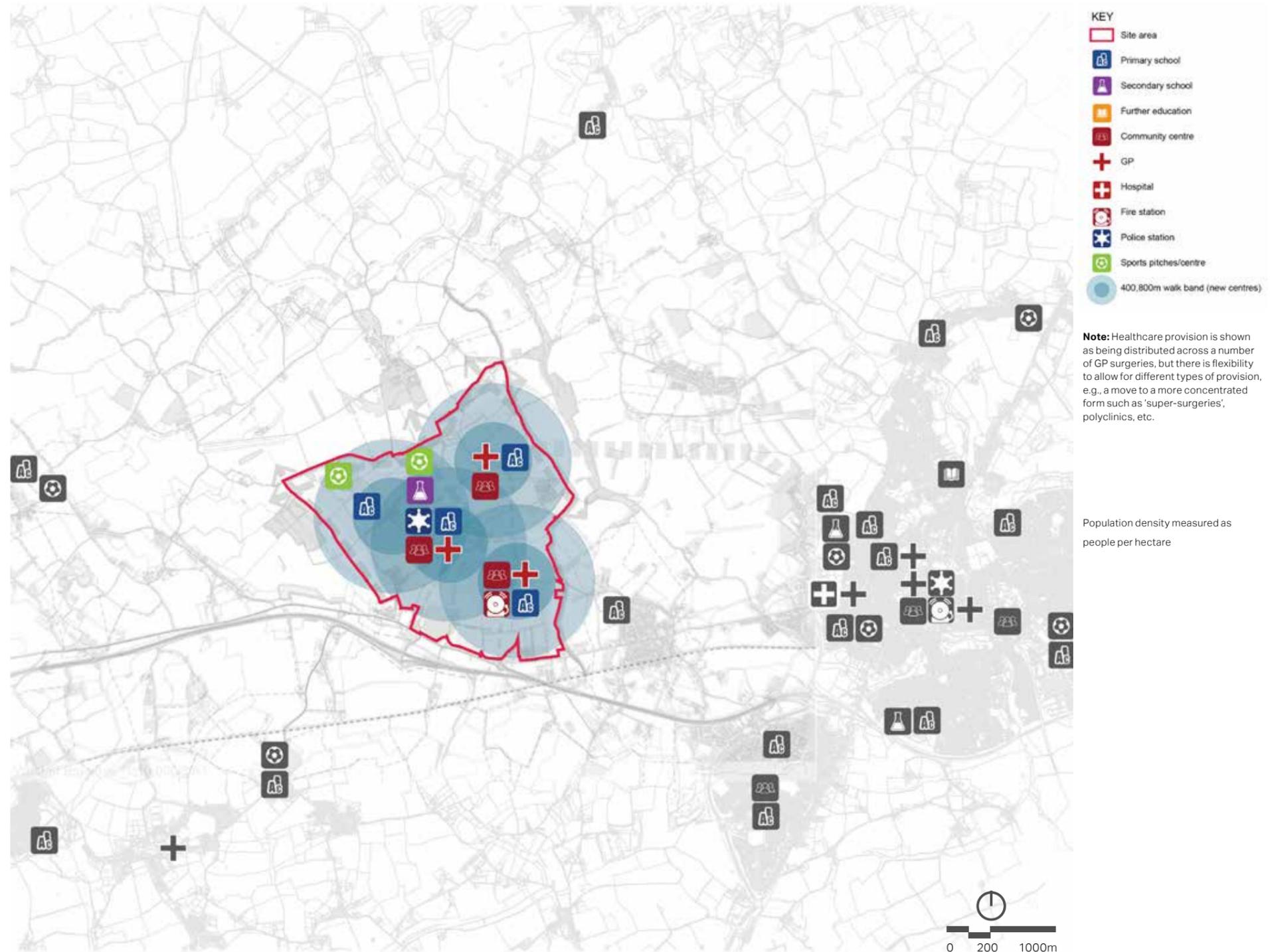


Figure 14: West Braintree Settlement Hierarchy. Source: AECOM

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3.4 Access and movement

Public Transport - strategic long-distance bus connectivity

The Garden Community will be underpinned by a region wide integrated transport strategy, which would include rail and bus based corridors. A part BRT /part in traffic, high headway, rapid and in-frequent stopping bus network will serve the site and provide a clear link with future growth areas, both in terms of employment and settlement population, within the local context and the wider region. The network will also be supplemented by a local, frequent stopping bus services. The public transport network could include the following bus routes / infrastructure interventions:

- A route to Stansted via the A120 (for future employment growth).
- A local bus interchange located adjacent to the A120 and proposed employment parcels at the site.
- A strategic busway through the site, connecting north west Braintree (Springwood Drive) to the Town-centre.
- Braintree Freeport linked via Millennium Way slips (or similar) given the future potential A120 alignment, or via the old A120 alignment (with the potential introduction of a new A120 alignment to the A12) linking Braintree with Marks Tey and Colchester.
- The re-purposing the Flich Line (Braintree Witham Branch Line) into a guided BRT corridor or Tram-Train providing a connection with the GEML at Witham and toward Colchester/London.
- Skyline 120 and the A130 toward Chelmsford linking the future proposed Park & ride bus infrastructure and Beaulieu Park rail station



Cambridge Guided Busway - an example of the type of solution that could be implemented on the Flich line. Operational since 2011 it runs for 25km and connects Cambridge to Huntingdon (60min) and Trumpington (15min). It runs at a 7 minute frequency and reaches speeds of 90kph. Image Source: Google

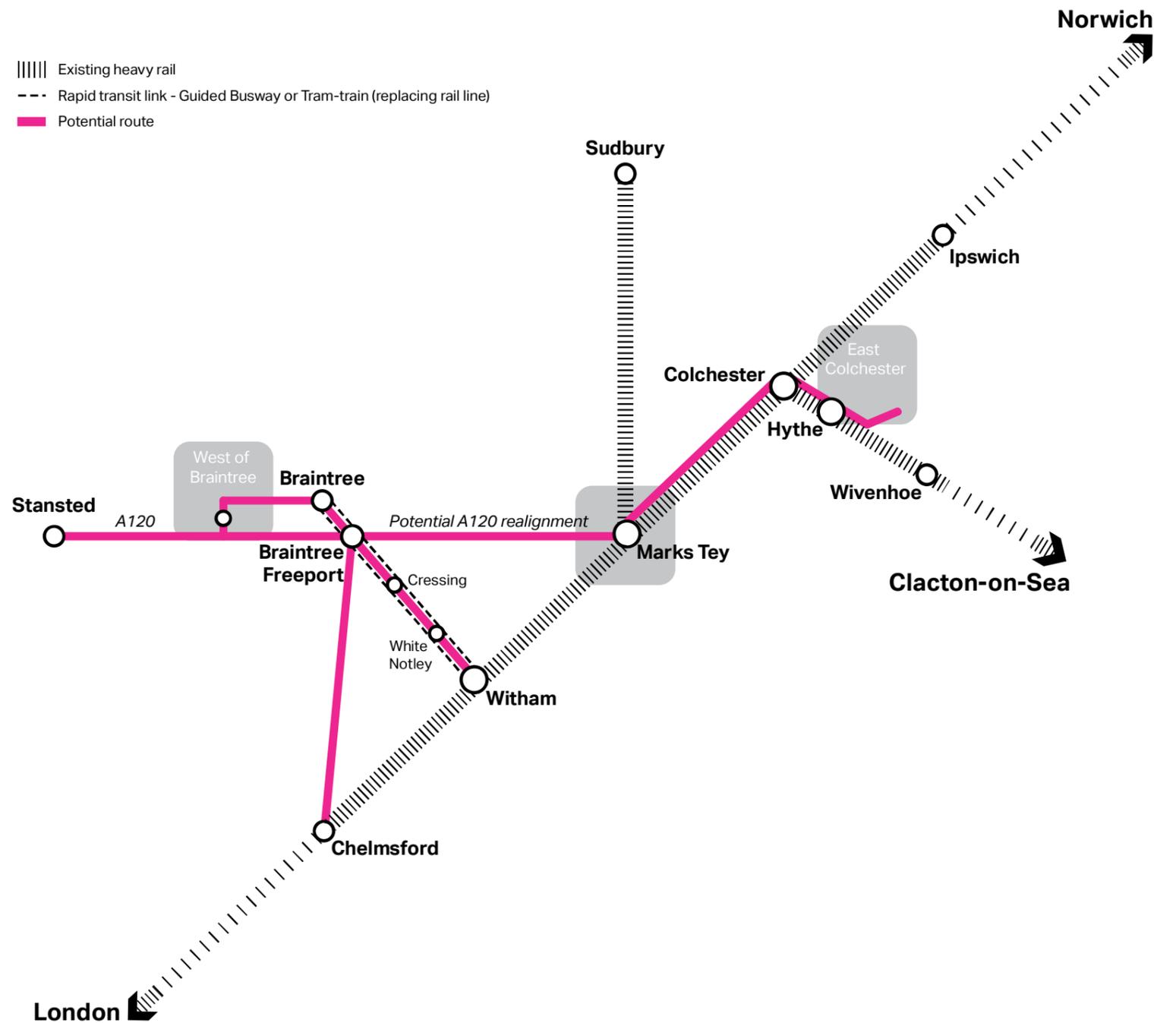


Figure 15: West of Braintree proposed strategic long distance bus connectivity

Local Bus Network

Through considerable upgrading of route frequency and vehicle provision, a number of existing and future routes will serve as local connections between the site, the local settlements and the towns of Chelmsford, Great Dunmow, and Braintree. It will also underpin local movement within the settlement via the segregated sustainable transport corridor/busway, connecting residential uses with employment, schools and amenities. This will also importantly connect the strategic bus interchange within the site located adjacent to the A120.

The identified bus network has the potential to provide a complete 400m and 800m catchment area across the majority of the site, meaning most dwellings are within the identified 10 minute walk distance to ensure connectivity and encourage the highest levels of public transport take up possible.

The bus network allows for short and long distance travel as well as clear interchange between both forms of movement hierarchy.

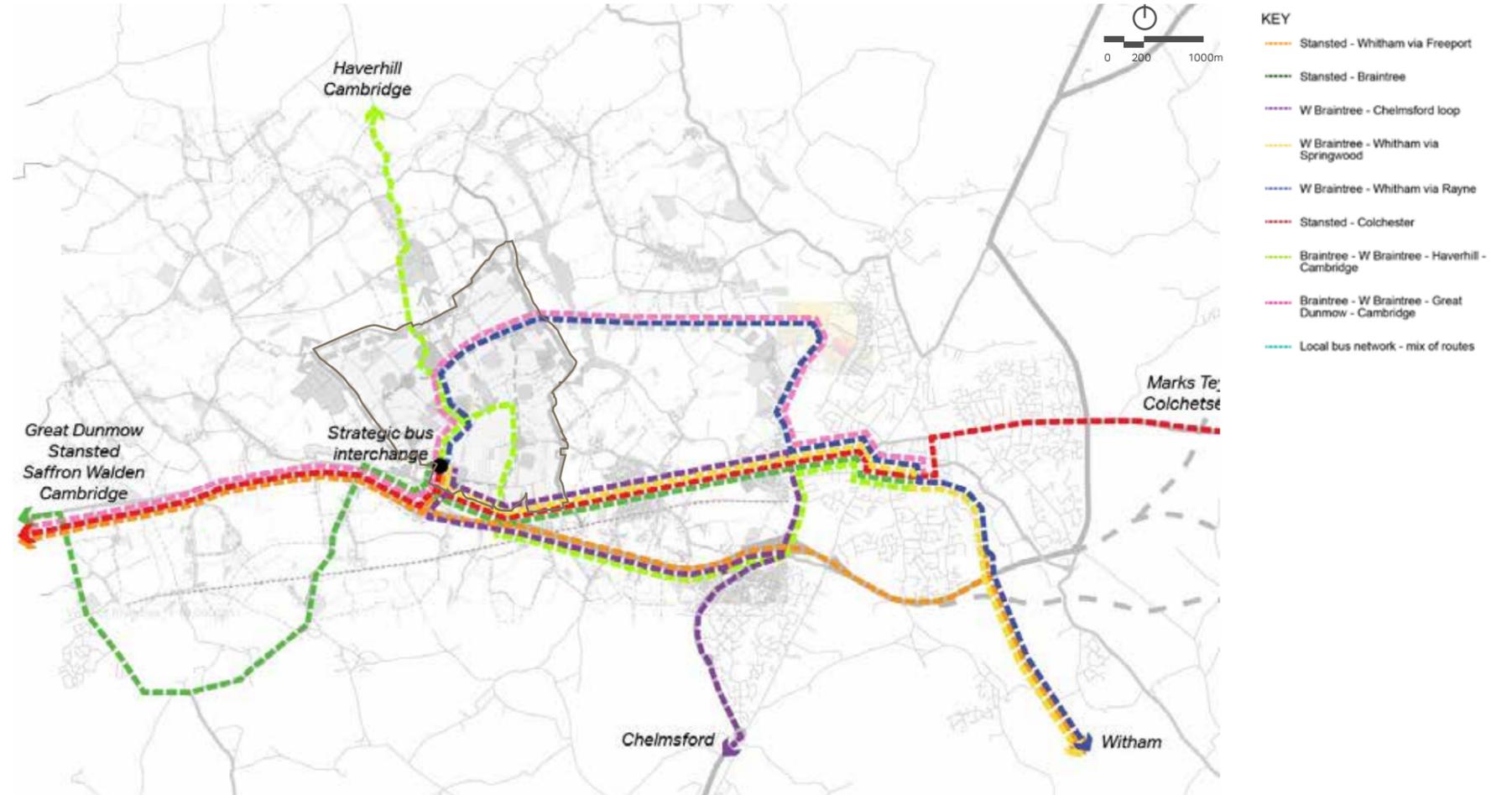


Figure 16: West of Braintree proposed local bus network

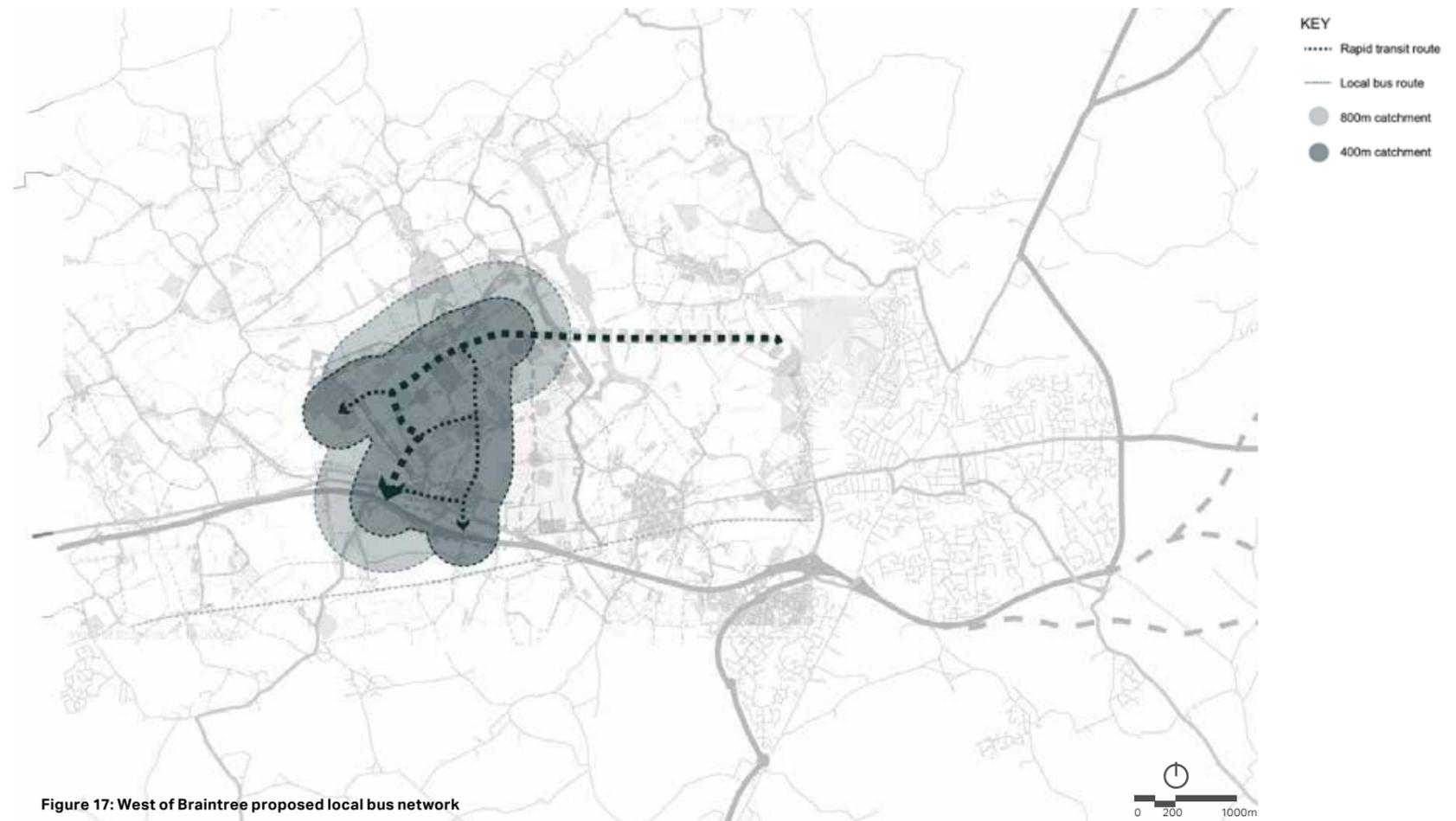


Figure 17: West of Braintree proposed local bus network



High quality bus infrastructure.

Active Modes

High quality streets and connections through the site will ensure that the modal choice for local journeys (under 2.5km) is predominantly via active modes and therefore enshrines the sustainable transport principles at the heart of the Garden Community.

For these journeys, car use should be limited, ensuring it is easier to walk than drive. For longer distance journeys active modes should be encouraged through high quality connectivity with the wider area and settlements / towns. A clear hierarchy of routes dedicated to active modes (walking & cycling) are proposed characterised by hierarchies.

Quietway

A Quietway inter-connects the site and continues northeast, providing a strategic commuter / leisure link through to the current employment and residential expansion to the north west of Braintree town centre (Springwood Drive). The Quietway will accommodate both walking and cycling, as well as a bus based segregated road link / busway.

Greenways

Greenways with provision for active modes inter-connect the three core settlements and ensure the most direct route is available for short distance internal movement. These routes connect formal and informal infrastructure and existing settlements surrounding the site to enable longer distance journeys.

On road & segregated footway / cycle lanes

- A shared use footway/Cycleway between Rayne and Blake End alongside the B1256 will improve southern connectivity.
- Minor upgrades to Pods Lane to improve leisure route linkages.
- Conversion of Queenborough Lane and Shalford Road to an in-traffic quiet cycle route toward Skyline 120.

Leisure

Connections to the existing and protected leisure based bridleways, trails and pedestrian rights of way (PROW's) on Flitch Way and Pods Lane, with upgrades to the existing pedestrian bridge over the A120 and B1256, will ensure a direct connection/interface with the southern edge of the site.

Improvements to the crossing on Dunmow Road will ensure Pods Lane is safely connected across the B1256 and toward Flitch Way. Given the current and possible future status of Flitch Way and the sensitivity that surrounds this route, Flitch Way east of Pods Lane and Rayne will retain its rural character and setting. A 2km all-weather surfaced section from River Brain to Pods Lane in Rayne with sensitive lighting is proposed to improve connectivity to Braintree town-centre.



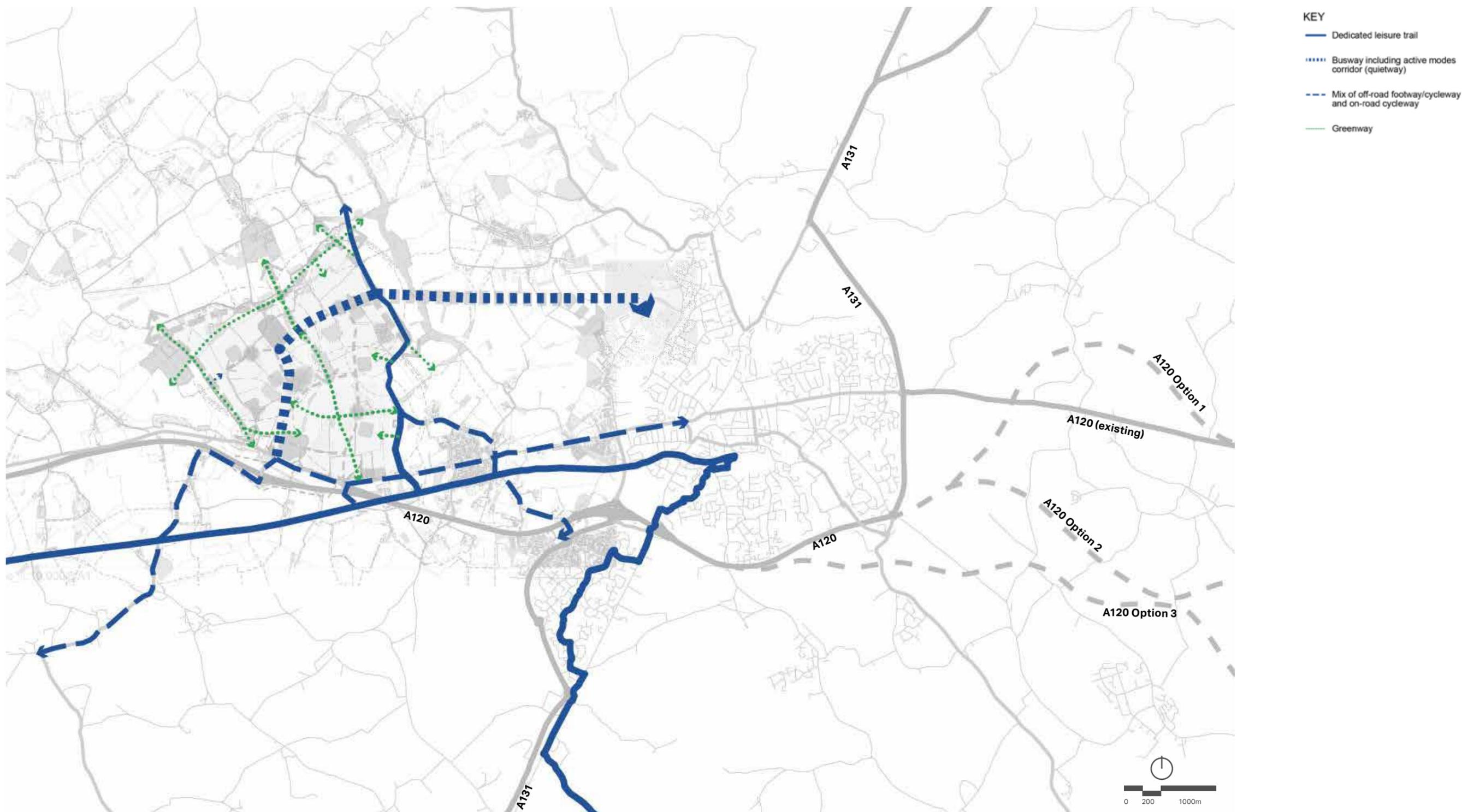


Figure 18: West of Braintree proposed local movement network

Road Network

The street hierarchy acts as the internal movement network connecting to the local highway system, and beyond. A network of primary streets link the site with the external local distributor / trunk road system providing a connection to local centres, whilst also providing connections to an eventual network of secondary streets. The secondary and tertiary networks should be planned to preserve the current nature of the lanes, for example Blake End Road leading to The Street, as much as possible where there are existing dwellings present with driveways and accesses.

It is essential that further highway modelling and testing of the solutions presented in the wider work commissioned by ECC and NEGC is explored in the future.

- The current and potential future strategic road network capacity should be preserved through emphasis on investment in sustainable transport modes and the local road infrastructure should be viewed as a means of access to the site, rather than the sole transport option available.
- The site, by its nature, lends itself to a only a small number of access possibilities, all of which connect with the B1256 and A120 to the south. The lanes to the north and west of the site provide connections and in the loosest sense ensure the new settlement is not a 'cul-de-sac'. However, the lanes will not, nor should they, support the high volumes of traffic generated by a development of this scale. The sterilised nature of the site frontage on the B1256 during the local plan period due to the Tarmac site operation and access requirements means access to the site is limited to a small western portion around Blake End. It is suggested that in order to meet the Garden Community principles and given the constrained nature of Blake End Road in terms of both vehicular capacity and possible future connectivity to active modes, a primary street access to the site via this route should not be relied upon both up to and following Local Plan period. Instead, in the fullness of time this route should only operate as a minor secondary or tertiary connection providing access to possibly a small number of dwellings as part of the future Garden Community masterplan and of course access to existing dwellings that front the road and existing settlements to the north. This means a new connection on the B1256 is proposed, with reference to the phasing set out at page 41.
- Given a) the strategic nature of the A120, b) future capacity upgrades to the east of this road to better serve the volume of strategic traffic movement through north Essex, c) the potential increased mixing of strategic and residential development traffic as a result of new settlements in north Essex and d) the finite capacity of any road infrastructure will bring, it is essential that site access to the A120 is carefully considered.
- Well planned road access will always be required but not at the detriment of encouraging residents and employees from using others forms of transport. The access arrangements between the site, the B1256 and the A120 will have to 'work hard' to ensure that when new infrastructure is provided it considers ease of travel in relation to other modes. This means new junction arrangements should be considered and only triggered when demand exceeds capacity, with provision built into the initial design for bus priority measures.

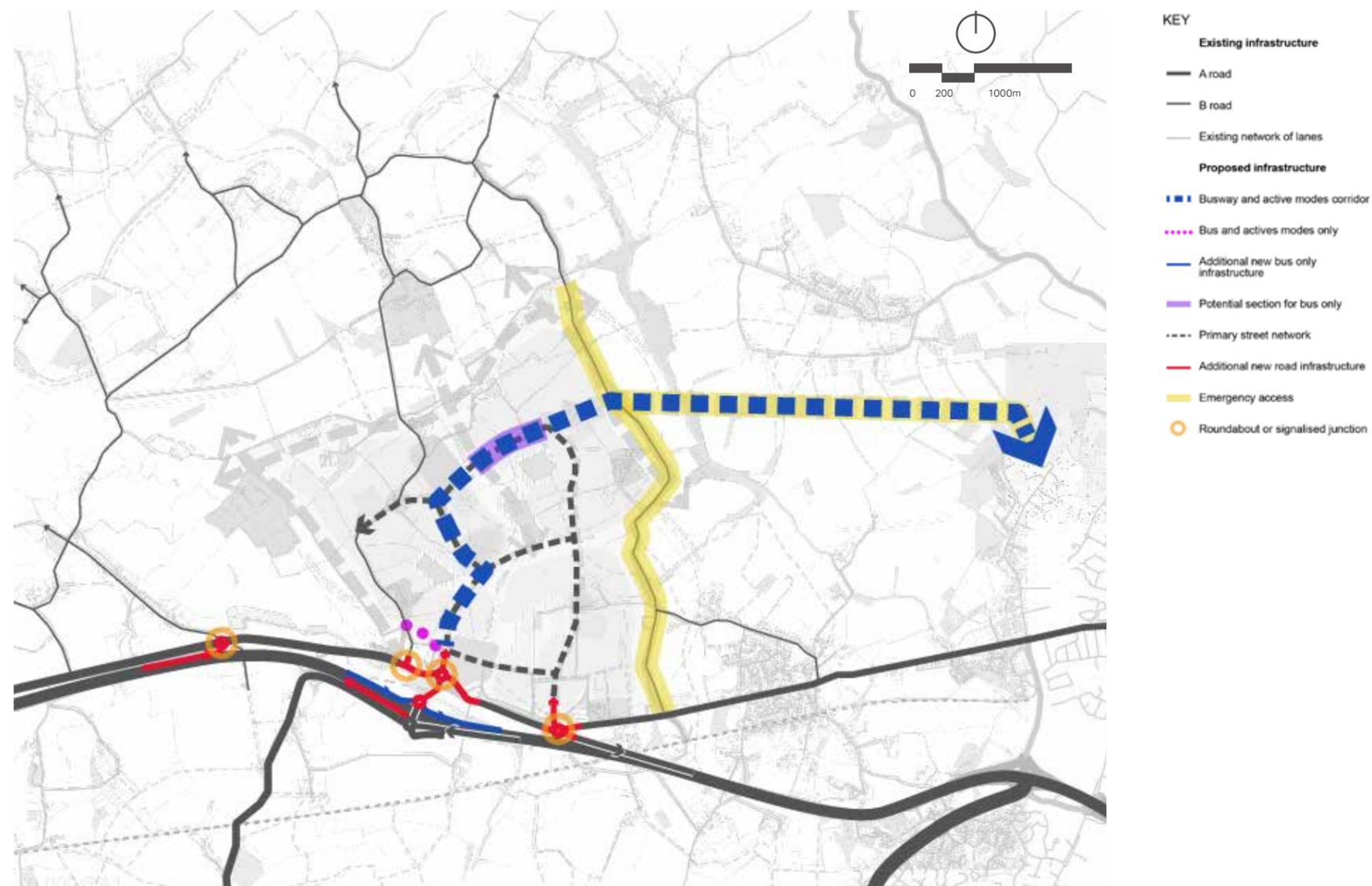


Figure 19: West of Braintree proposed road network

Residential Unit Numbers	Parking Ratios
High density 1 & 2 bed flats within 400m from Public transport nodes	0 to 0.75 spaces
Medium density 1 & 2 bed apartments outside of 400m walk threshold	0.75 / 1 space
Medium density houses (2 to 3 bed) within 400m from Public transport nodes	1 space
Lower density houses (2 to 3 bed) outside of 400m from Public transport nodes	2 spaces
Lower density houses (4 bed+)	2 spaces

Table 1: Illustrative Car Parking Standard

Car Parking

Whilst it is acknowledged that the desire to use the private car (or a similar future equivalent) will always exist to a degree, especially in more rural locations, to minimise its impact this must be planned for, notably making walking, cycling and public transport the most attractive forms of local transport. Car parking policy must therefore be radical in its intent to reduce car reliance. Policy should primarily focus on on-site car parking and street design along with its capacity to serve development that is consistent with a modal choice away from the private car especially for local journeys whilst recognising the importance of connectivity to the wider strategic road network, but not at a cost to its function.

In this context, a clear grading of parking ratios based on public transport accessibility and housing/development density will be used. Along with this, car clubs and changes in social habits toward peer to peer car sharing will be promoted and enabled within the development as means of reducing private car ownership and providing a convenient option for longer distance car travel. This will seek to build on the concept of the sharing economy, and the environmental and community benefits that potentially result.

Additional parking capacity will be located at a hub close to the A120 / employment zone to discourage site visitors to use parking via CPZ's. Furthermore, robust and clear future proofing of provision for the anticipated take up of electric cars as part of a low carbon future within the NEGC will necessitate that required infrastructure such as charging points will be readily accessible within streets, car parks and the home.

Limiting car use, and therefore parking provision, is entirely dependent on the local provision of employment and services within walking or cycling distance or easily accessible within minutes of high quality public transport. Potential car parking standards could take the form of the ratios set out in the table above.

Cycle Parking

The Essex Cycling Strategy November 2016 and guidance thereafter will provide the vision for cycling in the region.

Cycling facilities (hire schemes) and secure cycle parking will be located at major employment and public transport destinations. Innovative cycle parking solutions will also be located within residential areas both in the private domain but also in public spaces to ensure parking is both provided at the origin and destination of a journey and enshrine cycling as the mode choice for journeys under 2.5km.

Cycle parking in a similar vein to car parking should be ambitious in its intent, but unlike car parking should be provided in large numbers. Future standards should relate to density and typology of development to ensure uptake in cycling is maximised. The following residential and employment land use standards are proposed for illustrative purposes:

- Studio / 1 bed – 1 cycle spaces per unit
- 2 + bed – 2 cycle spaces per unit
- Visitor parking based on 1 cycle space per 8 units
- Employment (B1) uses – 1 cycle space per 100sqm
- Visitor parking based on 1 cycle space per 20sqm

Visitor cycle parking should be located at public transport interchanges and focal points within the development and could be realized through cycle hire schemes such as Brompton Cycle hire for example.

Strategic Access

In considering the evidence base available conclusions have been made as to the adequacy of the current highway network and its ability to accommodate new development in this location and likely timing of any new future road infrastructure interventions required to gain access to the site.

- Jacob's Braintree Local Plan – Options Assessment Modelling Report 26/01/16
- AADT Traffic flow data - ATC06 - B1256 Dunmow Road, Rayne. June 2015
- West Braintree Land Use Scenarios Outputs for AECOM 2016
- North Essex Garden Communities Movement and Access Study – INTERIM DRAFT

Local Plan – Options Assessment Modelling Report 26/01/16

Jacobs Local plan modelling up to plan period, which is based on an journey time network model, tested the wider highway network for various development scenarios for the Garden Community site including 1500, 2500 and 3500 homes with 769 to 1784 jobs respectably. Within the vicinity of the site, the modelling looked at the eastern merge onto the A120, and the westbound diverge. The localised junctions on the B1256 and B1417 were not considered as part of this work. The development trips associated with the local plan scenarios assumed that they would only be loaded onto the network at the Blake End junction. The report concluded that:

- “there is definite potential to increase capacity and to add A120 West connections. It is likely to need a study of topographical and of land take constraints for any scheme to increase capacity of the slips. Capacity is likely to be limited by the link capacities of the B1256 and B1417 and the B road junctions before the existing junction reaches capacity”

AADT Traffic flow data June 2015

- A 7-day automatic traffic count on B1256 Dunmow Road, Rayne, (24 June 2015), recorded 32,180 vehicles travelling eastbound and 9,724 vehicles westbound. The combined AADT value is approximately 6,000 two-way vehicles or 4,600 eastbound and 1,400 westbound. The flows suggest that there is likely to be a high degree of spare link capacity, especially given the B1256 previous design and its status as a de-restricted trunk road.
- Similarly, on the A120 within the location of the site, AADT flows of approximately 2,800 vehicles on the westbound off-slip and 3,200 vehicles on the eastbound on-slip were recorded in June 2015. Again, given the infrastructure, the flows are not considered high and the current infrastructure would likely accommodate increases in traffic flows.

West Braintree Land Use Scenarios Outputs

Jacobs generated summary trip demand outputs (AM and PM Peak) for a census data and ambitious NEGC based mode share scenarios for the following development scenarios:

- 2,500 homes plus employment
- 4,000 homes plus employment
- 6,000 homes plus employment
- 10,000 homes plus employment
- 13,000 homes plus employment.

The data suggests that with 10,000 homes, for example, and based on the Census data mode share from their Local Plan model (worst case for vehicular traffic demand), during the AM Peak the distribution would be approximately 4,000 two-way vehicle trips via the A120, with very small numbers to Braintree and the local villages via the existing lanes. In comparison the model suggests 2,200 two-way vehicle trips via the A120 using the ambitious mode share. In both scenarios the development flows are substantial and would require new junction infrastructure to accommodate the development flow forecasts.

In contrast 2,500 homes (up to local plan period 2033) AM Peak the distribution would be approximately 1,300 two-way vehicle trips via the A120, with very small numbers to Braintree and the local villages via the existing lanes. In comparison the model suggests 740 two-way vehicle trips via the A120 using the ambitious mode share. The consensus view in lieu of detailed junction modelling at this stage of the project (ARCADY, PICADY or LINSIG) is that the current infrastructure on the A120 / B1417 and B1417 / B1256 will accommodate development up to the local plan period. Upgrades to Blake End junction would be required to facilitate safe operation with the implementation of a new junction from the A120 to the site. The new junctions should be designed for the final state but include bus provision from the outset, with limited additional capacity for cars to ensure update of modes other than the car.

Commencement - up to and including Local Plan period (2033)



Figure 20: Commencement stage transport infrastructure.

- KEY**
- Existing infrastructure
 - Additional new infrastructure
 - Sterilised edge (quarry site)
 - Indicative quarry priority junction to serve as access for mineral extraction
 - Roundabout or signalised junction

Post Plan period - phased with development



Figure 21: Post plan period transport infrastructure.

- KEY**
- Existing infrastructure
 - Additional new infrastructure
 - Additional new bus only infrastructure
 - Roundabout or signalised junction

3.5 Infrastructure and sustainability

The delivery of a new Garden Community to the West of Braintree will provide a number of challenges in terms of infrastructure provision. The very lack of existing connections and services, however, is also an opportunity to think differently about how to serve the energy and water needs of the new community, unlock development potential and accelerate the pace of development. The opportunity therefore exists to deliver intelligent utility network infrastructure in an integrated, cost effective and timely manner.

The Garden Community LDV will need to act as a mediator between utility companies to bring forward a more integrated approach to provision that ensures that land parcels are unlocked and unconstrained by utilities infrastructure through intelligent timing and phasing.

The opportunity for combined utility corridors, ensuring utilities are provided from the outset and making maintenance easier and more convenient for residents, along with other sustainable on-site items such as approaches to waste water treatment and on-site power generation, should all be considered.

In addition, the potential for the utilisation of new technologies, including renewable technologies, needs further consideration.

Potable Water

The proposed development area is supplied by Anglian Water. The Resource Zone (RZ) that it is situated within is expected to be in a deficit state by the year 2040. This assessment by Anglian Water, as part of their current Water Resources Management Plan, takes into account growth of 200 new dwellings per annum; significantly lower than the proposed growth volume.

One of the main measures to mitigate the forecasted deficit will be to increase the transfer from neighbouring RZs with a supply surplus.

Waste Water

There is little spare capacity at either the Rayne or the Braintree waste water treatment plants, and waste water will need to be pumped to Bocking waste water treatment plant.

This would only provide a short term solution, and in the medium term a new waste water treatment plant would have to be provided within the development area. However, existing water courses are too small and ecologically sensitive to accept the final discharge of treated sewage effluent (TSE), so any TSE which is not used locally would still have to be pumped to Bocking.

The establishment of a new treatment plant would provide an opportunity for creating a robust water cycle strategy in line with the garden city principles. TSE could be used for non-potable purposes, including irrigation, wash down and WC flushing; significantly reducing the costs of pumping to Bocking whilst also aiding in the mitigation of the forecasted potable water supply deficit.

Gas

A medium pressure gas main currently runs through the south east corner of the proposed development area. Connection to this, along with pressure reducing stations, will be required to serve low pressure gas to the new sites.

Electricity

The West Braintree Primary substation has limited capacity, possibly only enough to serve the initial phase of development. The electrical network reinforcement required for development above this are expected to have significant cost implications. All options for reducing reliance on grid electricity need careful study with renewable sources such as solar, wind, ground and air source heat pumps therefore requiring robust economic appraisals.

Telecommunications

The Telecommunication network will be made available to the development at no cost, following a commitment by BT Openreach to serve all developments of more than 30 homes with high speed broadband.

The rural nature of the proposed development area means that mobile coverage in the area will require significant improvements. Mobile Network Operators have obligations to provide minimum coverage levels throughout the UK, however the low population density of the area will result in a disproportionately lower coverage. The investment into fibre optic broadband will be beneficial here, as the fibre optic infrastructure can be used to feed new base stations.

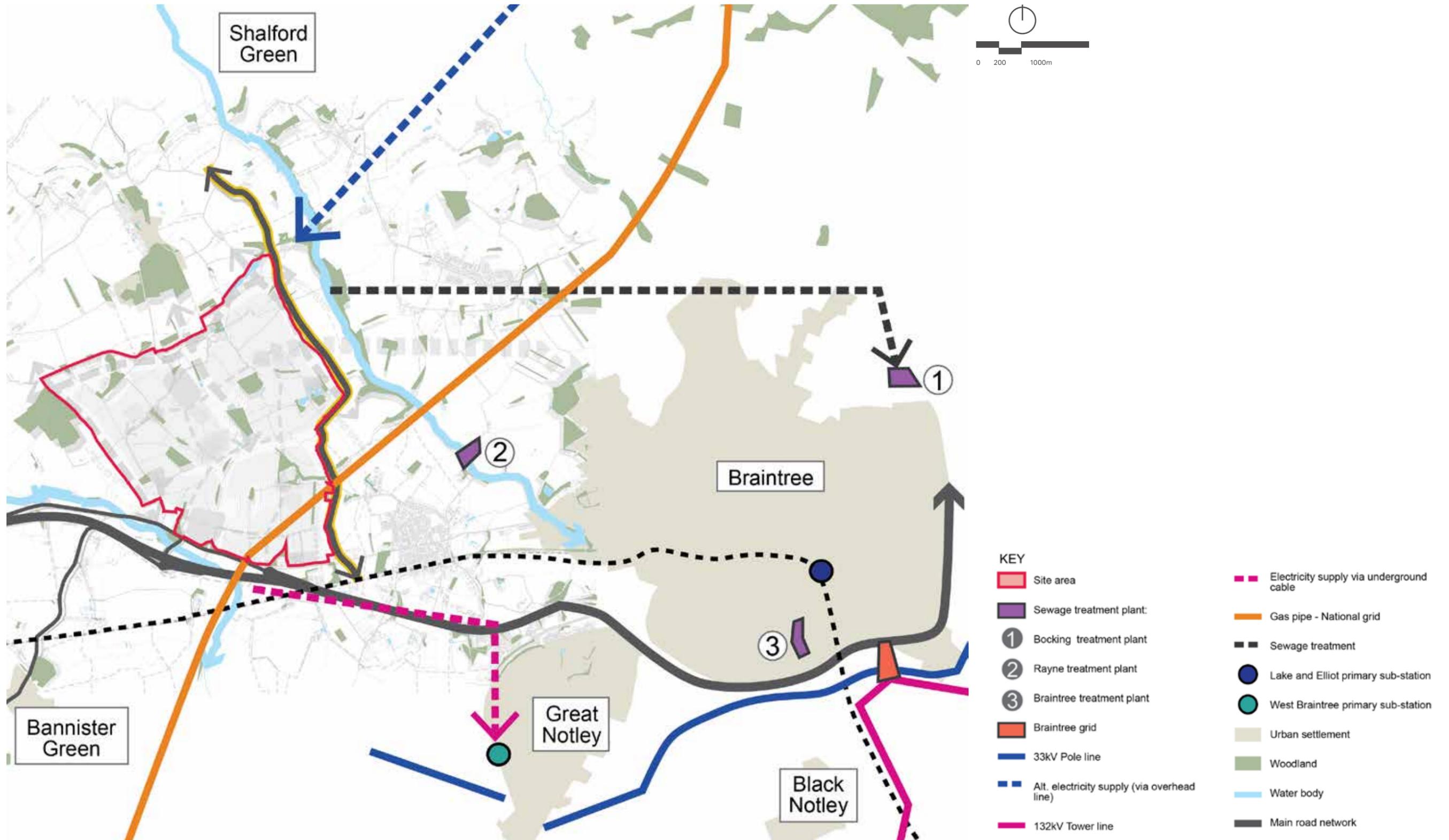


Figure 22: West of Braintree proposed utilities network

3.6 Green / blue infrastructure

By definition, a Garden Community evokes notions of development set within an extensive, verdant landscape, with multi-functional open space available for residents to enjoy. It is also a form of development where all open spaces, from the strategic green corridors, local parks and streets to the domestic garden, have a role to play in characterising the development.

The provision of significant quantum of accessible, well designed and well maintained open space is fundamental to the character and sense of place in the Garden Community to the West of Braintree.

The open space takes a number of forms, but it is the interconnectivity between different types and scale of open space that is the key to realising the vision of the Garden Community. The retention of existing landscape and open space assets is important, given the nature of the adjacent countryside and the quality of some of those assets. Retaining these established landscape assets helps to give meaning to the development from its earliest days, building on an existing character, rather than creating a new one from scratch. Making connections, internally and beyond the site boundaries, is essential both in terms of the creation of ecological pathways and linkages, but also to achieve a form of development that is firmly embedded within its landscape setting. There are clearly blocks of sensitive landscape and locations where the relationship of new built development with open areas of countryside, and other settlements (e.g., Great Saling and its conservation area), require a sensitive design response.

The landscape component of the Garden Community to the West of Braintree comes in three parts:

- Structural landscape: those elements that provide the setting for development and help to integrate it with the surrounding countryside;
- Town-wide landscape: which includes those spaces that provide amenity for the whole settlement, and
- Local landscape: the spaces located close to home, the ones that provide the small play areas, the local allotments, parks and the network of inter-linked green spaces that tie the community together and provide the most immediate and direct opportunity for residents to experience nature on their doorstep.

Structural Landscape - An integrated green and blue network

Sensitive local receptors, such as Pods Lane and Brook, Boxted Wood and the surrounding settlements require careful consideration. Clearly the creation of a new settlement is difficult to hide, no matter how extensive the surrounding landscape. In any case, this would also be the wrong approach to take. Creating a matrix of spaces, including landscape buffers and structural tree planting within which development sits, is a more nuanced and sustainable way of managing potential impacts on the surrounding area.

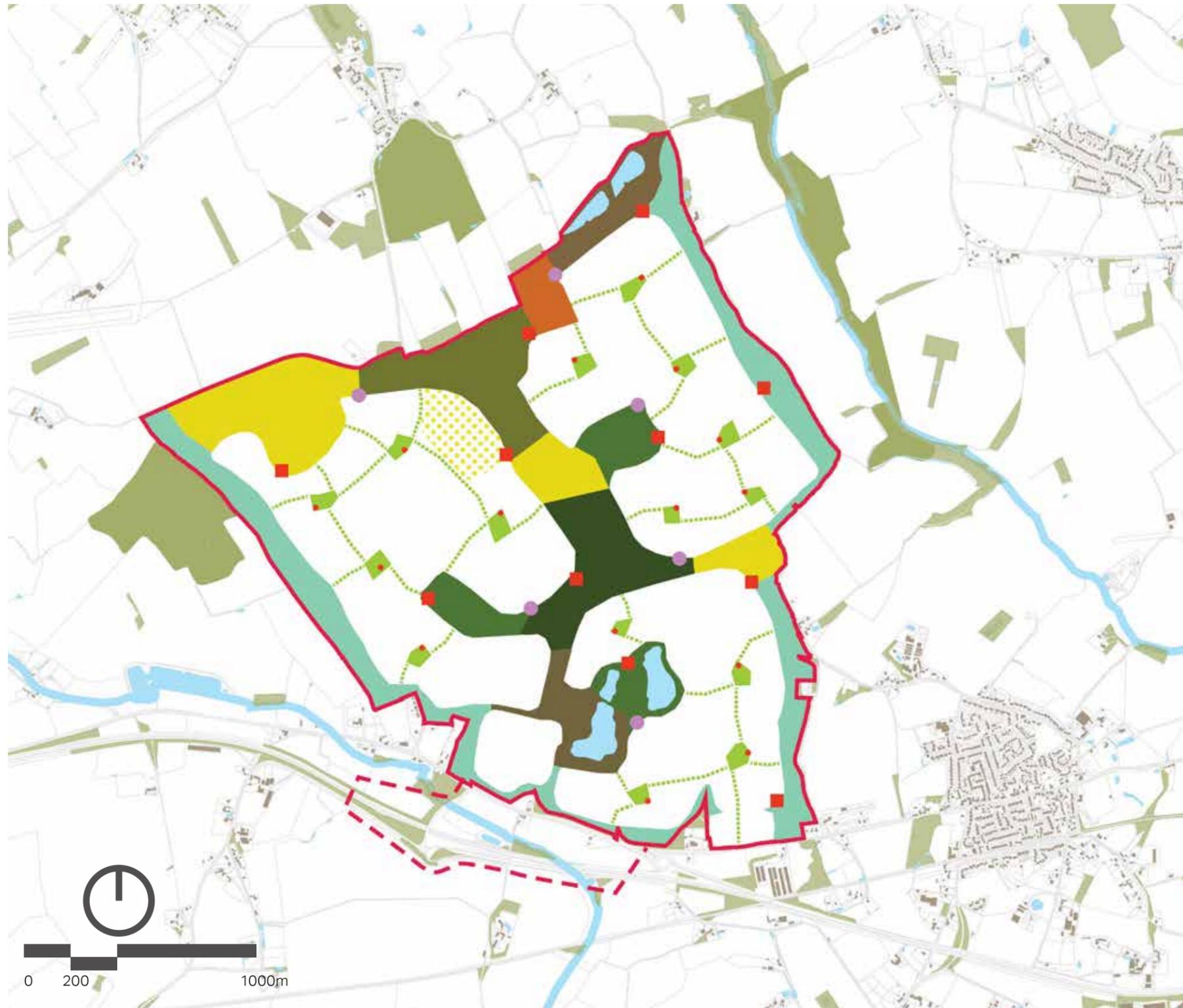
In order to facilitate an integrated green and blue infrastructure network the Concept Framework promotes the following key principles, which combine to establish a place that is resilient to climate change and establishes a pro-active relationship with the existing landscape:

- A focus on the existing open space and landscape features such as Boxted Wood and areas of ecological value to celebrate current features as well as establish a strong ecological network that retains and enhances biodiversity across the landscape.
- Definition of major east-west and north-south green corridors through the site, giving shape and form to development. This will provide a coherent landscape that ensures high levels of access to quality amenity, recreation and leisure space - encouraging healthy behaviours for new residents.
- Establishing connections into the wider landscape such that the new community becomes sustainably accessible through walking and cycling green routes.

Key spaces: Semi-natural green spaces that act both as buffers and interfaces with the wider landscape



Strategic landscape spaces, providing an environment that both buffers development and integrates it into the wider countryside



KEY

- Site boundary
- Extension for transport improvement
- Semi-natural green space buffer
- Ecological habitat
- Town farm
- Sports field
- Secondary school site including sports facilities
- Town park
- The Common
- Neighbourhood park
- Local park
- Woodland
- Water body
- Green route
- Allotments
- Neighbourhood play area
- Local play area

Figure 23: West of Braintree green and blue infrastructure.

Town-wide Landscape - knitting the place together

The Garden Community will contain major new parkland designed to capitalise on the existing landscape and celebrate the local distinctiveness of the area. This parkland will provide local amenity and leisure space while also creating new ecological habitats/reserves and providing storm water attenuation space with the potential to promote water balance and re-use such as irrigation.

The Town Park and Common are the key assets, providing amenity and creating a focus for civic life, while also helping to knit together the disparate parcels of mixed use development. The areas of habitat and Town Farm provide the stage for residents to directly engage with the landscape, and the flora and fauna it supports, both formally and informally. These areas use existing assets as a starting point, whether it be historic farm structures or existing and new wetland (arising out of the remediation work to the Tarmac extraction site).

Finally, the sports pitches are located at key junctures, providing access to a variety of formal and informal sports activities that contributes to the healthy living agenda that is one of the key aspirations of the Garden Community.

Key Spaces: The town Park, the Common, the Town Farm, Sports Fields, areas of habitat

Local Landscape - enriching the place

Local parks, allotments, play space and incidental green space will be fundamental to the overall sense of place and character in the Garden Community. They will create focal points for neighbourhoods and opportunities for resident interaction.

The incidental spaces located within development parcels are a key part of this local-level landscape, providing opportunities for play, amenity planting that also provides shade and shelter, as well as food production, and a network of spaces capable of supporting local drainage systems that help to manage surface water drainage as part of a more strategic, site-wide set of interventions.

Flowing between these spaces, heavily tree planted streets and avenues will weave the whole development together, creating a more nuanced and finely detailed counterpoint to the major green corridors that flow around the edges and spine of the new community.

The importance of existing habitat and landscape structures to the longer terms success and sustainability of the Garden Community cannot be over-emphasised. Protecting and enhancing existing assets, creating new spaces and connections and managing the whole system in a sensitive and responsive manner will help deliver spaces that are attractive to both people and nature.

Key Spaces: Local parks, pocket parks, incidental open space, play areas, allotments and community gardens and tree lined streets

An active landscape

There is ample opportunity to use both the structural landscape spaces and the local open space to deliver high quality sport and leisure provision within the Garden Community. This might include both formal sport and more informal leisure and recreation facilities, with local school facilities also having a role to play in providing for the needs of residents.

All play space should be integrated into natural surroundings and allow children to be within green spaces with a high degree of natural surveillance.

Locating play alongside complimentary uses such as schools, nurseries and cafés to support their function and improve their success and vibrancy should be a focus throughout.

A productive landscape

Building on the existing site's focus on arable agriculture and food production, the Garden Community will provide space to establish orchards, allotments and greenhouses for commercial and local neighbourhood food production.

Such spaces can be used by residents to grow fruit, vegetables and flowers, encouraging interaction with the outdoors, promoting education about the benefits of healthy living and giving people the opportunity to pursue a healthy lifestyle and fostering civic pride within the community.

A flexible landscape

Local spaces should be suited to the varying needs of a mixed community. Spaces should be flexible to allow for the changing needs of the community over time and allow for spaces to be inhabited throughout the year.



Community gardens, allotments and community orchards provide locally grown food, foster social interaction and promote healthy lifestyles.



Private gardens are an important component of the wider landscape, providing considerable flood mitigation, ecological habitat, play, food production and, as in this image, helping to characterise and define the street.



Tree lined streets help with place-making, provide cooling and shading, create ecological corridors and generally soften the visual aspect of development



Movement corridors through open space - for pedestrians and cyclists - create connections, bring life and vitality to the landscape and encourage healthy lifestyles amongst residents.



The incidental open spaces within residential parcels characterise the development and help with way-finding and legibility



The Town Park and Common are two of the important open spaces that provide town-wide amenities and help to knit the development together.



Children's playground, embedded within residential areas and local open space



Open space supports the sports and facilities and clubs that help to foster community and provide a forum for residents to meet and interact.



SUDS within open space (and streets) help to manage and mitigate the effects of surface water flooding - and important consideration when developing an existing green field site

This chapter outlines the key considerations in the delivery of a development in line with this concept framework.

04 Delivery

- 4.1 Infrastructure requirements
- 4.2 Implications for Policy SP10

4.1 Infrastructure requirements

Project List

The following table identifies the key project requirements to support the Garden Community as it relates to Social Infrastructure, Utilities and Transport. These projects are based on a high level assessment of the infrastructure requirements for the development option and the growth (housing and employment) envisaged. It is assumption based only and related either to the transport strategy, social

infrastructure standards set out within the Option Evaluation or the baseline work, and utility infrastructure requirements informed where possible through preliminary discussions with the relevant service providers (e.g. UK Power Networks and Anglian Water). They are indicative only and are not based on a detailed masterplanning exercise.

Table 2: West of Braintree Infrastructure requirements

Infrastructure	Demand arising from Concept Framework	Phasing	Justification
Education			
Primary Schools Form Entry	10-12	Phasing of education infrastructure to occur within development period and post according to the housing growth triggers	Minimum requirement based on Essex County Council - Developers' Guide to Infrastructure Contributions 2016. No account of existing surplus/deficit in existing surrounding facilities.
Secondary Schools Form Entry	10-12	As above	As above
Early Year Facilities	12-15	As above	As above
Healthcare & Community			
General Practitioners	10	Phasing of healthcare infrastructure to occur within development period and post development, according to the housing growth triggers for each facility. Approach to delivering provision (smaller practices, super-surgeries or polyclinics) to be developed in discussion with CCG.	Minimum requirement based on AECOM SIF standards, assuming off-site mitigation and no account of existing surplus/deficit in existing surrounding facilities.
Dentists	10	As above	As above
Acute Hospital Beds	35	As above	As above
Library Space	538 sqm	As above	As above
4 Court Sports Centre	1	As above	As above
4 Lane Swimming Pool	1	As above	As above
Open Space			
Outdoor Sport	27 ha	Phasing of open space infrastructure to occur within development period and post development, according to the housing growth triggers for each type	Minimum requirement based on AECOM SIF standards.
Children's Play Space	6 ha	As above	As above
Semi Natural Open Space	36 ha	As above	As above
Parks and Gardens	24 ha	As above	As above
Amenity Green Space	16 ha	As above	As above

Infrastructure	Demand arising from Concept Framework	Phasing	Justification
Energy			
52 No. 11 kV to 400 V distribution substations	39 MW	Phasing of energy infrastructure to occur during commencement up to plan period, and post plan period; according to housing growth triggers	Distribution and connection of to end-users
8 No. 11 kV ring circuits from primary substation to connect to distribution substations.		As above	As above
400 V LV circuits from distribution substations to end users		As above	As above
Potable Water			
New network of distribution pipework	3,245 m3/day	Phasing of energy infrastructure to occur during commencement up to plan period, and post plan period; according to housing growth triggers	Distribution and connection of to end-users
Waste Water			
Existing plant upgrades to treat additional capacity	2,920 m3/day	Phasing of energy infrastructure to occur during commencement up to plan period, and post plan period; according to housing growth triggers	Collection of waste water to distribution network
Plot connections for all properties to waste water distribution network		As above	As above
Gas			
1 No. Medium to Low Pressure reducing station	41 MW	Phasing of energy infrastructure to occur during commencement up to plan period, and post plan period; according to housing growth triggers	Distribution and connection to end-users
Plot connections for all properties to gas distribution network		As above	As above
Utilities - Off-Site Requirements			
Energy			
Primary Substation 33/11 kV with 2 x 45 MVA transformers	39 MVA	Commencement up to plan period	Supply of electricity to end-users
33 kV connection to new Primary Substation from existing Overhead Line		Commencement up to plan period	As above
Potable Water			
New connection network from existing reservoirs	3,245 m3/day	Commencement up to plan period	Supply of potable water to end-users
Additional importation from neighbouring areas required to serve the Anglian Water Resource Zone		2039	As above
Waste Water			
Upgrades to water course discharges		Commencement up to plan period	Environmental enhancement / EA regulations
Connection to existing waste water treatment works - primary and secondary collection networks	2,920 m3/day	Commencement up to plan period	Braintree WRC is at capacity and can't take flows. Bocking WRC can accept flows in early phases but this is approximately 6km away and so a significant pumping distance. May be preferable to provided new WRC in early phases but this would have to be developer funded (this has not been costed within this piece of work).
Gas			
Extension to existing Medium Pressure network		Commencement up to plan period	Supply of gas to end-users
Telecommunications			
Development of access chambers for BT Telecoms network, BT Openreach fibre optic network and private telecoms network throughout development		Commencement up to plan period	Supply of ICT / data network to end-users

Infrastructure	Demand arising Concept Framework	Phasing	Justification
Transport			
New segregated busway through site to connected with wider bus/BRT network. Including Dedicated walking and cycling corridor (quietway).		Commencement and up to plan period (2033)	To ensure non-car mode transit is embedded from the outset and ensure modal shift from the outset
Various combined segregated pedestrian / cycle "Greenways" through site	Phasing or sizing of infrastructure to occur with development growth / demand	Commencement and up to plan period (2033)	To ensure non-car mode transit is embedded from the outset linking the local region
Upgrade to existing pedestrian bridge over A120 to provide pedestrian / cycle connection between site and Flitch Way. At-grade or elevated link to continue into the site - 1 No		Commencement and up to plan period (2033)	To ensure non-car mode transit is embedded from the outset linking the local region
New pedestrian / cycle bridge (combined with new junction arrangements) over A120 providing a connection between the site and Flitch Way, including new route south of A120- 1 No		Commencement and up to plan period (2033)	To ensure non-car mode transit is embedded from the outset linking the local region
A shared use footway/Cycleway between Rayne and Blake End alongside the B1256.		Commencement and up to plan period (2033)	To ensure non-car mode transit is embedded from the outset linking the local region
Minor upgrades to Pods Lane to improve leisure route linkages		Commencement and up to plan period (2033)	To ensure non-car mode transit is embedded from the outset linking the local region
Conversion of Queenborough Lane and Shalford Road to an in-traffic quiet cycle route toward Skyline 120		Commencement and up to plan period (2033)	To ensure non-car mode transit is embedded from the outset linking the local region
Improvements to the crossing on Dunmow Road ensuring Pods Lane is safely connected across the B1256 and toward Flitch Way		Commencement and up to plan period (2033)	To ensure non-car mode transit is embedded from the outset linking the local region
Flitch Way east of Pods Lane and Rayne to retain rural character and setting. A 2km all-weather surfaced section from River Brain to Pods Lane in Rayne with sensitive lighting is proposed to improve connectivity to Braintree town-centre.		Commencement and up to plan period (2033)	To ensure non-car mode transit is embedded from the outset linking the local region
Transport Hub (BRT) At Grade	Phasing or sizing of infrastructure to occur with development growth / demand	Commencement and up to plan period (2033)	To ensure non-car mode transit is embedded from the outset linking the local region
Travel plan measures (smarter choices, car clubs, charging points, etc) - Straight Line Cost Over Time	Phased based on development	Commencement and up to plan period (2033)	To ensure non-car mode transit is embedded from the outset linking the local region
Bus service subsidies & other public transport improvements - Straight Line Cost Over Time	Phasing or sizing of infrastructure to occur with development growth / demand	Commencement and up to plan period (2033)	To ensure non-car mode transit is embedded from the outset linking the local region
Contribution to Strategic ("Sub-regional") Public Transport solution e.g. BRT	Phasing or sizing of infrastructure to occur with development growth / demand	Commencement and up to plan period (2033)	To ensure non-car mode transit is embedded from the outset linking the local region
Upgrades to the B1256 to facilitate access via a roundabout or signal controlled junction		Commencement and up to plan period (2033)	To facilitate vehicular connection to the site
Upgrades to improve safety and operation at the B1417 / B1256 and B1256 / Blake End junction to form a new roundabout or signal controlled junction		Commencement and up to plan period (2033)	To facilitate vehicular connection to the site
Utilise existing access arrangements from the A120 junction with the addition of a new on-slip		Commencement and up to plan period (2033)	To facilitate vehicular connection to the site
All-vehicle off-slip and associated junction improvement at Stebbing Green		Commencement and up to plan period (2033)	To facilitate vehicular connection to the site
Additional infrastructure to form an all-movement junction between the A120 and B1417 and associated widening of the bridge structure.	Phasing or sizing of infrastructure to occur with development growth / demand	Post Local Plan period	To facilitate vehicular connection to the site/ Land allocated for construction / implementation at initial phase but delivered post Local Plan period based on a demand and capacity based trigger solution not based on number of dwellings

Infrastructure	Demand arising Concept Framework	Phasing	Justification
Bus only eastbound off-slip and eastbound on-slips to above junction		Post Local Plan period	To ensure non-car mode transit is embedded from the outset linking the local region
The addition of a full junction upgrade connecting the main site access with the above upgrades to the A120/B1417 junction	Phasing or sizing of infrastructure to occur with development growth / demand	Post Local Plan period	To facilitate vehicular connection to the site, based on a demand and capacity based trigger solution not based on number of dwellings.
The addition of a new signal control or roundabout junction providing direct access from the B1256 / Dunmow Road junction through to the site	Phasing or sizing of infrastructure to occur with development growth / demand	Post Local Plan period	To facilitate vehicular connection to the site, based on a demand and capacity based trigger solution not based on number of dwellings.

4.2 Implications for Policy SP10

The draft Local Plan set draft policy guidance under Policy SP10: West of Braintree Garden Community. In summary of the conclusions drawn from completion of the concept framework, this section recommends potential updates and review.

Land Use, Capacity and Placemaking

The ability to deliver 2,500 homes in the plan period requires consideration.

The existing, non-specific text on employment (“appropriate provision”) in the introductory section could be updated to reflect the SQW-led study. The reference to “close to the A120” is still relevant, but could be supplemented with “as well as on non-employment park locations throughout the Garden Community”.

We would question whether it would be appropriate for retail provision in the neighbourhood centres to be restricted to convenience for a settlement of such size. Although the impact on Braintree must be borne in mind, would it be appropriate for a population inhabiting a settlement of up to 9,300 homes to have to travel elsewhere for non-convenience shopping (by way of comparison, Saffron Walden has about 6,500 homes)?

Bullet 1 under Placemaking and Design Quality makes reference to a number of assets that are partly or wholly outside the new site area, including Boxted Wood and the historic airfield. Pods Brook is also referenced but falls outside the site boundary that we are proposing. However, each of these assets do provide context so those listed could be described as being “within and close to its boundaries”.

The draft policy sets a target of “an average net density of at least 30 dwellings to the hectare”. This should be amended to “an average net density of 35 dwellings per hectare”, with the text about variable densities in different locations kept.

The draft policy could also be updated to directly reference the recommended red line boundary of the Concept Framework.

Access and movement

Pending high level modelling by Jacobs and further development of proposals regarding a direct greenway bus and cycle link to Braintree, the text under the Transportation heading is fit for purpose, subject to other comments received. However, a reference to a new junction to allow direct access from the Garden Community to the A120 should be added.

Point 8 in Policy SP10 should add the following text:

The provision of a strategic busway (bus based segregated road link) through the site and connecting it with north west Braintree (Springwood Drive) and the town-centre

Furthermore Point 9 should remove the reference to the linear park and add:

A Quietway inter-connecting the site, continuing northeast to provide a strategic commuter / leisure link toward employment and residential expansion to the north west of Braintree town centre. The Quietway will accommodate both walking & cycling combined with a strategic bus link.

Infrastructure and sustainability

The text on the design and infrastructure needing to incorporate the highest standards of innovation in technology to reduce impact of climate change, water efficiency and sustainable waste / recycling management facilities is still fit for purpose.

16. Provision of improvements to waste water treatment and off-site drainage improvements;

This statement should be reworded to state that:

16. Provision of improvements to waste water treatment and off-site drainage improvements and a study into the provision of a new waste water treatment facility on site

Additional text should be included to state that all options for reducing the need for grid electricity should be examined including solar, wind, ground and air source heat pumps. This is due to the West Braintree Primary substation having limited capacity.

Green / blue infrastructure

It should be noted in the policy that the woodland areas, and other sites of ecological importance, will be joined by a network of open space to protect habitats and the links between them. Furthermore, the policy should outline that a network of green space and water courses will surround the site, providing both ecological and amenity benefits.

The two references to a new country park being "to the east of the site" should be deleted. This is because we believe that the mineral extraction site would be the most appropriate as a development parcel, although this would need the policy agreement of Essex CC.

Phasing and Delivery

The recommended red line boundary should be included in the policy. The reference to the Masterplan Framework in the first paragraph should remain, as that work is still in progress.

We would recommend making reference to future joint working with Uttlesford DC should be included "if the emerging Local Plan for that District allocates sites for housing in this area", in order to comply with the Duty to Co-operate.

It may not be necessary to include the paragraph at the end of the introductory section about what the masterplan will do and how it will be produced, as this will be out of date by the time of examination/adoption. The final sentence about review and updating is useful however.

This chapter summarises client and stakeholder consultation undertaken to date.

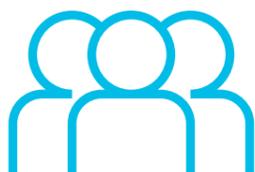
05 Stakeholder Engagement Feedback

- 5.1 Draft Policy SP10 - Consultation responses received
- 5.2 Masterplanning ^{ie} workshop
- 5.3 Stakeholder consultation

5.1 Draft Policy SP10 - Consultation responses received

In undertaking the Concept Framework production we have reviewed the June draft Local Plan consultation responses which indicate key local concerns.

We have sought to demonstrate how the Concept Framework has been informed as a result of consultation responses received. It must be recognised that some of the objections to the draft policy came from agents promoting 'rival' schemes elsewhere. As our brief is not to compare West of Braintree with other potential sites, these comments are not reflected in our synthesis. Likewise, the summary does not include comments from those understood to be promoting development at West of Braintree. The summary only considers matters to do with the natural and built environment, i.e. things that can influence design of the Garden Community, as opposed to process. Instead, the focus of this summary is on comments received from local organisations and individuals, the aim being to take them into account when working up the Concept Framework.



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Consultation responses reviewed

Further Reading

Braintree DC Draft Local Plan Consultation portal:
<http://braintree-consult.limehouse.co.uk/portal>

Comments received

Concept Framework response



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Traffic and transport

- Concerns regarding capacity of A120, old A120, Galley's Corner
- Great Saling already used as a cut-through
- A120 east in mornings, west in evenings (Also had 20 responses saying "We must have a full A120 access east and west bound near Blake End")
- Rural lanes
- Rat running through villages
- Include 20 responses saying "Need village relief road" (From various villages)

- Significant facilities for bus, cycle and walking are proposed, including a greenway direct to Braintree, in order to make them the mode of choice over the car.
- Car traffic will be routed away from existing villages and a new junction providing direct access to the A120 will be provided.
- Proposals are subject to traffic modelling to predict impacts and plan for mitigation.



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Impact on existing villages

- Concerns regarding surrounding villages being subsumed into larger settlements and communities
- Includes 20 responses saying "We must have a substantial green buffer zone"

- The preferred option avoids development to the north of the site, largely in order to reduce impact of neighbouring villages and to maintain meaningful buffers, either landscaped or left in existing use and outside the development area.



56

Rural/landscape character

- Concerns regarding loss of rural/landscape character and beauty

- The preferred option's focus on land towards the A120 keeps a large area of land to the north free of development. However, the local housing need that the Council is obliged to plan for means that there will be some loss of currently open land.
- The Garden Community concepts are specifically designed to bring together the best of town and country.



53

Agricultural land

- Concerns regarding loss of prime agricultural land

- The preferred option is around 400 units lower than capacity, which does mean that hundreds of hectares of prime agricultural land will not be developed. However, the local housing need that the Council is obliged to plan for means that regrettably there will be some loss of high grade agricultural land.



50

Habitat/ wildlife / flora

- Pod's Brook (Dr David Twinn says his studies of insect fauna in trees and hedgerows make the area of national importance)

- Noted habitats and other ecological assets do not form part of the proposed development plots and will be joined by a very significant green network.
- Assets such as Pod's Brook and Boxted Wood fall outside of the wider site boundary, whilst Golden Grove and Rumley Wood will be within ecological corridors.



37

Boxted Wood and other Ancient/mature Woodland

- Isolation of Boxted Wood from other woodland

- Noted habitats and other ecological assets do not form part of the proposed development plots and will be joined by a very significant green network.
- Boxted Wood falls outside of the wider site boundary, whilst Golden Grove and Rumley Wood will be within ecological corridors.



31

Heritage assets

- 2 listed parks in Great Saling
- Saling Grove, including borrowed views (1777 county map by Chapman and Andre showing Saling Grove park extending as far South as Onchars and parks farmhouse)
- Stebbing Green
- Conservation Areas

- The Concept Framework respects the setting of Saling Grove, as per the 1777 county map referred to by respondents. The gardens flow into one of the green corridors.
- There will be no direct impact on Conservation Areas.
- Some listed buildings are in the development plots and detailed design will need to protect their setting.

Comments received

Concept Framework response



28

Andrewsfield airfield amenity and heritage

- Concerns regarding loss of Andrewsfield airfield as amenity and heritage asset

- The preferred option does not impact on Andrewsfield airfield.



27

Rail services and public transport

- Concerns regarding lack of rail services and public transport

- Excellent public transport is a key part of the Garden Community vision and new infrastructure and services will be provided, including direct links to the rail network.
- Employment opportunities in the new settlement will reduce the need for travel to work.
- The scale of the development blocks, each with primary schools, are scaled to be walkable.
- New structures are being put in place to ensure that homes follow infrastructure, not vice versa.



24

Employment

- Concerns regarding lack of local employment, need for out-commuting

- A large number of jobs are being planned for, with the aim of making the Garden Community as self-sufficient as possible in many regards.



21

Community infrastructure

- Concerns regarding impact on community infrastructure with Education and health noted in particular.

- The Garden Community will be self-sufficient in terms of community infrastructure and will provide facilities that will be used by residents of surrounding areas as well.



11

Utilities

- Concerns regarding impact on or lack of utilities including Water, Broadband and Power

- All infrastructure will be upgraded, which will also benefit existing residents.



7

Mineral extraction

- Concerns regarding need to protect mineral extraction land, consider impact of extraction

- Development in this area means that some mineral sites will be built upon.
- Adjacencies may present opportunities to use the aggregates in Garden Community construction, bringing sustainability benefits.



6

Infrastructure first

- Concerns regarding need to put infrastructure in before housing, cost of infrastructure

- New structures are being put in place to ensure that homes follow infrastructure, not vice versa.

Comments received

Concept Framework response

	<p>6 — Rural leisure pursuits</p>	<ul style="list-style-type: none"> Concerns regarding impact on rural leisure pursuits including cyclists, runners, walkers and 'twitchers'. 	<ul style="list-style-type: none"> The green infrastructure networks will provide improved facilities for some of these groups.
	<p>4 — Andrewsfield airfield / Stansted no fly zone</p>	<ul style="list-style-type: none"> Concerns regarding the loss of Andrewsfield airfield and the fact this would put area under Stansted flight paths due to loss of no fly zone 	<ul style="list-style-type: none"> The preferred option does not impact on Andrewsfield airfield.
	<p>4 — Drainage and flooding</p>	<ul style="list-style-type: none"> Concerns regarding drainage and flooding 	<ul style="list-style-type: none"> It is acknowledged that drainage will need to be satisfactorily addressed as the plans progress.
	<p>4 — Light and air pollution</p>	<ul style="list-style-type: none"> Concerns regarding light and air pollution 	<ul style="list-style-type: none"> Compared with current use, an increase in light pollution is inevitable although can be managed. The active promotion of walking, cycling and public transport will reduce the amount of air pollution generated when compared to a standard development.
	<p>3 — Livelihood of farmers</p>	<ul style="list-style-type: none"> Concerns regarding the impact on farmers and people working in food production of livelihood 	<ul style="list-style-type: none"> The scale of the preferred option means that there will still be agriculture in the area of search, alongside multiple other employment opportunities.
	<p>3 — Green infrastructure plans</p>	<ul style="list-style-type: none"> Number of responses including those received from Natural England reflect the importance of green infrastructure 	<ul style="list-style-type: none"> Green infrastructure is a crucial component of the emerging Concept Framework.
	<p>1 — Infrastructure provision</p>	<ul style="list-style-type: none"> Concerns regarding lack of support from infrastructure providers 	<ul style="list-style-type: none"> The design team does not recognise this situation from engagement with infrastructure providers.
	<p>1 — Green infrastructure elsewhere</p>	<ul style="list-style-type: none"> Concerns regarding impact of green infrastructure elsewhere Hatfield Forest (National Trust objecting on these grounds) 	<ul style="list-style-type: none"> Hatfield Forest is 10 miles away. Significant green infrastructure will be maintained, improved or provided as part of the Garden Community project.
	<p>1 — Loss of rifle range</p>	<ul style="list-style-type: none"> Hatfield Forest (National Trust objecting on these grounds) 	<ul style="list-style-type: none"> The design team is unaware of a rifle range to be lost as part of the preferred option.

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5.2 Masterplanning ^{ie} workshop

The AECOM team conducted a site visit and workshop on Wednesday 16th November. This was focussed on achieving the following key objectives:

- To introduce AECOM and Client team leads, setting the platform for a collaborative approach.
- To gather further site specific intelligence
- To summarise, verify and explore the baseline work to date.
- To guide how disciplines and themes will be addressed in the Concept Framework.

In the afternoon, the AECOM team led an interactive session to collaboratively start to discuss and capture key principles.

Working Groups were focussed around Green Infrastructure, Land use and Community Facilities, Placemaking and Transport and Sustainability and Utilities.

Green Infrastructure

Placemaking

- Recognition that Green Infrastructure is fundamental to placemaking, with the need to define a landscape that matures over time.

Routes / Protected Lane

- Pods Lane is a Protected Lane and requires specific considerations. What form should it take in new development? Structuring principle / green infrastructure corridor / pedestrian / cycle / upgraded.
- Current movement is north-west. How can the landscape and green infrastructure facilitate east-west movement?

Local / Current Assets

- Address of Boxted Wood is key – is it to remain an isolated feature or be incorporated with enhanced access? Either way it must be celebrated as a key existing local asset and landscape feature.
- Great Sailing Hall- Capability Brown Landscape (or contemporary) – can this be re-visited to define a 21st century vision?
- Airstrip – consider how this historical feature could be used – open landscape is a direct result of its use requirement
- Flitch Way an important asset to be maximised, conserved and enhanced

Related Proposals

- Minerals Site – what's the appropriate future role – biodiversity / public access
- Productive Landscape
- Potential to create a productive Landscape – food / crops / biomass

Ecology / Wildlife

- Seek to understand habitat routes / movement corridors – green infrastructure should support this
- A multifunctional green network – SUDS / Wildlife / Productive / Attenuation

Energy

- Potential to facilitate energy from biomass? – The Garden Community as a pioneer for energy efficiency

Community

- Community Buy In – Encourage new community to engage early and define how they wish the landscape to work
- A playable landscape – natural / man made forms

Land Use and Community Facilities

What type of Place – flexible and adaptable

- Planning for the 21st century Garden City needs a flexible approach. Critical to understand the TCPA interpretation for West of Braintree. Be specific early.
- Driverless Options – accept need for car bias in early phases but in maturity driverless cars could be a reality.

Integration

- The need for better integration to establish 'community' – Older People / Sheltered Housing / Young Professionals – all in one place.

Scale and Density

- Need to understand and convey metrics that drive the numbers – what to densities mean for place? Convey character early. High density is good when well planned.
- Critical to recognise that this is on the countryside and 'suburbia' – how does it become exceptional in its approach to delivering sustainable communities?

Employment

- Tackle the question of employment early – what type and how much? Will it be one job / one home as per TCPA? Or jobs within a sustainable commuting distance?
- How will the employment uses relate to a residential environment?
- Ensure other local centres are not undermined – Garden Communities must compliment and be acutely aware of the areas of impact
- How to create flexible 'work-from-hubs' in the community? Work patterns are changing.
- Need to invest and best technology – a 5G Garden Community?
- A 24/7 flexible environment

Stewardship

- How can community groups become stewards / guardians of the community? Is this realistic?

Transport

- BRT systems could be appropriate
- Employment / Leisure destinations at Chelmsford, Freeport and Stanstead – how should the Garden Community relate to these?

Infrastructure

- 'Infrastructure before Housing' mantra critical

Consultation

- Need to reach beyond the existing and local residents. Who will move here? Who will embrace it? Who will invest?
- Defining a brand under NEGC Ltd early – give confidence of investment and delivery.

Placemaking and Transport

Access

- Access in and around the settlement is key – this is a fundamental change in the setting

Identity

- Creating an identity in an area that has organically grown over 100's of years
- Timing and Phasing
- Delivery rates and rates of rerun crucial. Public sector first? Who takes risk? Equalisation across BDC / UDC?
- Related Proposals
- Impact of Minerals extraction site key – engage with Tarmac early. They should be a positive development partner who is encouraged to engage.

Movement

- Use of Flich Way – Multi – use / modal?
- How does Public transport satisfy 2,500 homes but also pre-empt growth beyond plan period? Up front investment required – delivery upon a vision and remain strong from the outset.
- How to connect with the wide North Essex centres – Colchester Uni / Stanstead etc.
- Current issues with A120 need resolution
- This must not be a commuter town.

Employment Considerations

- Intervention sequencing in accordance with phased housing growth – what is the justification for this?

Centres

- District Centres + Community Facilities – key to understand relationship of growth / demand and infrastructure delivery

Affordability

- What tenures should be targeted?
- Need to ensure high levels of affordable housing for local people

Design

- Should there be a NEGC Design Code for each site?

Sustainability and Utilities

Definition

- What do we mean by sustainability in the context of a Garden Community? Set some standards / aspiration early and be clear.

Water

- Can WoB be the first water neutral site – be ambitious.
- Grey Water recycling systems
- How to reduce water consumption – less waste and less infrastructure required
- Link water to landscape – establish a harmonious relationship

Energy

- How to reduce energy?
- How will systems connect?
- Pylons or pies? 6km to Braintree

Transport

- All Public Transport provision? How to encourage a modal shift over time?
- How will the road network be flexible and adaptable from car to PT?
- Aim to limit conventional modes from the outset? Local needs / amenities should be walkable. The car is for long trip use only.

Building Technologies

- How to be pioneers in construction?
- How can WoB learn and take from exemplars and deliver on mass scale?
- Sustainability should not affect value or type of community? It should be intrinsic.
- Can we involve market / educational leaders – Universities / Institutions?

Facilities

- How to established shared facilities with continuous use for energy generation? – Schools, gyms, work centres, weekend groups – all under one roof. A hub of efficiency.

Social sustainability

- Community can't be designed but how do we design a place that encourages integration and ease of integration?



5.3 Stakeholder consultation

At the outset of this commission AECOM designed a stakeholder engagement strategy, aimed at providing tangible and usable feedback from representatives of the community to inform the development of the Concept Framework. Stakeholder engagement is an important part of creating a Concept Framework and has given transparency to the process and begun a dialogue with representatives of the local community.

Stakeholder workshops were selected as the best tool for communicating with stakeholders, as they are traditionally used to encourage participation and facilitate meaningful discussion. Two workshops were therefore included in the strategy; one in November 2016, to be held prior to work on the framework commencing, and a second in March 2017, to report back on the progress of the document, how it has been informed by stakeholder feedback, and to discuss its contents.

To help inform the strategy and understand local opinion on potential development in the area, the team reviewed all comments made by the public on Braintree Borough Council's Local Plan, prior to engaging with stakeholders. These comments were made during the formal eight-week consultation period run by the council from June to August 2015. A summary of comments made during the Local Plan consultation can be seen at section 5.1.

This chapter summarises stakeholder engagement to date and the next steps.

Identifying stakeholders

A stakeholder mapping exercise was undertaken to consider which elected representatives, community organisations, issue groups and business groups could represent the views of local people and help to inform the development of the Concept Framework.

A representative of the following councils and organisations were invited to both workshops:

- Bardfield Saling Parish Council
- Great Notley Parish Council
- Great Saling Parish Council
- Panfield Parish Council
- Rayne Parish Council
- Shalford Parish Council
- Braintree District Council
- Uttlesford District Council
- Essex County Council
- Stop Erosion of Rural Communities in Local Essex (SERCLE)

Following the first workshop in November, the project team became aware of a new local action group, SALIX, whom were subsequently invited to attend the second workshop in March 2017.

Stakeholder workshop 1: November 2016

The first stakeholder workshop was held from 4-7pm on Wednesday 23rd November in Braintree Town Hall.

The stakeholder workshop was attended by 15 people, representing Bardfield Saling Parish Council, Great Saling Parish Council, Rayne Parish Council, Shalford Parish Council, Braintree District Council, Uttlesford District Council and SERCLE, although not all attendees stayed for the final hour of the 3 hour session. AECOM consultants led the workshop, with officers from Braintree District Council, Colchester Borough Council, Essex County Council and Uttlesford District Council available to answer questions as needed.

The event began with a presentation from AECOM, introducing the team, a summary of the consultation process, the purpose of the workshop, what garden communities are and how they are designed and the site. The team emphasised that participation in the workshop would not be indicative of support for any scale of development across the borough; although there were concerns from some attendees that local residents would see participation as an endorsement of the councils' approach. AECOM subsequently issued a letter to all invitees providing reassurance that no support has been inferred from the attendance at the meetings.

As the workshop was at an early stage in the process, in order to allow for meaningful engagement and ensure that comments could be considered in advance of the framework being created, no details about how the Garden Community could look were given, including no site boundary being available. Some attendees felt that they were unable to make comments or discuss the principle of development in the area at such an early stage and chose to leave the session at this point.

The remaining participants then took part in the interactive element of the workshop, examining and annotating them with comments about existing conditions and opportunities for the future. Attendees were asked to consider the following questions when giving their comments:

- What makes this area special?
- What do people cherish about the local landscape?
- Which facilities do local people value?
- What aspects of the area work?
- What aspects of the area do not work?
- What do people fear about development here?
- What aspects of local life could the framework improve?
- Which towns, in Essex or beyond, do you think are great places to live and why?

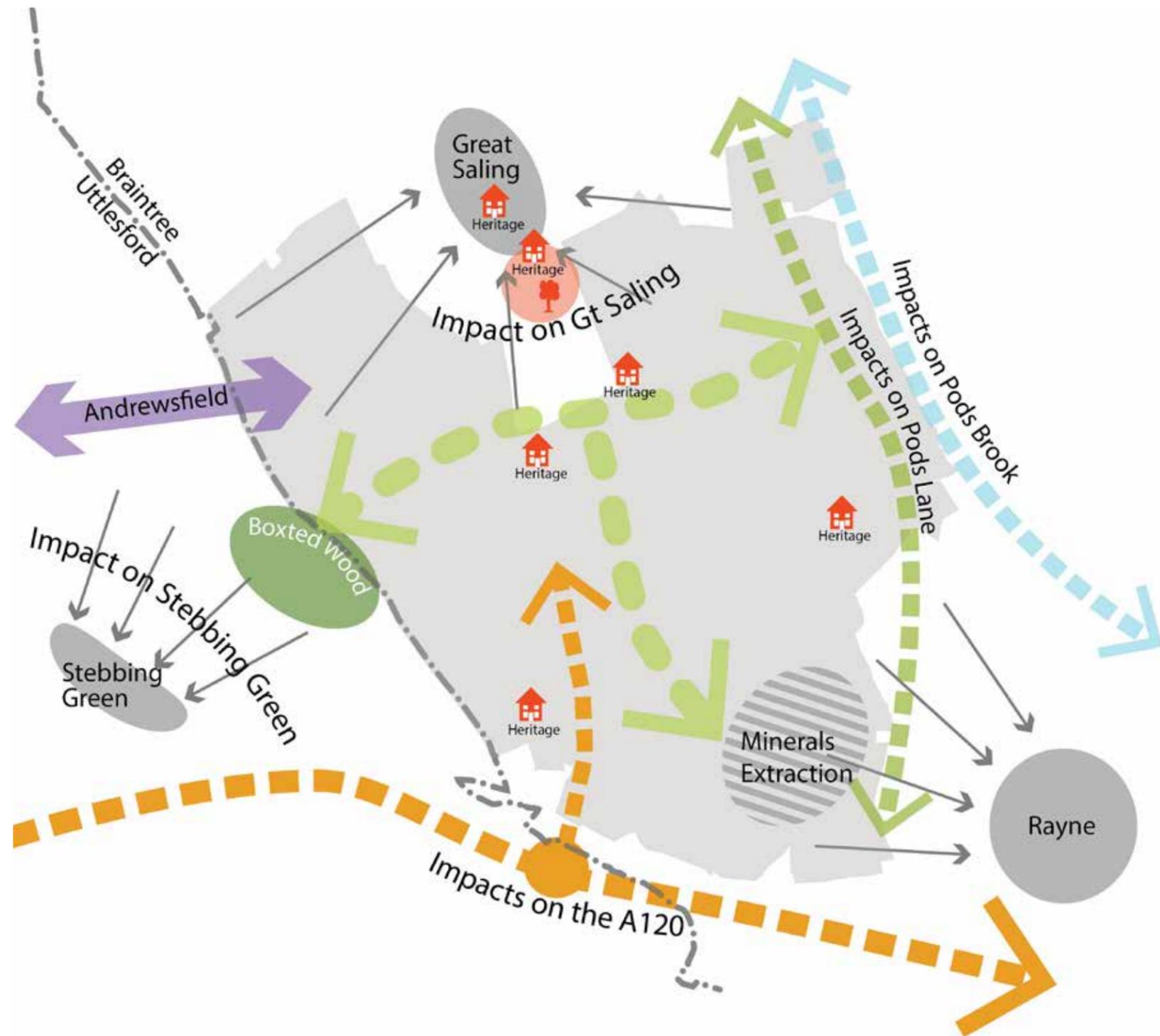
Key comments recorded as well as a spatial representation of the outcomes are recorded opposite.

The existing area

- There are large areas of minerals, with some safeguarding in place – particularly around the Tarmac site.
- The A120 is an important economic corridor. Links to Cambridge are important, as well as Colchester.
- Some people use Shalford as a rat-run to Cambridge
- There is currently very limited cycling by local people in to Braintree.
- The airfield isn't well visited. It's for private light aircraft.
- Fitch Way, a linear country park, is important to local people.
- Need to consider whether access would be compromised if Uttlesford District Council land is not included

Design Opportunities

- Concealing development in the landscape (within valleys, behind woodland etc)
- Use a range of buffers, such as community forests, to protect existing settlements. The size of the buffer is a great concern.
- Size of the buffer between villages is a major concern
- Break sight lines with visual interest.
- Look at opportunities to include ultra-fast broadband and renewable energy, with cost savings invested back in to the community
- Cycle facilities could be incorporated
- Mixed-use is important – light industrial etc.
- Try to encourage people to be a part of the countryside, rather than just observing it and 'protecting' it from the outside.
- Cultural attractions are important.
- Governance of the new Garden Community is an important issue to address.



Stakeholder update: December 2016

In response to some concerns about the purpose of the first workshop, as outlined above, a letter was sent to all stakeholders in December 2016.

The letter reiterated that the workshop was an engagement exercise aimed at highlighting and sharing the key issues of importance to the local community, including what they value and what they feel might be improved, in the context of developing a new Garden Community.

It highlighted that participation by local councillors or community groups in the meeting, or future meetings, would not explicitly or implicitly imply support for development of any kind across the county.

Stakeholder workshop 2: March 2017

A second workshop was held from 4-7pm on Wednesday 29 March in Braintree Town Hall. The purpose of the meeting was to provide an update on the progress of the framework, share some more detailed options (as shown opposite) and request stakeholder feedback.

Eight stakeholders attended, representing Barfield Saling Parish Council, Shalford Parish Council, and three different wards of Braintree District Council. A member of Felsted Parish Council attended, in their capacity as a local resident, rather than a Parish Council delegate.

Stebbing Parish Council and Felsted Parish Council both requested that their decision not to attend be noted. Both parties cited their objection to the principle of a New Town being built on land to the West of Braintree as their reason for not attending.

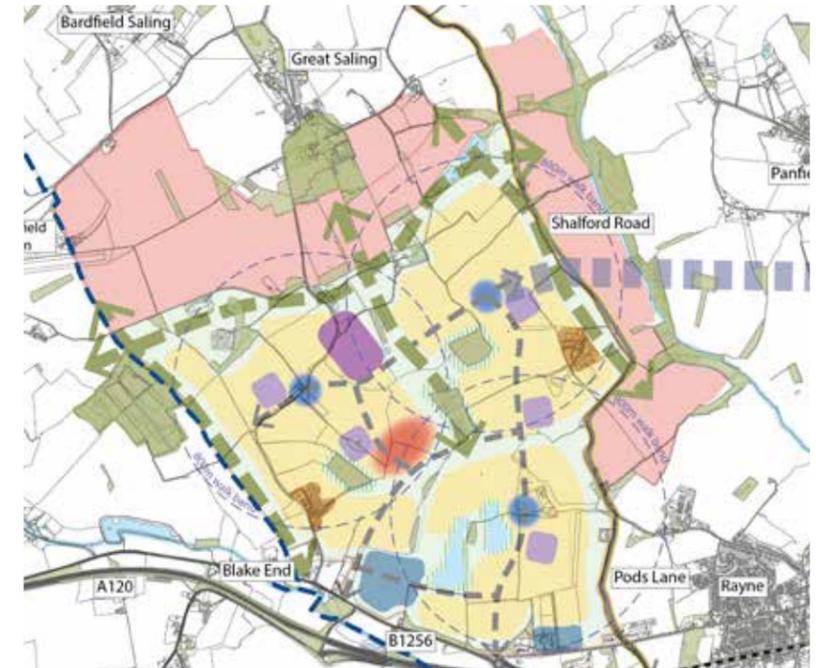
AECOM consultants led the workshop, with members of Colchester Borough Council, Braintree District Council and Essex County Council available to answer questions. A member of Uttlesford Council also attended, to answer questions about issues relating to the district border to the west of the site.

A presentation was given by AECOM, providing a recap of feedback on the draft Local Plan and from the first workshop. This led to a summary of how such comments had been used to begin shaping ideas for how a Garden Community could look in land to the West of Braintree.

Three indicative options were shown to the group, to illustrate the possibilities being explored by the project team. The options were used as aids to encourage discussion about key topic areas. A summary of comments relating to the existing area or opportunities/constraints of the site are given in Table 4.

Topic	Comments
Traffic and public transport	People will only walk/ cycle if it's safe.
	Bridleways should be included in studies. Walkers, cyclists and riders can use them
	Fears of creating a rat-run down to the south towards Felsted.
	Access to/from A120 is already a big issue – rat runs being formed because of people trying to get through.
	New roads will be needed for locals and your construction vehicles.
Impact on existing villages/loss of rural character/loss of prime agricultural land	Interest in layout of new roads – whether they would funnel all one way, or out to different roads?
	Re-consider whether this is a sustainable location, because of transport issues.
	Interest in the retail provision.
	Providing a Landscape Plan (ie. Planting early) would really help to soften the visual effect.
	Consider whether there is an advantage to higher density and more open space.
Wildlife & woodland	Interest in protecting any new green space from further development.
	What is known as 'Prime agricultural land' in the area is not vital.
	Wildlife is there because of the habitat around it – consider what happens when that is gone.
	Larger birds and deer may be displaced.
	Beaulieu Park is a good example of how design can respond to heritage. Particularly welcome the use of a meadow.
Heritage	There should be consultation with Stanstead as a second runway there could inhibit use of this runway in the future.
	Consider impact of loss of employment (Specialist repair/maintenance.)
Employment	Interest in impact on traffic, if employees are not local.
	Employment delivery should be viability tested now, not only in the future scenario of home working.
	Existing employment centre to the south could be expanded instead.
Utilities	There's lots of groundwater here.
	Advantage of a new development like this is delivering utilities underground, which gives an opportunity to be more visually appealing.
	Should include renewables.
Other	Fibre broadband needed to every home.
	Stakeholders showed a great interest in how land in Uttlesford would be affected; the team confirmed that their commission has been only to look at option for land in Braintree District.

Table 4: Summary of comments received.



Option 1: Northern Scheme

- 599 ha / 1,481 acres
- 9,000 dwellings
- 237 ha open space (10.98ha per 1,000 population)
- 57 ha Country Park might also be provided on Mineral extraction site
- 12 ha of employment land

Option 2: Northern Scheme (Reduced)

- 573 ha / 1,416 acres
- 7,900 dwellings
- 197 ha open space (10.4 ha per 1,000 population)
- 57 ha Country Park might also be provided on Mineral extraction site
- 12 ha of employment land

Option 3: Southern Scheme

- 496 ha / 1,067 acres
- 9,300 dwellings
- 170 ha open space (7.58 ha per 1,000 population)
- 14 ha of employment land

Next steps: April 2017 onwards

A follow up letter will be issued to all stakeholders following the completion of this report, including a summary of the information provided in this chapter.

Colchester Borough, Tendring District, Braintree District, and Essex County Councils are currently considering whether new Garden Communities are an appropriate way to address the housing need in North Essex. This Concept Framework acts as an evidence base for this decision but does not represent a decision on any development on land in the area. Consequently, there is not yet a result to be communicated with members of the public.

In the coming months, as part of Braintree District Council's Local Plan process, a summary of this framework will be made public, using a variety of print and online platforms.

Appendix 1

Options appraisal evaluation criteria

1. Physical Limitations

- R There are physical limitations which may be difficult to mitigate or will likely require significant time and investment to be overcome.
- A There are some physical limitations which require mitigation in order to maximise development potential
- G There are no or very limited physical limitations to development.

2. Impacts

- R Development may have a detrimental and negative impact upon areas of value and importance.
- A Development would require mitigation in order to ensure its impact on surrounding areas of value and importance is not at the detriment to their current status.
- G Impacts on surrounding areas of value and importance would be limited and acceptable.

3. Environment / Amenity

- R Development may cause an unacceptable impact upon the occupiers of existing properties and neighbouring areas / towns.
- A Development would require mitigation to ensure an acceptable impact upon the occupiers of existing properties and neighbouring areas / towns.
- G Development would likely have an acceptable relationship on occupiers of existing properties and neighbouring areas / towns, and the impact may be positive.

4. Transport

- R There is very limited potential to achieve integrated and accessible sustainable transport systems.
- A There is potential to achieve integrated and accessible sustainable transport systems, but this is likely to require significant on and off site investment.
- G There is existing access to sustainable transport systems or relative ease to establish an integrated and accessible transport system.

5. Resilience

- R Development may have a detrimental impact on surrounding town centres, regeneration / development priority areas or established institutions.
- A Development may impact on surrounding town centres, regeneration / development priority areas or established institutions, although this impact could be mitigated.
- G Development would likely make a positive contribution to surrounding town centres, regeneration / development priority areas or established institutions.

6. Housing

- R There is limited potential to secure a provision of a mix of tenures and housing types
- A The ability to secure a mixed tenure and housing type development would likely require significant grant funding / developer support
- G There is likely to be strong potential to provide a mix of housing types and tenure within the development.

7. Employment Opportunities

- R Development may not be able to support enough, or is not located close enough to existing centres, to secure a wide range of local jobs on site or in easy commuting distance of new houses.
- A It is likely to be possible to provide a wide range of jobs within the development, but providing sustainable transport access to local jobs in the wider area may be difficult.
- G It is likely to be possible to provide a wide range of jobs within the development, with good sustainable transport potential to local jobs in the wider area.

8. Mixed -Use Opportunities

- R There is limited opportunity to ensure the inclusion of cultural, recreational and shopping facilities in walkable, vibrant, sociable neighbourhoods.
- A There is potential to ensure the inclusion of cultural, recreational and shopping facilities in walkable, vibrant, sociable neighbourhoods.
- G There are existing cultural, recreational and shopping facilities within the site or in very close proximity which may have a positive effect on the development of community, with potential for new services that will ensure high levels of sustainability.

9. Environment Quality and Sustainability

- R There are identified constraints that may limit the potential to incorporate areas of publicly accessible open space, allotments/food productions areas, biodiversity gains, SUDs and / or implement zero carbon/energy positive technology.
- A There are some constraints that may limit the potential to incorporate areas of publicly accessible open space, allotments/food productions areas, biodiversity gains, SUDs and / or implement zero carbon/energy positive technology.
- G There are no constraints that limit the potential to incorporate areas of publicly accessible open space, allotments/food productions areas, biodiversity gains, SUDs and / or implement zero carbon/energy positive technology. And existing landscape features exist which may assist provision.

10. Developability & Deliverability

- R All or the majority of the potential development area is not currently available, nor will it become available within the emerging local plan period (to 2033). And/or some of the land ownership is currently unknown or fragmented, with no current knowledge of the prospect of an appropriate delivery mechanism being agreed that will enable a proportion of the land value created to be used to fund delivery of infrastructure, community assets and long term stewardship needed for a garden community.

- A All or the majority of the potential development area is currently available or can become available in time for meaningful development to commence within the emerging local plan period (to 2033); initial analysis suggests development should be capable of being commercially viable, but infrastructure requirements and investments are likely to be comparatively high. There is considered to be a good prospect of an appropriate delivery mechanism being agreed that will enable a proportion of the land value created to be used to fund delivery of infrastructure, community assets and long term stewardship needed for a garden community.

- G All or the majority of the potential development area is currently available or can become available in time for meaningful development to commence within the emerging local plan period (to 2033); initial analysis suggests development should be capable of being commercially viable, and infrastructure requirements and investments are likely to be comparatively lower. There is considered to be a good prospect of an appropriate delivery mechanism being agreed that will enable a proportion of the land value created to be used to fund delivery of infrastructure, community assets and long term stewardship needed for a garden community.

