

Thurrock Council

Local Plan Evidence Base

Lower Langdon Site Specific Assessment

Reference: 00B2

Issue | 07 July 2026

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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Ove Arup & Partners Limited
8 Fitzroy Street
London
W1T 4BJ
United Kingdom
arup.com

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			Prepared by	Checked by	Approved by
		Name	E. McDonald I. Mathers S. Yu G. Yiu	I. Varney	A. Richards
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			Prepared by	Checked by	Approved by
		Name	E. McDonald I. Mathers S. Yu G. Yiu	I. Varney A. Richards	R. Goodall 
		Filename			
		Description			
			Prepared by	Checked by	Approved by
		Name			

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1. Introduction

1.1 Overview

Thurrock Council (TC) is preparing a new Local Plan that will set out the vision and framework for the future development in Thurrock. Through the development of this new Local Plan, Lower Langdon and Corringham Park Farm sites have been identified as two areas with the combined potential to deliver approximately 5,000 homes (4,000 homes and 1,000 homes respectively).

Evidence is required to better understand the feasibility of growth at these sites and to ensure they meet the development needs of the area, align growth and infrastructure, improve the environment and mitigate and adapt to the effects of climate change in accordance with the National Planning Policy Framework (NPPF paragraph 11).

Furthermore, it is important that if new development is allocated to the sites at Lower Langdon and Corringham Park Farm, it should be comprehensively planned so that the infrastructure needed to support growth of this scale is provided when and where it is needed.

Ove Arup & Partners Limited (Arup) has been commissioned by TC to prepare transport evidence for the emerging Thurrock Local Plan which is delivered in two Phases:

Phase 1: Transport Evidence:

- a) **Baseline Transport Report** - Provides a summary of existing conditions relating to transport in Thurrock.
- b) **Transport Assessment** – Provides a summary of the vision for Local Plan development and details how transport impacts will be mitigated.

Phase 2:

- **Infrastructure Delivery Plan** – Provides a summary of transport infrastructure necessary to accommodate Local Plan growth as developed through the Transport Assessment and engagement with infrastructure providers and key stakeholders.

Arup has also been commissioned by TC to prepare the following supplementary transport evidence to illustrate how development could come forward at major site allocations identified within the emerging Local Plan preferred spatial option including:

- **West Horndon site specific assessment (SSA)** – Provides a concept layout and access strategy to identify associated transport infrastructure requirements for the West Horndon sites.
- **South Ockendon SSA** – Provides a concept layout and access strategy to identify associated transport infrastructure requirements for the South Ockendon sites.
- **Lower Langdon SSA** – Provides a concept layout and access strategy to identify associated transport infrastructure requirements for the Lower Langdon and Corringham Park Farm sites (this report).

This report focuses on the site specific assessment of the Lower Langdon site allocation, which has the potential to deliver approximately 4,000 new homes. The assessment will inform the emerging Local Plan Transport Assessment and Infrastructure Delivery Plan for Regulation 19 consultation.

The proposed allocation at Corringham Park Farm (circa 1,000 homes) has also been included due to its proximity to the Lower Langdon site and so has been included within the analysis to demonstrate how these sites could come forward in a complementary way. This ensures a coordinated and holistic consideration of infrastructure requirements in the area. Figure 1-1 shows the location of Lower Langdon, Corringham Park Farm and the boundary of Thurrock Council.

1.2 Policy context

A review of transport policy relevant to Local Plan development is included in the Baseline Transport Report; however, two additional documents have subsequently been identified which have informed the Transport Assessment and this site specific assessment as summarised below:

- **Draft Thurrock Transport Strategy 2026 – 2040** (November 2025) – Aims to guide future transport investment, improve travel choices, and support sustainable growth. This represents a shift from road capacity expansion (predict and provide) to vision-led planning, emphasizing the needs of communities, environmental stewardship and inclusive mobility.
- **Thurrock Design Code** (Emerging) – This will build on the draft Thurrock Design Charter (2023) to provide prescriptive design requirements for creating healthy, beautiful, and distinctive places with a high and consistent standard of design.

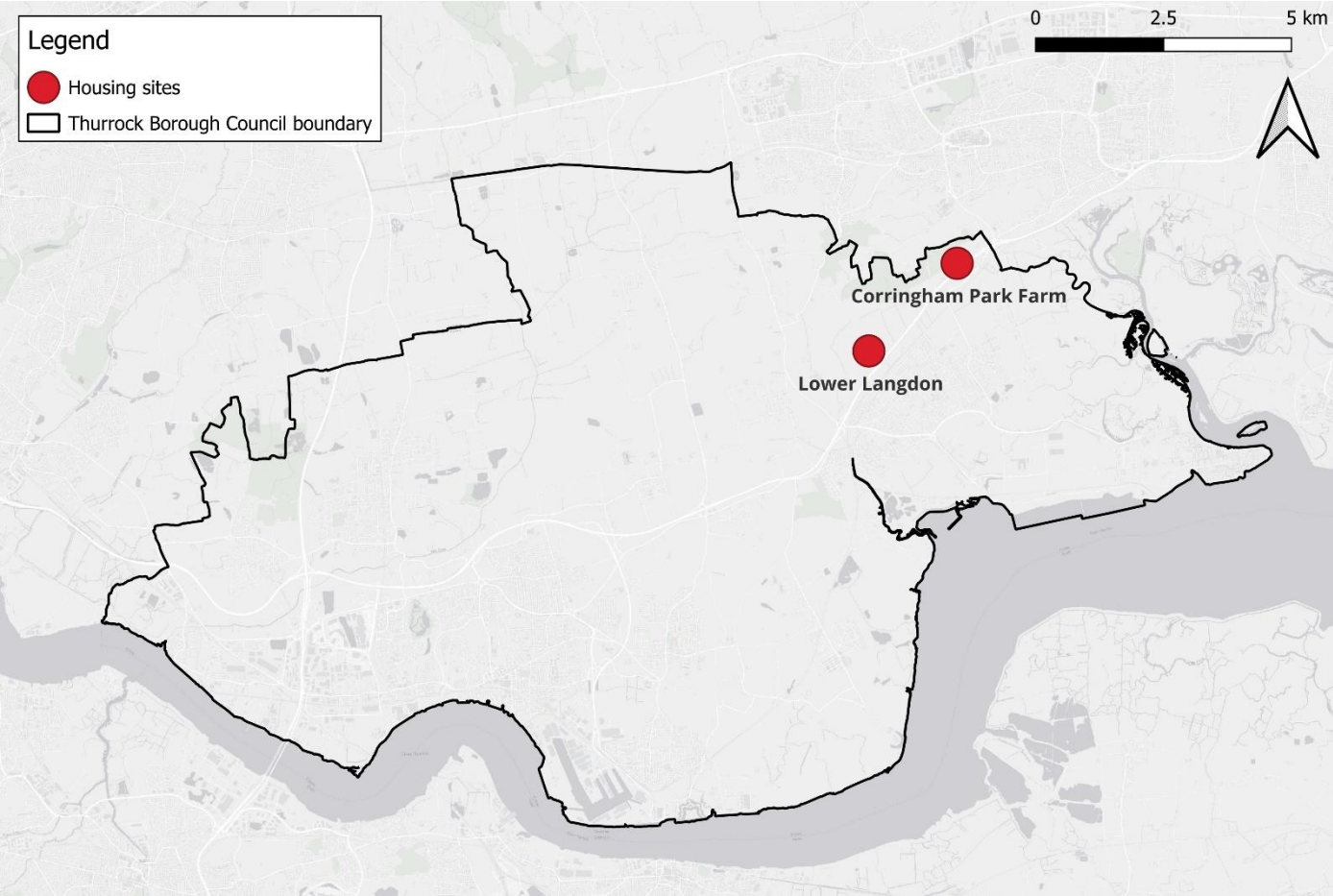


Figure 1-1: Location of Lower Langdon and Corringham Park Farm within Thurrock

1.3 Report structure

This report relates to Lower Langdon and Corringham Park Farm sites and is structured as follows:

- Chapter 2: Site context
- Chapter 3: Constraints mapping
- Chapter 4: Vision and objectives
- Chapter 5: Combined contextual analysis
- Chapter 6: Transport infrastructure proposals
- Chapter 7: Next steps

2. Site context

2.1 Site allocation and existing land use

Lower Langdon is an area of Green Belt farmland located to the east of Thurrock, bounded by the A13 to the southeast, the B1007 North Hill to the southwest, Langdon Hills to the northwest and Langdon Hills Country Park to the north. The site is currently undeveloped farmland with existing access via B1007 and One Tree Hill (via Northlands Farm Chase).

Corringham Park Farm is also an area of Green Belt farmland, located in the northeastern corner of Thurrock on the border with Basildon. It is also bounded by the A13 to the southeast, One Tree Hill to the southwest, and Langdon Hills Country Park to the northwest with some industrial and residential uses to the northeast.

The location of both sites is shown in Figure 2-1.

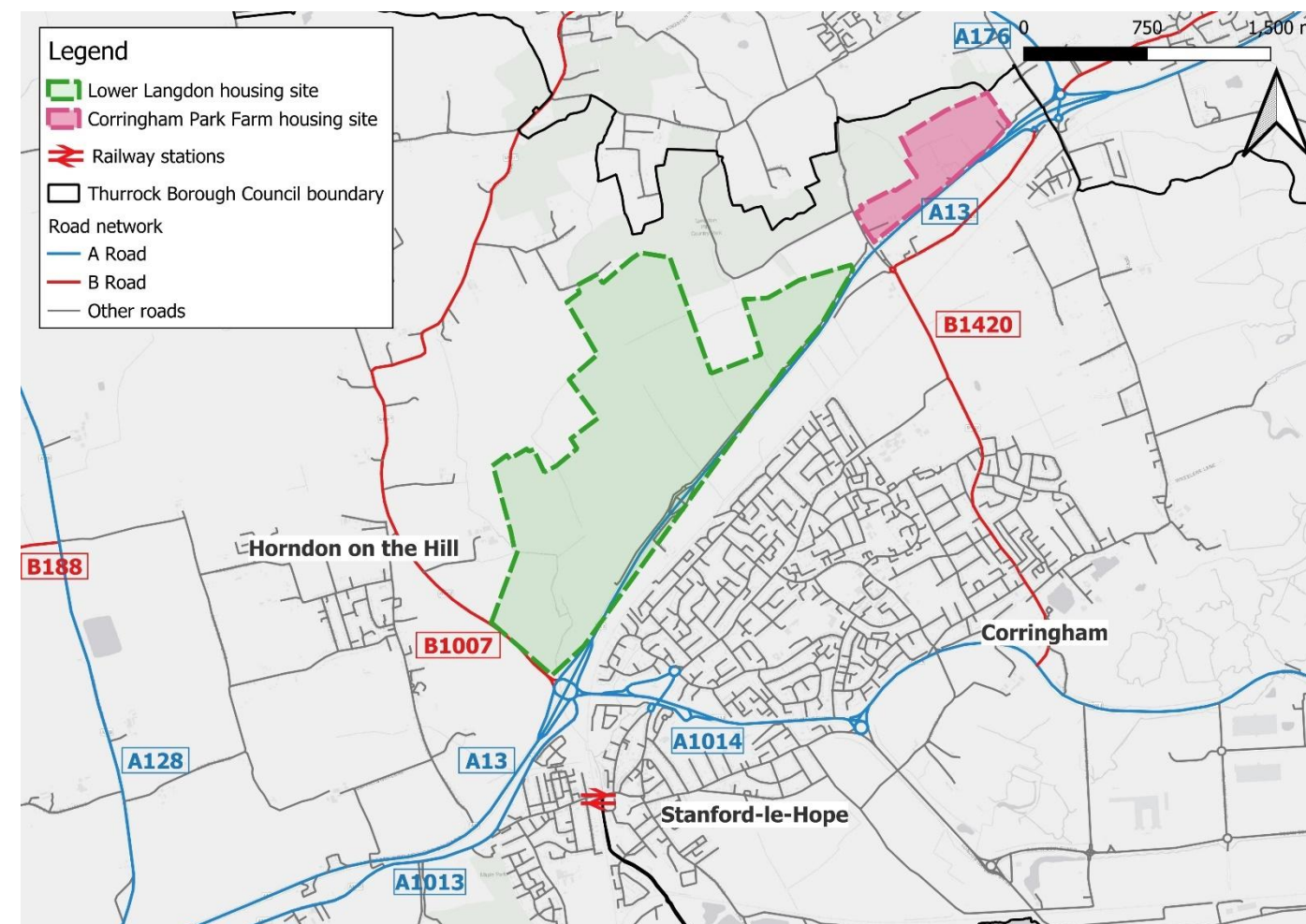


Figure 2-1: Location of housing sites and the surrounding road network

The Lower Langdon housing site comprises 225.3 hectares, of which 160.40 hectares is estimated net developable area, as detailed further in Section 5. The Corringham Park Farm housing site has a total area of circa 29.4 hectares.

2.2 Walking and cycling

2.2.1 Walking Network

Given the undeveloped nature of the Lower Langdon site, pedestrian infrastructure within its boundaries is limited. However, there are Public Rights of Way (PROWs) which pass through and around the site, as shown in Figure 2-2. Whilst these routes are more likely to be used for recreational and leisure purposes, they do provide connections to the nearby settlements of Horndon on the Hill, Stanford-le-Hope and Langdon Hills. Within these settlements, pedestrian infrastructure is generally in good condition, with well-maintained footways provided along most residential streets.

Pedestrian infrastructure within the Corringham Park Farm site is more limited, with no PROWs identified within the site's boundaries, as shown in Figure 2-2. The southwestern-most corner of the site is in close proximity to a brideway along Northlands Farm Chase, which link to the Lower Langdon site. Other Public Rights of Way to the south of the site in Corringham are not easily accessible due to the lack of crossing opportunities over the A13 and railway line to the south. Within the site, there are currently several private access roads; these are associated with the existing equestrian uses of the site and do not form a cohesive network.

The A13, which runs immediately south of the site, creates severance between Lower Langdon and Corringham Park Farm with Stanford-le-Hope and Corringham to the south. As shown in Figure 2-2, there are three pedestrian crossings across the A13 in the vicinity of the Lower Langdon and Corringham Park Farm sites. These consist (from north to south) of a road crossing at the junction between the A13 and A176, an overbridge at One Tree Hill, and an underpass.

The railway track also introduces further severance between Lower Langdon and Stanford-le-Hope/Corringham, with the crossing points largely parallel to the A13 crossing points, as illustrated in Figure 2-2, and an additional level crossing by Stanford-le-Hope station.

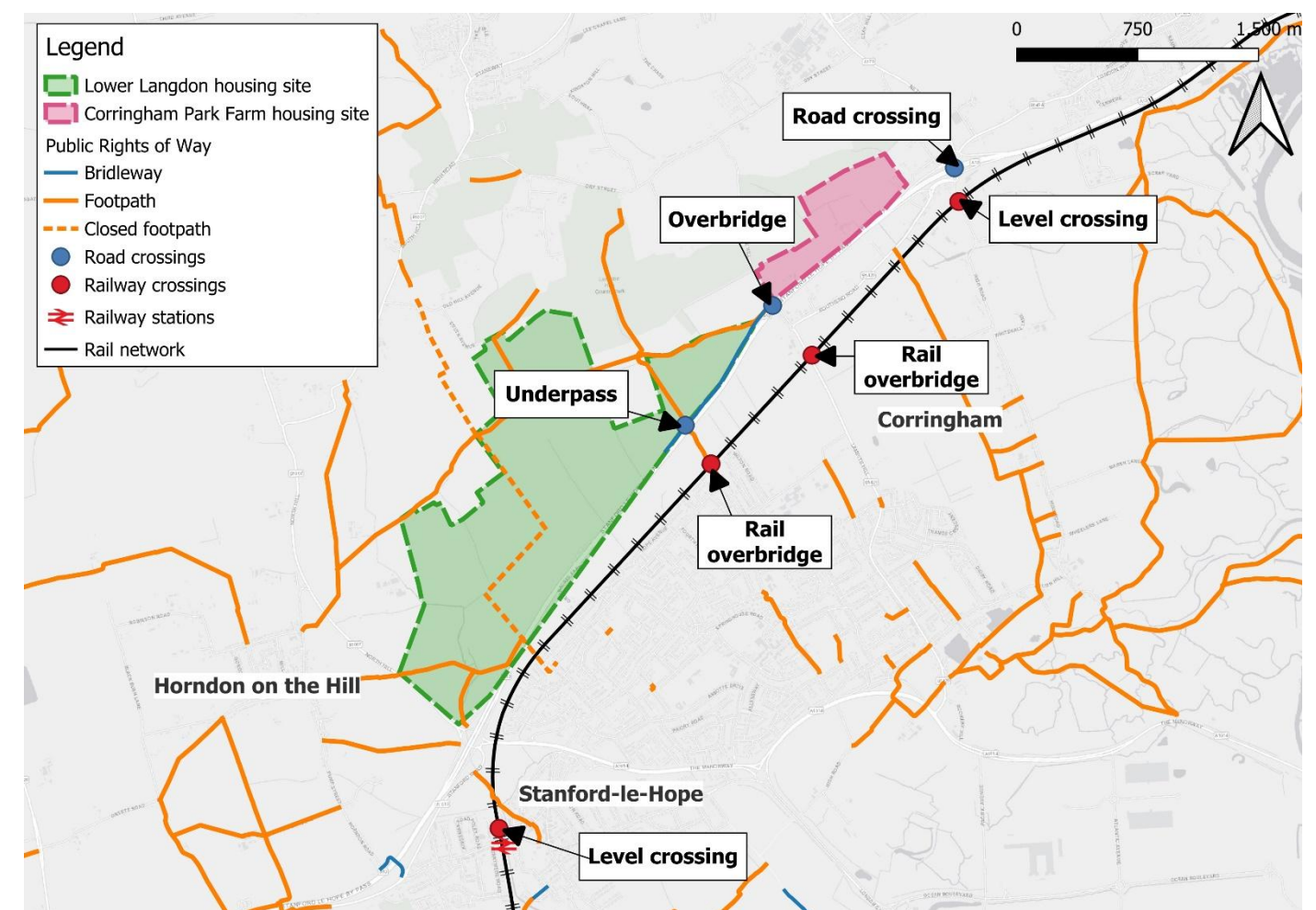


Figure 2-2: Public Rights of Way around Lower Langdon and Corringham Park Farm

2.2.2 Cycle Network

The largely undeveloped nature of both housing sites means that there is currently no dedicated cycle infrastructure within their boundaries. However, as shown in Figure 2-3, there are some cycle routes in the vicinity of both sites. This includes a section of the National Cycle Network (NCN 13) connecting One Tree Hill to Corringham and Stanford-le-Hope station, and Local Cycle Network between Horndon on the Hill and Stanford-le-Hope. However, most of these routes are not segregated from neither traffic nor pedestrians, and further upgrades in compliant with LTN 1/20 may be required to further encourage mode shift towards cycling.

Several of the primary roads surrounding the site, including the A13 and A1014, are unsuitable for cyclists due to high traffic volumes and vehicle speeds. Other roads, including the B1007, B1420 and some main roads within Stanford-le-Hope and Corringham are suitable only for more experienced cyclists for similar reasons. However, many of the internal roads in Stanford-le-Hope, Corringham and Horndon on the Hill are classified by Thurrock Council as ‘suitable for cyclists’, reflecting their predominantly residential character with lower vehicle speeds.

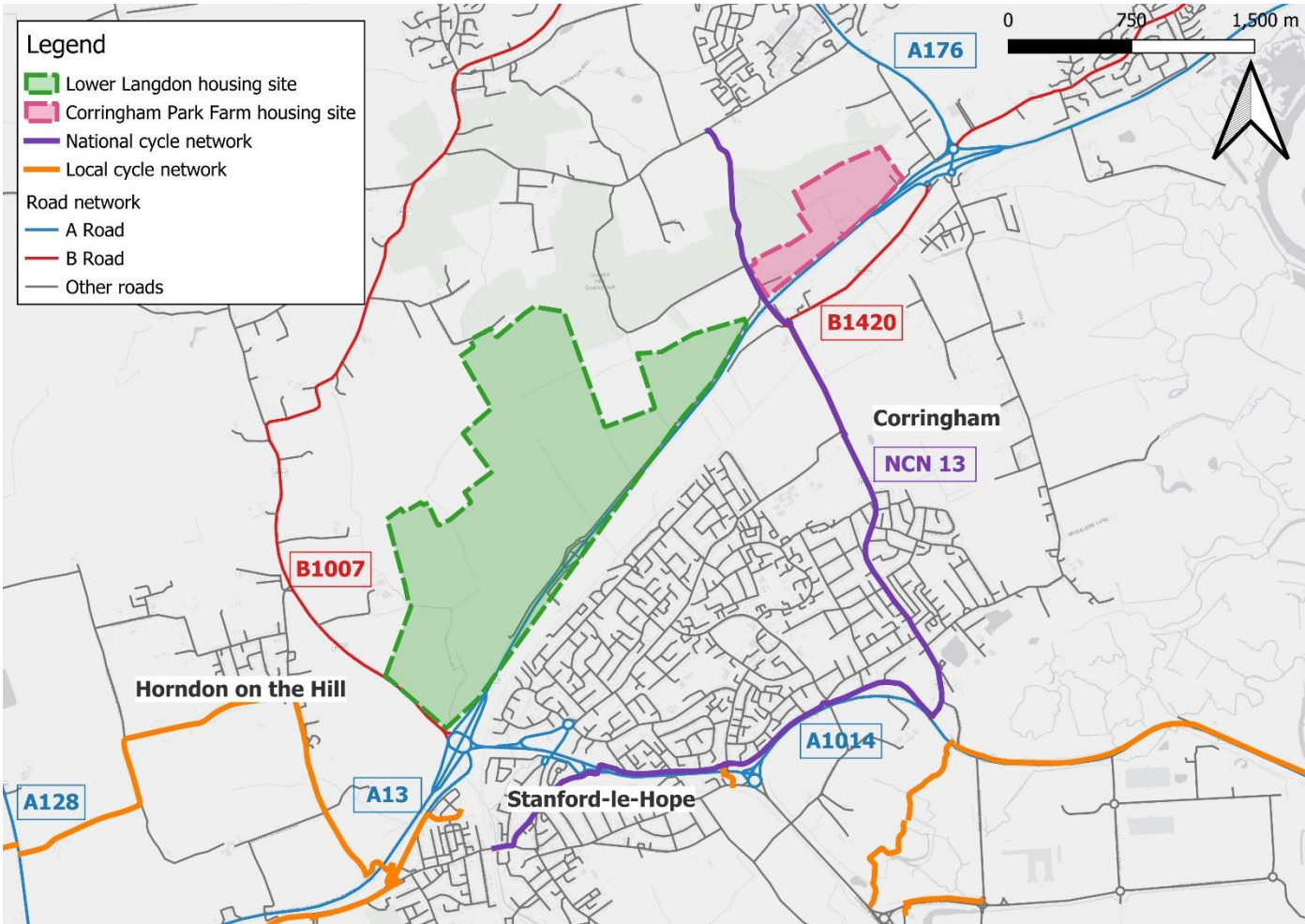


Figure 2-3: Cycle infrastructure around Lower Langdon and Corringham Park Farm

2.3 Public transport accessibility

2.3.1 Bus services

No bus routes currently serve the Lower Langdon or Corringham Park Farm sites. Bus services operating in the wider area are shown in Figure 2-4 with frequencies in Table 2-1.

Bus routes which operate closest to both sites are Service 375 which runs between Horndon on the Hill and Grays, the Service 200 connecting Basildon to Grays, and Service 100 which runs between Basildon and Lakeside Shopping Centre. Additionally, Service 21 runs along the A176 in proximity to the Corringham Park Farm site.

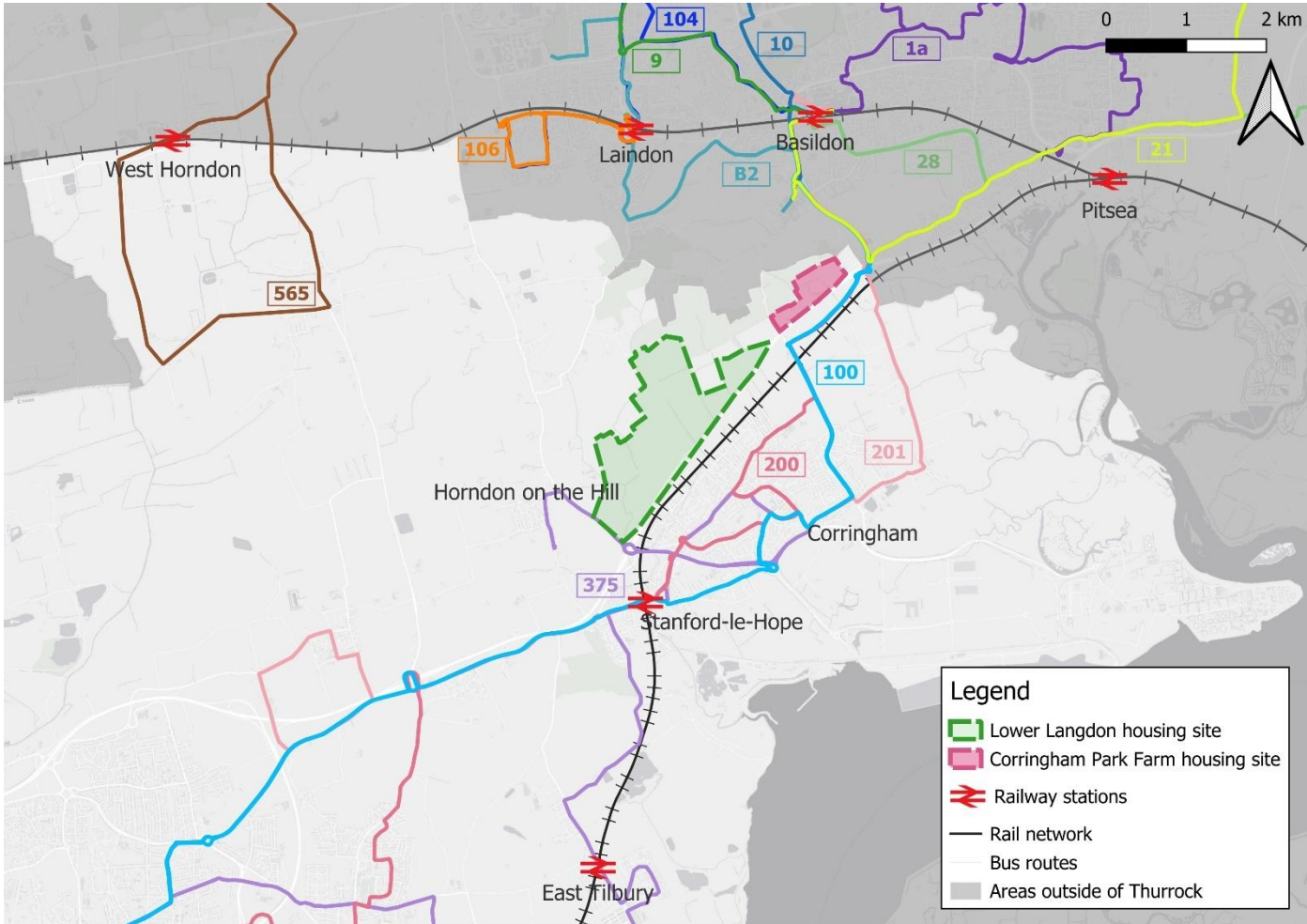


Figure 2-4: Bus and rail connections around Lower Langdon and Corringham Park Farm

Table 2-1: Bus routes and frequency around Lower Langdon and Corringham Park Farm

Route No.	Operator	Origin - destination	Frequency
375	Central Connect	Horndon on the Hill – Grays via Stanford-le-Hope and East Tilbury	Mon-Fri: 6 services a day, 07:00-17:00. Sat: 07:00-17:00.
200	First Essex	Basildon – Grays via Tilbury, Chadwell St Mary and Stanford-le-Hope	Mon-Fri: 1 service an hour, 05:00-18:00. Sat: 1 service an hour, 06:00-18:00. Sun: 1 service every 90 minutes, 08:00-17:00.
100	First Essex	Basildon – Lakeside via Corringham, Stanford-le-Hope and Grays	Mon-Fri: 3 services an hour, 06:00-20:00, 2 services an hour 20:00-23:30. Sat: ~3 services an hour 09:00-20:00, 2 services an hour 06:30-09:00, 20:00-23:30. Sun: 2 services an hour 10:00-17:00, 1 service an hour 09:00-10:00 and 17:00-21:30.
1a	First Essex	Basildon - Pitsea	Saturdays only: 4 services a day in each direction, 09:30-14:00.
9	First Essex	Basildon – Brentwood via Laindon, Billericay and Hutton	Mon-Sat:~1 service an hour, 06:00-19:30.
10	Central Connect	Basildon – Wickford	Mon-Sat: 1 service every ~2 hours, 08:00-19:00.
21	NIBSbuses	Basildon – North Benfleet	Mon-Fri: 1 service an hour, 07:00-18:00. Sat: 1 service an hour, 09:00-17:00.
28	First Essex	Basildon – Southend via Pitsea and Hadleigh	Mon-Fri: 6 services an hour 07:00-19:00, ~2 services an hour 05:30-07:00 and 19:00-23:00. Sat: ~4 services an hour 08:00-18:00, 2 services an hour 18:00-23:30. Sun: 2 services an hour, 09:00-18:00.
104	NIBSbuses	Basildon – Langdon Hills via Laindon	Mon-Fri: 5 services an hour, 09:00-13:30.
106	NIBSbuses	Laindon – Great Berry	Mon-Fri: ~3 services an hour, 06:00-08:00 and 17:00-19:00 only.
201	First Essex	Basildon – Orsett via Stanford-le-Hope and Corringham	Mon-Fri (excl. bank holidays): 1 service every 80 minutes, 09:30-13:30.
565	NIBSbuses	Brentwood – Brentwood via Ingrave and West Horndon	Mon-Fri: ~1 service an hour, 07:00-18:45. Sat: ~1 service an hour, 08:00-18:45.
B2	First Essex	Basildon – Laindon via Langdon Hills	Mon-Fri: 2 services an hour, 06:30-17:30, 1 service an hour 17:30-23:30. Sat: 2 services an hour, 08:30-17:30. 1 service an hour 06:30-08:30 and 17:30-23:30. Sun: 1 service an hour, 08:00-21:00.

2.3.1.1 Private shuttle service

There is an additional private shuttle service running from Pitsea railway station to London Gateway Port, with one service per hour between 05:15 and 08:15 and 14:10 and 17:40, Monday to Friday. This service is run by Zeelo and is available only for employees of the London Gateway Port.

2.3.2 Rail services

The closest railway station to the Lower Langdon site is Stanford-le-Hope Station, which is approximately 0.8km from the south corner of the site as the crow flies. The closest railway station to the Corringham Park Farm site is Basildon Station, which is approximately 1.7km from the north of the site as the crow flies. Additionally, Laindon Station is approximately 2.75km north of the Lower Langdon site and 2.75km northwest of the Corringham Park Farm site as the crow flies.

Stanford-le-Hope, Basildon and Laindon stations are served by the London, Tilbury and Southend (LTS) rail line which provides direct connections between Shoeburyness and London Fenchurch Street stations. For the Stanford-le-Hope branch, this is via Tilbury and Grays, and for the Basildon and Laindon branches, this is via West Horndon. The line is operated by c2c (under public ownership and managed by DfT Operator Ltd since 2025). The LTS rail line and its wider connections are shown in Figure 2-5.

The LTS line plays a strategic role in supporting access to major employment hubs, particularly within the Thames Freeport area, including DP World London Gateway, the Port of Tilbury, and the Ford site at Dagenham. These connections are essential for facilitating sustainable access to jobs in logistics, port operations, and industrial sectors within Thurrock.

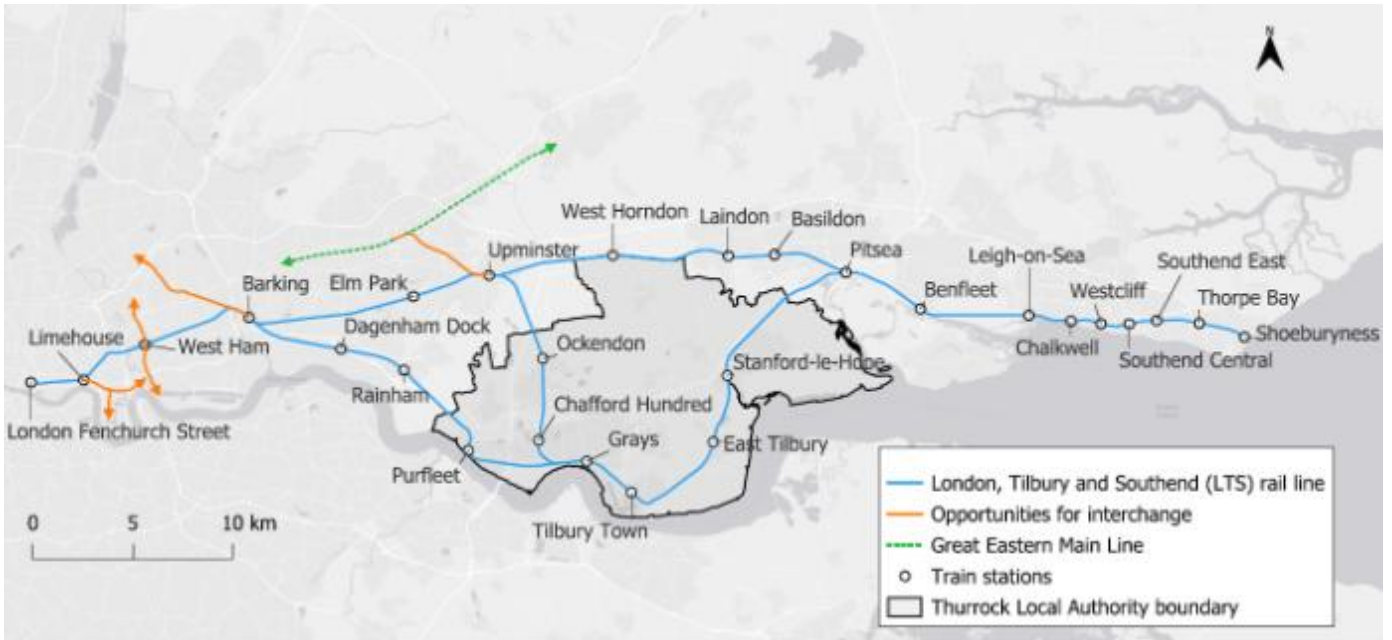


Figure 2-5: Stanford-le-Hope and Basildon stations in relation to the wider rail network

2.3.2.1 Stanford-le-Hope Station

Stanford-le-Hope railway station is located on the western side of Stanford-le-Hope, which generally has good pedestrian access, well-maintained footways and flat roads suitable for cycling, though there are no dedicated cycle lanes. There are 70 cycle parking stands available outside the station entrance and in the station car park.

Stanford-le-Hope Station provides five services towards London per hour during peak periods (07:00-09:00 and 16:00-19:00), and two services towards Pitsea (from which onward connections to Shoeburyness are available). During off-peak hours, there are two services per hour towards London, and five services per hour towards Pitsea. The average journey times are 35 minutes to London Fenchurch Street, 25 minutes to Southend and 15 minutes to Grays. Step-free access is provided to both platforms via a level crossing, with additional stepped access available between platforms via a footbridge. Station facilities include customer help points, staff assistance, an accessible ticket office counter, ramps for train access and sheltered seating, although toilet facilities are not provided.

2.3.2.2 Basildon Station

Basildon railway station is located in Basildon town centre, which generally has good pedestrian access, well-maintained footways and relatively flat roads suitable for cycling, though there are no dedicated cycle lanes. There are 36 cycle parking stands available outside the station towards the bus station.

Basildon Station provides seven services towards London per hour during peak periods (07:00-09:00 and 16:00-19:00), and five services towards Shoeburyness. During off-peak hours, there are four services per hour towards London, and four services per hour towards Shoeburyness. Average journey times are 45 minutes to London Fenchurch Street and 20 minutes to Southend. Step-free access is provided to both platforms via lifts. Station facilities include customer help points, staff assistance, an accessible ticket office counter, ramps for train access, a seated area and toilets.

2.3.3 Laindon Station

Laindon railway station is located in Laindon town centre, which generally has good pedestrian access, well-maintained footways, though its relatively high elevation is less conducive to cycling, and there are no dedicated cycle lanes. There are 48 cycle parking spaces available in racks outside the main station entrance.

Laindon Station provides five services towards London per hour during peak periods (07:00-09:00 and 16:00-19:00), and approximately four services towards Shoeburyness. During off-peak hours, there are four services per hour towards London, and four services per hour towards Shoeburyness. Average journey times are 32 minutes to London Fenchurch Street and 22 minutes to Southend.

Walking and cycling catchment areas of a 5-, 10-, 15- and 20-minute walk and cycle from each of the stations, based on the existing street and road network, are shown in Figure 2-6 and Figure 2-7. It is worth noting that whilst some areas of the Lower Langdon housing site are within the catchment areas for Stanford-le-Hope station, existing routes necessitate crossing the A13, which acts as a barrier to convenient and attractive active travel towards Stanford-le-Hope station from the site.

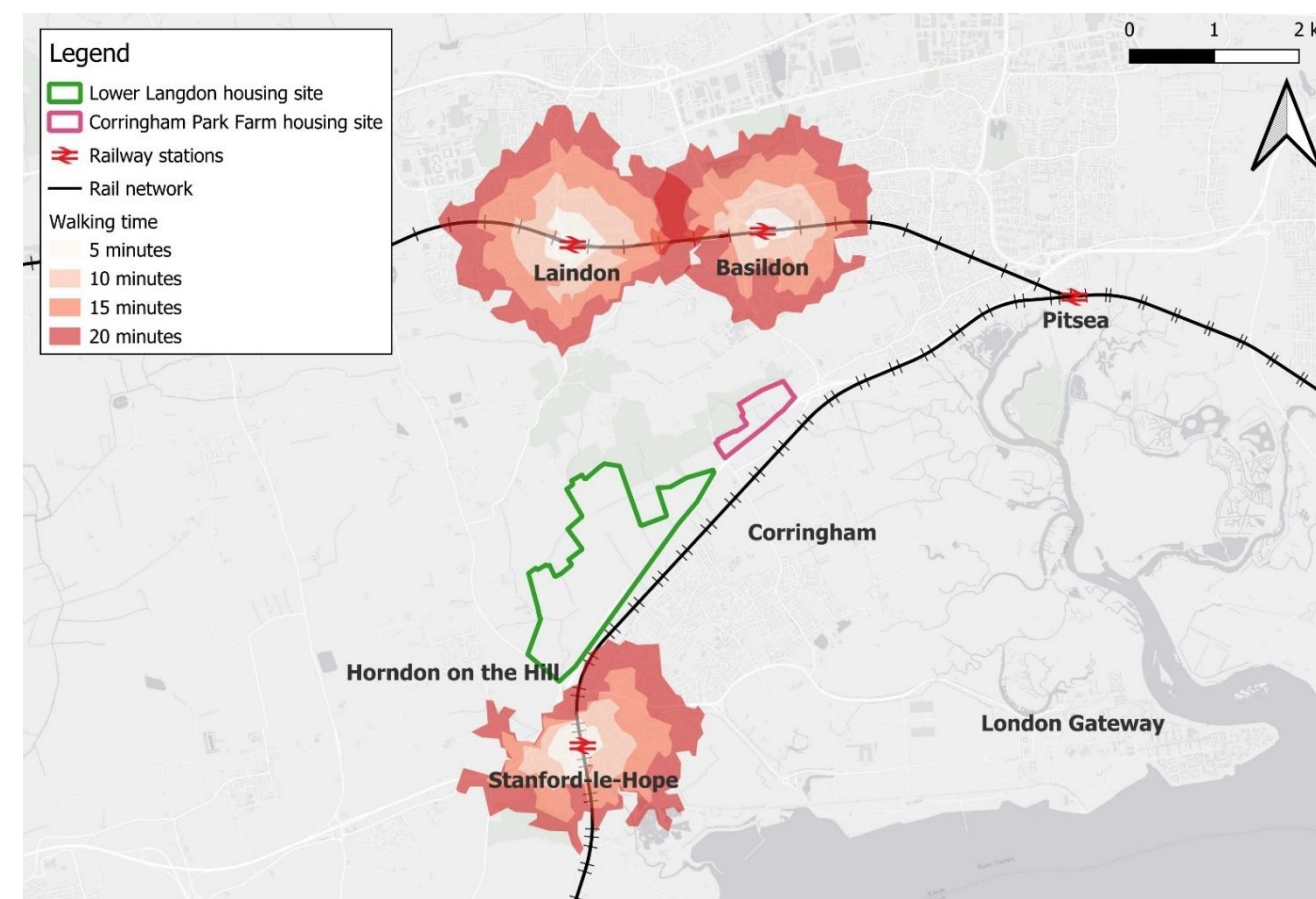


Figure 2-6: 5-, 10-, 15- and 20-minute walking catchment to Stanford-le-Hope, Basildon and Laindon stations

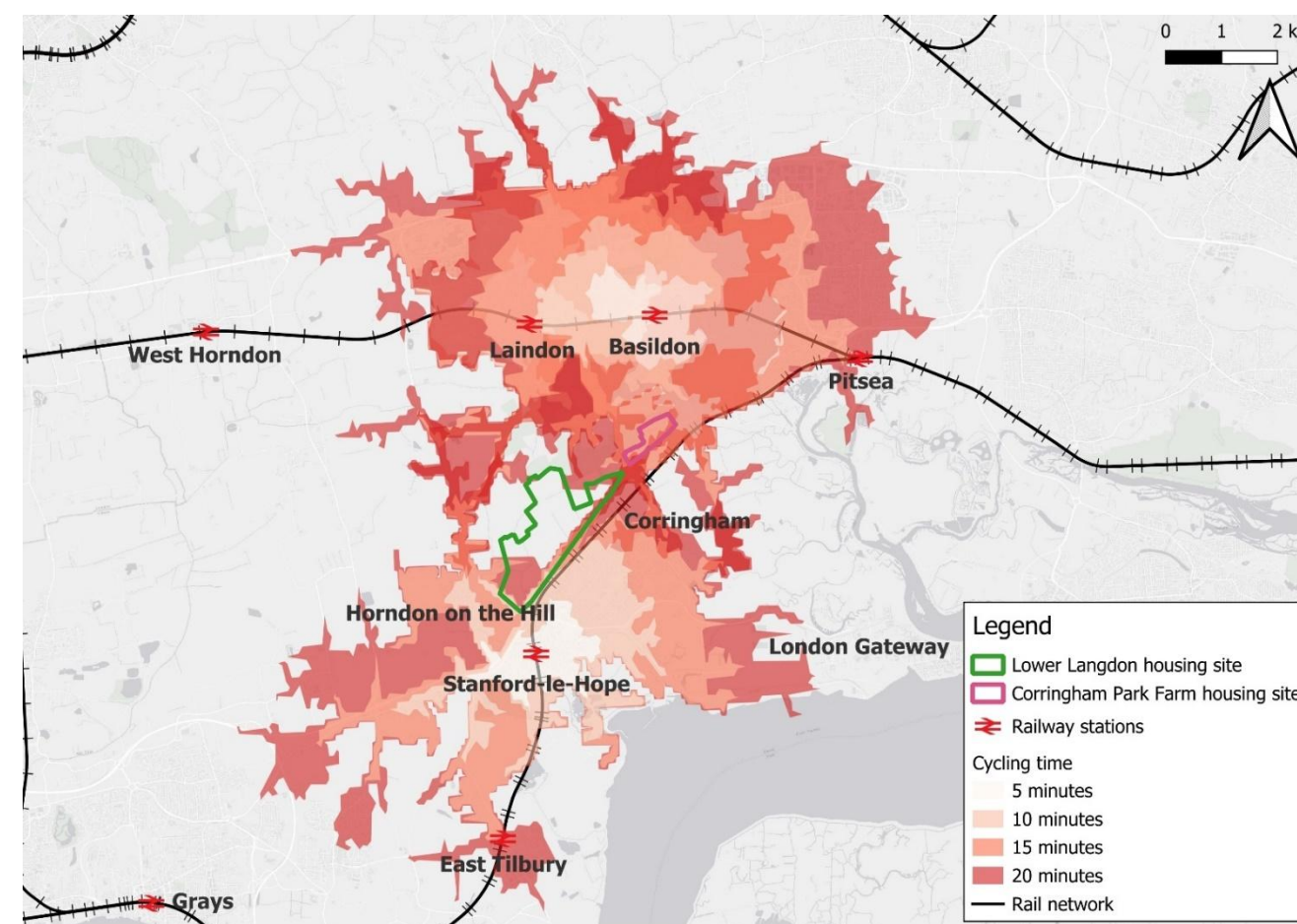


Figure 2-7: 5-, 10-, 15- and 20-minute cycling catchment to Stanford-le-Hope, Basildon and Laindon stations

2.3.3.1 Rail-Bus connection

Bus stops are located immediately outside Stanford-le-Hope Station, providing services to Horndon on the Hill, Grays and East Tilbury via the 375 route, Basildon, Tilbury and Grays via the 200 service, Basildon, Grays and Lakeside via the 100 service, and Basildon and Orsett via the 201.

Basildon bus station is located immediately opposite the train station, providing onward connections to numerous locations, including Billericay, Laindon, Basildon Hospital, Pitsea, Canvey, Southend, Chelmsford, Brentwood, Tilbury, Grays and Stansted Airport.

Bus stops are located immediately outside Laindon station, providing onward connections to numerous locations, including Basildon, Billericay, Chelmsford and Wickford.

2.3.3.2 Parking restrictions and provision

Waiting and parking restrictions apply on roads surrounding Stanford-le-Hope station, with permitted on-street parking only on selected streets. The station car park provides 66 car parking spaces; however, there are no designated accessible parking bays.

Waiting and parking restrictions similarly apply on roads surrounding Basildon station. There is no dedicated car park for the station, however, there are several town centre car parks in close proximity.

Waiting and parking restrictions similarly apply on roads surrounding Laindon station, though there are dedicated drop-off and pick-up points outside the main station entrance. The station car park provides 243 parking spaces, however, there are no designated accessible parking bays.

2.4 Highway network

The Lower Langdon housing site is located immediately to the north of the A13, which provides eastbound connections towards Southend and Chelmsford via the A130, and westbound connections to Junction 30 of the M25 towards London, and the A1089 connecting with Tilbury. The A13 in the vicinity of the sites is a dual carriageway with a 70mph speed limit and no footways present along its edge adjacent to the housing site, though as shown in Figure 2-2, there is a section of public bridleway along Northlands Farm Chase which runs parallel to the A13 along the southeastern side of the site.

Immediately west of the site is the B1007 which connects the A13 to the A128 to the west via Horndon on the Hill and Dunton to the North. The B1007 is a single-lane carriageway with landscape verges on both sides, HGV restrictions and a speed limit of 60mph, lowering to 50mph towards Langdon Hills. Narrow sections of footway are provided on the northern side of the B1007 towards Langdon Hills, but no footways are provided on the southern side of the route where it meets the site’s boundaries.

The north and east of the Lower Langdon site are bordered by rural and wildlife areas with limited highway coverage and a small number of local roads, as shown in Figure 2-8.

The Corringham Park Farm site is bounded by Vange Park Road to the south, which runs parallel to the A13 and connects Bells Hill Road with existing uses of the site. Along the site frontage, Vange Park Road is a single-track road, widening to a two-way single carriageway beyond the site boundary where it meets the adjacent residential area. Immediately south of Vange Park Road is the A13, which is a dual-lane carriageway with a 70mph speed limit and no footways present along its edge adjacent to the housing site.

Immediately west of the Corringham Park Farm site is One Tree Hill, a single-lane carriageway of national speed limit, with several narrow sections where vehicle passing is constrained. A footway is present along the southern section of the road. To the east of the site is an industrial site, beyond which is Bells Hill Road, a narrow residential road with a 30mph speed limit and no footways present. Further east is the A176 Nether Mayne, a single carriageway road (dual in some sections), with a 40-50mph speed limit. Footways are present on the western hand side of the road (travelling northbound). The north of the Corringham Park Farm site is bordered by rural and wildlife areas with limited highway coverage.

Car parking provision in the immediate vicinity of the Lower Langdon site is limited. Two car parks are located at Langdon Hills Country Park on One Tree Hill to the northeast of the site, and a further car park is available at Horndon Park in Horndon on the Hill to the west.

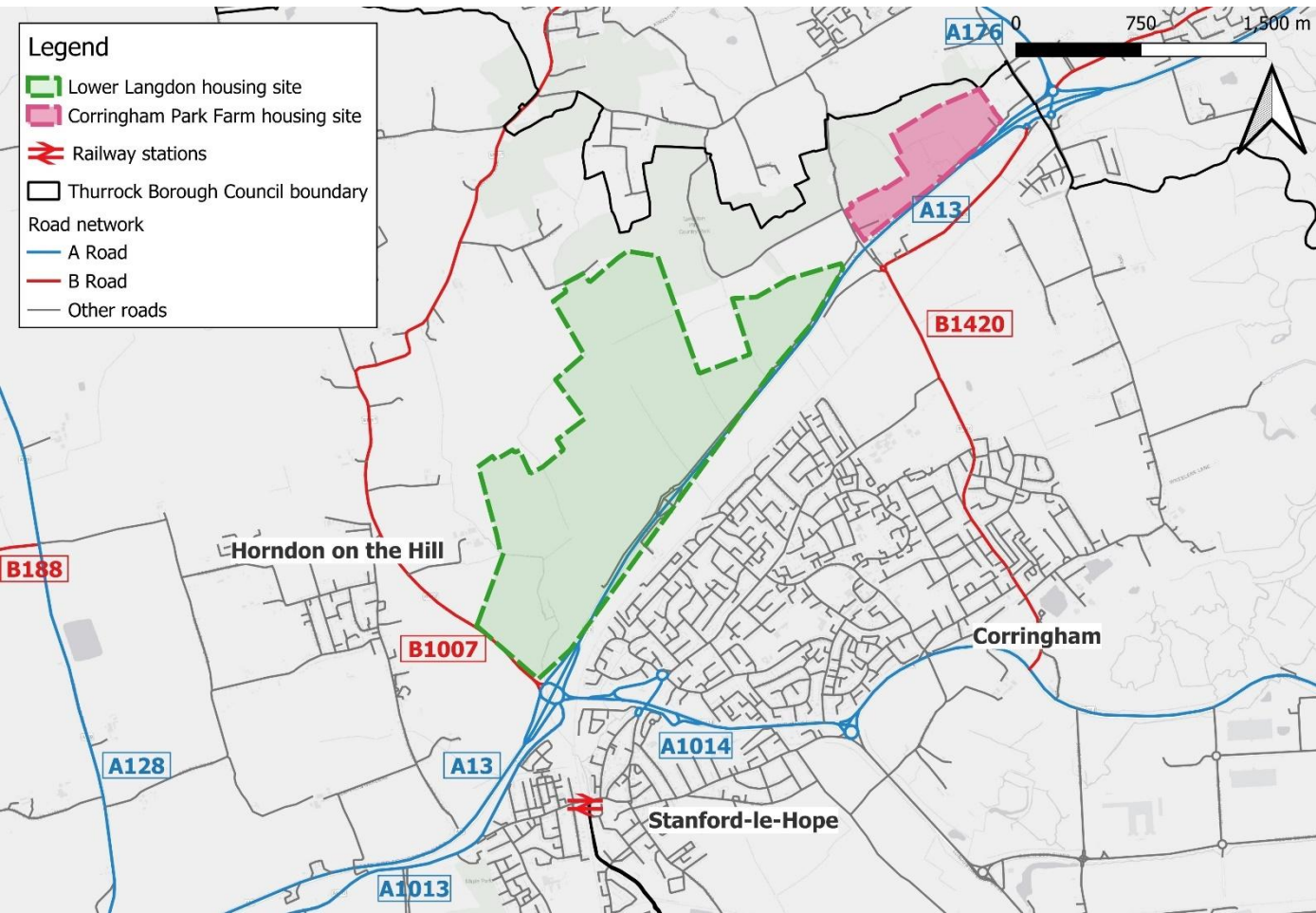


Figure 2-8: Road network around Lower Langdon and Corringham Park Farm

To the south of the Lower Langdon site, in Stanford-le-Hope, there is the station car park with 66 car parking spaces, and an NCP car park with 75 spaces. The majority of Stanford-le-Hope south of the A1014 is subject to parking permit restrictions; while to the north of A1014, on-street parking is available across much of the town.

Car parking is also limited around the Corringham Park Farm site, given its rural nature. The closest car parks are the aforementioned Langdon Hills Country Park car parks to the west of the site.

2.5 Access to existing amenities

The nearest amenities to the Lower Langdon site are located in Horndon on the Hill, Stanford-le-Hope and Corringham. As outlined in Section 2.3.2, Stanford-le-Hope is the nearest railway station to the site; and both Stanford-le-Hope and Corringham offer a wide range of amenities, including pre-schools, primary and secondary schools, GP surgeries, convenience shops and supermarkets, community centres and places of worship. Horndon on the Hill, located to the west of the site, provides more limited but locally accessible amenities including a GP surgery, pre-school, primary school, village hall, convenience shop and two places of worship.

The nearest amenities to the Corringham Park Farm site are located to the south of Basildon, including several convenience shops, places of worship and pre-schools. As outlined in Section 2.3, Basildon is the closest railway station to the Corringham Park Farm site. A wide range of amenities are available in Basildon town, including schools, convenience shops and supermarkets, GP surgeries and employment hubs, including business parks north of Cranes Farm Road.

The closest hospital to both sites is Basildon University Hospital, located on the A176 Nether Mayne to the north of the sites. The amenities surrounding both sites are shown in Figure 2-9.

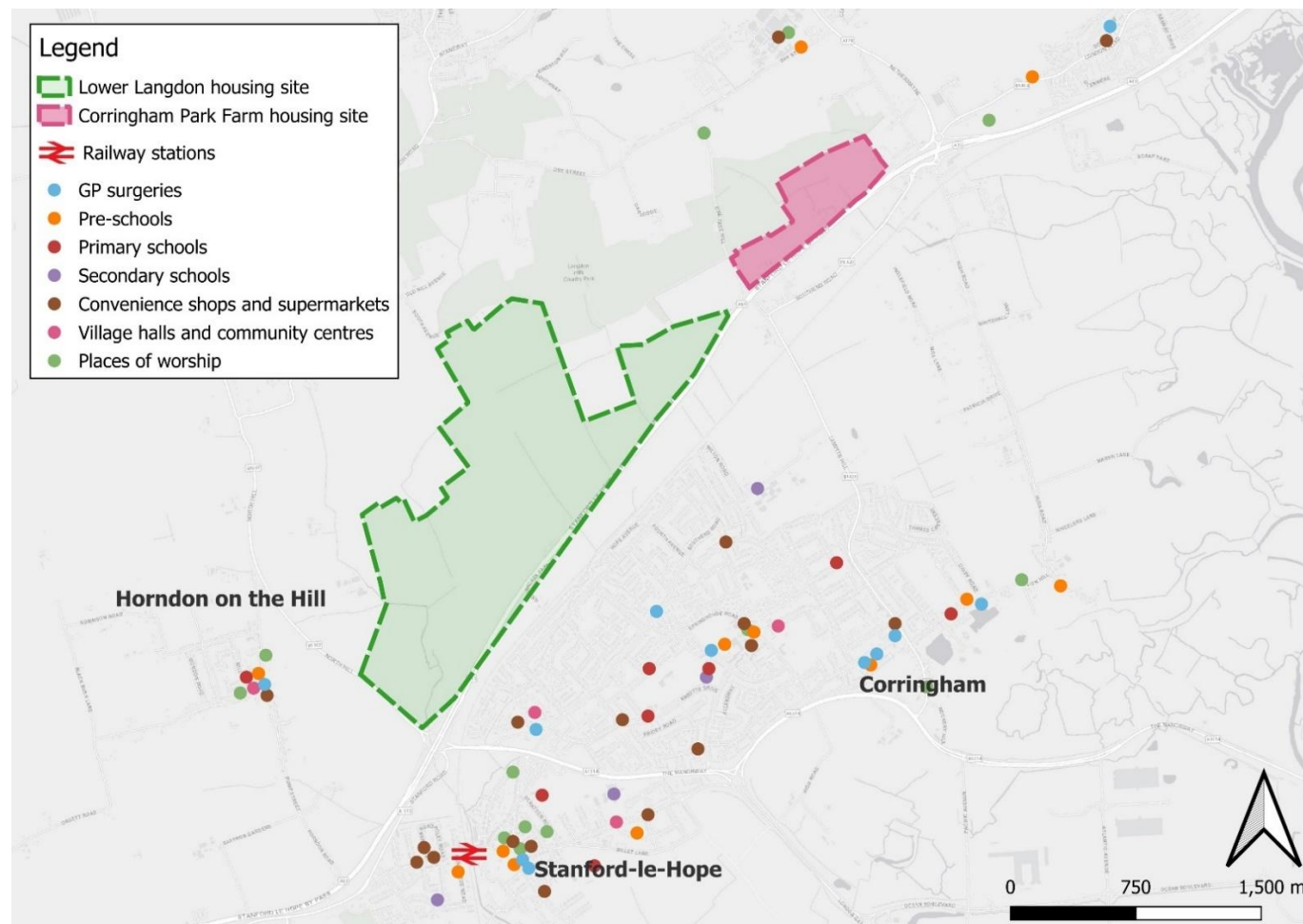


Figure 2-9: Amenities around Lower Langdon and Corringham Park Farm

2.6 Census travel to work data

Data from the 2011 Census has been used to interrogate travel to work patterns and methods of travel around the Lower Langdon and Corringham Park Farm housing sites. 2011 Census data is widely used in transport planning due to the impacts of the COVID-19 pandemic on the 2021 Census, with higher working from home and furlough levels during this period leading to abnormal travel patterns which do not reflect typical commuting data.

The Census Middle Super Output Area (MSOA) of Thurrock 004 was used, as shown in Figure 2-10, as it reflects the site's current rural nature and limited employment, and access to train station in close proximity.

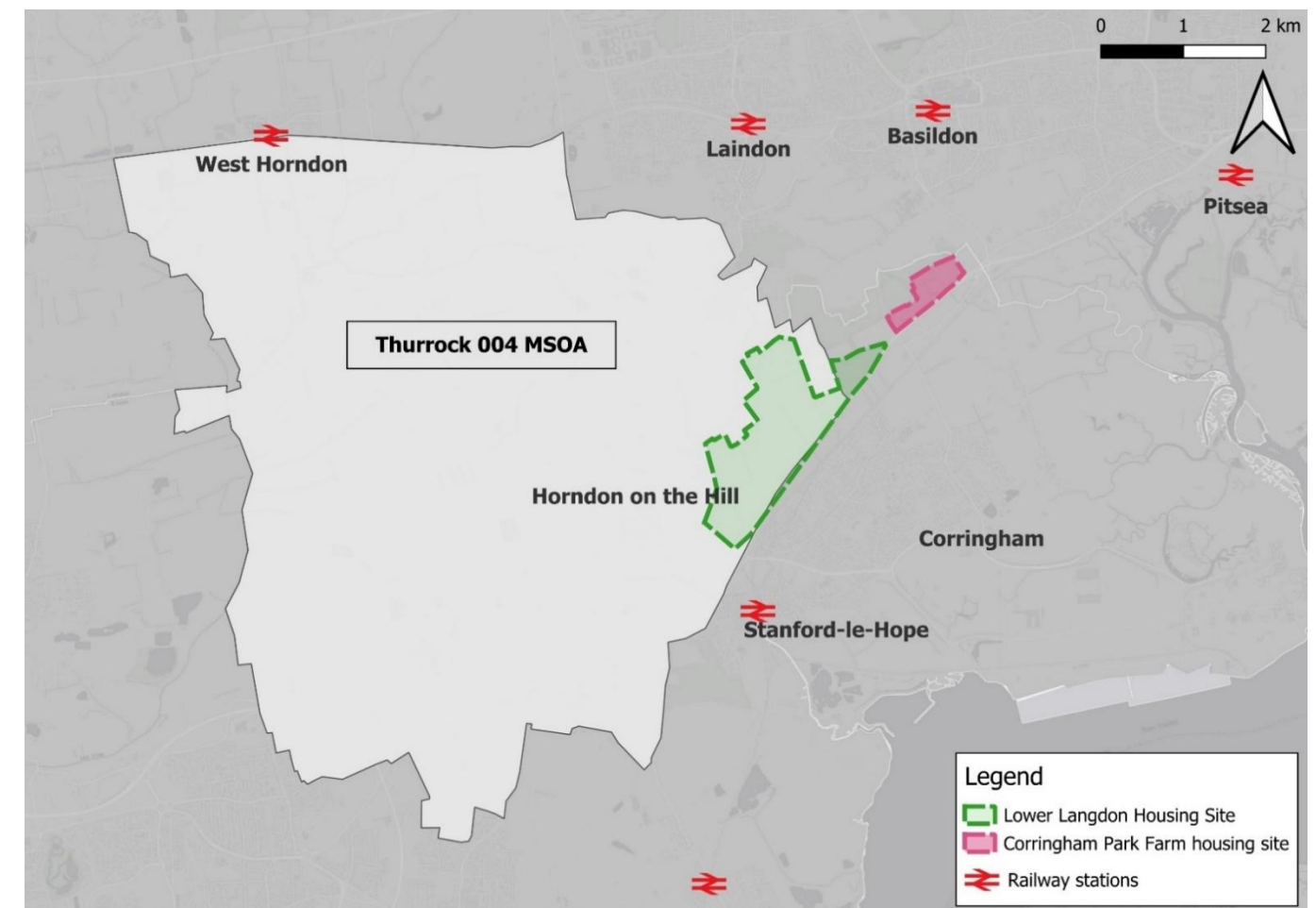


Figure 2-10: Extent of Thurrock 004 MSOA

Driving a car or van was the main way for residents of Thurrock 004 MSOA to travel to work, making up approximately 74% of total commutes in 2011. This was followed by train at 13% (majority to reach destinations in London), 5% as a passenger in a car/van, 4% travelling on foot, and 1% by bus. The travel to work mode share from Thurrock 004 MSOA is illustrated in Figure 2-11.

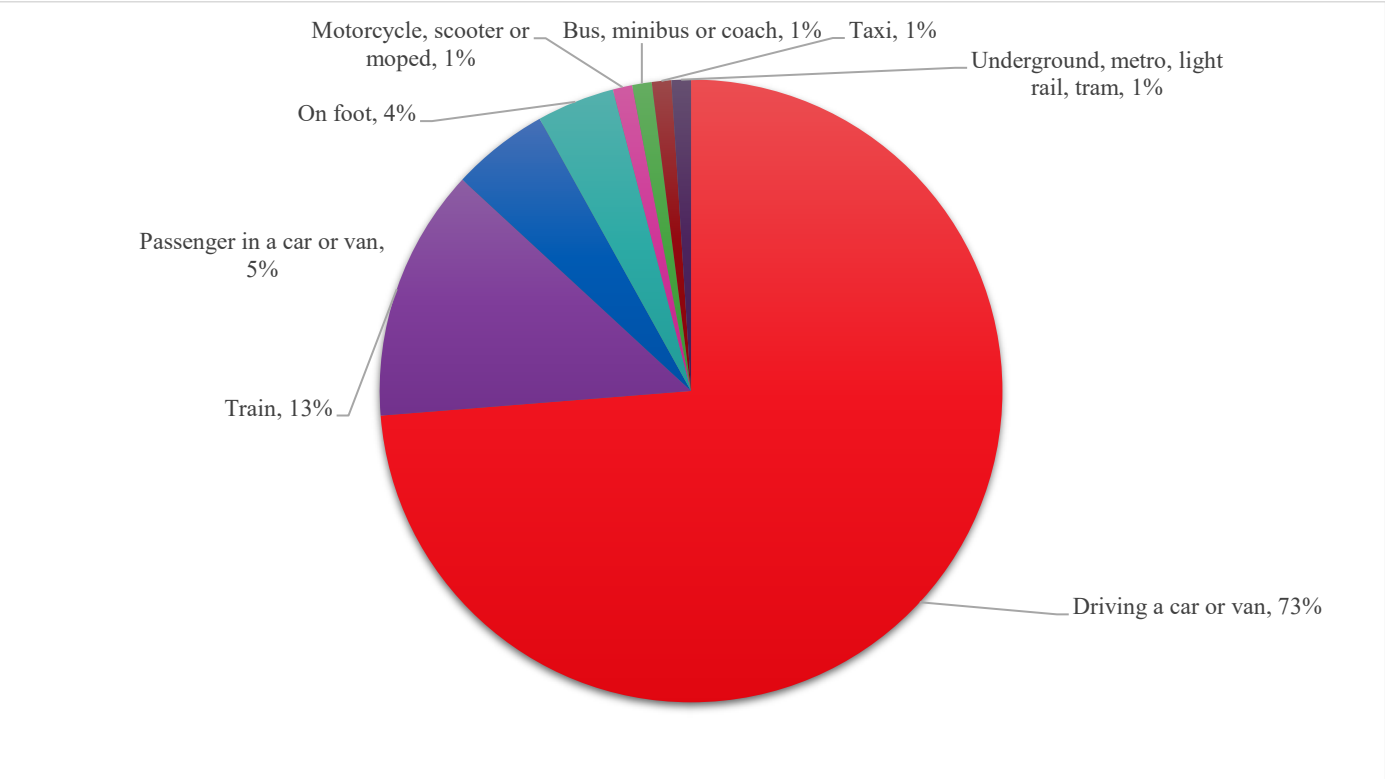


Figure 2-11: Method of travel to work for Thurrock 004 MSOA

The key places of employment for residents of Thurrock 004 MSOAs are displayed in Table 2-2. Thurrock was the most popular place of work for Thurrock 004 MSOA in 2011, making up 39% of total commutes. This was followed by Basildon at 11% of total commutes, Westminster at 10%, Havering at 7% and Brentwood at 5%. This reflects Thurrock’s status as a key employment hub, and the importance of the port region as a regional pull, as well as employment opportunities in London and the wider Essex region.

Table 2-2: Place of work and mode share (2011) for Thurrock 004 MSOA

Location of work		Methods of travel to work			
Destination	Percent of total commutes	Private vehicle	Train	Bus	Active travel
Thurrock	39%	87%	3%	2%	8%
1. Thurrock 015*		89%	5%	3%	2%
2. Thurrock 004		62%	3%	0%	34%
3. Thurrock 016		96%	1%	2%	0%
Basildon	11%	93%	2%	2%	3%
Westminster	10%	13%	86%	0%	1%
Havering	7%	95%	3%	2%	1%
Brentwood	5%	96%	2%	1%	0%
Tower Hamlets	5%	53%	45%	1%	0%
Barking and Dagenham	3%	92%	7%	0%	1%

*Thurrock 015 includes West Thurrock, Lakeside Shopping Centre and Purfleet-on-Thames

2.7 Planned infrastructure

2.7.1 Local Cycling and Walking Infrastructure Plan

In January 2025, Thurrock Council published its first Local Cycling and Walking Infrastructure Plan (LCWIP), outlining proposals for changes to local infrastructure designed to improve the walking and cycling environment. The location of these proposals is shown for the wider Thurrock area in Figure 2-12.

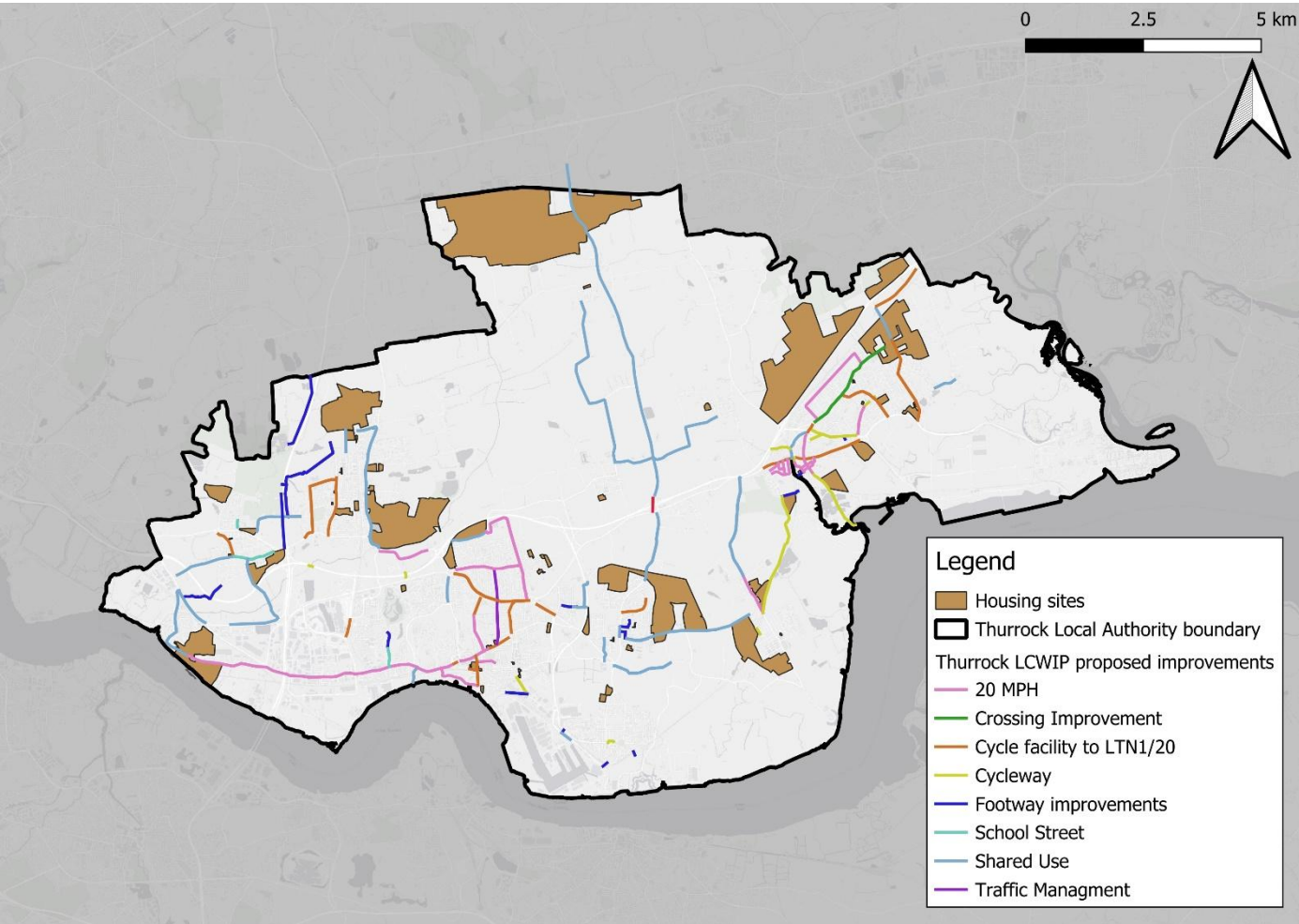


Figure 2-12: Thurrock LCWIP borough-wide proposals

The LCWIP also outlines initial Local Plan proposals for future development, highlighting several opportunity sites (including Lower Langdon), together with new green links and preferred new routes between these sites, as shown in Figure 2-13.

Thurrock’s LCWIP also outlines specific measures in key settlements including Stanford-le-Hope and Corringham, as shown in Figure 2-14.



Figure 2-13: Extract of Thurrock LCWIP initial Local Plan proposals for future development and connections

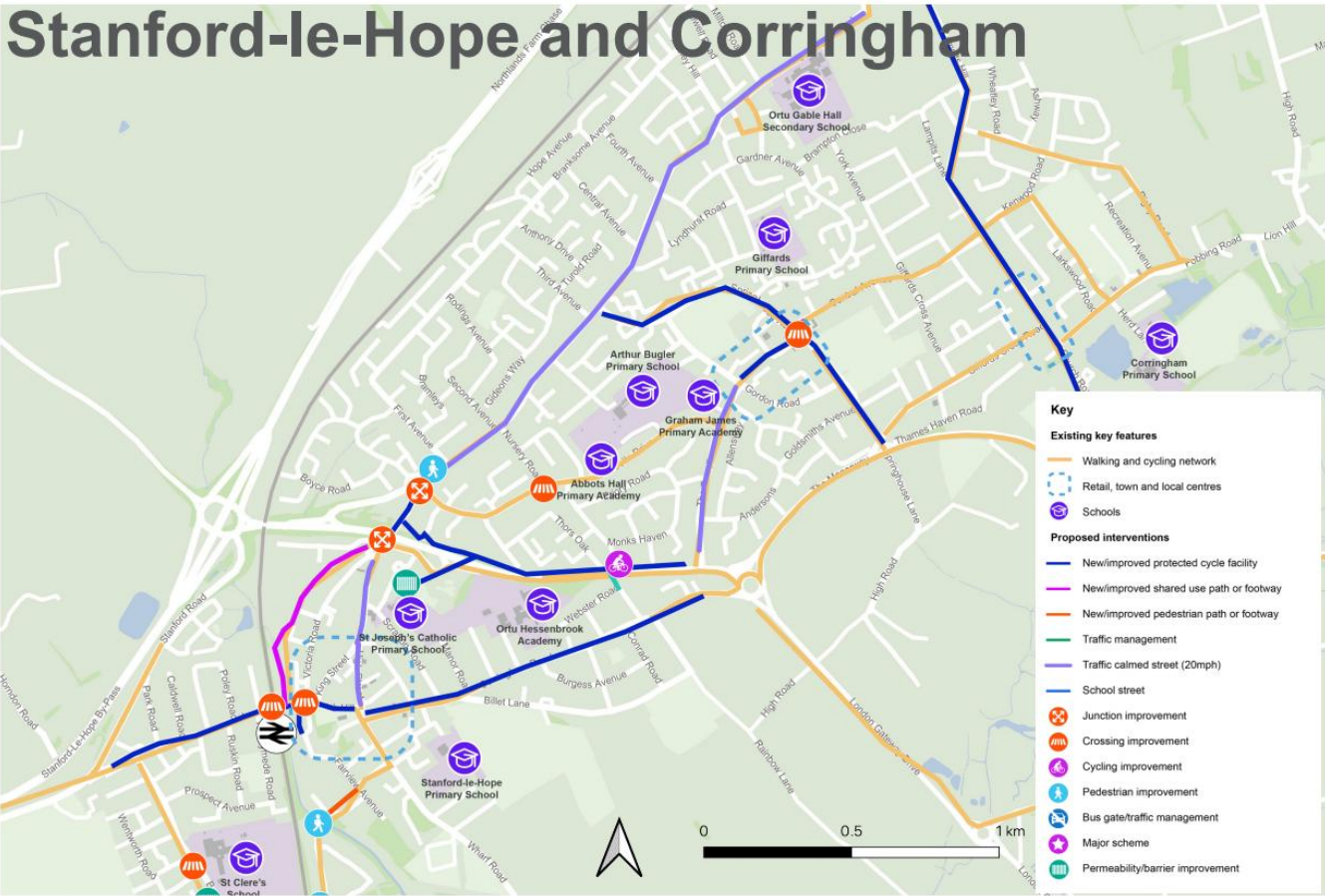


Figure 2-14: Extract of Thurrock LCWIP proposals in Stanford-le-Hope and Corringham

As illustrated in Figure 2-14, several new/improved cycle facilities are proposed across Stanford-le-Hope and Corringham, most notably along Lamptis Hill, which would connect to the southeastern corner of the Lower Langdon site and near the southwestern corner of the Corringham Park Farm site, and around Stanford-le-Hope railway station. Several shared use path and footway, junction, crossing and cycling improvements are also proposed throughout the wider area.

Basildon Borough Council also updated its LCWIP in 2025, with the location of proposals illustrated in Figure 2-15. These have been split into primary routes, which offer the most direct connections between key areas, and secondary routes, which are less direct but still provide good connectivity to employment areas, educational facilities, rail stations and future developments. Most notable for the Lower Langdon and Corringham Park Farm housing sites are primary cycle route 9B and Pitsea primary walking route 1, which connect to the A13, and secondary cycle route 20 which connects to the north of Langdon Hills Country Park, in close proximity to Corringham Park Farm in particular.

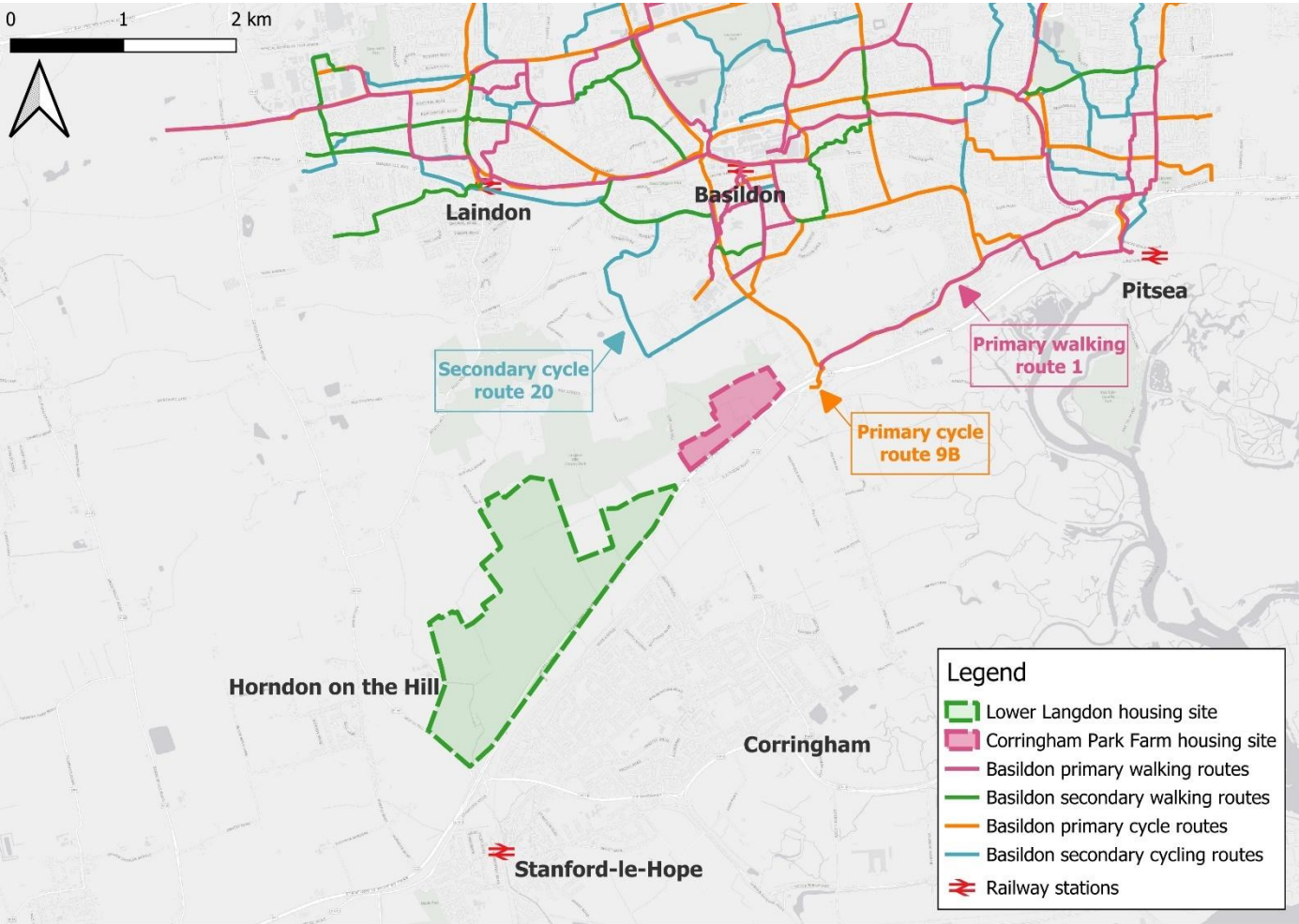


Figure 2-15: Basildon LCWIP proposals in relation to housing sites

2.7.2 Bus Service Improvement Plan

Thurrock’s Bus Service Improvement Plan (BSIP) outlines a comprehensive strategy to transform local bus services, enhance connectivity across Thurrock and provide a viable alternative to car use. The plan identifies interventions for the 2024/2025 period, as well as proposals for 2025-2030, to improve bus services, accessibility, connectivity, cost and experience for all bus users.

While many interventions outlined in the BSIP are not yet fully committed and will require external funding and partnership support, the plan provides a strategic foundation for service enhancement across Thurrock. It establishes baseline infrastructure and operational improvements necessary to diversify travel choices, increase bus mode shares, and underpin the delivery of Thurrock’s Local Transport Plan Vision 2050.

Thurrock’s existing bus network and routes identified in the BSIP for improvement in the 2025-2030 period are shown in Figure 2-16. The interventions in closest proximity the housing sites are detailed further in Table 2-.

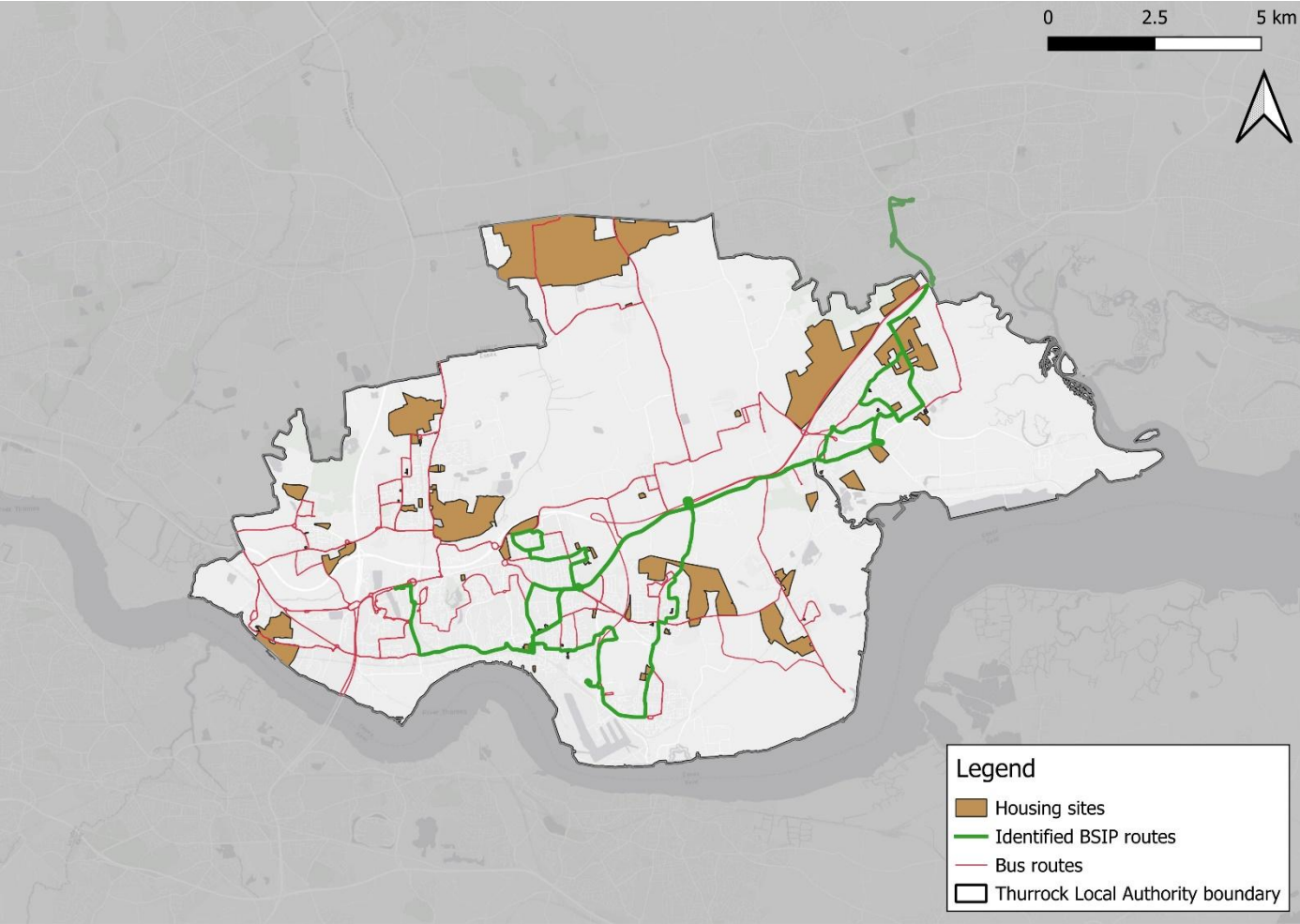


Figure 2-16: Bus routes and identified BSIP routes across Thurrock

Table 2-3: Thurrock BSIP interventions identified near Lower Langdon and Corringham Park Farm housing sites

Intervention area	Description
Route 100	To provide a Monday to Saturday at 15 min frequency service and Sunday evening service.
Route 200	To provide a minimum half-hourly Monday to Saturday and hourly Sunday service.
Stanford-le-Hope waiting and interchange facilities	Creation of bus turnaround and interchange facilities at Stanford-le-Hope station.
Rural area bus provision	To launch a DRT trial for evening and Sunday provision to smaller communities unserved by conventional buses in Horndon on the Hill, Fobbing and East Tilbury.

Following the grant of £1,954,465 from the Department for Transport to TC for their Transport Bus Service Improvement Plan grant, in November 2025 TC published their Bus Service Improvement Plan – Expenditure Programme¹, outlining more detailed delivery plans for further bus service improvements. The interventions closest to the housing sites are detailed in Table 2-4.

Table 2-4: Thurrock BSIP Expenditure Programme interventions identified near Lower Langdon and Corringham Park Farm housing sites

Intervention area	Description
Route 201	Funded BSOG to maintain route 201 serving Basildon, Fobbing, Corringham, Stanford-le-Hope and Orsett Hospital - Thurrock contracted service.
Route 375	12-month extension of the tendered bus service connecting East Tilbury, Horndon on the Hill and West Tilbury with Grays.
Route 200	Extension of the existing 200 service operated by First Essex to run on Sundays, on a 90 minute frequency.
Route 200	Extra AM service 0510 from Basildon, 0520 from Grays and PM service - 1930 from Grays.
Route 100	Extension of existing 100 service in evenings to run every 30 mins (currently hourly) between 7-11pm Monday to Saturday.
Route 100	Extension of existing 100 service in evenings to run every hour between 6.30-9.30pm Monday to Saturday.
Stanford-le-Hope bus turnaround	Funding contribution towards detail design and construction of new stops at King Street, including supporting structures on London Road.

These improvements will help deliver significant enhancements in service reliability, increase operational frequency, and strengthen overall network connectivity, thereby improving public transport accessibility and promoting sustainable travel choices.

¹ <https://democracy.thurrock.gov.uk/documents/s50205/Bus%20Service%20Improvement%20Plan.pdf>

2.7.3 Thurrock Draft Transport Strategy

Thurrock Council’s Draft Transport Strategy (2026-2040) was published for consultation in November 2025 (consultation closed in February 2026). The strategy reiterates Thurrock’s Local Transport Plan Vision 2050, and supporting policies, priorities and goals to deliver sustainable growth and improve the transport network for current and future needs across Thurrock.

The strategy is intended to contribute to the development of Thurrock’s emerging Local Plan and represents the first phase in developing Thurrock’s Local Transport Plan. It identifies sustainable transport infrastructure to unlock growth and support existing and new communities with high-quality transport connections. Several transport projects have been identified within the Strategy that would benefit the housing sites and surrounding area, as explained in Table 2-5.

Table 2-5: Thurrock Draft Transport Strategy interventions benefiting the housing sites and surrounding area

Intervention	Description
New railway station at Stanford-le-Hope	Following demolition of the previous station buildings, a new Stanford-le-Hope railway station will be delivered. It will feature step-free access, a wider London-bound platform with covered waiting areas, a footbridge with lifts, and improved walking and cycling routes around the station. Construction is expected to take place from August 2026 to July 2027.
New bus interchange on King Street in Stanford-le-Hope	A new bus interchange on King Street will serve local services and the London Gateway Link Bus, improving access for port and logistics park employees and enabling smoother interchange.
New road parallel to the B1420 Southend Road; new bridge over railway; new link to Fobbing High Road	A new road parallel to the B1420 Southend Road/Lampits Hill with a new bridge over the railway better suited for current and future traffic levels will help support the downgrading of the current hump bridge on Southend Road to be an active travel route. A new road linking Fobbing High Road and Lampits Hill would allow the level crossing at Fobbing to be closed, reducing disruptions to traffic flow.
Southend Road/Orsett Road Sustainable Travel Corridor	A Sustainable Travel Corridor will be set up along London Road and Orsett Road/Southend Road, with Grays Bus Station as the main bus interchange at the centre of the corridor. The corridor will focus on bus services and active travel on these roads, with local car trips allowed but movements moved away from the area onto the A1306 Arterial Road. The Sustainable Transport Corridor will prioritize bus services improving journey times and reliability of the busiest routes in the borough, unlocking more capacity on the corridor which could serve as an initial step toward high-capacity regional services known as Bus Rapid Transit (BRT) or Mass Rapid Transit (MRT) and provide safer environments for pedestrians and cyclists.

2.7.4 Essex Local Transport Plan

Essex County Council have developed their draft Local Transport Plan ‘A Better Connected Essex’ in 2025, setting out the transport vision and priorities for Essex, and how the Council plans to deliver its desired outcomes. As part of this, 13 area-specific Implementation Plans have been developed to outline potential projects across Essex. Within the South Essex Implementation Plan, several projects around the sites have been identified, as illustrated in Table 2-6.

Table 2-6: South Essex Implementation Plan interventions identified near Lower Langdon and Corringham Park Farm housing sites

Intervention	Description
A13 non-motorised user crossing improvements	New pedestrian and cycle crossings across the A13 to improve safety and placemaking and encourage footfall and active and sustainable travel.
A13 improvements	Package of capacity and safety improvements including sustainable options and schemes to address local pinch points linked to the delivery of growth along the corridor and the Lower Thames Crossing. This would keep the network moving by improving safety and reducing congestion.
South Essex bus metro	Rapid transit (bus or tram or mixed) linking key transport hubs to provide connectivity across South Essex to improve public transport options for sustainable access to services and jobs.
A13 sustainable corridor	In support of the South Essex bus metro, bus lanes between west of Sadlers Farm Roundabout to Southend border and beyond, to connect employment areas in Basildon and Southend. This would encourage sustainable modes and have a journey time advantage, very
Dunton Hill - Laindon sustainable corridor	Route for future South Essex Rapid Transit (SERT) to encourage DHGV residents to travel sustainably, due to improved journey times.
Park and Ride for Basildon Hospital and College	Provision of Park and Ride scheme to improve access to Basildon University Hospital provide congestion relief for the surrounding highway network.

2.7.5 Highway investment

The A13 Stanford-le-Hope Bypass widening scheme was completed in 2023, widening the A13 between Orsett Cock Roundabout (A128) and The Manorway (A1014) immediately west of the site from two to three lanes in each direction. There are currently no committed strategic highway capacity improvement schemes in the vicinity of the sites.

Planned future local highway investment includes the creation a new road parallel to the B1420 Southend Road, as highlighted in Table 2-5.

2.7.6 Lower Thames Crossing

On 25 March 2025, the Secretary of State for Transport granted development consent for Lower Thames Crossing (LTC), a new road crossing connecting Kent, Thurrock and Essex. Approximately 23km in length, it will connect to the existing road network from the A2/M2 to the M25 with two tunnels (one southbound and one northbound) running beneath the River Thames. Once open to the public in 2032, it is expected to ease congestion at the Dartford Crossing, improve regional connectivity, and unlock economic growth across the Southeast. However, it also presents new challenges for local permeability within Thurrock, which will need to be considered and mitigated where possible. As shown in Figure 2-17, the Lower Thames Crossing will be located to the west of the housing sites; however, its impacts will likely affect the wider Thurrock region.

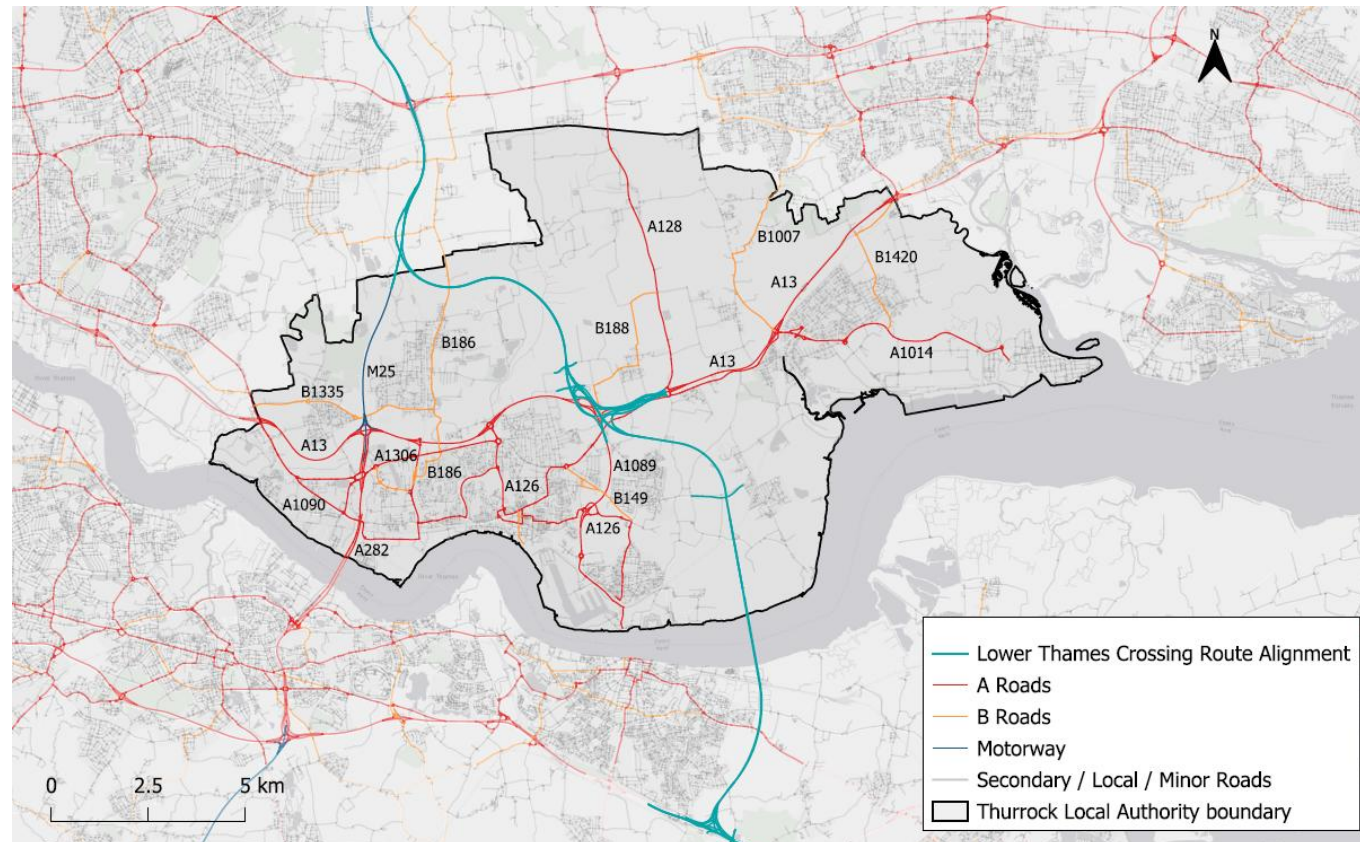


Figure 2-17: Lower Thames Crossing and existing highway network

3. Constraints mapping

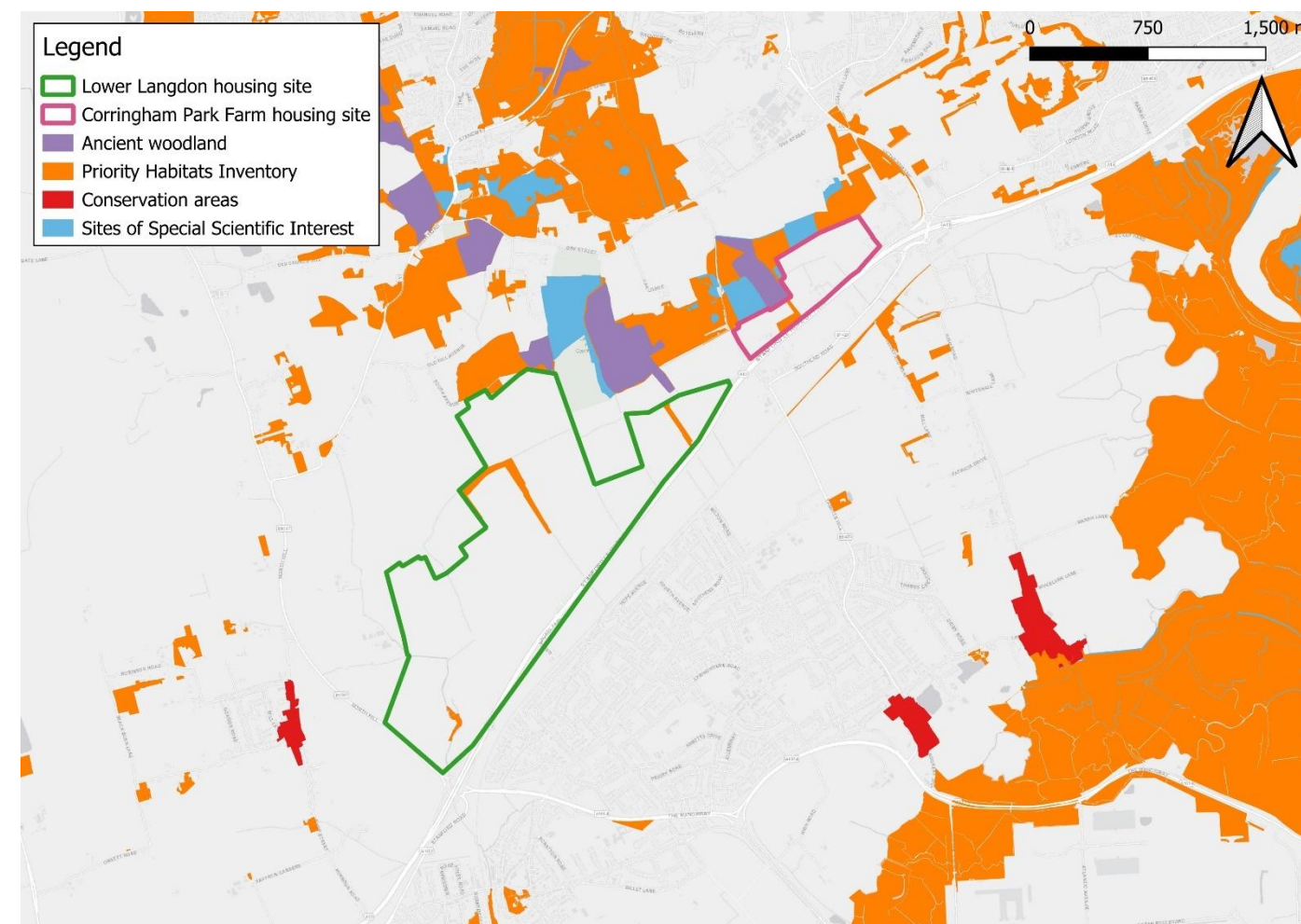
Site constraints have been identified and overlaid on the housing site in Lower Langdon to calculate the net developable area and inform the spatial and access strategies outlined in Section 5. These constraints include:

- Environmental
- Flood risk
- Green Belt
- Heritage

Given the size of the site and scale of potential development, constraints analysis focuses on the Lower Langdon housing site only.

3.1 Environmental constraints

Environmental constraints have been mapped from Natural England datasets, including ancient woodland, Sites of Special Scientific Interest, areas in the Priority Habitats Inventory, and conservation areas. As shown in Figure 3-1, there are several small Priority Habitats areas within the housing sites, but no other protected areas.



(Source: Natural England)

Figure 3-1: Environmental constraints in relation to the housing sites

The Lower Langdon housing site is relatively flat on its southwestern side, with elevation rising towards the northeastern side, as shown in Figure 3-2. The Corringham Park Farm has higher elevation, with up to 60m elevation on its northeastern side.

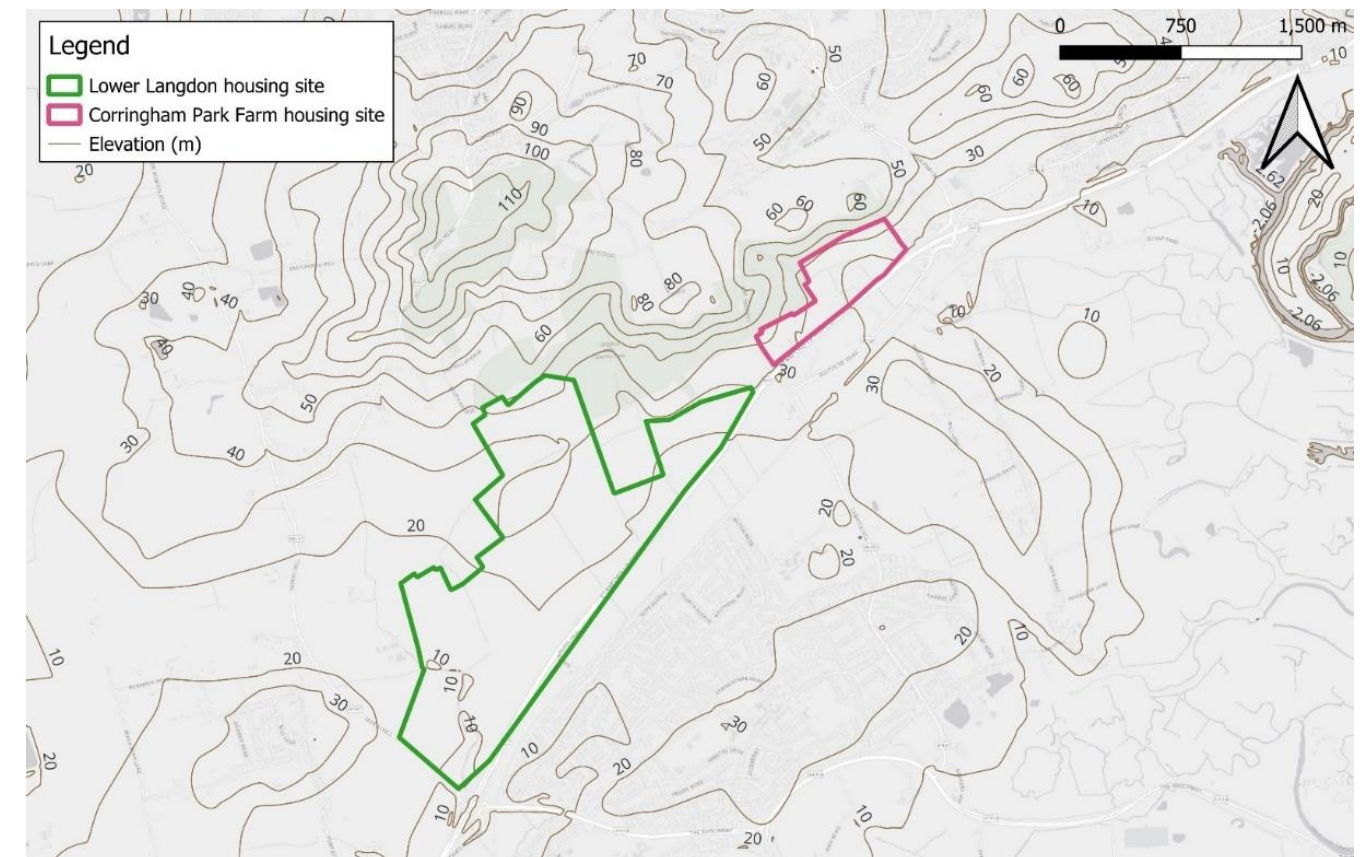
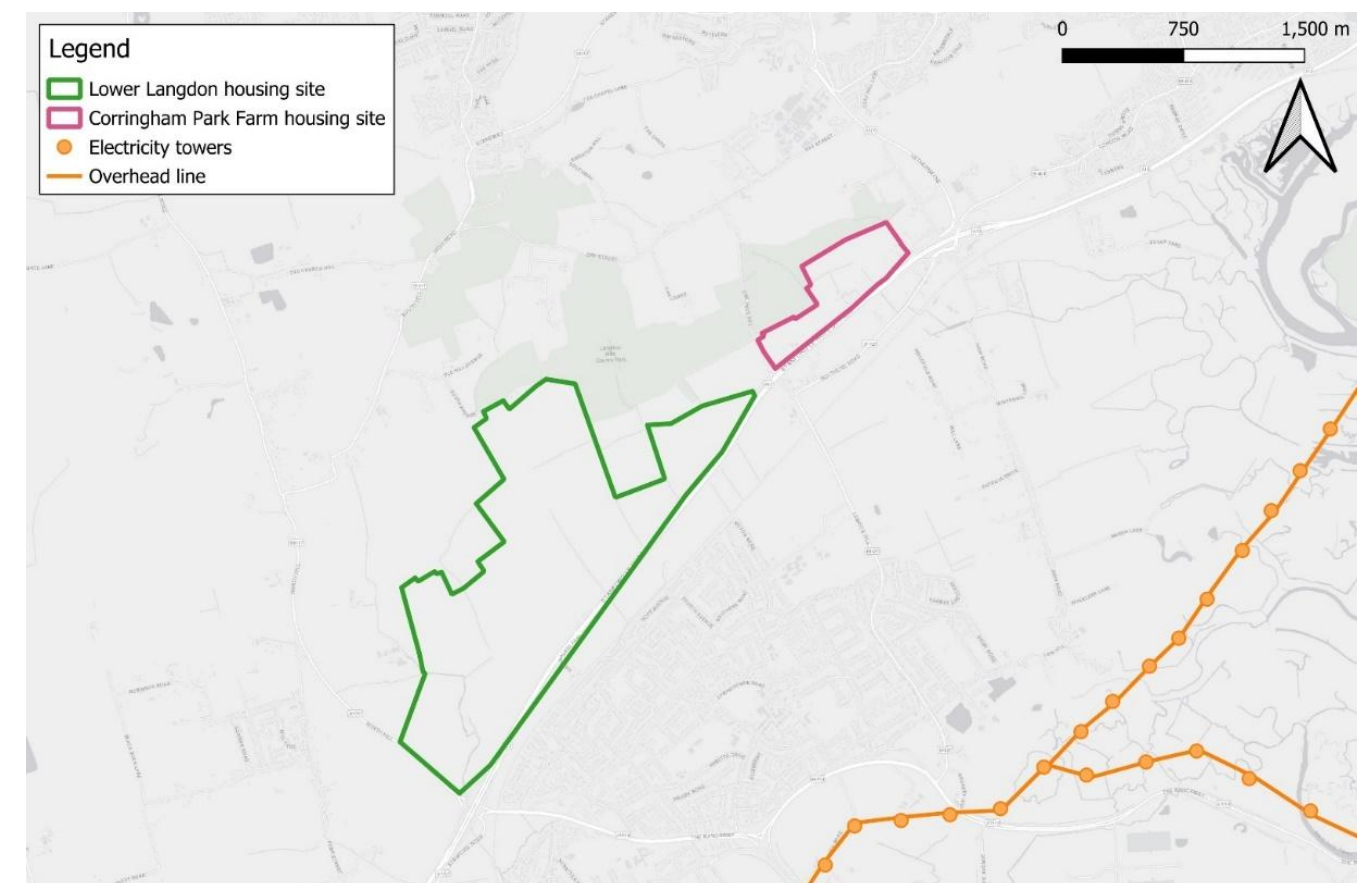


Figure 3-2: Elevation in relation to the housing sites

There are several electricity towers and an overhead to the southeast of the housing sites, as shown in Figure 3-3, but nothing overlapping its boundaries.

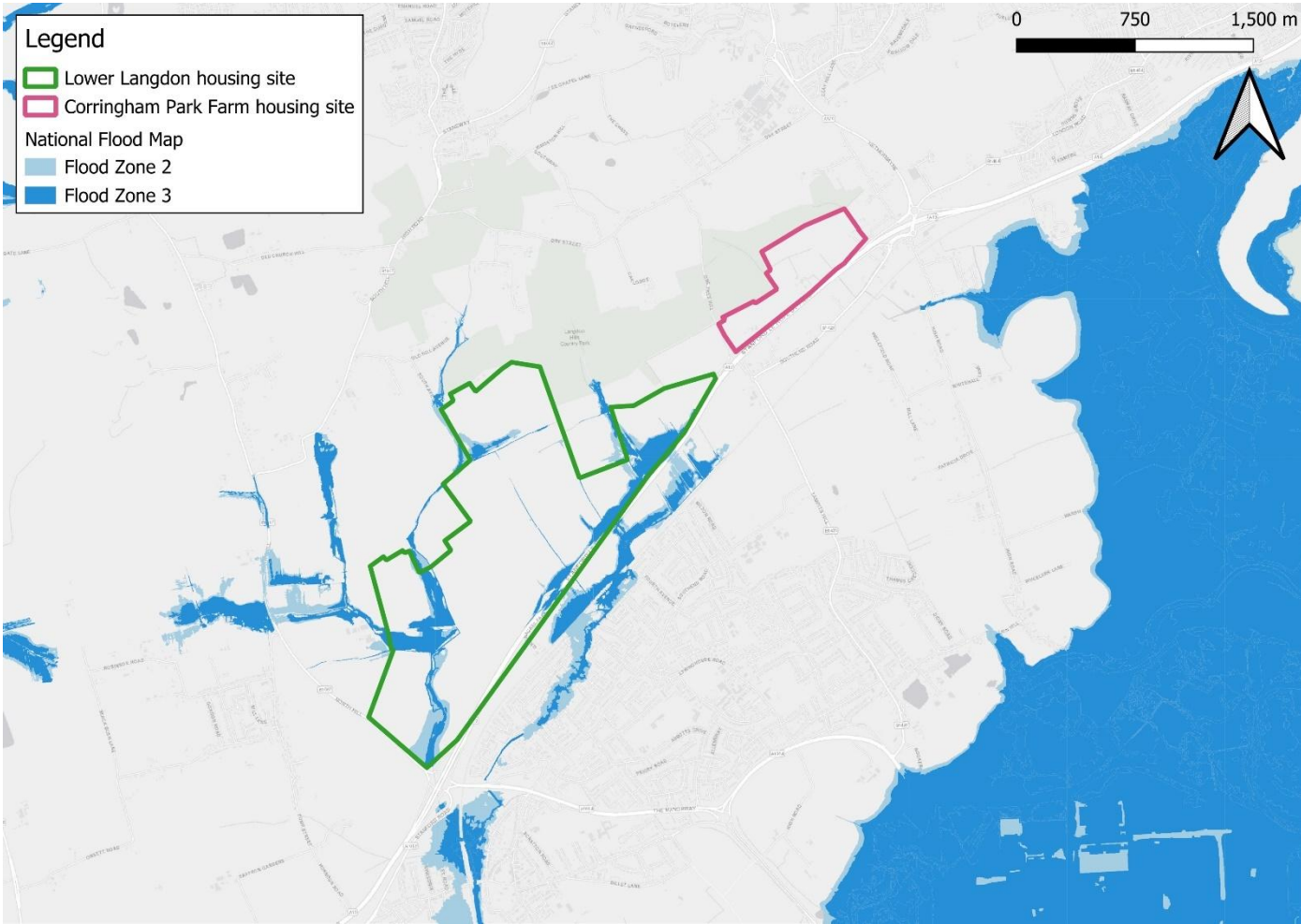


(Source: National Grid)

Figure 3-3: Utilities constraints in relation to the housing sites

3.2 Flood risk

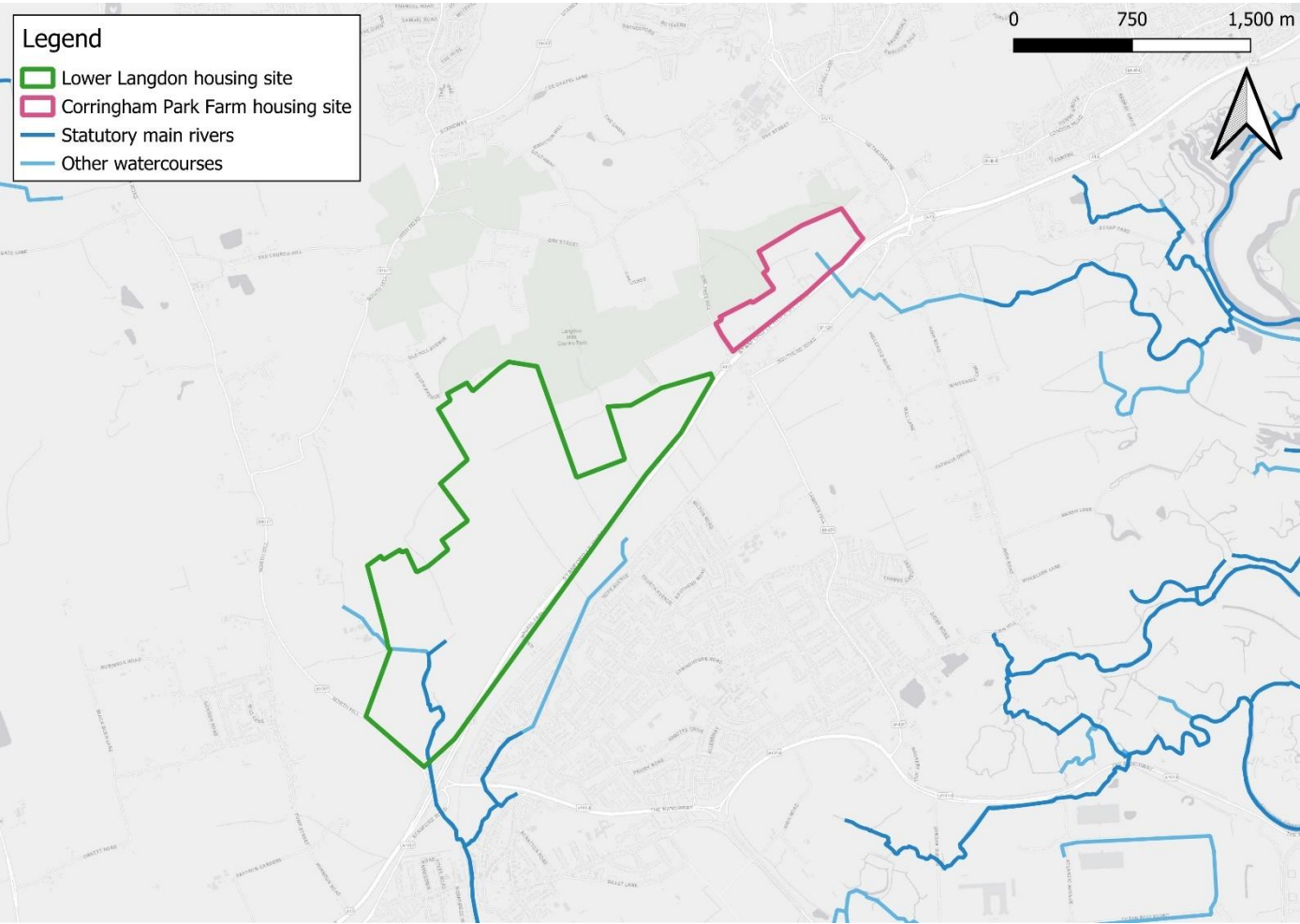
The latest National Flood Risk Assessment (NaFRA) data has been interrogated. Figure 3-4 shows the extent of flood zones 2 and 3 extent in relation to the housing site. As shown in Figure 3-, the flood zone 2 and 3 areas are concentrated around the western and eastern ends of the Lower Langdon site. This poses a flooding constraint that would need to be carefully mitigated and managed, which has been built into the spatial strategy later outlined in Section 5. There are no flood zone areas overlapping the Corringham Park Farm site.



(Source: NaFRA)

Figure 3-4: Flood zone 2 and 3 areas in relation to the housing sites

Statutory main rivers and other watercourses have been mapped in Figure 3-5. As shown, a section of statutory main river and an area of other watercourse lie within the Lower Langdon site boundary on its southwestern side, and a section of other watercourse lies on the southern side of the Corringham Park Farm site.

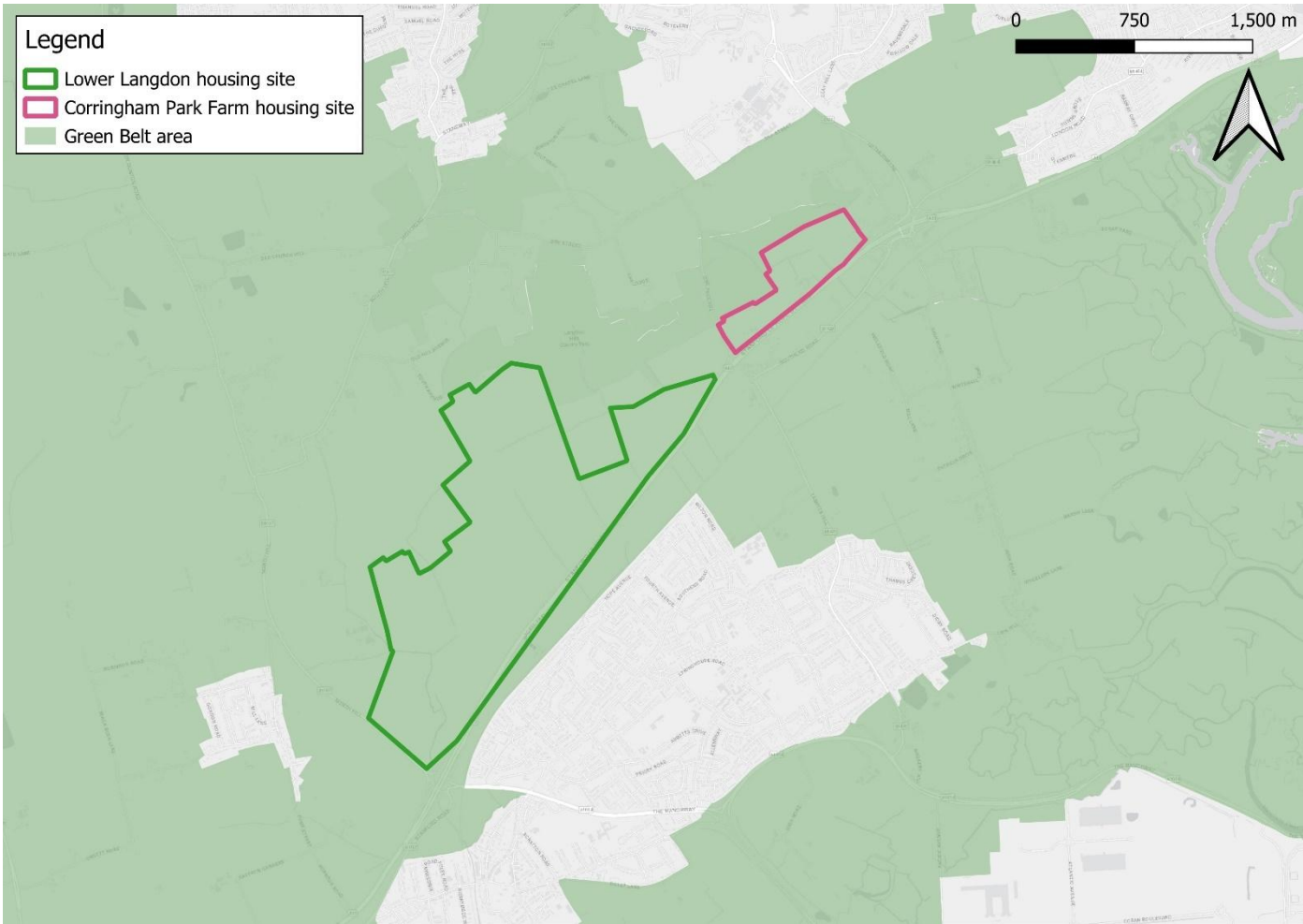


(Source: Environment Agency)

Figure 3-5: Statutory main rivers and other watercourses in relation to the housing sites

3.3 Green Belt stage 2 assessment

The extent of the Green Belt is shown in Figure 3-6, which covers the entirety of both housing sites.



(Source: Ministry of Housing, Communities and Local Government)

Figure 3-6: Extent of Green Belt area in relation to the housing sites

3.4 Heritage

Figure 3-7 shows the overlay of heritage constraints (including scheduled monuments and ancient woodland) on the housing sites. As shown, there is no overlap between the heritage areas and the housing sites.



(Source: Historic England)

Figure 3-7: Heritage constraints in relation to the housing sites

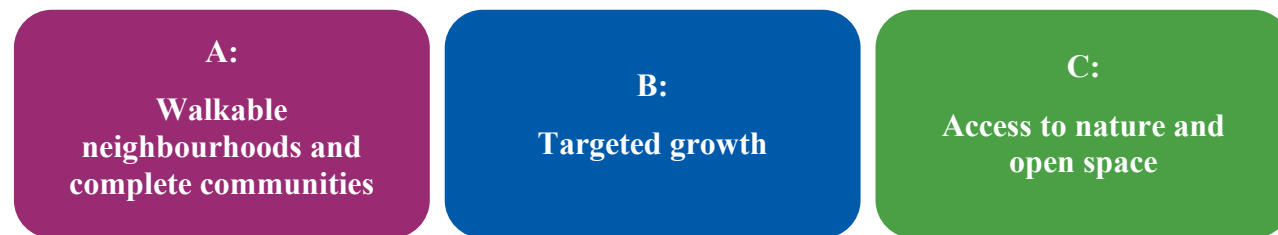
4. Vision and objectives

4.1 The vision

TC is committed to deliver sustainable community regeneration and growth through the creation of neighbourhoods in Lower Langdon that promote safe and inclusive active travel, provide housing choice and affordability, respect localities' heritage and deliver zero carbon.

As discussed in Chapter 1, the anticipated development scale of the Corringham Park Farm site has been considered and assessed with the Lower Langdon site in this SSA, however, the conceptual plan and spatial strategy focus on the larger site at Lower Langdon only.

4.2 The objectives



A. Walkable neighbourhoods and complete communities

- Ensure neighbourhood centres provide a mix of uses, especially services for daily life: build off types and location of the commercial activity, facilities and amenities already present around Lower Langdon.
- Design town expansions such that walking, cycling, wheeling and public transport are the most convenient, safe and attractive choices for getting around, with high quality transport links between all neighbourhoods, centres, amenities and surrounding villages.
- Provide homes that can cater to people at all stages of life and offer diverse tenure types.
- Provide a new bus route, improving connections to neighbouring communities, amenities and employment opportunities.

B. Targeted growth

- Provide a spatial framework that provides flexibility to allow for growth without sprawl.
- Capitalise on local stations locations as catalysts for balanced growth
- Support sustainable access to major employment hubs by taking advantage of Lower Langdon's strategic location between Basildon, and the London Gateway employment allocation; allowing residents to benefit from the existing and planned employment opportunities within a short journey.

C. Access to nature and open space

- Lower Langdon's development will create and enhance a comprehensive network of green links, spaces and places easily accessible to the public.
- Ensure that every resident has access to usable green space of diverse characteristics within a walkable distance.
- Buildings, spaces and neighbourhoods will be designed and built to ensure low levels of climate and resource impact and embed high levels of climate resilience.
- The expansion of Lower Langdon will protect, enhance and create blue and green networks for nature and people, including the protection of 'nature-only' habitats and routes.

5. Combined contextual analysis

5.1 High level capacity testing

5.1.1 Methodology

To assess Lower Langdon’s capacity to accommodate **4,000 new homes**, and Corringham Park Farm’s capacity to accommodate **1,000 new homes**, the following methodology has been adopted, structured as three main tasks:

- 1. **Baseline Analysis and Constraints Mapping**
Development of constraint maps incorporating relevant planning information that may affect potential development opportunities.
- 2. **Assumptions**
Identification of key assumptions that underpin and influence building capacity across the residential site.
- 1. **Capacity Study**
Assessment of development potential for the site, summarised in a table detailing gross and net developable areas, recommended densities, and the estimated minimum number of residential units per site, based on planning constraints.

This is a high-level study, with all Gross Developable Areas derived from Site Areas following the application of general assumptions, indicative setbacks, and broad planning considerations. **The resulting estimated number of residential units is indicative and provided for information purposes only.** The Council remains responsible for site-specific planning risks and considerations, which may significantly affect the outcomes presented in this study.

The steps of the assessment process are as per the diagram below:



5.2 Assumptions

5.2.1 Green Belt

Lower Langdon residential site is located within Thurrock’s Green Belt. It is assumed that this site, having been identified by TC, is considered developable. **In recognition of the Green Belt’s distinctive character, additional provision for Open Space and Biodiversity Areas has been incorporated into the assumptions** underpinning the capacity testing.

5.2.2 Flood Zones and Watercourses

Flood zones are one of the major constraints when assessing development potential. **The capacity testing has assessed the Development avoiding Flood Zones 2 and 3.**

Accordingly, these areas have been excluded from the Gross Developable Area, and appropriate setbacks have been applied.

According to Paragraph 23 of the updated Planning Practice Guidance (PPG), the aim of the sequential approach is to ‘direct new development to areas of lowest flood risk’, and it explicitly states that ‘existing flood defences are initially ignored when comparing sites, since their long-term performance (and climate change impacts) is uncertain’. The National Planning Policy Framework (NPPF) reinforces this by requiring that development proposals in Flood Zone 3 must demonstrate safety over their lifetime, including climate change allowances, and must not increase flood risk elsewhere. Furthermore, the PPG clarifies that if no reasonably available lower-risk sites exist, development in high-risk areas may only proceed if it can be made safe for its lifetime and without increasing flood risk to others—otherwise, ‘development is not appropriate and should not be considered’. These policies collectively underscore that development in Flood Zone 3, especially under future climate scenarios, poses unacceptable risks and should be avoided unless stringent safety and sustainability criteria are met.

While land currently defined as Flood Zone 2 could provide some development opportunities, the requirement to provide mitigation over the lifetime of the development will limit productive use as mitigation measures would be required to account for the next 100 years of climate change.

Setbacks have also been applied to existing watercourses.

5.2.3 Priority Habitats Inventory, Forestry, and Ancient Woodlands

These areas have also been excluded from the Gross Developable Area in the capacity testing. As will be illustrated later, they have been integrated into potential green infrastructure and corridors within the high-level Concept Plan, which demonstrates how these sites could be brought forward for development.

5.2.4 Setbacks Summary

Table 5-1 summarises the key setbacks applied to each site, which form the basis for calculating the Gross Developable Land Area. Other setbacks, such as offsets to neighbouring properties, roads, and railway corridors, have not been deducted from the Gross Developable Land Area. Instead, they are considered as part of green buffers and hedgerows within the biodiversity and ecological areas allocated in the land use distribution for capacity testing.

Table 5-1: Setbacks

Category	Setback	Source
Woodlands and Protected Habitats	15 m	Natural England (National Guidance)
Main Rivers	8 m	Environment Agency standard
Other watercourses	5 m	Good practice, recommendation for ecological buffer
Flood Zone 2	10 m	Good practice, recommendation for ecological buffer
Flood Zone 3	15 m	Good practice, recommendation for ecological buffer

5.2.5 Residential Densities

In line with planning guidelines, density assumptions for the Lower Langdon site have been established. These assumptions underpin the dwelling capacity estimates.

A minimum density of 30 dwellings per hectare and a maximum of 70 dwellings per hectare has been assumed.

*CSTP1, 5.15: The South Essex Strategic Housing Market Assessment (2008) (SHMA) provided a residential density assessment of the sub-region and concluded that a density of at least **60 dwellings per hectare** would be appropriate in urban locations with high public transport accessibility and good access to services. The Council welcomes this approach and considers it entirely appropriate in Thurrock. In respect to **suburban locations**, a density range of **30 to 40 dwellings per hectare** was suggested. It is considered that in the **urban context of Thurrock** a density range of **30 to 75 dwellings per hectare** would be more appropriate in such locations. The Council will produce a Design and Sustainability SPD that will set out the design principles that will guide density levels in the Borough and provide a character assessment of each area to provide area specific density guidance.*

Although the Council specifies the density ranges noted above, the policy wording does not clarify whether these figures apply to gross or net site area. For this study, in line with established practice standards, these densities have been applied **to the net developable area**. Most local authorities and guidance, such as PPS3 and RICS standards, calculate housing density on a net developable basis, as this more accurately reflects the actual intensity of housing on land designated for residential use.

The following density categories have been applied (see Figure 5-1):

- **Medium Density (70–45 dwellings per hectare):** Developments that extend the existing town settlement, maintaining a neighbourhood character.
- **Lower Density (45–30 dwellings per hectare):** Developments along the edge of the Green Belt within the proposed site boundaries with a more rural character.

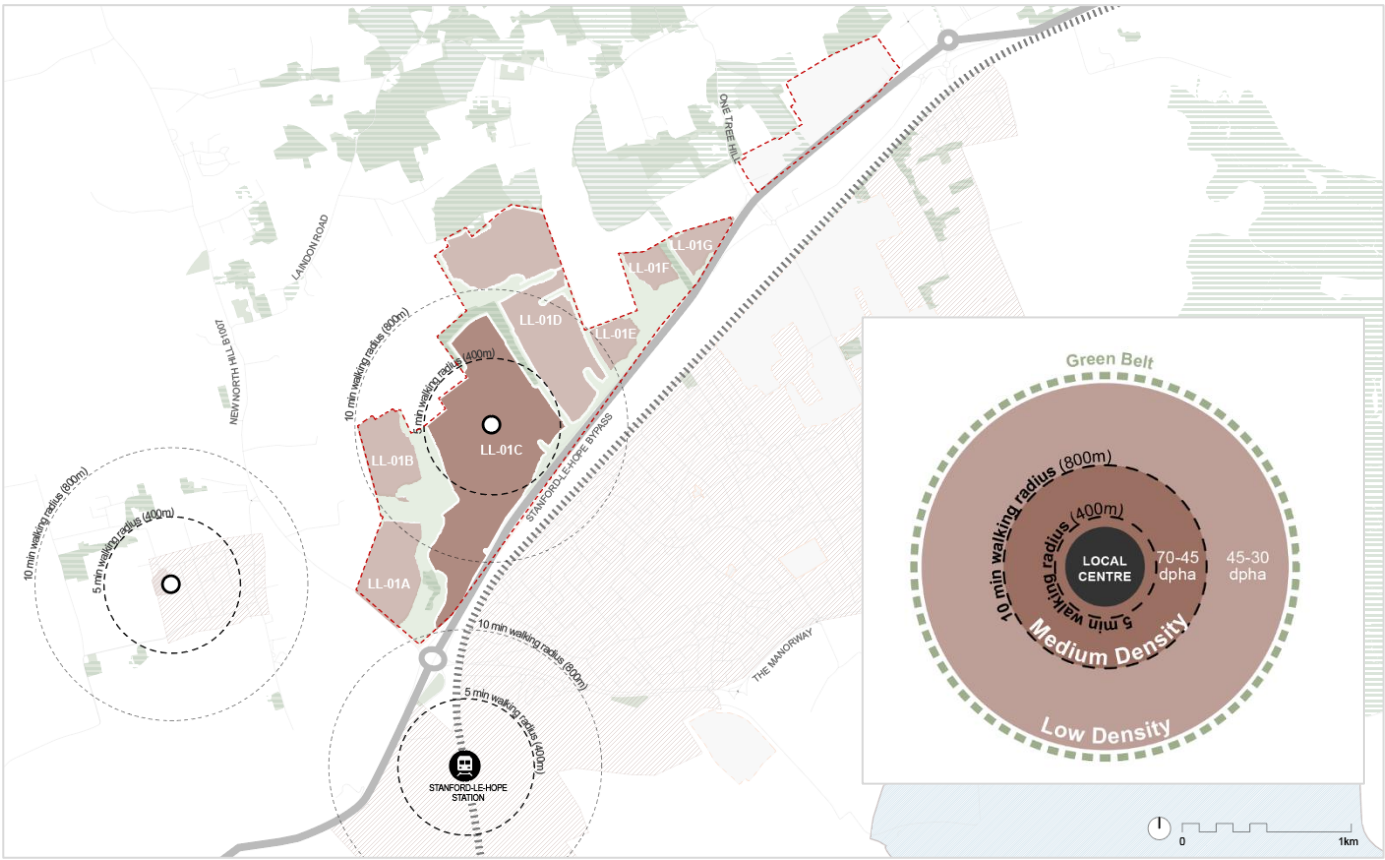


Figure 5-1: Residential Densities Diagram

5.3 Housing Typologies

Building on the assumed density ranges, a series of case studies have been included. These illustrate the variety of housing typologies that new developments could accommodate, ensuring alignment with the town's character and principles of sustainable growth.

The primary approach to density in the new developable areas is to create more compact and cohesive urban environments compared to the existing fabric, encouraging mixed-use spaces and adhering to the principles of the 15-minute neighbourhoods.

High - Medium Density (70-45 dwellings per hectare)



Figure 5-2: Kemp's Farm (South Ockendon)



Figure 5-3: New Lodge (York)

Lower Density (45-30 dwellings per hectare)



Figure 5-4: Lovedon Fields (Hampshire)



Figure 5-5: The Avenue (Saffron Walden)

5.4 Land Area Distribution and Net Developable Area

Taking into account the planning constraints and assumptions outlined above, and following the application of site-specific setbacks, a series of land use percentages and parameters have been established, which determine the Net Developable Area from the Gross Developable Land Area. These assumptions provide a structured basis for assessing development capacity and inform the spatial strategy for each site.

For Lower Langdon’s high level capacity testing, the **Net Developable Area is assumed to be 71% of the total Gross Developable Land Area**. The range of densities have been applied to the Net Developable Area to obtain a minimum estimated number of dwellings.

For simplicity of the study, the same percentages have been applied to the extent of the site, regardless of location. In a more detailed study, these land area allocations would need to be adjusted to reflect site-specific characteristics and density variations depending on typologies, ranging from more urban to more suburban contexts.

Table 5-2: Lower Langdon Land Area distribution for capacity testing

Category	Percentage	Notes
Net Developable Area (Residential Plots)	56%	Private gardens and building footprints
Net Developable Area (Non-Residential)	4%	Education and leisure facilities, retail and employment
Roads and Access	15%	Carriageways, footpaths, cycleways, shared access tracks
Public Open Space	10%	Shared amenity areas, play areas, informal green spaces
Biodiversity and Ecological Areas	4%	Habitat corridors, green buffers, hedgerows, woodland edges, ponds
SuDS and Drainage	4%	Swales, attenuation basins, permeable surfaces
Community Facilities	5%	Community facilities, health centres, allotments, cycle storage, recycling facilities, shared workspace, electric vehicle charging, etc.
Other Infrastructure	2%	Pumping stations, substations, easements, etc.

5.4.1 Lower Langdon Capacity Testing

The objective of this study is to provide a high-level estimate demonstrating that the Council’s strategic provision of 4,000 dwellings can be accommodated across the site in Lower Langdon.

The following key information has been compiled and summarised in a table to help determine its development potential for each option:

- **Site Area (ha):** The total area of the site, as defined by the Council’s proposed site boundaries.
- **Gross Developable Land Area (ha):** The area remaining after excluding Flood Zones, protected habitats, woodlands and existing ROWs.
- **Land Utilisation (%):** The proportion of land that can potentially be developed, calculated as Gross Developable Land Area divided by Site Area.
- **Net Developable Land Area (ha):** The portion of land available for development, including private gardens and building footprints. This excludes open spaces, infrastructure, community facilities, and biodiversity areas.
- **Estimated Number of Residential Units:** Based on density distribution assumptions within the range of 30 to 100 dwellings per hectare. This figure must demonstrate capacity exceeding the 4,000-dwelling target.

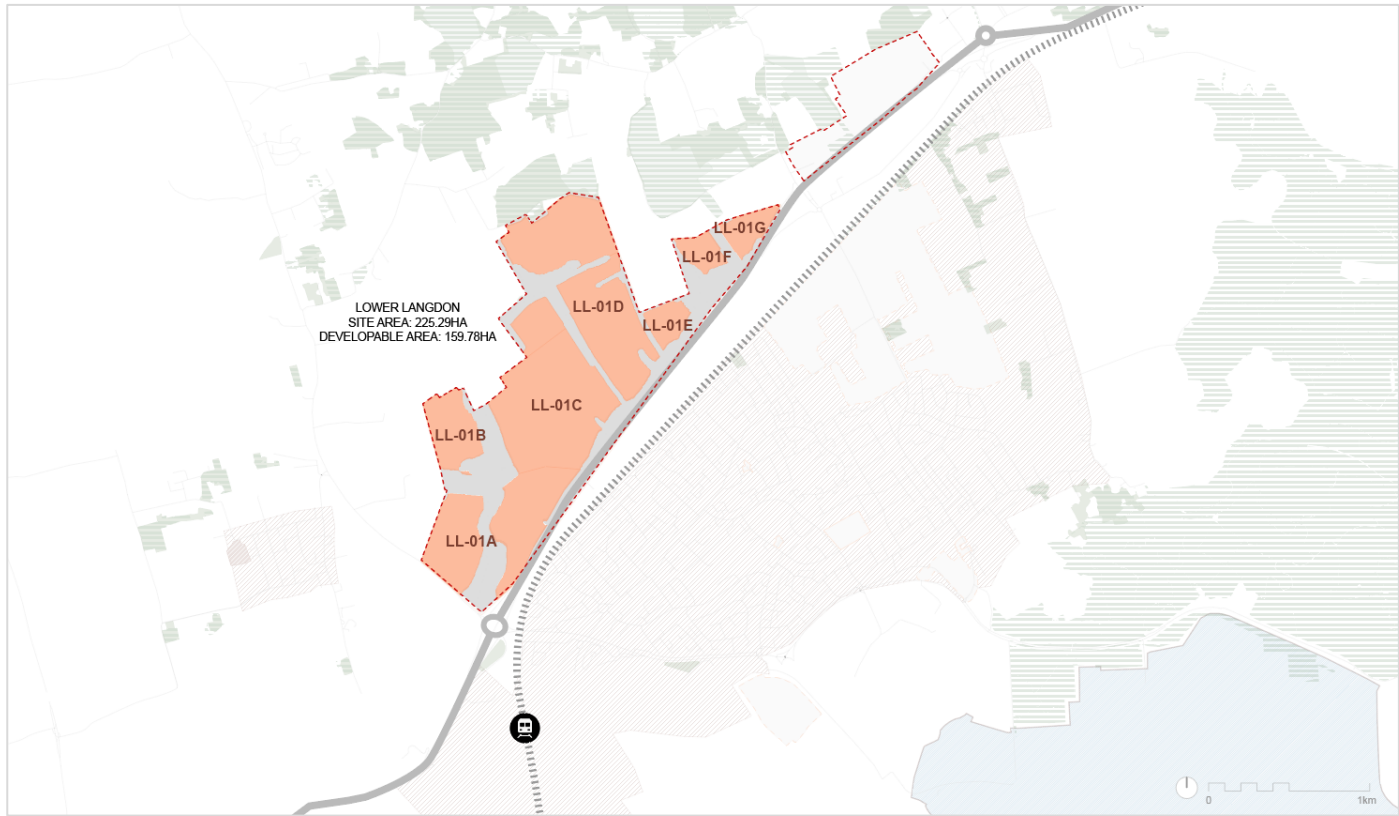


Figure 5-6: Lower Langdon Gross Developable Area

Table 5-3: Lower Langdon Option 1A Capacity Study summary

Site Number	Site Area	Gross Developable Land Area	Land Utilisation (Gross Developable Area / Site Area) (%)	Net Developable Land Area	Proposed Density (dwellings / ha of net area)	Estimated Number of Units (target density)
LL-01A	225.29ha	15.59ha	71%	8.73ha	40	349
LL-01B		11.76ha		6.59ha	40	263
LL-01C		68.21ha		38.2ha	50-60	2,150
LL-01D		47.97ha		27.96ha	30-40	995
LL-01E		5.11ha		2.86ha	30	86
LL-01F		5.73ha		3.21ah	30	96
LL-01G		6.03ha		3.38ha	30	101
Total	225.29ha	160.40 ha	71%	90.20 ha		4,041

The estimated number of dwellings is **4,041 in relation to the Council target of 4,000 units**. It is concluded that, based on the outlined assumptions, Lower Langdon could accommodate 4,000 new dwellings within the residential site allocated by the Council.

5.4.2 Corringham Park Farm Capacity Testing

For testing purposes, a high-level capacity assessment was undertaken for Corringham Park Farm to demonstrate the Council’s strategic assumption of delivering **1,000 dwellings**. Adopting the same planning constraints and assumptions to Lower Langdon, the Gross Developable Area is 25.71ha (88% utilisation), refer to Figure 5-8.



Figure 5-7: Corringham Park Farm Gross Developable Area

To achieve the Council’s vision of 1,000 dwellings would require medium-density development typology comparable to those proposed at the Lower Langdon local centre, with limited provision of amenities, open space and green infrastructure. This approach falls below best-practice standards (refer to Table 5-4), and would be unlikely to support the creation of healthy and sustainable communities.

With the adoption of best practice principles consistent with Lower Langdon and the wider Thurrock area and an appropriate level of density **the estimated number of dwellings is 463 dwellings**. However, there is potential for Lower Langdon to accommodate the Corringham Park Farm housing deficit, given the site area and provision of amenity, open space, infrastructure and public transport proposed.

Table 5-4: Corringham Park Farm Land Area distribution scenarios for capacity testing

Category	Percentage (to achieve vision)	Percentage (best practice)	Notes
Net Developable Area (Residential Plots)	69%	60%	Private gardens and building footprints
Roads and Access	15%	15%	Carriageways, footpaths, cycleways, shared access tracks
Public Open Space	10%	10%	Shared amenity areas, play areas, informal green spaces
Biodiversity and Ecological Areas	2%	4%	Habitat corridors, green buffers, woodland edges, ponds
SuDS and Drainage	2%	4%	Swales, attenuation basins, permeable surfaces
Community Facilities	0%	5%	Community facilities, cycle storage, electric vehicle charging etc.
Other Infrastructure	2%	2%	Pumping stations, substations, easements, etc.

Table 5-5: Corringham Park Farm Capacity Study summary

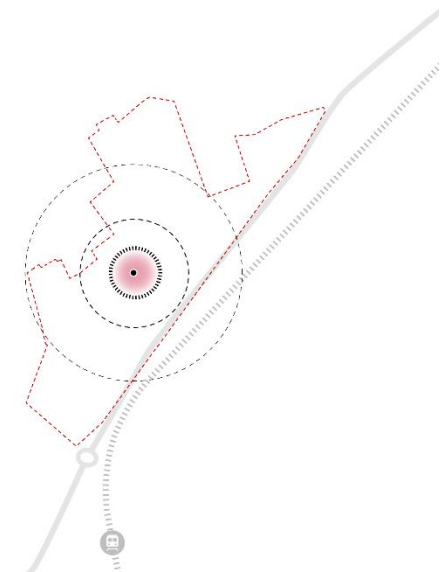
Site	Site Area	Gross Developable Land Area	Land Utilisation (Gross Developable Area / Site Area) (%)	Net Developable Land Area	Proposed Density (dwellings / ha of net area)	Estimated Number of Units (target density)
Corringham Park Farm (TC allocation vision – Target 1,000 not best practice)	29.39ha	25.74ha	88%	17.76ha	60	1,066
Corringham Park Farm (Best Practice)				15.44ha	30	463

5.5 Design Principles

A set of design principles has been developed to guide Lower Langdon’s transport assessment for the potential development area and town expansion. These principles outline specific strategies that build on the previously established core objectives and align with the Design Principle categories set out in the Thurrock Design Charter Draft.

- 1 Pride in Thurrock
- 2 Healthy Places for All
- 3 Connecting to Opportunity
- 4 Resilient and Sustainable Futures

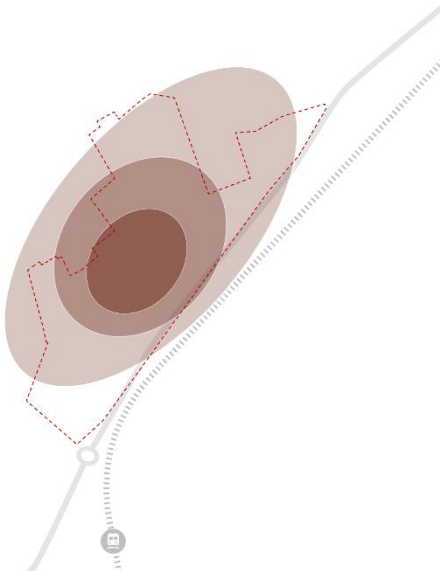
Pride In Thurrock



Create a **new local centre** withing walking distance for residents

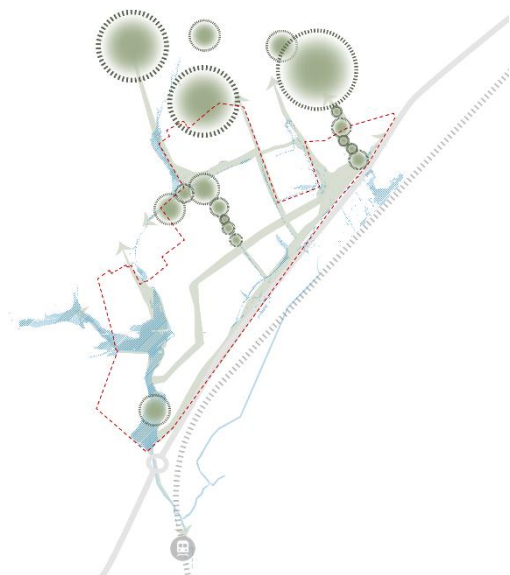


Integrate cultural and leisure facilities within the centre and adjacent ecological green corridors to foster vibrant community lift and generate employment opportunities.

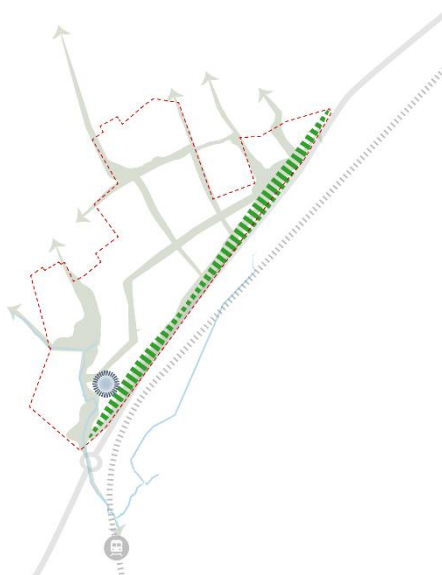


Concentrate higher densities around the new local centre transitioning to lower densities towards the edges to provide housing choice and respect the rural context

Healthy Places for All



Strengthen biodiversity corridors and open space along the watercourse and flood prone areas, linking residential areas with open space, amenity and active travel networks

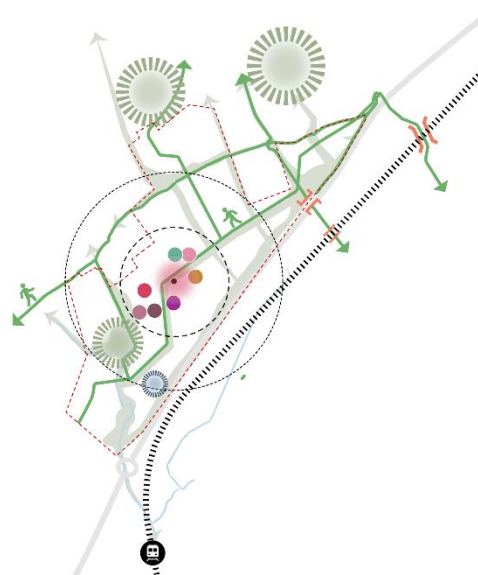


Utilise green corridors and the placement of non-residential uses to **create a buffer reducing negative impacts from Stanford-Le-Hope Bypass.**

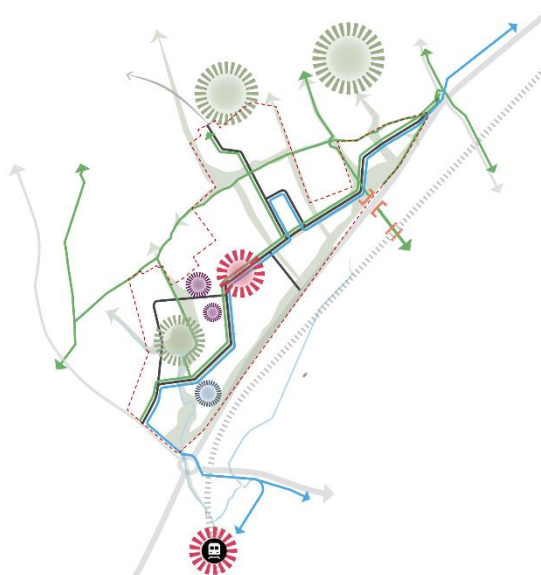


Deliver mixed-tenure homes and diverse housing typologies that are affordable and reflect the character of their location with the town and respond to existing and projected demographics.

Connecting to Opportunity



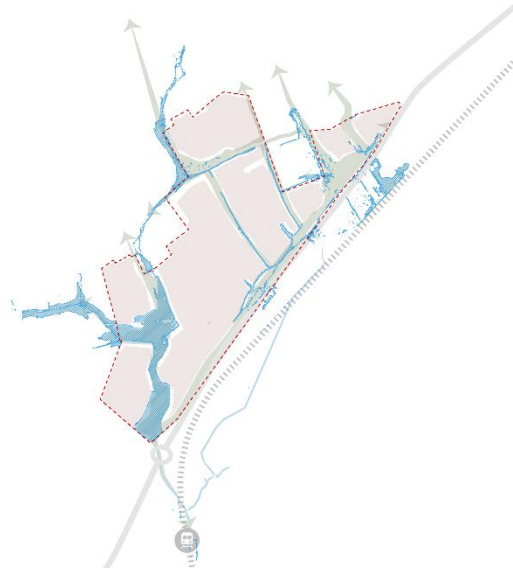
Create walkable neighbourhoods with safe and amenable routes utilising green corridors connecting neighbourhoods across the site and to the town centre.



Develop an integrated public transport, road and pedestrian and cycling network to improving connectivity for residents to places of employment, education and nature



Mitigate rail severance by enhancing the existing access across Stanford-Le-Hope Bypass.



Avoid development within flood zones, by incorporating these areas into the green-blue biodiversity corridor to enhance ecological resilience.



Phase development strategically to support sustainable growth, ensuring key community facilities are delivered early and distributed effectively.



Adopt a holistic systems approach to managing waste, energy, and water by integrating self-sufficient and resilient solutions such as biomass, sustainable drainage systems (SuDS), rainwater harvesting, photovoltaic panels, and similar technologies

5.7 Concept plan

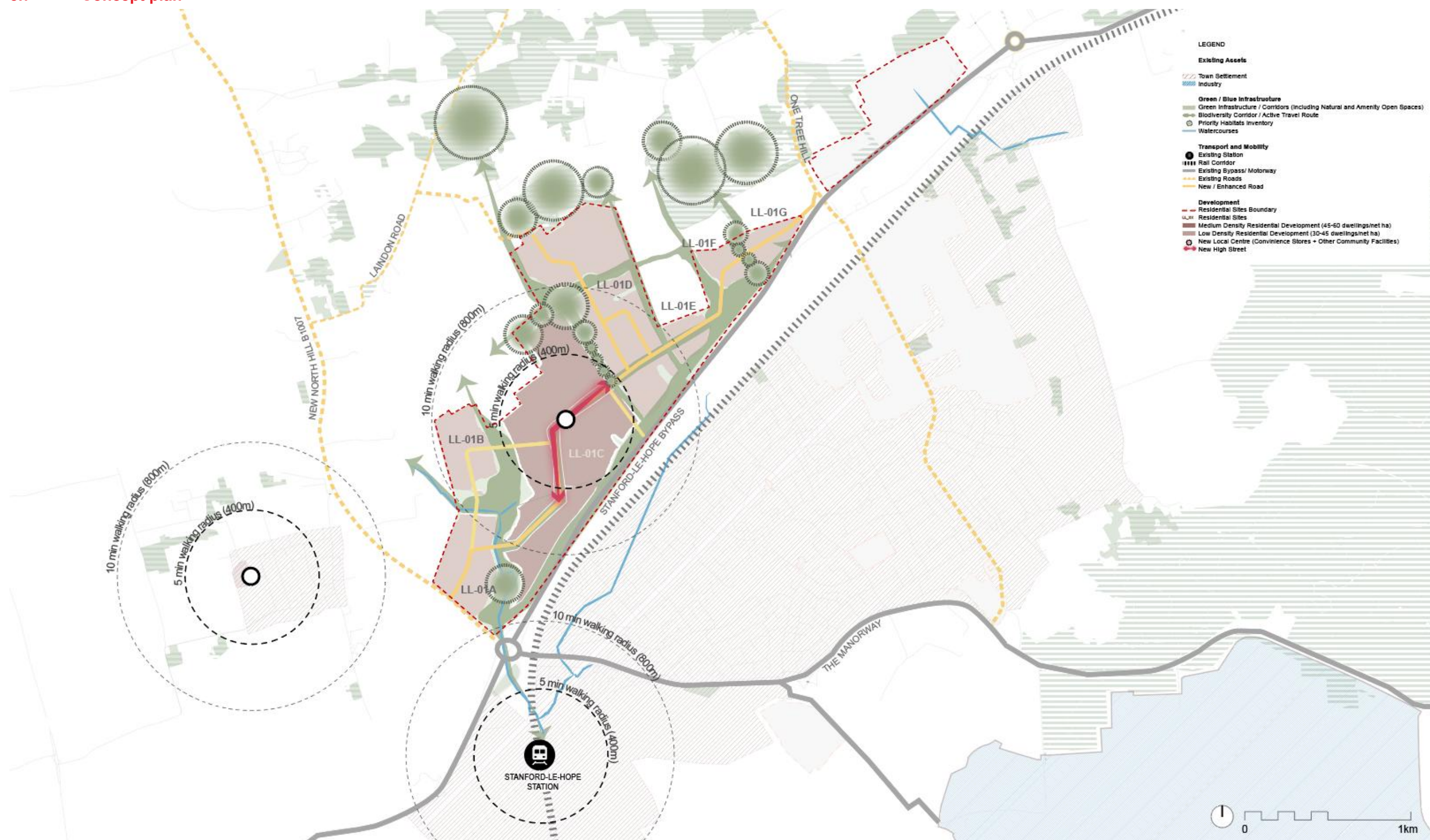


Figure 5-8: High-Level Spatial Plan

This Concept Plan illustrates a high-level framework developed solely to inform the transport assessment regarding the expanded capacity for 4,000 new dwellings in Lower Langdon. It is not intended for planning purposes (see Figure 5-8).

5.8 Land uses and community facilities

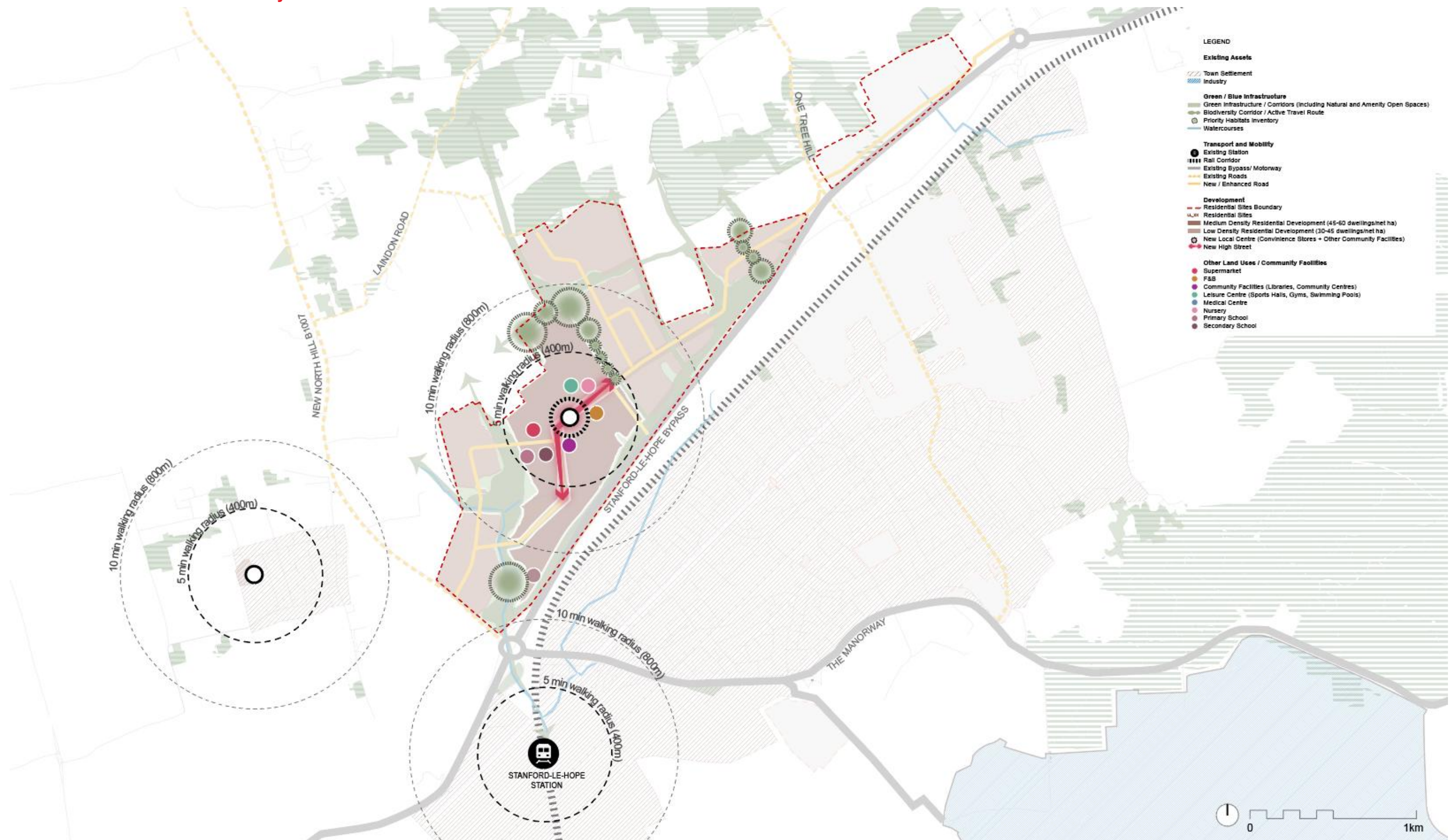


Figure 5-9: Potential land use and community facilities

A high-level assessment of the potential community facilities and land uses required to support the delivery of 4,000 new homes has been assessed and mapped (See Figure 5-9). Community facilities have been strategically positioned at key activity nodes and adjacent to green infrastructure to ensure strong accessibility. Their high-level placement has also informed development of the potential Access and Movement Strategy.

5.9 Access and movement strategy

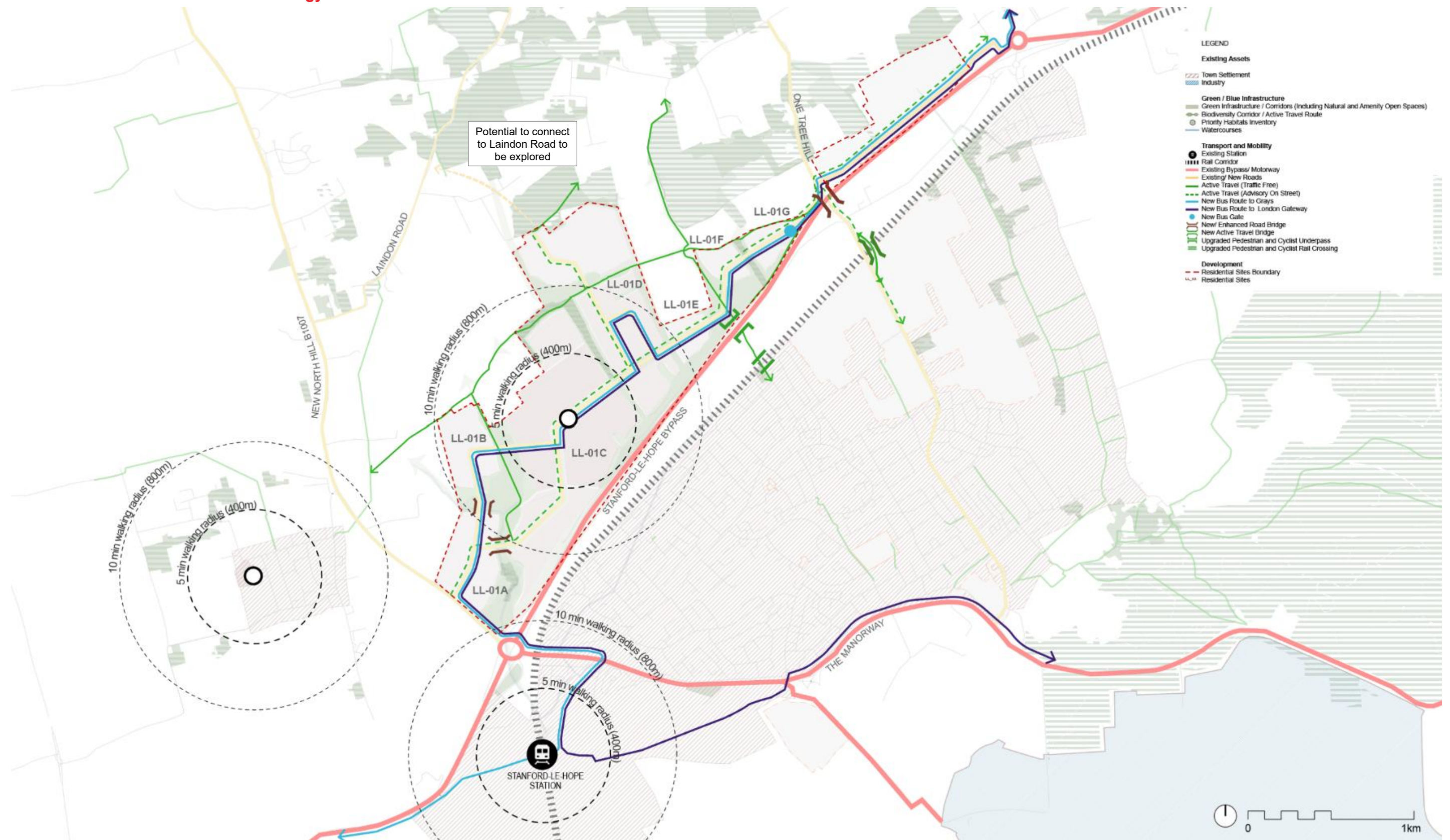


Figure 5-10: Access and movement strategy

As above, the Access and Movement Strategy shows high level conceptual design. Any detailed routings and road design will be designed in line with LTN1/20 standards with bus routes within c.400m of each development site to be detailed as appropriate through design development.

The two new bus services proposals are detailed in subsequent chapter. The strategy is to route across the site, allowing residents at different plots within the site to be connected to Basildon and Stanford-le-Hope Stations, the key employment sites at London Gateway and Grays. As per initial feedback from TC, a bus gate (for bus access only) has been proposed at the eastern access of the site to prevent vehicles e.g. from Corringham using the Lower Langdon site as shortcut to access A13.

5.10 Road hierarchy plan

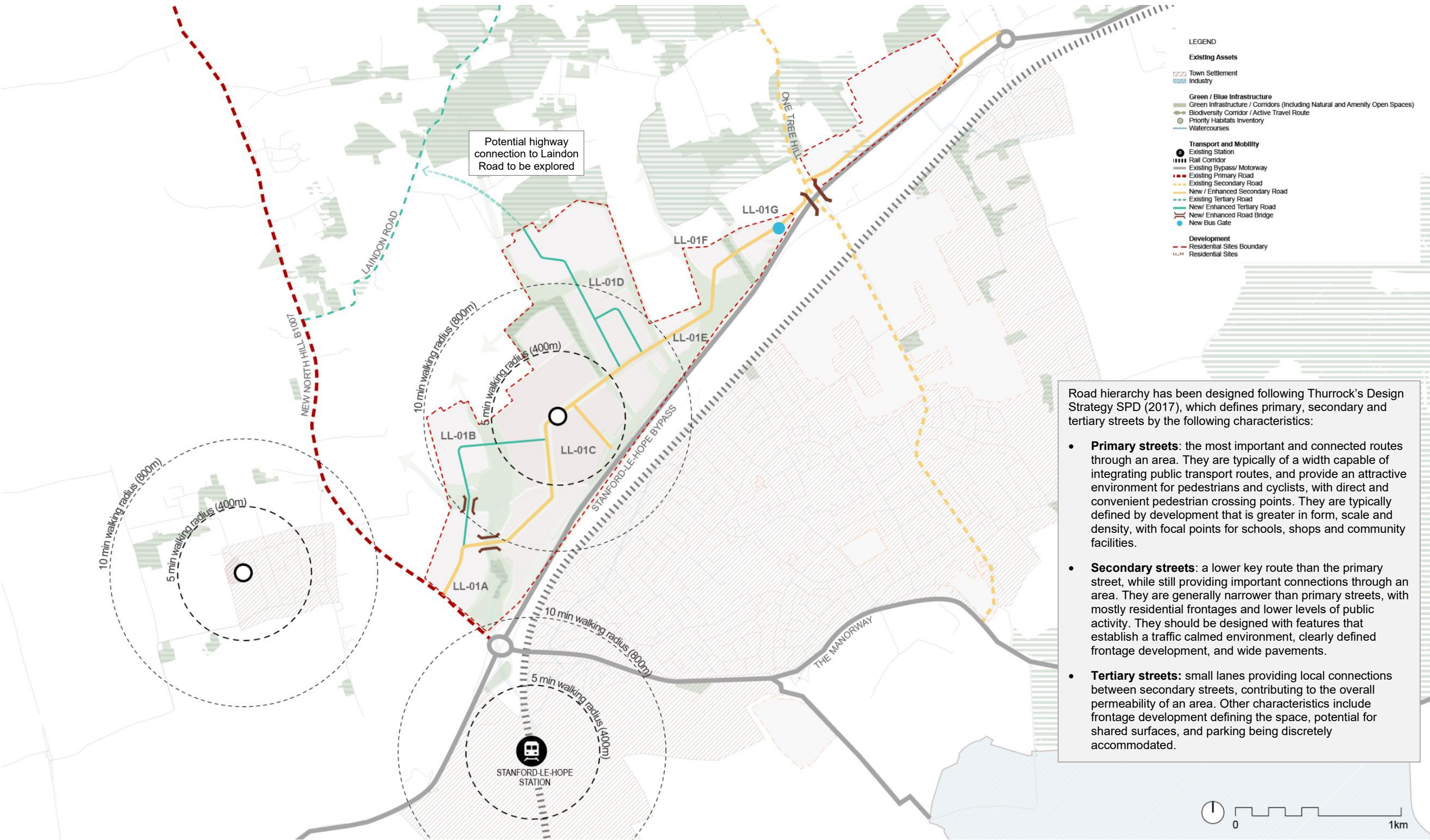


Figure 5-11: Road hierarchy proposals

5.12 High-level consideration of phasing and resilience

5.12.1 Phasing

Phasing development in a sustainable and integrated manner is critical to the success of a long-term growth strategy.

The timeline outlined below provides a high-level summary of key considerations for phasing a development of this scale and location. This is not intended as a detailed phasing strategy, and many elements may occur simultaneously, but rather as a set of recommendations informed by previous experience and best practice.

1. Establish a Robust, Connected Network of Roads and Green Infrastructure

- Deliver key structural elements to enable growth, including a new road network, bridges, and transport upgrades at critical junctions, as well as improvements to bus services, and existing rights of way.
- Create a comprehensive green-blue infrastructure network and active travel corridors that connect future developments and can be integrated early on as a valuable asset.



Figure 5-12: Indicative Phase 1

2. Establish New Local Centre to Support First Phase of Residential Development

- Establish new local centres, complemented by essential community facilities to create a sense of place and attract new residents.
- Simultaneously develop medium density housing close the new local centre, and lower density housing connected to primary green infrastructure to ensure ease of active travel and access to open space and amenity.

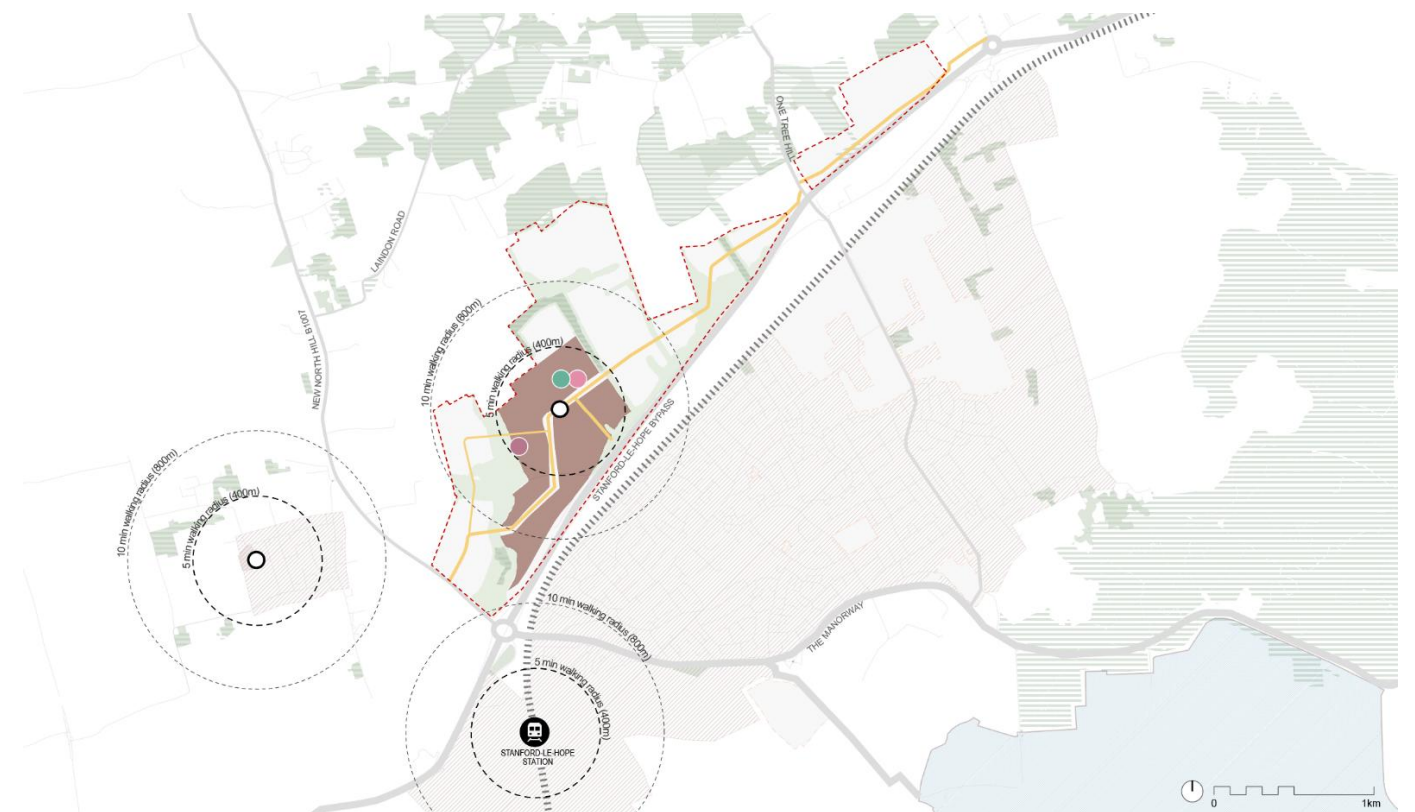


Figure 5-13: Indicative Phase 2

3. Expand Development and Services

- Progressively develop residential sites outwards towards the site boundary.
- Deliver new community facilities, parks, and open spaces in ahead of residential expansion.

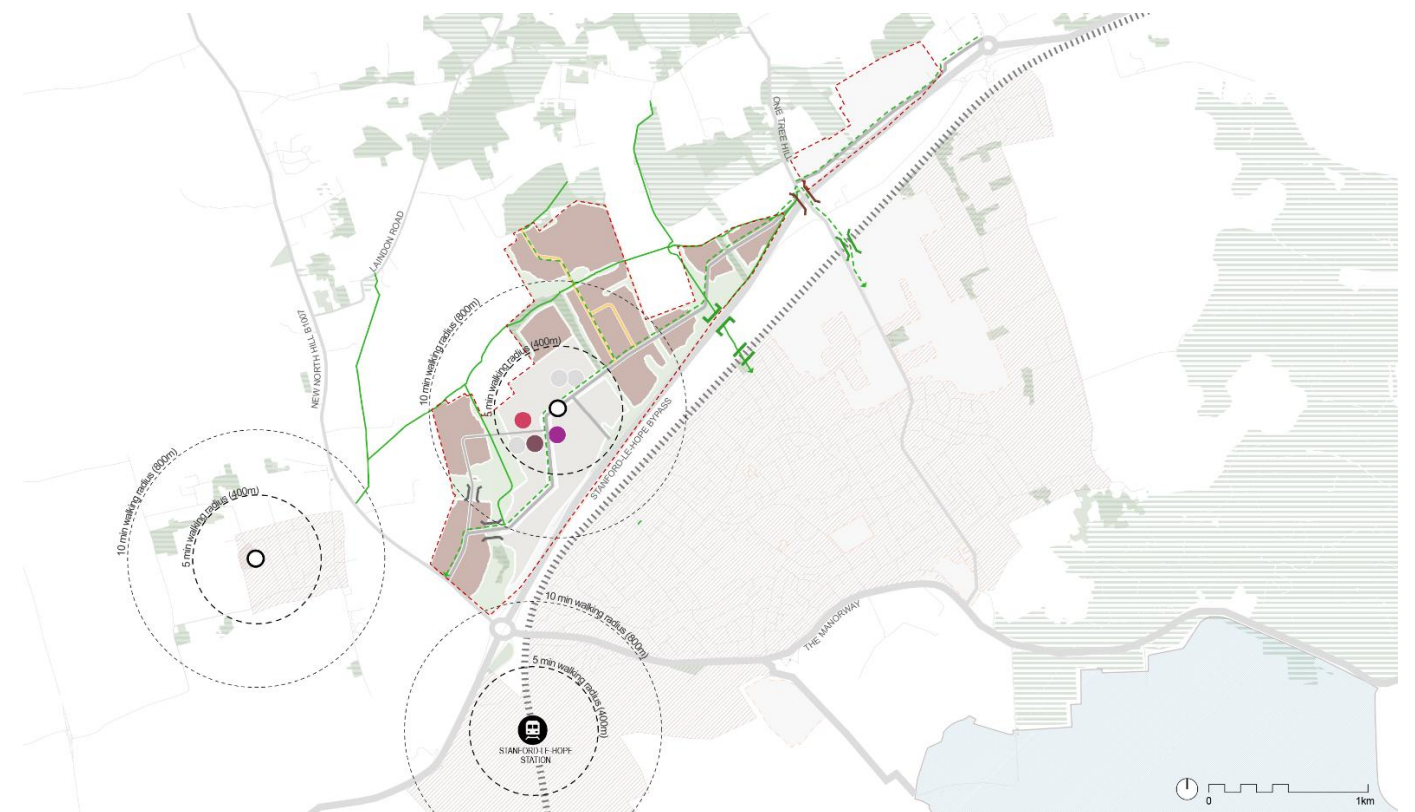


Figure 5-14: Indicative Phase 3

5.12.2 Resilience

To ensure the resilience of the development and enable Lower Langdon's growth to adapt to future changes and challenges, the following recommendations should be considered:

- **Invest in high-quality infrastructure** by creating a comprehensive, integrated transport network that supports multiple modes of travel.
- **Deliver high-quality housing** offering densities and typologies, meeting the highest standards of design and sustainable construction.
- **Implement nature-based solutions and a robust landscape framework**, ensuring green-blue infrastructure mitigates heat island effects and reduces flood risk.
- **Commit to good design and placemaking**, following Thurrock's Design Charter guidelines to achieve a holistic approach that enhances neighbourhood quality and promotes the well-being and prosperity of local communities.

6. Transport infrastructure proposals

6.1 Overview

This report has been developed in conjunction with site specific assessments for Local Plan growth at West Horndon and South Ockendon, and overarching Transport Assessment for emerging Local Plan growth across Thurrock. This report therefore informs and is informed by these wider reports.

It is important that significant new development allocated to the site at Lower Langdon is comprehensively planned so that infrastructure needed to support growth of this scale is provided when and where it is needed. As such, this chapter assessed the robust travel demand, impacts on local networks and mitigation required for the combined number of homes planned for Lower Langdon and Corringham Park Farm. The anticipated travel demand and transport infrastructure proposals to accommodate emerging Local Plan growth at Lower Langdon are identified in this section.

6.2 Travel demand and emerging infrastructure proposals

Baseline and future travel demand at Lower Langdon has been interrogated using Arup WalkFar and MoDES tools.

- Arup’s WalkFar tool is a product of their Delivering Sustainably Walkable Neighbourhoods publication. It takes an evidence-led approach to forecasting the internalisation potential of new and existing settlements and translates that into a forecast ‘walkability’, the extent to which trips could reasonably be expected to be made by walk and cycle based on forecast number of homes, spatial layout, development density, number of jobs, scale and location of town centre facilities, school provision, and car availability.
- Arup’s MoDES model builds on the success of their WalkFar tool, developed through our Delivering Sustainably Walkable Neighbourhoods publication. It uses published and other desktop data sources including the National Trip End Model and Census to formulate a demand, journey purpose and mode choice demand model specific to the local area, community and behaviours.

MoDES has therefore been utilised to present baseline and potential future trip rate and mode share information for Lower Langdon based on emerging land uses and facilities set out in Section 5.6-5.12.

6.2.1 Transport infrastructure required to deliver Access and Movement Strategy

The spatial strategy and access strategy have identified the following infrastructure to be required to deliver the housing targets and facilitate access to the allocated housing site. Table 6-1 sets out proposed infrastructure required across Lower Langdon.

Table 6-1: Proposed infrastructure required at Lower Langdon

Modes	Infrastructure	Location / Description
Walking / cycling	Active travel routes	Creation of or upgrade of existing roads to provide high quality internal paths, links to existing network and new links to improve connectivity between towns. Roads to provide sufficient width for inclusion of cycle lane / footways. Proposed cycle lanes can be provided as traffic-free links.
All modes	New roads	New roads to be built to facilitate access and connectivity to the new housing sites. Carriageway width depends on function of the roads, typically range between 4.1m (secondary) to 5.5m (primary road), or 6m for bus routes or routes to accommodate heavy vehicles (refuse); with c.2m footway or either or both sides of the road, verge planting and associated lighting and signage.
All modes	Upgraded roads	Existing roads to be upgraded to meet function of the road. Carriageway width typically ranges between 4.1m (secondary) to 5.5m (primary road), or 6m for bus routes; with c.2m footway or either or both sides of the road.
All modes	New junctions	New access junctions to the sites, including bus access, and new accesses created for existing junctions.
All modes	New bridge	New bridge for use by all modes to be provided over the existing creek, equivalent to secondary road standard (4.1m width).
All modes	New bridge	New bridge for use by all modes to be provided over the existing creek, equivalent to tertiary road standard.
Pedestrians, cyclists	New bridge	Dedicated cyclist and pedestrian bridge to be provided along Southend Road over the rail corridor, running parallel to existing road overpass approximately 80m in length and 4-5m wide with associated lighting and signage.
All modes	Upgraded bridge	Upgrade existing One Tree Hill bridge (approximately 140m) over the A13 Stanford-Le-Hope Bypass, widening of the footways to c2m either side to improve pedestrian safety and associated lighting and signage.
Bus	New bus route	New bus service to connect to Basildon station, Corringham Park Farm, Lower Langdon, Stanford-le-Hope station and London Gateway.
Bus	New bus route	New bus service to connect to Basildon town, Corringham Park Farm, Lower Langdon, Stanford-le-Hope station, and Grays.
Bus	New bus gate	New bus gate at the junction between internal site road network and One Tree Hill.

6.2.2 Lower Langdon trip generation

Baseline trip rates and mode shares for Lower Langdon are reflected by Census MSOA Thurrock 004, and presented in Table 6-2. The average baseline car driver peak hour mode share of c.52% and low cycle mode share (c.1%) is typical of much of Thurrock and reflects a lack of local facilities, employment opportunities, and services accessible by attractive walking and cycling routes which results in car trips being the only reasonable travel option in many cases.

Baseline and potential future trip rates and mode shares, presented in Table 6-2, are based on emerging proposals set out in in Section 5.6-5.12 and reflecting delivery of the Thurrock LCWIP and BSIP and development delivered in line with the emerging Thurrock Design Code that support sustainably walkable neighbourhoods.

Potential future mode shares in Table 6-2 and trip rates in Table 6-3 reflect a significant increase in walking and cycling to access new, local facilities as part of mixed-use development designed to support sustainably walkable neighbourhoods. Potential future rail mode share is broadly similar to the baseline with a moderate increase in future bus mode share at Lower Langdon. This results in a reduced future car driver average peak hour mode share to approximately 46% which is considered a realistic vision-led forecast. It should be noted that whilst the future share of peak hour rail trips reduces due to increased local employment rail patronage will increase in absolute terms.

Table 6-2: Baseline and potential future mode shares

Modes	Baseline – Thurrock 004 MSOA – AM peak hour	Baseline – Thurrock 004 MSOA – PM peak hour	Potential future – AM peak hour	Potential future – PM peak hour
Rail/ LUL	10%	14%	9%	13%
Bus/ Coach	3%	5%	4%	7%
Car Passenger	14%	12%	15%	14%
Car Driver	45%	56%	41%	51%
Cycle	1%	1%	1%	2%
Walk	28%	12%	29%	13%
All modes	100%	100%	100%	100%

Table 6-3: Baseline and Potential future year two-way peak hour trip rates

Modes	Baseline – Thurrock 004 MSOA (internal + external)		Potential future (internal + external)		Potential future (external only)	
	AM peak hour	PM peak hour	AM peak hour	PM peak hour	AM peak hour	PM peak hour
Rail/ LUL	0.074	0.092	0.072	0.088	0.072	0.088
Bus/ Coach	0.022	0.032	0.031	0.044	0.023	0.033
Car Passenger	0.107	0.082	0.116	0.091	0.097	0.082
Car Driver	0.347	0.366	0.318	0.332	0.295	0.312
Cycle	0.005	0.009	0.009	0.013	0.003	0.004
Walk	0.214	0.076	0.223	0.088	0.000	0.000

The potential future two-way trip generation for 5,000 homes, based on the trip rates identified in Table 6-3 is shown in Table 6-4.

Table 6-4: Two-way trip generation (external trips) – Lower Langdon

Modes	Internal and external		External only	
	AM peak hour	PM peak hour	AM peak hour	PM peak hour
Rail/ LUL	361	442	361	442
Bus/ Coach	156	218	116	163
Car Passenger	581	455	487	409
Car Driver	1,589	1,661	1,477	1,558
Cycle	44	67	17	22
Walk	1116	442	0	0
All modes	3,846	3,284	2,458	2,594

A comparison of mode share between the average baseline mode shares and potential future mode shares assessed in MoDES are shown in Figure 6-1. The mode shares for AM and PM peak hours residential trips are shown in Figure 6-2 which demonstrate that in the AM peak hour 40% of residential trips from Lower Langdon and Corringham Park Farm sites can credibly be undertaken by sustainable modes with up to 30% undertaken by active travel modes.

The split of the internal and external car driver trips is also shown in Figure 6-2 shows that, under a walkable neighbourhood assumption, 36% of car trips in the AM peak hour, and 21% in the PM peak hour would be internalised.

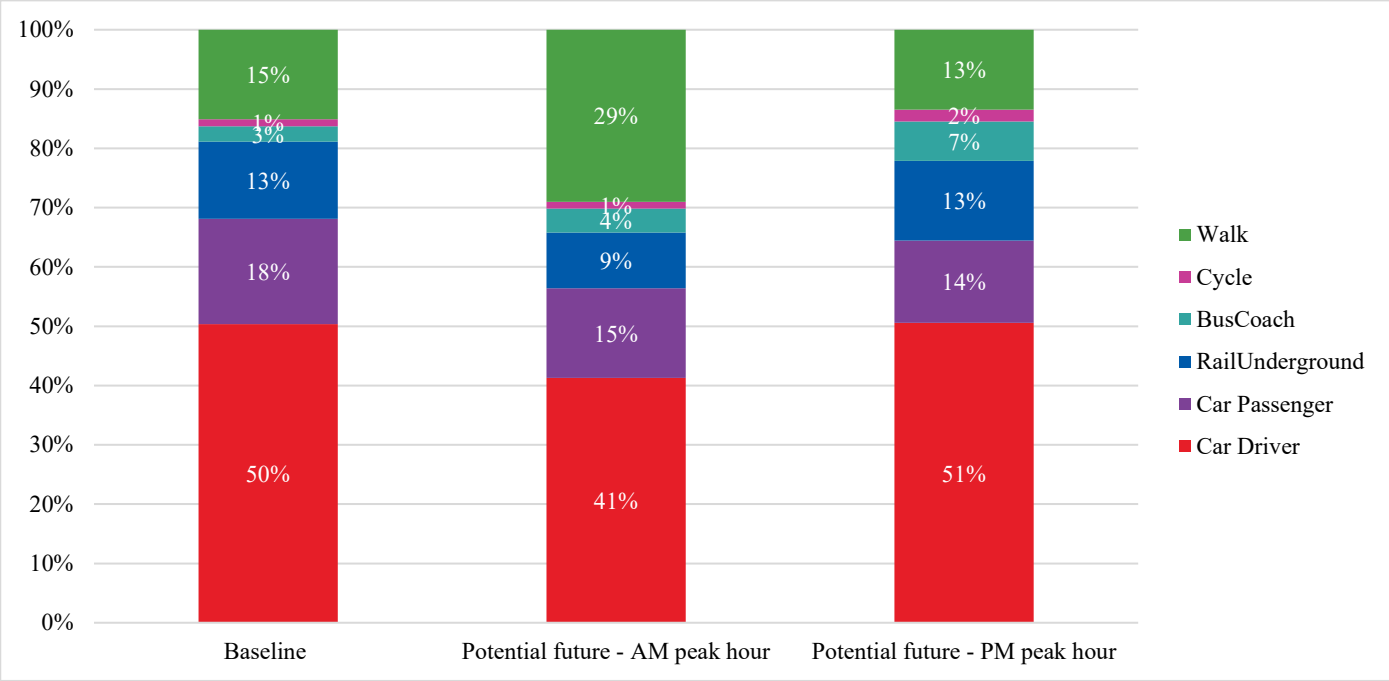


Figure 6-1: Comparison of mode share changes

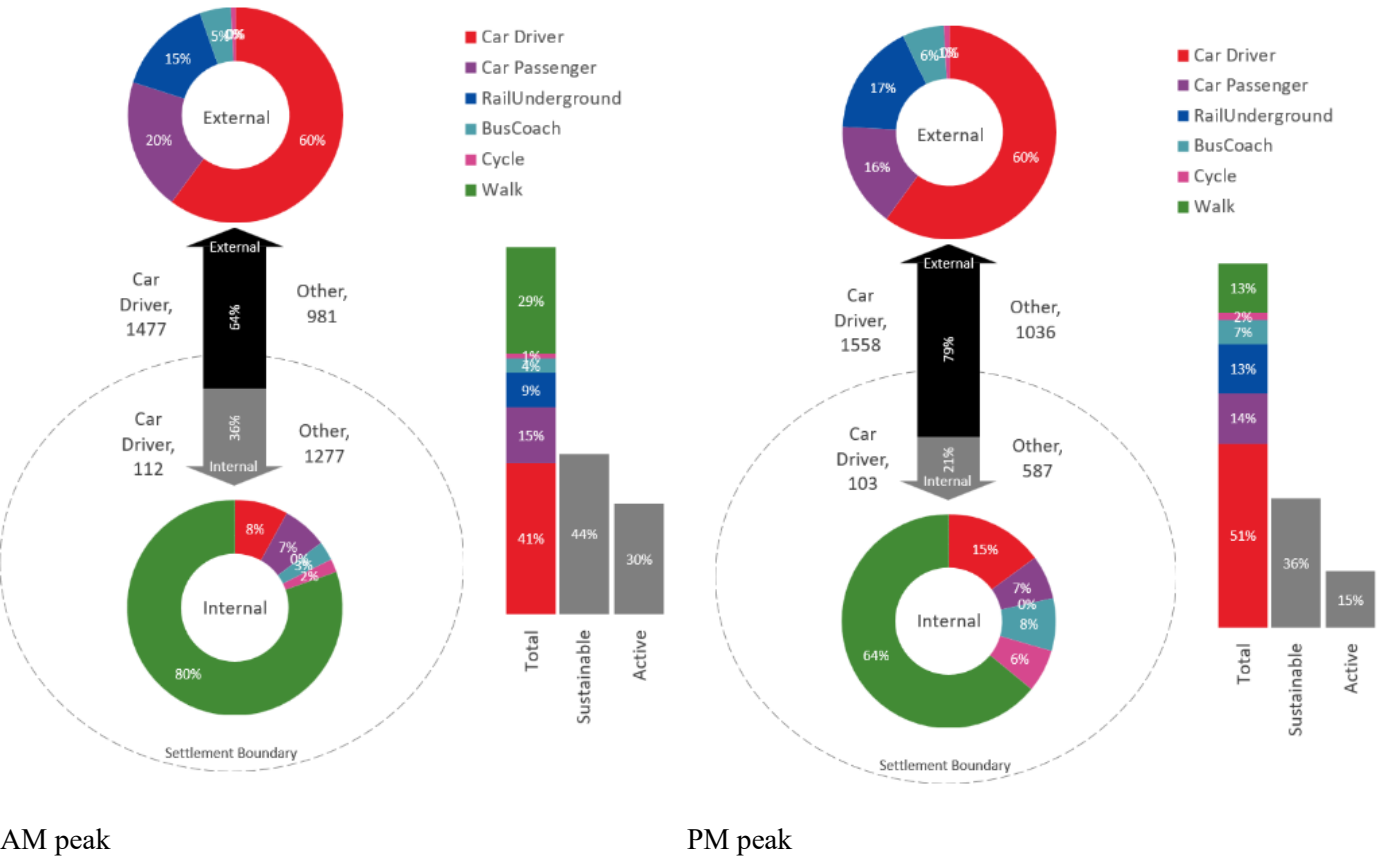


Figure 6-2: Mode share (internal and external) summary – AM and PM peak hours

6.3 Transport impacts and mitigation

6.3.1 Active travel impacts

Development at Lower Langdon delivered through sustainably walkable neighbourhoods will result in increased walking and cycling. Proposals outlined in the concept and land use plans seek to deliver walking and cycling routes that complement the proposed Thurrock and Basildon LCWIP networks and include:

- Provision of a continuous spine route across Lower Langdon with advisory cycle lane and ~2m footway
- Provision of dedicated active travel routes along green corridors with paving (~2m width), lighting and signage
- New / enhanced site access junction north of the site to connect pedestrians and cyclists across the Briars towards Basildon
- Pedestrian and cyclist enhancements via the underpass across the A13 and railway tracks to connect to Stanford-le-Hope
- Upgrade existing One Tree Hill bridge (approximately 140m) over the A13 Stanford-Le-Hope Bypass, widening of the footways to c2m either side to improve pedestrian safety and associated lighting and signage
- Dedicated pedestrian and cyclist bridge along Southend Road over the rail corridor, running parallel to existing road overpass approximately 80m in length and 4-5m wide with associated lighting and signage

The proposed walking and cycle infrastructure in combination with Thurrock and Basildon LCWIP proposals will enhance the attractiveness of walking and cycling for both new and existing communities.

6.3.2 New bus services proposals

Development at Lower Langdon and Corringham Park Farm will increase demand for travel by bus. This will increase the viability of existing bus routes (such as 375) and may further encourage existing bus operators to increase bus service frequencies, particularly at peak times.

The access strategy identifies the provision of two new bus routes:

- New bus service connecting Basildon station, Corringham Park Farm, Lower Langdon, Stanford-le-Hope station and London Gateway
- New bus service connecting Basildon town, Corringham Park Farm, Lower Langdon, Stanford-le-Hope station, Tilbury and Grays

These routes and have been identified to complement existing bus routes and to serve housing sites, existing employment and potential growth sites including London Gateway, Tilbury and Grays. These routes are illustrative and the exact placement of routes and bus stops will need to be determined through design development with further refinement at the planning application stage. The new bus services are anticipated to include:

- Single decker bus (electric bus) for both services
- Services running between 07:00 and 19:00 across six days a week (Monday to Saturday) for both services
- A frequency of two services per hour 07:00-10:00 and 16:00-19:00 for the service towards London Gateway
- A frequency of one service every ~45 minutes 07:00-10:00 and 16:00-19:00 for the service towards Grays
- Fare of £3 per trip for both services

The routing of the new Grays service would route through the Sustainable Travel Corridor along Orsett Road/Southend Road, that adheres to the intervention identified in the Draft Transport Strategy (refer to Table 2-5).

Development at Lower Langdon is therefore anticipated to generate additional bus service demand at Lower Langdon, as shown in Table 6-5. This is based on the robust assessment that all peak hour trips are in a single direction.

The proposed bus routes overlaid on the existing bus services in the vicinity of the housing sites are shown in Figure 6-3.

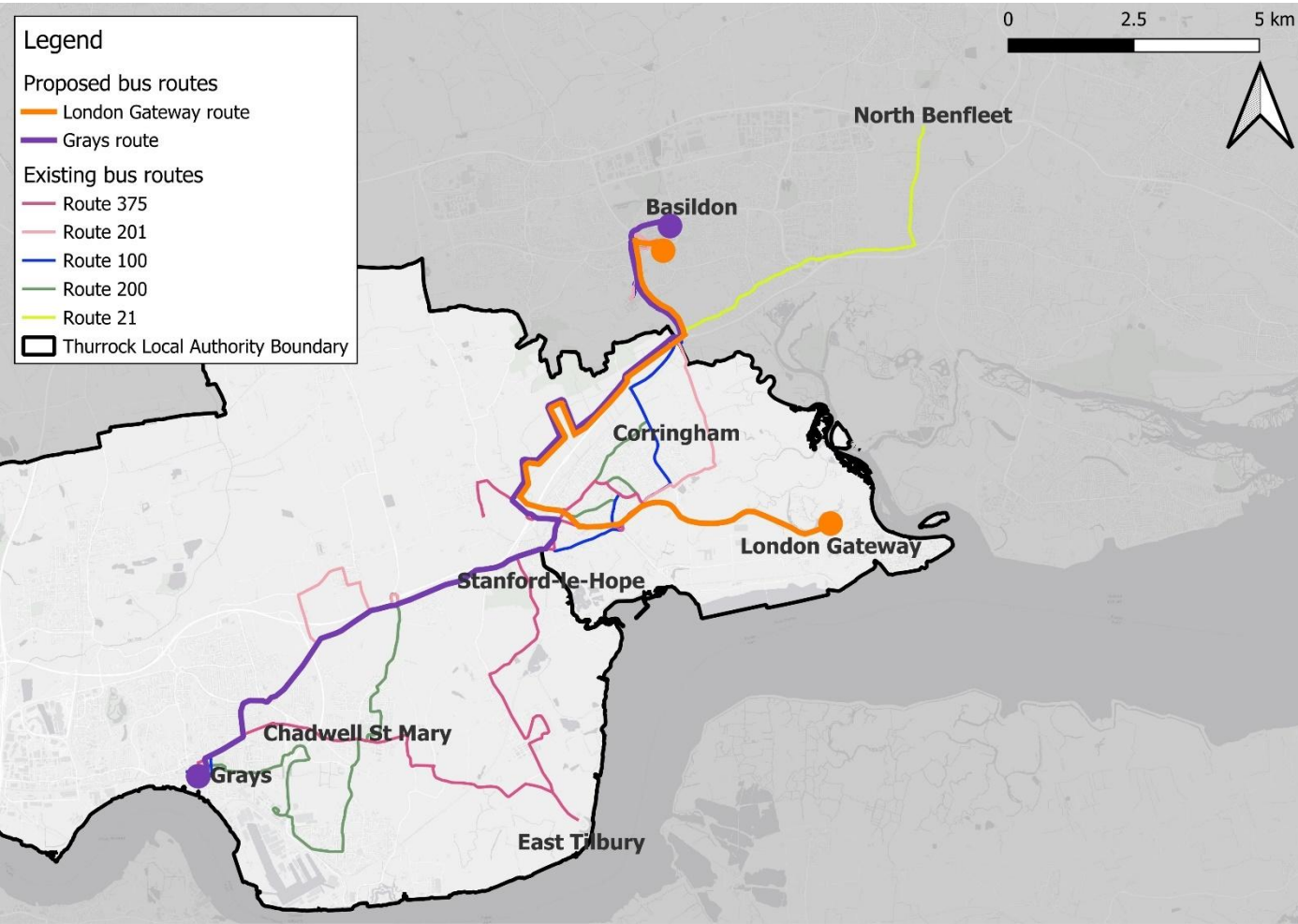


Figure 6-3: Existing bus routes and proposed new bus routes

Table 6-5: Travel demand and impacts on Lower Langdon – Buses (current and future provision)

	Future (AM peak) travel demand and impacts	Future (PM peak) travel demand and impacts
Bus demand (internal + external trips)	156	218
Proposed future provision – London Gateway route (two services per hour to London Gateway during AM peak hour, and two services per hour to Basildon during PM peak hour)	Assuming c.50% of the bus passengers take the London Gateway route: +20 passengers per service (average)	Assuming c.50% of the bus passengers take the London Gateway route: +28 passengers per service (average)
Proposed future provision – Grays route (one service every ~45 minutes to Grays during AM peak hour, and one service every ~45 minutes to Basildon during PM peak hour)	Assuming c.50% of the bus passengers take the Grays route: +40 passengers per service (average)	Assuming c.50% of the bus passengers take the Grays route: +56 passengers per service (average)

6.3.3 Rail services

Development at Lower Langdon and Corringham Park Farm will increase demand for travel by rail. The increase in demand on existing railway services at Stanford-le-Hope station is shown in Table 6-6. Based on the Census Travel to Work data, approximately 90% of the rail trips were made towards central London, and 10% towards Shoeburyness.

Table 6-6: Travel demand and impacts – Railway (current and future provision)

	Future (AM peak) travel demand and impacts	Future (PM peak) travel demand and impacts
Rail demand (internal + external trips)	361	442
Towards central London (three services per peak hour)	+108 passengers per service (average)	+15 passengers per service (average)
Towards Shoeburyness (four services per peak hour)	+9 passengers per service (average)	+100 passengers per service (average)

Future growth across Thurrock presents an opportunity to enhance rail accessibility and usage through integration, particularly through improved interchange facilities, better first and last-mile connections, and potential service enhancements that support population growth and freight movement.

6.3.4 Highway impacts

As part of the Transport Assessment prepared to support the Thurrock Local Plan, junctions across Thurrock have been assessed where a high magnitude of impact has been flagged. Junctions where the maximum magnitude of impact has been flagged as ‘high’ around the Lower Langdon and Corringham Park Farm sites are outlined in Table 6-7 with some sites identified for further monitoring and detailed assessment at the planning application stage.

Table 6-7: Junctions with ‘high’ maximum magnitude of impact around the Lower Langdon and Corringham Park Farm sites

Junction node ref	Junction location	Junction type	Assessment outcomes	Mitigation proposals
76225	A13 / B1007 / A1014 Northbound slip road diverge	Motorway Diverge	The Strategic Modelling flagged a High impact at this node given the With Local Plan modelling has a maximum V/C of 102.55% from 84.95% in the AM. Further monitoring and surveys of the junction is recommended to accurately understand the impact at this junction.	N/A - junction identified for further monitoring
76231	A13 / B1007 / A1014 Northbound bound slip road merge	Motorway Merge	The Strategic Modelling flagged a High impact at this node given the With Local Plan modelling has a V/C of 93.55% up from 53.85% in the Base model. Further monitoring and surveys of the junction is recommended to accurately understand the impact at this junction.	N/A - junction identified for further monitoring
76237	A13 / A176 off slip eastbound	Motorway diverge	The modelled traffic demand indicates that the mainline carriageway is approaching capacity and may begin to experience issues due to merging/weaving during congestion. Monitoring is recommended.	N/A - junction identified for further monitoring
76239	A13 Stanford-le-Hope By-Pass westbound on slip at Five Bells	Motorway merge	The modelled traffic demand indicates that the mainline carriageway is approaching capacity and may begin to experience issues due to merging/weaving during congestion. Monitoring is recommended.	N/A - junction identified for further monitoring

As identified in Section 6.2, the external car driver travel demand is below that assessed through strategic highway modelling as part of the Transport Assessment prepared to support the Thurrock Local Plan. Therefore no further highway mitigation has been identified in this report, however further details are provided in the Transport Assessment.

The following will need to be delivered to support development at Lower Langdon:

- New roads – New roads to be built to facilitate access and connectivity to the new housing sites. Carriageway width depends on function of the roads, typically range between 4.1m (secondary) to 5.5m (primary road), or 6m for bus routes; with c.2m footway on either or both sides of the road as a minimum.
- Upgraded roads – Existing roads to be upgraded to meet function of the road. Carriageway width typically ranges between 4.1m (secondary) to 5.5m (primary road), or 6m for bus routes; with c.2m footway on either or both sides of the road as a minimum.
- New access junctions – New junctions to be provided to provide access into Lower Langdon, to include bus access.
- New bridges – Two new bridges to be provided over creek, equivalent to Secondary and Tertiary Road standard.

6.4 Monitoring and Management approach

As identified in the emerging Local Plan Transport Assessment, a ‘Monitor and Manage’ approach will be required to maximise the impact of policies and proposals, and adjust the approach where issues are identified. Many of the proposals and mitigation measures identified within the Transport Assessment will require further refinement and investigation with National Highways and developers when development proposals at site allocations within the Local Plan come forward.

More strategically a strategy and modelling review at intervals throughout the plan period will be needed to be undertaken, to understand progress against meeting Thurrock’s Local Transport Plan Vision 2050 objectives and identify if developments are being delivered aligned to the strategy. Where outcomes diverge from those identified within this Assessment further investigation will be required to identify appropriate management and mitigation measures, which prioritise uptake of sustainable travel and highways intervention as a last resort.

7. Next steps

This site specific assessment is being submitted as part of the evidence base work with the Local Plan at Regulation 19.

This is a non-statutory planning document that will guide and shape the future development at Lower Langdon, setting out how the new town will be comprehensively delivered.

This document establishes the vision, strategic objectives and spatial strategy for growth at Lower Langdon and includes detailed analysis of the existing site context, including the development constraints and opportunities which culminates in a Concept Plan.

This site specific assessment could later inform a Supplementary Planning Document forming part of the Thurrock Local Plan.

In the longer term, site-specific design codes could be developed. These codes would provide a clear set of design requirements to deliver the vision for growth at each new neighbourhood at Lower Langdon to serve as a quality benchmark to ensure a high-quality sustainable place is delivered.

Appendix A

South Essex Implementation Plan interventions

