North Essex Authorities Section 1 Local Plan Resumed Hearings
Statement to Matter 6: Transport and other infrastructure

On behalf of Parker Strategic Land

December 2019

Turley

Contents

David Murray-Cox
david.murray-cox@turley.co.uk

Client
Parker Strategic Land

Our reference
MATS3000

2 Dec 2019

1. Introduction

1.1 This Statement has been prepared by Turley and RPS behalf of Parker Strategic Land in relation to the shared Section 1 Local Plans for Braintree District Council ('BDC'), Colchester Borough Council ('CBC') and Tendring District Council ('TDC'), which are collectively referred to as the North Essex Authorities ('NEAs').

1.2 This Statement responds to the Inspector's Issues and Questions (Document IED019) for Matter 6 (transport and other infrastructure) of the resumed Examination hearing sessions.

1.3 Parker Strategic Land has major land and development interests in Braintree District at Kelvedon, and in Colchester, and therefore has a significant interest in the Section 1 Local Plan.

1.4 In particular, Parker Strategic Land is promoting an area of approximately 468 hectares located to the north west and south west of Kelvedon on land within Braintree District. This land is primarily located to the north of the existing railway line with the exception of an area between the railway line and the A12. The land extends from the A12 south of the railway line and includes land between Oak Road and Cranes Lane. To the north of the railway line, the site extends from Cranes Lane in the south west to Coggeshall Road to the north east.

1.5 RPS have provided advice in support of the Kings Dene proposals at Kelvedon which is being promoted as an alternative or complementary location for development to those currently being considered in the emerging Development Plans for the area. This includes the Initial Transport Appraisal (2nd July 2019) prepared for the development proposal, and the Technical Note (26th September 2019) attached to the representations made by Turley on behalf of Parker Strategic Land Ltd to the recent consultation on the Suggested Amendments and other associated documents.

1.6 This Statement should be read alongside the earlier representations submitted on behalf of the Parker Strategic Land and the Statements submitted on their behalf to other Matters to be considered during the resumed Examination hearing sessions.

1.7 Parker Strategic Land's response to Matter 6 is set out in Section 2 of this Statement.

1.8 From a procedural perspective, Parker Strategic Land acknowledge that the submitted Plan is that which is being examined. Whilst the NEAs have prepared a set of 'suggested amendments', we understand that any Main Modifications will need to be subject to further consultation.

1.9 We note that the Inspector's questions for questions 6, 7 and 8 (which all participants are invited to address) seek responses on the answers to questions 3, 4 and 5 (which the NEAs and Highways England are invited to address). Accordingly Turley and RPS reserves the opportunity to provide a further response in this regard by 16th December 2019 in accordance with the Inspector's guidance in Document IED20.

2. Response to Matter 6: Transport and other infrastructure

Road funding and programming

6. What are the consequences of the answers to 3 (a), (b) & (c) for the feasibility of the West of Braintree and Colchester Braintree Borders GCs?

2.1 An updated note on the on the A120 and A12 schemes and the interaction of the Kings Dene site with these schemes following the A12 preferred route announcement is attached at Appendix A of this statement.

2.2 In responding to this question it is important to recognise the overall movement strategy of the NEGC and hence the movements that are expected to take place, are focused to the east / west corridor between Colchester and Braintree, and beyond to Uttlesford. Whilst evidence has been provided in the previous representations on behalf of Parker Strategic Land, to show that such movements are not consistent with the Census data, the basis of the NECG movement strategy is on the assumption that significant movements of trips will occur between Braintree and Colchester and onward to Uttlesford.

2.3 In effect therefore the movement strategy proposed for the NEGC together with the infrastructure provision, underpins the Rapid Transit system. In effect without the provision of the A120 upgrading between Braintree and the A12 at an early stage in the development of the scheme, together with the improvements to four lanes on the A12 between junction 23 and junction 25, the levels of patronage predicted and hence viability of the Rapid Transit system cannot be relied upon.

2.4 Hence the certainty of the funding of these schemes is vital to the assessed delivery of the infrastructure mitigation for the NEGCs, and the timing of the delivery at an early stage of the developments is key to ensuring the mode share targets are met.

7. What are the consequences of the answers to 4 (a) & (b) for the feasibility of the Colchester Braintree Borders GC?

2.5 It is understood that the Housing Investment Fund (HIF) only relates to the funding of the 4th lane on the A12 between junctions 23 and 25 which is a requirement of the CBBCG. The funding for the main alignment of the A12 between junction 23 and 25 is secured by Highways England through the Road Investment Strategy.

2.6 Again, the HIF bid for the A12 widening to 4 lanes is critical to the delivery of the CBBGC and also to the delivery of the A12 junction 23 to 25 upgrading. In the absence of the HIF funding, the upgrading will only be to a three lane dual carriageway and not four as required by the CBBGC. The consequence of this will be a lack of capacity on this section of the A12 to the detriment of traffic in general, but more specifically to the detriment of the RTS which is likely to use this route between Colchester and Braintree.

2.7 Given the CBBGC aspiration to limit development at West Tey to 17,000 dwellings, it may be appropriate to consider the need for the 4th lane on the A12 in this scenario

through more detailed traffic modelling of the development proposals at this lower level (ref. Carter Jonas representations in September 2019 on the Suggested Amendments Technical Consultation) . Hence a lower level of development at West Tey will reduce the need for the 4th lane on the A12 and allow the HIF funding to be diverted to assist other aspects of the overall development proposals.

8. What are the consequences of the answers to 5 (a) & (b) for the feasibility of the Tendring Colchester Borders GC?

2.8 The section of A120 – A133 is understood to be the first phase of the overall RTS albeit that these proposals are limited to movements within Colchester and to the north and east of Colchester. However, the effect of the development traffic from the TCBGC must also impact on the wider network and will affect both the A12 and the A120 given the scale of development proposals within TCBGC which is assumed to include for up to 10,700 homes.

Other infrastructure and phasing

10. Do the Integrated Water Management Strategy [EB/015] and the AECOM IPPD document [EB/088] provide sufficient certainty that adequate provision can be made for water supply and waste water treatment for the proposed GCs?

2.9 Parker Strategic Land have no comments in this regard.

11. Is the approach to the phasing of infrastructure provision at the GCs, set out in the AECOM IPPD document, justified and appropriate?

2.10 The approach set out in the AECOM Infrastructure Planning, Phasing and Delivery Document (Document EB/088) appears to be a very 'high level' summary as to the infrastructure delivery and phasing approach which could be applied to the GCs. However it is clear that AECOM have made various assumptions which may not be reflected in reality. For example:

- AECOM have assumed a number of dwellings delivered in each phase at each GC – the actual phasing may differ.
- AECOM identify infrastructure that may be required/delivered in each phase based on the number of dwellings – the housing mix may differ and require a different form of infrastructure.
- The viability of each GC may fluctuate and may not support the delivery of infrastructure as expected.
- The masterplanning of each GC may differ.
- The quantum of development in each GC may differ.

2.11 The fact that the AECOM document should not be relied upon as being justified or appropriate is set out in the document itself through various statements such as:

"Please note the infrastructure highlighted is indicative and not based on a detailed masterplanning exercise.

In accordance with the Garden Community approach, the programme assumes the front-loading of several infrastructure items so that they are provided before the benchmarked trigger point."

12. Would an alternative approach to phasing be preferable, such as that set out in the Infrastructure Delivery Plan by Create, submitted with the response to EB/088 from Carter Jonas on behalf of L&Q, Cirrus Land & G120?

2.12 Parker Strategic Land have no comments in this regard.

13. (a) Are the Section 1 Plan's policies sufficiently clear about what infrastructure needs to be provided, and by when?

2.13 No.

2.14 In particular we note that Suggested Amendment 58 (Document EB091) (a new paragraph regarding the Garden Communities) appears to suggest that there is uncertainty regarding the route and funding of significant highways works which are fundamental to the GCs. Moreover, the same paragraph refers to a "A scheme and specification for a phased rapid transit network and programme for the integration of the three Garden Communities into the rapid transit network". In our submission, the Rapid Transit System is a fundamental component of the accessibility strategy for North Essex, upon which the GCs are based.

2.15 Similar phrasing is then found within Policies SPB7 – 9 for example.

2.16 The significance of such schemes (and the implications of uncertainty on deliverability, sustainability and viability for example), means that the details of the proposals is required now, not at some point in the future.

2.17 As far as Parker Strategic Land can establish, there is no clarity within the Section 1 Plan's policies to establish what infrastructure needs to be provided and by when. These are fundamental issues that should be clarified at this stage given their essential significance to the viability, deliverability, sustainability and connectivity of the GCs. Without such clarification, Parker Strategic Land submit that there can be no certainty in support of the claims that the GCs would be sustainable, viable or deliverable (and therefore any such claims in the evidence base documents cannot be relied upon).

13. (b) Should the Plan's policies require funding for key infrastructure to be committed before planning permission is granted for any of the GCs?

2.18 Regardless of whether it is necessary for the funding of key infrastructure to be committed, it is essential that the NEAs apply a mechanism to ensure that that infrastructure is delivered as expected.

13. (c) Should the Plan's policies link the phased provision of infrastructure to defined trigger points in the phasing of development at the GCs?

2.19 This is essential in order to ensure that the infrastructure required to support the GC is delivered, and delivered in a timely manner. A failure to secure infrastructure via such measures could, in theory lead to a situation where it is not provided as expected, or worse, at all. The consequence of either outcome could be that the GCs are not the sustainable developments envisaged by the NEAs.

2.20 However should this approach be adopted then it is also essential that the resulting trigger points are assessed and taken into account in the supporting evidence base documents. As an example, the NEA should demonstrate that the GCs would be capable of viably delivering infrastructure as required by the triggers.

Rapid Transit System for North Essex

2.21 The evidence provided by RPS in the earlier representations submitted on behalf of Parker Strategic Land raised a number of questions over the viability of the RTS. This included the realistic levels of usage based on the movement patterns that should be considered consistent with the Census data, together with the mode share and trip rate data. Based on all of these factors it is considered that the viability assessments of the RTS is flawed.

2.22 Updated information on the assessment of the RTS and Mode Share is attached in the Technical Note prepared by RPS at Appendix A.

14. Are the capital costs for the proposed RTS set out in section 5.1 of the Vision to Plan document [EB/079] realistic?

2.23 The text accompanying Table 5-1 of the Vision Plan (EB/079) states that the land acquisition costs are not explicitly included in the costs considered hence these costs are likely to underestimate the delivery of the overall infrastructure.

2.24 This could have implications for matters of viability (to be considered in Matter 7).

15. Have sources for all the necessary capital funding for the RTS been identified?

2.25 Parker Strategic Land have no comments in this regard at this time.

16. Do sections 5.2, 5.3 and 5.4 of the Vision to Plan document provide reliable estimates of revenue, operating costs and commercial viability for the RTS?

2.26 The revenue forecasts appear hugely optimistic, in assuming the demands of the services at the various assessment years. RPS identified within the Technical Note at Appendix 3 of Parker Strategic Land's representations the uncertainty of these projections to 2033 when the final link (route 4) in the RTS system will not have been delivered.

17. Funding has been secured through the Housing Investment Fund [HIF] for a bus-based RTS serving the Tendring Colchester Borders GC.

17. (a) Which elements of the RTS scheme proposed in the Vision to Plan document would be covered by the HIF funding?

2.27 It appears the funding (£99.9M) provides the majority of the funds required for the delivery of the A120 -A133 link road (£65.5M) plus the measures to provide bus priority measures within Colchester to deliver the RTS (£45M). This is then identified to unlock 2500 dwellings by 2033 and up to 6500 in total beyond this date.

17. (b) Would any additional funding be required to complete Route 1 of the RTS scheme as proposed in the Vision to Plan document?

2.28 Given the HIF funding does not cover the full costs it is assumed further funds will be required.

17. (c) If so, how would that additional funding be secured?

2.29 Parker Strategic Land have no comments in this regard at this time.

18. How would connecting public transport services within the proposed garden communities be funded?

2.30 It is assumed that the local bus services within each community would be delivered by that development providing a connection between the residential and commercial areas and connecting those areas with a hub served by the RTS.

19. Is the proposed phasing of the introduction of the RTS system

19. (a) realistic?

2.31 Given the proposed routes do not include for land acquisition costs, and there is a high degree of uncertainty over the routes of the schemes, it is considered that the proposed phasing is not realistic.

19. (b) consistent with the proposed timing of development at the garden communities?

2.32 It is considered that the proposed phasing of the RTS is neither realistic nor consistent with the proposed timings of the garden communities. If the RTS is to achieve the levels of patronage identified it is essential the service is delivered at the outset of the development and be directly accessible to the NEGC.

20. Does the Vision to Plan document provide sufficient reassurance at this strategic stage of planning that it would be feasible in physical terms to construct the proposed RTS system?

2.33 It is considered that the vision document does not give sufficient reassurances at the strategic level that it would be feasible to construct the proposed RTS system to a standard to ensure the delivery of the service. There are too many uncertainties as to the route of the overall service and the ability to deliver priority to the service along the route to ensure the buses achieve the level of service required.

21. What are the implications for the GCs of the proposal not to build Route 4, linking the Colchester and West of Braintree sub-systems, until after 2033?

2.34 As identified within the attached note at Appendix B, the lack of the connection between Colchester and West of Braintree until post 2033 will result in far lower levels of patronage and hence revenue affecting the viability of the overall scheme.

22. The Vision to Plan document proposes a bus rapid transit system initially, potentially to be replaced beyond the Section 1 Plan period by trackless trams. Are these proposals justified and consistent with the Plan's aspirations for high-quality rapid transit networks and connections?

2.35 There are serious questions over the ability to deliver a bus rapid transit system in the first place over the entire route between Colchester and Stansted. Even if this is achieved there must remain considerable doubt over the ability to upscale this to a trackless tram system.

Mode Share Strategy

2.36 Updated information on the assessment of the RTS and Mode Share is attached in the Technical Note prepared by RPS at Appendix A

23. Are the refined mode share targets set out at Figures 7-1, 7-2 & 7-3 of the Mode Share Strategy document [EB/080] justified by the evidence contained and referenced in that document?

2.37 In relation to the questions raised by the Inspector, it is considered that there is not an evidence base to justify the mode share targets set out in the Mode Share Strategy document, and the referencing to other locations identified within the document are not relevant to the NEGC.

24. Should these (or other) mode share targets be included as requirements of the Section 1 Plan's policies?

2.38 Whilst it would seem appropriate to set out mode share targets within the Section 1 Plan policies, the assessments of the scheme should be based on realistic mode shares based on the current census data.

Appendix A: RPS Technical Note 03. 29/11/2019.

Turley Office
The Pinnacle
20 Tudor Road
Reading
RG1 1NH

T 0118 902 2830

Turley

APPENDIX A.

TECHNICAL NOTE

Project Title: Kings Dene Strategic Development, Kelvedon, Essex

Report Reference: JNY9797-03

Date: 26 November 2019

TRANSPORT REVIEW OF THE NORTH ESSEX LOCAL PLANS (SECTION 1)

Introduction

1.1 This Technical Note has been prepared by RPS on behalf of Parker Strategic Land Ltd, in relation to Section 1 of the North Essex Local Plan. Specifically, this document has been prepared to provide an update on the Kings Dene proposals in response to the matters raised by the Inspector in his note of the 11th November 2019, under Matter 6 "Transport and other infrastructure".

1.2 RPS have provided advice in support of the Kings Dene proposals at Kelvedon which is being promoted as an alternative or complementary location for development to those currently being considered in the emerging Development Plans for the area. This includes the Initial Transport Appraisal (2nd July 2019) prepared for the development proposal, and the Technical Note (26th September 2019) attached to the representations made by Turley on behalf of Parker Strategic Land Ltd to the recent consultation on the Suggested Amendments and other associated documents.

1.3 This Note has been prepared to update matters in relation to the "A12 Chelmsford to A120 widening, junctions 19 to 23 Preferred route announcement" by Highways England (HE) in October 2019, which changes the alignment of the A12 from that previously considered in the assessment of the Kings Dene site.

1.4 Furthermore the note provides additional comments on the Rapid Transit System (RTS) and the mode shares assessed in the context of the NEGC and relates this work to the evidence provided in support of sustainable travel within Harlow Essex. These matters are therefore set out below.

A12 Junctions 19 to 23 Preferred Route Announcement.

1.5 In October 2019, Highways England published the preferred route for the A12 between junctions 19 and 23, and at the same time began a consultation on the alternative alignments for the A12 between junctions 23 and 25. The documents in support of these proposals identify a revised timetable for the delivery of the A12 upgrading with a final consultation on the overall route in 2020. Clearly this must be subject to any decisions on the proposed West Tey development given the options for junctions 23 to 25 offer alternatives to accommodate this proposal. The overall scheme is then identified to be delivered and opened to traffic in 2027 / 2028.

1.6 This most recent announcement on the preferred route for the A12 between junctions 19 and 23 has implications over the access strategy to the Kings Dene site at Kelvedon. Accordingly

attached at ***Appendix 1*** are updated plans of the phasing of the accesses to the Kings Dene site based on the latest information available from HE.

1.7 These plans supersede those plans attached at Appendices C and D of the Initial Transport Appraisal, and Appendix D of the Transport Review of the North Essex Local Plan (Section 1), attached to the Turley representations on behalf of Parker Strategic Land Ltd.

1.8 The plans demonstrate how access can be achieved prior to the A12 upgrading and then once the A12 is upgraded but without the A120 improvements. Finally the scheme identifies how access is achieved with both the A12 and A120 measures in place. Hence the access plans demonstrate how development can commence on the Kings Dene site in advance of the A12 improvement works, and then how access is delivered through the phased delivery of both the A12 and the A120.

1.9 Accordingly it is considered that there are no impediments to the commencement of development and the delivery of development infrastructure as part of the Kings Dene development.

1.10 It is understood that funding for the A12 scheme for upgrading between junctions 19 and 25 was identified within the Road Investment Strategy (RIS)1 bid. However, the overall costs for the scheme are yet to be identified given the various options being considered, and hence at this time the full funding of the scheme must be reliant on further funding to be delivered through the RIS2 programme which is yet to be announced. That funding will only be for a three lane dual carriageway between junction 23 and 25 of the A12, and not the four lanes required by the CBBGC.

1.11 It is understood that Housing Investment Fund (HIF) is to finance the 4th lane on the A12 between junctions 23 and 25 which is a requirement of the CBBCG. The HIF bid for the A12 widening to 4 lanes is critical to the delivery of the CBBGC and also to the delivery of the A12 junction 23 to 25 upgrading. In the absence of the HIF funding the upgrading will only be to a three lane dual carriageway and not four as required by the CBBGC. The consequence of this will be a lack of capacity on this section of the A12 to the detriment of traffic in general, but more specifically to the detriment of the RTS which, it is understood is likely to use this route between Colchester and Braintree.

1.12 Given the CBBGC aspiration to limit development at West Tey to 17,000 dwellings, (ref West Tey Reps September 2019 Carter Jonas)**,** it would seem appropriate to consider the need for the 4th lane on the A12 in this scenario. This could be assessed through more detailed traffic modelling of the development proposals at this lower level of development and avoid the need for substantive further investment in the scheme from the HIF, and the uncertainty of the scale of the delivery of the A12 corridor between junctions 23 and 25.

1.13 Turning to the A120 improvements, at this time funding for the A120 has not been secured and although a bid for funding has been submitted to the Road Investment Strategy (RIS) 2, there have been no announcements over this funding stream from Government at this time.

1.14 Whilst the Option D route for the A120 is identified as a preferred route by Essex County Council, the scheme does not have a preferred route status within the Highway England programme and there is no start or completion date within the Department of Transport or Highways England Roads programme.

1.15 It is important to recognise the overall movement strategy of the NEGC and hence the movements that are expected to take place, are focused to the east / west corridor between Colchester and Braintree, and beyond to Uttlesford. Whilst evidence has been provided in the previous representations to the Local Plan by RPS, to show that such movements are not

consistent with the Census data, the basis of the NECG movement strategy is on the assumption that significant movements of trips will occur between Braintree and Colchester and onward to Uttlesford.

1.16 In effect therefore the movement strategy proposed for the NEGC together with the infrastructure provision, underpins the Rapid Transit system. In effect without the provision of the A120 upgrading between Braintree and the A12, and the improvements to four lanes on the A12 between junction 23 and junction 25 to allow for the Rapid Transit system, the levels of patronage predicted and hence viability of the Rapid Transit system cannot be relied upon.

1.17 Hence the certainty of the funding of these schemes is vital to the assessed delivery of the infrastructure mitigation for the NEGC's.

Rapid Transit System for North Essex

1.18 The evidence provided in the previous submissions by RPS attached to the responses by Turley have raised a number of questions over the viability of the RTS. This included the realistic levels of usage based on the movement patterns that should be considered consistent with the Census data, together with the mode share and trip rate data. Based on all of these factors it is considered that the viability assessments of the RTS is flawed.

1.19 It should also be noted that the RTS system is unlikely to penetrate any of the NEGC to a significant degree as this will only delay the overall movement of the service along the route corridor. Hence each of the NEGC will in effect operate local bus service within the development which would then connect to a hub for onward travel by the RTS system.

1.20 Furthermore, it is understood that between CBBGC and Braintree the route (route 4) would be via the A12 and the new alignment of the A120, not along the existing A120 corridor. Hence the decision to use the RTS will require the user to first use a local bus service and then connect to the RTS for onward travel along road based corridors.

1.21 Whilst it is understood that bus priority may be provided within Braintree and Colchester through infrastructure improvement measures, this is subject to more detailed design work over the feasibility of such measures. Hence at this time there is no certainty of the journey times along any of the routes proposed.

1.22 The viability assessment of the various elements of the RTS states that land acquisition costs are not explicitly included in the costs considered hence these costs are likely to underestimate the delivery of the overall infrastructure.

1.23 The provision of the section between Colchester and Braintree, Route 4, is to be delivered post 2033 will mean that the overall provision of the service will not be delivered until after a significant proportion (in excess of 7,500 dwellings) of the developments on each of the NEGC have been built and occupied. Accordingly those residents will have made their route and mode choices without the option of the RTS. Such route choices are more likely to be car based and therefore not supporting the mode share predictions.

1.24 However the revenue forecasts set out in Table 5-9 of the Vision Plan, suggests total demand in 2033 will be 6.0 million passengers on the lower investment forecast, rising to 8.7 million on the higher forecast. This is based on 7,500 dwellings being built by this time over the three NEGC and no link between Colchester and Braintree. Such assumptions must be hugely optimistic and if not delivered, completely undermine the viability of the RTS proposals.

1.25 Finally the Vision Plan identifies the predicted level of service between Colchester and Stansted, based on the higher levels of investment, as an end to end journey time in the AM peak of

126mins. This journey time is broadly the same as the current level of service that can be achieve by train from Colchester to Stansted travelling via London Liverpool Street. By contrast car based journey times are currently in the region of 45mins to 60 mins depending on the time of day and will no doubt reduce with the upgrading of the A12 and A120. Hence the proposals do not offer a significant benefit to encourage travellers to switch mode of travel away from the car.

Mode Share Strategy

1.26 Finally, in relation to the mode share strategy, it is considered that there is not an evidence base to justify the mode share targets set out in the Mode Share Strategy document, and the referencing to other locations identified within the document are not relevant to the NEGC, or to north Essex as a whole.

1.27 Whilst it would seem appropriate to set out mode share targets within the Section 1 Plan policies, the assessments of the scheme should be based on realistic mode shares, based on the current census data.

1.28 In contrast to that proposed at the NEGC, the approach proposed at Harlow in Essex, and set out in the Harlow and Gilston Garden Town Transport Strategy, is for 50% of journeys across Harlow to be by sustainable modes and within the new communities 60% of journeys to be by sustainable modes.

1.29 The figures of 50% across Harlow and 60% within the Garden Communities also includes for working from home. However the work from home percentage is not part of the 70% highlighted in the Mode Share Strategy for NEGC. Hence the 50% and 60% figures for Harlow would be less if directly compared to the 70% figure for the NEGC.

1.30 Given the high level of bus services and bus infrastructure within Harlow, together with the existing provision for cyclist, and the provision of two rail stations, it is considered that the adoptions of a sustainable target of 50% overall within Harlow is a realistic aspiration.

1.31 However, the aspirational target in Harlow only highlights the unrealistic proposition for the NEGC where infrastructure is not in place, and the new settlements are physically separated from the existing main towns and employment areas.

1.32 Accordingly it is considered that the evidence contained within the Mode Share Strategy document does not justify the mode share targets proposed which relate to active travel and public transport of circa 70% of the trips, of which 20% are RTS trips.

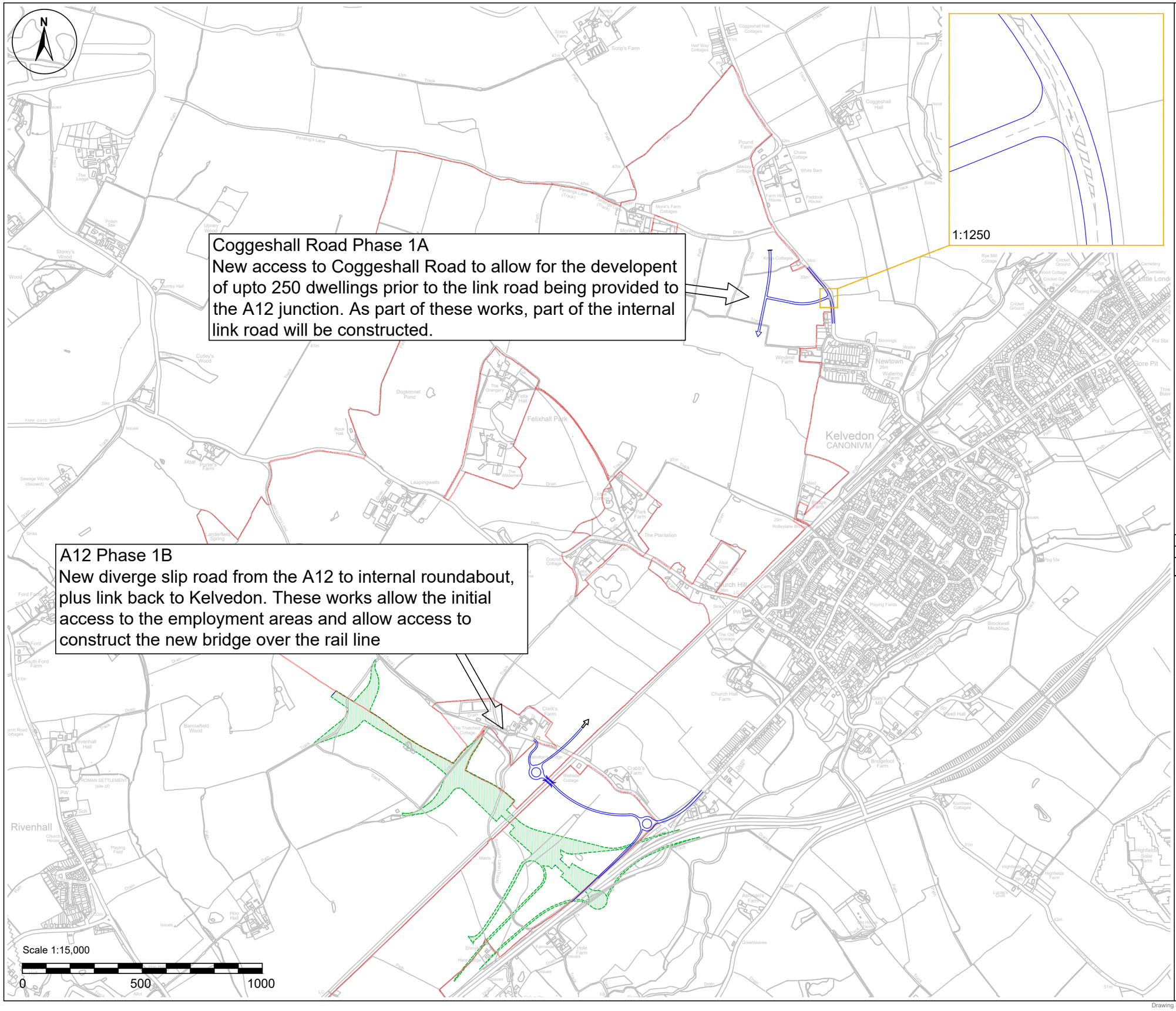
1.33 Whilst the aspiration of a mode shift is supported, the evidence needs to relate to realistic aspirational targets in the same way as those that have been promoted at Harlow. Such aspirational targets need to reflect a greater reliance on the rail based travel and less reliance on the RTS routes. The Harlow and Gilston Garden Town Transport Strategy is attached at ***Appendix 2*** of this Technical Note.

Summary.

1.34 In summary, this Technical Note has been prepared to update the information in support of the Kings Dene, Kelvedon proposals following the preferred route announcement for the A12 between junctions 19 and 23.

1.35 The Technical Note also provides information on the RTS and Mode Share strategy relating this to the evidence provided to the Harlow Local Plan in support of the Harlow and Gilston Garden Town Transport Strategy.

APPENDIX 1 – UPDATED PLANS OF KINGS DENE ACCESSES



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Key:

Kings Dene site boundary

Safeguarded route for A120

Rev	Description	By	CB	Date
B		AJ	PRB	22:11:19
A		AJ	PRB	17:05:19

MAKING COMPLEX EASY

140 London Wall, London, EC2Y 5DN
T: +44(0)20 7280 3300 **E:** transport@rpsgroup.com

Client: Parker Strategic Land Ltd

Project: Kings Dene, Kelvedon Strategic Development

Title: Phase 1 Access Proposals

Status	Drawn By	PM/Checked by
PRELIMINARY	AJ	BRP
Project Number	**Scale @ A3**	**Date Created**
JNY9797	1:15,000	May 2019
RPS Drawing/Figure Number		**Rev**
JNY9797-13		B

rpsgroup.com

Drawing Ref: P:\JNY9797 - Kelvedon Strategic Development\Highways\Drawings\JNY9797-13B Phase 1.dwg

Phase 2
Construction of up to 750 dwellings from southern access.
Closure of Railway level crossing to vehicle traffic and connection of Hollow Road/Church Street to internal road network.

Close existing level crossing and down grade existing lane to a 'quiet lane'.

Scale 1:15,000
0 500 1000

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Key:

Kings Dene site boundary

Safeguarded route for A120

Indicative alignment of main road through the site

Rev	Description	By	CB	Date
B		AJ	BRP	22:11:19
A		AJ	BRP	

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140 London Wall, London, EC2Y 5DN
T: +44(0)20 7280 3300 **E:** transport@rpsgroup.com

Client: Parker Strategic Land Ltd

Project: Kings Dene, Kelvedon Strategic Development

Title: Phase 2 Access Proposals

Status	Drawn By	PM/Checked by
PRELIMINARY	AJ	MA
Project Number	**Scale @ A3**	**Date Created**
JNY9797	1:15000	May 2019

RPS Drawing/Figure Number: JNY9797-14

Rev: B

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Drawing Ref: P:\JNY9797 - Kelvedon Strategic Development\Highways\Drawings\JNY9797-14B Phase 2.dwg

Phase 3
Completion to link between Coggeshall Road and A12 junction by 1000 dwellings including access to the rail station car park. Completion of A12 upgrading Chelmsford to Kelvedon including a new local road link between Kelvedon and Witham with access to the A12 via junction 22 at Witham (this is on the assumption that prior to the A120 upgrading a junction at Kelvedon is not provided). Completion of northern link to Coggeshall Road and bypass of existing S bend. Access to southern employment area from down graded section of A12. Improved pedestrian links to existing areas of Kelvedon. Development of housing up to 5000 dwellings.

New pedestrian /cycle bridge

Close existing level crossing and down grade existing lane to a quite lane'

Scale 1:15,000

0 500 1000

NOTES

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Key:

Kings Dene site boundary

Safeguarded route for A120

Indicative alignment of main road through the site

Rev	Description	By	CB	Date
B		AJ	PRB	22:11:19
A		AJ	PRB	

MAKING COMPLEX EASY

20 Milton Park, Abingdon, Oxfordshire, OX14 4SH
T: +44(0)1235 432 190 **E:** transport@rpsgroup.com

Client Parker Strategic Land Ltd

Project Kings Dene, Kelvedon Strategic Development

Title Phase 3 Access Proposals

Status	Drawn By	PM/Checked by
PRELIMINARY	AJ	MA
Project Number	**Scale @ A3**	**Date Created**
JNY9797	1:15000	May 2019
RPS Drawing/Figure Number		**Rev**
JNY9797-15		B

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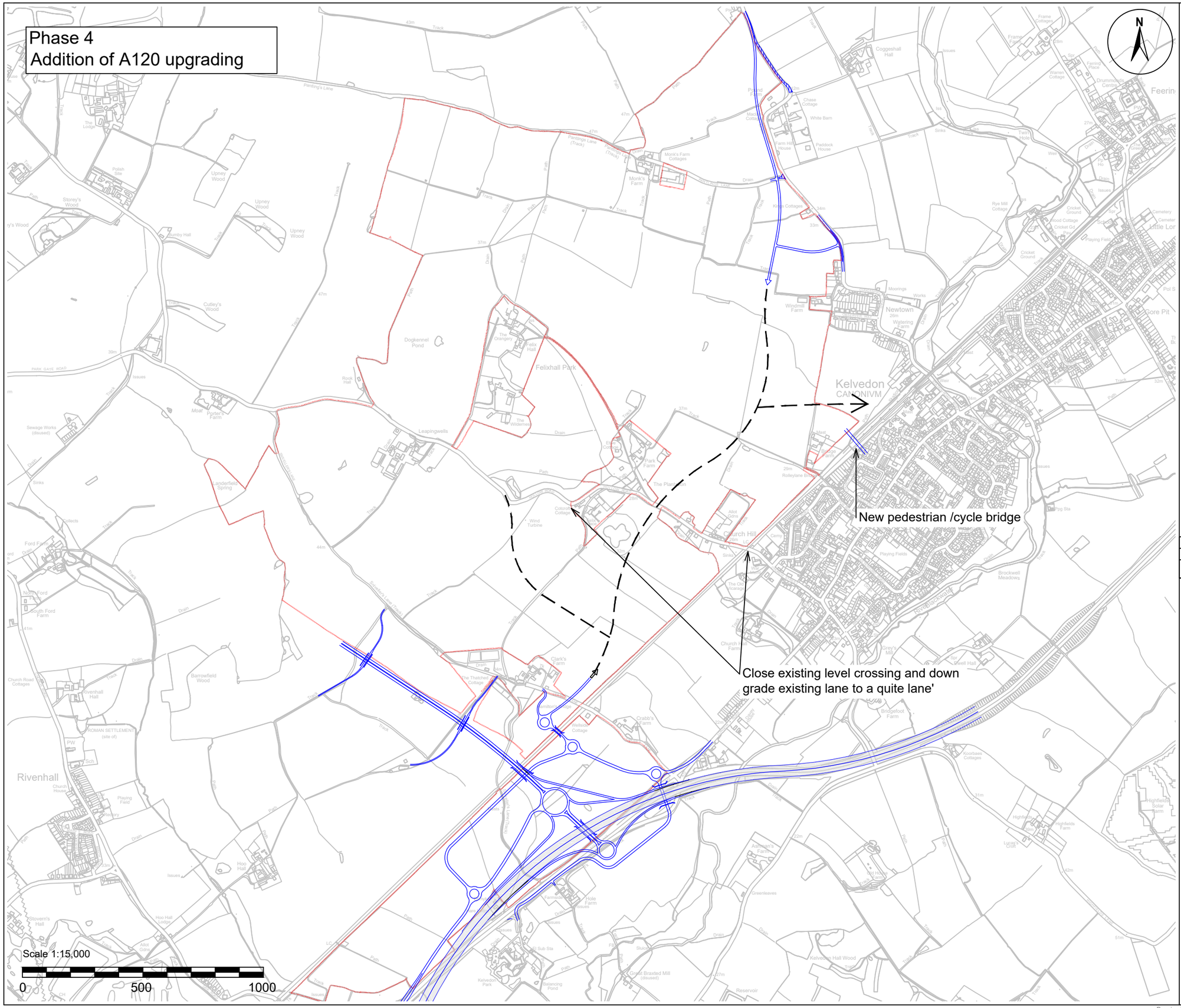
Drawing Ref: P:\JNY9797 - Kelvedon Strategic Development\Highways\Drawings\JNY9797-15B Phase 3.dwg

Phase 4
Addition of A120 upgrading



NOTES

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Key:

Kings Dene site boundary

Indicative alignment of main road through the site

Rev	Description	By	CB	Date
B		AJ	BRP	25.11.19
A		AJ	BRP	

MAKING COMPLEX EASY

20 Milton Park, Abingdon, Oxfordshire, OX14 4SH
T: +44(0)1235 432 190 **E:** transport@rpsgroup.com

Client: Parker Strategic Land Ltd

Project: Kings Dene, Kelvedon Strategic Development

Title: Phase 4 Access Proposals

Status	Drawn By	PM/Checked by
PRELIMINARY	AJ	MA
Project Number	**Scale @ A3**	**Date Created**
JNY9797	1:15000	May 2019
RPS Drawing/Figure Number		**Rev**
JNY9797-16		B

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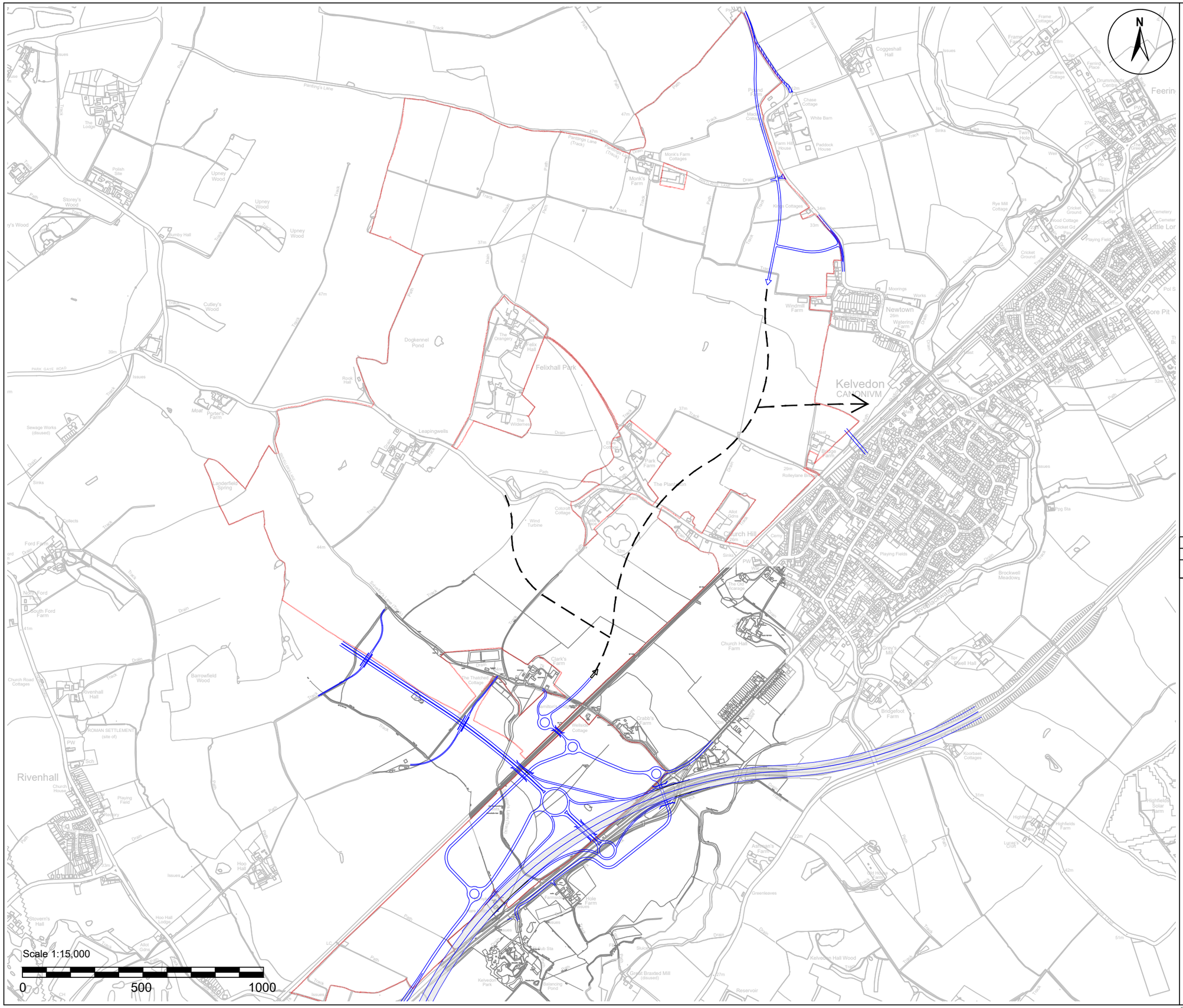
Drawing Ref: P:\JNY9797 - Kelvedon Strategic Development\Highways\Drawings\JNY9797-16B Phase 4.dwg



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Key:

Kings Dene site boundary

Indicative alignment of main road through the site

Rev	Description	By	CB	Date
B		AJ	BRP	25.11.19
A		AJ	BRP	

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20 Milton Park, Abingdon, Oxfordshire, OX14 4SH
T: +44(0)1235 432 190 **E:** transport@rpsgroup.com

Client Parker Strategic Land Ltd

Project Kings Dene, Kelvedon Strategic Development

Title Highway Infrastructure Plan

Status	Drawn By	PM/Checked by
PRELIMINARY	AJ	MA
Project Number	**Scale @ A3**	**Date Created**
JNY9797	1:15000	May 2019
RPS Drawing/Figure Number		**Rev**
JNY9797-17		B

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Drawing Ref: P:\JNY9797 - Kelvedon Strategic Development\Highways\Drawings\JNY9797-17B.dwg

APPENDIX 2 - THE HARLOW AND GILSTON GARDEN TOWN TRANSPORT STRATEGY

HARLOW

Essential Reference Paper"B"

Harlow and Gilston Garden Town

Transport Strategy

DRAFT FOR CONSULTATION 2019

INTRODUCTION

Welcome to Harlow and Gilston Garden Town

1.1 Harlow and Gilston was designated as a Garden Town in 2017, with East Herts, Epping Forest and Harlow District Councils, and Essex and Hertfordshire County Councils working together to deliver new and support existing communities in and around Harlow. Growth in the Garden Town is being planned to deliver at least 23,000 new homes following Garden City principles.

1.2 At least 16,500 homes will be built in new communities to the north (Gilston Area), south (Latton Priory), east (East of Harlow) and west (Water Lane) of Harlow (collectively referred to as the new Garden Communities). Employment clusters and job growth will be dispersed throughout the Garden Town, including in the town centre, Enterprise Zone sites and employment areas as well as in the new communities.

1.3 Harlow New Town includes a number of distinct neighbourhoods and employment areas separated by open spaces. The Gilston Area to the north of the River Stort includes a number of existing villages whilst the areas to the west, south and east of Harlow are predominantly rural in character. These new Garden Communities together with the existing New Town form the Harlow and Gilston Garden Town (HGGT).

1.4 To prepare for this, the three District Councils are producing their Local Plans which set out the allocations and policies for delivering and managing growth and change across the Garden Town both within the new Garden Communities and existing urban areas, and the social and physical infrastructure needed. Working with stakeholders and the community the District and County Councils have jointly prepared a Vision for the Garden Town which is set out in the Harlow and Gilston Spatial Vision document.

“Growing the pioneering New Town of Gibberd and Kao into a Garden Town of enterprise, health and sculpture at the heart of the UK Innovation Corridor. Harlow and Gilston will be a joyful place to live with sociable streets and green spaces; local centres accessible by walking and cycling; and innovative, affordable public transport. It will set the agenda for sustainable living. It will be adaptable, healthy, sustainable and innovative.”

Why does HGGT need a transport strategy?

1.5 Planned significant housing growth will fuel an increase in travel demand. Economic growth is a national priority and will be needed to provide employment for the growing population. Transport has a critical role to play in facilitating housing and employment growth. **We cannot simply build more road capacity to accommodate this growth.**

1.6 With increasing travel demand, continued reliance on high levels of single occupancy car use will result in worsening congestion which will constrain growth. Meeting this demand through significant increases in highway capacity will be expensive to deliver, will displace congestion to other locations, and will have significant adverse environmental impacts. Experience shows that new road capacity will soon be filled by additional trips reducing the initial benefits of investment.

1.7 Achieving a change in travel behaviours, including reducing the need to travel, and focusing travel on active travel modes, will help facilitate sustainable growth and has wider social benefits, such as addressing current health concerns in the community.

1.8 Transport and travel is rapidly evolving and any existing and new transport services need to be flexible and adaptable to changing technology, such as Mobility as a Service (a shift away from personally owned modes of transport towards a consumer door-to-door service), real time travel information and electric and autonomous vehicles.

1.9 Public transport will also need to be adaptable to changing market conditions and demands, such as possible longer-term conversion to Rapid Transit Systems (segregated light-rail or guided systems such as electric tram or metro systems) or Bus Rapid Transit (high quality, high frequency bus-based equivalent), integration between modes and more demand-responsive transport.

1.10 This Transport Strategy sets out how HGGT will achieve the challenge of future travel demand linked to planned growth.

Meeting future transport needs

1.11 This Transport Strategy has been prepared to help deliver the Vision and principles through identifying measures to reduce the need for travel, whilst recognising that travel will continue to be important in our daily lives.

1.12 The Strategy sets out three objectives:

1 Achieve a target where 60% of all journeys within the new Garden Town Communities, and 50% of all journeys across Harlow, will be undertaken by sustainable modes.

2 Mobility options will be based on a hierarchy of importance:

   i) Reduce the need to travel

   ii) Walking and cycling

   iii) Public transport

   iv) Private vehicles

3 Support and encourage a culture of active and sustainable travel ensuring all journeys will be efficient and safe.

1.13 The planned housing and economic growth for the Garden Town provides a once-in-a-lifetime opportunity to deliver a step-change in travel behaviour. Appropriate transport infrastructure and services will also be needed to deliver our growth aspirations in accordance with the Vision. Ensuring that transport infrastructure and services can adapt to new technologies, innovative new service models and changing habits is fundamental to ensure this investment has long term benefits for the whole of the Garden Town.

1.14 Local Plan policies and allocations for each of the District Councils, and the transport policies of the County Councils will continue to be used to shape and assess development proposals. The Garden Town Vision and Design Charter and this Transport Strategy will be material planning considerations in this process ensuring that development across the Garden Town is of a consistent high quality and is delivered in a co-ordinated and sustainable way.

CHALLENGES AND OPPORTUNITIES

Existing movement challenges

2.1 The HGGT will deliver significant growth, bringing together established and new communities as a fully integrated Garden Town.

2.2 Harlow is used to growth. It was originally established under the New Towns Act of 1946, and was organised as a series of neighbourhoods surrounding the existing older community of Old Harlow, which remains village-like with a distinct character including many listed buildings.

2.3 The new communities which form an integral part of the Garden Town will be delivered as a series of distinct new communities linked to the wider Garden Town and neighbouring settlements.

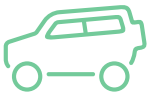
2.4 Travelling to Harlow 83% of people drive and a high number of trips have their origin in Bishop's Stortford and Epping Forest. Only 11% of these trips are by sustainable modes.

2.5 From Harlow 22% of all trips are made by sustainable modes double that of inbound trips, reflecting train trips to London for work.

2.6 Within Harlow there is good accessibility by all modes, with town-wide bus services and bus priority on some routes, extensive segregated footways and cycleways and a pedestrianised town centre. Currently, 34% of travel within the town is by sustainable modes, an excellent foundation on which to build to achieve our ambition of 60% of all journeys within the new Garden Town Communities, and 50% of all journeys across Harlow, to be undertaken by sustainable modes.

2.7 Some of the key movement challenges by mode are shown in the following table, together with the opportunities they provide for HGGT going forward.

Mode	Current Position	Opportunities
Flexible working 	• 6.9% of the working population works at or mainly from home	• "Better Digital" – delivery of superfast broadband and 5G to support increased home and flexible working.
Walking and cycling  	• Harlow has a reasonably good walking and cycling network and 16% of the resident population walks or cycles to work. • Some parts of the town are not well served by the network, including the more recent growth areas, and links to neighbouring settlements and villages are limited. • There are missing links, outdated facilities and severance caused by existing roads. • The proportion of residents who walk or cycle for any purpose was 89% (East Herts), 87% (Epping Forest), and 84% (Harlow) vs. 87% (UK) in 2014/15 in spite of the availability of relatively good walking and cycling network.	• Update the existing pedestrian and cycle network and fill in its gaps, reduce conflicts with motorised vehicles, and make best use of Green Wedges for increased commuting and leisure walking and cycling trips. • Provide walking and cycling routes that interconnect the new communities where practicable. • "Sustainable Transport Corridors" – provide a framework of key north-south and east-west public transport, walking and cycling routes. • Expand the existing River Stort crossing and provide a new River Stort crossing to improve connections with the Gilston Area.
Bus 	• Harlow has a comprehensive local bus network, with around 40 daytime bus routes, run by six operators. • Buses provide accessible transport options for all and help keep the network moving. • Most services travel to the bus station so bus journeys to the key employment and retail sites on the periphery of the town often require an intermediate change of buses. • Services are very limited to neighbouring settlements such as Epping and Bishop's Stortford.	• "Sustainable Transport Corridors" – provide a framework of key north-south and east-west public transport, walking and cycling routes. • More direct, frequent and integrated public transport services to a range of destinations. • Review options for a Park and Ride facility which links to a Mass Rapid Transit system. • Explore innovation within bus provision such as "on-demand services". • Further bus priority building on the existing network would reduce delays and congestion in the peak periods.

Mode	Current Position	Opportunities
Rail 	• The location of the rail stations on the northern edge of Harlow are quite distant for parts of the town and the proposed Garden Town Communities. • Rail stations are located on the edge of the town and access to the town centre from the main station by foot is not easy.	• Improve rail stations and services on the West Anglia Main Line and lobby for the benefits of four tracking and Crossrail 2 at Broxbourne. • Improve sustainable routes to the town centre from the station and reduce severance. • Improve wayfinding
Road 	• Harlow is connected to the Strategic Road Network at M11 J7 and Harlow is sometimes considered as a through route to access this junction. • A new motorway junction J7a will be constructed to the north east of the town. • Parts of the network, particularly the A414, are reaching, or are over, capacity during peak periods, constraining access to Harlow potentially stifling growth. • The A414 presently provides the principal crossing over the River Stort and railway line connecting the original Harlow New Town with the Gilston Area and has very limited walking and cycling provision, no bus priority and presently suffers from peak period congestion. • Private vehicle trips represent a high mode share of current commuter trips, with 75% travel by car or van, higher than the 69% national average. • Widespread availability of affordable and privately controlled parking provision throughout the town encourages private vehicle trips as the easy choice. • Increasing congestion will worsen air quality. Many new and existing residents of the new Garden Communities may have established, or bring with them, behaviours of car use based upon their current opportunities.	• "Better Digital" – delivery of superfast broadband and 5G to support home and flexible working. • "Sustainable Transport Corridors" – provide a framework of key north-south and east-west public transport, walking and cycling routes. • Expand the existing River Stort crossing and provide a new River Stort crossing to improve connections with the Gilston Area. • Undertake improvements to the A414, completion of M11 J7a in 2022/23 and schemes identified in the Memorandum of Understanding on Highways & Transportation Infrastructure for the West Essex / East Hertfordshire area. • Review options for the implementation of a Workplace Parking Levy. • Review options for a Park and Ride facility which links to a Mass Rapid Transit system.

Maximising opportunities

2.8 HGGT is well placed to provide a healthy and well-connected environment for existing residents and workers and for future growth. There is already good transport infrastructure in place to improve upon in order to deliver the target of 60% of all journeys within the new Garden Town Communities, and 50% of all journeys across Harlow, to be undertaken by sustainable modes.

2.9 HGGT, as part of the London – Stansted – Cambridge growth corridor, is recognised as a key development area within what is termed the UK Innovation Corridor, and there is opportunity within this corridor to link residents to jobs, ranging through high-tech digital and bio-medical to logistical, resource recovery, aeronautical and food manufacturing industries.

2.10 To support growth, the proposals in this strategy include transformational change across the Garden Town to, firstly reduce the need to travel, then make sustainable modes the preferred choice of transport, at the same time reducing distances travelled.

2.11 The technology sector is exciting and offers an opportunity for HGGT to be a leader in both development and adoption.

2.12 Examples include:

- The growth in the science, technology, engineering and digital industries at the Harlow Enterprise Zone.
- The arrival of Public Health England in the town and the potential re-provision of Princess Alexandra Hospital, helping to promote healthy living.
- The University of Hertfordshire Centre for Sustainable Communities and the presence of Harlow College and Anglia Ruskin University.
- Links with Transport Systems Catapult in Milton Keynes.

2.13 With such partners, HGGT has the potential to realise opportunities and test technological and socially innovative mobility solutions which enhance the physical and social wellbeing of residents, workers and visitors.

2.14 Examples include:

- Trials of autonomous and connected vehicles.
- Mobility as a Service (MaaS) and advanced Rapid Transit options (bus or rail) potentially delivering a significant shift from car ownership.
- Promoting active forms of travel for physical and mental health.

2.15 The challenge lies in drawing all of these opportunities together in order to create a seamless and attractive sustainable transportation network and services which maximise infrastructure investments and benefits all members of the community.

OBJECTIVES

Our objectives for mobility in the Garden Town

Objective 1 – Modal Split

50% of all journeys across Harlow will be made by active and sustainable modes...

...and this target rises to 60% of all journeys within the new communities

3.1 Why have we set these sustainable mode share targets? The transport network is under a lot of stress now, even without growth in housing and jobs which will create more demand for travel and more pressure on the transport network. Without behavioural change, as planned growth takes place not only in the Garden Town, but nationwide, this pressure will continue to increase with adverse impacts on the economy, productivity and on public health. The HGGT growth aspiration offers us the opportunity to address these problems head-on and provide a new approach to mobility that can support growth without detriment to wider society. Our targets will help us to deliver sustainable growth and regeneration, and mitigate against some of the adverse impacts of growth both now and in the future across HGGT.

3.2 The Vision for HGGT is challenging but, as the previous section has shown, HGGT has good foundations in place on which to build to deliver this.

3.3 The 60% modal shift for the Garden Town Communities should be achievable from the outset or as early as possible in the new developments. The 50% target across the wider area will be delivered as infrastructure and measures are put in place to enable the shift to sustainable modes

Objective 2 – Transport Hierarchy

3.4 To deliver the Vision HGGT will plan and deliver transport interventions and services for the whole town against the following hierarchy:

- Reduce the need to travel
- Walking and cycling
- Public transport
- Private vehicles

3.5 Achieving this will benefit members of society within the Garden Town.

3.6 For the individual travelling actively, the health benefits can be extensive, whilst the community will benefit from the reduced pressure on demand for health care services.

Transport is a major source of air pollution, with poor air quality a serious threat to health. Reducing the number of vehicles, and reducing the emissions from those remaining will have significant impact on the reduction of the most harmful emissions, which include carbon dioxide and nitrogen oxide, and particulates.

At the same time the reduction in the consumption of fuels will combine to enhance our local and global environment.

Objective 3 – Support and encourage a culture of active and sustainable travel

3.7 Careful planning of the built and natural environment will enable and encourage physical activity and active lifestyles. It starts with policy and planning, and place-making and home design, and providing local centres that can reduce journey lengths and provide a degree of self-sufficiency for everyday activities such as school, convenience shopping, health and community facilities, recreation and open spaces. For instance, digital technology is reducing the need for travel through increasing the option for people to work from home. Local co-working spaces can further reduce travel by recognising that people may still prefer to retain a work environment but might not necessarily need to be at their place of work every day.

3.8 Existing and new HGGT communities will be supported by sustainable movement corridors providing high quality networks for walking, cycling and public transport. These will be linked to key places of employment, the bus station and rail network, enabling seamless and multi-modal sustainable connections with destinations within HGGT and beyond.

3.9 The delivery of high quality infrastructure across the Garden Town in order to make sustainable travel more attractive, more convenient and intuitive to use for almost every journey instead of the private car, will support the delivery of our Vision.

3.10 A rebalancing of funding from provision of additional road capacity to delivery of sustainable interventions will take place.

3.11 How we intend to deliver these objectives is presented in the rest of this document.

Most Sustainable

Least Sustainable

ACTION PLAN

Introduction

4.1 The Transport Strategy recognises the need to deliver transformational change, not only to reduce the need to travel, but to make sustainable modes a first choice for travel for most journeys for most people. It is also about ensuring that movement corridors are as effective as possible in bringing communities together, providing leisure opportunities and enhancing lives throughout HGGT.

Action 1 – Reducing the need to travel

4.2 Reducing the need to travel means reducing the number, or length, of journeys or both. It does not mean reducing the freedom or ability to travel. The benefits of reducing the need to travel have a close bearing on our everyday lives. The HGGT will support reducing the need to travel through:

a) Facilitating remote and flexible working technologies and practices to enable a better work life balance for residents;

b) Facilitating shorter (and more active) journeys by improving sustainable interconnectivity;

c) Encouraging vibrant town and neighbourhood centres offering a wide range of local services and amenities; and

d) Providing opportunities to live and work within the same community to reduce travel distances.

Action 2 – Making better use of existing infrastructure

4.3 The HGGT recognises the value of existing transport infrastructure assets such as footways, cycleways, roads, lighting, traffic signals and signage. The HGGT will support activities to make better use of this infrastructure through:

a) Education, training and marketing activities to ensure residents are aware of non-car options available to them, particularly for short journeys;

b) Provision of data through apps to ensure travellers are informed about their travel options and use the most efficient mode for each journey;

c) Identifying pinch points, severance issues, or movement conflicts across the network and delivering schemes or enhancements which benefit users;

d) Reviewing and improving signage and visibility; and

e) Effective maintenance management to maximise asset longevity and user experience.

Action 3 – Supporting and encouraging a culture of active and sustainable travel

4.4 The HGGT will support and actively encourage a culture of multi-modal mobility where people are inspired and motivated to travel actively and sustainably by:

a) Promoting a culture where sustainable transport choices and active travel lifestyles are the norm, reflecting the hierarchy presented in Objective 2;

b) Identifying and enhancing principal sustainable movement corridors, both within and beyond HGGT, which connect housing with key destinations for work, education, healthcare, leisure and recreation;

c) Providing direct, high quality links which make walking, cycling and public transport the easy, attractive, affordable and safe options for most journeys;

d) Provision of segregated facilities on key routes should be sought to enhance safety for respective users;

e) Corridors running along existing roads can be expected to accommodate high quality bus / Rapid Transit services;

f) Providing very high quality interchange facilities which enhance user experience, network transparency and the opportunity for interchange between modes. Co-location with retail, leisure, employment or community uses should be encouraged;

g) Masterplans and planning proposals should reflect the objectives of the Transport Strategy and will be expected to demonstrate how they have incorporated Active Design into proposals which promote physical activity and active lifestyles through the built and natural environment;

h) New development should incorporate the movement hierarchy as a first principle. Development should seamlessly incorporate sustainable travel opportunities and infrastructure;

i) Applications for new development or change will be expected to consider its interaction with the wider transport context and may be required to participate in, and contribute to, wider collaborative proposals to facilitate overall sustainable travel delivery;

j) Travel Plans will be required for all development within the HGGT set against the HGGT Travel Plan which will form the basis of expectations for the site, in accordance with the requirements of the National Planning Policy Framework (NPPF), County or District Policies or HGGT guidance;

k) There will be an ongoing, consistent educational and promotional campaign to engage and develop partnerships with the community to influence travel behaviours to create a culture of sustainable and active travel and challenge perceived safety (personal security) concerns; and

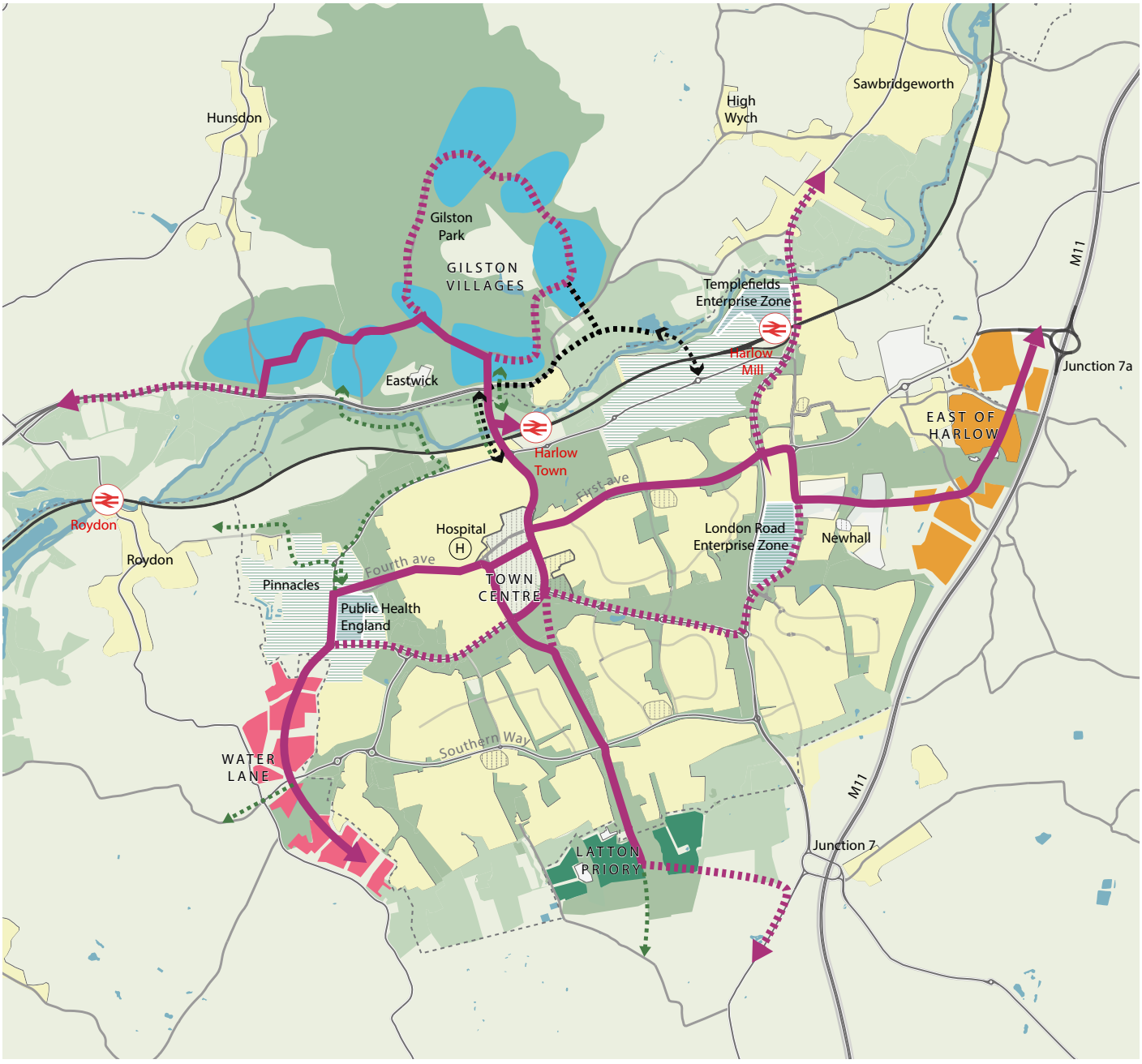
l) Develop and exploit a unified brand for presenting and promoting transport in HGGT.

Action 4 – Sustainable Transport Corridors

Enhancing opportunities for sustainable, active travel

4.5 HGGT provides a significant opportunity to build on Harlow's foundation as New Town, using its distinctive spatial layout incorporating many open spaces and an extensive network for walking and cycling. These valued spaces and Green Wedges are to be protected and enhanced and should facilitate sustainable mobility through the creation of Sustainable Transport Corridors.

4.6 These corridors will provide the high quality sustainable connectivity between the existing and new communities and key destinations. The Sustainable Transport Corridors will fully integrate with a network of public and active travel mode routes, with town-wide promotion (and adoption) of active travel behaviours, which will mark the Garden Town out as a national leader in sustainable movement.



- District boundaries
- Train stations
- New neighbourhoods and villages
- Harlow Town Centre and local centres
- Industrial areas
- Enterprise Zones / PHE
- Existing neighbourhoods and villages
- Sustainable Transport Corridor (incl. walking and cycling)
- Sustainable Transport Corridor potential extension (incl. walking and cycling)
- New / improved road river crossing
- New / improved pedestrian and cycle link
- Potential road extension
- Junction 7a
- H Potential hospital redevelopment

Action 5 – Supporting Walking and Cycling

4.7 The HGGT will build upon, and enhance, the existing valued and distinctive walk / cycle network of Harlow New Town to ensure an accessible, safe and attractive network for all users within the whole Garden Town.

4.8 In order to encourage more active travel and create a shift away from motorised modes, the HGGT will:

a) Develop a Local Cycling and Walking Infrastructure Plan for HGGT.

b) Identify existing network gaps and provide an enhanced, coherent and integrated network of walking and cycling infrastructure which is accessible and attractive for users of all ages, abilities and journey purposes;

c) Identify the most appropriate Sustainable Transport Corridor routes to ensure connectivity by active travel modes throughout and beyond HGGT;

d) Develop and deliver a well-maintained network which encompasses infrastructure solutions ranging from on-street cycle lanes and cycle-friendly junctions, through to shared footways and completely segregated off-road routes;

e) Identify potential points of conflict between cyclists and other road users at key cross-over/intersections and deliver appropriate solutions including infrastructure upgrades, more segregated cycle facilities, and priority for walking and cycling over other modes;

f) Protect and enhance Harlow's green infrastructure which support a wide variety of uses such as walking, cycling and community interaction;

g) Utilise seamless wayfinding with a unified brand / typography to integrate with the rest of the HGGT sustainable transport network;

h) Ensure homes and destinations provide suitable facilities, so that access to secure cycle parking, e-bike charging, associated storage and other facilities to support users of active travel modes are at least as convenient, if not better, than access to private motor vehicles;

i) Maximise opportunities for natural surveillance of cycle ways and walking routes, supported with maintenance, CCTV and lighting to improve the perception of safety and reduce personal security fears;

j) Ensure widespread access to cycle training across the community, education and workplaces to suit a range of users, from primary school pupils to adults, and the mobility impaired for whom self-propelled mobility can be liberating; and;

k) Support the development of a cycle hire scheme throughout the Garden Town, working with existing key destinations, employers and developers to ensure bikes and parking are located to maximise opportunities for residents, workers and visitors to access the scheme. Easy to use flexible payment systems and shared platforms will be supported by education and training activities. Opportunities should be explored to extend the scheme to neighbouring settlements within a reasonable cycle commute distance.

Action 6 – Public Transport

4.9 Proposals for public transport will need to create opportunities for services and user experience which surpasses private vehicle travel.

Bus and demand responsive travel

4.10 Improvements in bus services should be structured around a core network of movement corridors that connect within, and beyond, HGGT. Phased implementation will allow upgrading of services running on the existing roads along identified corridors and the improvement of connections between services. The HGGT will support this through:

a) Ensuring that services connect homes with key destinations, making use of the Sustainable Transport Corridors, offering frequent, high quality, seamless, rapid services with limited stops;

b) Developing / improving bus priority where required, including use of Urban Traffic Control systems to prioritise the movement of buses and minimise delays caused by traffic congestion;

c) Ensuring that public transport services are provided from first occupation so that new residents, workers or visitors develop sustainable travel habits from the outset;

d) Providing high quality interchanges at the town centre, rail stations and across communities in HGGT where movement corridors meet to facilitate modal interchange;

e) Improving stop and station infrastructure to ensure comfortable, sheltered waiting areas which are provided with Real Time Passenger Information at key stops and interchanges;

f) Maximising opportunities to access up-to-date travel information via mobile phones and IT;

g) Using of a unified brand/typography for the network;

h) Promoting integrated ticketing with the wider transport network including flexible payment systems and shared digital platforms;

i) Developing a Quality Bus Partnership (QBP) to influence and improve service quality and infrastructure;

j) Championing innovation in public transport provision and encouraging partners to do the same.

k) Developing a platform through which to share data for future service enhancements;

l) Supporting demand responsive transport, ensuring this is integrated with, and complementary to, the wider HGGT bus network and to meet the needs of more vulnerable travellers;

m) Integrating existing routes with new development areas, possibly serving these with demand responsive services, as this can offer flexibility during the early phases of development and can be enhanced as the development grows;

n) Encourage high quality vehicles with low emission or electric transmissions, on-board Wi-Fi, charge points, etc.;

o) Ensuring that new bus services and improvements to existing routes take into account emerging technology, such as electric or low emission engines, integrated ticketing and user-centric platforms such as 'Mobility as a Service' (MaaS);

p) Providing electric vehicle charging points for buses at depots and key interchanges or exploring innovative solutions for charging integrated within vehicles or infrastructure; and

q) Requiring construction travel plans to mitigate the impact of construction traffic and to consider whether providing bus services for construction workers on major development sites from key travel interchanges or temporary facilities can help reduce congestion or pollution, particularly in or through sensitive areas.

Bus Rapid Transit (BRT)

4.11 Bus Rapid Transit which is a fast high quality high frequency integrated bus service, will provide connections within and beyond HGGT, directly linking the rail stations, town centre, hospital, college and key employment areas, and will provide connections to Stansted Airport, nearby towns, and potentially the Central Line at Epping. BRT will be integrated with the existing bus network.

Rail

4.12 The recent Anglia Corridor Study (March, 2016) includes proposals for the West Anglia Main Line, which it identifies as a busy commuter and leisure route, which has the potential for significant housing and employment growth. The HGGT will support enhancements which include:

a) Longer trains providing more seats on peak services;

b) Line speed improvements to support faster journeys;

c) Enhancing Harlow Town and Harlow Mill Stations to provide enhanced access for Gilston communities, and to enable them to operate as high quality interchanges with bus services at station forecourts, including Real Time Information;

d) Improving walking and cycling facilities and wayfinding to the rail stations from residential areas and the town centre to encourage active travel access to rail services; and

e) Taking opportunities to work with key stakeholders to address differential pricing between national rail services and those delivered by Transport for London.

Action 7 – Infrastructure for road based travel

4.13 This Transport Strategy recognises the importance of prudent investment in road infrastructure improvements that will help to mitigate current congestion and facilitate the planned growth across the Garden Town. However, it also recognises that extensive road capacity improvements would conflict with the Vision for the Garden Town and the user hierarchy set out in Objective 2 and reduce the ability to achieve, or likelihood of achieving, the required modal shift.

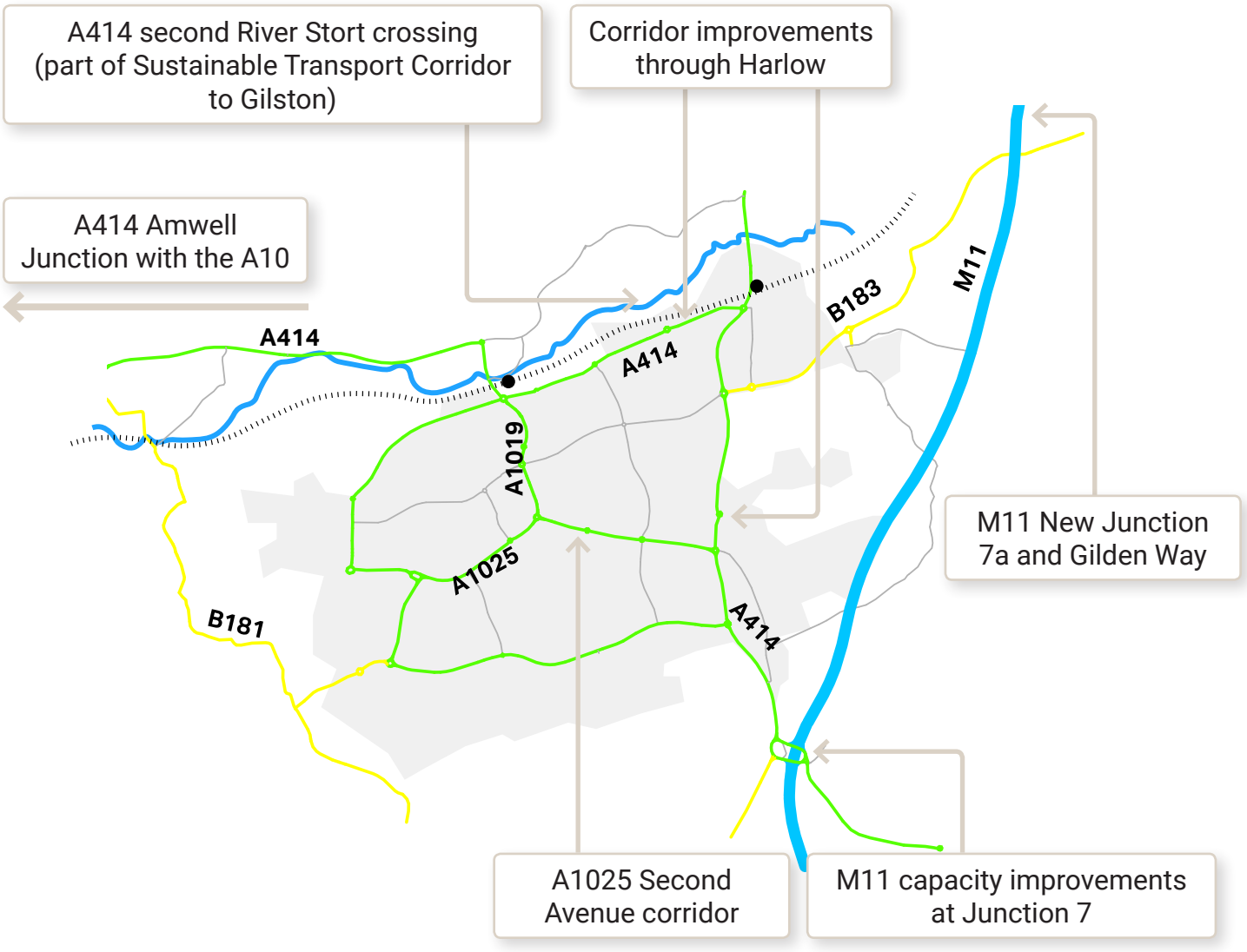
4.14 Road improvements have been identified to complement the wider mobility needs of the town, with due consideration of the user hierarchy and to concentrate vehicles onto appropriate routes. Delivery of limited highway infrastructure improvements should not constrain , but should actively benefit, users of Sustainable Transport Corridors.

4.15 Highway improvements will enable and support the growth of HGGT and plans for their implementation will be developed between the relevant District and County Councils. Identified strategic highway improvements to support delivery of Local Plan objectives and targets are shown in the following map.

4.16 These highway improvements do not include specific interventions that may be required to deliver the Garden Communities, which will be determined as part of their master planning, with due cognisance of the requirements of this Transport Strategy and the emerging work from the Sustainable Transport Corridors Study and the HGGT Vision and Design Charter, and could include:

a) Traffic and network management measures such as revised speed limits and restrictions to specific routes to ensure motor vehicles remain on designated routes; and

b) Electric vehicle infrastructure to encourage the take up and use of electric vehicles by residents and businesses.



Parking

4.17 The ready supply and low cost of parking in Harlow currently supports extensive use of the car. Addressing this will help to reduce private vehicle trips and to achieve the HGGT sustainable mode share objective. The HGGT will:

a) Consider the implications and viability of introducing a workplace parking levy as a demand management intervention. The revenue would be used to fund sustainable transport investments such as improvements to public transport services and behavioural change interventions;

b) Consider the feasibility of implementing a park and ride which serves HGGT and links to proposals for a wider Mass Rapid Transit system;

c) Review the supply and utilisation of existing commercial parking space in Harlow, much of which is privately owned;

d) Engage with providers and, where possible, encourage them to consider converting space for conventional cars to electric vehicle charging spaces, autonomous vehicles, cycle and powered two wheeler parking;

e) Manage new parking supply at key destinations through the planning system, and work with businesses, retailers and developers to manage car park capacity to create a better balance between parking supply and land use, and reduce the attractiveness of car use by making it harder to be certain of a parking space whilst balancing the needs of retailers and employers through delivering improved access for active and sustainable travel;

f) Work with residential developers to design and deliver flexible residential car parking to enable later conversion to other uses to benefit the community;

g) Plan flexible forecourts/parking areas for pick-up and drop-off by autonomous and shared use vehicles; and

h) Provide charging infrastructure for Electric Vehicles in public and private locations to aid transition to low-carbon, low-emission vehicle technologies.

Action 8 – Anticipating Change

A responsive and resilient transport system

4.18 The Garden Town offers extensive opportunities for innovation in mobility and transport, with a unique urban form and partnerships ready to enable delivery. The local authorities are already working closely together to realise the Garden Town Vision and wider links exist between the councils and industry, research and education. Emerging technologies and socially innovative shared mobility solutions have potentially significant implications for providing future transport services to change travel behaviours and the Garden Town will seek to take the lead to exploit these opportunities as they arise. To achieve this HGGT will:

a) Support Masterplans which demonstrate flexibility in anticipation of future mobility scenarios, including adaptable parking, drop off and pick up arrangements and electric vehicle charging points to ensure that communities can readily respond;

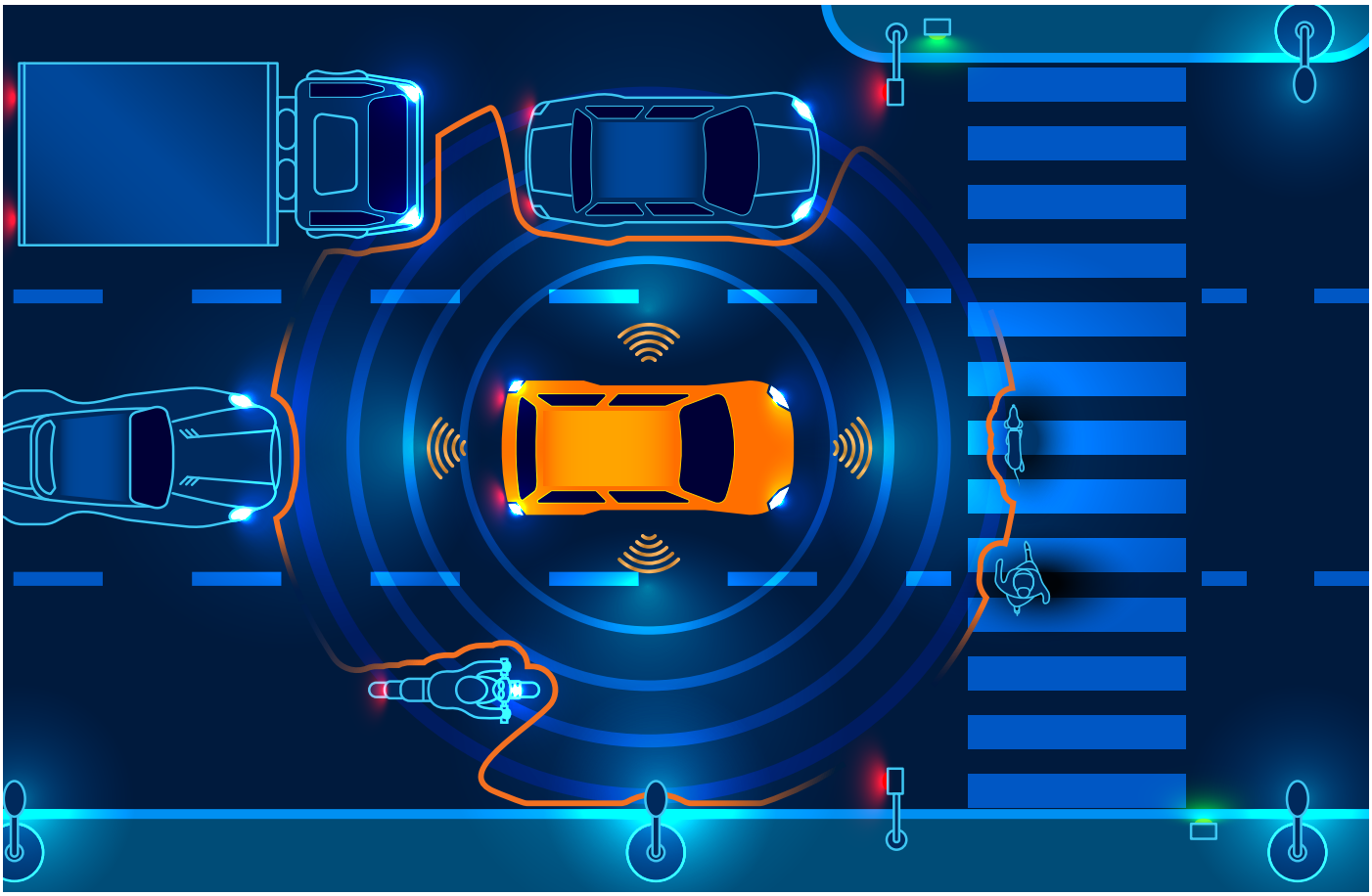
b) Exploit opportunities to trial and develop shared mobility, demand responsive, autonomous and alternatively fuelled vehicle and public rapid transit technologies with partners. The HGGT will also be seen as being open to innovation through marketing and lobbying of businesses, institutions and government;

c) Facilitate development of 'Mobility as a Service' journey planning and travel information mobility platforms to enable travellers to plan, book and pay for end to end journeys using real-time information for any mode;

d) Consider the benefits of adopting an 'open data' approach for transport data to support innovation and investment in data solutions and other technologies which aid mobility, traffic and parking management, enabling real-time advice to users;

e) Encourage sustainable deliveries: including low carbon vehicle use, delivery hubs and last mile logistics which use electric vehicles, freight bicycles (typically electric aided), or cargo bicycles to deliver goods to local centres or the final destination; and

f) Give consideration to shared public transport vehicles being able to use bus and taxi priority



NEXT STEPS AND FURTHER INFORMATION

5.1 This Transport Strategy provides an opportunity to support a pattern of development that minimises the need for travel, minimises journey lengths, encourages sustainable active travel, and enables accessibility for all members of the community.

5.2 By adopting this strategy, the Councils are committing to a unified approach to deliver HGGT as set out in their respective local plans and Spatial Vision for the area.

5.3 Next steps include

- Ensuring this Transport Strategy is woven into the masterplanning for HGGT;
- Securing funding, initially in the form of £151m from the Housing and Infrastructure Fund;
- Securing developer funding without which the strategy cannot be delivered;
- Developing a delivery plan to produce a detailed funded programme for delivery of the actions in this strategy, including but not limited to:
  - Prepare masterplans and work with developers to ensure properties enable residents to work from home where possible.
  - Work with developers to prepare travel plans, develop branding for sustainable modes, and explore the opportunities for the development of apps to help travellers to choose the best modes for their journey.
  - Design and provide a network of sustainable transport corridors.
  - Develop a local cycling and walking infrastructure plan and a local cycling and walking delivery plan.
  - Develop Infrastructure Delivery Plan for the Garden Town which identifies, prioritises, phases and identifies funding opportunities for sustainable transport schemes.
  - Work with developers to prepare Masterplans which demonstrate flexibility in anticipation of future mobility scenarios, including adaptable parking, drop off and pick up arrangements and electric vehicle charging points to ensure that communities can readily respond.
- Development of monitoring and evaluation strategy, including a set of targets, which we will use to monitor our progress toward meeting our sustainable mode ambition.

5.4 Further information on the Garden Town and the local Plans for the district councils, as well as their Infrastructure Delivery Plans (which include Transport Interventions) can be found online:

www.harlow.gov.uk/planning-policy

www.eastherts.gov.uk/gilston

www.efdclocalplan.org/local-plan/planning-policy/

www.essex.gov.uk/Environment%20Planning/Development-in-Essex/Pages/Default.aspx

www.hertfordshire.gov.uk/services/recycling-waste-and-environment/planning-in-hertfordshire/transport-planning/local-transport-plan.aspx

5.5 The relevant transport policies of the County Councils can be found online:

www.essexhighways.org/transport-and-roads/highway-schemes-and-developments/transport-planning.aspx www.essex.gov.uk/Environment%20Planning/Development-in-Essex/Pages/Sustainable-Travel.aspx

www.hertfordshire.gov.uk/services/recycling-waste-and-environment/planning-in-hertfordshire/transport-planning/local-transport-plan.aspx

5.6 The following documents provide additional evidence to support the measures contained in this strategy:

National cycling and walking investment strategy
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/603527/cycling-walking-investment-strategy.pdf

TfL Healthy Places work
http://content.tfl.gov.uk/healthy-streets-for-london.pdf