

Tiptree Neighbourhood Plan: Strategic Highways Note - February 2022

Introduction

1. COTTEE Transport Planning (CTP) have been instructed by the Tiptree Neighbourhood Plan Group (TNPG) to prepare a Strategic Highways Note to form part of the evidence base following points raised by the Tiptree Neighbourhood Plan (TNP).
2. The TNP's transport objectives were set out in the Tiptree Neighbourhood Plan Regulation 16 Strategic Environmental Assessment (SEA) Report February 2020:
 - Objective 13: To ensure vehicular access to new estates does not create congestion or compromise pedestrian safety.
 - Objective 14: To avoid increased congestion on existing roads and junctions in and around Tiptree by focusing development to the north and west edge of the village.
 - Objective 15: To promote steady and safe traffic flow through the village centre in order to help maintain a viable shopping centre.
 - Objective 16: To promote the provision of cycleways and footpaths from new developments to existing village amenities including the village centre.
 - Objective 17: To improve access to Kelvedon and Witham railway stations and the A12 north and south.
 - Objective 18: In the long term to relieve traffic on Church Road.
3. The overall objectives have been simplified in the new draft Neighbourhood Plan (2022) as required by the Examiner as follows:
 - 1: To deliver development prioritising local distinctiveness in keeping with the village feel, rural surroundings and heritage of Tiptree.
 - 2: To meet the housing, infrastructure and service requirements and needs of Tiptree and its residents in a sustainable manner.
 - 3: To improve movement through Tiptree, for vehicular traffic but also for walking and cycling and to improve access to main routes and railway stations whilst minimising impact on the village centre.

4: To protect and enable Tiptree's green environment, wildlife, and biodiversity to thrive and grow.

5: To enable Tiptree village centre to thrive as a safe location for people to spend leisure time and access community facilities.

6: To ensure that Tiptree is an attractive location for a range of businesses so that its local economy can thrive.

4. This document will establish and set out the baseline position in respect to traffic flows on key links and junctions in and around Tiptree.
5. Broad locations for housing in Tiptree are considered and this document provides an assessment of their suitability against revised Objective 3. This has been broken down into four sub objectives as follows:
 - a. Improve movement through Tiptree for vehicular traffic;
 - b. Improve movement through Tiptree for walking and cycling;
 - c. Improve access to main routes and railway stations; and
 - d. minimising impact on the village centre.
6. Strategic cross-boundary issues are considered separately, for example, the A12 improvements.
7. Based on the above considerations this report concludes which of the broad locations most closely align to TNP's transport objectives.

8. The Withdrawn Neighbourhood Plan: Examination 2020

Notwithstanding the considerable effort and evidence base to support the Neighbourhood Plan the following concerns were still raised by the Examiner:

- The plan did not consider strategic cross-boundary issues, e.g. A12 junction improvements.
- The plan was not supported by robust or proportionate evidence to explain why it followed its spatial strategy.
- A technical appraisal is required that considers the current conditions and an assessment of the impact of different spatial options on the roads and junctions.
- Reasonable alternative locations need to be assessed.
- Rationale required for the northern link road.

The outcome of the Tiptree Neighbourhood Plan Examination was not anticipated by either Colchester Borough Council (CBC) or Tiptree Parish Council (TPC), and the way the Examination was conducted did not allow for any dialogue or consideration about the existence, status, justification, or interpretation of evidence relating to many of the matters raised (Tiptree Neighbourhood Plan – Joint Examination Response – December 2020).

9. Emerging Neighbourhood Plan: Timescales

- Pre-submission (Regulation 14) - TPC are preparing a new draft TNP. It is anticipated that the plan will go to Regulation 14 six-week consultation in March / April 2022.
- Submission Stage (Regulation 16) is expected in the summer of 2022 and will be undertaken by CBC.
- The Neighbourhood Plan Examination is expected in the autumn and, if permitted to proceed, referendum and adoption will follow at the end of 2022.

10. Colchester Local Plan – Section 2

- CBC held a public consultation on the modifications to Section 2 of the Local Plan. The consultation closed on 15 November 2021.

11. A12 Improvements & Cross Boundary Issues

- The Examiner of the withdrawn Neighbourhood Plan raised a need to consider strategic cross-boundary issues, e.g. A12 junction improvements.
- A12 works are anticipated to commence in 2023, but there is no guarantee that the works will take place or follow this timescale expectation.
- National Highways (NH) has produced some modelling to determine the effects of the new A12 junction proposed at Feering, but this is limited in its geographic extent. No consideration has been given to the impacts on Tiptree itself, especially the impacts associated with the redistribution of traffic to Church Road which runs through the centre, and the double mini roundabout at the junction of the B1022 and B1023 which is already at capacity.
- NH has designated funds for local schemes outside the A12 plan and TPC consider that such funds should be directed to maintaining a viable route to the A12 at Rivenhall for traffic emanating from the south of Tiptree to ensure that additional traffic through Tiptree centre (Church Road) is minimised. Representations in this regard have been made by TPC to the NH consultation.
- ECC have not modelled the effects of the A12 improvements upon the local road network in Tiptree or beyond.

12. Kelvedon Road (B1023)

- Kelvedon Road is the principal road connecting Tiptree to the A12 (northbound). The other main route to the A12 (southbound) is via Braxted Park Road.
- NH predict increases in traffic on Kelvedon Road arising from a new A12 junction proposed to be constructed to the south of Feering.
- NH have recently (November 2021) prepared plans to widen and address some drainage issues in Inworth village. These plans were the subject of a re-consultation which concluded in December 2021.
- NH consider that Kelvedon Road has existing capacity to accommodate the additional traffic from the A12 improvements. Their analysis allowed for around 600 new homes in Tiptree.
- However, NH and ECC have indicated that they have not considered the impacts of the additional A12 improvement traffic on key junctions and links in Tiptree village itself.

13. The Strategic Technical Highways Note - Brief

The Examiner considered the topic of Traffic and Movement at paragraphs 8.8 – 8.10 of the withdrawn TNP Report of Examination October 2020 and cited comments by Marden that: ***‘In safeguarding land for a link road, the NP should be supported by sufficient evidence to demonstrate that this is necessary and will alleviate existing congestion.’*** The Examiner also cited comments by Bloor Homes that: ***‘there is no evidence to suggest that the proposed link road is needed, would be of benefit, is deliverable, or represents the optimum route for a new link road’***; and the National Planning Policy Framework requirement for ***‘robust and proportionate evidence’*** to support Plan makers’ proposals.

Discussions have taken place with the Highway Authority ECC, and it has been agreed that this document should be ‘high-level’ and not to the level of detail of a Transport Assessment. This Strategic Highways Note is therefore to consider broad locations for growth around Tiptree.

ECC have provided advice on the information they expect to see in relation to this note as follows:

- Consider other routes in Tiptree for a link road. A simple exercise to rule out other potential locations looking at a high level.
- A link road assessment should identify options to improve congestion and journey time reliability; and to accommodate future growth that will lead to more peak hour trips on the roads, more congestion and access issues for residents.

- Space within Tiptree village centre is constrained resulting in limited opportunity to provide highway capacity improvements. One of the key factors on the local network is also journey time reliability.
- ECC have confirmed that it should be possible to undertake a high-level study to examine potential route options for a link road and carry out an assessment using existing traffic data for Tiptree to determine the feasibility of such a link and setting out the benefits of the proposed link road. ECC confirmed that the high-level study could be structured as:
 - ***Presentation of the surveyed Tiptree traffic conditions within the agreed study area.*** In this regard data has been obtained from ECC.
 - ***Current proposed link road and the identification of any other possible links with high level look at link benefits***
 - ***Traffic flows - without the development in Tiptree and the link road***
 - ***Traffic flows - with the link road and development in Tiptree (committed and proposed)***
 - ***Sensitivity test for A12 traffic with and without link road***
 - ***Summary***
- The introduction of a link road will result in a redistribution of trips. The reassignment could be determined through a strategic model such as SATURN. CTP have obtained some data from Jacobs (NH's consultant) to assist in this regard.
- An initial assessment strategy for the link road, if suitable traffic data is available, could be carried out, however this would only be indicative.
- Key junctions and available traffic counts would need to be identified. Due to the nature of Tiptree this can be defined on the four routes that converge at the double mini roundabout but also to include other key routes.
- Any other possible links could be determined at a high level looking at routes and likely reassignment.
- ECC's methodology to assess the proposed link road (allowing for the proposed development) is set out below:
 - ***Undertake an assessment for both 2021 and 2026 (future year of the development);*** In this regard 2022 and 2027 have been selected to better fit with the predicted A12 improvement opening date data contained within NH's documents.

- Derive the amount of background traffic routing through the local area on adjacent routes that is likely to reassign to the proposed link road in both 2021 and 2026 (revised to 2022 and 2027); the level of reassignment would consider journey times, reliability, distance, and directness.
- Allow for appropriate committed developments (including reassignment of traffic to the proposed link road and additional connections).
- Derive the traffic generation, distribution and assignment of the development proposal allowing for the link road; and
- Assess the impact of the link road allowing for the introduction of the proposed development.

14. The Strategic Housing Land Availability Assessments Sites (SHLAA) map is provided below in **Figure 1**. This map has been used to identify broad locations for development in Tiptree.

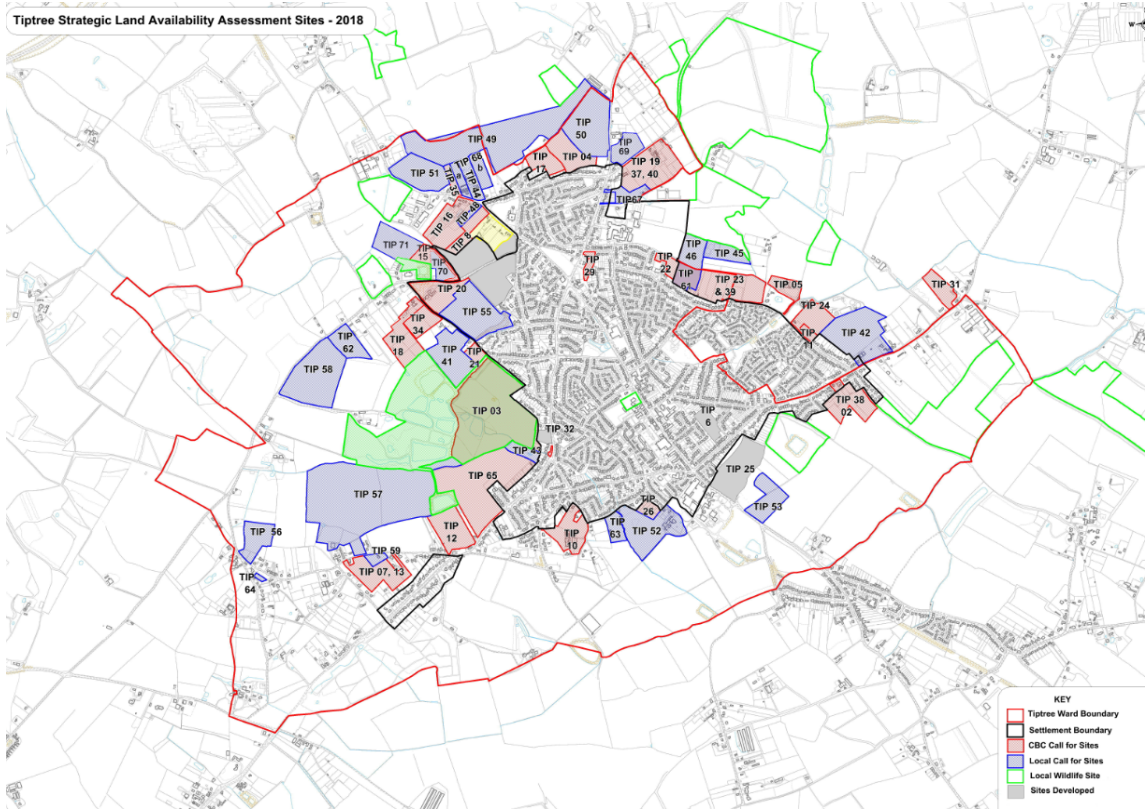


Figure 1 – SHLAA site map

15. Broad locations for growth and capacity figures in Tiptree are shown on **Figure 2** and in the table below. They have been taken from the Colchester Borough Council SHLAA (2017) and Tiptree SHLAA (2018) in **Figure 1**. The numbers in the table have been subject to rounding. Broad locations 8 and 9 could comprise several potential options. Therefore, different numbers have been considered for each. All the land between locations 1 and 2 was offered at the call for sites but could not be used because it was in Messing Cum Inworth Parish.

Tiptree – Broad Locations for Growth	Scenario – Dwelling Numbers <i>*figures and broad locations taken from Strategic Housing Land Assessment, subject to rounding</i>
Broad Location 1	200
Broad Location 2	200
Broad Location 3	175
Broad Location 4	175
Broad Location 5	75
Broad Location 6	75
Broad Location 7	200
Broad Location 8	Scenario A = 250 Scenario B = 450 <i>NB Total potential capacity is 1,000 dwellings. But exceeds local plan requirement so not tested further.</i>
Broad Location 9	Scenario A = 150 Scenario B = 275 Scenario C = 450
Broad Location 10	175
Broad Location 11	220



Figure 2 - Broad Locations for Growth

16. The Barbrook Lane site shown on the above plan shaded grey is committed residential development comprising 200 homes.

17. TPC have considered indicative link road options as shown on **Figure 3**.



Figure 3 - Tiptree Parish Council Link Road options (indicative)

18. Considering the sites shown on the SHLAA map at **Figure 1** – if a site is not shown on the map, then it is not available for consideration for a link road. **Figure 4** below shows the TPC indicative link road options overlaid on the SHLAA map.

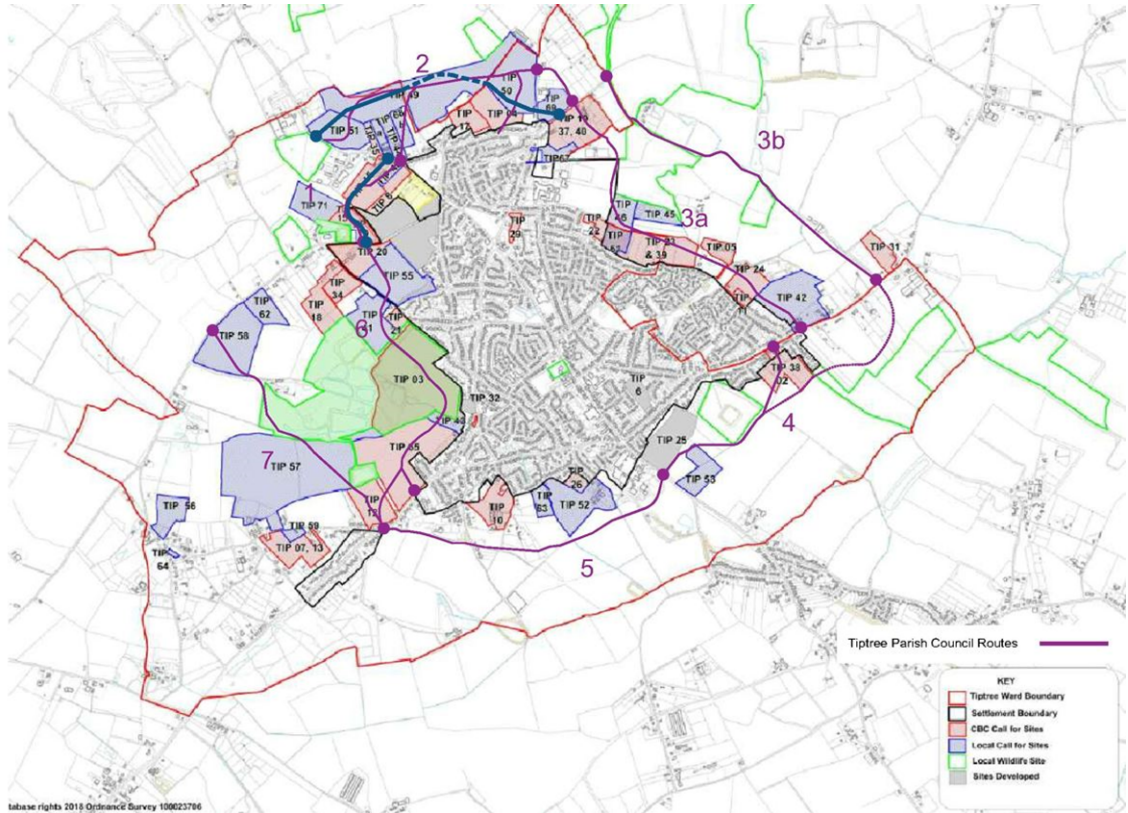


Figure 4 – TPC Routes overlaid on SHLAA map

19. Routes 3a, 3b, 4, 5 and part of Route 2 (at the eastern end) fall outside SHLAA sites or existing highway and therefore can be discounted for that reason alone. However, adjustment of Route 2 at its eastern end has allowed Route 2 to be included.
20. Whilst Route 6 falls within SHLAA sites it serves only as access to development rather than fulfilling any strategic function. There is therefore no traffic problem for this route to solve unless it is linked to Route 5 for example, which itself falls outside the SHLAA sites and is therefore not deliverable. TNPG have also identified the route as impacting a local wildlife site.
21. Route 7 currently does not connect site TIP57 with TIP58 and / or Grange Road, therefore the route is not viable. If continuous land were available the indicative route could be adjusted to avoid the local wildlife site, hence at this time the route can be discounted.
22. Route 1 – TPC are not promoting this within the NP due to doubts over deliverability relating to multiple land ownership issues but consider it to have potential longer-term value. Furthermore, it has limited strategic value in the short term and therefore has not been considered in this report.
23. The above high-level assessment leaves Route 2 (modified as shown in **Figure 5** below) as the only deliverable route. It is apparent that no other locations provide links between two strategic

roads (B1022 and B1023), therefore there is no other potential for link roads other than between locations 1 and 2 in **Figure 2**. Route 2 has the added benefits of:

- Reducing the length of the Colchester Road to Feering route (and for traffic emanating from locations 1 and 2) when compared to travelling via the double mini roundabout with the associated journey time savings.
- Reducing the number of junctions to negotiate therefore providing more direct connections.
- Improving the reliability of journeys e.g., avoidance of Maypole Rd at school times / double minis / narrow section of Kelvedon Road and the various junctions on that route.
- Reduction of traffic on Maypole Road (past Thurstable School), Oak Road and Kelvedon Road (adjacent to Baynards School) / the double mini roundabout / narrow section of Kelvedon Road and the various junctions on that route. Parts of Oak Road are narrow and have no footways, particularly close to Baynards School.
- As a result of the above – potential safety improvement especially for school children and pedestrians / cyclists using Oak Road.
- Reducing traffic at the junctions located at each end of Oak Road and Vine Road all of which have poor geometry / visibility.

24. Figure 5 below shows the potential new road links (including modified Route 2). The dashed green lines show connections to Kelvedon Road (B1023) in the west and Colchester Road (B1022) in the east. The asterisk shows the potential location for a connection which is specified in the emerging Colchester Local Plan but is not deliverable through this plan. The dotted green line shows the indicative route of a possible future extension of the link road between Kelvedon Road and Grange Road.

25. Parts of the link road connecting locations 1 and 2 would be incorporated into the proposed developments at Highland Nursery and Elms Farm. However, the centre section of this road lies in the parish of Messing and although this land was offered on the Call for Sites, it is outside the scope of this Neighbourhood Plan.

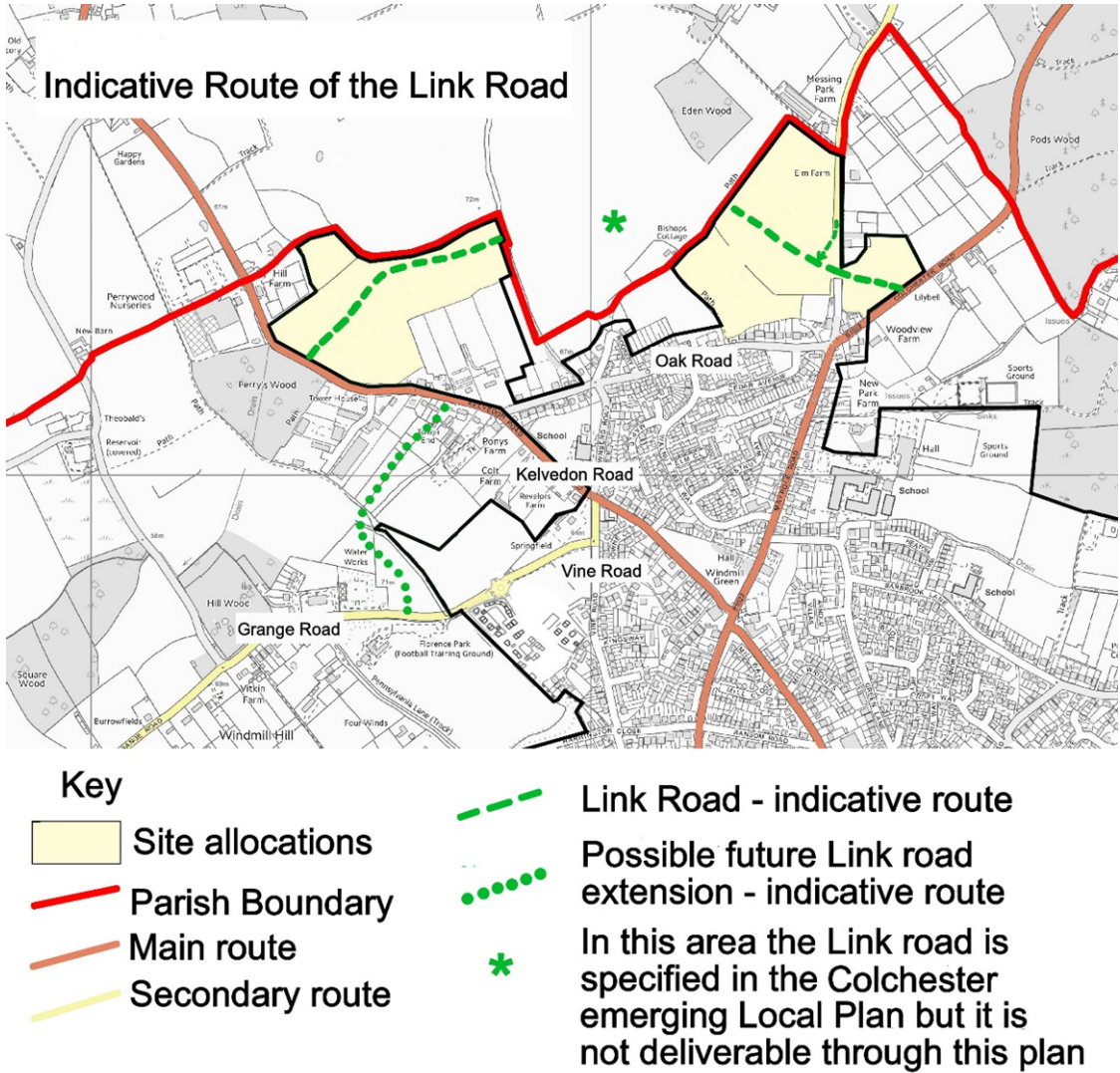


Figure 5 – Potential new road links to the NW of Tiptree

26. The assessment therefore considers:

- The impact of the link road between locations 1 and 2 on traffic flows in Tiptree;
- impact of the link road taking account of development at locations 1 and 2; and
- impact of the link road taking account of the A12 junction improvements and development of locations 1 and 2.

27. Traffic generated by locations:

Assuming an AM and PM peak hour trip rate of 0.6 vehicles per dwelling (a standard and robust figure used by ECC in the assessment of traffic impact); and an employment trip rate of 1.5 vehicles per 100 sqm GFA (employment applies to location 1 only).

• Broad Location 1	200 homes (120 movements) plus 0.5 Ha employment land (30 vehicle movements).	Total	=	150 peak hour movements
• Broad Location 2	200 homes		=	120 peak hour movements
• Broad Location 3	175 homes		=	105 peak hour movements
• Broad Location 4	175 homes		=	105 peak hour movements
• Broad Location 5	75 homes		=	45 peak hour movements
• Broad Location 6	75 homes		=	45 peak hour movements
• Broad Location 7	200 homes		=	120 peak hour movements
• Broad Location 8	Scenario A 250 homes	=		150 peak hour movements
	Scenario B 450 homes	=		270 peak hour movements
• Broad Location 9	Scenario A 150 homes	=		90 peak hour movements
	Scenario B 275 homes	=		165 peak hour movements
	Scenario C 450 homes	=		270 peak hour movements
• Broad Location 10	175 homes		=	105 peak hour movements
• Broad Location 11	220 homes		=	132 peak hour movements

28. Based on 2011 travel to work Census data the following traffic distribution is predicted.

- **Tiptree 5%** (based on the Census 18.2% of work destinations are less than 2 km i.e., within Tiptree. The census indicates 15% walk or cycle therefore 5% of Tiptree residents have been assumed to use a car to drive to / from work within Tiptree)
- **Colchester 35%**
- **Chelmsford 10%**
- **Braintree 15%**
- **Maldon 15%**
- **London 10%**
- **Other 10%**

29. From the above it is anticipated that 60% of traffic from the developments will travel to / from the A12 (of the 35% travelling to Colchester it has been assumed that 15% travels to/from the A12 and 20% via the B1022 or Newbridge Road depending on the location of the site within the village). The small number of internal Tiptree car trips (most trips will be walk / cycle trips from the development) will be distributed throughout the local network. Maldon traffic (15%) will travel south on the B1022.

30. The CTP note attached at Appendix 4 to CBC's Topic Paper 6 dated January 2021 reviewed the comments of the Examiner and provided a high-level review of traffic figures based on the traffic data currently available and confirmed that a detailed Transport Assessment will be undertaken

in the usual manner as part of the planning process with further supporting traffic surveys and analysis to be provided. This approach has been supported by ECC.

31. Policy SS14 confirms this approach at point (iv):

‘Set out the policy framework within the parish to guide the delivery of any infrastructure/community facilities required to support the development. This will include a detailed transport assessment with a view to confirming provision of the first phases of a road between the B1022 and B1023;’

32. At Appendix 2 of the CBC Topic Paper 6 ‘Proposed Modifications’ paragraph 14.219 it is stated that:

‘Infrastructure necessary to deliver the growth up to 2033 will need to address cross boundary issues with neighbouring Local Planning Authorities and neighbouring Parishes. This will include the additional traffic generation forecasts for the proposed new junction 24 onto the A12 as well as from the growth locations. With the northern growth location there is potential for a new road which would ultimately link the B1022 and B1023. The Tiptree Neighbourhood Plan will be expected to deliver the first phases of the road through a design which allows future completion/linkage.’

Analysis

33. Tables are attached at **Appendix A** which set out:

- Base traffic data with growth applied to 2022 (for no link road and no A12 improvement) and 2027 for the other scenarios. Committed development has been added. Separate tables have been included for committed development and traffic growth (TEMPRO).
- Impact assessment on the key junctions and links for the 2022 base scenario (no link road and no A12 improvement) and for the three 2027 scenarios. A threshold of 5% traffic increase has been adopted and those links / junctions where this threshold is exceeded are highlighted red. This is a guide to where impact may be considered significant when compared to existing traffic flows.
- Tables are included for ‘with link’ for locations 1 and 2 since no other locations can deliver the link road or benefit from the link road if locations 1 and 2 do not come forward.
- A Red / Amber / Green (RAG) analysis has been undertaken for each site based on each element of revised objective 3 in the latest NP.

No link Road – without A12 improvements

Objective 3 (a) – vehicular traffic

- 34.** The RAG analysis shows that all locations except 5 and 6 would have an impact of more than 5% on the routes identified in the first column. The reason for this is locations 5 and 6 have been assessed for a lower number of homes (75) therefore their overall impact is lower than other locations. However, despite their smaller size, since locations 5 and 6 are to the south of the village they increase vehicular traffic on Church Road through the village centre more than other locations to the north and west. The village centre is more sensitive to smaller traffic flow increases than other routes in the village therefore locations 5 and 6 are considered less well situated in this context.
- 35. Locations 7, 8, 9 and 11** to the west of the village have a significant impact on Braxted Park Road, in some cases greater than 10%. This is a route identified as having issues with the Appleford Bridge which operates one-way with vehicles being required to give way to oncoming traffic. These locations also impact Kelvedon Road. The larger housing locations impact greater than 10% in some cases.
- 36. Locations 1, 2, 3 and 10** impact Kelvedon Road with locations 1 (AM peak), 9b and 9c impacting greater than 10%. Locations 2, 3, 8b and 9c impact Maypole Road, in the case of locations 2 and 3 to greater than 10%.

Objective 3(b) – walking and cycling

- 37.** It has been assumed that all locations would be required to deliver improvements to walking and cycling access to satisfy planning requirements at application stage. As regards locations 1 and 2 there are opportunities to improve walking and cycling access to Thurstable and Baynards schools with the implementation of crossing points on Maypole Road (for Thurstable school) and improvements to the junction of Oak Road / Maypole Road / Messing Road to facilitate pedestrian / cycle access, and footway / public footpath improvements in the vicinity of Oak Road for access to Baynards school.

Objective 3(c) – improving access to main routes and railway stations

- 38.** The main routes are the B1022 and B1023 which converge at the double mini roundabout to the north of the village centre. Locations 4, 5 and 6 together with site 7 are farthest away from railway stations, the nearest of which are located at Kelvedon and Witham to the north-west and west respectively. Residents of locations 4, 5 and 6 would need to: travel through the village centre; use the Station Road / Maldon Road / Braxted Park Road route; the Factory Corner junction, Newbridge Road to Smythe's Green (to access Colchester) to reach main routes and railway stations. The Smythe's Green route to Colchester is compromised by poor alignment and visibility at its junction with the B1022. Site 8, whilst having access to the B1023 and Witham station to the west, would require residents to use the Braxted Park Road route which is compromised by

the one-way traffic operation at Appleford Bridge. Access to Kelvedon railway station would require residents to pass through the double mini roundabout.

Objective 3(d) – minimising impact on the village centre

39. Locations 4, 5, 6 and 7 are most likely to impact the village centre adversely in traffic terms since they are located to the south of the village with main destinations being to the north, west and east thereby potentially attracting traffic through the village centre.

With Link Road – without A12 improvements

Objective 3 (a) – vehicular traffic

40. As indicated earlier only locations 1 and 2 can deliver the link road therefore all impacts associated with other locations remain the same as described above under the 'No link road' assessment. The link road would reduce traffic on Kelvedon Road south of the new connection to Kelvedon Road in the case of both locations 1 and 2. The link road would also have the effect of reducing the impact of both locations on Maypole Road and at the double mini roundabout. Oak Road would also benefit from removing any rat-running traffic. North of the new link road locations 1 and 2 would continue to have an impact on Kelvedon Road.
41. The link road will deliver demonstrable long-term highway improvements for Tiptree. The Tiptree Neighbourhood Plan can facilitate the initial sections of the link road, with the remainder of the route to be delivered outside of the Neighbourhood Planning process.

Objective 3(b) – walking and cycling

42. The link road will reduce rat-running on Oak Road, to the benefit of pedestrian and cycle movement along that route. It will also reduce traffic on Maypole Road, and Kelvedon Road south of the new connection. Reduced traffic on these routes where access to Thurstable School and Baynards School is achieved will improve the environment for pedestrians and cyclists.

Objective 3(c) – improving access to main routes and railway stations

43. The link road will connect the two main routes that pass-through Tiptree (the B1022 and B1023). There will be direct access to these routes from new traffic originating from locations 1 and 2 through the construction of new junctions at each end. Traffic from these locations would not therefore impact on existing village routes. Similarly, access to the railway station at Kelvedon is convenient and will not impact on existing village routes.

Objective 3(d) – minimising impact on the village centre

44. Locations 1 and 2 will have minimal adverse impact on the village centre since most main destinations are located to the north, west and east and can be accessed either directly from each site or by using the link road.

Comparison - 'no link road' versus 'with link road'

45. A table is attached at **Appendix B** which compares the existing route between the end points of the proposed link road and the situation with the link road in place. The criteria for comparison are based on those set out by ECC in their brief:

- Length of route
- Journey time
- Directness
- Reliability
- Other

46. **Length of route** – the route between the end points is reduced by around 500m, a reduction of about 30%.

47. **Journey time** – the journey time is reduced from around 6.5 and 9 minutes (north to east route) in the AM and PM peaks respectively to 2 minutes. For the reverse route the journey time is reduced from around 4 and 3.25 minutes in the AM and PM peaks respectively to 2 minutes. These peak hour reductions are principally due to avoiding the delays that occur at the double mini roundabout added to the time saved in travelling the shorter distance.

48. **Directness** – the existing route requires the driver to navigate the constrained double mini roundabout and pass nine T-junctions most of which are not designed to modern geometric standards, with some having poor visibility which impacts safe operation. The proposed link road will provide two new junctions at the end points and a small number of T-junctions to serve as access to the new residential development. All will be designed to modern standards of geometry and visibility and will be subject to the required rigorous safety audit process prior to implementation.

49. **Reliability** – the existing route has poor levels of reliability with delays at the double mini roundabout and delays associated with Maypole Road and Kelvedon Road at the start and end of the school day. These unreliable routes lead to drivers seeking alternatives, for example, rat-running on Oak Road; and some using a route through Messing village. The link road will bypass existing areas of delay and congestion and will reduce rat-running on Oak Road.

50. **Other** – without improvement the existing route will continue to deteriorate over time and will experience increases in delay and congestion. This will be further exacerbated by additional traffic arising from the A12 improvement scheme. The link road will remove through traffic from Maypole Road, Kelvedon Road, and the double mini-roundabout; and rat-running traffic along Oak Road. Given that Oak Road, Maypole Road and Kelvedon Road are main access routes to Thurstable School and Baynards School the link road will lead to less traffic in the vicinity leading to safer road conditions.

A12 improvements

- 51.** NH have included various committed development values in their data. Three of the locations namely Barbrook Lane, Wilkin & Sons Factory Hill site and Land at Grange Farm are justified for inclusion. However, some locations are not justified at this stage for inclusion in the NH analysis because they are not committed. These locations are as follows: NH included an allowance for 130 units at Land adjoining the Gables (Kelvedon Road) which is currently pending appeal and is location 10 in this assessment; NH included 255 units at Peakes Close which was dismissed at appeal and is location 8 in this assessment; and NH included 221 units at Brooks Meadow which is pending a planning decision and has been included as location 11 in this assessment.
- 52.** Adding traffic from the A12 improvements for the purpose of this analysis increases base flows therefore adding development traffic to a larger base flow value leads to a lower impact on Tiptree roads in most cases. However, there are instances, for example locations 4, 5 and 6, where impact on Church Road increases due to additional traffic travelling to the proposed all movements A12 junction 24 via Inworth as opposed to via Braxted Park Road.
- 53.** The latest NH modelling figures published in November 2021 added 327 and 286 vehicle movements to Kelvedon Road in the AM and PM peaks respectively.
- 54.** NH propose improvements to Kelvedon Road to mitigate some of this impact, but it is understood that neither NH nor ECC have yet considered the impacts of redistributed traffic on other key roads and junctions in Tiptree such as Church Road, the double mini roundabout, and Braxted Park Road.

Conclusions

- 55.** TPC have considered indicative routes for link roads in Tiptree. These have been examined in this report and only Route 2 has been found to be deliverable. Route 2 has been termed the Link Road for the purposes of this report. Only Broad locations 1 and 2 can deliver the Link Road.
- 56.** Broad locations for housing in Tiptree have been identified and have been assessed against the new draft TNP (2022) Objective 3. This has been broken down into four sub objectives for the purposes of this report. A RAG analysis has been undertaken to assess each broad location for growth.
- 57.** Four scenarios have been examined:
- No Link Road (without A12 improvements) – all locations considered
 - With Link Road (without A12 improvements) – locations 1 and 2
 - No Link Road (with A12 improvements) – all locations considered
 - With Link Road (with A12 improvements) – locations 1 and 2

No Link Road (without A12 improvements) – all locations considered

58. Vehicular traffic - All locations except 5 and 6 would have a significant impact on one or more routes. Locations 5 and 6 however have fewer homes (75) and being located south of the village would have the propensity to increase traffic on the sensitive route through the village centre.
59. Walking and Cycling – all locations have the potential to improve access to pedestrians and cyclists and applicants would be expected to examine these in detail at planning application stage.
60. Access to main routes and railway stations – locations 4, 5 and 6 are farthest from railway stations and would require passing through the village centre. Access to main routes and railway stations is best achieved from other locations which have a lower impact on the village centre.
61. Minimising impact on the village centre – locations 4, 5, 6 and 7 are most likely to impact the village adversely in traffic terms since they are located to the south of the village when most destinations lie to the north, east and west.

With Link Road (without A12 improvements) – locations 1 and 2 only

62. Only locations 1 and 2 can deliver the link road, therefore all impacts identified with other locations remain as described in the without link road scenario.
63. The link road will deliver demonstrable long-term highway improvements for Tiptree. The Tiptree Neighbourhood Plan can facilitate the initial sections of the link road, with the remainder of the route to be delivered outside of the Neighbourhood Planning process.
64. Vehicular Traffic - the Link Road would reduce the traffic impact of both locations on Kelvedon Road (south of the new link road connection), Maypole Road, and at the double mini roundabout. The Link Road is parallel to Oak Road and would remove existing traffic that uses it as a rat-run.
65. Walking and Cycling - less traffic on Oak Road would benefit walking and cycling along and across that route. The impact of development on Maypole Road, the double mini roundabout, and Kelvedon Road (south of the link road connection) would be reduced. These routes and junctions are located close to Thurstable and Baynards School where considerable numbers of children walk to and from school.
66. Improving access to main routes and railway stations – the Link Road connects the two main routes that pass-through Tiptree (B1022 and B1023). Direct access to these routes is achieved from locations 1 and 2 from the Link Road without the need to use or impact existing village roads. Access to the main line railway station at Kelvedon to the north is direct and convenient and does not require the use of existing village roads.

67. Minimising impact on the village centre – locations 1 and 2 have minimal adverse impact on the village centre since most main destinations are located to the north, west and east. These directions can be accessed either directly from each location or via the Link Road.

68. A comparison of the Link Road versus no Link Road has been undertaken and has identified the following benefits:

- **Length of route** – a reduction in journey length of 500m for through traffic.
- **Journey time** – North to east route - AM peak reduced journey time from 6.5 minutes to 2 minutes; PM peak reduced from 9 minutes to 2 minutes. East to north route – AM peak reduced 4 minutes to 2 minutes; PM peak reduced from 3.25 minutes to 2 minutes.
- **Directness** – existing route requires drivers to navigate the double mini roundabout and nine T-junctions most of which are not designed to modern geometric standards. The Link Road will be designed to modern standards and will be subject to rigorous safety audit processes. The Link Road will therefore provide a more direct route.
- **Reliability** – the existing route suffers from delays at the double mini roundabout, along Maypole Road and Kelvedon Road. Rat -running on Oak Road will be reduced. The Link Road will improve reliability.
- **Other** – without improvement the existing route via Maypole Road, the double mini roundabout and Kelvedon Road will continue to deteriorate with increased delay and congestion. Additional traffic from the A12 improvement will exacerbate delays and congestion. Oak Road will benefit from the removal of rat-running traffic. Safer road conditions will result on all existing routes from less traffic especially in the vicinity of Thurstable and Baynards schools.

A12 improvements

69. The A 12 improvements and proposed new junction 24 will increase traffic on roads in and around Tiptree. TPC have made representations to NH on several traffic related issues, and it is considered that the following warrant further consideration:

- Church Road through the village centre
- Double mini roundabout B1022 / B1023
- Braxted Park Road – Appleford Bridge
- The origin of traffic entering Tiptree via Factory Hill
- The impact of access to Kelvedon Road from side roads

Summary

70. From the analysis undertaken in this report it is concluded that locations 1 and 2 incorporating the Link Road are the most suitable for residential development growth in Tiptree since there is minimal impact on village roads and junctions and these locations most closely align with TNP's objectives.

- 71.** Two hundred homes at location 1 and 2 plus employment could be achieved without causing a severe impact on the highway network. The only significant impact from the two locations would be on Kelvedon Road to the north of Tiptree. In their analysis for the A12 improvement NH have concluded that Kelvedon Road has capacity for additional traffic and NH have plans for some improvements to the route. NH have allowed for the development of 600 homes in Tiptree in their latest November 2021 modelling. A full Transport Assessment would follow at planning application stage to verify the findings of this assessment.
- 72.** The development of other locations for residential development have been considered but no other locations can deliver mitigation in the form of a link road to direct traffic away from village roads or align more closely than locations 1 and 2 with TNPG's transport objectives.
- 73.** The future Link Road being delivered by locations 1 and 2 will mitigate the impact of housing development at those locations and provide additional benefits. Both locations 1 and 2 can provide pedestrian and cycle improvements linking the locations to nearby schools and the village centre.
- 74.** The link road can facilitate the provision of 400 dwellings at locations 1 and 2 required by the NP without having a significant impact on the existing pressure points at the double mini-roundabout, Church Road and Braxted Park Road (Appleford Bridge). In addition, the link road can reduce existing traffic flows through the double mini-roundabout and Oak Road which are currently travelling on the Colchester Road to / from Feering route. No other sites within the NP assessment can deliver a suitable link road which not only mitigates the impact of their development but also provides an improvement to the existing routes within Tiptree.

APPENDIX A

IMPACT ASSESSMENT TABLES

Tiptree Neighbourhood Plan - Base Survey Data - AM Peak Hour

Link / Junction	Reference	Base Year (Survey)	Base	2022	2027	Committed Development	2022 + Committed Development	2027 + Committed Development	A12 Improvement Flows*	2027 + A12 Improvement
Double Mini -Roundabout	ECC data - site 18395-01	2018	1918	1971	2019	125	2096	2144	262	2281
B1022 - Maypole Road	ECC data - site 18143-01	2018	650	668	684	78	746	762	33	717
B1023 - Kelvedon Road (S of Oak Road)	ECC data - site 20190-01	2020	722	730	748	94	824	842	262	1010
B1023 - Church Road	ECC data - site 14229-01	2014	782	853	893	76	929	969	33	926
B1022 - Maldon Road (S of Station Road)	ECC data - site 18481-01	2018	1461	1501	1538	94	1595	1632	65	1603
B1023 - Inworth Road	ECC data - site 16326-52	2016	762	805	815	74	879	889	327	1142
B1022 - Maldon Road (N of Station Road)	ECC data - site 18395-01	2018	915	940	963	52	992	1015	82	1045
Factory Hill Junction	ECC data - site 17191-01	2017	1144	1185	1214	76	1261	1290	33	1247
Station Road	ECC data - site 17191-01	2017	575	596	610	42	638	652	0	610
Braxted Park Road	ECC data - site 14637-01	2015	732	767	786	60	827	846	33	819

Tiptree Neighbourhood Plan - Base Survey Data - PM Peak Hour

Link / Junction	Reference	Base Year (Survey)	Base	2022	2027	Committed Development	2022 + Committed Development	2027 + Committed Development	A12 Improvement Flows*	2027 + A12 Improvement
Double Mini -Roundabout	ECC data - site 18395-01	2018	1993	2045	2095	125	2170	2220	243	2338
B1022 - Maypole Road	ECC data - site 18143-01	2018	656	673	690	78	751	768	29	719
B1023 - Kelvedon Road (S of Oak Road)	ECC data - site 20190-01	2020	677	684	701	94	778	795	243	944
B1023 - Church Road	ECC data - site 14229-01	2014	889	973	1019	76	1049	1095	29	1048
B1022 - Maldon Road (S of Station Road)	ECC data - site 18481-01	2018	1416	1453	1488	94	1547	1582	72	1560
B1023 - Inworth Road	ECC data - site 16326-52	2016	863	899	921	74	973	995	286	1207
B1022 - Maldon Road (N of Station Road)	ECC data - site 18395-01	2018	1076	1104	1131	52	1156	1183	100	1231
Factory Hill Junction	ECC data - site 17191-01	2017	1142	1181	1210	76	1257	1286	29	1239
Station Road	ECC data - site 17191-01	2017	593	613	628	42	655	670	0	628
Braxted Park Road	ECC data - site 14637-01	2015	720	756	774	60	816	834	33	807

Notes:

See committed development table for included sites and distribution.

A12 improvement flows distributed based on Select Link Analysis (SLA) provided by National Highways.

*A12 improvement flows include committed development.

Tiptree Neighbourhood Plan - Committed Development (as included within the NH A12 assessment - 2027) - AM Peak Hour

Site	Number of Dwellings	Trip Rate	Total Vehicle Movements	Double Mini-Roundabout		B1022 - Maypole Road		B1023 - Kelvedon Road (S of Oak Road)		B1023 - Church Road		B1022 - Maldon Road (S of Station Road)		B1022 - Maldon Road (N of Station Road)		B1023 - Kelvedon Road Inworth Road (N of Oak Road)		Factory Hill Junction (Church Road / Station Road / Chapel Road)		Station Road		Braxted Park Road	
				Distribution	Vehicles	Distribution	Vehicles	Distribution	Vehicles	Distribution	Vehicles	Distribution	Vehicles	Distribution	Vehicles	Distribution	Vehicles	Distribution	Vehicles	Distribution	Vehicles	Distribution	Vehicles
Land off Barbrook Lane	200	0.6	120	75%	90	55%	66	35%	42	45%	54	40%	48	40%	48	35%	42	0%	0	0%	0	25%	30
Wilkin & Sons - Factory Hill	126	0.6	76	20%	15	0%	0	20%	15	25%	19	55%	42	0%	0	20%	15	100%	76	55%	42	40%	30
Land at Grange Farm, Tiptree (application 122134)	103	0.6	62	32%	20	20%	12	60%	37	5%	3	7%	4	7%	4	28%	17	0%	0	0%	0	0%	0

Tiptree Neighbourhood Plan - Committed Development (as included within the NH A12 assessment - 2027) - PM Peak Hour

Site	Number of Dwellings	Trip Rate	Total Vehicle Movements	Double Mini-Roundabout		B1022 - Maypole Road		B1023 - Kelvedon Road (S of Oak Road)		B1023 - Church Road		B1022 - Maldon Road (S of Station Road)		B1022 - Maldon Road (N of Station Road)		B1023 - Kelvedon Road Inworth Road (N of Oak Road)		Factory Hill Junction (Church Road / Station Road / Chapel Road)		Station Road		Braxted Park Road	
				Distribution	Vehicles	Distribution	Vehicles	Distribution	Vehicles	Distribution	Vehicles	Distribution	Vehicles	Distribution	Vehicles	Distribution	Vehicles	Distribution	Vehicles	Distribution	Vehicles	Distribution	Vehicles
Land off Barbrook Lane	200	0.6	120	75%	90	55%	66	35%	42	45%	54	40%	48	40%	48	35%	42	0%	0	0%	0	25%	30
Wilkin & Sons - Factory Hill	126	0.6	76	20%	15	0%	0	20%	15	25%	19	55%	42	0%	0	20%	15	100%	76	55%	42	40%	30
Land at Grange Farm, Tiptree (application 122134)	103	0.6	62	32%	20	20%	12	60%	37	5%	3	7%	4	7%	4	28%	17	0%	0	0%	0	0%	0

Notes:

Committed development sites have been considered based on the National Highways (NH) A12 assessment. The following NH 'committed development' sites have been excluded from the assessments within this report.
 Distribution for Land off Barbrook Lane is based on the August 2018 TA.

"Tiptree Neighbourhood Plan sites." NH advised that a total of 20 houses were included but the location of the sites could not be determined. It is therefore assumed that these sites will be included within the background TEMPRO traffic growth.

"Land adjoining Gables, Kelvedon Road." The site is currently pending appeal and is included as 'site 10' within this assessment. It has not therefore been included as committed development.

"Land at Maldon Road, rear of Peakes Close". The site was dismissed at appeal. The broad location has been included as 'site 8' within this assessment.

"Land at Brooks Meadows, Tiptree" The planning application is pending a decision and is included as 'site 11' within this assessment. It has not therefore been included as committed development.

Tiptree Neighbourhood Plan - Base Survey Data - TEMPRO Growth Factors

TEMPRO BASE + FUTURE YEAR	NTM GROWTH RATE - AM PEAK HOUR	NTM GROWTH RATE - PM PEAK HOUR	TEMPRO ASSUMPTIONS	
			Housing	Jobs
2014 - 2022	1.0904	1.0950	+ 334	+ 181
2015 - 2022	1.0482	1.0494	+ 284	+ 139
2016 - 2022	1.0559	1.0420	+ 234	+ 97
2017 - 2022	1.0360	1.0341	+ 192	+ 80
2018 - 2022	1.0277	1.0263	+ 149	+ 62
2020 - 2022	1.0115	1.0110	+ 64	+ 27
2014 - 2027	1.1421	1.1467	+ 444	+ 227
2015 - 2027	1.0740	1.0749	+ 394	+ 185
2016 - 2027	1.0700	1.0674	+ 344	+ 143
2017 - 2027	1.0614	1.0593	+ 302	+ 126
2018 - 2027	1.0529	1.0512	+ 259	+ 108
2020 - 2027	1.0363	1.0356	+ 174	+ 73

Notes:

TEMPRO Area Definition - Colchester 020 (E02004525 - Tiptree)

NTM Growth Rates are for 'principal road types'

Alternative Assumptions have not been applied - double counting of committed development is therefore likely for the 2027 scenario

Tiptree Neighbourhood Plan - Objective 3 - Red Amber Green Site Assessment - No Link Road Without A12 Improvements - 2022

Site	Number of Dwellings	Revised SEA - Objective 3 "To improve movement through Tiptree for ...			
		a) vehicular traffic (red indicates % impact >5%)	b) for walking and cycling	c) and to improve access to main routes and railway stations	d) whilst minimising impact on the village centre (red indicates % impact >5%)
1	200	Kelvedon Road (N & S Oak Road)			
2	200	Kelvedon Road (N & S Oak Road) Maypole Road			
3	175	Kelvedon Road (N & S Oak Road) Maypole Road			
4	175	Station Road			
5	75				
6	75				
7	200	Station Road Braxted Park Road			
8a	250	Maldon Road (N & S of Station Road) Braxted Park Road			
8b	450	Maldon Road (N & S of Station Road) Double Mini Roundabout (AM only) Kelvedon Road (N & S Oak Road) Maldon Road (N & S Station Road) Maypole Road Braxted Park Road			
9a	150	Kelvedon Road (S Oak Road)			
9b	275	Kelvedon Road (N of Oak Road - AM only) Kelvedon Road (S of Oak Road) Braxted Park Road			
9c	450	Kelvedon Road (N & S Oak Road) Maypole Road Braxted Park Road			
10	175	Kelvedon Road (N & S Oak Road)			
11	220	Maldon Road (N of Station Road) AM Braxted Park Road			

New Draft Tiptree Neighbourhood Plan (2022) Objective 3: To improve movement through Tiptree, for vehicular traffic but also for walking and cycling and to improve access to main routes and railway stations whilst minimising impact on the village centre.

RAG Rating
 Red Negative Impact
 Amber Neutral Impact
 Green Positive Impact

Tiptree Neighbourhood Plan - Objective 3 - Red Amber Green Site Assessment - No Link Road With A12 Improvements - 2027

Site	Number of Dwellings	Revised SEA - Objective 3 "To improve movement through Tiptree for ...			
		a) vehicular traffic (red indicates % impact >5%)	b) for walking and cycling	c) and to improve access to main routes and railway stations	d) whilst minimising impact on the village centre (red indicates % impact >5%)
1	200	Kelvedon Road (N & S Oak Road)			
2	200	Kelvedon Road (N & S Oak Road) Maypole Road			
3	175	Kelvedon Road (N & S Oak Road) Maypole Road			
4	175	Church Road Kelvedon Road (S of Oak Road)			
5	75				
6	75				
7	200	Station Road Braxted Park Road			
8a	250	Maldon Road (N of Station Road) Maldon Road (S of Station Road - AM) Braxted Park Road			
8b	450	Maldon Road (N & S of Station Road) Kelvedon Road (S of Oak Road) Maldon Road (N & S Station Road) Maypole Road Braxted Park Road			
9a	150	Kelvedon Road (S of Oak Road)			
9b	275	Kelvedon Road (N & S of Oak Road)			
9c	450	Kelvedon Road (N & S Oak Road) Maypole Road Braxted Park Road			
10	175	Kelvedon Road (N of Oak Road)			
11	220	Kelvedon Road (S of Oak Road) Maldon Road (N of Station Road) AM			

New Draft Tiptree Neighbourhood Plan (2022) Objective 3: To improve movement through Tiptree, for vehicular traffic but also for walking and cycling and to improve access to main routes and railway stations whilst minimising impact on the village centre.

RAG Rating
 Red Negative Impact
 Amber Neutral Impact
 Green Positive Impact

Tipree Neighbourhood Plan - Impact Assessment (WITH LINK and WITHOUT A12 Improvements) - 2027 Including Committed Development AM Peak Hour

Site	Number of Dwellings	Trip Rate per dwelling	Indicative Employment (sqm)	Trip Rate (per 100sqm)	Total Vehicle Movements	Double Mini-Roundabout			B1022 - Maypole Road			B1023 - Kelvedon Road (S of Link Road)			B1023 - Church Road			B1022 - Malden Road (S of Station Road)			B1022 - Malden Road (N of Station Road)			B1023 - Kelvedon Road Inworth Road (N of Link Road)			Factory Hill Junction (Church Road / Station Road / Chapel Road)			Station Road			Bracted Park Road			Link Road	
						Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles
						1	200	0.6	2000	1.5	150	20%	30	1.4%	0%	0	0.0%	20%	30	3.6%	5%	8	0.8%	15%	23	1.4%	15%	23	2.2%	60%	90	10.1%	0%	0	0.0%	0%	0
2	200	0.6	-	-	120	20%	24	1.1%	20%	24	3.1%	0%	0	0.0%	5%	6	0.6%	15%	18	1.1%	15%	18	1.8%	60%	72	8.1%	0%	0	0.0%	0%	0	0.0%	0%	0	0.0%	60%	72

Tipree Neighbourhood Plan - Impact Assessment (WITH LINK and WITHOUT A12 Improvements) - 2027 Including Committed Development PM Peak Hour

Site	Number of Dwellings	Trip Rate	Employment (sqm)	Trip Rate (per 100sqm)	Total Vehicle Movements	Double Mini-Roundabout			B1022 - Maypole Road			B1023 - Kelvedon Road (S of Link Road)			B1023 - Church Road			B1022 - Malden Road (S of Station Road)			B1022 - Malden Road (N of Station Road)			B1023 - Kelvedon Road Inworth Road (N of Link Road)			Factory Hill Junction (Church Road / Station Road / Chapel Road)			Station Road			Bracted Park Road			Link Road	
						Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles
						1	200	0.6	2000	1.5	150	20%	30	1.4%	0%	0	0.0%	20%	30	3.8%	5%	8	0.7%	15%	23	1.4%	15%	23	1.9%	60%	90	9.0%	0%	0	0.0%	0%	0
2	200	0.6	-	-	120	20%	24	1.1%	20%	24	3.1%	0%	0	0.0%	5%	6	0.5%	15%	18	1.1%	15%	18	1.5%	60%	72	7.2%	0%	0	0.0%	0%	0	0.0%	0%	0	0.0%	60%	72

Notes:
Red highlighted cell indicates % impact >5%

Tiptree Neighbourhood Plan - Objective 3 - Red Amber Green Site Assessment - With Link Road Without A12 Improvements - 2027

Site	Number of Dwellings	Revised SEA - Objective 3 "To improve movement through Tiptree for ...			
		a) vehicular traffic (red indicates % impact >5%)	b) for walking and cycling	c) and to improve access to main routes and railway stations	d) whilst minimising impact on the village centre (red indicates % impact >5%)
1	200	Kelvedon Road (N of Link Road)			
2	200	Kelvedon Road (N of Link Road)			

New Draft Tiptree Neighbourhood Plan (2022) Objective 3: To improve movement through Tiptree, for vehicular traffic but also for walking and cycling and to improve access to main routes and railway stations whilst minimising impact on the village centre.

RAG Rating
 Red Negative Impact
 Amber Neutral Impact
 Green Positive Impact

Tipree Neighbourhood Plan - Impact Assessment (WITH LINK and WITH A12 Improvements) - 2027 Including Committed Development AM Peak Hour

Site	Number of Dwellings	Trip Rate per dwelling	Indicative Employment (sqm)	Trip Rate (per 100sqm)	Total Vehicle Movements	Double Mini-Roundabout			B1022 - Maypole Road			B1023 - Kelvedon Road (S of Link Road)			B1023 - Church Road			B1022 - Malden Road (S of Station Road)			B1022 - Malden Road (N of Station Road)			B1023 - Kelvedon Road Inworth Road (N of Link Road)			Factory Hill Junction (Church Road / Station Road / Chapel Road)			Station Road			Bracted Park Road			Link Road	
						Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles
						1	200	0.6	2000	1.5	150	20%	30	1.3%	0%	0	0.0%	20%	30	3.0%	5%	8	0.8%	15%	23	1.4%	15%	23	2.2%	60%	90	7.9%	0%	0	0.0%	0%	0
2	200	0.6	-	-	120	20%	24	1.1%	20%	24	3.3%	0%	0	0.0%	5%	6	0.6%	15%	18	1.1%	15%	18	1.7%	60%	72	6.3%	0%	0	0.0%	0%	0	0.0%	0%	0	0.0%	60%	72

Tipree Neighbourhood Plan - Impact Assessment (WITH LINK and WITH A12 Improvements) - 2027 Including Committed Development PM Peak Hour

Site	Number of Dwellings	Trip Rate	Employment (sqm)	Trip Rate (per 100sqm)	Total Vehicle Movements	Double Mini-Roundabout			B1022 - Maypole Road			B1023 - Kelvedon Road (S of Link Road)			B1023 - Church Road			B1022 - Malden Road (S of Station Road)			B1022 - Malden Road (N of Station Road)			B1023 - Kelvedon Road Inworth Road (N of Link Road)			Factory Hill Junction (Church Road / Station Road / Chapel Road)			Station Road			Bracted Park Road			Link Road	
						Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles	% Impact	Distribution	Vehicles
						1	200	0.6	2000	1.5	150	20%	30	1.3%	0%	0	0.0%	20%	30	3.2%	5%	8	0.7%	15%	23	1.4%	15%	23	1.8%	60%	90	7.5%	0%	0	0.0%	0%	0
2	200	0.6	-	-	120	20%	24	1.0%	20%	24	3.3%	0%	0	0.0%	5%	6	0.6%	15%	18	1.1%	15%	18	1.5%	60%	72	6.0%	0%	0	0.0%	0%	0	0.0%	0%	0	0.0%	60%	72

Notes:

Red highlighted cell indicates % impact >5%

Tiptree Neighbourhood Plan - Objective 3 - Red Amber Green Site Assessment - With Link Road With A12 Improvements - 2027

Site	Number of Dwellings	Revised SEA - Objective 3 "To improve movement through Tiptree for ...			
		a) vehicular traffic (red indicates % impact >5%)	b) for walking and cycling	c) and to improve access to main routes and railway stations	d) whilst minimising impact on the village centre (red indicates % impact >5%)
1	200	Kelvedon Road (N of Link Road)			
2	200	Kelvedon Road (N of Link Road)			

New Draft Tiptree Neighbourhood Plan (2022) Objective 3: To improve movement through Tiptree, for vehicular traffic but also for walking and cycling and to improve access to main routes and railway stations whilst minimising impact on the village centre.

RAG Rating
 Red Negative Impact
 Amber Neutral Impact
 Green Positive Impact

APPENDIX B

LINK COMPARISON TABLE

Tiptree Neighbourhood Plan - Link Road Comparison

	Link Road Comparison - Colchester to Feering Route				
	Length of Route* (km) - Colchester to Feering route	Journey Time (based on average speed of 40kph - off-peak with no delays)	Directness (number of junctions navigated and number of minor road junctions connecting to the route)	Reliability	Other
Existing Route (via Kelvedon Road, double mini-roundabout junction and Maypole Road)	1.8km	<p>162 s (2mins:42secs) Feering to Colchester +236 s delay** AM peak hour (Total 6mins:38secs) +374 s delay** PM peak Hour (Total 8mins:56secs) Colchester to Feering + 70 s delay** AM peak hour (Total 3mins:52secs) + 31 s delay** PM peak hour (Total 3mins:13secs)</p>	<p>1 junction to navigate (double mini-roundabout) Route passes 9 T-junctions including Oak Road, Vine Road, Barbrook Lane, Walnut Tree Way, Thurstable School / Leisure World and Maypole junction.</p>	<p>Poor Existing route is unreliable during peak periods with delays at the double mini-roundabout junction and delays associated with Maypole Road and Kelvedon Road at school times. Unreliable route leads to rat-running of Oak Road or drivers seeking alternative routes.</p>	<p>Without improvement the existing route will continue to become less reliable and will experience increases in delay and congestion, particularly when the A12 improvements are included.</p>
Proposed Route (via new Link Road)	approx. 1.3km	<p>117 s (1min:57secs)</p>	<p>0 junctions to navigate (excluding the roundabouts at either end of the Link Road. Small number of residential T-junctions will connect to the Link Road.</p>	<p>Good Link Road will bypass existing areas of delay and congestion and will reduce rat-running of Oak Road.</p>	<p>Link Road will reduce rat running on Oak Road. Link Road will remove through traffic passing Thurstable School and Baynards Primary School improving highway safety. Link Road will reduce pressure on double mini-roundabout junction.</p>

* Length of route calculated from the location of the proposed link road roundabouts at the western end (B1023 Kelvedon Road) and the eastern end (B1022 Colchester Road)

** Existing route peak hour journey time delay based on ARCADY results contained within the TA for the approved Barbrook Lane committed development site.