

# Local Plan – Transport Assessment Addendum 2

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Rev.	Date	Reason for issue	Prepared	Reviewed	Approved
2	20/09/2021	Final	Dermot Hanney / Stacie Ballard	Mark Fitch	Mark Fitch
3	20/10/2021	Comments from NH/KCC	Dermot Hanney	Mark Fitch	Mark Fitch

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## Tunbridge Wells Local Plan – Sensitivity test model outputs

### 1 Overview

- 1.1.1 This report is an Addendum to the Transport Assessment that formed an evidence base document to the Pre-Submission Local Plan at Regulation 19 stage. As a result of ongoing consultation with the highways authorities Kent County Council (KCC) and National Highways (NH, formally Highways England), further Sensitivity Tests have been agreed so that all parties have confidence that highly robust traffic modelling have been undertaken.
- 1.1.2 This is a further Addendum to that issued in September 2021 to KCC and NH following feedback. This further Addendum shows the efforts made to reach agreement with both approving authorities. This report also sets out the reasoning and justification for the approach taken, explaining why the measures proposed to create a sustainable future for Tunbridge Wells, and appropriate analysis of the positive impact of those measures to allow for and promote travel by sustainable means, is the only reasonable approach that can be taken. A review of government policy and announcements, in particular since the March 21 Reg 19 report, is provided.
- 1.1.3 A key purpose of the work undertaken through these final sensitivity test model runs is to understand if there are any wider impacts if new development demand is based on TemPRo or TRICS. In summary the two approaches to trip generation that could be used are:

- TempPRO - as suggested in Government TAG guidance as the appropriate tool for such models at Regulation 19 stage and used within other Local Plans;
- TRICS - all sites assessed individually. This assumes limitless population growth and in, a strategic model, can significantly overestimate the number of new car trips generated, as it does not take into account 'pass by', 'diverted' trips or internalised trips. TRICS guidance outlines a need to consider wider issues around internalisation and local trips, modal shift and change in trip rates. For a Local Plan this is complex to do with so many sites. TEMPRO allows for high level capping of impacts. Without this, TRICS rates should not be based solely on historic trends and needs a holistic approach to application to take account of wider changes.<sup>1</sup>

- 1.1.4 The approach set out in our Transport Assessment Reg 19 Report (March 2021) is based on Tempro which we consider to be appropriate. However, NH and KCC have requested a sensitivity test using a TRICS based methodology as well.
- 1.1.5 A modal shift of 10% of modelled vehicle trips is applied to the TRICS rates for the Local Plan sites in Paddock Wood and Tudeley, as agreed with NH and KCC. This is consistent with the approach used in the Reg 19 Pre-Submission Local Plan (PSLP) March 2021.
- 1.1.6 This note sets out the results of the TRICS based tests. The TRICS based Trip Rates have been agreed with NH and KCC and are shown in **Table 1-1**.

*Table 1-1 Trip rates used in sensitivity analysis*

Description	Car trip rates - residential sites					
	AM			PM		
	O	D	Two - way	O	D	Two - way
Core Trip Rate for New Development	0.35	0.13	0.48	0.14	0.34	0.48
10% Modal Shift Trip Rate	0.31	0.12	0.43	0.12	0.31	0.43

- 1.1.7 This Addendum Report sets out the results of the final sensitivity test model runs following correspondence with NH and KCC. The key scenarios tested are:

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<sup>1</sup> TRICS Guidance Note on the Practical Implementation of the Decide & Provide Approach  
[http://www.trics.org/img/trics%20dp%20guidance\\_web.pdf](http://www.trics.org/img/trics%20dp%20guidance_web.pdf)

1. *A New Reference Case (RC) – only including development that has planning permission and taking account of committed developer mitigations as part of committed developments already modelled in the demand;*
2. *Local Plan (LP) - No change to RC highway network. TRICS based trip rates for new developments. No changes have been made to existing development demand or trip rates in the model;*
3. *Local Plan Highways test (LPH - Local Plan scenario including highways mitigation measures only) - No demand changes as compared to the LP scenario;*
4. *Mitigation Scenario (MS = Local Plan scenario including highways mitigation measures and 10% mode shift in Sustainable Transport Zone).*

1.1.8 As shown in **Table 1-2** the TRICS based sensitivity tests for the Local Plan scenarios results in a **relatively small increase** in vehicles compared to the Regulation 19 consultation Transport Assessment. As our analysis in this note shows, this change in demand has some additional corridor impacts in the town centres but does not change the overall mitigation package proposed in the March 2021 report. Accordingly, the modelling presented at the Regulation 19 stage continues to remain valid.

*Table 1-2 Peak total modelled highway trips by scenario tested*

Total Modelled Highway Trips	March 2021 - Reg 19 report		Oct 2021 - Sensitivity Tests using TRICS		
	1. Reference Case	2. Local Plan	1. Reference Case	2/3. Local Plan	4. Mitigation Scenario – with Sustainable Transport Zone
AM Peak	46,600	46,600	45,536	49,435	46,903
PM Peak	45,002	45,002	43,564	47,709	45,157

1.1.9 It was agreed with NH to constrain trips to Origins in AM Peak and Destinations in PM Peak for these tests. As a result, many of the additional highway trips generated between the two scenarios are in the counter peak direction, where more highway capacity is available to be used.

1.1.10 The 10% mode shift, so 10% reduction in car driver trips, applied to the TRICS trip rates for trips from the new settlements at Tudeley and Paddock Wood is considered to be low given the new cycling, pedestrian and public transport infrastructure being planned for these developments. The modal shift assumption of 10% is based on the Sustainable Towns research (DfT Sustainable Travel Towns: evaluation of the longer-term impacts, Sept 2018). However, in Tunbridge Wells Borough there will be an even greater level of investment per head into sustainable transport infrastructure

than that applied within the Sustainable Towns Report. Therefore, the positive impact is likely to be greater. In support of this statement, Transport for the South East (TfSE) used Scenario Forecasting techniques to explore and quantify different transport and socio-economic outcomes for the future of the South East, referencing car trip reductions of up to 15% (Scenario forecasting summary report, Steers for TfSE, Oct 2019).

- 1.1.11 The trip rates also do not include adjustments for internalisation / localisation rates of the new Local Plan sites in Paddock Wood and Tudeley as well as the wider area around Paddock Wood in particular. Nor does it include reductions in trip rates due to change in how people travel. At this time, ONS data has shown that for 2020 Tunbridge Wells borough had the highest levels of 'Working from Home' in England for that year. In addition, TRICS have observed over 25 years of data that people are travelling less today than they used to<sup>2</sup>.
- 1.1.12 In addition, the new infrastructure and Area Wide Travel Planning will result in additional benefits and mode shift across the borough in Royal Tunbridge Wells, Pembury and the adjoining Tonbridge and Malling borough. This is as a result of bus service improvements and exceptional inter-urban cycle networks that stretch out from the Local Plan sites to the key adjoining town centres and is referred to as the Sustainable Transport Zone. A modal shift for those areas, as set out in the Transport Assessment Reg 19 Report (March 2021), has been applied. This is discussed in section 2.3 of this note. This further scenario has been shown separately for clarity in the model outputs presented later in this document.
- 1.1.13 The full model year is 2038, with an interim model year also tested for 2031. This was agreed with both NH and KCC in advance of the modelling.

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<sup>2</sup> TRICS (2021), 'Guidance Note on the Practical Implementation of the Decide & Provide Approach

## 2 Method to identify problem junctions

### 2.1 Identify problem

- 2.1.1 As previously presented in the Reg 19 PSLP (section 9.6.2) and in discussion with the highway authorities, the following approach has been taken to identify which junctions are severely affected by the Local Plan developments and require further mitigation beyond the sustainable transport measures set out:
- Average junction Volume / Capacity is  $> 90\%$  in the Local Plan scenario and greater than Reference Case equivalent by  $5\%$  ,
  - Additional analysis undertaken where average junction V/C is similar between RC and LP but key A road arm is significantly higher in the LP

- 2.1.2 Volume over Capacity (V/C) is a measure of the performance of a junction – over  $95\%$  a junction is generally agreed to be above capacity. There are, as is common in the Kent and much of the South East, many junctions with Volume / Capacity close to or greater than  $95\%$  in the Reference Case. Where the Volume / Capacity is similar or at a lower level in the Local Plan scenario, mitigation measures are not proposed – the Transport Assessment for the Local Plan focuses on the measures which need to be secured as a result of the allocated development sites for severe impacts only.

### 2.2 Identify Mitigation Measures

- 2.2.1 At a higher level, our work has followed a ‘Decide and Provide’ approach to mitigation, in line with that set out in the TRICS report<sup>3</sup>. Figure 2-1 sets out the recommended approach to Decide and Provide.

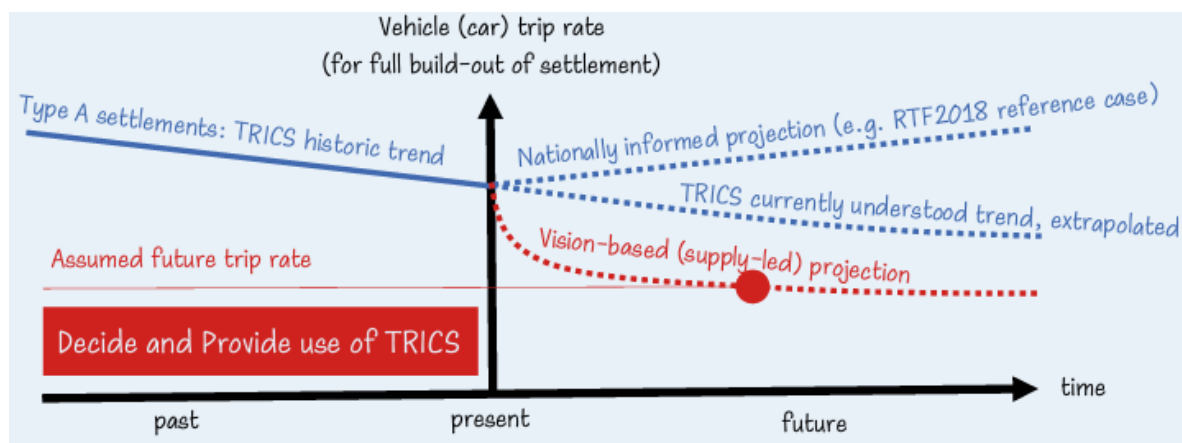


Figure 2-1 Decide and Provide use of TRICS: TRICS Guidance Note on the Practical Implementation of the Decide & Provide Approach

This approach has included ‘visioning’ where we have set out a vision for achieving a Local Plan based on a “compelling and clearly expressed place-based vision that has

<sup>3</sup> TRICS (2021), ‘Guidance Note on the Practical Implementation of the Decide & Provide Approach

sustainable transport as well as health, climate change and environmental needs integrated from the start"<sup>4</sup>. This place-based vision looks to minimise car use and support short-distance access to retail, employment, education and community services by sustainable and active travel. From this vision, we have aimed to develop scenarios with realistic vision based car trip rate projections.

- 2.2.2 Based on the forecast demand projections, we have then identified mitigation measures for each location using the following process. We have subdivided the key junctions into corridors to help identify their location. From this we have run analysis based on:
1. Where are the issues – what is the junction in question and where is it located.
  2. Why is the issue occurring – an analysis was undertaken looking at which junction arms have seen increases in traffic demand. We also consider the V/C in the Local Plan Report, if a mitigation was identified then, and what the V/C is after the sensitivity model runs for Reference Case and Local Plan.
  3. How is it to be mitigated – high level analysis has been undertaken to understand if mitigation is required, and the impact this would have on the identified additional congestion.
  4. When mitigation is required – analysis was undertaken with an interim year highway model that includes all development up to 2031. The analysis then identifies if the issue requires mitigating before 2031 or between 2031 and 2038.
  5. By whom – this analysis aggregates the developments by area to try to identify the key sites that contribute to the impacts identified. Appendix A sets out the aggregation of sites to area for reference.

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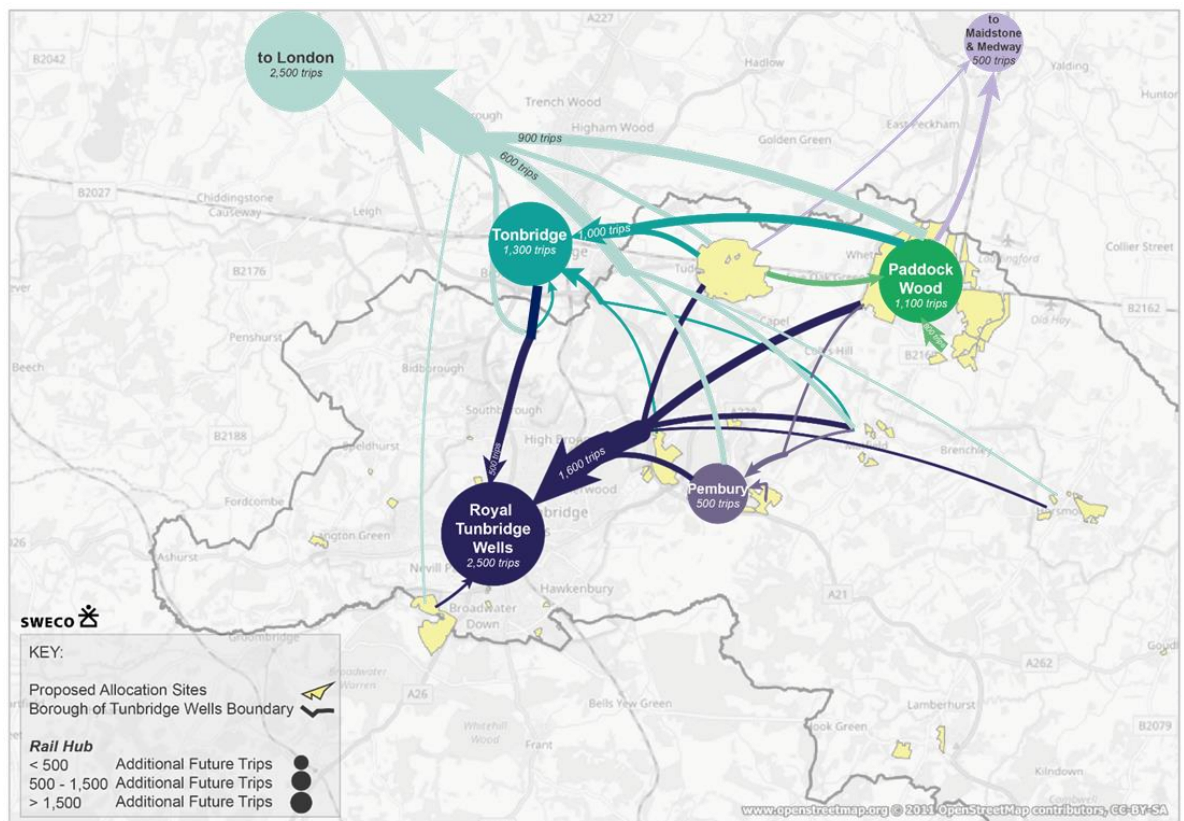
<sup>4</sup> CIHT (2019), 'Better planning, better transport, better places'

## 2.3 Wider investment in Sustainable Transport

- 2.3.1 In order to inform the level of realistic trip reduction from car in the future, we have developed an evidence base to support the sustainable approach we have taken and to estimate the level of modal change that will occur. The key part of this evidence base is the DfT commission 'Sustainable Travel Towns' demonstration project and subsequent evaluation of it.
- 2.3.2 In 2004, three towns - Darlington, Peterborough and Worcester – jointly received £10 million funding from the Department for Transport for the implementation of large-scale 'smarter choice' programmes over a five-year period, as part of the 'Sustainable Travel Towns' (STT) demonstration project. All three programmes put in place a range of initiatives aiming to encourage more use of non-car options – in particular, bus use, cycling and walking – and to discourage single-occupancy car use. This included wider funding that meant in the end there was a total of £13m for Darlington and £15m in Peterborough.
- 2.3.3 An evaluation conducted on behalf of the Department for Transport of the impacts of the STT project concluded that it was successful in reducing travel by car and increasing the use of other modes, from a comparison with trends in other medium-sized urban areas. Overall, in the three towns, there was a reduction in total traffic levels in the order of 2%, together with a reduction of 7-10% in the number of car driver trips per resident. It has been identified that the average investment between Peterborough and Darlington equated to an average of £105 per head over a 10 year period.
- 2.3.4 The current proposals for the Masterplan sites at Tudeley and Paddock Wood equate to a total of £50m investment. This is a 75:25 split between capital (infrastructure) for walking, cycling and bus investment and revenue (bus subsidy and travel plans) investment. Taking account of the 2019 population for Tonbridge and the areas around Paddock Wood, Pembury and Royal Tunbridge Wells, as well as Local Plan growth, this is an approximate investment of £370 per head. The investment is focussed on the masterplan sites and trips between Tonbridge and Paddock Wood, and Paddock Wood and Royal Tunbridge Wells via Pembury. In addition, new bus routes, cycling infrastructure, and a corridor study are proposed as mitigation for the A26 corridor between Tonbridge via Southborough to Royal Tunbridge Wells. Some additional schemes have as yet been uncostered such as wider LCWIP investment. The Low Traffic Neighbourhood Evidence Base by Tunbridge Wells Borough Council has not been costed.
- 2.3.5 KCC's Bus Service Improvement Plan (BSIP) will be submitted to the DfT at the end of October 2021. Alongside the Plan KCC will make a funding request to DfT. As part of this TWBC submitted a list of the bus services/infrastructure that have been included in the Local Plan IDP. Only schemes beyond this scope for the Tunbridge Wells area can be considered as a net increase in investment on top of the figure identified here.

- 2.3.6 This additional investment is therefore going to increase the average investment per head and create a significant a modal shift from car. To reflect the benefits of an investment of some 2 to 3 times the scale of that made in the STT, the Mitigation Scenario model run has been undertaken. This model run tests the impact on the wider area that would benefit from the cycling and bus improvements and the Area Wide Travel Planning proposed. This model run is consistent with that set out in the March 2021 Transport Assessment supporting the Reg 19 PSLP.
- 2.3.7 The measures, as set out in the Reg 19 PSLP consultation report, will bring new cycling infrastructure and improved bus services to a much wider area, alongside Area Wider Travel Planning to promote the use of these new and improved travel options. These measures follow the corridors where new trips are expected and are designed to ensure as many as possible of the additional future trips can be made by public transport or cycling. The new trips are shown in Figure 9-3 of the March 2021 TA and replicated as Figure 2-2 in this note.

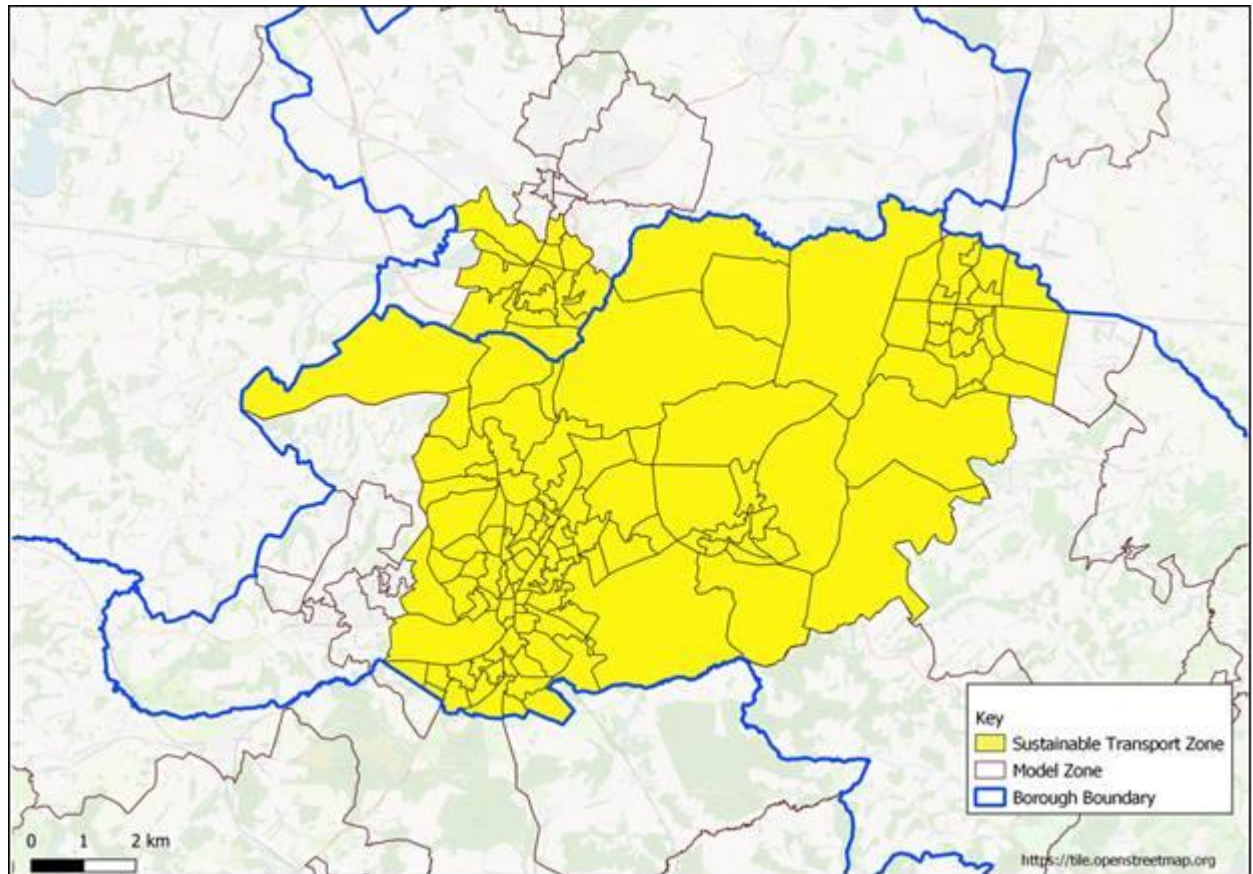
Figure 2-2 – High-level summary of trip distribution of Local Plan developments





**2.3.8** Taking account of the distance banding identified in the STT work, a 10% overall trip reduction has been applied in Scenario 4, the Mitigation Scenario. The core area where this modal shift has been applied is shown in Figure 10-2 of the March 2021 report and **Figure 2-2** of this note. The only difference is the urban area of Tonbridge has been added to the zone, given the high frequency bus service improvements, high tech bus stop infrastructure, the interurban cycle routes and the Area Wide Travel Plans proposed. This is the Sustainable Transport Zone.

Figure 2-3 – Sustainable Transport Zone



2.3.9 Only trips originating or ending in this Sustainable Transport Zone are affected by the modal shift.

## 2.4 Why the need for the Sustainable Transport Zone Scenario

2.4.1 The rationale for the approach to developing the proposed Local Plan mitigations is in line with current and emerging Government policy that seeks to avert dangerous levels of climate change and provide for a sustainable future. The importance of need to address environmental degradation is highlighted by TWBC joining 300<sup>5</sup> other local authorities in declaring a 'climate emergency' and this Local Plan offers a key opportunity to have an impact, at a local-level, on the global strategy to curb emissions.

2.4.2 The Government has just published its Net Zero Strategy which presents the plans to ensure that the UK achieves net zero with regards to greenhouse gas emissions by 2050. A key part of achieving the UK targets for greenhouse gas reduction and net zero compliance is the decarbonisation of transport. The report includes:

- the aim that half of all journeys in towns and cities will be cycled or walked by 2030
- Local Transport Plans (LTPs) will need to set out how local areas will deliver ambitious carbon reductions in line with carbon budgets and net zero
- A need to embed transport decarbonisation principles in spatial planning and across transport policy making
- an aspiration to reduce car trip rates and increase car occupancy through greater car sharing,
- A need to deliver a world class cycling and walking network in England by 2040

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<sup>5</sup> <https://www.climateemergency.uk/blog/list-of-councils/>

- 2.4.3 The DfT's Decarbonising Transport<sup>6</sup> plan lays out the Government's path to net zero for the transport sector. The plan highlights how an important aspect of reducing emissions from transport will be to use cars less, with people being able to utilise improved sustainable transport alternatives for more of their journeys.
- 2.4.4 An important way of delivering this will be through embedding transport decarbonisation principles in spatial planning to ensure that future growth does not lock in unsustainable patterns of movement.
- 2.4.5 The National Planning Policy Framework (NPPF)<sup>7</sup> identifies how decisions around transport infrastructure, in relation to future growth and development, are fundamental in facilitating sustainable development and contributing to wider sustainability and health objectives. Historic transport and land use planning that is based on predicting future demand to provide capacity ('predict and provide') will limit the sustainability of future development – it will both fail to provide for sustainable transport use and instead provide for continued increases in car use, and NPPF seeks to avoid this.
- 2.4.6 A key paradigm change that needs to take place to achieve this outcome is to move away from 'predict and provide' to an approach that sets outcomes that communities want to achieve and provides the transport solutions to deliver those outcomes ('vision and validate' or 'decide and provide'). The Chartered Institute of Highways and Transportation (CIHT) report 'Better planning, better transport, better places'<sup>8</sup> reinforces this approach by highlighting the importance of planning for the desired outcomes with a key recommendation being to fully abandon predict and provide models of transport planning. The report also recommends that Local Plans should be assessed against wider sustainability criteria, such as health and well-being, lifestyle and environmental criteria, not just standard demographic and transport information. Another key recommendation from the report is that the supporting evidence base for Local Plans must demonstrate where transport capacity presents opportunities as well as constraints. For example, where traffic congestion is forcing people to reconsider their travel behaviour and the provision of appropriate sustainable transport infrastructure can facilitate them to use that instead.
- 2.4.7 The CIHT report references the TRICS 'Decide and provide guidance'<sup>9</sup> that provides information for planners and policy makers on how to plan for future growth, considering potential future trends, scenarios and uncertainty that will impact on travel behaviour and demand. The TRICS guidance identifies how decide and provide aims to improve the resilience of planning decisions by taking account uncertainty about the future. This approach will support more effective plan-making compared to predict and provide which is reliant on historic trends that may be irrelevant in the future.

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<sup>6</sup> <https://www.gov.uk/government/publications/transport-decarbonisation-plan>

<sup>7</sup> <https://www.gov.uk/government/publications/national-planning-policy-framework--2>

<sup>8</sup> <https://www.ciht.org.uk/knowledge-resource-centre/resources/better-planning-better-transport-better-places/>

<sup>9</sup> <http://www.trics.org/decideandprovideguidance.html>

- 2.4.8 The Government further emphasises the important of adopting a decide and provide approach, as part of the plan-making's visioning and area-identification process, through proposals included in the Planning for the Future White Paper<sup>10</sup>. The proposals include a 'new emphasis on front-loading and engagement at the plan-making stage' and a 'greater focus on placemaking within the National Planning Policy Framework'. Developing a vision of how future growth can be accommodated sustainably through the provision of effective sustainable transport infrastructure is key to supporting the transition to a low carbon future. Reverting to decision making that is based on providing highway capacity for an assumed level of demand will significantly hinder efforts to facilitate sustainable mobility while risking exacerbating existing highway capacity issues.
- 2.4.9 With reference to wider transport policy and strategy the Government is committed to substantial mode shift away from car by making cycling and walking the natural choice for short journeys and improving the public transport network. The Cycling and Walking Investment Strategy<sup>11</sup> and Gear Change<sup>12</sup> present a vision to see half of all journeys cycled or walked in towns and cities by 2030, demonstrating a clear direction for to travel demand in urban areas that moves away from car use and towards active modes. Meanwhile, the Bus Back Better<sup>13</sup> strategy identifies specifically that in congested areas, substantial modal shift from cars is needed if the Government's broader climate goals are to be met.
- 2.4.10 In summary, the 'Sustainable Transport Zone' scenario reflects the enormous investment of over £50m in new sustainable infrastructure already directly identified by the Local Plan IDP, as well as yet to be costed potentially additional wider bus based BSIP and walking and cycling based LCWIP investment beyond the Local Plan IDP requests. This spending is in line with current and emerging government policy to 'Build Back Better'<sup>14</sup> and Gear Change<sup>15</sup>. This scenario robustly tests the future situation with relatively small reductions in car trips and provides an achievable vision for ensuring a more sustainable future based on low-carbon growth.
- 2.4.11 Our final scenario, Scenario 4, includes a 10% reduction for car trips in the Sustainable Transport Zone that reflects mode shift evidence that the bus, cycling and walking intervention impacts had on car trips in the Sustainable Travel Towns. No doubt this is a big change for the area. However, there is already a commitment to change from the Local Authority in the LCWIP work, the County Council in the BSIP, and from Government. The Government's top down ambition for a 50% walking and cycling mode share in urban areas by 2030 would equate to a circa 25% reduction in internal car trips for the Sustainable Transport Zone area alone. Given these commitments, we feel it is realistic to have a 'Decide and Provide' vision of 10% reduction in car trips in the area by 2038 at the end of the Local Plan, based on the investment outlined in this report and the wider investment from the LCWIP and BSIP. This also excludes the potential for wider funds to be used to compliment the investment in sustainable transport earmarked.

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<sup>10</sup> <https://www.gov.uk/government/consultations/planning-for-the-future>

<sup>11</sup> <https://www.gov.uk/government/publications/cycling-and-walking-investment-strategy>

<sup>12</sup> <https://www.gov.uk/government/publications/cycling-and-walking-plan-for-england>

<sup>13</sup> <https://www.gov.uk/government/publications/bus-back-better>

### 3 Results of sensitivity model runs

3.1.1 Model scenario changes were requested by stakeholders. As a result, the model scenarios tested and presented here have the following amendments in comparison to the March report.

- **Reference Case (RC)** – Appendix B outlines the locations where junctions have been upgraded to take account of committed developer mitigations as part of committed developments already modelled in the demand.
- **Local Plan (LP)** - No change to RC highway network. The demand has been uplifted based on the agreed Local Plan trip rates both for the smaller sites and the 10% reduced rates for the larger Paddock Wood and Tudeley sites as outlined in Table 1-1. No changes have been made to existing development demand or trip rates in the model, including existing Tudeley and Paddock Wood areas.
- **Local Plan Highways (LPH - Local Plan scenario including highways mitigation measures only)** – No demand changes as compared to the LP scenario. This scenario highway network has been amended to take account impacts identified from LP scenario. Where significant schemes have been identified as required a highway mitigation has been added. Appendix C outlines the locations for these schemes.
- **Mitigation Scenario (MS = Local Plan scenario including highways mitigation measures and mode shift from Sustainable Transport Zone)** – This scenario includes demand changes based on modal shift from car as outlined in section 2.3.8. The network is the same as the LP highway network, except for additional signals at the Sandhurst Road and Sandrock Road junctions on the A264 Pembury Road and also bus only provision on Calverley Park Gardens. This is all to aid bus priority on the A264 Pembury Road corridor.

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<sup>14</sup> <https://www.gov.uk/government/publications/build-back-better-our-plan-for-growth>

<sup>15</sup>

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/904146/gear-change-a-bold-vision-for-cycling-and-walking.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/904146/gear-change-a-bold-vision-for-cycling-and-walking.pdf)

**3.1.2** The findings of the model runs are summarised by corridor in tables on the following pages. The results are for 2038, with intermediate year results for 2031 set out in **Appendix D**.

3.1.3 The following references are used:

AM = Morning peak period

PM = Evening peak period

RC = Reference Case

LP = Local Plan scenario without highway mitigations

LPH = Local Plan scenario including highways mitigation measures only

MS = Local Plan scenario including highways mitigation measures and mode shift from Sustainable Transport Zone

### 3.2 A21 Corridor

Table 3-1 A21 mitigations

ID Junction	Description	Corridor	Mitigation	Worst performance - Average Volume/Capacity (V/C)			
				RC	LP	LPH	MS
57-1	A26 Quarry Hill Road / A21	A21 / A26	No issues	37	40	39	37
57-2	A26 Quarry Hill Road / A21 / A26 London Road	A21 / A26	No issues	46	49	48	47
57-3	A26 Quarry Hill Road / A21 / A26 London Road	A21 / A26	No issues	63	63	61	58
9	A26 Woodgate Way / Pembury Road / A2014 Vauxhall Lane / A21 / A2014 Pembury Road	A21 / A26	RC - Widen lanes at roundabout	82	84	86	82
30	A21 / Tonbridge Road / Longfield Road	A21	RC - Widen lanes at junction and under A21	46	52	54	53
102	A21/Tonbridge Rd Roundabout	A21	RC - Widen lanes at junction and under A21	43	49	52	50
21	A21 / A228 Pembury Road / A264 Pembury Road	A21 / A264 / A228	LPH / MS - A228/A264 corridor upgrade - queueing not onto A21	85	90	93	90
22	A21 / A228 Pembury Northern Bypass / A228 Pembury Road	A21 / A228	LPH / MS - A228/A264 corridor upgrade - queueing not onto A21	94	100	94	89
34	Henwood Green Road / A21 Hastings Road	A21	No issues	16	34	16	14
35	Kippings Cross Roundabout (A21/B2160 Maidstone Rd)	A21 / B2160	LPH / MS - Signals to regulate B2160 and A21 interaction	87	96	90	86



- 3.2.1 No new mitigation locations and mitigations have been identified in the sensitivity testing when compared with the outputs of the March 2021 Transport Evidence report (Sections 10.7, 11.3 and 12). Mitigations for junctions 9, 30 and 102 are part of existing mitigation plans for new developments in the area, primarily the Kingstanding Way development and have been included in traffic modelling in the Reference Case and onwards.

### **Kippings Cross**

- 3.2.2 The proposed mitigation manages the extra flow from Local Plan sites, ensuring the A21 delay travelling north from Lamberhurst is reduced compared to the Reference Case.
- 3.2.3 The Local Plan mitigation is to provide traffic signals at Kippings Cross roundabout and localised widening of the approach on the B2160 Maidstone Rd, as set out in the March 2021 Transport Evidence supporting the Reg 19 PSLP (Table 11-7). This is the approach requested by NH and KCC, namely to establish a suitable financial contribution from the Local Plan sites towards works at junctions where there is an impact.
- 3.2.4 It is not recommended that this scheme is actually implemented as it does not resolve the fundamental existing issue at this junction, that the A21 reduces down to one lane here and that a larger roundabout as part of future dualling on this section of the A21, or some such similar more comprehensive scheme, is required. We understand NH and TfSE are undertaking studies of the A21 including this section at the moment, for a place in a later Road Investment Strategy (RIS) period, and a contribution from the Tunbridge Wells Borough Local Plan towards any resulting scheme will be required during the Local Plan period.

### **A21 / A264 / A228 Pembury Rd junctions**

- 3.2.5 There is a need to manage flow on the A264 corridor in this area. The priority from our analysis is to use traffic signals both to gate traffic before and after the A21 junction with the A228/A264. This means for Woodgate Corner (junction of A228/Tonbridge Road/Pembury High Street) recasting the signals to allow for all movements for each arm individually to enable more trips to link from the A228 Pembury Northern Bypass with the A21/Longfield Road junction, a junction which has more spare capacity and is well suited to supporting higher demand flows in the future. The A264 Pembury Road can only support single lane running so it is planning to use signals at key junctions on this corridor to gate traffic coming out of Royal Tunbridge Wells before it reaches the A21 dumbbell junction to help keep demand within junction and link capacity.
- 3.2.6 The sustainable transport mitigations also support placing a bus lane on the A228 southbound from Woodgate Corner to past the dumbbell junction with the A21 to also help control highway demand through the junction.

### 3.3 A228 Corridor (Pembury – East Peckham)

Table 3-2 A228 mitigations

ID Junction	Description	Corridor	Mitigation	Worst performance - Average Volume/Capacity (V/C)			
				RC	LP	LPH	MS
8	A26 Woodgate Way / B2017 Tudeley Road / Tudeley Lane	Tudeley	Additional approach capacity on B2017	87	93	89	88
12	A228 Branbridges Road / B2160 Maidstone Road / A228 Whetsted Road	A228	2 lane approach on A228 Whetsted NB and B2160 Maidstone Road	96	99	92	90
13	A228 Maidstone Road / B2017 Badsell Road	A228	Enlarged roundabout from wider Colts Hill Bypass works	96	105	74	70
15	B2017 Badsell Road / B2160 Maidstone Road	Paddock Wood	Realigned junction with signals	51	56	55	51
88	B2017 Crockhurst Street/Tudeley Road/Hartlake Road	Tudeley	Access closed with local access via Tudeley Masterplan area. Hartlake Road closed to through traffic	66	89	80	78
103	Five Oak Green/Bypass	Tudeley	New Section for Colts Hill / Five Oak Green Link Roads			51	48
104	Five Oak Green Bypass/ Colts Hill Bypass	A228	New Section for Colts Hill / Five Oak Green Link Roads			79	76
106	Colts Hill Bypass/Alders Rd	A228	Enlarged roundabout from wider Colts Hill Bypass works			69	68

- 3.3.1 Two locations (A228 with B2160 – junction 12 and A228 / B2017 - junction 13) are identified that require mitigation before 2031. This includes constructing at least part (potentially the rebuild of the existing roundabouts first) or all of the proposed works to Colts Hill including the part bypass by 2031 to minimise impacts of new traffic on existing local residents. Both these interventions were identified previously but the timeframes for delivery are now more certain. Work for junction 12 can be completed within highway boundary. Work for junction 13 will need additional third party land. However, this should be seen as part of the Colts Hill Bypass land acquisition.
- 3.3.2 The Sensitivity Test identifies the need to further consider the final design for the proposed part Colts Hill Bypass and Five Oak Green link road junction to ensure it is correctly sized for the forecast demand. This scheme will need third party land.

**A26 corridor (South of Royal Tunbridge Wells – A21/A26 junction)**

Table 3-3 A26 Mitigation

ID Junction	Description	Corridor	Mitigation	Worst performance - Average Volume/Capacity (V/C)			
				RC	LP	LPH	MS
42	A26 London Road / Major York's Road	A26 RTW	Corridor Study	96	104	105	101
54	A26 London Road / Yew Tree Road	A26 RTW	Corridor Study	90	95	96	87

- 3.3.3 Two additional junctions for consideration have been identified in the sensitivity testing presented in this note. However, it must be noted that a number of junctions are already close to, at or over capacity in the sensitivity Reference Case.
- 3.3.4 The solutions for the A26 corridor, as set out in the March 2021 Transport Evidence supporting the Reg 19 PSLP, will be demand management rather than physical changes as there is no land available close to and around Royal Tunbridge Wells for major junction widening. The environmental and social costs and knock on effects of major road building would prohibit such an approach. This is discussed in more detail in the March 2021 Transport Evidence supporting the Reg 19 PSLP with a focus on a corridor mitigation plan, where signals are used to control traffic flow, turns and parking are rationalised to open up space for cycling, walking and high quality bus corridors. This includes work identified and costed by Phil Jones Associates (PJA) as part of the LCWIP to implement improvements to the A26 Cycle Route as well as Low Traffic Neighbourhoods in the area, with future pedestrian and cycle friendly junction designs needing to take a lead from this.
- 3.3.5 The Local Plan is delivering new bus routes for Royal Tunbridge Wells from the Local Plan sites in Tudeley / Paddock Wood. Funding should be sought to extend these services along the A26 to the Local Plan sites along Eridge Road / Broadwater Down. This will deliver extra bus capacity for the area. Any corridor study should focus on identifying on ways to get more priority to buses along this corridor.

## A228 / A264 (Royal Tunbridge Wells – Pembury)

Table 3-4 A228 / A264 mitigations

ID Junction	Description	Corridor	Mitigation	Worst performance - Average Volume/Capacity (V/C)			
				RC	LP	LPH	MS
20	A228 Pembury Northern Bypass / High Street / Tonbridge Road	A228/A264	Extra left lane from A21 junction, signals retimed to push traffic towards A21 Longfield Road junction	80	88	83	81
23	Blackhurst Lane / A264 Pembury Road / Hall's Hole Road	A228/A264	Roundabout	100	103	105	102
24	A264 Pembury Road / Sandhurst Road	A264	Signalised – safety scheme for walking and cycling / priority for buses	76	80	78	81
25	A264 Pembury Road / Sandrock Road	A228/A264	Signalised – safety scheme for walking and cycling / priority for buses	56	61	60	88

- 3.3.6 This corridor mitigation focuses on adding new signals at Sandrook Road and Sandhurst Road to help gate or manage the traffic on the corridor. This will also act as a safety scheme for walking and cycling and aid bus priority along the corridor. Woodsgate Corner Junction 20 is to be re-signalled to push Pembury Bypass traffic towards the A21 via Tonbridge Road. Woodsgate Corner will be redesigned to include high quality cycling and pedestrian crossings, based around the CYCLOPS concept.
- 3.3.7 A roundabout has been proposed by developers for the junction with Halls Hall Road (junction 23) and included in the modelling. However, it is not clear it would work any better than the current junction arrangement and may make this important corridor less attractive for pedestrians and cyclists. The Section 106 agreement to deliver the roundabout allows for the contributions to be used for alternative mitigations. In all scenarios there are significant congestion and demand issues, with limited space for increased junction capacity. As mentioned previously, the overall proposal for this area in the March 2021 Transport Evidence supporting the Reg 19 PSLP is one of managing highway demand through the provision of improved bus services and walking and cycling infrastructure on the corridor, plus the aforementioned signalisation. Encouraging modal shift rather than trying to accommodate additional cars, which would cause further problems in other parts of Royal Tunbridge Wells, is the short and long term solution. The March 2021 report references making Calverley Park Gardens bus and cycle only as well as enhancing bus and cycle priority on the core corridor.

### 3.4 Junction performance in Tonbridge and Malling Borough

#### Tonbridge Town Centre Corridor

- 3.4.1 The existing traffic volumes and limited capacity cause congestion in the Reference Case. The modelling, as set out in **Table 3-5**, represents this. Thus, it is not possible to attribute the Local Plan development as the cause of severe congestion impacts overall. Nonetheless the Local Plan developments do add traffic flow to these junctions which in turn has some negative impacts on operation. The space for mitigation in central Tonbridge is limited and the approach to mitigating this should be focused on encouraging significant modal shift or traffic management in Tonbridge town centre. TWBC is aware that TMBC is progressing its LCWIP and TWBC seeks to work with TMBC on improving cycling infrastructure and public transport across the boundary. This will be complimented by significant investment identified in the Local Plan in cycling and bus connections to Tonbridge from Paddock Wood and Tudeley and from Royal Tunbridge Wells. This investment can act as a key driver for wider change in Tonbridge and changes on the Town Centre Corridor can unlock further benefits from this significant investment by developers in Tunbridge Wells Borough.
- 3.4.2 Specific plans include funding a landmark Bus Stop for bus services towards Tudeley around Tonbridge Station, signage, and pedestrian crossing improvements if necessary as part of quality service from Paddock Wood to Tonbridge. Work at the A26 / B2017 Tudeley Road roundabout can help establish a safe walk and cycle link from Tudeley via the closed to traffic section of Tudeley Lane, Goldsmith Road and Priory Road.

#### A26 / Three Elm Lane junction (junction 86)

The modelling set out in **Table 3-5** suggests that the A26 / Three Elm Lane junction (junction 86) away from the town centre requires mitigation and this can be provided through signalisation and provision of an additional approach lane that should be funded through the Tunbridge Wells Local Plan.

Table 3-5 Tonbridge mitigations

ID Junction	Description	Corridor	Mitigation	Worst performance - Average Volume/Capacity (V/C)			
				RC	LP	LPH	MS
4	B2260 High Street / Railway Approach / Vale Road / Barden Road	Tonbridge	Corridor Study	78	89	92	82
5	B2260 Quarry Hill Road / A2014 Pembury Road / A26 Quarry Hill Road	Tonbridge	Corridor Study	94	99	105	105
7	A26 Vale Road / A26 Vale Rise / Vale Road	Tonbridge	Corridor Study	101	96	98	96
83	High Street/Medway Wharf Road	Tonbridge	Corridor Study	73	72	80	70
86	A26 Hadlow Road East/Three Elm Lane	Tonbridge	Signals	111	121	91	86



### 3.5 Delivery of schemes – land ownership

- 3.5.1 The Local Plan makes clear that “the Council will use its Compulsory Purchase Order powers if necessary, to deliver strategic transport links, and/or will work in partnership with other organisations or authorities as necessary” (para 6.575). This is explicitly stated in the overarching strategic policy for ensuring comprehensive development (Policy STR4) and the strategic policies for Paddock Wood and east Capel (STR/SS1) and Tudeley Village (STR/SS3).
- 3.5.2 The mitigation schemes we have identified primarily stay within highway boundaries. Where this has not been possible, our schemes have identified land away from people’s homes and buildings. The land that requires potential CPOs, which would be linked to specific planning permissions, is shown in Appendix G.

### 3.6 A21 Merge Diverge analysis

- 3.6.1 The merge diverge analysis has been updated from that set out in the March 2021 Transport Evidence supporting the Reg 19 PSLP, to take account of the sensitivity traffic flow analysis. Document CD122 Revision 1 of the Department for Transport (DfT) document Design Manual for Road and Bridges (DMRB) has been reviewed. The conclusions of section 9.7 of the Reg 19 PSLP report are the same, whereby no potential issues are apparent at junctions within the study area in the Reference Case or when Local Plan development traffic is added to the network.
- 3.6.2 Table 9-17 of the Reg 19 PSLP report has been updated as **Table 3-6**, confirming all existing merge diverge junction types will continue to be appropriate with the Local Plan development built out. Flows for these merge diverge junctions are provided in Appendix F.

**Table 3-6 Forecast Merge and Diverge Type along A21 corridor**

<b>Junction</b>	<b>Merge/Diverge</b>	<b>Direction</b>	<b>Existing Type</b>	<b>Base</b>	<b>RC</b>	<b>LPH</b>	<b>LP</b>
A21/A26	Diverge	EB	C	✓	✓	✓	✓
	Merge	WB	A	✓	✓	✓	✓
A21/A2014	Diverge	EB	A	✓	✓	✓	✓
	Merge	EB	B	✓	✓	✓	✓
	Diverge	WB	A	✓	✓	✓	✓
	Merge	WB	A	✓	✓	✓	✓
A21/Longfield Rd	Diverge	NB	A	✓	✓	✓	✓
	Merge	NB	A	✓	✓	✓	✓
	Diverge	SB	D	✓	✓	✓	✓
	Merge	SB	A	✓	✓	✓	✓
A21/A228	Diverge	SB	A	✓	✓	✓	✓
	Merge	SB	A	✓	✓	✓	✓
	Diverge	NB	A	✓	✓	✓	✓
	Merge	NB	B	✓	✓	✓	✓

## 4 Summary and conclusions

- 4.1.1 This report is an Addendum to the Transport Assessment that formed an evidence base document to the Pre-Submission Local Plan at Regulation 19 stage. As a result of consultation with the highways authorities Kent County Council (KCC) and Highways England (NH), further Sensitivity Tests have been agreed so that all parties have confidence that highly robust traffic modelling have been undertaken.
- 4.1.2 This report sets out the results of the sensitivity tests undertaken and responds to the queries raised. This note responds to the following questions:
1. Where are the issues
  2. Why is the issue occurring
  3. Local Plan Report, if a mitigation was identified, what the junction performance is after the sensitivity model runs for Reference Case and Local Plan scenarios.
  4. How are impacts to be mitigated
  5. When mitigation is required
  6. By whom or how will mitigation be funded
- 4.1.3 **Table 4.1** illustrates the new mitigation measures required as a result of the sensitivity test analysis. For more information on the mitigation measures already proposed please refer to Tables 10-2 to 10-5 and Table 11-7 of the March 2021 Transport Evidence supporting the Reg 19 PSLP.

*Table 4-1 Summary of required junction mitigation works and status at March 2021 Reg 19 report*

ID Junction	Description	Corridor	Highway Design Mitigation - LPH/MS scenarios	Summary intervention	Status from March
4	B2260 High Street / Railway Approach / Vale Road / Barden Road	Tonbridge		New bus services to/from Tudeley LP site + local interventions	Interventions new
5	B2260 Quarry Hill Road / A2014 Pembury Road / A26 Quarry Hill Road	Tonbridge		New bus services to/from Tudeley LP site + local interventions	Interventions new
7	A26 Vale Road / A26 Vale Rise / Vale Road	Tonbridge		New bus services to/from Tudeley LP site + local interventions	Interventions new
83	High Street/Medway Wharf Road	Tonbridge		New bus services to/from Tudeley LP site + local interventions	Interventions new
86	A26 Hadlow Road East/Three Elm Lane	Tonbridge	Yes	Signals and turning lanes	Included
8	A26 Woodgate Way / B2017 Tudeley Road / Tudeley Lane	Tudeley	Yes	Widened approaches B2017 Tudeley Road	Included
88	B2017 Crockhurst Street/Tudeley Road/Hartlake Road	Tudeley	Yes	Close Hartlake Road for safety	Included
103	Five Oak Green/Bypass	Tudeley	Yes	New link	Included
104	Five Oak Green Bypass/ Colts Hill Bypass	A228	Yes	New link	Included
106	Colts Hill Bypass/Alders Rd	A228	Yes	New link	Included
12	A228 Branbridges Road / B2160 Maidstone Road / A228 Whetsted Road	A228	Yes	Widened approach A228 NB + B2106 NB	Included
13	A228 Maidstone Road / B2017 Badsell Road	A228	Yes	Increase size of roundabout and approaches	Included
20	A228 Pembury Northern Bypass / High Street / Tonbridge Road	A228	Yes	Extra lane NB, resignalisation	Included
23	Blackhurst Lane / A264 Pembury Road / Hall's Hole Road	A264	Yes	Roundabout	Included
24	A264 Pembury Road / Sandhurst Road	A264	Yes (MS only)	Signals	Included
25	A264 Pembury Road / Sandrock Road	A264	Yes (MS only)	Signals	Included
76	A264 Pembury Road/Kingswood Road/Calverley Park Gardens	A264	Yes (MS only)	Bus / cycling only Calverley Park Gardens	Included
35	Kippings Cross Roundabout	A21	Yes	Signals on roundabout	Included
42	A26 London Road / Major York's Road	A26		New bus services for Local Plan developments + corridor study	Included
54	A26 London Road / Yew Tree Road	A26		New bus services for Local Plan developments + corridor study	Included

- 4.1.4 As shown the only additional mitigation works are local schemes for Tonbridge (landmark Bus Stop at Tonbridge Station, signage, pedestrian crossing improvements, improvements to walk cycle route from station to Tudeley Lane and Tudeley Road) and signalisation of the A26 / Three Elm Lane junction, neither of which are required until after 2031. New infrastructure set out in the **March 2021 Transport Evidence supporting the Reg 19 PSLP** includes new high frequency high quality bus services, from Tonbridge to Paddock Wood via Tudeley, and Tonbridge to Royal Tunbridge Wells via Southborough. In addition, new inter urban cycle routes on these corridors are proposed as part of the Tudeley and Paddock Wood masterplans or the A26 corridor improvements set out in the Tunbridge Wells Borough Council's LCWIP submissions.
- 4.1.5 The landmark Bus Stop at Tonbridge Station, signage, pedestrian crossing improvements, improvements to walk cycle route from station to Tudeley Lane and Tudeley Road will help both with access from the Local Plan sites at Tudeley and Paddock Wood but also people living within this part of Tonbridge. These proposals are instead of a previously suggested Corridor Study, that KCC advised is already underway as part of a for a wider Tonbridge transport and public realm review. In addition, it is proposed that an extension of the Area Wide Travel Planning measures into Tonbridge. The Area Wide Travel Plan will help to promote use of the new infrastructure and bus services available, reducing car trips. The positive impact of the modal shift that would occur has been modelled in this note.
- 4.1.6 Highway works at the A26 / Three Elm Lane junction (junction 86) away from Tonbridge town centre would include signalisation and provision of an additional approach lane that should be funded through the Tunbridge Wells Local Plan.
- 4.1.7 Merge Diverge analysis has been re-run and no further mitigation measures for the A21 are required beyond those stated in the **March 2021 Transport Evidence supporting the Reg 19 PSLP**.
- 4.1.8 A comprehensive list of all mitigation measures, either highways, walking and cycling, bus and soft multi-modal measures are set out in Appendix E. In Tunbridge Wells not only is increasing highways capacity impossible due to the constrained nature of the historic towns in an AONB, but it is the wrong approach for the health of the people and the environment.
- 4.1.9 In summary, the sensitivity modelling set out in this note responds to the queries raised by NH and KCC and addresses their concerns. The modelling shows that the sustainable transport based Decide and Provide approach will mitigate the impacts of the Local Plan development and, alongside existing walk, cycle and bus initiatives, provide a positive healthy future for Tunbridge Wells. This approach is fully in line with government policy and ambition and the modelling provided robustly tests this, and the control, scenarios.

## Appendix A – Area look up for new developments + development assumptions

### Residential Sites

Parish	Dev Name	Total No. of Dwellings by 2031	Total No. of Dwellings by 2038	Transport Model Zone	Area
		Dwellings	Dwellings		
Royal Tunbridge Wells	Former Cinema Site	0	109	91066	RTW Centre
Royal Tunbridge Wells	Larger Town Centre Allocation	0	200	81033	RTW Centre
Royal Tunbridge Wells	Land at Lifestyle Ford	50	50	91006	RTW Centre
Royal Tunbridge Wells	Land at Lifestyle Ford	50	50	91007	RTW Centre
Royal Tunbridge Wells	Former Plant and Tool Hire, Eridge Road	45	45	91004	A26 West
Royal Tunbridge Wells	Wyevale Garden Centre, Eridge Road	30	30	91072	A264 West
Royal Tunbridge Wells	Land at 36-46 St Johns Road	0	90	81034	RTW Centre
Royal Tunbridge Wells	West of Eridge Road at Spratsbrook Farm	0	60	91070	A26 West
Royal Tunbridge Wells	West of Eridge Road at Spratsbrook Farm	0	60	91071	A26 West
Royal Tunbridge Wells	Land at BT Engineering Centre	35	35	91004	A26 West
Royal Tunbridge Wells	Land at BT Engineering Centre	15	15	91067	A26 West
Royal Tunbridge Wells	Culverden Stadium, Culverden Down	0	30	81044	A26 North
Royal Tunbridge Wells	Land at Bayham Sports Field West	0	25	91000	RTW South
Royal Tunbridge Wells	Colebrook Sports Field, Liptraps Lane	0	48	81004	North Farm
Royal Tunbridge Wells	Colebrook Sports Field, Liptraps Lane	0	32	80260	North Farm
Royal Tunbridge Wells	Land at Rown Tree Road, Showfields Road	155	155	80272	A26 West
Royal Tunbridge Wells	Land at former Gas Station, Sandhurst Rd	200	200	91025	North Farm
Royal Tunbridge Wells	Land at Beechwood Sacred Heart School	0	36	81000	A264
Royal Tunbridge Wells	Turners Pie Factory (see RTW20)	70	70	91004	A26 West
Royal Tunbridge Wells	Turners Pie Factory (see RTW20)	30	30	91067	A26 West
Royal Tunbridge Wells	Montacute Gardens	30	30	81037	A26 West
Royal Tunbridge Wells	Caenwood (site 100)	70	100	80261	A26 North
Royal Tunbridge Wells	202+230 Upper Grosvenor Road	45	45	91021	North Farm
Cranboook and Sissinghurst	Turnden	168	204	80254	East TW
Cranboook and Sissinghurst	Land adj Crane Valley	23	113	80254	East TW
Cranboook and Sissinghurst	Land adj Crane Valley	23	113	81068	East TW
Cranboook and Sissinghurst	Land south The Street	20	20	81066	East TW
Cranboook and Sissinghurst	Orchard Cottage	18	18	81066	East TW
Southborough	Spelchurst Road (former allotments)	0	16	81019	A26 North
Southborough	Land at Baldwins Lane	26	26	81007	North Farm
Hawkhurst	White House	0	42	81065	East TW
Hawkhurst	Copthall	40	40	81064	East TW
Hawkhurst	Copthall	40	40	81065	East TW
Hawkhurst	Brook House, Cranbrook road	25	25	81065	East TW
Hawkhurst	Former Ste of Springfield Nurseries	24	24	81065	East TW
Pembury	R/o High Street and west of Chalket Lane	60	60	91059	Pembury
Pembury	Hubbles Farm and south of Hastings Road	80	80	91060	Pembury
Pembury	North of the A21, south and west of Hastings Road	80	80	91060	Pembury
Pembury	Downingbury Farm, Maidstone Road	15	15	91051	Pembury
Pembury	Downingbury Farm, Maidstone Road	10	10	81016	Pembury
Pembury	Sturgeons fronting Henwood Green Road	0	19	91061	Pembury
Pembury	Woodsgate Corner	0	80	81014	Pembury
Pembury	Owlsnest, Tonbridge Road	38	38	91052	Pembury
Pembury	Cornford Court, Cornford Lane	35	35	81014	Pembury

Rusthall	Lifestyle Motor Europe, Langton Road	15	15	81041	A264 West
Goudhurst	Balcombes Hill	0	14	81053	East TW
Goudhurst	Triggs	0	11	81053	East TW
Horsmonden	Furnace Lane	55	55	81056	East TW
Horsmonden	East of Horsmonden	165	165	81056	East TW
Horsmonden	Land south of Brenchley Road and west of Fromandez Drive	0	100	81056	East TW
Benenden	New Pond (Uphill)	20	20	81062	East TW
Benenden	Feoffee	25	25	81062	East TW
Benenden	Benenden Hospital	50	73	81062	East TW
Lamberhurst	Spray Hill	30	30	80256	East TW
Sandhurst	South Sayville, Rye Road west of Marsh Quarter Lane	15	15	81063	East TW
Sandhurst	Sharps Hill Farm, Queen Street	15	15	81063	East TW
Speldhurst	West of Speldhurst Road and south of Ferbies	12	12	91068	A264 West
Brenchley and Matfield	Brenchley Road	45	45	91047	Paddock Wood
Brenchley and Matfield	Land at Maidstone Road	15	15	80259	Paddock Wood
Frittenden	Land at Cranbrook Road	30	30	81066	East TW
Capel (Tudeley)	Tudeley Village	1050	2800	91201	Tudeley
Paddock Wood	Land at Mascalls Farm	99	412	82001	Paddock Wood
Paddock Wood	Paddock Wood Town Centre	14	14	91054	Paddock Wood
Paddock Wood	Paddock Wood Town Centre	21	21	91076	Paddock Wood
Paddock Wood	RES10	46	77	82003	Paddock Wood
Paddock Wood	RES5	136	230	91064	Paddock Wood
Paddock Wood	RES6	183	309	91064	Paddock Wood
Paddock Wood	RES2	92	155	91045	Paddock Wood
Paddock Wood	RES4	182	306	91064	Paddock Wood
Paddock Wood	RES9	105	177	82003	Paddock Wood
Paddock Wood	RES8	253	427	82003	Paddock Wood
Paddock Wood	RES7	92	156	91064	Paddock Wood
Paddock Wood	RES3	219	370	91045	Paddock Wood
Paddock Wood	RES17	41	69	82002	Paddock Wood
Paddock Wood	RES19	15	26	82002	Paddock Wood
Paddock Wood	RES16	100	169	82000	Paddock Wood
Paddock Wood	RES18	78	132	82002	Paddock Wood
Paddock Wood	RES20	92	155	82002	Paddock Wood
Paddock Wood	RES12	154	260	82000	Paddock Wood
Paddock Wood	EXS1	37	62	82000	Paddock Wood
Paddock Wood	RES14	138	233	82000	Paddock Wood
Paddock Wood	RES15	64	108	82000	Paddock Wood
Paddock Wood	RES13	102	171	82000	Paddock Wood

## Employment Sites

Parish	Dev Name	Total No. of Jobs by 2031	Total No. of Jobs by 2038	Transport Model Zone	Area
Royal Tunbridge Wells	Land adjacent to Longfield Road	2604	3720	91177	North Farm
Royal Tunbridge Wells	Land at Colebrook House, Pembury Road	0	250	91177	North Farm
Royal Tunbridge Wells	Former North Farm Landfill Site	0	292	91077	North Farm
Royal Tunbridge Wells	Land to the north of Hawkenbury Rec	0	98	81000	RTW South
Royal Tunbridge Wells	TN2 Centre	0	32	81005	North Farm
Southborough	Land at Mabledon House	0	27	91069	A26 North
Southborough	Land at Mabledon House	0	18	91036	A26 North
Hawkhurst	Sports Pavillion	7	7	81064	East TW
Hawkhurst	Sports Pavillion	7	7	81065	East TW
Hawkhurst	Hawkhurst Station Business Park	107	214	80255	East TW
Hawkhurst	Site at Limes Grove	0	55	80255	East TW
Speldhurst	Land adjacent to Rusthall recreation ground, Southwood Road, Rusthall (in Speldhurst Parish)	0	85	81027	A264 West
Paddock Wood	Paddock Wood Parcel 5	1359	1813	91055	Paddock Wood
Paddock Wood	Paddock Wood Parcel 6	570	1140	91200	Paddock Wood
Paddock Wood	Paddock Wood Town Centre	236	471	91076	Paddock Wood
Paddock Wood	Paddock Wood Town Centre	157	314	91054	Paddock Wood
Capel (Tudeley)	Village Centre	355	355	91201	Tudeley
Capel (Tudeley)	Neighbourhood Centre 1	75	75	91201	Tudeley
Capel (Tudeley)	Neighbourhood Centre 2	31	61	91201	Tudeley
Capel (Tudeley)	Neighbourhood Centre 3	0	45	91201	Tudeley

## Local Plan Development Summary

<b>Area</b>	<b>Resi – 2031 Units</b>	<b>Emp – 2031 GFA sq m</b>	<b>Resi – 2038 Units</b>	<b>Emp – 2038 GFA sq m</b>
RTW Centre	100	-	499	-
A26 West	380	-	500	-
A264 West	57	-	57	85
A26 North	70	-	146	45
RTW South	-	-	25	98
North Farm	271	2,604	351	4,294
A264	-	-	36	-
East TW	784	122	1,190	284
Pembury	318	-	417	-
Paddock Wood	2,324	2,322	4,097	3,738
Tudeley	1,050	460	2,800	536
<b>Total</b>	<b>5,354</b>	<b>5,509</b>	<b>10,118</b>	<b>9,080</b>



## **Appendix B – Changes to highway network included in Reference Case**

- Halls Hole Road/ A264 Pembury Road/ Blackhurst Lane roundabout
- Pedestrian Crossing on A264 Pembury Road
- Kingstanding Way - Longfield Road/ Knights Park new development entrance
- Badsell Road / Mascalls Court Road / B2160 junction realignment
- A21/Tonbridge Road/Longfield Road upgrade to junction layout
- A26/ A2014 Vauxhall Roundabout – remarking roundabout
- Lambert Rd/Longfield Rd – signal timings

## Appendix C – Changes to highway network included in LP scenario

- Colts Hill Bypass and Five Oak Green Bypass – safety schemes and access to larger masterplan sites
- A228 Whetsted Rd/B2160 Maidstone Rd jct upgrade - additional approach lanes NB on A228 and B2160
- B2017 Tudeley Rd/Hartlake Rd junction upgrade - close junction to improve safety. Reroute local trips through new Tudeley development. Close Hartlake Road to through traffic to minimise impact of any additional trips on Tudeley Local Plan site
- A26 Woodgate Way/B2017 Tudeley Rd junction upgrade + B2017 widening – additional approach capacity on the B2017 as well as new pavement/paths/crossings for walking and cycling
- A21 Kippings Cross – signalise roundabout to manage demand from B2160 and retain same flow on A21
- A26 Hadlow Road East/ Three Elm Lane – add signals and new layout to allow turn movements not to block A26
- Woodgate Corner – resignal to push more traffic to A21/Longfield Road junction where there is more highway capacity

## Appendix D – 2031 Interyear junction capacity tests for key junctions

**Key**  
 Junctions v/c 2037 AM (Highest)

	Overloaded (>100%)
	Above practical capacity (95-100%)
	At practical capacity (90-95%)
	Exceeding capacity threshold (85-90%)
	Approaching capacity threshold (80-85%)
	Below 80% capacity

### A21 Corridor

ID Junction	Description	Corridor	Mitigation	Average V/C			
				AM	PM	AM	PM
				Reference Case	Reference Case	2031 Intermediate Year	2031 Intermediate Year
9	A26 Woodgate Way / Pembury Road / A2014 Vauxhall Lane / A21 / A2014 Pembury Road	A21	Widen lanes at roundabout	86	76	81	70
30	A21 / Tonbridge Road / Longfield Road	A21	Widen lanes at junction and under A21	62	60	50	48
102	A21/Tonbridge Rd Rbt	A21	Widen lanes at junction and under A21	54	43	45	50
21	A21 / A228 Pembury Road / A264 Pembury Road	A21	A228/A264 corridor upgrade - queueing not onto A21	71	84	89	88
22	A21 / A228 Pembury Northern Bypass / A228 Pembury Road	A21	A228/A264 corridor upgrade - queueing not onto A21	48	63	80	97
35	Kippings Cross Roundabout	A21	Signals to regulate B2160 and A21 interaction	83	73	91	84

A228 Corridor (Pembury – East Peckham)

ID Junction	Description	Corridor	Mitigation	Average V/C			
				AM	PM	AM	PM
				Reference Case	Reference Case	2031 Intermediate Year	2031 Intermediate Year
8	A26 Woodgate Way / B2017 Tudeley Road / Tudeley Lane	Tudeley	Signals and additional approach capacity on B2017	89	76	90	86
12	A228 Branbridges Road / B2160 Maidstone Road / A228 Whetsted Road	A228	2 lane approach on A228 Whetsted NB	98	83	89	84
13	A228 Maidstone Road / B2017 Badsell Road	A228	Enlarged roundabout from wider Colts Hill Bypass works	93	77	90	79
15	B2017 Badsell Road / B2160 Maidstone Road	Paddock Wood	Realigned junction with signals	71	77	48	53
88	B2017 Crockhurst Street/Tudeley Road/Hartlake Road	Tudeley	Access closed with local access via Tudeley Masterplan area. Hartlake Road closed to through traffic	68	50	63	73
103	Five Oak Green/Bypass	Tudeley	New Section for Colts Hill / Five Oak Green Link Roads			37	44
104	Five Oak Green Bypass/ Colts Hill Bypass	A228	New Section for Colts Hill / Five Oak Green Link Roads			75	68
106	Colts Hill Bypass/Alders Rd	A228	Enlarged roundabout from wider Colts Hill Bypass works			65	63

A228 / A264 (Royal Tunbridge Wells – Pembury)

ID Junction	Description	Corridor	Mitigation	Average V/C			
				AM	PM	AM	PM
				Reference Case	Reference Case	2031 Intermediate Year	2031 Intermediate Year
20	A228 Pembury Northern Bypass / High Street / Tonbridge Road	A228/A264	Extra left lane from A21 junction, signals retimed to push traffic towards A21 Longfield Road junction	64	68	81	83
23	Blackhurst Lane / A264 Pembury Road / Hall's Hole Road	A228/A264	Roundabout	107	99	103	93
24	A264 Pembury Road / Sandhurst Road	A228/A264	Signalised	68	65	77	72
25	A264 Pembury Road / Sandrock Road	A228/A264	Signalised	56	53	59	58

A26 corridor (South of Royal Tunbridge Wells – A21/A26 junction)

ID Junction	Description	Corridor	Mitigation	Average V/C			
				AM	PM	AM	PM
				Reference Case	Reference Case	2031 Intermediate Year	2031 Intermediate Year
42	A26 London Road / Major York's Road	A26 RTW	Corridor Study	96	87	101	87
54	A26 London Road / Yew Tree Road	A26 RTW	Corridor Study	77	88	75	89

### Junction performance in Tonbridge and Malling Borough

ID Junction	Description	Corridor	Mitigation	Average V/C			
				AM	PM	AM	PM
				Reference Case	Reference Case	2031 Intermediate Year	2031 Intermediate Year
1	A227 Hadlow Road / A26 Cannon Lane	Tonbridge	Corridor Study	80	77	80	76
3	A227 High Street / B2260 High Street / A227 Bordyke / Lansdowne Road	Tonbridge	Corridor Study	82	84	89	85
4	B2260 High Street / Railway Approach / Vale Road / Barden Road	Tonbridge	Corridor Study	70	77	75	76
5	B2260 Quarry Hill Road / A2014 Pembury Road / A26 Quarry Hill Road	Tonbridge	Corridor Study	95	94	97	93
6	A26 Quarry Hill Road / Brook Street	Tonbridge	Corridor Study	102	101	99	102
86	A26 Hadlow Road East/Three Elm Lane	Tonbridge	Signals	116	88	107	93

## Appendix E – Summary of Mitigation measures

<b>Highway Schemes</b>
<b>Area wide Multi-modal measures</b>
<b>Bus infrastructure</b>
<b>Bus services</b>
<b>Cycling and Walking measures</b>

Area	Scheme Type	Scheme Number	In Reg 19 PSLP report?	Mitigation Measure	Short Description	Initial high level costs (£m)	When	Whom (development location) or funding pot
A26 / B2260 Corridor Tonbridge	<b>Area wide Multi-modal measures</b>		No	Town Centre schemes to assist access from Tudeley / Paddock Wood by sustainable transport	A package of improvements are identified (landmark Bus Stop at Tonbridge Station, signage, and pedestrian crossing improvements, improve route between station and Tudeley Lane) to complement wider sustainable transport measures for the town centre,	£100k	2031-2037	Tudeley
A26 / B2260 Corridor Tonbridge	<b>Highway Schemes</b>		No	Signalisation and additional approach lane	Sensitivity modelling suggests that the A26 / Three Elm Lane junction (junction 86) away from Tonbridge town centre also requires mitigation and this can be provided through signalisation and provision of an additional approach lane	£500k	2031-2037	Tudeley
A26 / B2260 Corridor Tonbridge	<b>Area wide Multi-modal measures</b>		No	Area Wide Travel Planning for Tonbridge	Extend the Area Wide Travel Plan for Tudeley in RTW to cover Tonbridge	£100k	2031-2037	Tudeley



Area wide	<b>Area wide Multi-modal measures</b>	101	Yes	Area Wide Travel Plans (AWTPs)	Help to promote use of the new infrastructure and bus services available, reducing existing car trips. The positive impact of the modal shift that would occur has been modelled	£350,000	Throughout LP period	All major developments in the borough
Area wide	<b>Area wide Multi-modal measures</b>	102	Yes	5G new small cell mobile base stations	Develop 5G capability in area to facilitate the evolution of highly connected and, ultimately, fully autonomous vehicles.	To be costed as part of future studies	Pre 2031	TWBC funding bid
Area wide	<b>Bus infrastructure</b>	301	Yes	Paddock Wood to Tonbridge via Tudeley bus corridor	Mix of new and existing link roads with bus priority over whole corridor. Reliant on Masterplan delivery	Costed as part of Masterplan studies	Pre 2031	Tudeley and Paddock Wood
Area wide	<b>Bus infrastructure</b>	302	Yes	Paddock Wood / Tudeley to Tunbridge Wells via Pembury bus services	New buses, bus stop upgrades, improve interchange facilities at hospital and train stations. Link bus priority through signals to junction upgrades on corridor	Costed as part of Masterplan studies	Pre 2031	Tudeley and Paddock Wood
Area wide	<b>Bus infrastructure</b>	303	Yes	Bus Gates	Masterplan sites at Tudeley and Paddock Wood to include bus access roads	Costed as part of Masterplan studies	Pre 2031	Tudeley and Paddock Wood
Area wide	<b>Bus services</b>	308	Yes	Improved 205 Service between Paddock Wood and Tonbridge, via Tudeley Village	High frequency service with bus priority links and limited stops. Bus stops located centrally in new development areas	Costed as part of Masterplan studies	Pre 2031	Tudeley and Paddock Wood
Area wide	<b>Bus services</b>	309	Yes	Improved 6 Service between Paddock Wood and Royal Tunbridge Wells	High frequency service with bus priority links. Bus stops located centrally in new development areas	Costed as part of Masterplan studies	Pre 2031	Paddock Wood
Area wide	<b>Bus services</b>	310	Yes	DRB (Demand Responsive Bus) - Rural on-demand bus service in east Tunbridge Wells	Connect east Tunbridge Wells to key hubs such as rail stations, Paddock Wood, Tunbridge Wells Hospital, and North Farm.	£500,000	Pre 2031	North Farm, Tudeley, Paddock Wood
Area wide	<b>Bus services</b>	312	Yes	Express Bus (Pembury – North Farm/Pembury hub – Tunbridge Wells – Broadwater Down)	High frequency service with bus priority links and limited stops. Bus stops located centrally in new development areas	£1,000,000	Pre 2031	Paddock Wood, Pembury, Broadwater Down

Area wide	<b>Cycling and Walking measures</b>	401	Yes	LTN 1/20 standard Cycle/Walking route to link Paddock Wood to Tonbridge via Tudeley village	Make use of new road and bus around Tudeley Masterplan for high quality cycle and walking priority links	Costed as part of Masterplan studies	Pre 2031	Tudeley and Paddock Wood
Area wide	<b>Cycling and Walking measures</b>	402	Yes	LTN 1/20 standard New cycling/Walking infrastructure within Paddock Wood and Tudeley (LCWIP)	Use of Paddock Wood and Tudeley Masterplan low traffic links, develop segregated cycle link with link to Hop Picker Line and National Route 18 of the National Cycle Network. High Quality walk and cycle links	Costed as part of Masterplan studies / LCWIP	Pre 2031	Tudeley and Paddock Wood
Area wide	<b>Cycling and Walking measures</b>	403	Yes	LTN 1/20 standard Inter-urban route Paddock Wood – Tunbridge Wells via improved A228	Connect Paddock Wood to the upgraded cycle path on A264 via the enhanced A228 works	Costed as part of Masterplan studies	Pre 2031	Tudeley and Paddock Wood
Area wide	<b>Cycling and Walking measures</b>	406	Yes	LTN 1/20 standard Cycling/Walking corridor and rights of way between Tunbridge Wells and Tudeley via Half Moon Lane	Supports e-bikes and other bikes. Offers quality cycle link to North Farm – includes linking in High Brooms station	Costed as part of LCWIP	Pre 2031	LCWIP
Area wide	<b>Cycling and Walking measures</b>	407	Yes	LTN 1/20 standard Cycling/Walking corridor and rights of way between Tunbridge Wells and Tonbridge, including A26	Integrate Kingstanding and North Farm cycle links with A21 cycle route, and upgrade A26 corridor to high quality walk and cycle corridor	Costed as part of Kingstanding development at North Farm / LCWIP	Pre 2031	Kingstanding
Area wide	<b>Cycling and Walking measures</b>	408	Yes	Cycling support for Tunbridge Wells / Pembury / Paddock Wood / Tudeley (maintenance, rental etc)	Focus on supporting cycle businesses to establish in area	£50,000	Pre 2031	All major developments in the borough
Area wide	<b>Cycling and Walking measures</b>	411	Yes	LTN 1/20 standard Provide continuous footpath and cycle links between Hawkhurst and Sissinghurst along A229 corridor	Enhances accessibility between proposed Local Plan sites and existing settlements, as well as improving access to existing bus stops	£1,000,000	Pre 2031	Hawkhurst, Sissinghurst

Colts Hill	<b>Highway Schemes</b>	203	Yes	Link road connecting B2017 with Colts Hill By-pass south of Five Oak Green	Will remove highway trips through Five Oak Green	Costed as part of Masterplan studies	Pre 2031	Tudeley
Five Oak Green	<b>Bus infrastructure</b>	306	Yes	Bus Gate and traffic measures for rerouted through traffic	Reduce traffic through Five Oak Green and Colts Hill, and provide bus priority, through installation of bus gates and signage	Costed as part of Masterplan studies	Pre 2031	Tudeley and Paddock Wood
Five Oak Green	<b>Highway Schemes</b>	204	Yes	Five Oak Green traffic calming	Remove through traffic with filters	Costed as part of Masterplan studies	2031 - 2037	Tudeley and Paddock Wood
Kippings Cross	<b>Highway Schemes</b>	218	Yes	A21 Kippings Cross / Blue Boys	Multi-modal corridor study required - Underlying issues which need NH/LEP funding Interim scheme focuses on additional B2160 approach lane and signals at roundabout	£1,500,000	Pre 2031	Paddock Wood
Paddock Wood	<b>Highway Schemes</b>	202	Yes	A228 Maidstone Road / B2017 Badsell Road (Colts Hill) roundabout	Increased capacity	Costed as part of Masterplan studies	Pre 2031	Paddock Wood
Paddock Wood	<b>Highway Schemes</b>	205	Yes	A228 Whetsted Rd/B2160 Maidstone Rd jct upgrade	Additional capacity on A228 Whetsted Road (SW) approach arm as a result of Local Plan	Requires an additional £1,000,000 to what is costed as part of Masterplan studies	Pre 2031	Paddock Wood
Paddock Wood	<b>Highway Schemes</b>	207	Yes	B2107/B2160 Maidstone Rd/ Mascalls Court Rd signals	Upgrade junction to remove delay generated by additional new highway trip demand	Costed as part of Masterplan studies	2031-2037	Paddock Wood
Paddock Wood	<b>Highway Schemes</b>	214	Yes	B2160 Maidstone Road/Lucks Lane	Undertake a road widening of Lucks Lane to match link capacity to demand	£500,000	2031-2037	Paddock Wood
Paddock Wood	<b>Bus infrastructure</b>	307	Yes	Bridge Paddock Wood High Street	Bus Gate	£500,000	Pre 2031	Paddock Wood
Paddock Wood	<b>Bus services</b>	311	Yes	DRB (Demand Responsive Bus) -	Connect new developments in area to key locations such as	Costed as part of	Pre 2031	Tudeley and Paddock Wood

				Paddock Wood Masterplan area	employment sites and railway station	Masterplan studies		
Paddock Wood	<b>Cycling and Walking measures</b>	410	Yes	Hop Pickers Route	Upgrade Hop Pickers Route for walking and cycling	Costed as part of LCWIP	Pre 2031	LCWIP
Paddock Wood	<b>Highway Schemes</b>	241	Yes	B2160 / Lucks Lane	Wider access roads to key employment areas, located close to western end of Lucks Lane are proposed	£500,000	2031 - 2037	Paddock Wood
Colts Hill	<b>Highway Schemes</b>	201	Yes	The new junction that will connect the Bypass and the existing A228 at Colts Hill	Additional capacity to support Local Plan growth	Costed as part of Masterplan studies	2031 - 2037	Tudeley and Paddock Wood
Five Oak Green	<b>Highway Schemes</b>	201	Yes	The new junction that will connect the Bypass and the Five Oak Green Bypass	Additional capacity to support Local Plan growth	Costed as part of Masterplan studies	2031 - 2037	Tudeley and Paddock Wood
Pembury	<b>Highway Schemes</b>	215	Yes	A228 Pembury Northern Bypass / High Street / Tonbridge Road (Woodsgate Corner)	Redesign to improve walking and cycling crossing, added priority for buses to hospital and improve movement from A228 to A21 via Tonbridge Road	£1,500,000	Pre 2031	KCC led scheme, Pembury / Paddock Wood
Pembury	<b>Bus infrastructure</b>	304	Yes	Bus priority - A264 (Woodsgate Corner to A264 Pembury Road)	Inbound (towards RTW) bus priority section to allow bus services to get ahead of any traffic at A21 junction	Costed as part of highway schemes	Pre 2031	KCC led scheme, Pembury / Paddock Wood
Pembury	<b>Bus infrastructure</b>	305	Yes	Bus only route through Calverley Park Gardens	Used as bus bypass of Calverley Road / Pembury Road / Bayhall Road / Prospect Road junction	£200,000	Pre 2031	Pembury / Paddock Wood
Pembury	<b>Cycling and Walking measures</b>	405	Yes	LTN 1/20 standard Upgrade cycle route from Pembury to North Farm along High Street / Tonbridge Road	Protected on road separation for cycling where required. Integration with shared use paths where it's lower cycling demand. Woodsgate Corner upgrade included.	£500,000 (Woodsgate Corner costed as part of highway scheme)	Pre 2031	Pembury / Paddock Wood
Pembury	<b>Highway Schemes</b>	215, 216, 217	Yes	Signalisation of Woodsgate Corner, Sandrock Road/Sandhurst Road junction and new roundabout at Halls Hole Road	Resignaling Woodsgate Corner to push traffic to use Tonbridge Road, new signals at Sandrock Road and Sandhurst Road junctions, in addition to new roundabout at Halls Hole Road	£3,000,000.00	Pre 2031	KCC led scheme - contributions from North Farm, Paddock Wood, Pembury

A26 Corridor RTW	<b>Area wide Multi-modal measures</b>	100	Yes	A26 corridor upgrade	Reallocation of space with smart traffic management to improve journey time reliability and access for sustainable modes	Costed as part of LCWIP	Pre 2031	LCWIP
Royal Tunbridge Wells	<b>Area wide Multi-modal measures</b>	103	Yes	Low Traffic Neighbourhoods (LTNs)	LTNs for Royal Tunbridge Wells and the surrounding urban are including Langton Green, Rusthall, Southborough and Bidborough	Costed as part of LCWIP	Pre 2031	LCWIP
Royal Tunbridge Wells	<b>Highway Schemes</b>	206	Yes	Junction – Blackhurst Lane / A264 / Hall’s Hole Road	New roundabout	Costed as part of Kingstanding development North Farm	Pre 2031	Kingstanding
Royal Tunbridge Wells	<b>Highway Schemes</b>	208	Yes	A26 / A2014 / Pembury Road (Vauxhall Roundabout)	Upgrade roundabout to support new developments	Costed as part of Masterplan studies	2031 - 2037	Tudeley
Royal Tunbridge Wells	<b>Highway Schemes</b>	209	Yes	Longfield Road / Knights Park development access	Kingstanding Way adjacent site access	Costed as part of Kingstanding development North Farm	2031-2037	Kingstanding
Royal Tunbridge Wells	<b>Highway Schemes</b>	210	Yes	A21 / Longfield Road	Dumbbell roundabout upgrade	Costed as part of Kingstanding development North Farm	Pre 2031	Kingstanding
Royal Tunbridge Wells	<b>Highway Schemes</b>	211	Yes	Pembury Road A228 / A21	Move toucan crossing on A264 to support better flow around A21 junction	Costed as part of Kingstanding development North Farm	2031 - 2037	Kingstanding
Royal Tunbridge Wells	<b>Highway Schemes</b>	216	Yes	Signalise T junction – A264 Pembury Road / Sandhurst Road	Link junctions on A264 by signals to control traffic flow and provide safer walking and cycling crossings	£500,000	2031-2037	North Farm, Paddock Wood, Pembury
Royal Tunbridge Wells	<b>Highway Schemes</b>	217	Yes	Signalise T junction – A264 Pembury Road / Sandrock Road	Link junctions on A264 by signals to control traffic flow and provide safer walking and cycling crossings	£500,000	Pre 2031	North Farm, Paddock Wood, Pembury

Royal Tunbridge Wells	<b>Cycling and Walking measures</b>	404	Yes	LTN 1/20 standard Upgraded cycle route along A264 Pembury Road	Dedicated 2-way segregated cycle link from Pembury to Tunbridge Wells Station with high quality crossings to ensure high quality cycling and walking link	Costed as part of LCWIP	Pre 2031	LCWIP
Royal Tunbridge Wells	<b>Cycling and Walking measures</b>	409	Yes	LCWIP Royal Tunbridge Wells + surrounding urban area	walking and cycling routes in Royal Tunbridge Wells and the surrounding urban area	Costed as part of LCWIP	Pre 2031	LCWIP
Tudeley	<b>Highway Schemes</b>	213	Yes	A26 Woodgate Way/B2017 Tudeley Rd junction upgrade + B2017 widening	Upgrade to redirect traffic flow away from A21 / A2228 / A264 junction to use A21/ Longfield Road junction where possible. Augment for cycle/walking priority signals through junction. Widen B2017	Requires an additional £500,000 to what is costed as part of Masterplan studies	Pre 2031	Tudeley
Tudeley	<b>Highway Schemes</b>	212	Yes	B2017 Tudeley Rd/Hartlake Rd junction upgrade	Close link at junction. Route traffic through Tudeley. Remove through access on Hartlake Road at River Medway. Potential for ANPR for local through access	£100,000	2031-2037	Tudeley

## **Appendix F – Detailed A21 junction data from SATURN**

See attached spreadsheet for A21 junctions in model simulation area

Model name	Report name
2038 RC	RC = Reference Case
2038 LP-DM1	LP = Local Plan scenario without highway mitigations
2038 LP-DS1	LPH = Local Plan scenario including highways mitigation measures only
2038 LP-DS-MS	MS = Local Plan scenario including highways mitigation measures and mode shift from Sustainable Transport Zone



**2038 Tunbridge Wells SATURN model  
Merge Diverge**

Junction	Merge/Diverge	Direction	AM - Flow (Veh)					PM - Flow (Veh)				
			Base	RC	LP	LPH	MS	Base	RC	LP	LPH	MS
A21/A26	Diverge	EB	718	753	788	832	827	772	830	916	910	853
	Merge	WB	716	673	626	641	630	649	730	701	701	668
A21/A2014	Diverge	EB	355	399	394	375	333	370	456	439	458	464
	Merge	EB	898	1,046	1,066	965	963	794	861	877	877	897
	Diverge	WB	799	937	1,032	1,036	953	729	924	1,009	975	970
	Merge	WB	349	463	545	649	647	252	288	269	282	263
A21/Longfield Rd	Diverge	NB	280	243	159	359	350	235	293	318	254	282
	Merge	NB	658	327	378	522	443	803	840	866	932	939
	Diverge	SB	984	1,059	1,102	1,076	1,003	733	701	784	787	817
	Merge	SB	129	55	77	163	78	328	462	660	738	646
A21/A228	Diverge	SB	322	546	534	430	419	296	486	449	522	488
	Merge	SB	142	286	328	216	245	227	424	533	421	397
	Diverge	NB	454	590	566	825	744	215	469	492	409	316
	Merge	NB	434	1,005	972	961	954	413	779	780	675	668

Junction	Merge/Diverge	Direction	Existing Type	Base	RC	LPH	MS
A21/A26	Diverge	EB	C	✓	✓	✓	✓
	Merge	WB	A	✓	✓	✓	✓
A21/A2014	Diverge	EB	A	✓	✓	✓	✓
	Merge	EB	B	✓	✓	✓	✓
	Diverge	WB	A	✓	✓	✓	✓
	Merge	WB	A	✓	✓	✓	✓
A21/Longfield Rd	Diverge	NB	A	✓	✓	✓	✓
	Merge	NB	A	✓	✓	✓	✓
	Diverge	SB	D	✓	✓	✓	✓
	Merge	SB	A	✓	✓	✓	✓
A21/A228	Diverge	SB	A	✓	✓	✓	✓
	Merge	SB	A	✓	✓	✓	✓
	Diverge	NB	A	✓	✓	✓	✓
	Merge	NB	B	✓	✓	✓	✓





## **Appendix G – Diagrams of mitigation changes**

See attached PDF document

**J8**  
**A26 Woodgate Way\_B2017 Tudeley Road\_Tudeley Lane**

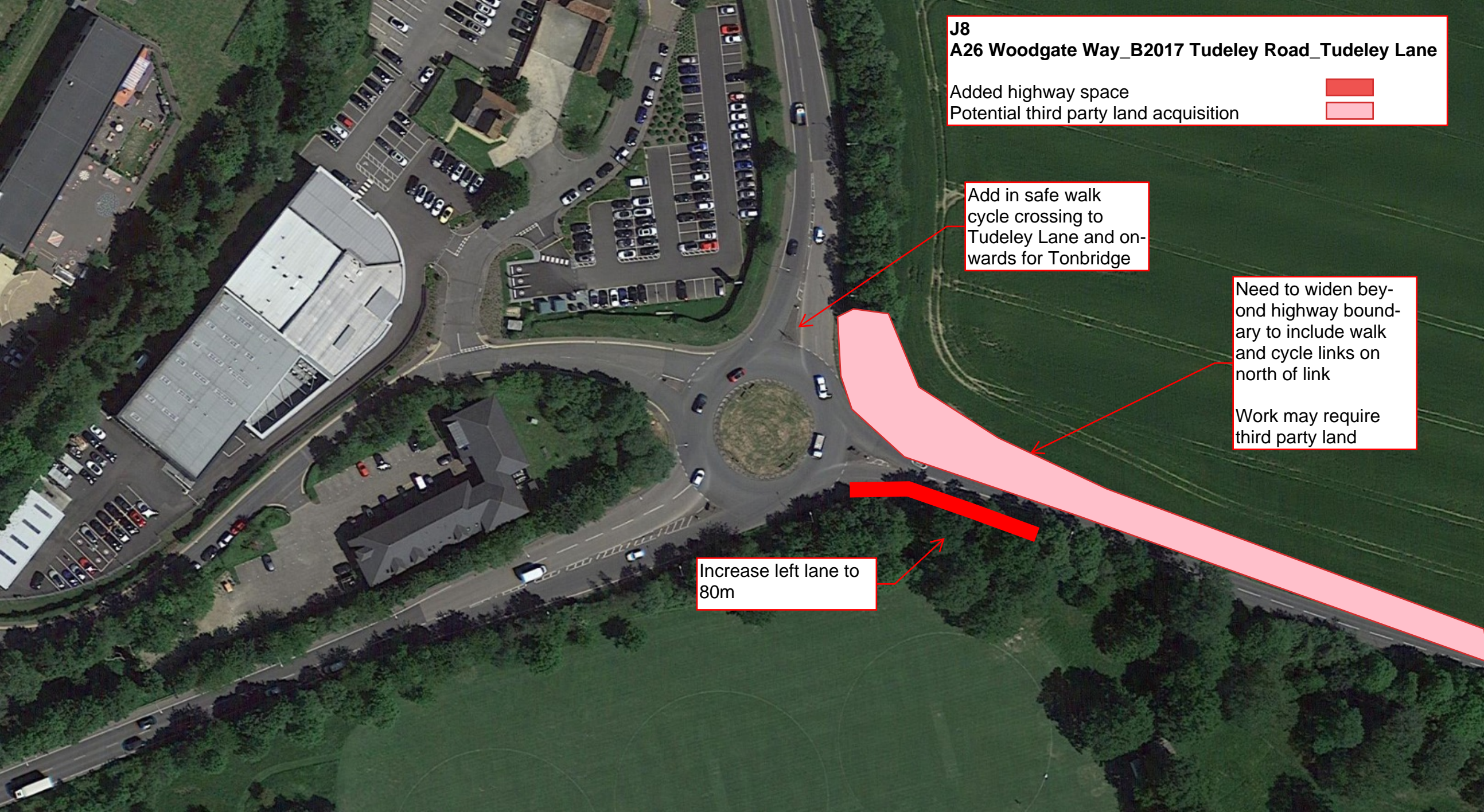
Added highway space   
Potential third party land acquisition

Add in safe walk cycle crossing to Tudeley Lane and onwards for Tonbridge

Need to widen beyond highway boundary to include walk and cycle links on north of link

Work may require third party land

Increase left lane to 80m

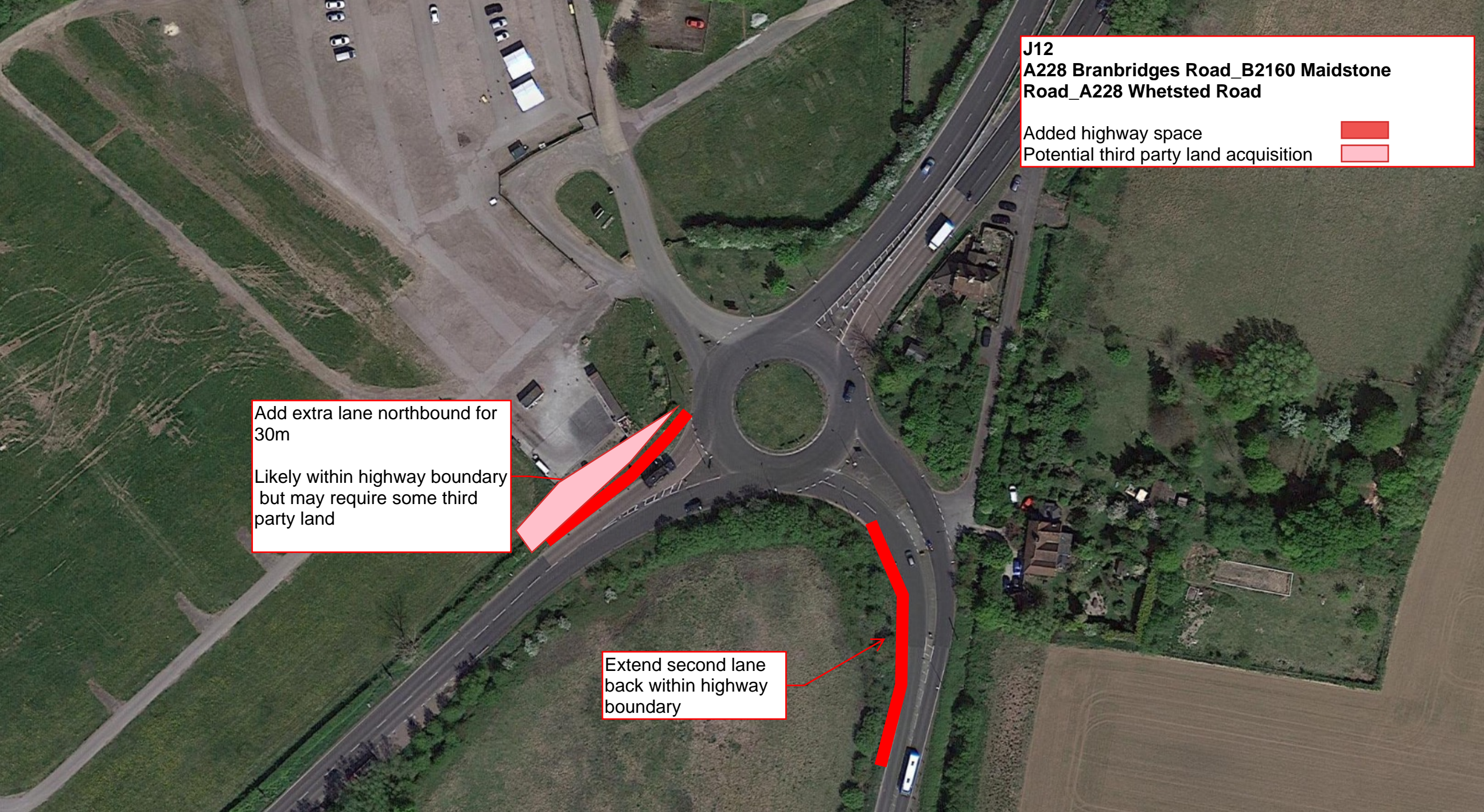


**J12**  
**A228 Branbridges Road\_B2160 Maidstone**  
**Road\_A228 Whetsted Road**



Added highway space █  
Potential third party land acquisition █

Add extra lane northbound for 30m  
Likely within highway boundary but may require some third party land

Extend second lane back within highway boundary

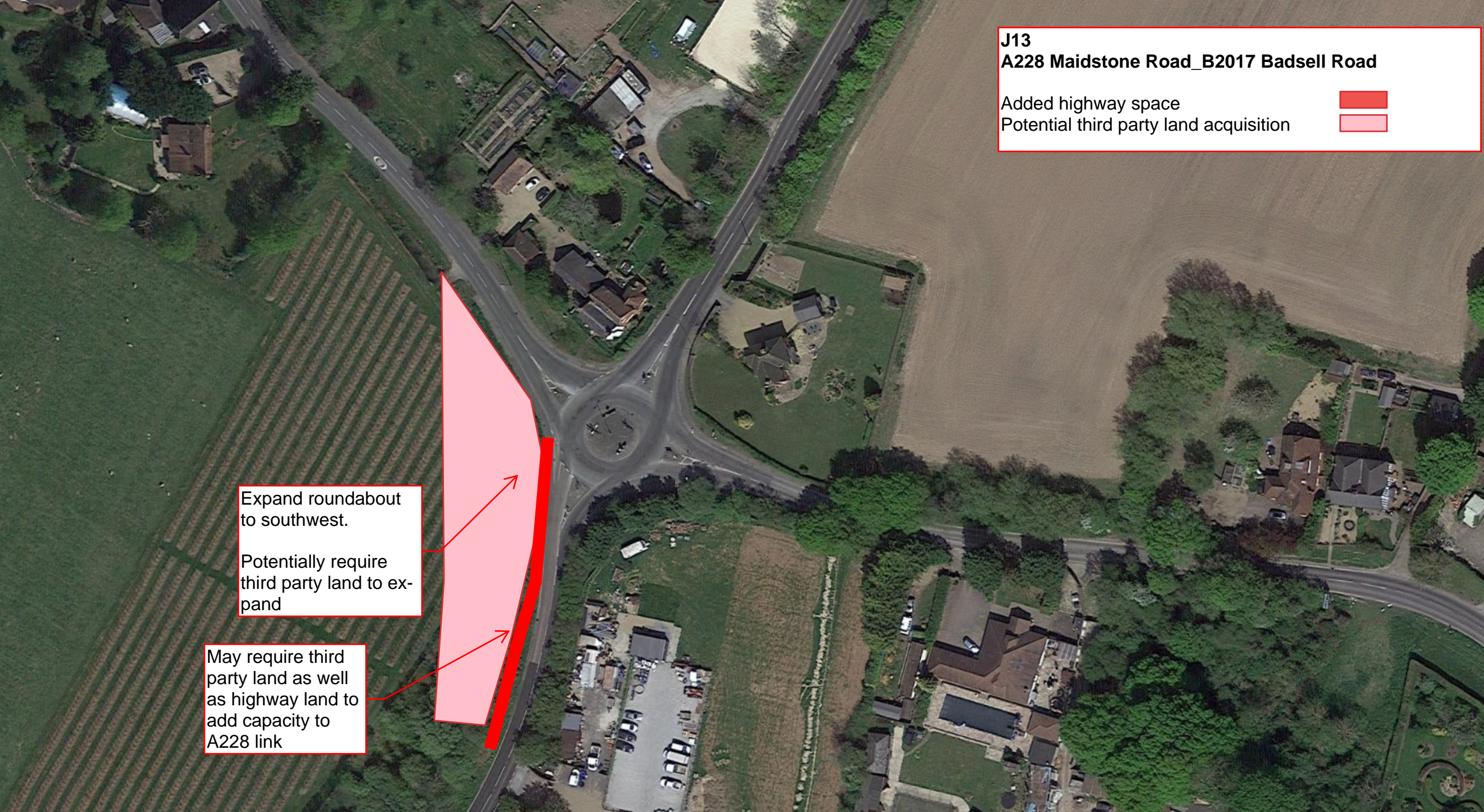


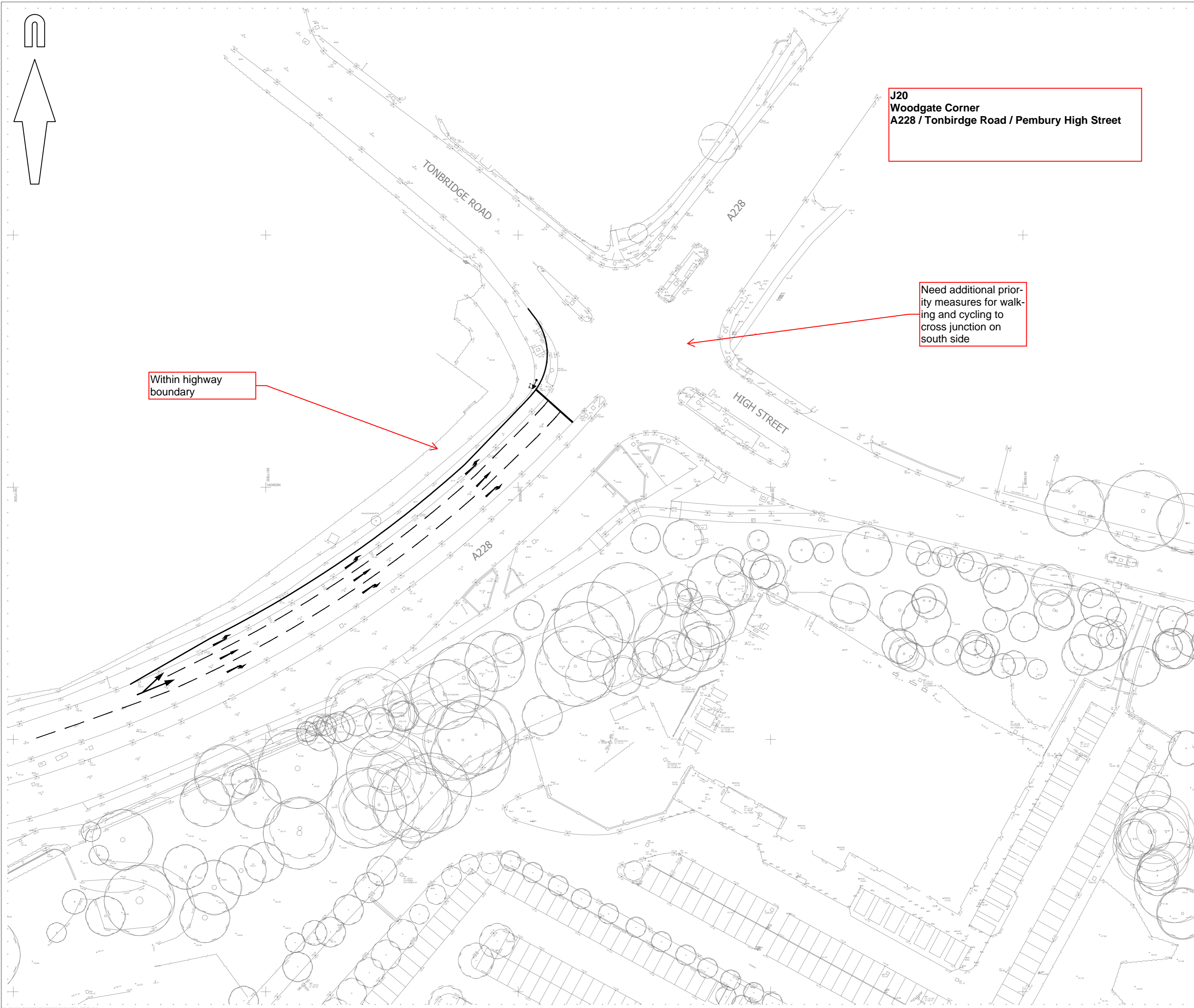
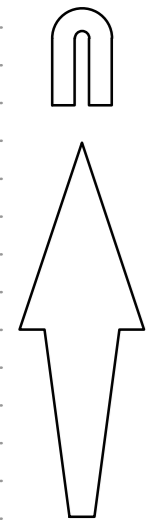
**J13**  
**A228 Maidstone Road\_B2017 Badsell Road**

Added highway space   
Potential third party land acquisition 

Expand roundabout to southwest.  
Potentially require third party land to expand

May require third party land as well as highway land to add capacity to A228 link





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**A2 ORIGINAL**

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**J20  
Woodgate Corner  
A228 / Tonbridge Road / Pembury High Street**

Need additional priority measures for walking and cycling to cross junction on south side

Within highway boundary

**PRELIMINARY**  
NOT FOR CONSTRUCTION

rev.	amendment	checked	date



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client  
**HENDY GROUP**

project  
**PROPOSED MOTOR VILLAGE, PEMBURY**

scale  
**1:500 @ A2**

drawn by  
**JME**

checked by  
**AP**

date  
**FEBRUARY 2020**

cad file  
**FIGS 200206**

title  
**POSSIBLE CHANGES TO A228/TONBRIDGE ROAD/HIGH STREET JUNCTION OPTION 1**

Mayer Brown Limited jobcode  
**HGPEMBURY.1**


suitability  
**P1**

revision  
**P1**

drawing number  
**FIGURE 02**



**J35**  
**A21 Kippings Cross**

Added highway space 

Add signals to A21  
EB arm and B2160  
Maidstone Arm only

Extend 2nd lane back  
30 metres within high-  
way boundary



**J88**  
**B2017 Crockhurst Street\_Tudeley**  
**Road\_Hartlake Road**



Close link  
Access through new  
Tudeley Development  
Close Hartlake Road  
to through traffic to  
reduce through trips  
through Tudeley





Five Oak Green Bypass

Colts Hill Bypass