

Technical Note

Review of Post-Initial Findings Evidence Base Documents

Tudeley Garden Village

Project Number: 22316
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Prepared for: The Hadlow Estate

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1. Introduction

- 1.1 Markides Associates (MA) have been commissioned by The Hadlow Estate to review and offer guidance regarding the post-initial findings evidence base presented in support of the Emerging Tunbridge Wells Borough Council (TWBC) Local Plan, with respect to the proposals at Tudeley Garden Village (TGV).
- 1.2 Following the Local Plan examination and associated hearings, the Inspector's initial findings were published in November 2022. The initial findings, amongst other matters, discussed Policy STR/SS3, The Strategy for Tudeley Village, which seeks to develop a new settlement between Paddock Wood and Tonbridge.
- 1.3 The comments of the Inspector focused on four key areas:-
- Bus Provision;
 - Walking and Cycling Infrastructure;
 - Trip Internalisation, Modal Shift and Severity of Traffic Impacts; and
 - Five Oak Green Bypass.
- 1.4 The areas raised were duly responded to by MA, in the form of a Technical Note (TN01), which was submitted to TWBC for consideration (which is attached at **Appendix A**). TWBC formally responded to the points raised by the Inspector¹. That response aligned with much of the evidence presented as part of TN01 with respect to the three top bullet points, to offer

¹ PS_054 Development Strategy Topic Paper Addendum (January 2024)

comfort surrounding deliverability and feasibility. The only residual queries remained over timescales and deliverability of the Five Oak Green bypass within the Plan period.

- 1.5 TWBC have subsequently set out modifications to their development strategy² which temporarily remove the Tudeley Garden Village allocation from the current Emerging Local Plan but identify the need for an early plan review.
- 1.6 As part of the revised development strategy, TWBC have also reduced the scale of development at Paddock Wood, by a quantum in the region of 1,000 homes.
- 1.7 In relation to these modifications additional post-initial findings evidence is relied upon by TWBC. As part of this TN, these documents have been reviewed and their implications (or otherwise) for the Emerging Local Plan evidence base have been considered.
- 1.8 Based on an assessment of these post initial findings, it is clear that the evidence does not properly support TWBC's approach and there is a lack of clarity and uncertainty regarding the deliverability of: the proposed public transport improvements, the requirement to secure necessary modal shift and the implications for the highway network.
- 1.9 For ease of reference, the four key areas outlined by the Inspector initially have been used as the basis for assessment of the additional evidence base and have been taken in turn below considering the evidence that was provided to demonstrate the sustainability of Tudeley Garden Village and then consideration of the post-initial findings evidence base relied upon for the Main Modifications. For a detailed assessment of the areas raised in the context of the Inspector's initial findings, please refer to MA's TN01 (included at **Appendix A**).

2. Bus Provision

Evidence in respect of Tudeley Garden Village

- 2.1 A review of the post-initial findings evidence base reveals that the Red Amber Green (RAG) assessment for the proposals at Tudeley Village³ considers bus provision for the site following the Inspector's comments. As a result of this RAG assessment, bus provision to Tudeley Garden Village is unsurprisingly (given what was proposed) classified as 'Green' with Stantec noting:-

"The study (Bus Feasibility Technical Note⁴) concludes that the proposed level of development across the TWBC area will support significant expansion of the local bus service network, and that credible and viable options for public transport enhancements are available that will be able to support the development coming forward. Stantec believe that the majority of the work needed to address the Inspector's concerns on bus travel, and

² PS_063 Summary of Proposed Modifications to the Development Strategy, following Inspector's Initial Findings Letter (January 2024)

³ PS_039 RAG Assessment – Access and Movement – Five Oak Green Bypass

⁴ PS_058 Tunbridge Wells Bus Feasibility Technical Note (July 2022)

the plausibility of it being a genuine alternative to the private car, has already been completed by WSP.

As stated in the WSP note, further work will be needed to shortlist the new bus priority measures and bus network improvement options, but overall Stantec believe enough work has been done at this stage to demonstrate to the Inspector that credible bus enhancements are available.”

- 2.2 The Bus Feasibility Technical Note (July 2022), produced by WSP on behalf of TWBC and Kent County Council (KCC), was re-submitted as part of the post-initial findings evidence base to highlight the viability and feasibility of bus services with Tudeley Garden Village in place, with Options 1 and 2 considered to be the most viable. Both options sought to improve bus connectivity via the B2017 corridor, with improvements to the service frequency of the existing 205 service to offer half hourly buses (in both options) between Paddock Wood, Tudeley and Tonbridge with an additional half hourly service proposed as part of Option 2, referred to as the Blue Line⁴.
- 2.3 The bus feasibility study⁴ also identified a number of further opportunities along the Tonbridge to Paddock Wood bus corridor that would improve journey times by approximately 17% and bus speeds from 20mph to potentially 24mph, both of which would improve reliability.
- 2.4 Service improvements on this corridor were also identified by WSP⁵ as part of their work on behalf of Tudeley Garden Village which identifies the enhancement of the existing bus route serving the B2017 corridor between the towns of Tonbridge and Paddock Wood. As part of this work, WSP proposed that this service be increased to a 30-minute service initially (as has been considered viable above) before then running every 15-minutes once Tudeley Garden Village is sufficiently built out to make this more frequent service. They have also proposed an increase in operational hours, running from Monday-Saturday.

Evidence in respect of the Revised Development Strategy

- 2.5 Notwithstanding these clear findings that demonstrate the sustainability of Tudeley Garden Village in relation to bus provision, as part of the post-initial findings evidence base, two additional documents relating to bus provision have been produced to support the approach in the main modifications which involves the removal of the TGV allocation:-
- PS_040 Tunbridge Wells Public Transport Feasibility Review (October 2023); and
 - PS_041 Paddock Wood Bus Service Options (October 2023).
- 2.6 The former is a revised bus feasibility assessment, responding to the modifications of the Emerging Local Plan that involve the removal of TGV. Without the development proposals at Tudeley, Options 1 and 2 are no longer considered to present the most viable options with

⁵ Tudeley Village: Public Transport Strategy, Hadlow Tonbridge. WSP. (February 2019).

respect to longer distance bus service improvements. Instead, Option 5 and 5a are being presented as the optimum solutions in the context of the modifications proposed. However, both these options remove any bus service improvements along the B2017 corridor between Tonbridge and Paddock Wood, and instead relate to the A228 corridor.

- 2.7 The documents acknowledge that the removal of Tudeley Garden Village from the Emerging Local Plan, undermines the viability of bus improvements on the B2017 corridor which is clearly the case. However, it is also accepted that there will still be a strong desire line for travel between Paddock Wood and Tonbridge, which currently has limited bus provision and is reliant on existing rail services.
- 2.8 Document PS_041 suggests the provision of a bespoke bus service which operates only within Paddock Wood itself, connecting the proposed expansion areas to the Town Centre and Station. Several options for this service are noted in terms of routeing and timings but generally, the proposals seek to offer a figure of eight route within Paddock Wood operating at a 15-to-20-minute frequency with the potential for an element of Demand Responsive Transport (DRT).
- 2.9 However, it is clear that the options for the bespoke bus service are not financially viable in terms of cost to revenue. Indeed, only Option 1a (which proposes a 20-minute frequency for the bus with a 10% bus mode share) actually shows a self-funding service by the end of the plan period. The 10% mode share is indicated as being the highest of the possible mode shares with lesser figures of 3% and 5% also assessed, but it is important to emphasise that the service is not viable at these lower levels of mode share. The assessment below identifies a number of concerns with the feasibility of this service achieving a 10% mode share.
- 2.10 With respect to the proposals at Paddock Wood, emphasis has been placed on the importance of active transport connections. With regard to this, TWBC state the following:-
- “Given that Paddock Wood is a compact, relatively flat, town with a concentrated town centre, it is feasible for the majority of the population to use active modes to access the town centre for day-to-day services.”⁶*
- 2.11 This means that the proposed bespoke figure of eight service will in fact be operating within a walkable / cyclable distance of the Town Centre, directly competing with active transport modes which offer greater flexibility and reduced cost when compared with the bus service and so undermining the viability of providing such a bus service.
- 2.12 On that basis the service is very unlikely to achieve the required 10% mode share to offer financial viability in the long term.

⁶ PS_053 Provisions for sustainable and active travel, especially for major development sites, and the implications for transport modelling (November 2023)

- 2.13 It is also not clear whether the viability analysis has assumed that all of the 10% bus mode share assumed for the town will use the bespoke shuttle service; in reality a proportion of the towns patronage will use other buses. Thereby the level of patronage on the shuttle service is inevitably likely to sit below the level required to be viable.
- 2.14 In the context of the proposed bespoke bus service, it should also be noted that public transport trips to the main centre at Tonbridge are much less likely to take place where a direct service is not available as there are inherent cost and journey time penalties associated with using both bus and rail to complete the journey. When compared with the proposals at TGV, where a direct, frequent bus service with a journey of less than 4.0km (travel time of under 15 minutes) at a lower cost will be provided, the suitability of the sustainable transport provisions is further questioned.

3. Walking and Cycling Infrastructure

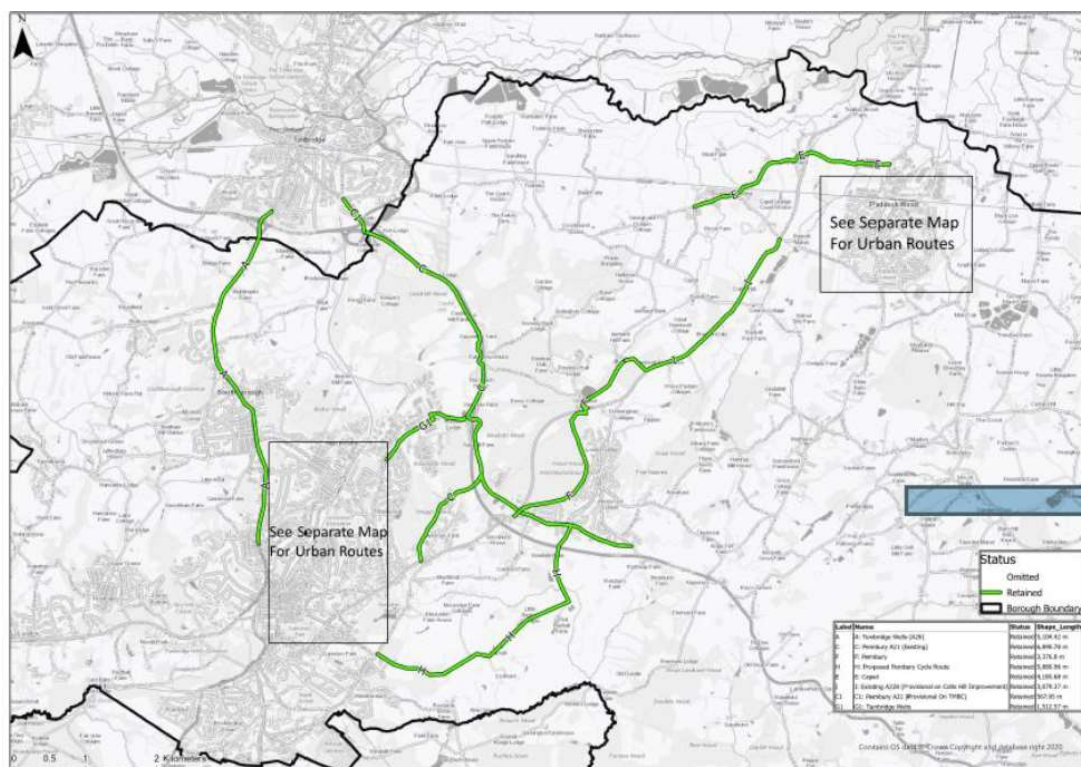
Evidence in respect of Tudeley Garden Village

- 3.1 As above, the RAG assessment for Tudeley considered the walking and cycling infrastructure elements as raised by the Inspector. These related to the provision of a footway / cycleway towards Tonbridge and the associated collaboration with Tonbridge and Malling Borough Council (TMBC). Both aspects were categorised as 'Amber' in the assessment which indicated the need for additional evidence, but where Stantec had identified that with additional evidence it is 'highly likely the concern can be overcome'³.
- 3.2 The TN01 produced by MA with respect to the matters raised, highlighted the land ownership of the Hadlow Estate on the B2017 corridor, in the context of providing pedestrian and cycle linkages, given the location of the site from Tonbridge Town Centre (approximately 4km, representing approximately a 45-minute walk or a 15-minute cycle ride).
- 3.3 Although further detail of those links would be provided in terms of their design and routeing to Tonbridge, the TN01 and associated RAG assessment highlight their feasibility in the context of land ownership considerations.

Evidence in respect of the Revised Development Strategy

- 3.4 With respect to the remaining evidence base for the post-initial findings, it is noted that following the removal of Tudeley Garden Village, the inter-urban cycle routes now being proposed focus primarily on the linkage of Paddock Wood to Pembury and into Tunbridge Wells, with no linkage being sought to Tonbridge (though a route to Five Oak Green has been retained).
- 3.5 The proposed inter-urban routeing to be promoted as part of the modified Emerging Local Plan is shown below in **Figure 3.1**.

Figure 3.1 Inter-Urban Cycle Connections⁶



Source: TWBC

3.6 Applying the principles that were applied to Tudeley Garden Village (where it was demonstrated that there was land in the control of the Hadlow Estate on the B2017 corridor), it is essential that further information regarding the design and deliverability of these routes is provided in the context of matters such as land ownership. Moreover, reference is also now made to the possibility of the cycle route on the A228 forming part of the Colts Hill bypass, which is the subject of separate deliverability issues (as will be discussed later in this note).

4. Trip Internalisation, Modal Shift and Severity of Traffic Impacts

Internalisation

4.1 The TN01 produced by MA reviewed and built upon the evidence base presented with respect to internalisation of trips. As part of the Local Plan evidence base, assessments were completed by both Stantec⁷ and WSP⁸ that highlighted the opportunities for trip internalisation for the proposals at Tudeley Garden Village (with Stantec also reviewing the

⁷ Core Document 3.66, Tunbridge Wells Local Plan: Paddock Wood and East Capel and Tudeley Village, Access and Movement Report (December 2020)

⁸ Tudeley Garden Village Regulation 19 Submission – Transport (May 2021), Appendix F (Approach to Vehicular Trip Analysis and Traffic Management), Page 120

internalisation potential at Paddock Wood). This evidence base was built upon by MA, with additional analysis presented with respect to the retail and commuting impact of the proposals, associated job creation and education demand at the site.

- 4.2 Based on the evidence presented within TN01, it was concluded that as a result of the scale and mixed-use nature of the proposals at Tudeley Garden Village, meaningful trip internalisation was inherently viable for future resident's day-to-day needs.
- 4.3 Limited additional information with respect to internalisation for Paddock Wood is provided within the additional documentation (with the main analysis having been completed by Stantec⁷ previously), though TWBC do identify that even with the proposed reduction in development quantum at Paddock Wood, the revised development strategy will facilitate the internalisation of trips and will offer an increased level of self-containment with the aim of meeting residents needs locally as a result of the mixed-use nature of the proposals⁶.
- 4.4 Given the limited additional evidence presented in this regard, no more detailed consideration has been given to this aspect.

Modal Shift Assumptions

- 4.5 On assessment of the revised modelling evidence presented, it is now evident that a number of differing modal shift assumptions have been considered in the context of the Emerging Local Plan and Paddock Wood more specifically.

SWECO Strategic Highway Model Mode Shift Assumptions

- 4.6 With respect to the previously assumed modal shift assumptions for the Local Plan modelling, the following was noted:-
- **SWECO's Original Strategic Modelling**
 - A 10% reduction in car driver trips with origins and destinations within an area defined as the 'Sustainable Transport Zone' (a triangle between Paddock Wood, Tonbridge and Tunbridge Wells within which Tudeley was previously included), plus for strategic sites, a 10% reduction was applied to the TRICS baseline in recognition of opportunities for internalisation and sustainable trips to local services⁶.
- 4.7 The revised modelling following the modifications now no longer includes this 10% TRICS baseline reduction as standard. Instead, within the 'Mitigation' scenario at Stage 3 of the modelling, the potential for internalisation and sustainable modes is assessed in the context of the scale, form and location of the development.
- 4.8 This change taken to mode shift lacks clarity, with the full modelling reports having not been made available with only summaries provided. The full modelling reports are necessary for the predicted mode shares to be relied upon. However, in the absence of this detail, we set out below our understanding of the assessment.

4.9 Based on the information presented, the revised SWECO modelling within the ‘Mitigation’ scenario now assumes two modal shift scenarios:-

- **“Low (L)** - This scenario focusses on the minimum modal shift expected from the proposed sustainable transport interventions, with the main impact expected from the investment around Paddock Wood, with additional low level modal shift around Royal Tunbridge Wells and Pembury driven by changes in both bus and cycling infrastructure; and
- **High (H)** - This scenario assumes high levels of modal shift as a result of the sustainable transport measures being delivered as part of the plan. This particularly impacts Paddock Wood due the extent of measures proposed. There is also an expectation of agglomeration of bus, walking, and cycling schemes leading to increased benefits around Royal Tunbridge Wells and Pembury.”⁹

4.10 Based on the Low and High scenarios respectively, the total car trip generation assumes a reduction in car mode share for Paddock Wood of only 4% and 9% respectively (no mention is made of traffic reductions in other areas). The High scenario is seen to broadly align with the mode share previously assessed by SWECO, with the Low scenario offering a more conservative estimate.

TWBC Provisions for Sustainable and Active Travel Mode Shift Assumptions

4.11 TWBC have separately identified mode shift assumptions based on proposed sustainable transport measures, internalised trips and associated active transport connections proposed in support of the Local Plan. Based on this TWBC assume the following modal shift away from car use:-

Table 4.1 TWBC Modal Shift Assumptions⁶

Locality	Area-wide Measures	Local Measures – Base	Local Measures – Potential	Combined Shift
Paddock Wood	-5%	-10%	-15%	-15-20%
Royal Tunbridge Wells	-5%	-5%	-	-10%
Pembury	-5%	-	-	-5%

4.12 It is unclear if any of these assumptions have been tested by any modelling in support of the Main Modifications.

4.13 With respect to the above, the 5% modal shift for the area-wide measures is a reduction from the original 10% modal shift applied within the ‘Sustainable Transport Zone’ (as detailed

⁹ PS_049 TW Local Plan Stage 3 Modal Shift Impact Reporting (September 2023)

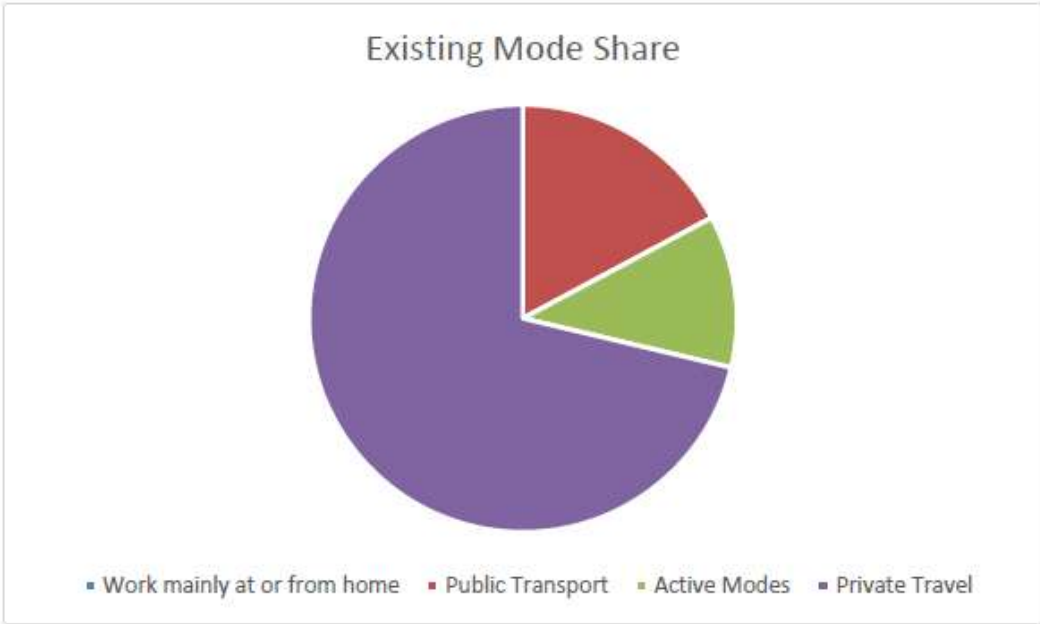
above), to account for the proposed inter-connecting cycle routes and proposed bus service improvements between the settlements. It appears that TWBC have refined this figure as 10% was considered optimistic and 5% is now proposed.

- 4.14 In addition, based on local measures (the problems for which in respect of Paddock Wood have been touched on above) a further specific reduction for the area in question has been proposed, which for Paddock Wood has been indicated as being between 10% and 15%, in light of the proposals for interconnectivity within Paddock Wood itself, via active and sustainable transport improvements and local services and facilities (the problems for which have been identified above).
- 4.15 Based on the above, for the proposals at Paddock Wood it is indicated that up to a 20% modal shift could be obtained in line with TWBC's assessment.
- 4.16 From the evidence presented, it is clear that the modal shift presented by SWECO for modelling purposes and the modal shift identified by TWBC are two separate approaches to considering modal shift which have had to be introduced as a result of the modifications. **However, clarification is required as to the information provided and what modal shift has been applied for the capacity modelling as from the new evidence, it is wholly unclear.**

Stantec Access and Movement Mode Shift Assumptions

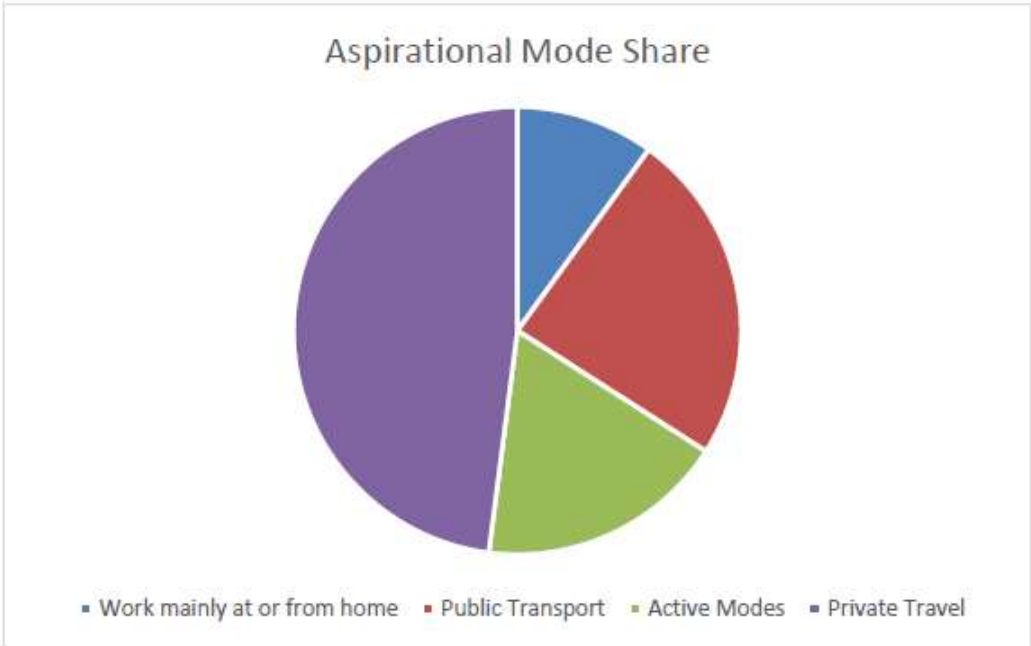
- 4.17 In addition to the above, Stantec have considered the possible modal shift for Paddock Wood with the incorporation of home working as a means of reducing the need to travel. The existing and aspirational mode share for Paddock Wood based on this is shown in **Figure 4.1** and **Figure 4.2** below.

Figure 4.1 Existing Mode Share – MSOA Tunbridge Wells 001 (Paddock Wood)¹⁰



Source: Stantec

Figure 4.2 Aspirational Mode Share (Paddock Wood)¹⁰



Source: Stantec

¹⁰ PS_060 Paddock Wood and east Capel Access and Movement Report (November 2023)

- 4.18 Whilst no actual percentages are assigned to the graphs, from previous evidence presented¹¹ it is noted that based on the 2011 Census for MSOA Tunbridge Wells 001, a 65.6% car driver mode is found, with train and bus travel accounting for 17.1% and walking and cycling accounting for 11.5% (additional modes were noted such as car passenger which make up the rest of the mode share).
- 4.19 The aspirational mode share reduces car driving to under 50% with proportional increases in active and sustainable transport use. Home working is also added to the graph. While home working and/or hybrid working may now form a greater part of people's day-to-day lives than pre-COVID conditions, for this to be accepted the justification for its inclusion needs to be appropriately evidenced to ensure suitability and at this time, it has not been.
- 4.20 Moreover, the above mode share focuses solely on travel to work trips and as such, cannot be applied as a holistic reduction to trips, as peak trips are completed for several different journey purposes, including (but not limited to) education and shopping. Therefore, the above should be considered in this context also.

Mode Shift Assumption Summary

- 4.21 In summary, the various supporting documents identify the following mode shift away from cars for the proposals at Paddock Wood:-
- **SWECO** – 4% to 9% shift;
 - **TWBC** – 15% to 20% shift; and
 - **Stantec** – car share from 65.6% to less than 50%.
- 4.22 Given the above, several differing approaches to mode shift have been completed by different parties. From the evidence presented, it is unclear as to how each is applicable in the context of main modifications. Additionally, based on the above and preceding analysis with respect to queries relating to the proposed bespoke bus service at Paddock Wood (in terms of financial viability and achievable mode share) and inter-urban cycle connections, it is questioned whether sufficient evidence has been provided at this time to demonstrate the achievability of the mode shifts outlined.

Traffic Impacts in Tonbridge

Evidence in respect of Tudeley Garden Village

- 4.23 Within the Local Plan evidence base, SWECO completed capacity analysis for Tonbridge Town Centre¹². The capacity analysis presented was completed on a 'worst case' basis, with no internalisation factors included for the proposals at Tudeley Garden Village. On assessment of the capacity impacts outlined, within TN01, MA concluded that it was reasonable to state

¹¹ Core Document 3.66, Tunbridge Wells Local Plan: Paddock Wood and East Capel and Tudeley Village, Access and Movement Report (December 2020)

¹² Examination Document PS_023, Local Plan – Transport Assessment Addendum 2 (October 2021), Table 3-5, Page 24

that the impacts were unlikely to be considered ‘severe’ in the context of the NPPF, particularly when considered in the context of the ‘worst case’ assessment.

- 4.24 Furthermore, whilst opportunities for improvement at the junctions identified had not been specifically reviewed, it was noted that this did not prohibit the possibility of improvements being viable, following further review.

Evidence in respect of Revised Development Strategy

- 4.25 With regard to the anticipated traffic impacts within Tonbridge, with the removal of Tudeley from the Local Plan, no further evidence has been presented by TWBC with regard to potential impacts at this location.
- 4.26 However, with respect to Paddock Wood, it is still recognised that there will be a strong desire for movement between the Paddock Wood and Tonbridge, as shown in Stantec’s diagram below in **Figure 4.3**.

Figure 4.3 Indicative External Trip Distribution – Paddock Wood¹⁰



Source: Stantec

- 4.27 The anticipated trip impact for movements from Paddock Wood has been reviewed as part of the revised modelling process. Within the modelling review, SWECO note that:-

“Looking at where there are increases in flows on highway links around Paddock Wood when comparing the Local Plan High Modal Shift scenario with the Reference Case scenario, notable increases are forecast at the following locations:

- 1. Foxhole Lane (Pembury)*
- 2. Benchley Road*
- 3. Railway crossings east of Paddock Wood*

4. B2017 Five Oak Green

5. Links to Horsmonden⁷” (emphasis added)

4.28 Based on the modelling assessment presented, the trip distribution for Paddock Wood travelling towards Tonbridge and Capel has been outlined during the AM and PM peak periods. This indicates the following trip impact:-

Table 4.2 Origin-Destination Analysis – Paddock Wood¹³

Time Period	Arrivals	Departures
Tonbridge		
AM Peak	289	505
PM Peak	524	305
Capel		
AM Peak	33	19
PM Peak	38	50

4.29 From the modelling document it is now unclear as to whether the above relates solely to vehicle trips or whether these trips are multi-modal. Further clarification is, therefore, required in this regard to establish the scale of impact that is being outlined.

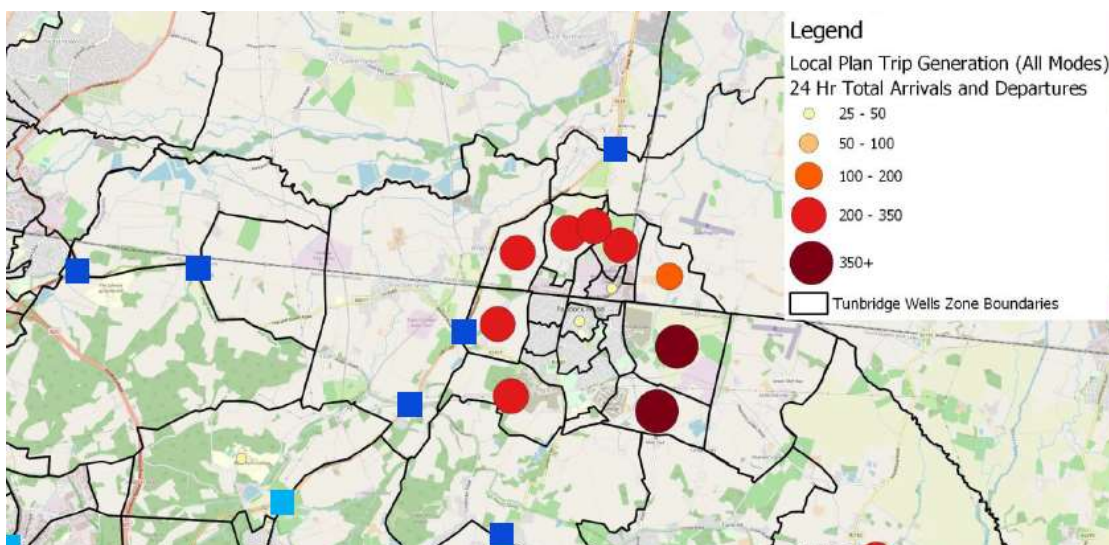
4.30 Nonetheless, the modelling report produced indicates a strong demand between Tonbridge and Paddock Wood (as well as with Royal Tunbridge Wells and Paddock Wood itself). This clearly demonstrates that the demand generated by Paddock Wood will impact Tonbridge and as a result, the associated B2017 corridor.

Revised Modelling Assessment

4.31 Additionally, on review of the modelling results presented as part of the modifications, several hotspots along the B2017 are identified as shown in **Figure 4.4** below. The major hotspots are shown in dark blue (indicating an increase of >50 vehicles and at least one junction arm having a V/C increased by >5%).

¹³ PS_048 TW Local Plan Stage 2 Reporting (August 2023)

Figure 4.4 Hotspot Areas Identified⁹



Source: SWECO

4.32 Taking the above, the report notes that:-

*“Focus needs to be tackling the underlying congestion issues in the ‘major’ hotspot locations along the A228, A264, **B2017** and B2160. By tackling these issues, it is anticipated that other ‘major’ and ‘minor’ hotspots will dissipate without the need for more targeted interventions in these locations.*

It is anticipated that to fix the major hotspots there will be a need for significant investment to support some, or all, of the following measures:

- *Measures to ensure high levels of trips remain local within Paddock Wood (both new and existing trips)*
- ***Modal shift from car to other modes and maximise capacity at hotspots when considering all modes, not simply highway***
- *Where appropriate, physical junction improvement works to increase capacity in key junctions to mitigate LP impacts (not address existing issues)⁹” (emphasis added)*

4.33 Physical measures have been considered by SWECO¹⁴, and measures have been identified at the junctions of the A26 / B2017 and A228 / B2017 which are suggested to increase capacity and mitigate the delays resulting from of the modified Local Plan allocations.

4.34 The identification of the B2017 corridor and associated ‘hotspot’ junctions along it, clearly continues to indicate an impact associated with the Paddock Wood allocation in this area, which will be discussed further in the context of the Five Oak Green bypass and traffic calming for Five Oak Green below.

¹⁴ PS_059 Tunbridge Wells Local Plan – Stage 3 Part 2 Outcomes (November 2023)

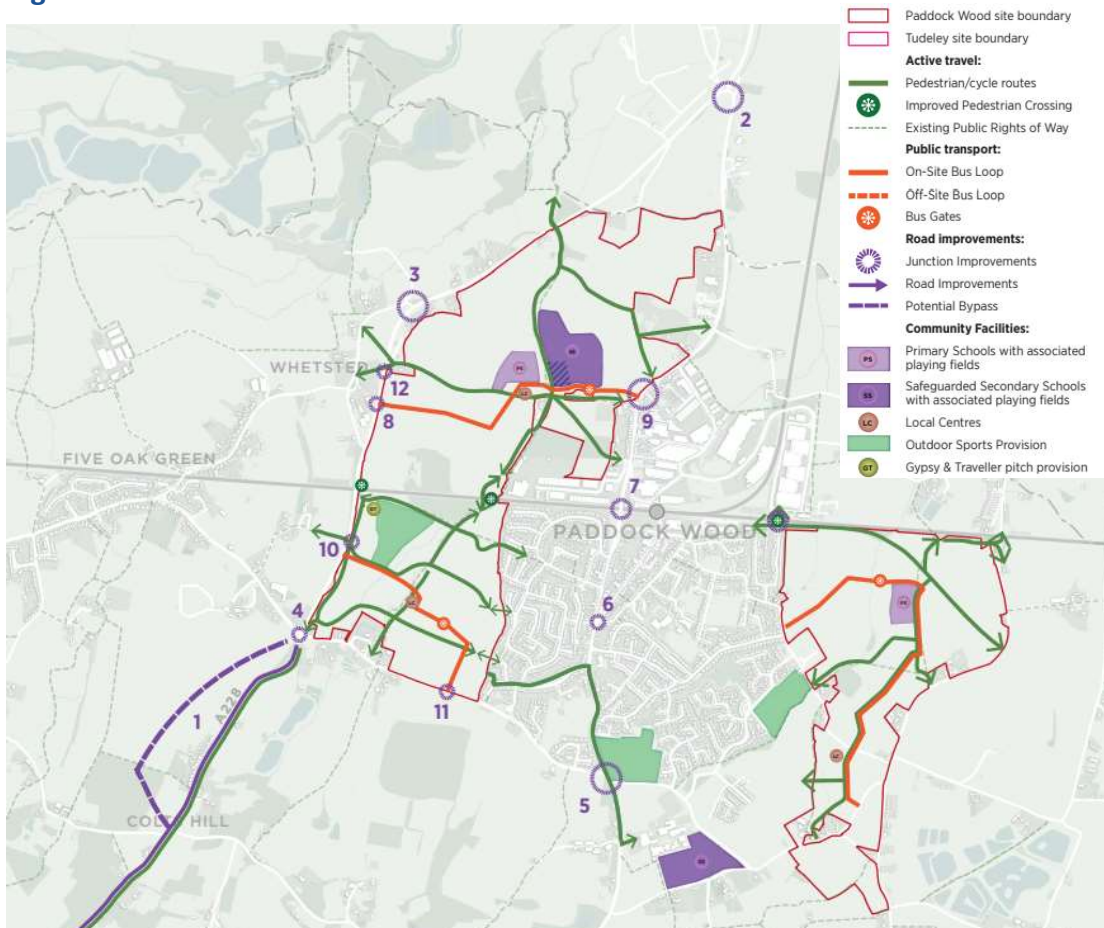
5. Five Oak Green Bypass and Traffic Calming

5.1 Following the removal of Tudeley from the Emerging Local Plan, the Five Oak Green Bypass has now been removed in totality.

5.2 As discussed above and previously within the TN01, it is clear, however, that the B2017 corridor will still be impacted by the development proposals at Paddock Wood, with several junctions on the B2017 having been identified as ‘hotspots’ and Tonbridge itself being identified as a key attractor for trips from Paddock Wood.

5.3 Despite the clear draw of trips between Paddock Wood and Tonbridge, not only has the bypass been removed but reference to the requirement for traffic calming measures in Five Oak Green has also been removed, as shown on the revised Infrastructure Plan for Paddock Wood, below in **Figure 5.1**.

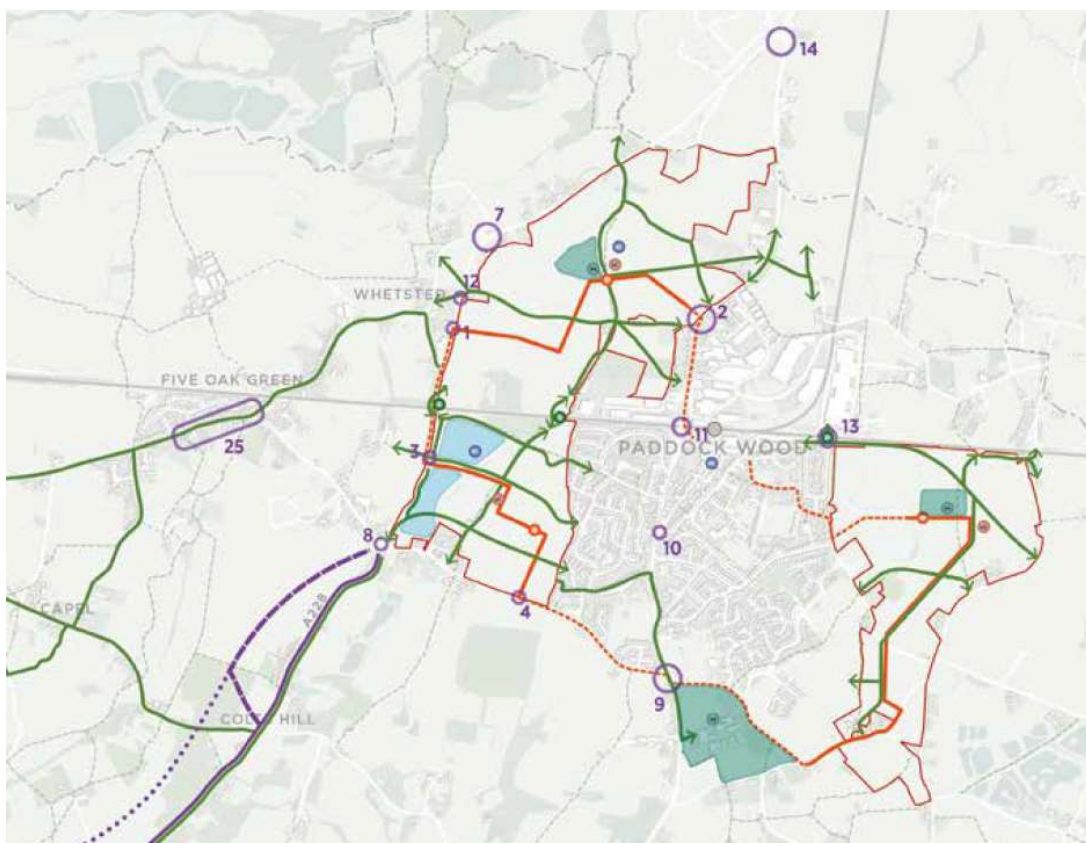
Figure 5.1 Infrastructure Plan for Paddock Wood¹⁰



Source: David Lock Associates

- 5.4 This is questioned when it appears that these traffic calming measures were previously included as part of Paddock Wood's infrastructure plan¹⁵ under Item 25, an extract of which it shown in **Figure 5.2** below.

Figure 5.2 Previous Infrastructure Plan for Paddock Wood¹⁵



Source: David Lock Associates

- 5.5 Whilst the allocation has reduced, evidence remains that there will be a material impact on the B2017 corridor as a result of the Paddock Wood proposals.
- 5.6 In respect of the capacity of the B2017, SWECO have undertaken a link capacity assessment of the road, which is shown in **Figure 5.3** below. The link capacity assessment has been conducted on the basis of the road being a UAP3 classification of 6.1m wide, which allows for the one-way, hourly flows of 900 vehicles to be accommodated¹⁶.

¹⁵ Tunbridge Wells Strategic Site Masterplanning and Infrastructure Study (February 2021), Pages 136-137, Scenario 2 – Paddock Wood and east Capel only

¹⁶ Extract from Design Manual for Roads and Bridges (TA 79/99) as outlined in Transport for London's Road Task Force – Technical Note 10 available at: <https://content.tfl.gov.uk/technical-note-10-what-is-the-capacity-of-the-road-network-for-private-motorised-traffic.pdf>

Figure 5.3 B2017 Badsell Road Link Capacity¹⁴

B2017 Badsell Road (Five Oak Green)

Scenario	AM				PM			
	eastbound		westbound		eastbound		westbound	
	Demand	V/C	Demand	V/C	Demand	V/C	Demand	V/C
2018 Base	282	31	416	46	512	57	331	37
2038 Ref Case	455	51	615	68	644	72	405	45
2038 Local Plan Modal Shift (LPMS)	509	57	898	106	832	92	481	53

Source: SWECO

- 5.7 The modelling demonstrates that under base flows and in 2038 without the Local Plan allocations, the B2017 Badsell Road would operate within its practical link capacity. However, with the Local Plan allocations and assuming a 9% mode shift is achieved, the B2017 would clearly exceed practical capacity (90% of theoretical capacity) in both peak hours. If the mode shift targets are not achieved, then the performance of this road link will be worse.
- 5.8 While it is not entirely clear, it seems that the new modelling shows additional local plan flows of circa 50 eastbound and 250 westbound in the AM peak towards Five Oak Green, and 190 eastbound and 75 eastbound in the PM peak (note that some of these vehicles may be originating and destinating in Five Oak Green itself, detail has not been provided). TWBC do not appear to be planning any infrastructure improvements to mitigate the impact of these additional movements, either by increasing capacity or incorporating measures to encourage the use of more appropriate routes (i.e. traffic calming).
- 5.9 With respect to the previously proposed bypass, the extent that other measures are more appropriate and proportionate to the scale of impact, particularly within the context of recent transport policy which seeks to promote sustainable and active transport above the private vehicle has not been considered by TWBC. Moreover, with the development of new roads brings the opportunity for induced demand, increasing baseline flows and resulting in further, unintended capacity implications. It is considered that this is something which should have been explored further in the approach to TGV before its deletion.
- 5.10 In light of the above evidence, no sound basis has been provided for removing measures along the B2017 corridor for the proposals at Paddock Wood, despite the significant draw of trips indicated. The Five Oak Green bypass and Five Oak Green traffic calming measures are not referenced in the context of Paddock Wood’s revised impact and given the evidence presented, it is considered that these aspects need to be revised, particularly in the context of no proposed bus service enhancements along this corridor.

6. Additional Considerations

Colts Hill Bypass

- 6.1 As detailed above in **Figure 5.1**, the Colts Hill Bypass remains as part of the Paddock Wood allocation. As part of their report, Stantec have produced a slightly revised design for the bypass as shown in **Figure 6.1** below.

more certain that the deliverability of the Five Oak Green bypass with implications for allocation deliverability also.

7. Summary and Conclusion

7.1 Following the removal of Tudeley Village from the Emerging TWBC Local Plan, additional evidence has been presented to assess the modifications now completed to the Local Plan.

7.2 Based on the additional evidence presented, it is considered that the evidence to support its removal and the retention of Paddock Wood is unclear in a number of critical respects. The key issues are:-

- **Bus Provision** – the viability and necessity of the bespoke Paddock Wood circular route, particularly given concerns regarding its ability to be self-funding and the potential interaction between walking and cycling;
- **Walking and Cycling** – essential evidence to support the viability of the proposed walking and cycling improvements on the A228 corridor for Paddock Wood, particularly in the context of the Colts Hill bypass;
- **Modal Shift Assumptions** – multiple modal shift assumptions have been identified within the revised evidence but with a lack of clarity as to what is proposed, what has changed and whether they are achievable;
- **Impacts for Tonbridge and Five Oak Green Bypass** – the impact of Paddock Wood on the B2017 corridor is considered to be material. The high-level approach to assessing this impact means that it is not possible to fully understand the full impacts of Paddock Wood on this corridor. The removal of the Five Oak Green bypass and traffic calming measures within Five Oak Green itself means that there are no material mitigation measures being proposed for these impacts; and
- **Colts Hill Bypass** – the Colts Hill Bypass has been retained as part of the Paddock Wood infrastructure strategy and delivery of the allocated site is dependent on its provision. However, the same questions remain over the deliverability of this infrastructure in the context of the concerns raised by the Inspector with respect to the Five Oak Green bypass.

APPENDIX A – TN01 RESPONSE TO INSPECTOR’S INITIAL FINDINGS FOR THE TUNBRIDGE WELLS BOROUGH LOCAL PLAN