



TUNBRIDGE WELLS BUS FEASIBILITY REVIEW

DATE:	30 October 2023	CONFIDENTIALITY:	Public
SUBJECT:	Public Transport Study – Revised Growth Scenarios		
PROJECT:	Tunbridge Wells Bus Feasibility Review	AUTHOR:	Jody Wu
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1. INTRODUCTION

WSP has been commissioned by Kent County Council (KCC) and Tunbridge Well Borough Council (TWBC) to revise the previous bus network study in line with the updated Tunbridge Well Local Plan 2020-2038.

The revised growth scenario includes the removal of Tudeley Garden Village and reduced growth at Paddock Wood. The reduction in growth has included a reduction in housing numbers and the relevant impact on the bus network. A review of the revenue and capital costs set out in the Tunbridge Wells Bus Study, with reference to recent increases in the price of fuel and other operational costs, has been conducted and compared to the previous study.

1.1 BACKGROUND

Sustainable travel modes sit at the heart of the 5-year strategic plan as set out by TWBC. Up to 50% of residents remain within the study area, with 40-45% being of working age, meaning options to increase the use of local sustainable travel modes are very important to reduce congestion and improve air quality within town centres and on the local highway networks. However, during this work, reviews have been undertaken highlighting the current bus service provision to be both limited in attracting more patronage and insufficient to meet the future demands of proposed developments.

From a Bus Service Improvement Plan (BSIP) consultation which took place in 2022, more frequent bus services which operate for longer durations, improved reliability, and supported by better fares, were identified as three main factors for encouraging greater bus use. Tonbridge Town Centre to Tunbridge Wells Town Centre was specifically identified, concerning reliability, as the corridors within the study area where patronage levels and general delay to services meant bus priority was desirable. The finding reflects comments provided by local bus operators who expressed the need for additional services to serve the new developments.

The current mode share of buses for travelling to work is low at 2% and reflects this predominantly low-frequency network which is in operation between town pairings. Only the Tonbridge-Royal Tunbridge Wells corridor supports a 15-minute headway but sometimes experiences peak time congestion due to the current highway layout and capacity limitations.

New development sites mainly in Paddock Wood and East Capel, have been designed around the concept of walkable neighbourhoods and to position public transport at the heart of each development.

Walking distances from new housing to public transport should be no further than 400m, to maximise public transport usage, public transport services must be high frequency, high quality, and reliable to ensure permanent mode shift from private car use.

The use of active travel modes to access the local bus network is an opportunity to widen the reach of local services beyond the traditional 400m threshold but this must be reflected within both bus and walking/cycling related policies and strategies.

1.2 STUDY CORRIDOR SEGMENTS

The housing allocation sites are divided into six study corridor segments in total. The corridor segments include Tonbridge to Paddock Wood, Paddock Wood to Pembury, Pembury to Royal Tunbridge Wells, Royal Tunbridge Wells to Tonbridge, Tonbridge to Tunbridge Wells Hospital and Tunbridge Wells Hospital to Pembury. The total number of dwellings in the revised Tunbridge Wells Local Development Plan in each corridor segment is set out in Table 1.

Table 1-1: Total Housing Development (dwellings) by study area corridor

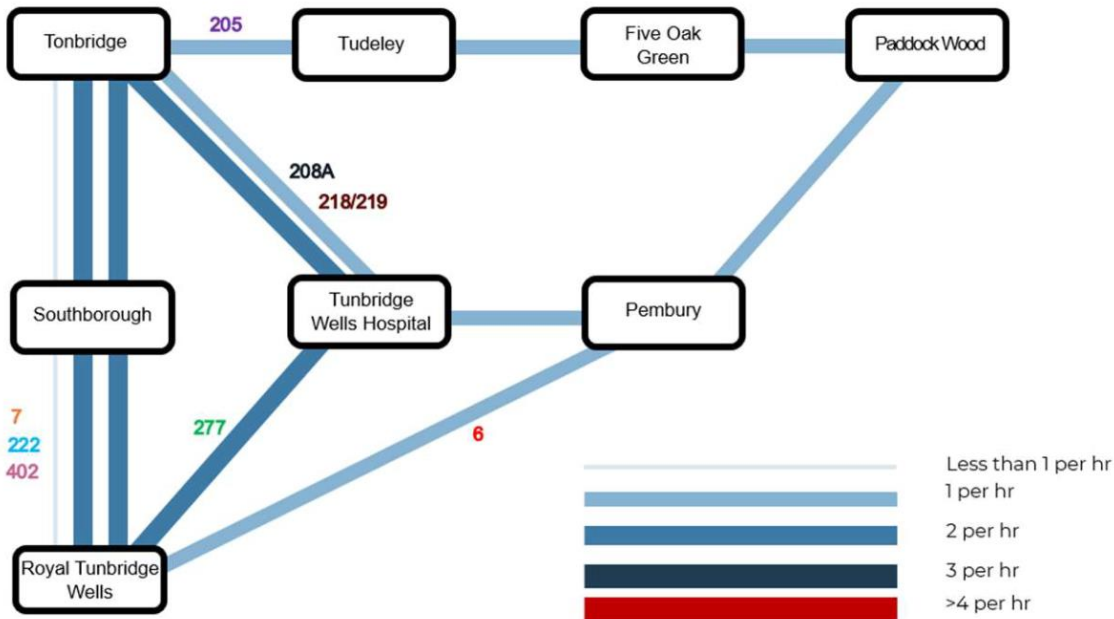
Corridor	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35
Tonbridge -Paddock Wood	0	0	0	5	5	5	1	0	0	0
Paddock Wood – Pembury	110	236	315	325	300	370	370	344	324	230
Pembury – Royal Tunbridge Wells	0	19	20	0	0	0	0	0	0	0
Royal Tunbridge Wells - Tonbridge	95	0	98	70	15	70	100	74	44	44
Tonbridge –Pembury	0	0	0	0	0	0	0	0	0	0
Tonbridge -Paddock Wood	0	44	36	44	36	44	11	50	21	0

*These housing figures are based on the Local Plan housing trajectory updated in May 2023

2. SCENARIO FOR THE BUS NETWORK

The bus network involved in the study includes route No. 7, 222, 402, 277, 208A, 6X, 6, 218/219 and 205. Although the Tudeley Village housing allocation has been removed from the updated Local Plan, the bus routes involved in the study remain the same.

Figure 2-1: Baseline bus network service frequency



The changes in the dwelling numbers would not result in a change in the cost for each proposed option as the bus routes for each scenario remain the same. The fuel price in the model for calculating the bus cost has been updated. The cost for each bus scenario is set out in Table 2-1.

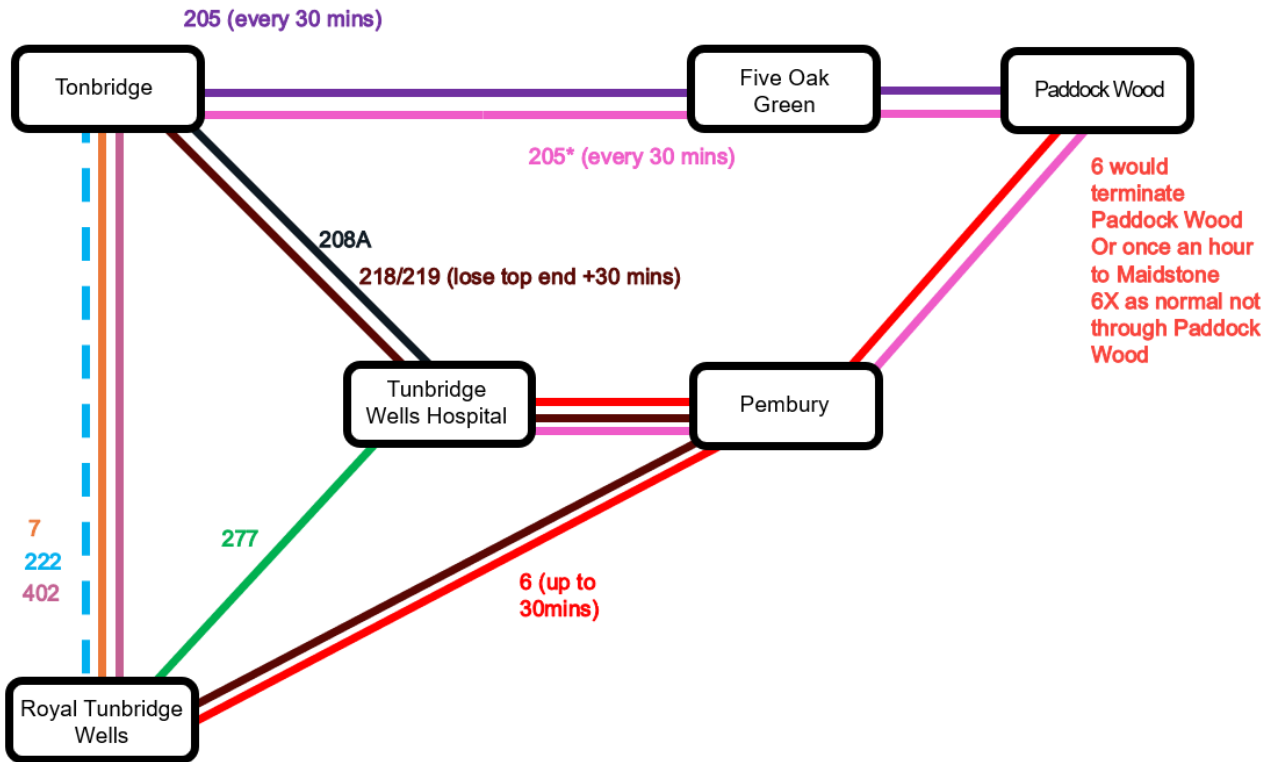
Table 2-1: Estimates for the current baseline network and each proposed option

Scenario	Total cost for 2025/26 (£)	Total PVR	Ave. Cost per bus per year (£)
Baseline	4,508,960	19	237,314
Option 1	7,553,385	29	236,783
Option 1 (with all bus priorities)	6,871,288	25	249,865
Option 2	7,032,530	27	236,786
Option 2 (with all bus priorities)	6,350,433	23	251,005
Option 3	8,080,104	31	236,953
Option 3 (with all bus priorities)	7,568,532	28	245,732
Option 4	7,870,492	30	238,500
Option 4 (with all bus priorities)	7,017,870	25	255,195

It is worth noting that all cost estimates are modelled across a seven-day period with the time period of 06:00 to 23:59. This ensures that the current baseline is comparable to the proposed options. The detail for each option is set out below.

2.1 Option 1

Figure 2-2 Option 1 bus network service frequency

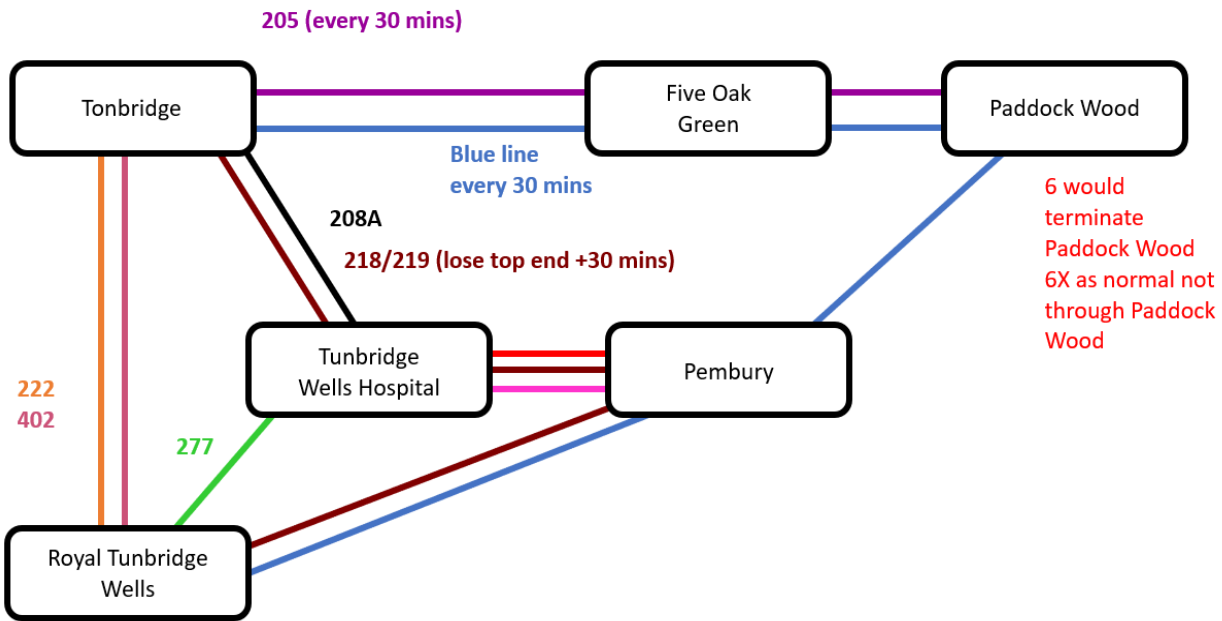


Option 1 changes to services from baseline network

Service	Changes
7, 222, 402, 277, 208A, 6X	Remain unchanged
6	Increased frequency to twice an hour between Royal Tunbridge Wells and Paddock Wood. Every other service would continue to Maidstone.
218/219	Increased frequency to twice an hour. Does not serve local loop in North Tonbridge, and continues instead along the same route as service no. 6 to Royal Tunbridge Wells via Pembury
205	Increased frequency to twice an hour, with every other service continuing along the same route as service no. 6 to Tunbridge Wells Hospital via Pembury.

2.2 Option 2

Figure 2-3: Option 2 bus network service frequency

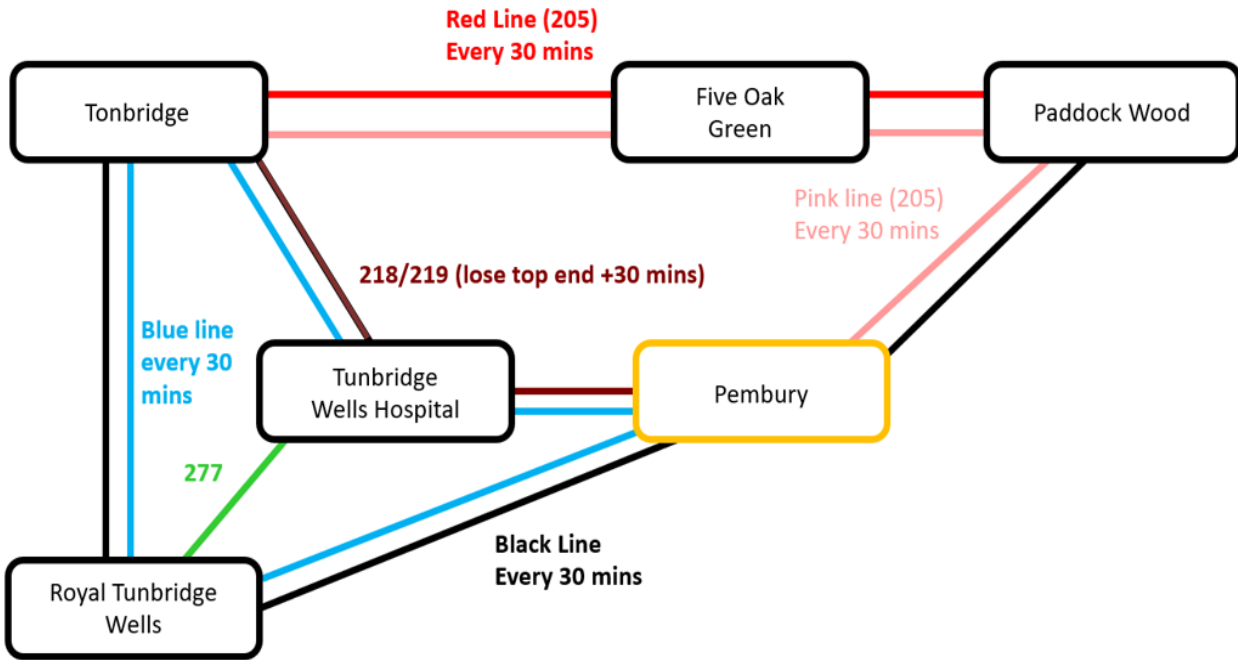


Option 2 changes to services from baseline network

Service	Changes
7, 222, 402, 277, 208A, 6X	Remain unchanged
6	Would operate only between Paddock Wood and Maidstone.
218/219	Increased frequency to twice an hour. Does not serve local loop in Tonbridge, and continues instead along the same route as service no. 6 to Royal Tunbridge Wells via Pembury
205	Increased frequency to twice an hour.
Blue	New service between Royal Tunbridge Wells, Tunbridge Wells Hospital, Pembury, Paddock Wood, Tonbridge, following the same routes as 6 and 205. Operating every 30 mins.

2.3 Option 3

Figure 2-4: Option 2 bus network service frequency

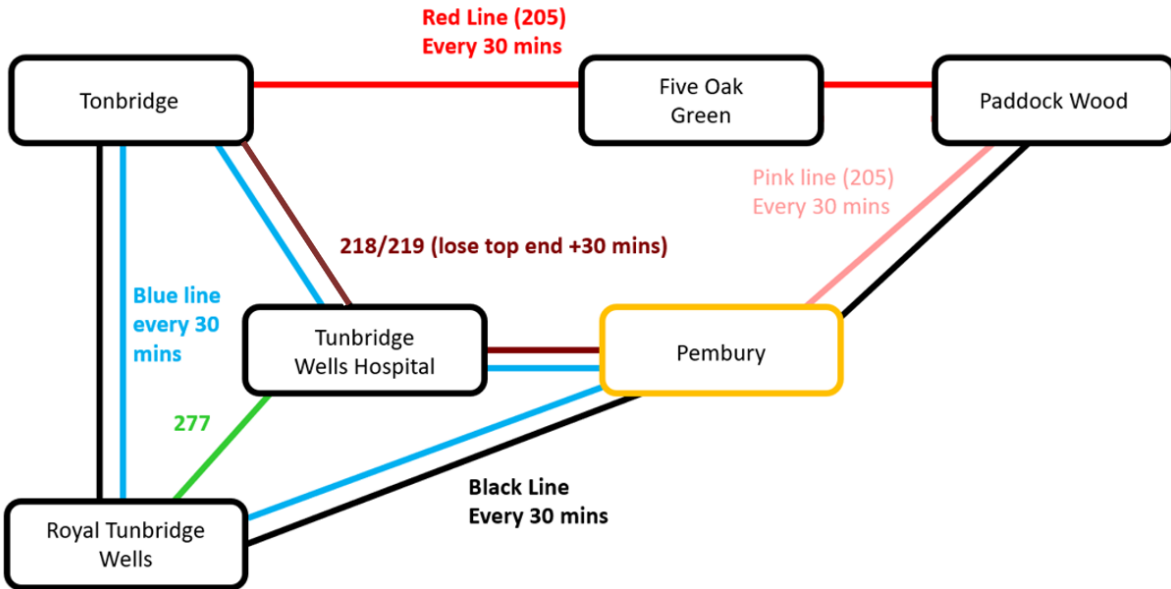


Option 3 changes to services from baseline network

Service	Changes
222, 277, 208A, 6X	Remain unchanged
7,402	Now terminate in Tonbridge
6	Would operate only between Paddock Wood and Maidstone.
218/219	Retained frequency at twice an hour. Does not serve local loop in Tonbridge
205	Increased frequency to twice an hour. Every other service continues to Pembury
Blue	New loop service between Royal Tunbridge Wells, Pembury, Tunbridge Wells Hospital, and Tonbridge. Operating every 30 mins.
Black	New service between Tonbridge, Royal Tunbridge Wells, Pembury, and Paddock Wood

2.4 Option 3a

Figure 2-5: Option 3a bus network service frequency

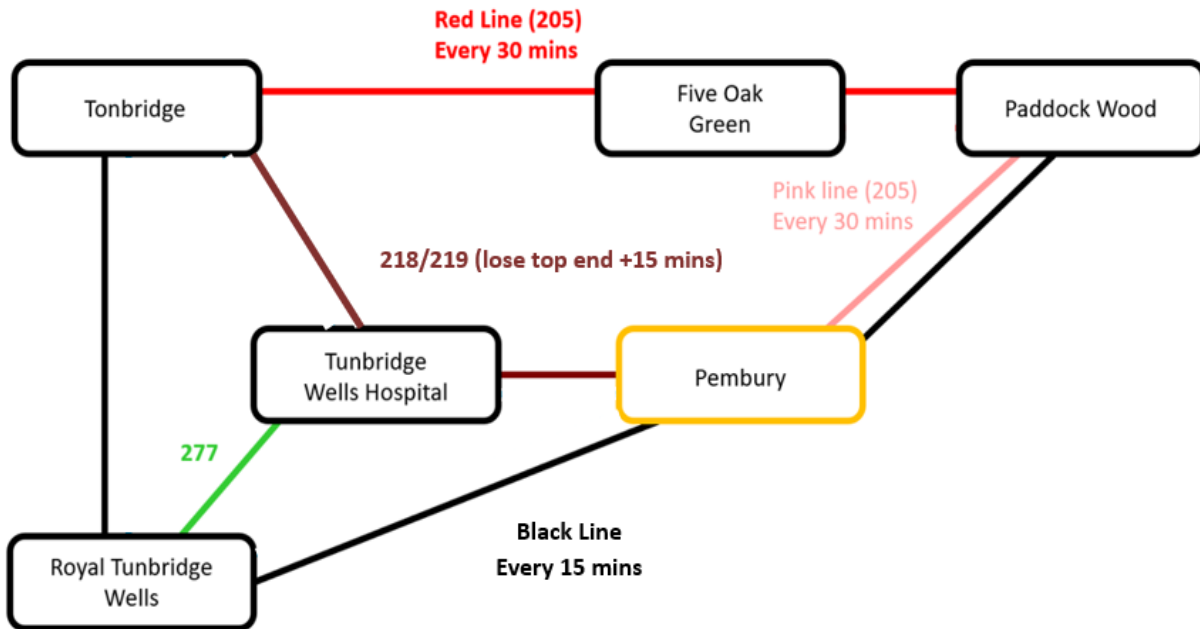


Option 3a changes to services from baseline network

Service	Changes
222, 277, 208A, 6X	Remain unchanged
7,402	Now terminate in Tonbridge
6	Would operate only between Paddock Wood and Maidstone.
218/219	Retained frequency at twice an hour. Does not serve local loop in Tonbridge
205	Increased frequency to twice an hour. Operates only between Paddock Wood and Pembury
Blue	New loop service between Royal Tunbridge Wells, Pembury, Tunbridge Wells Hospital, and Tonbridge. Operating every 30 mins.
Black	New service between Tonbridge, Royal Tunbridge Wells, Pembury, and Paddock Wood

2.5 Option 3b

Figure 2-6: Option 3b bus network service frequency

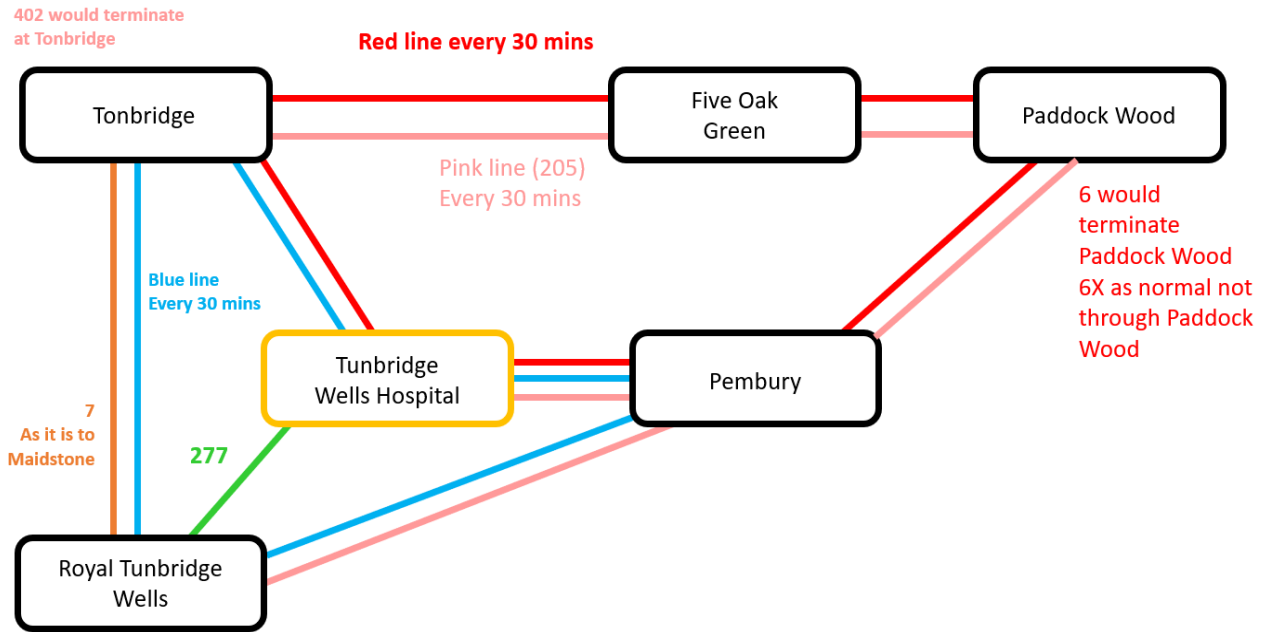


Option 3b changes to services from baseline network

Service	Changes
222, 277, 208A, 6X	Remain unchanged
7,402	Now terminate in Tonbridge
6	Would operate only between Paddock Wood and Maidstone.
218/219	Retained frequency at twice an hour. Does not serve local loop in Tonbridge
205	Increased frequency to twice an hour. Operates only between Paddock Wood and Pembury
Black	New service between Tonbridge, Royal Tunbridge Wells, Pembury, and Paddock Wood, every 15 minutes

2.6 Option 4

Figure 2-7: Option 4 bus network service frequency

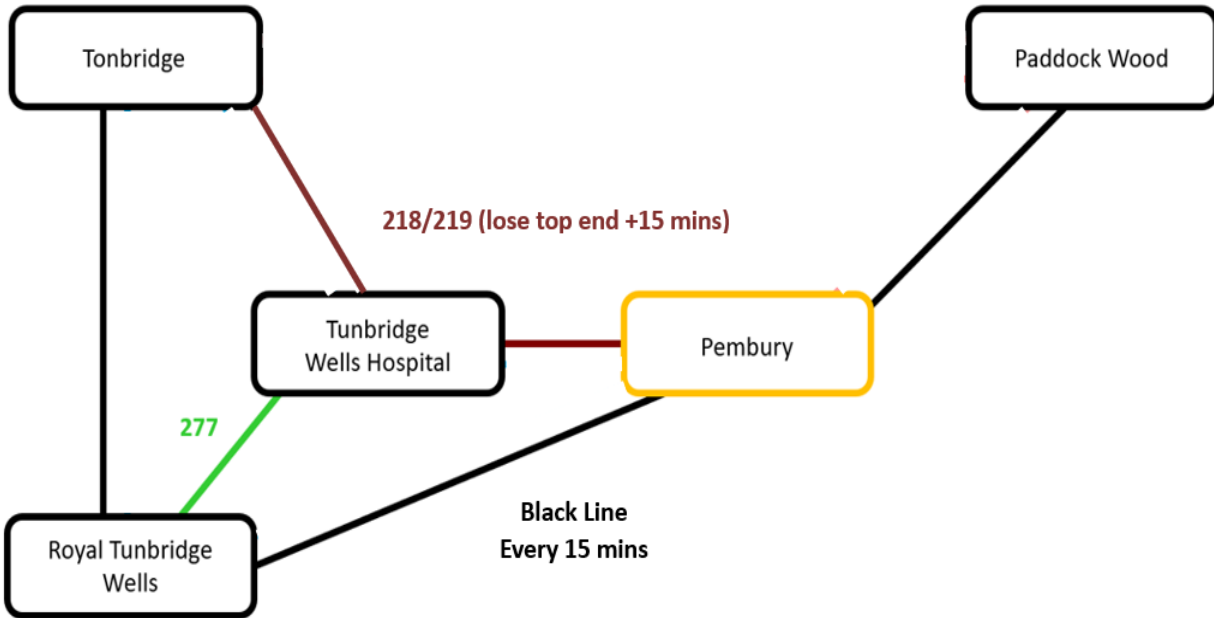


Option 4 changes to services from baseline network

Service	Changes
7, 222, 277, 6X, 208A	Remain unchanged
402	Not terminates at Tonbridge, operating only between Sevenoaks and Tonbridge
6	Would operate only between Paddock Wood and Maidstone.
218/219, 205	Replaced by service below
Red	Loop service operating every 30 minutes between Tonbridge, Paddock Wood, Pembury, Tunbridge Wells Hospital
Blue	Loop service operating every 30 minutes between Tonbridge, RTW Hospital, Pembury, Royal Tunbridge Wells
Pink	Service operating every 30 minutes between Tonbridge, Paddock Wood, Pembury, RTW Hospital, Pembury

2.7 Option 5

Figure 2-8: Option 5 bus network service frequency

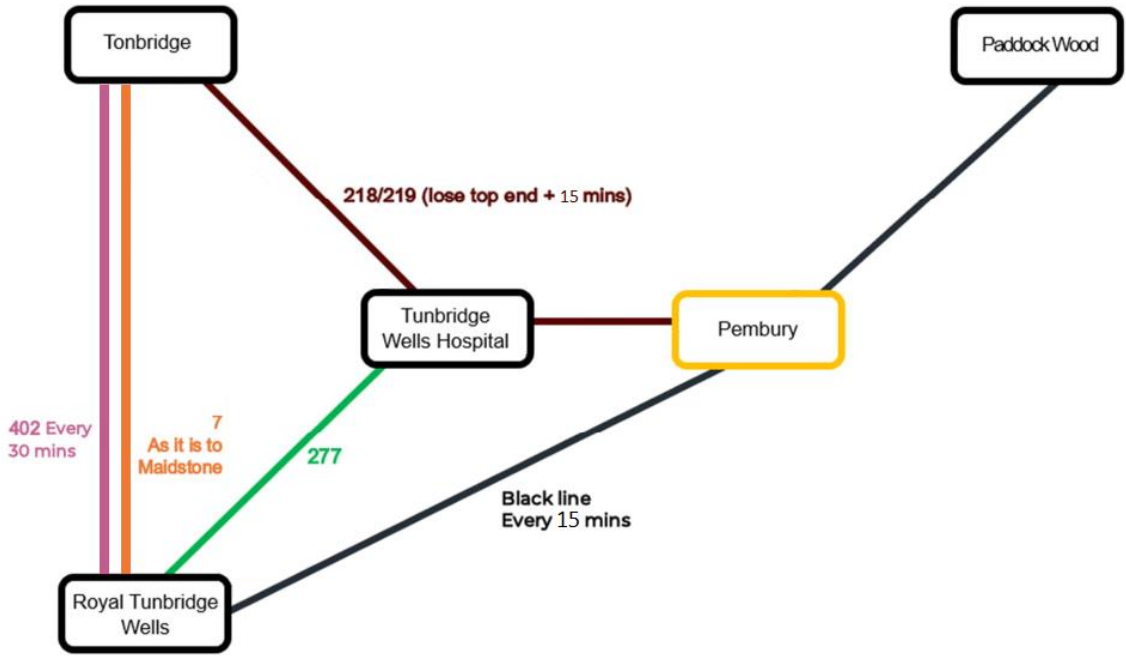


Option 5 changes to services from baseline network

Service	Changes
222, 277, 6X, 208A	Remain unchanged
7, 402	Now terminates at Tonbridge.
218/219	Operates every 15 minutes. Service terminates at Tonbridge.
Black	New service between Tonbridge, Royal Tunbridge Wells, Pembury and Paddock Wood

2.8 Option 5a

Figure 2-9: Option 5 bus network service frequency



Option 5a changes to services from baseline network

Service	Changes
222, 277, 6X, 208A	Remain unchanged
7, 402	Remain unchanged
218/219	Operates every 15 minutes.
Black	New service between Royal Tunbridge Wells, Pembury and Paddock Wood

2.9 Engagement with bus operators

Each of the five options has been generated following a review of the existing local bus network across the study area and following very early engagement with local bus operators at the start of the project in 2022.

All the options have been devised using an aspirational approach to a potential local bus network within the study area and to meet the objectives of the project that require the application of approaches that meet the desire to create a Bus Rapid Transit (BRT) 'light' solution – something best delivered in a contained network.

On this basis, the options have not been developed using existing data pertaining to ridership across the existing service network within the study area and as such an in-depth analysis of the peak flows, directions, and days of the week where buses are most popular has not formed part of the initial brief. It is recommended that following discussion around each of the options through further stakeholder engagement, bus patronage data is considered and mapped to each option to see how current bus use may support or be affected by the proposed network modifications under each option.

Considering the points above, there is potential that some routes which have been indicated as terminating at interchange hub locations on the edges of the study area (e.g., Tonbridge and Paddock Wood) in several options (including routes 6, 7, and 402) may have a strong commercial case to operate across the full length of their existing route and, as such, the potential savings in vehicles and miles proposed may be outweighed by the loss in patronage and revenue. To mitigate this, analysis of data for patronage and revenue on a sectional or stop to stop basis would be required to conclude on the commercial (or otherwise) viability of each option.

Further, several options require interchange between services at strategic hub locations. It should be noted that forced interchange may not be popular with existing users of the local bus network where it replaces a former through journey and would only become acceptable if in general, the frequency levels of local bus services within and outside of the study area remained the same, and ideally were improved. Introducing an interchange penalty can be mitigated by significant improvements in passenger waiting, information and service frequency facilities but will still require a change in mindset over a longer period of time to become an accepted and adopted practice.

It is recommended that following the publication of this work, further detailed stakeholder engagement is conducted with local bus operators and further stakeholders with a vested interest in the performance and operation of the local bus service network such that the options presented can be considered and challenged. This process should lead to a shortlisting of options and may identify variations to one or more options which are deemed more likely to be successful, in particular by local bus service providers.

3. BUS REVENUE COMPARISON

With reference to the updated housing allocation numbers, the bus revenue for each option has been remodelled. The bus revenue in the previous study with the submitted Tunbridge Wells Local Plan is listed in Table 2. As the estimated passenger numbers decreased with fewer dwellings, the revenue is expected to be lower than in the previous study. Table 4 lists the corresponding bus revenue for each option, including the baseline scenario. The revenue is calculated based on the housing development from year 2025/26 to 2034/35.

According to the 2019 National Travel Survey¹ conducted by the Department of Transport, buses take up 5% of the mode share among all types of transportation. In 2021, the National Statistics published transport statistics showing a 6% bus mode share in England. Following the recovery of the economy, it is anticipated that the bus mode share will continue to rise alongside the promotion of active travel measures in the country. Therefore, a 5% bus mode share would be an appropriate figure for the baseline scenario.

Alternatively, for some areas with priority bus lanes and a well-designed bus network, the mode share of buses is comparatively higher. For instance, the Kent Thameside network made up 22%² of local journeys and is recognised as a successful example of a Bus Rapid Transit (BRT) scheme. This figure is a result of the consummate bus network with Fastrack routes and therefore will be an overly ambitious mode share figure for other areas. As such, the mode share of 15% will be used as the highest estimated mode share figure for the proposed options.

Table 3-1: Total Cost and Revenue for each option with the submitted Tunbridge Wells Local Plan

Scenario	Mode Share	Additional Bus Cost from 2025/26 to 2034/35	Total PVR	Total bus Revenue from 2025/26 to 2034/35	The deficit/ profit
Baseline	5%	£ 45,089,600	19	£ 14,950,493	£ -30,139,107
	10%	£ 45,089,600		£ 29,900,986	£ -15,188,614
	15%	£ 45,089,600		£ 44,851,480	£ -238,120
Option 1	5%	£ 23,577,540	29	£ 14,950,493	£ -8,627,047
	10%	£ 23,577,540		£ 29,900,986	£ 6,323,446
	15%	£ 23,577,540		£ 44,851,480	£ 21,273,940
Option 1 (with all bus priorities)	5%	£ 17,376,660	25	£ 14,950,493	£ -2,426,167
	10%	£ 17,376,660		£ 29,900,986	£ 12,524,326
	15%	£ 17,376,660		£ 44,851,480	£ 27,474,820
Option 2	5%	£ 18,842,490	27	£ 14,950,493	£ -3,891,997
	10%	£ 18,842,490		£ 29,900,986	£ 11,058,496

¹ 2019 National Travel Survey (publishing.service.gov.uk)

² Zero Emission Bus Regional Areas (ZEBRA) Scheme Business Case (August 2021)

Scenario	Mode Share	Additional Bus Cost from 2025/26 to 2034/35	Total PVR	Total bus Revenue from 2025/26 to 2034/35	The deficit/ profit
	15%	£ 18,842,490		£ 44,851,480	£ 26,008,990
Option 2 (with all bus priorities)	5%	£ 12,641,610	23	£ 14,950,493	£ 2,308,883
	10%	£ 12,641,610		£ 29,900,986	£ 17,259,376
	15%	£ 12,641,610		£ 44,851,480	£ 32,209,870
Option 3	5%	£ 28,365,890	31	£ 14,950,493	£ -13,415,397
	10%	£ 28,365,890		£ 29,900,986	£ 1,535,096
	15%	£ 28,365,890		£ 44,851,480	£ 16,485,590
Option 3 (with all bus priorities)	5%	£ 23,715,230	28	£ 14,950,493	£ -8,764,737
	10%	£ 23,715,230		£ 29,900,986	£ 6,185,756
	15%	£ 23,715,230		£ 44,851,480	£ 21,136,250
Option 4	5%	£ 26,460,320	30	£ 14,950,493	£ -11,509,827
	10%	£ 26,460,320		£ 29,900,986	£ 3,440,666
	15%	£ 26,460,320		£ 44,851,480	£ 18,391,160
Option 4 (with all bus priorities)	5%	£ 18,709,220	25	£ 14,950,493	£ -3,758,727
	10%	£ 18,709,220		£ 29,900,986	£ 11,191,766
	15%	£ 18,709,220		£ 44,851,480	£ 26,142,260

*Covers years from 2025/26 to 2034/35

3.1 NEW BUS NETWORK OPTIONS

With the removal of Tudeley Village, the Pink line (route 205) from Tonbridge to Paddock Wood will be removed for Option 3a and 3b. In addition, the Blue line (a loop service) will be removed in option 3b and replaced with the doubling of the Black line and the Brown line (route 218/219). The Black line and the Brown line were running every 30 minutes before the modification. In the newly proposed option 3b, both services will be running every 15 minutes.

Option 5 and 5a are proposed to strengthen the connection from Paddock Wood to Royal Tunbridge Wells. This is based on the reduction in housing numbers in Tudeley Village and Paddock Wood in the revised housing trajectory. Both the Brown line (route 218/219) and the Black line will be running every 15 minutes in options 5 and 5a. In option 5, the Black line will connect Tonbridge to Royal Tunbridge Wells and Royal Tunbridge Wells to Paddock Wood through Pembury. For option 5a, Tonbridge will be connected to Royal Tunbridge Wells with bus routes 7 and 402, both running every 30 minutes. There will not be any improvements to the existing service for route 205. Compared to the baseline scenario, the black line provides a more frequent service than bus route 6 which runs every 60 minutes. The same applies to the proposed

bus service 218/219. It is proposed that bus 218/219 will run every 15 minutes in contrast to every 60 minutes in the baseline scenario.

The bus frequency will have a direct impact on the transportation preferences of the population. Generally, the more frequent the bus is, the higher the percentage of mode share. According to the data provided by the Department of Transport in 2022³, the mode share of buses dropped to 3.5% post-Covid. The expected bus mode share scenarios are therefore adjusted to be 3%, 5% and 10%.

The table below shows the cost and revenue for different scenarios with different mode shares. The estimated yearly costs may vary depending on the fuel price and inflation in general. The inflation rate is modelled at 10% for the year 2025/26 to 2027/28 and at 1% less than the previous year from 2028/29 onwards.

Table 3-2: Total Cost and Revenue for each option with the revised growth scenario

Scenario	Mode Share	Additional Bus Cost from 2025/26 to 2034/35	Total PVR	Total Bus Revenue from 2025/26 to 2034/35	Forecast deficit/ profit
Baseline	3%	£71,772,461	19	£4,303,122	£-67,469,339
	5%	£71,772,461		£ 7,171,870	£-64,600,591
	10%	£71,772,461		£ 14,343,741	£-57,428,720
Option 1	3%	£40,064,452	29	£4,303,122	£-35,761,330
	5%	£40,064,452		£ 7,171,870	£-32,892,582
	10%	£40,064,452		£ 14,343,741	£-25,720,711
Option 1 (with all bus priorities)	3%	£20,564,955	25	£4,303,122	£-16,261,833
	5%	£20,564,955		£ 7,171,870	£-13,393,085
	10%	£20,564,955		£ 14,343,741	£-6,221,214
Option 2	3%	£22,845,471	27	£4,303,122	£-18,542,349
	5%	£22,845,471		£ 7,171,870	£-15,673,601
	10%	£22,845,471		£ 14,343,741	£-8,501,730
Option 2 (with all bus priorities)	3%	£20,582,862	23	£4,303,122	£-16,279,740
	5%	£20,582,862		£ 7,171,870	£-13,410,992
	10%	£20,582,862		£ 14,343,741	£-6,239,121
Option 3a	3%	£41,635,840	31	£4,303,122	£-37,332,718
	5%	£41,635,840		£ 7,171,870	£-34,463,970

³ Annual bus statistics: year ending March 2022 (revised) - GOV.UK (www.gov.uk)

Scenario	Mode Share	Additional Bus Cost from 2025/26 to 2034/35	Total PVR	Total Bus Revenue from 2025/26 to 2034/35	Forecast deficit/ profit
	10%	£41,635,840		£ 14,343,741	-£27,292,099
Option 3a (with all bus priorities)	3%	£33,532,097	28	£4,303,122	-£29,228,975
	5%	£33,532,097		£ 7,171,870	-£26,360,227
	10%	£33,532,097		£ 14,343,741	-£19,188,356
Option 3b	3%	£37,476,220	16	£4,303,122	-£33,173,098
	5%	£37,476,220		£ 7,171,870	-£30,304,350
	10%	£37,476,220		£ 14,343,741	-£23,132,479
Option 3b (with all bus priorities)	3%	£30,289,923	15	£4,303,122	-£25,986,801
	5%	£30,289,923		£ 7,171,870	-£23,118,053
	10%	£30,289,923		£ 14,343,741	-£15,946,182
Option 4	3%	£39,732,343	30	£4,303,122	-£35,429,221
	5%	£39,732,343		£ 7,171,870	-£32,560,473
	10%	£39,732,343		£ 14,343,741	-£25,388,602
Option 4 (with all bus priorities)	3%	£31,612,247	25	£4,303,122	-£27,309,125
	5%	£31,612,247		£ 7,171,870	-£24,440,377
	10%	£31,612,247		£ 14,343,741	-£17,268,506
Option 5	3%	£13,050,382	26	£4,303,122	-£8,747,260
	5%	£13,050,382		£ 7,171,870	-£5,878,512
	10%	£13,050,382		£ 14,343,741	£1,293,359
Option 5 (with all bus priorities)	3%	£7,781,916	23	£4,303,122	-£3,478,794
	5%	£7,781,916		£ 7,171,870	-£610,046
	10%	£7,781,916		£ 14,343,741	£6,561,825
Option 5a	3%	£13,050,382	22	£4,303,122	-£8,747,260
	5%	£13,050,382		£ 7,171,870	-£5,878,512
	10%	£13,050,382		£ 14,343,741	£1,293,359
Option 5a (with all bus priorities)	3%	£7,781,916	19	£4,303,122	-£3,478,794
	5%	£7,781,916		£ 7,171,870	-£610,046

Scenario	Mode Share	Additional Bus Cost 2025/26 to 2034/35	Total PVR	Total Bus Revenue from 2025/26 to 2034/35	Forecast deficit/ profit
	10%	£7,781,916		£ 14,343,741	£6,561,825

*Covers years from 2025/26 to 2034/35

Among all the options, options 5 and 5a are the most economically viable option with the 3%, 5% and 10% bus mode share scenario. With the retention of the few essential bus routes, the main areas are connected with reduced cost. The break-even points for options 5 and 5a with and without bus priority options are illustrated in **Figure 3-1** to **Figure 3-4** below.

Figure 3-1: The Revenue Profile and additional cost for Option 5 at 3% mode share

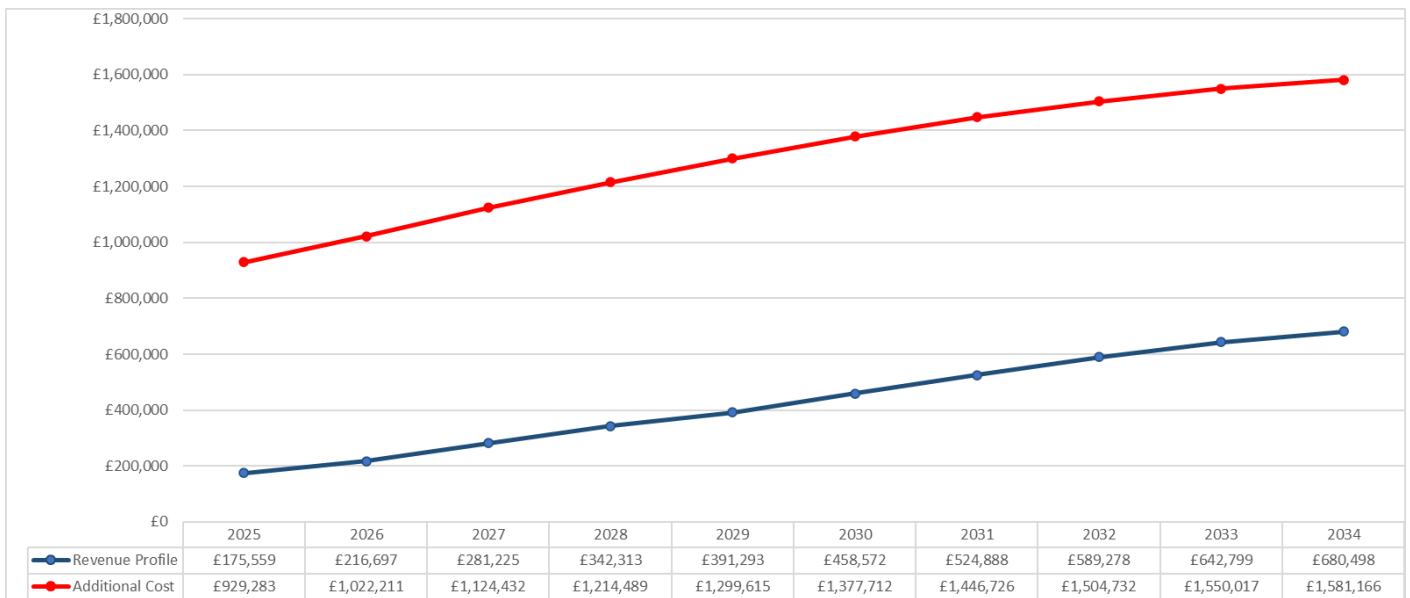
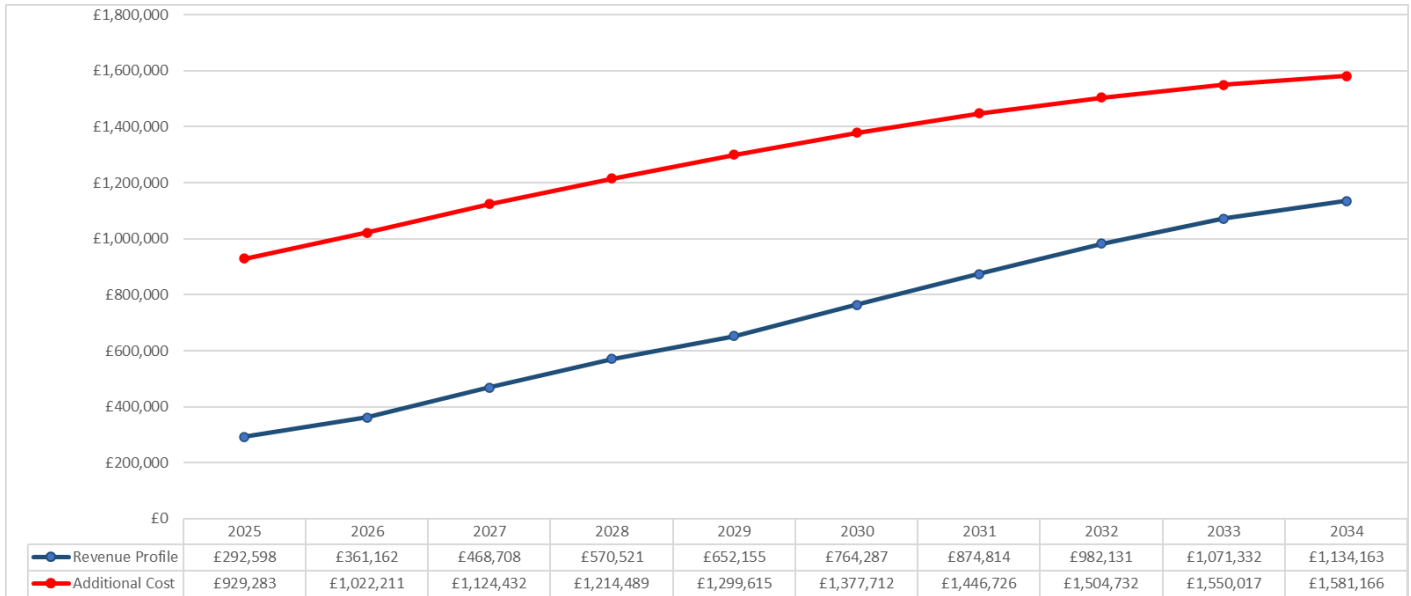


Table 3-3: Profit / deficit by year at 3% mode share

	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35
Revenue and cost gap	-£753,724	-£805,514	-£843,207	-£872,176	-£908,321	-£919,139	-£921,838	-£915,453	-£907,218	-£900,669

Figure 3-2: The Revenue Profile and additional cost for Option 5 at 5% mode share



* The red line represents the yearly costs, and the blue line represents the yearly revenue based on 10% mode share

Table 3-4: Profit / deficit by year at 5% mode share

	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35
Revenue and cost gap	-£636,684	-£661,049	-£655,724	-£643,968	-£647,459	-£613,425	-£571,912	-£522,601	-£478,685	-£447,004

Figure 3-3: The Revenue Profile and additional cost for Option 5 (with all bus priorities) at 3% mode share

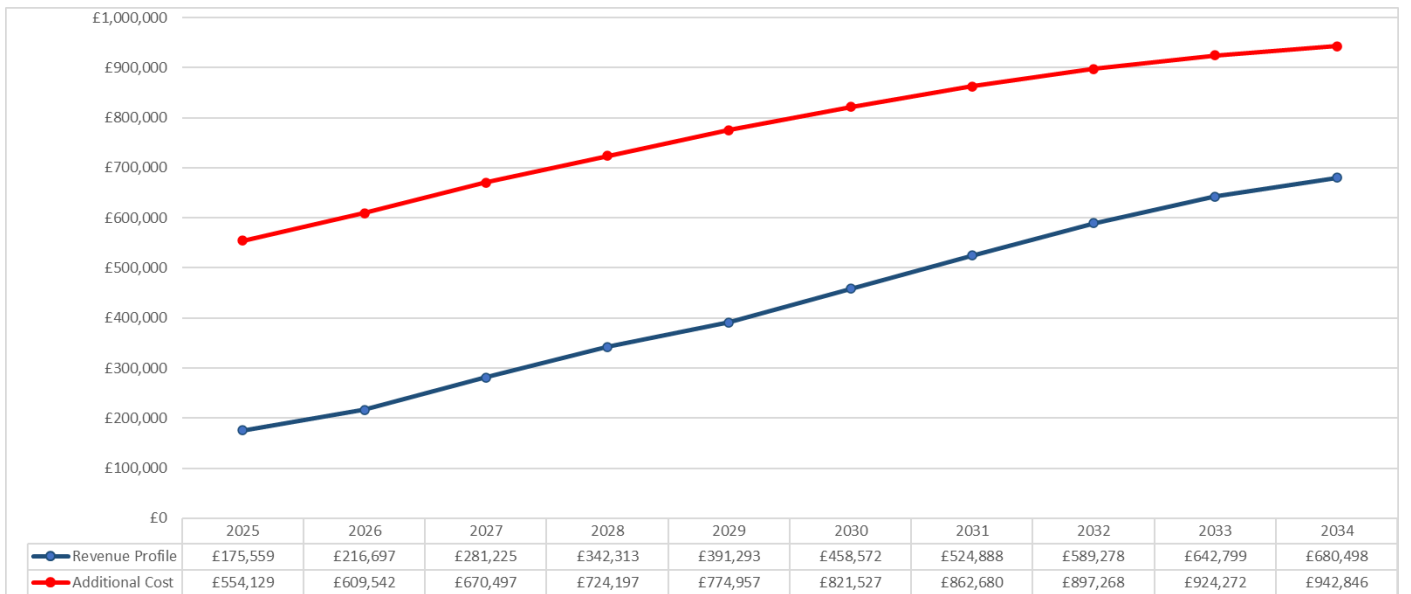
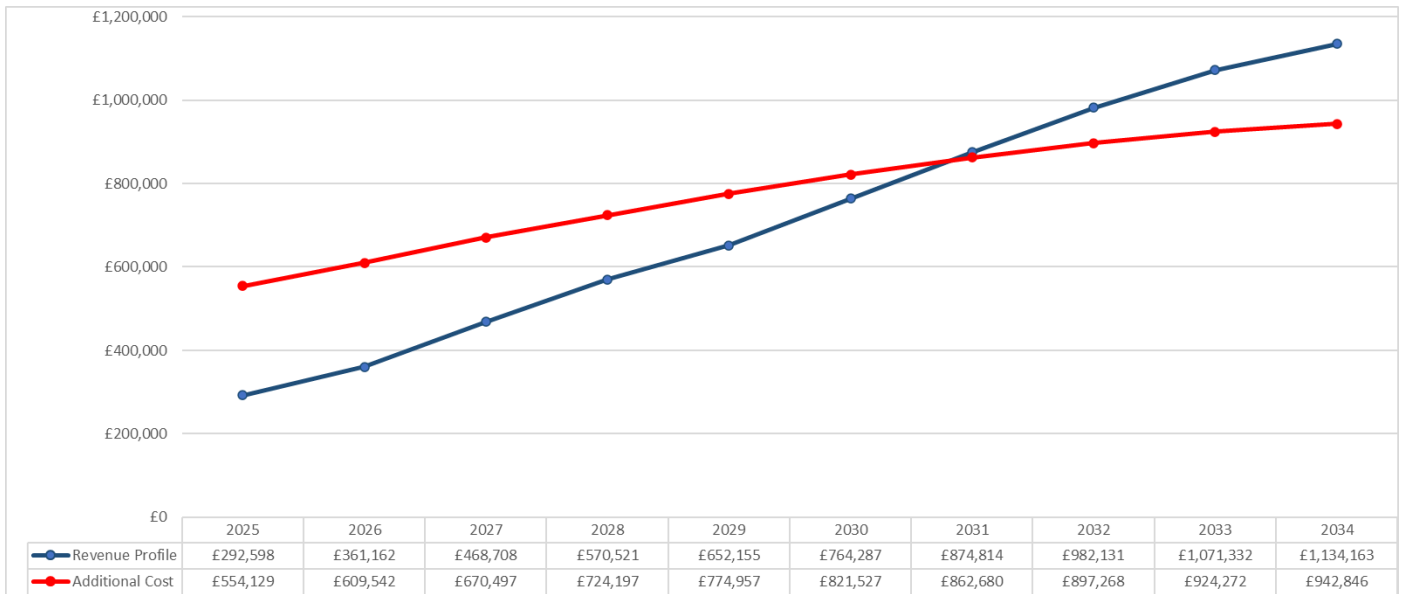


Table 3-5: Profit / deficit by year at 3% mode share

	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35
Revenue and cost gap	-£378,570	-£392,845	-£389,272	-£381,885	-£383,664	-£362,954	-£337,791	-£307,990	-£281,473	-£262,349

Figure 3-4: The Revenue Profile and additional cost for Option 5 (with all bus priorities) at 5% mode share



*The red line represents the yearly costs, and the blue line represents the yearly revenue based on 10% mode share

Table 3-6: Profit / deficit by year at 5% mode share

	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35
Revenue and cost gap	£-261,531	£-248,380	£-201,789	£-153,676	£-122,802	£-57,239	£12,134	£84,862	£147,060	£191,317

Figure 3-5: The Revenue Profile and additional cost for Option 5a at 3% mode share

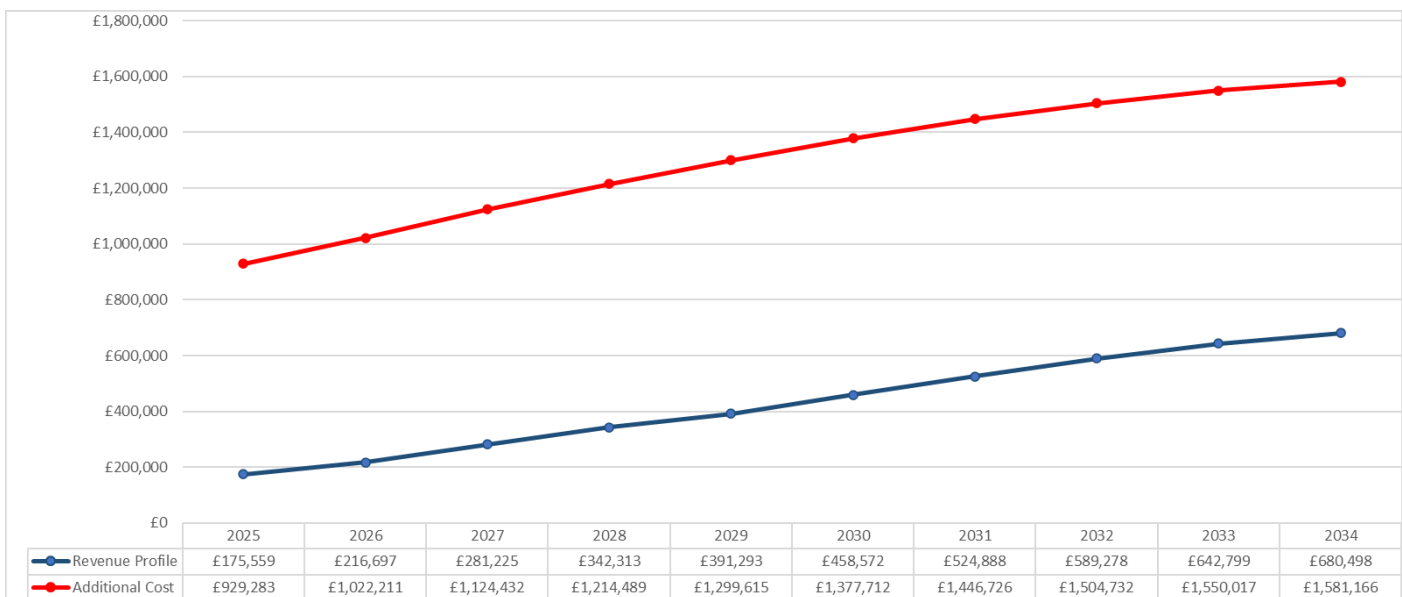


Table 3-7: Profit / deficit by year at 3% mode share

	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35
Revenue and cost gap	-£753,724	-£805,514	-£843,207	-£872,176	-£908,321	-£919,139	-£921,838	-£915,453	-£907,218	-£900,669

Figure 3-6: The Revenue Profile and additional cost for Option 5a at 5% mode share

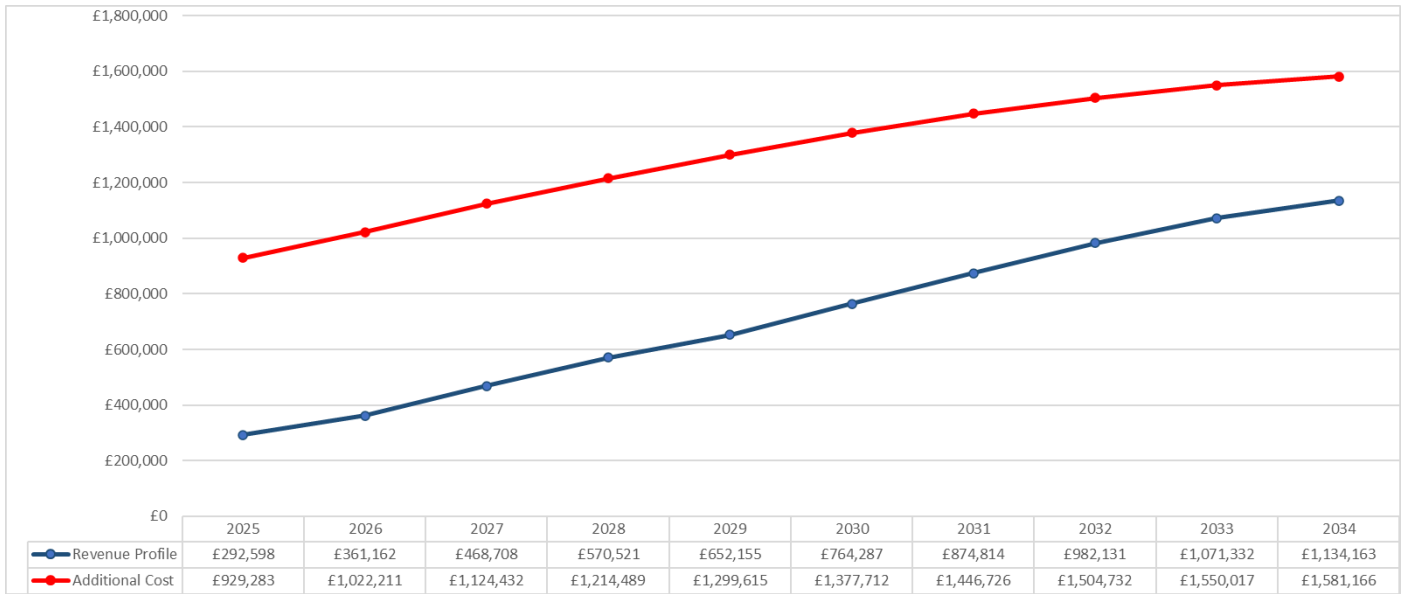


Table 3-8: Profit / deficit by year at 5% mode share

	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35
Revenue and cost gap	-£636,684	-£661,049	-£655,724	-£643,968	-£647,459	-£613,425	-£571,912	-£522,601	-£478,685	-£447,004

Figure 3-7: The Revenue Profile and additional cost for Option 5a (with all bus priorities) at 3% mode share

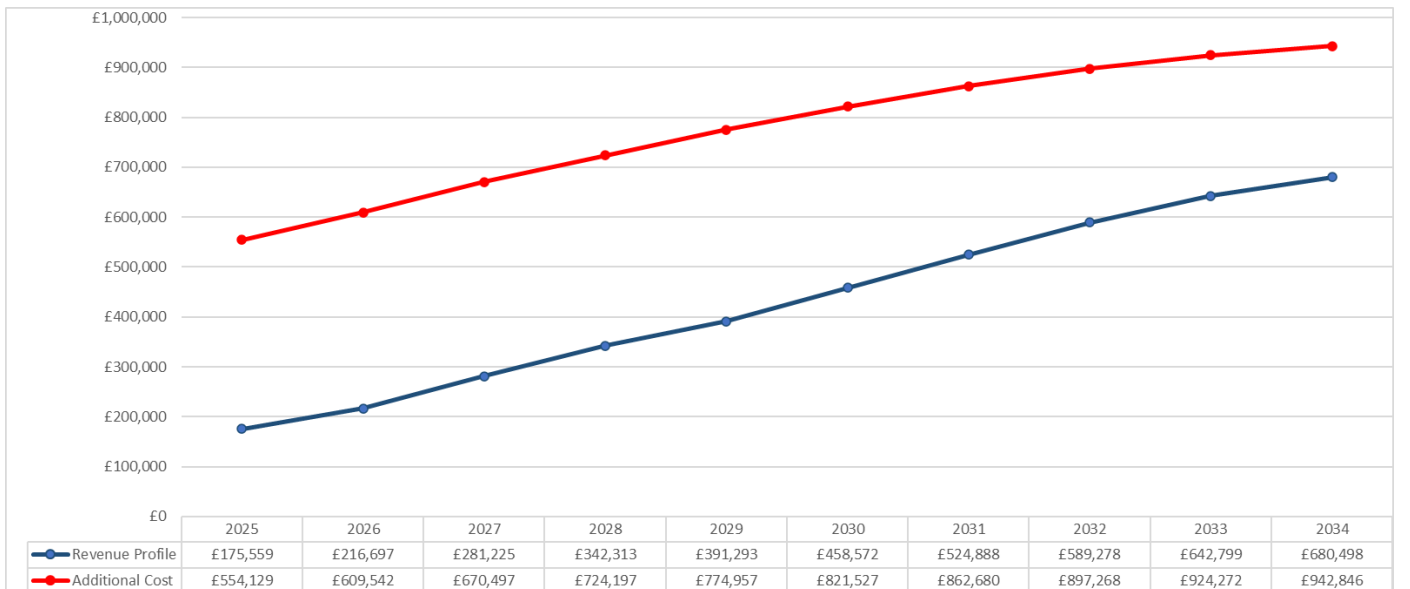
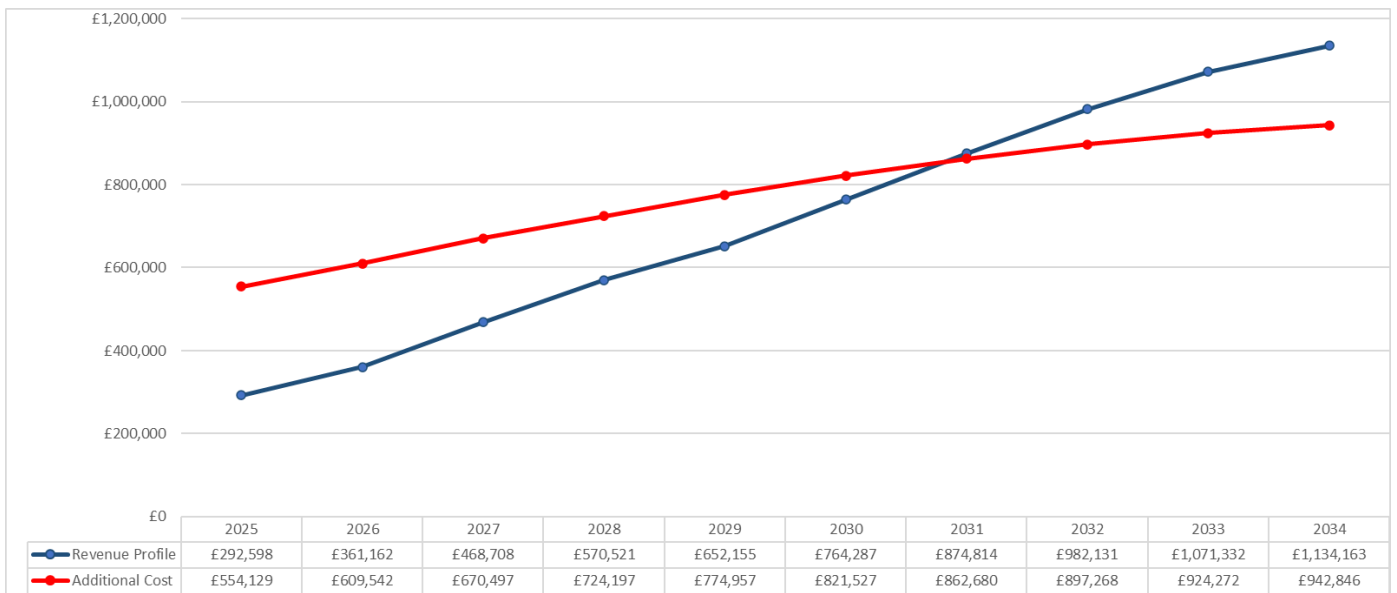


Table 3-9: Profit / deficit by year at 3% mode share

	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35
Revenue and cost gap	-£378,570	-£392,845	-£389,272	-£381,885	-£383,664	-£362,954	-£337,791	-£307,990	-£281,473	-£262,349

Figure 3-8: The Revenue Profile and additional cost for Option 5a (with all bus priorities) at 5% mode share



*The red line represents the yearly costs, and the blue line represents the yearly revenue based on 10% mode share

Table 3-10: Profit / deficit by year at 5% mode share

	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35
Revenue and cost gap	-£261,531	-£248,380	-£201,789	-£153,676	-£122,802	-£57,239	£12,134	£84,862	£147,060	£191,317

3.2 SUBSIDIES REQUIRED FOR OPTION 5 AND 5A

The yearly revenue projection for **Figure 3-1** to **Figure 3-4** are based on a bus mode share of 3% and 5%. The estimated yearly costs may vary depending on the fuel price and inflation in general. The inflation rate is modelled at 10% for the year 2025/26 to 2027/28 and at 1% less than the previous year from 2028/29 onwards. The 3% and 5% mode share were used for its practicality. The 3%, 5% and 10% mode share scenarios are provided below for reference. Based on the difference between the yearly revenue and yearly additional costs, the subsidy amount required is set out in **Table 3-11**.

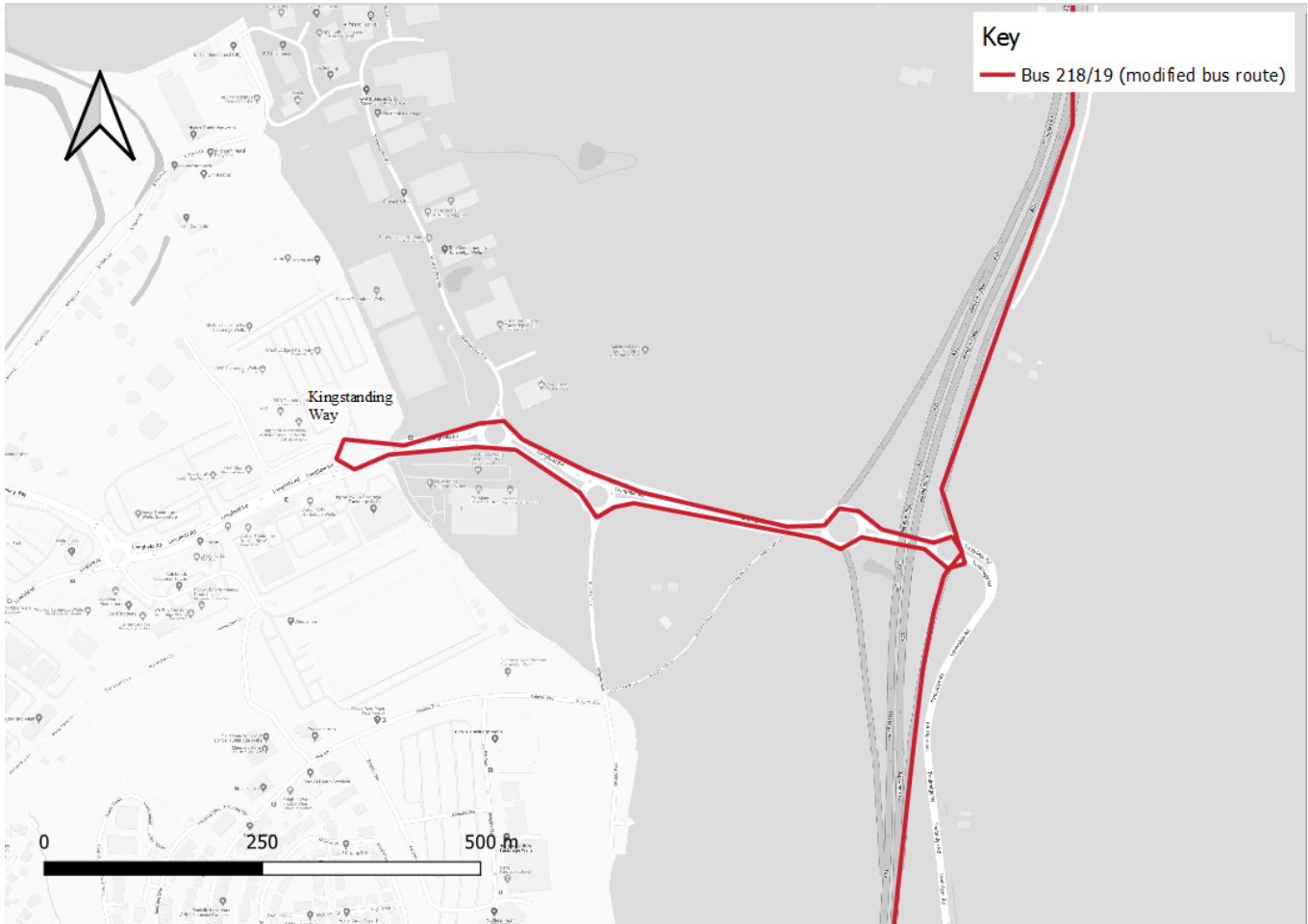
Table 3-11: Subsidies required for Option 5 from 2025/26 to 2034/35

Scenario	Mode Share	Additional Bus Cost from 2025/26 to 2034/35	Baseline cost from 2025/26 to 2034/35	Total Bus Revenue from 2025/26 to 2034/35	Subsidies required (Revenue- (total cost))
Option 5	3%	£13,050,382	£71,772,461	£4,303,122	-£80,519,721
	5%	£13,050,382	£71,772,461	£ 7,171,870	-£77,650,973
	10%	£13,050,382	£71,772,461	£ 14,343,741	-£70,479,102
Option 5 (with all bus priorities)	3%	£7,781,916	£71,772,461	£4,303,122	-£75,251,255
	5%	£7,781,916	£71,772,461	£ 7,171,870	-£72,382,507
	10%	£7,781,916	£71,772,461	£ 14,343,741	-£65,210,636
Option 5a	3%	£13,050,382	£71,772,461	£4,303,122	-£80,519,721
	5%	£13,050,382	£71,772,461	£ 7,171,870	-£77,650,973
	10%	£13,050,382	£71,772,461	£ 14,343,741	-£70,479,102
Option 5a (with all bus priorities)	3%	£7,781,916	£71,772,461	£4,303,122	-£75,251,255
	5%	£7,781,916	£71,772,461	£ 7,171,870	-£72,382,507
	10%	£7,781,916	£71,772,461	£ 14,343,741	-£65,210,636

4. BUS ROUTES MODIFICATION FOR KINGSTANDING WAY

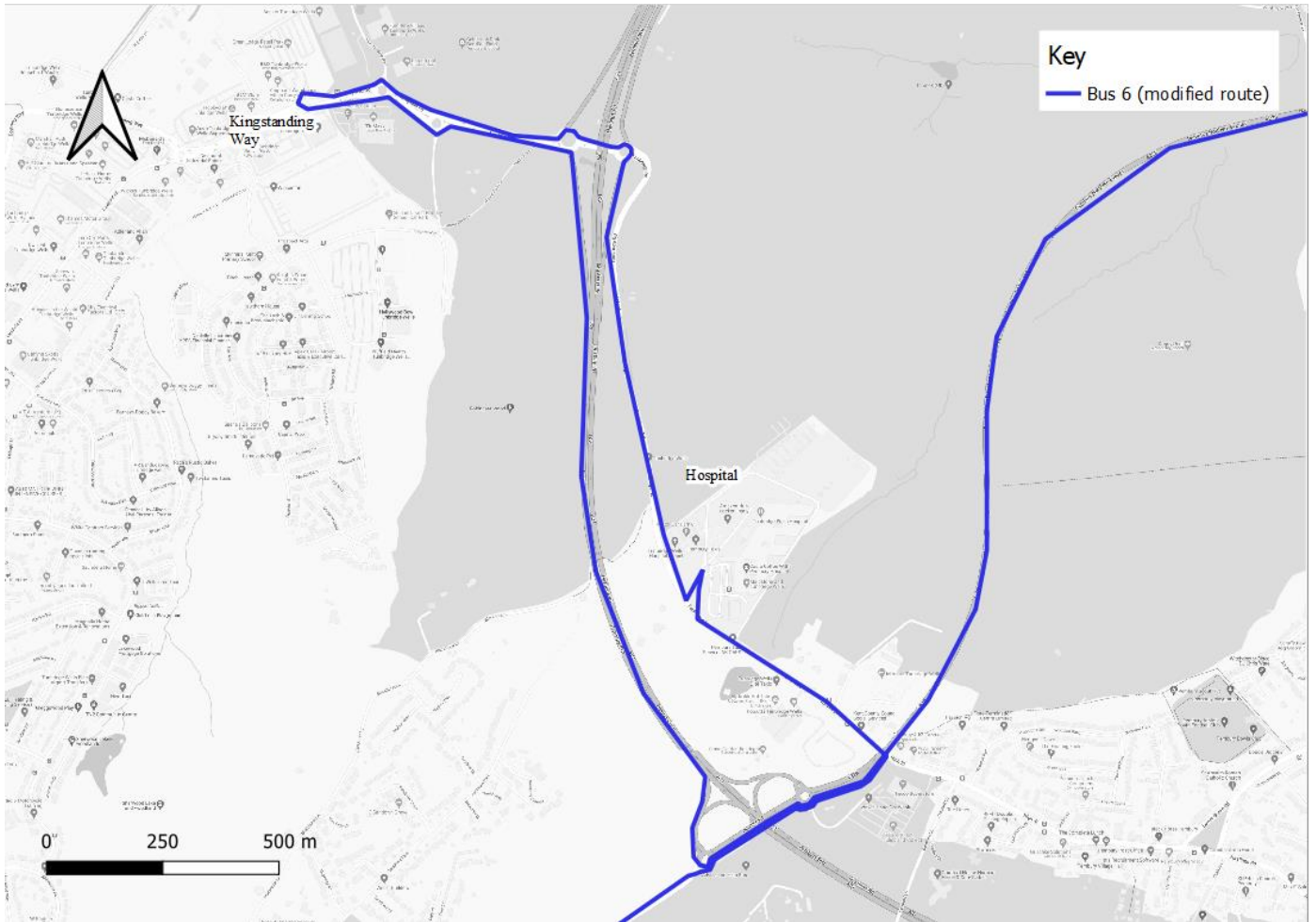
The existing 277 bus route connects the Tunbridge Wells Hospital to Pembury terminating at the Tunbridge Wells Railway Station. To cater for the employment allocation at Kingstanding Way in North Farm, a slight deviation is proposed on and off the A21 in each direction as shown in **Figure 4-1**. The detour will add approximately 650 meters to the distance travelled.

Figure 4-1: Proposed Bus Route 218/19



Alternatively, the buses travelling from the Paddock Wood to Tunbridge Wells can travel beyond the hospital to serve the existing teardrop loop at Kindstanding Way as shown in **Figure 4-2**. This diversion will create an additional 5,000 meters of travel distance by bus 6.

Figure 4-2: Proposed Bus Route 6





5. EMPLOYMENT AND OTHER ALLOCATION

In this report, the trip rates are estimated on the basis of the number of housing developments in the Local Plan. The other factors including the employment allocation and proposed schools are not accounted for. The trend of remote working has influenced the choice of transportation and it has become harder to draw the correlation between the number of jobs in the area with the bus trip rates. In addition, more employees are expected to be living near the employment sites. Therefore, the impact of the employment sites on the bus trip rates are reduced.

The number of schools allocated in the Local Plan will have an impact on the bus trip rates. However, the choice of transportation among school children varied. The bus trip rates are unlikely to be predicted based on the number of schools.



6. SUMMARY

The modelling and forecasting process has included an estimation of the additional revenue expected with the updated housing allocation taking place across the Tunbridge Wells Borough Council area between the financial year 2025/26 to 2034/35.

The WSP bespoke Public Transport Assessment (PTASS) model has been used to project the expected public transport revenue across the full period (2025/26 to 2035/35). The updated housing development information has been supplied by TWBC based on the Local Plan. The housing allocation sites are sorted on a corridor-by-corridor basis to accurately capture the corresponding development in each corridor segment.

The years included in this study have been narrowed down to 10 years instead of 15 in the previous study. The revenue comparison is generated based on the financial year 2025/26 to 2034/35 as requested by TWBC.