TECHNICAL NOTE 1

DATE:	30 October 2023	**CONFIDENTIALITY:**	Restricted
SUBJECT:	Paddock Wood Bus Service Options		
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1. INTRODUCTION

WSP has been commissioned by Kent County Council (KCC) and Tunbridge Wells Borough Council (TWBC) to examine the current local bus network operating across the TWBC area and understand how the current local bus network and any subsequent changes to routes, supporting infrastructure, and service levels may support the planned population expansion brought about by the adoption of the Tunbridge Wells Borough Local Plan (2020-2038). This has resulted in a series of reports:

- Tunbridge Wells Bus Feasibility Note (Main Report)
- Public Transport Study – Revised Growth Scenarios (Addendum to Main Report)
- Paddock Wood Bus Service Options (This Report)

The Revised Growth Scenarios examined the impact of reductions in housing allocations across the study area (for reference shown below in 1 and Table 1-1) and the revised work seeks to understand how these reductions may affect the operational model for improved bus services already identified through the Main Report.

Changes to the number of houses proposed within Paddock Wood as one of the options in the above revised growth scenarios, it is likely that a new bespoke bus service will be required to better serve the area. This would be a local bus service for the immediate Paddock Wood town and suburban area and could be funded in part or full, with Section 106 funding attracted by the new housing developments. This Technical Note explores the options for a proposed town bus service which have been identified and outlined below. In addition, the estimated operational cost and the potential revenue based on the updated housing numbers and public transport use by new residents are provided subsequently.

It should be noted that, as this service would operate in addition to the previous network changes proposed, there could be a degree of abstraction of revenue from those services, should the additional service be introduced.

Figure 1-1 Paddock Wood Study Area

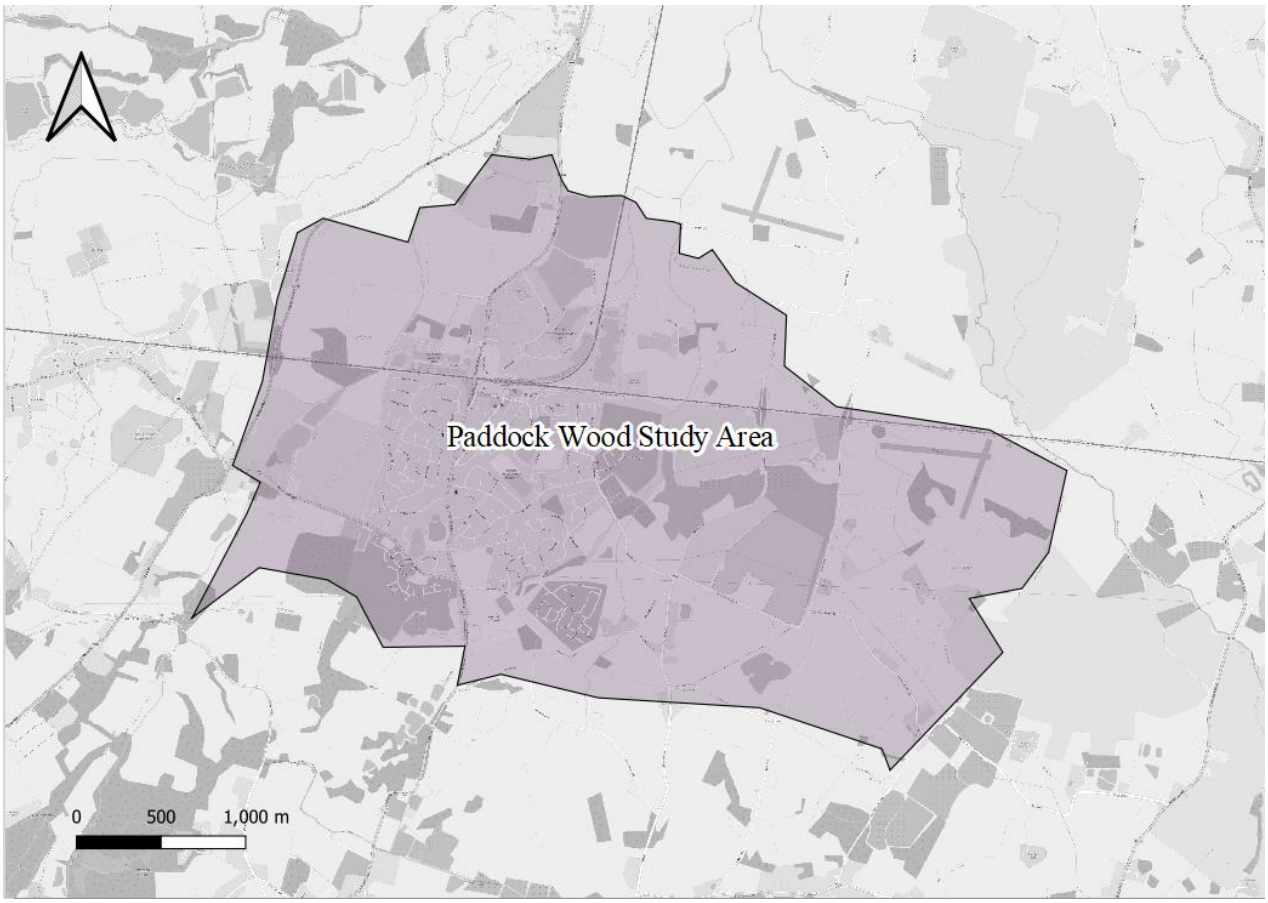


Table 1-1 - Housing trajectory for Paddock Wood from 2025/26 to 2034/35

Paddock Wood	East or West PW	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	Total
Redrow	East	20	70	70	70	70	70	70	70	70	83	
Persimmon	East	30	60	70	70	70	70	70	70	50	62	1285
Remaining E PW	East	0	0	0	0	0	0	0	0	0	0	
Crest	West	0	41	85	95	100	100	100	100	100	50	771
Dandara	West	0	35	60	60	60	60	60	60	60	33	488
Countryside	East	60	0	0	0	0	0	0	0	0	0	60
Town Centre (North)	North	0	30	30	30	0	0	0	0	0	0	90
Total	All	**110**	**236**	**315**	**325**	**300**	**300**	**300**	**300**	**280**	**228**	**2694**

2. BACKGROUND

Paddock Wood is a historic town situated in Kent, known for its traditional industry of growing hops and fruit. It is situated about 8 miles southwest of the nearby county town of Maidstone. According to the 2021 census, it has a population of 7,611 people. It is a popular commuting town and has excellent rail links, with a regular 30-minute service to London Charing Cross from Paddock Wood station, which is managed and operated by Southeastern Railway.

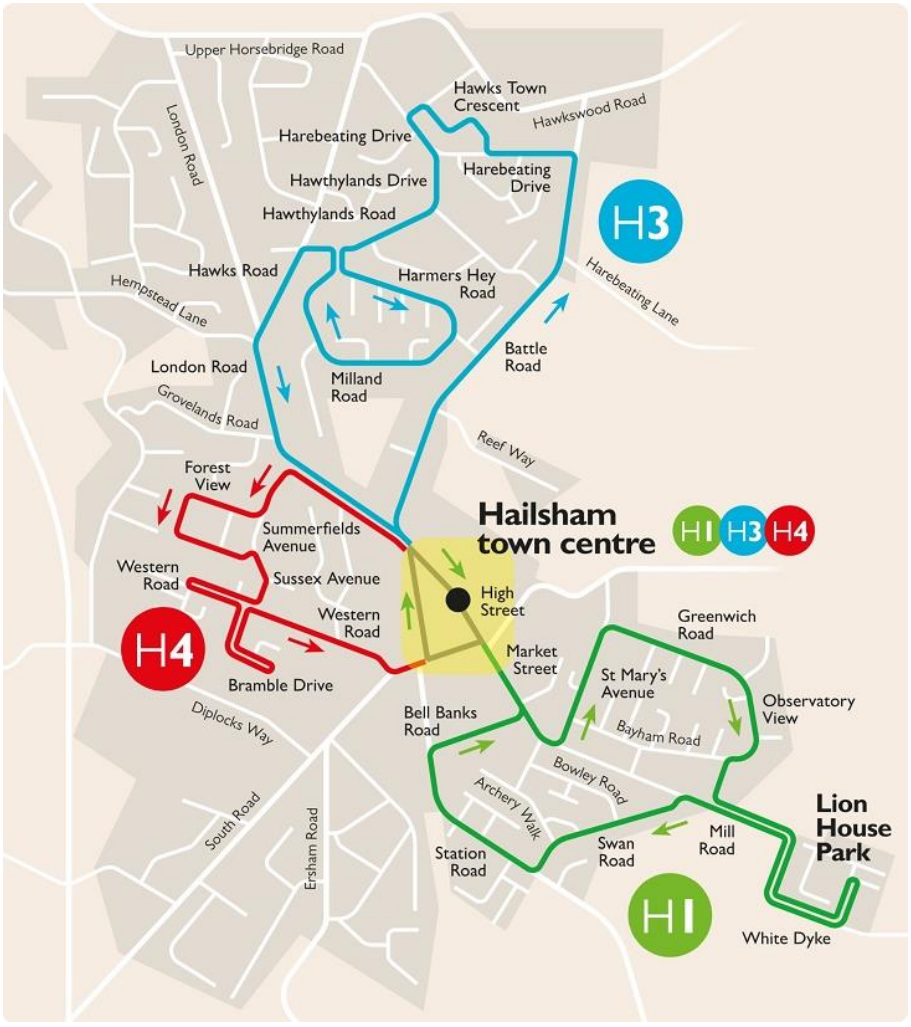
By road, long-distance public transport is provided by Centaur Coaches. There are three coach services connecting Paddock Wood to London Victoria Coach Station. These include the services 768, 788 and 789. Daily departures from Paddock Wood start from between 5am and 6 am with typical journey times taking around 2 hours and 17 minutes.

Paddock Wood is set to expand within the next ten-year period with up to 3,657 new houses both on the western and eastern sides of the town. With a national average of 2.6 people per household, this could equate to an additional population of up to 9,508 people. This would then double the town size to a new total population of as many as 17,000 people. The existing current bus service as it is, will not be able to best serve these new residential developments and the future expanding population. TWBC has previously conducted a study in 2016 to investigate improving the local bus service. This current study will look to see how this could be taken on to make further improvements, with the latest expansion of the town in mind.

Case Study 1: Hailsham Bus Service

Hailsham is a town in East Sussex which is of similar size to Paddock Wood with a population of 22,207. The Hailsham bus service consists of three main bus routes that serve the town. Figure 2-1 below shows the bus service H1, H3 and H4 within Hailsham. All three of the bus routes serve a different part of Hailsham and are connecting to the high street. The H1 is running at every hour, the H3 and H4 is running at every 1-1.5 hour. All of the bus routes provide service on Monday, Wednesday, Friday and Saturday from 8am to 5pm.

Figure 2-1 Hailsham Bus Service



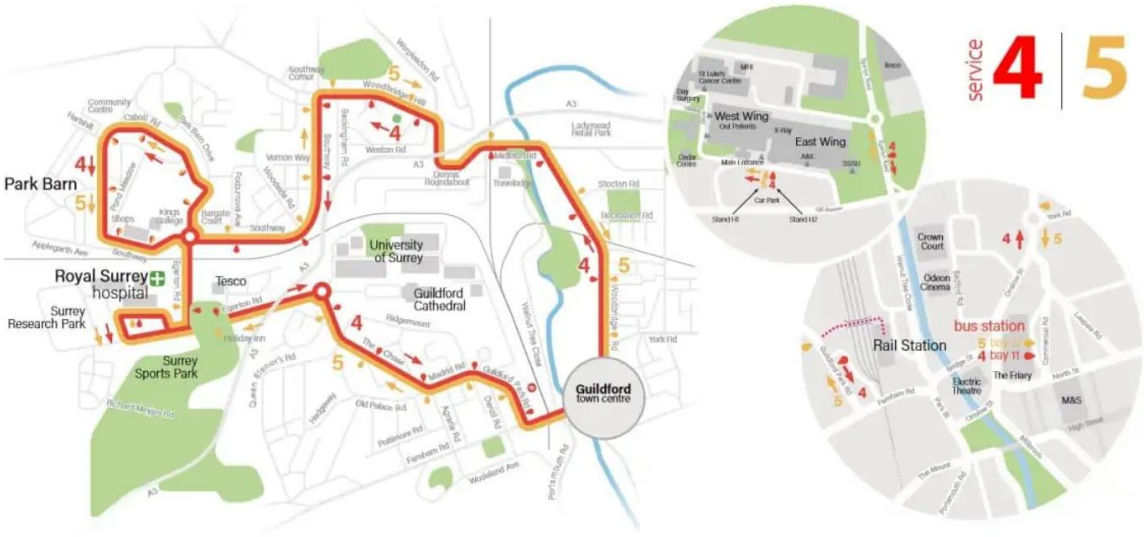
Source: [Hailsham Town Bus Routes H1, H3 and H4 | Cuckmere Buses]

Case Study 2: Guildford Bus Service

Guildford, is a town in Surrey which has a much larger population than Paddock Wood at around 143,600 (2021 census). The Guildford town bus service has a route structure which could be a good comparator for Paddock Wood. The 4/5 service runs in a figure of eight around the town and has the railway station as its focal stopping point, for easy modal interchange. It also serves the town centre shopping district and hospital.

Guildford, like Paddock Wood, is also a town within easy reach of London by rail. Figure 2-2 below shows the bus service 4/5 within Guildford.

Figure 2-2 Guildford Bus Service route 4/5



Source: https://www.guildfordbus.co.uk/route-maps/

3. EXISTING BUS ROUTES IN PADDOCK WOOD

There are buses 6/6A, 203, 205 and 207 serving Paddock Wood as shown in Figure 3-1. Bus 6 runs from Maidstone to Tunbridge Wells from Monday to Saturday. Bus 203 runs as a loop service from Benover to Paddock Wood, and back to Benover. It runs only once per week on Wednesday. Bus 205 serves the Tonbridge and Paddock Wood area from Monday to Friday. Early buses are provided before 0900 on schooldays. It also runs on Saturday morning from 8am to 2pm. Bus 207 runs from Claygate to Paddock Wood, Tonbridge, Tunbridge Wells and back to Claygate. It runs once per day from Monday to Friday. Table 3-1 provides the details of the bus routes, frequency and destinations.

Figure 3-1 Existing bus routes within Paddock Wood

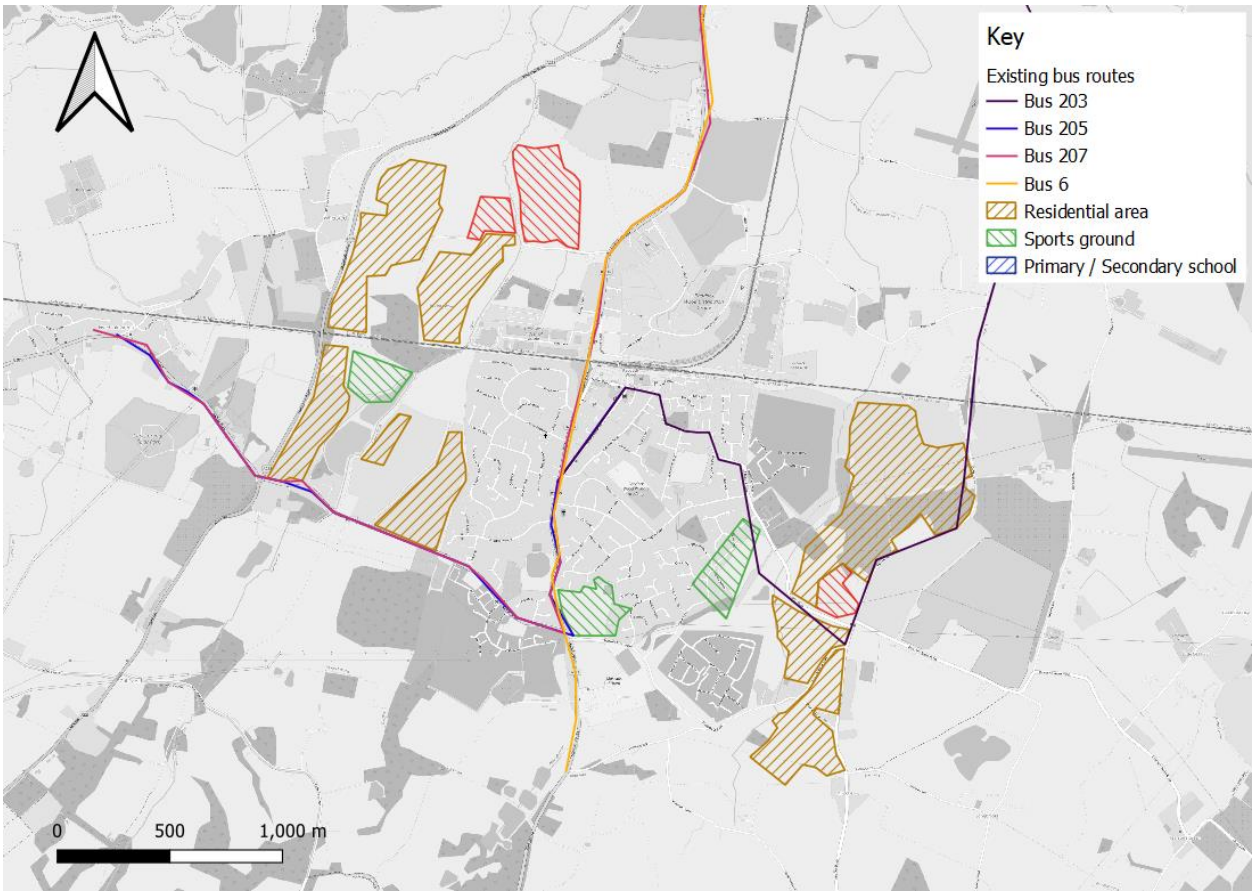


Table 3-1 Service details of the existing bus routes within Paddock Wood

Bus Route	Frequency (Day and Time)	Destination
6/6A	Mon – Sat (7am to 6pm, 6pm to 8pm with reduced stops)	Maidstone - East Peckham - Paddock Wood - Pembury -Tunbridge Wells.
203	Wed (1045 depart Benover, arrive Paddock Wood 1110. Back to Benover at 1316)	Benover – Paddock Wood- Benover.
205	Mon – Fri (6am to 7pm, early buses before 9am on schooldays) Saturdays (8am to 2pm)	Tonbridge – Paddock Wood - Tonbridge
207	Mon - Fri Once per day (Dep Claygate 0705. Arrive Tunbridge Wells 0835. Depart Tunbridge Wells 1600 Arrive Claygate 1718.)	Claygate – Paddock Wood - Tonbridge – Tunbridge Wells – Paddock Wood- Claygate.

4. OPTION 1

Option 1 provides the bus service within Paddock Wood with a 20-minute headway running from 7am to 7pm from Monday to Saturday. The proposed bus route and time between each proposed stop are provided in Figure 4-1 and Table 4-1. The single journey time for the loop is estimated to be 25 minutes. With the minimum layover time of approximately 2.5 minutes, the total time for a one directional loop would be 28 minutes. Therefore, the Peak Vehicle Requirement (PVR) would be 2 buses. The distance for each round trip is estimated to be 5.7 miles. The details for the bus route passing the Paddock Wood Station are depicted in Figure 4-2.

Figure 4-1 – Proposed bus route for Option 1

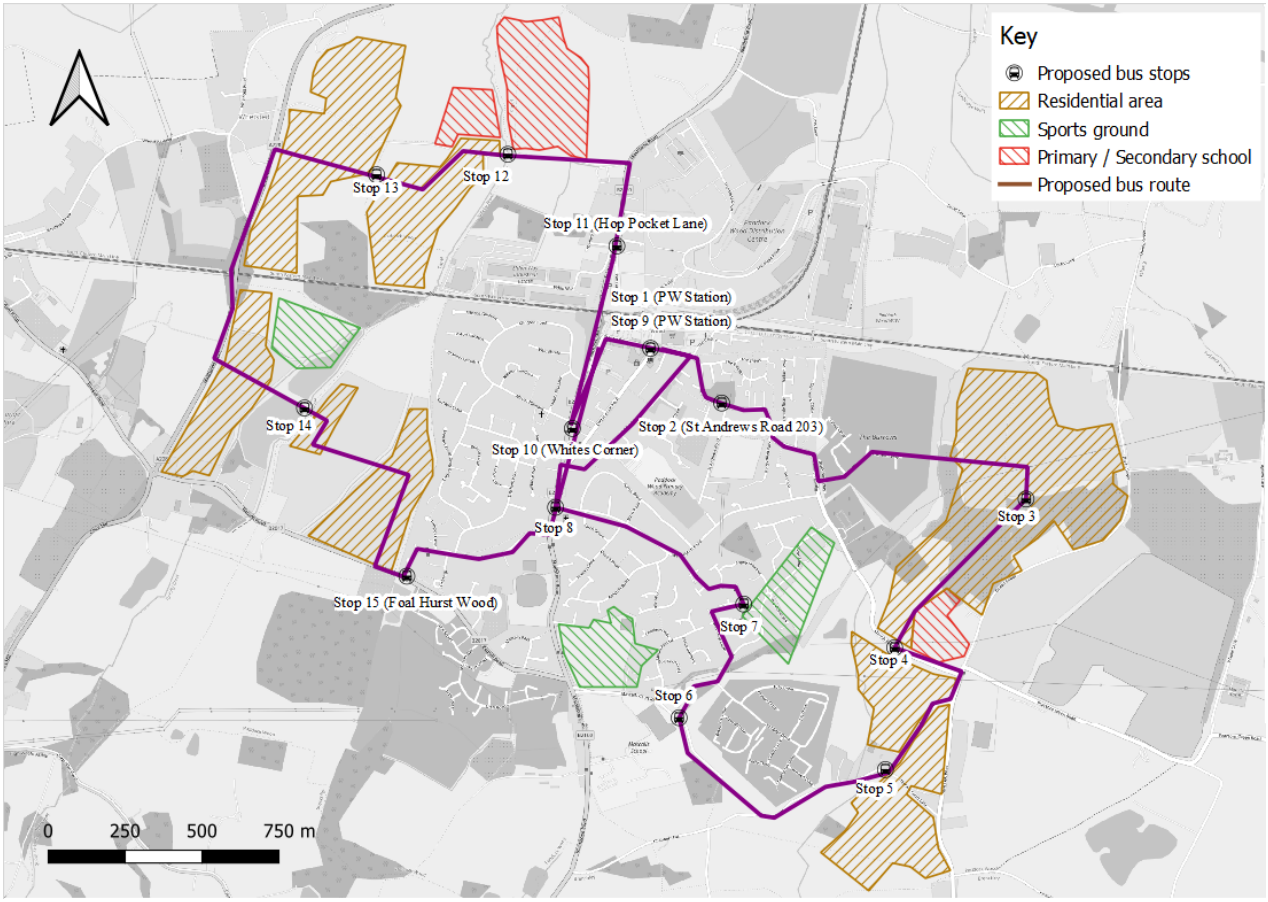


Figure 4-2 – Details of the proposed bus route passing through the Paddock Wood Station

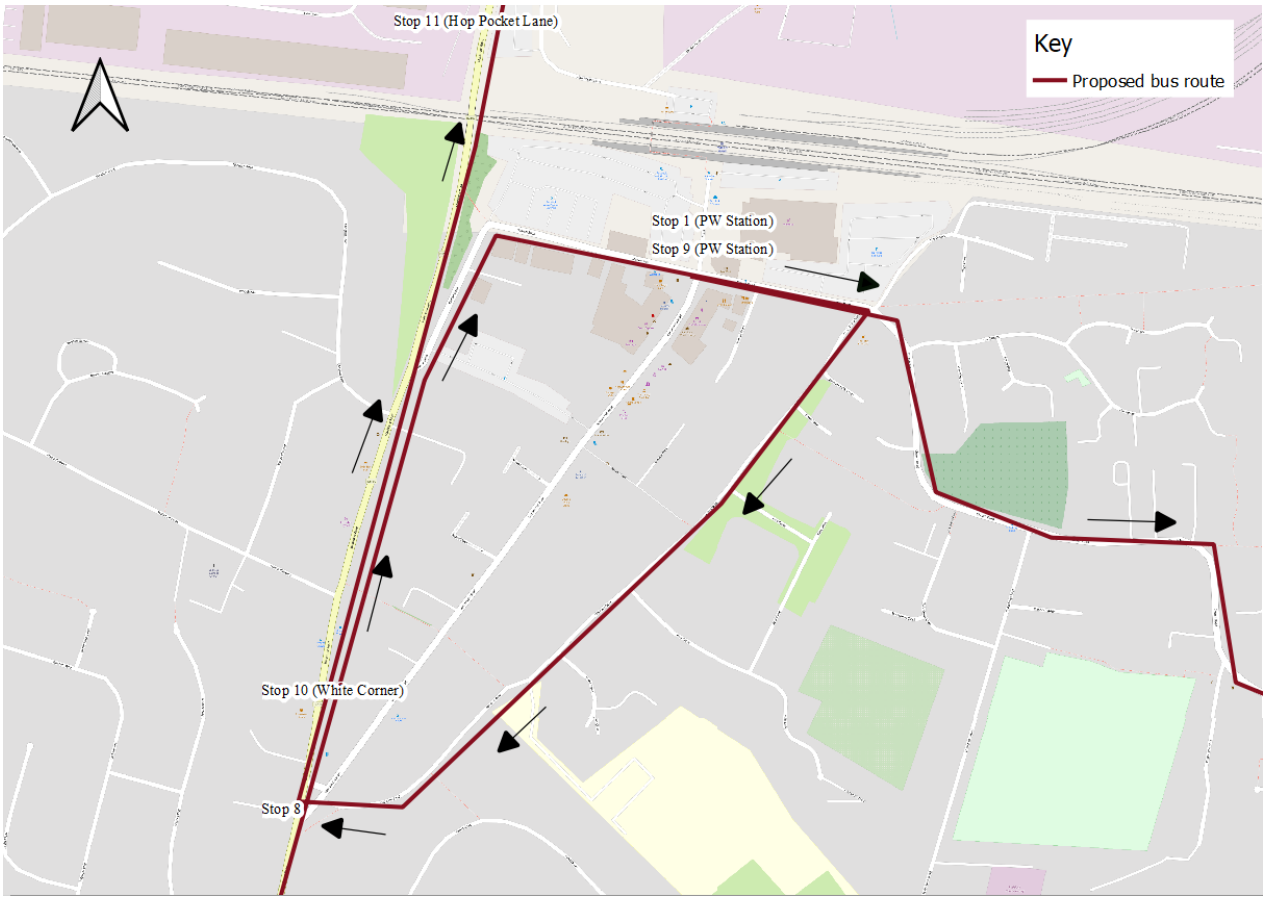


Table 4-1 – Proposed round trip time for Option 1

Proposed bus route stops	Distance (m)	Time	Frequency
Stop 1 (Waitrose)	0	0715	Monday to Saturday (Every 20 mins)
Stop 2 (St Andrews Road)	305	0716	
Stop 3	1,290	0719	
Stop 4	648	0720	
Stop 5	643	0721	
Stop 6	891	0723	
Stop 7	554	0724	
Stop 8	751	0726	
Stop 9	749	0727	
Stop 10 (Whites Corner)	818	0729	
Stop 11	665	0730	
Stop 12	485	0731	
Stop 13	502	0732	
Stop 14	1380	0735	
Stop 15 (Foal Hurst Wood)	928	0737	
Stop 1 (Waitrose)	1,430	0740	

*Journey time = 25 mins, Layover = 2.5 mins

Estimated Cost for Option 1

With Option 1, the bus service will run every 20 minutes giving rise to a total of 35 round trips per day. The cost model has factored in the costs for vehicles, drivers, maintenance, fuel, overheads, and an element of operator profit. The total estimated operation cost including profit per annum is £309,787. If the bus service run every 15 minutes, the cost would go up to £453,433. Alternatively, a bus service running every 30 minutes will nearly half the cost as there will only be 1 Peak Vehicle Requirement (PVR). As the proposed development in Paddock Wood is phased, the frequency of the bus service can be adjusted according to the amount of completed development.

Table 4-2 – Estimated cost for Option 1a in year 2025/26 (bus running every 20mins)

Total estimated operation cost	**£ 309,787**
Profit percentage	10%
PVR	2

Table 4-3 – Estimated cost for Option 1a in year 2025/26 (bus running every 15mins)

Total estimated operation cost	**£ 420,045**
Profit percentage	10%
PVR	2

The cost per bus is tailored to each option based on the vehicle, driver, maintenance, fuel, overhead cost estimates and an element of operator profit set at 10%.

5. OPTION 2

Considering one of the main purposes of the proposed bus service is to connect the railway station, providing a service that covers a wider period of the day to cater for traditional early and late peak travel times and provide later travel options for local leisure and social trip purposes would be potentially useful for new and existing residents. Option 2 therefore proposes a bus service that covers a wider daily period between 6am and 11pm. The proposed route taken by the bus would be the same as shown in Option 1 (see Figure 4-1).

As the daily time span covered by the service will be longer, with the same bus frequency of every 20 minutes, the bus will complete 50 round trips per day (15 more round trips than Option 1). The estimated cost for Option 2 is £405,285, an increase of £95,498. If the service runs every 15 minutes, the cost will go up to £592,030. Similar to Option 1, running the bus service at every 30 minutes will nearly half the cost of the bus service running at every 15 minutes.

Table 5-1 – Estimated cost for Option 2 operational in year 2025/26 (bus running every 20 mins)

Total estimated operation cost	**£ 405,285**
Profit percentage	10%
PVR	2

Table 5-2 – Estimated cost for Option 2 operational in year 2025/26 (bus running every 15 mins)

Total estimated operation cost	**£ 558,641**
Profit percentage	10%
PVR	2

The cost per bus is tailored to each option based on the vehicle, driver, maintenance, fuel, and fixed overhead cost estimates and an element of operator profit set at 10%.

The total cost for Option 2 will be higher as the bus will complete more trips per day. It will also be less cost-effective as the bus in the early or late hours may not be well utilized.

An alternative to this option would be to consider Digital Demand Responsive Transport (DDRT). The bus running at off-peak hours would then operate only on demand. This can greatly reduce the bus trips made in the off-peak hours and hence reduce the overall cost.

DDRT has been implemented in several regions of the. The Fflecsi service is a form of DDRT funded and administered by Transport for Wales. It offers a pick-up and drop-off service after aggregating passengers

with similar journey routes together. Passengers can book their rides via the app or phone and the Fflecsi bus will pick them up upon request.

The operational costs of the Fflecsi service comprise of the cost of the vehicles, the call centre and ViaVan (an on-demand transit system). The estimated cost for the Paddock Wood DDRT service will be benchmarked against the West Sussex Fflecsi service. The average cost per full 12-hour day for a DDRT vehicle in West Sussex was £575. This translates to £47.92 per hour including vehicle and driver. The cost of DDRT also includes the cost for call centre, software platform such as ViaVan and other technology. These are estimated to cost £1,086 per month for 2 vehicles. Compared to Option 1, there will be an extra 5 hours of service time for Option 2. If the bus is operated as a DDRT service, the cost will be around £240 per day. Table 5-2 below shows the estimated cost of Option 2 with DDRT. The bus used for the DDRT would be a minibus / midibus with 16-24 seats. The same size of bus is proposed for all options.

Table 5-3 – Estimated cost for Option 2 with DDRT in year 2025/26

Estimated cost with service hour of 7am to 7pm	**£ 309,787**
Estimated cost for DDRT vehicle and driver (6-7am, 7-11pm)	£ 74,880
Other DDRT costs (call centre, software platform)	£ 13,032
Total cost	**£ 397,699**

*The estimated cost for DDRT is calculated based on 312 operation days per year.

6. OPTION 3

To further improve rail and bus inter-connectivity there is the option of introducing a bus stop directly outside or adjacent to the railway station's pedestrian entrance. This would benefit passengers of both modes of transportation, providing an easier, safer, and more convenient transport interchange. These proposals would be complemented by a new bus, or bus-only entrance into the southwest side of the station car park (where there is currently an exit for cars only), adjacent to the 90-degree bend on Station Road. The bus would run through the station car park, arriving at a new bus stop directly outside the station building. The illustrative route for Option 3 is shown in Figure 6-1.

Once having collected/dropped off its passengers, the bus would exit the railway station car park by driving along Station Approach to rejoin Station Road. Some modest changes and improvements to the bus and passenger infrastructure would be required within the station boundary. Paddock Wood Station is currently managed by Southeastern Railway, and it is not a park-and-ride location for car/rail mixed-mode journeys. It is highly likely that Network Rail would have to be consulted and included in these improvements if this idea were to be taken on further.

The service hours for this option would be the same as Option 1, with the bus service running from 7am to 7pm. The distance of the route would be very similar to Option 1 except for the change to the location of Stop 1. Therefore, the cost and revenue of this option would also be the same as Option 1 as summarized below in Table 6-1.

Table 6-1 – Estimated cost for Option 3 in year 2025/26

Total estimated operation cost	**£ 309,787**
Profit percentage	10%
PVR	2

Figure 6-1 – Proposed route for Option 3

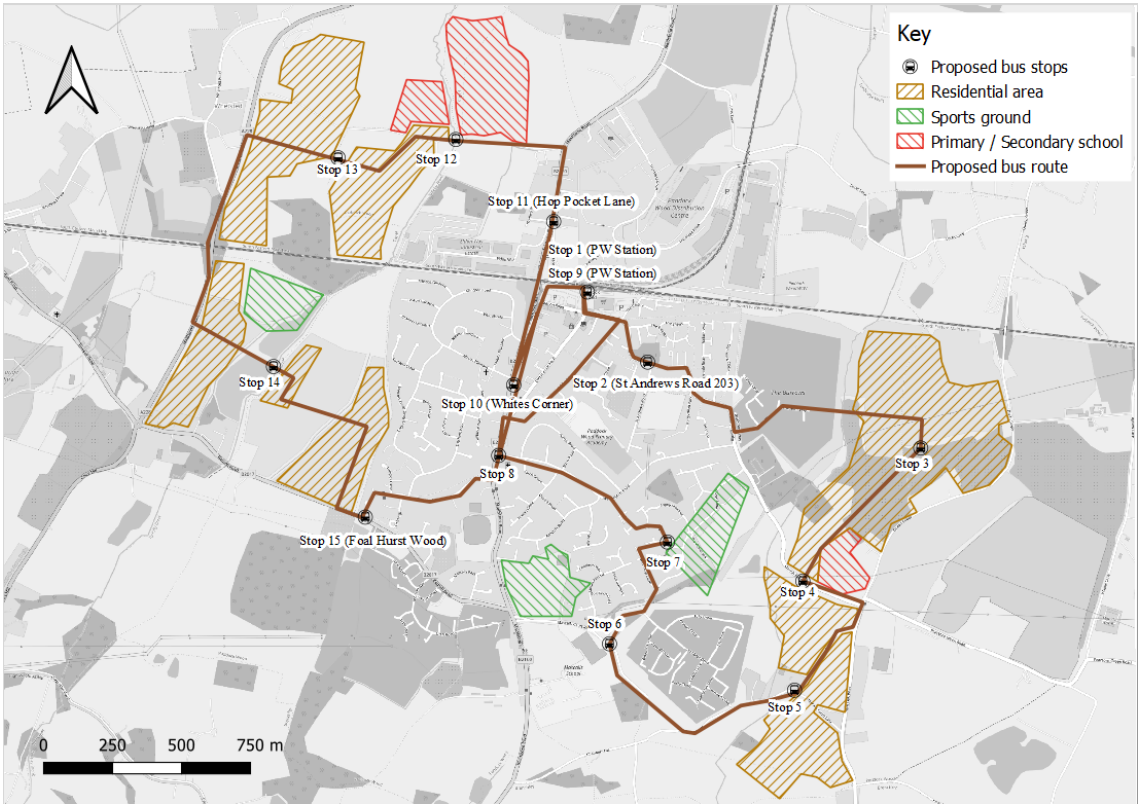
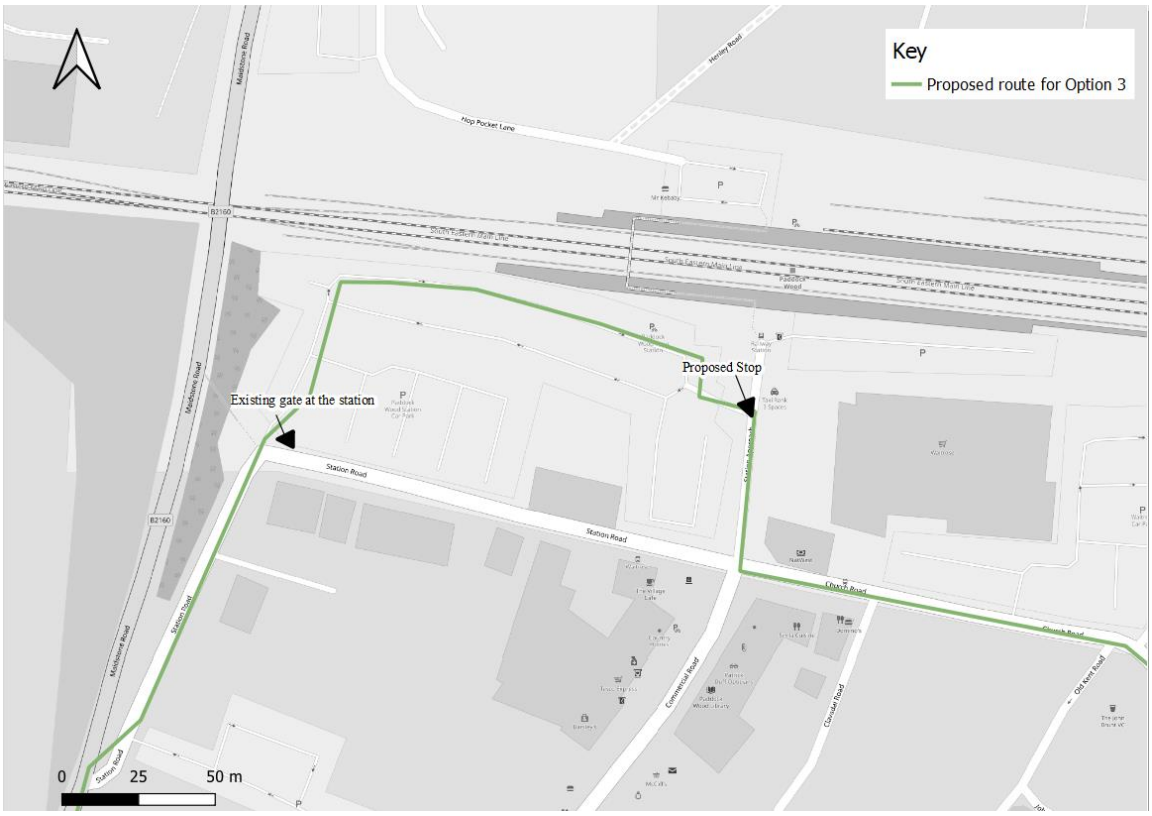


Figure 6-2 – Details of the proposed route for Option 3

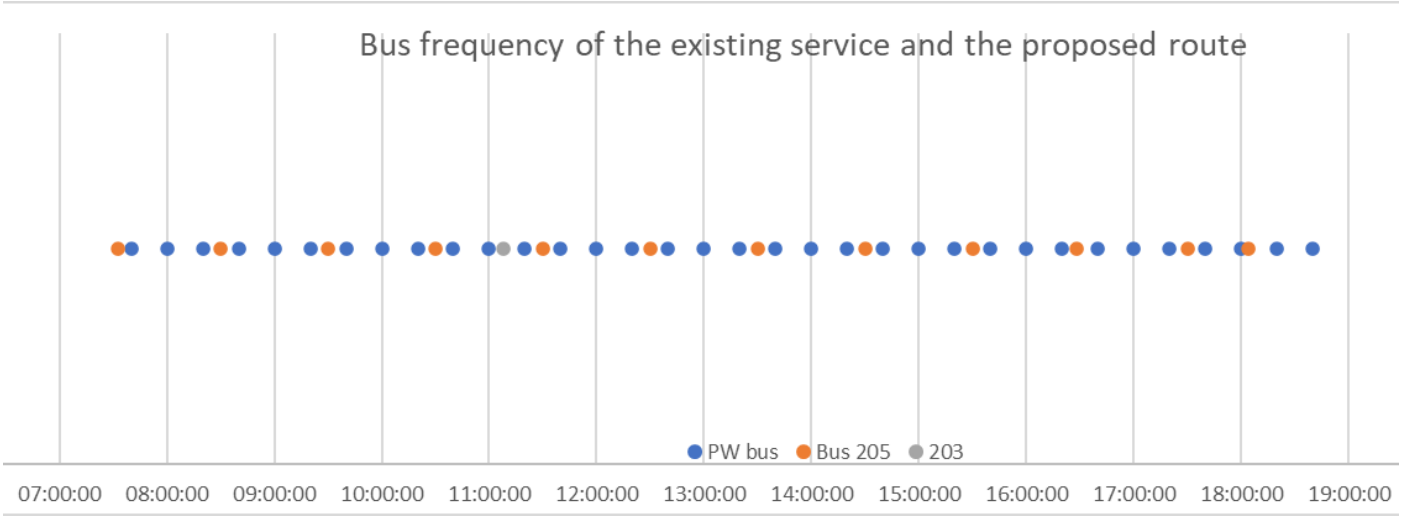


7. PROPOSED BUS INTERCHANGE

There are two existing bus routes running within Paddock Wood that also serve the railway station. For instance, both bus 203 and 205 pass through Paddock Wood Station, stopping at Waitrose. The proposed bus route will also stop at the same Waitrose. This stop can therefore be turned into an interchange to provide a better connection from Paddock Wood to nearby areas. Bus 203 currently operates between Benover to Paddock Wood and Bus 205 between Tonbridge and Paddock Wood. A bus interchange at the stop closest to the train station would provide passengers with a location to interchange between routes and travel between the Benover and Tonbridge as well as providing interchange to and from the local town service to allow inter-urban to local transfers within Paddock Wood.

Bus 203 operates once every week on Wednesday, and it stops at Waitrose near Paddock Wood Station at 11:08am. For Bus 205, it runs 13 times a day. A scattered diagram comparing the times of the buses stopping at Paddock Wood Station is provided as Figure 7-1. The proposed Paddock Wood town bus service would match the schedule of the existing bus service to enhance its usage. As the proposed Paddock Wood bus service would run every 28 minutes, it would be more frequent than the 203 and 205 bus. Therefore, the stop at Paddock Wood would be able to establish itself as an interchange.

Figure 7-1 – The bus frequency of 203, 205 and the proposed service



8. BUS ROUTE PHASING

The proposed development on the Eastern side of Paddock Wood would be developed approximately two years ahead of the Western side. The proposed town bus service would therefore be separated into two phases. The first phase of the bus route comprises of the Eastern development in Paddock Wood from Stop 1 to Stop 9 (Paddock Wood Station). The second phase comprises of the bus route proposed as Option 1 to Option 3 above. The reduction in the distance of the bus route will result in the shortened time required for a complete loop. The estimated time for each journey would be 13 minutes with a 10% layover time included. The distance between stops and the schedule is provided in Table 8-1.

Figure 8-1– Proposed bus route for Phase 1

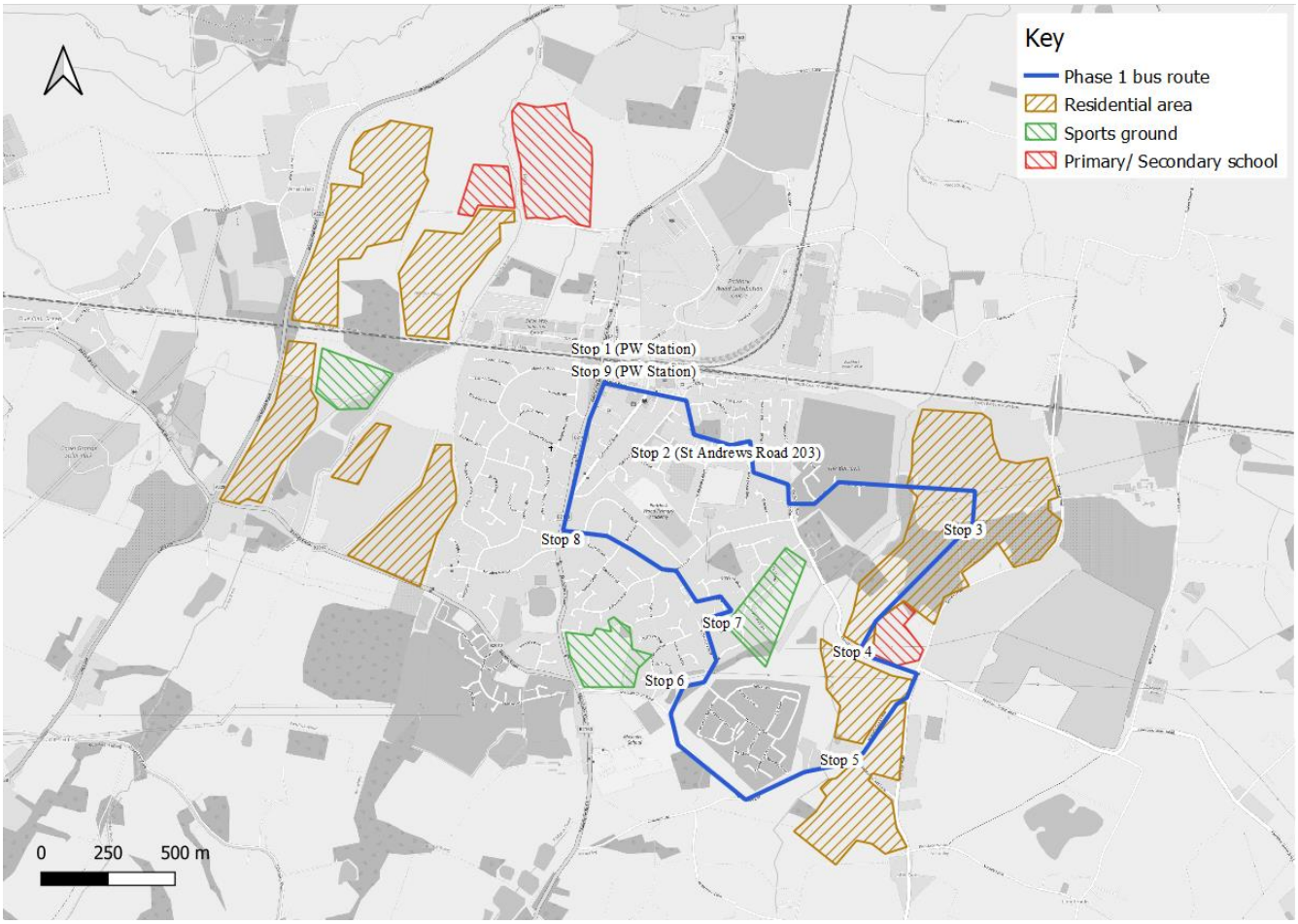


Table 8-1 - Details of the proposed bus route for phase 1

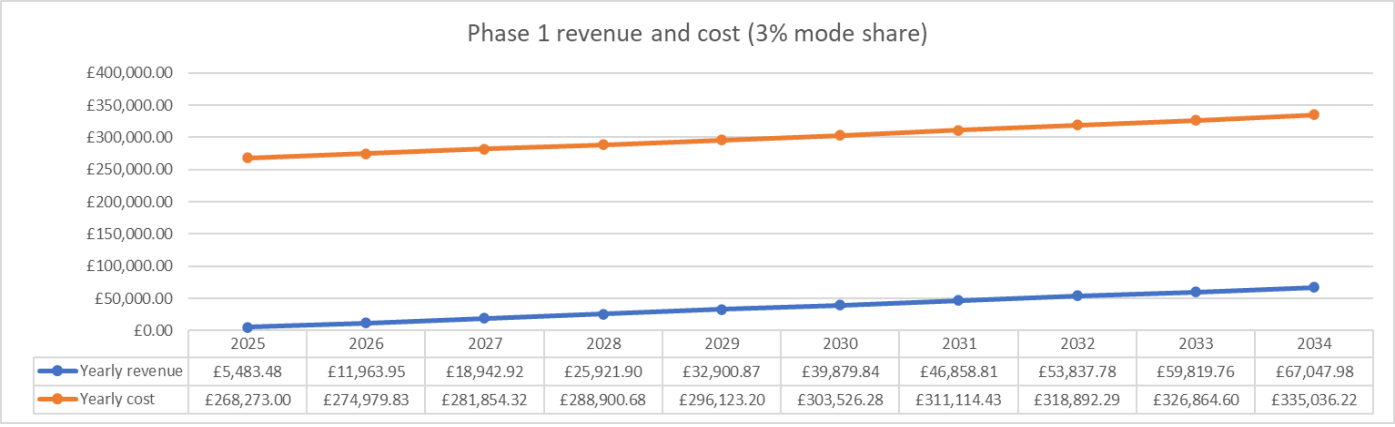
Proposed bus route stops	Distance (m)	Time	Frequency
Stop 1 (Waitrose)	0	0715	Monday to Saturday (Every 15 mins)
Stop 2 (St Andrews Road)	305	0716	
Stop 3	1290	0719	
Stop 4	648	0720	
Stop 5	643	0721	
Stop 6	891	0723	
Stop 7	554	0724	
Stop 8	751	0726	
Stop 9 (Waitrose)	723	0727	

*Journey time = 11 mins, Layover = 1.1 mins

Table 8-2 – Estimated operation cost for the proposed bus route for phase 1

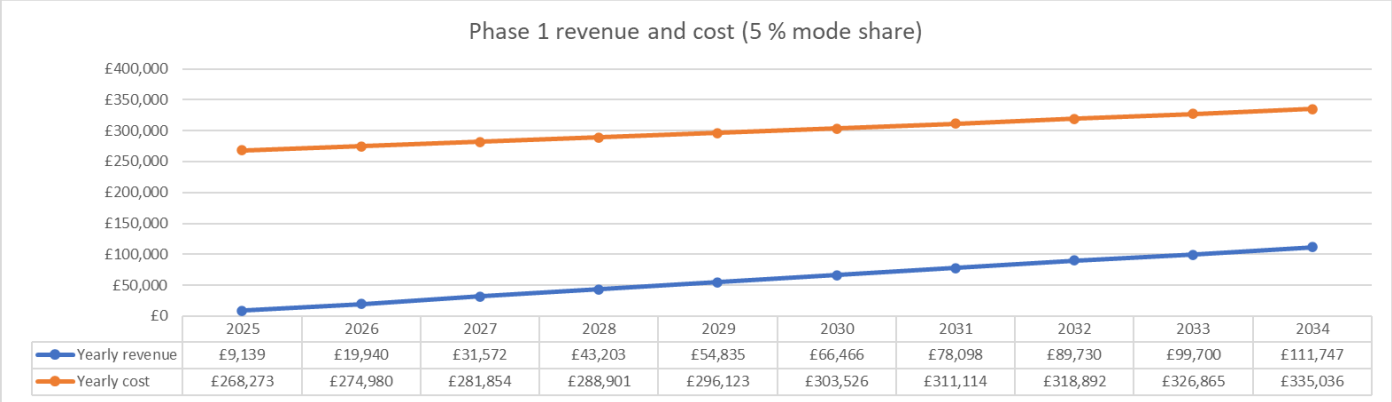
Total estimated operation cost	£ 268,273 (year 2025)
Profit percentage	10%
PVR	1

Figure 8-2 – Estimated revenue and cost for the proposed bus route at 3% mode share



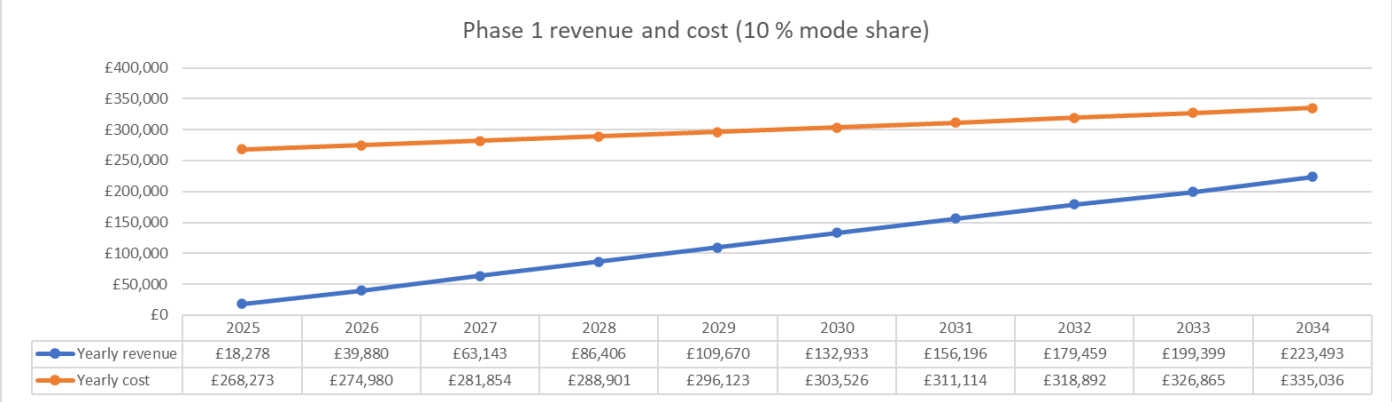
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Yearly revenue	£5,483.48	£11,963.95	£18,942.92	£25,921.90	£32,900.87	£39,879.84	£46,858.81	£53,837.78	£59,819.76	£67,047.98
Yearly cost	£268,273.00	£274,979.83	£281,854.32	£288,900.68	£296,123.20	£303,526.28	£311,114.43	£318,892.29	£326,864.60	£335,036.22

Figure 8-3 – Estimated revenue and cost for the proposed bus route at 5% mode share



	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Yearly revenue	£9,139	£19,940	£31,572	£43,203	£54,835	£66,466	£78,098	£89,730	£99,700	£111,747
Yearly cost	£268,273	£274,980	£281,854	£288,901	£296,123	£303,526	£311,114	£318,892	£326,865	£335,036

Figure 8-4 – Estimated revenue and cost for the proposed bus route at 10% mode share



	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Yearly revenue	£18,278	£39,880	£63,143	£86,406	£109,670	£132,933	£156,196	£179,459	£199,399	£223,493
Yearly cost	£268,273	£274,980	£281,854	£288,901	£296,123	£303,526	£311,114	£318,892	£326,865	£335,036

9. PROPOSED BUS SERVICE PROJECTED REVENUE

According to the 2019 National Travel Survey[1] conducted by the Department of Transport (DfT), buses take up 5% of the mode share among all types of transportation. With the data provided by the DfT[2] in 2021, the mode share of bus dropped to 3% post-Covid. Following a recovery of the economy to pre-covid levels, 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 bus is comparatively higher. For instance, the Kent Thameside (Fastrack) bus network made up 22%[3] of local journeys and is recognised as a successful example of a Bus Rapid Transit (BRT) scheme. The success of the BRT is a result of the provision of the Fastrack routes and well-planned bus transit within the area. It would, therefore, be an overly ambitious mode share figure for other areas. As such, the mode share of 10% will be used as the highest estimated mode share figure for the proposed options.

[1] 2019 National Travel Survey (publishing.service.gov.uk)
[2] Modal comparisons (TSGB01) - GOV.UK (www.gov.uk)
[3] Zero Emission Bus Regional Areas (ZEBRA) Scheme Business Case (August 2021)

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 in the mode share. Therefore, the model has reflected various possible scenarios by providing revenue with 3%, 5% and 10% modal split.

Based on Option 1a, the cost of running the proposed service for the period of 2025/26 to 2034/35 would be £3,470,662. The proposed housing numbers within Paddock Wood have been taken into account when estimating the revenue. When the bus service is running every 15 minutes (Option 1b), the cost per year would be £ 5,079,983. For Option 2a, the cost of running the service every 20 minutes would be £4,540,562 and for running it every 15 minutes, the cost would be £ 6,632,738.

This revenue model has an estimated trip rate of 0.55 and an average fare price of £1 per ticket. The total bus trips will increase over the years as the cumulative buildout increases. The bus ticket used in this cost model is set at £1 referencing the Town Bus Fare in Taunton[4]. Since the introduction of the £1 bus fare, the use of the town bus service has increased by 24%. In addition, the £2 fare applied across the rest of Somerset has resulted in a 16% increase in bus use. The £1 Town Bus Fare can be applied in Paddock Wood to increase the overall bus mode share.

Table 9-1 – Bus cost and revenue from year 2025/26 to 2034/35

Scenario	Mode Share	Bus Cost from 2025/26 to 2034/35	Total bus Revenue from 2025/26 to 2034/35	Forecast profit/ deficit
Option 1a (Every 20mins)	3%	£3,470,662	£ 727,856	-£2,370,014
	5%	£3,470,662	£ 1,213,094	-£1,884,776
	10%	£3,470,662	£ 2,426,189	-£671,681
Option 1b (Every 15mins)	3%	£ 5,079,983	£ 727,856	-£4,352,127
	5%	£ 5,079,983	£ 1,213,094	-£3,866,889
	10%	£ 5,079,983	£ 2,426,189	-£2,653,794
Option 2a (Every 20mins)	3%	£4,540,562	£ 727,856	-£3,324,994
	5%	£4,540,562	£ 1,213,094	-£2,839,756
	10%	£4,540,562	£ 2,426,189	-£1,626,661
Option 2b	3%	£ 6,632,738	£ 727,856	-£5,904,882
	5%	£ 6,632,738	£ 1,213,094	-£5,419,644

[4] Council's £1 fare for Taunton nets industry award for sustainability (somerset.gov.uk)

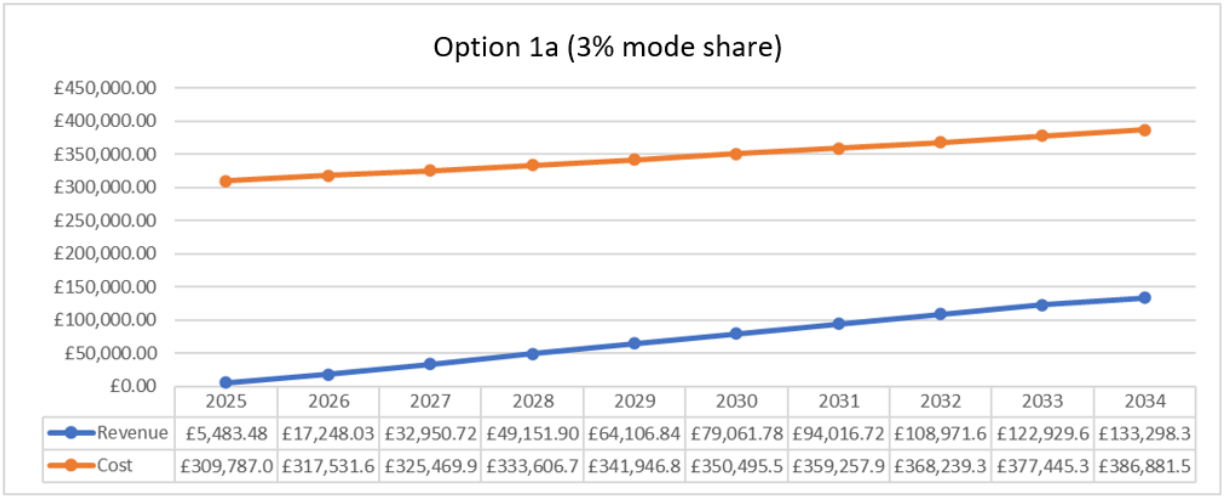
(Every 15mins)	10%	£ 6,632,738	£ 2,426,189	-£4,206,549
Option 3a (Every 20mins)	3%	£3,470,662	£ 727,856	-£2,370,014
	5%	£3,470,662	£ 1,213,094	-£1,884,776
	10%	£3,470,662	£ 2,426,189	-£671,681
Option 3b (Every 15mins)	3%	£ 5,079,983	£ 727,856	-£4,352,127
	5%	£ 5,079,983	£ 1,213,094	-£3,866,889
	10%	£ 5,079,983	£ 2,426,189	-£2,653,794

*The yearly cost increase and total cost is modelled with an average inflation rate of 2.5% (The average is based on the period of 1989 to 2022 in the UK provided by the Office of National Statistics).

With a bus mode share of 3%, the service will be in deficit throughout the period of 2025/26 to 2034/35. The overall deficit throughout the period of 2025/26 to 2034/35 would be £2,370,014. The deficit by year for Option 1a is illustrated in Figure 9-1 and Table 9-2.For Option 1b, the deficit by year is shown in Figure 9-2 and Table 9-3.

The revenue for Phase 1 bus route with a 3% bus mode share is £5,483. This is equivalent to 0.6 person per trip. It is not an efficient service with a 3% bus mode share. However, when factored in the existing development, the utilization would be much higher with an estimation of £101,842 (see Table 10-4). This translates to 11 people per trip. It is anticipated that the town bus service would achieve a 5% mode share with the frequency of 20 minutes.

Figure 9-1 – Cost and revenue for 3% bus mode share (Option 1a)



	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Revenue	£5,483.48	£17,248.03	£32,950.72	£49,151.90	£64,106.84	£79,061.78	£94,016.72	£108,971.6	£122,929.6	£133,298.3
Cost	£309,787.0	£317,531.6	£325,469.9	£333,606.7	£341,946.8	£350,495.5	£359,257.9	£368,239.3	£377,445.3	£386,881.5

Table 9-2 – Revenue gap for 3% bus mode share (Option 1a)

Revenue gap									
2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
-£304,349	-£300,283	-£292,519	-£284,455	-£277,840	-£271,434	-£265,241	-£259,268	-£254,516	-£253,583

Figure 9-2 – Cost and revenue for 3% bus mode share (Option 1b)

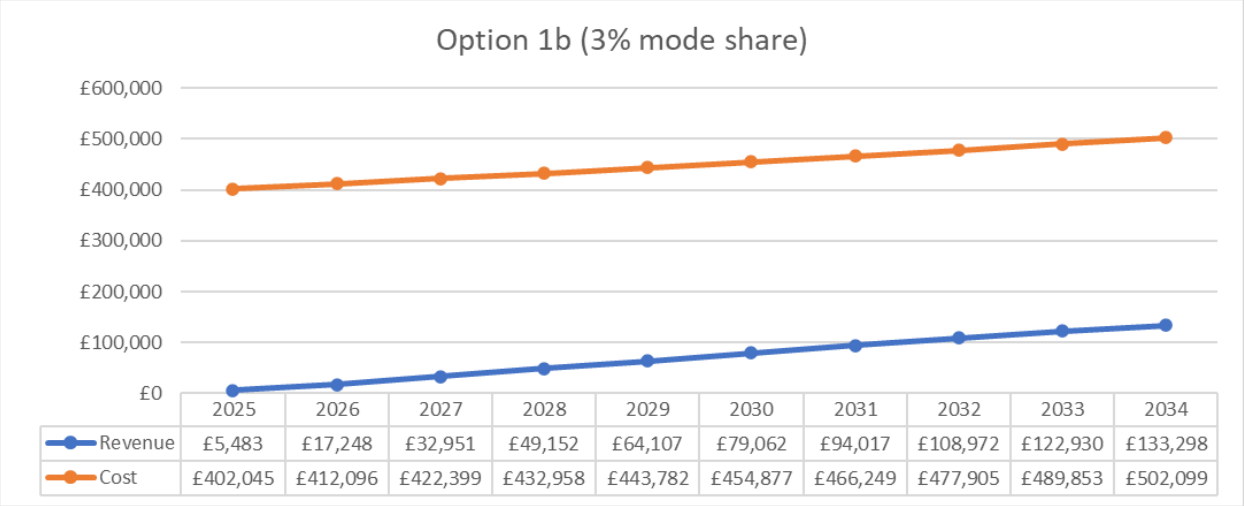
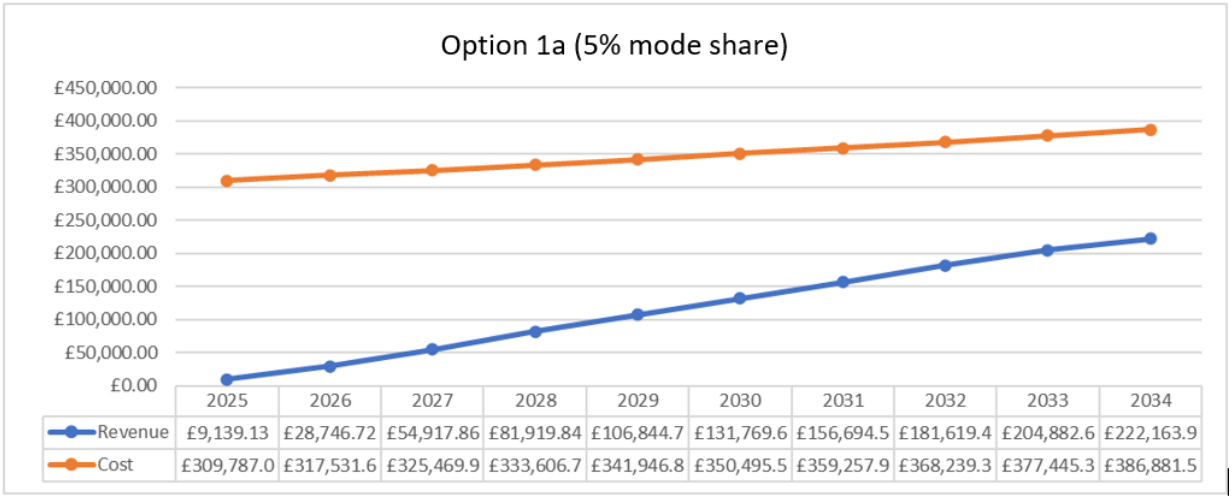


Table 9-3 – Revenue gap for 3% bus mode share (Option 1b)

Revenue gap									
2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
-£396,562	-£394,848	-£389,448	-£383,807	-£379,676	-£375,815	-£372,232	-£368,934	-£366,923	-£368,801

With a bus mode share of 5%, the service will also be in deficit throughout the 10 years period. The difference between the revenue and cost for Option 1a with a 5% mode share are shown in Figure 9-3 and Table 9-4. For Option 1b, the difference between the revenue and cost with a 5% mode share are shown in Figure 9-4 and Table 9-5. It is estimated that with the current yearly buildout rate, the service will break even in 2043 for Option 1a and 2049 for Option 1b.

Figure 9-3 Cost and revenue for 5% bus mode share (Option 1a)



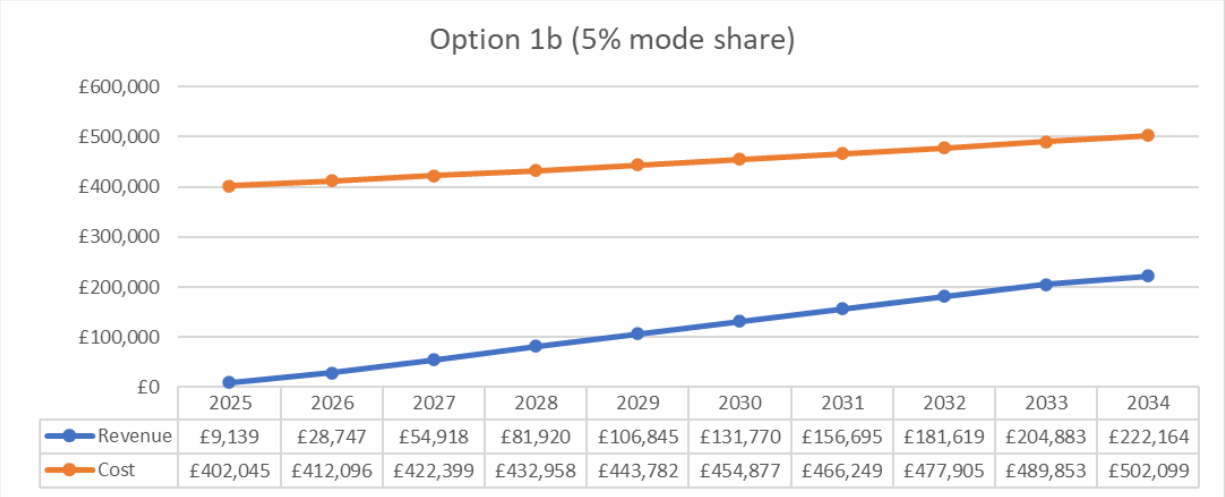
	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Revenue	£9,139.13	£28,746.72	£54,917.86	£81,919.84	£106,844.7	£131,769.6	£156,694.5	£181,619.4	£204,882.6	£222,163.9
Cost	£309,787.0	£317,531.6	£325,469.9	£333,606.7	£341,946.8	£350,495.5	£359,257.9	£368,239.3	£377,445.3	£386,881.5

Table 9-4– Revenue gap for 5% bus mode share (Option 1a)

Revenue gap

2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
-£300,648	-£288,785	-£270,552	-£251,687	-£235,102	-£218,726	-£202,563	-£186,620	-£172,563	-£164,718

Figure 9-4 – Cost and revenue for 5% bus mode share (Option 1b)



	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Revenue	£9,139	£28,747	£54,918	£81,920	£106,845	£131,770	£156,695	£181,619	£204,883	£222,164
Cost	£402,045	£412,096	£422,399	£432,958	£443,782	£454,877	£466,249	£477,905	£489,853	£502,099

Table 9-5 – Revenue gap for 5% bus mode share (Option 1b)

Revenue gap

2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
-£392,906	-£383,349	-£367,481	-£351,039	-£336,938	-£323,107	-£309,554	-£296,286	-£284,970	-£279,935

With a bus mode share of 10%, the service is expected to break even in late 2032 for Option 1a. The profit and deficit by year is shown in Table 9-6. For Option 1b, the profit and deficit by year with a bus mode share of 10% is shown in Figure 9-6 and Table 9-7.

Figure 9-5 Cost and revenue for 10% bus mode share (Option 1a)

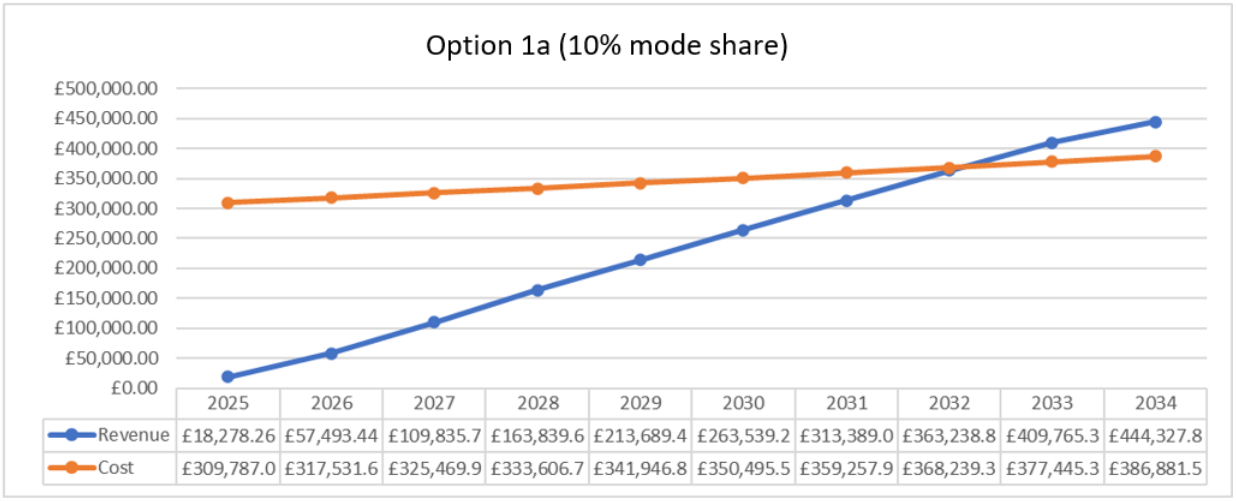


Table 9-6 – Revenue gap for 10% bus mode share (Option 1a)

Revenue gap									
2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
-£291,508	-£260,038	-£215,634	-£169,767	-£128,257	-£86,956	-£45,868	-£5,001	32,320	57,446

Figure 9-6 – Cost and revenue for 10% bus mode share (Option 1b)

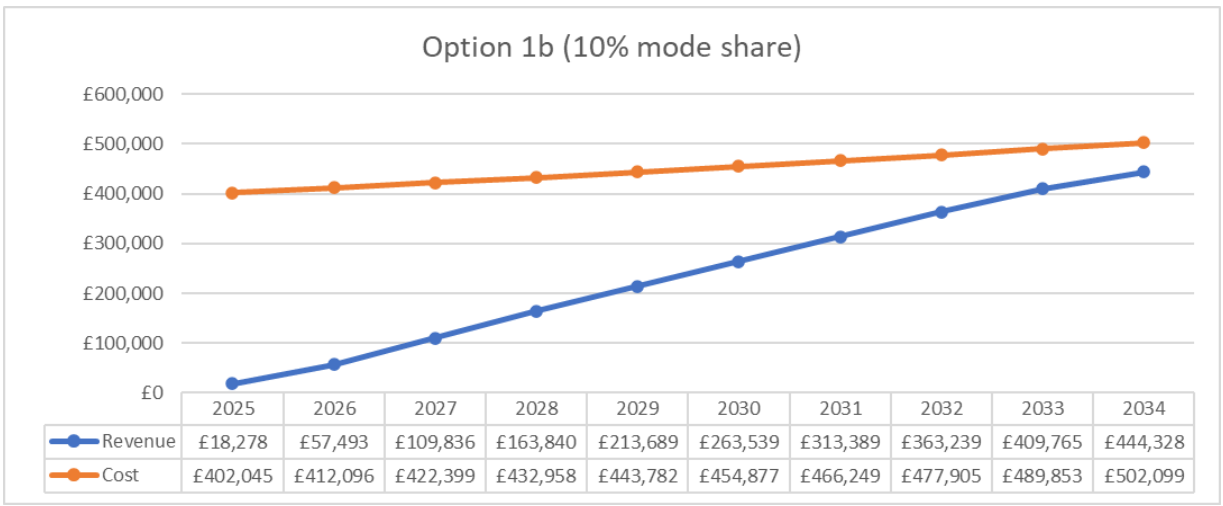


Table 9-7 – Revenue gap for 10% bus mode share (Option 1b)

Revenue gap									
2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
-£383,767	-£354,603	-£312,563	-£269,119	-£230,093	-£191,338	-£152,860	-£114,666	-£80,087	-£57,771

For Option 2, the 3%, 5% and 10% bus mode share will all result in deficit throughout the 10-year period from 2025/26 to 2034/35. The deficit by year for Option 2a with a 3% bus mode share is illustrated in Figure 9-7 and Table 9-8. For Option 2b, the deficit by year with a 3% bus mode share is shown in Figure 9-8 and Table 9-3.

Figure 9-7 - Cost and revenue for 3% bus mode share (Option 2a)

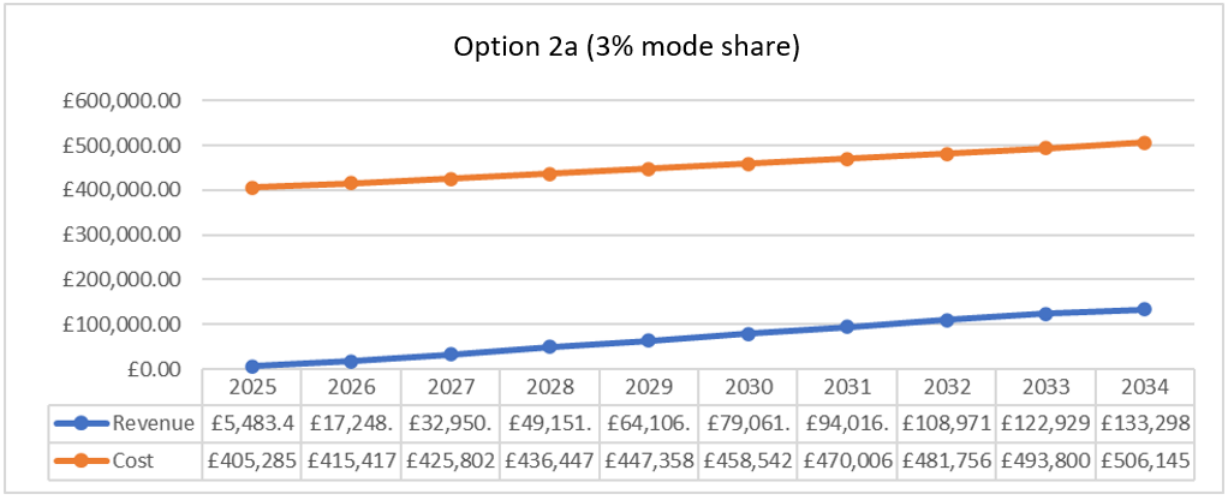


Table 9-8 – Revenue gap for 3% bus mode share (Option 2a)

Revenue gap									
2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
-£399,802	-£398,169	-£392,852	-£387,296	-£383,252	-£365,297	-£375,990	-£372,785	-£370,871	-£372,847

Figure 9-8 Cost and revenue for 3% bus mode share (Option 2b)

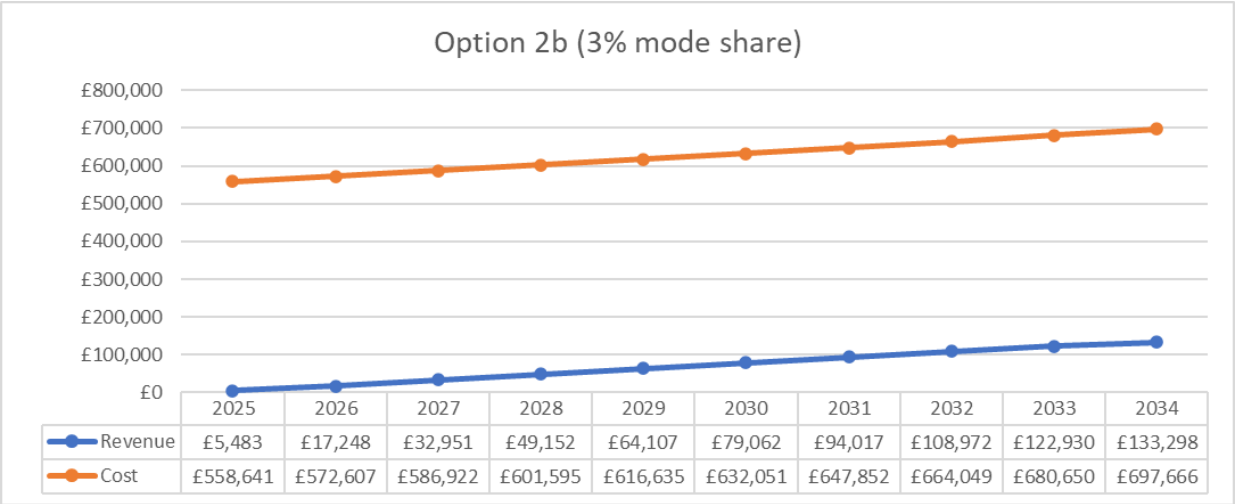


Table 9-9 – Revenue gap for 3% bus mode share (Option 2b)

Revenue gap									
2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
-£553,158	-£555,359	-£553,971	-£552,443	-£552,528	-£552,989	-£553,836	-£555,077	-£557,720	-£564,368

The deficit by year for Option 2a with a 5% bus mode share is illustrated in Figure 9-9 and Table 9-10. For Option 2b, the deficit by year with a 5% bus mode share is shown in Figure 9-10 and Table 9-11. It is expected that the service will break even in 2047 for Option 2a and 2053 for Option 2a.

Figure 9-9 Cost and revenue for 5% bus mode share (Option 2a)

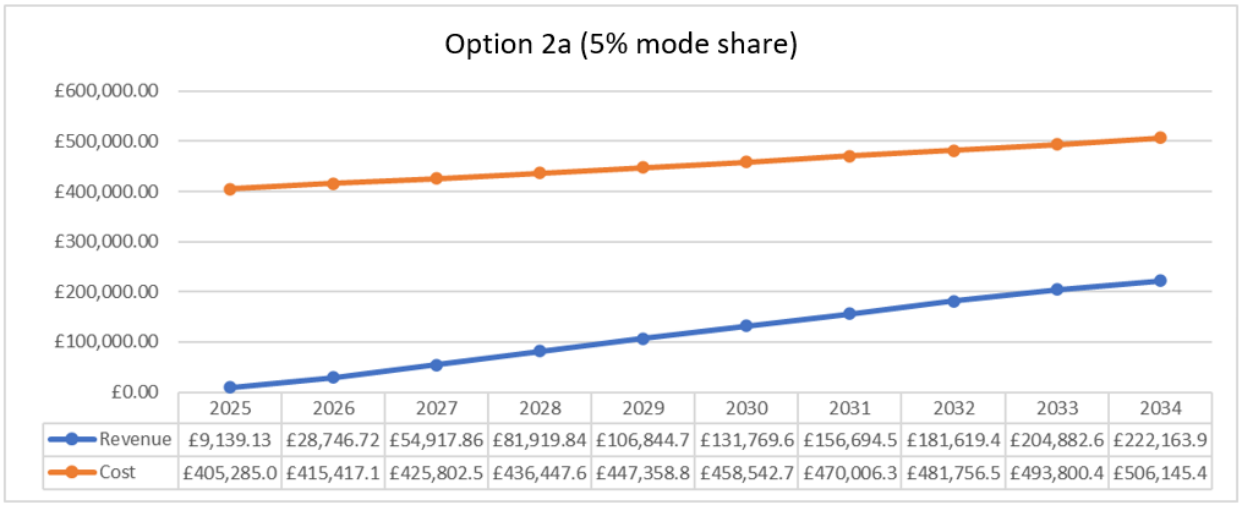


Table 9-10 – Revenue gap for 5% bus mode share (Option 2a)

Revenue gap									
2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
-£396,146	-£386,671	-£370,885	-£354,528	-£340,514	-£326,773	-£313,312	-£300,137	-£288,918	-£283,982

Figure 9-10 Cost and revenue for 5% bus mode share (Option 2b)

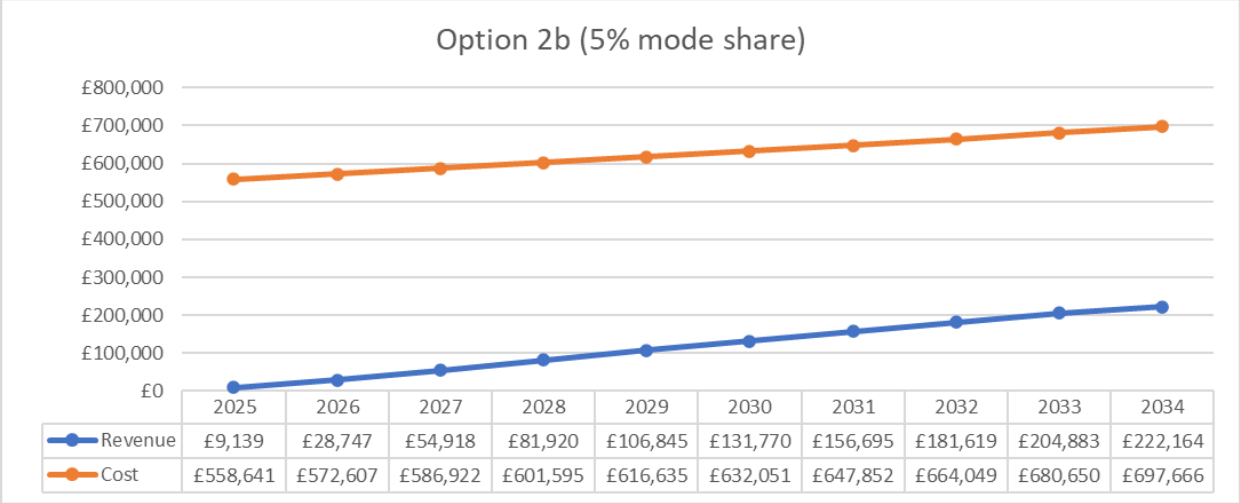


Table 9-11 – Revenue gap for 5% bus mode share (Option 2b)

Revenue gap									
2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
-£549,502	-£543,860	-£532,004	-£519,675	-£509,790	-£500,281	-£491,158	-£482,429	-£475,767	-£475,502

The deficit by year for Option 2a with a 10% bus mode share is illustrated in Figure 9-11 and Table 9-12. For Option 2b, the deficit by year with a 10% bus mode share is shown in Figure 9-12 and Table 9-13.

Figure 9-11 Cost and revenue for 10% bus mode share (Option 2a)

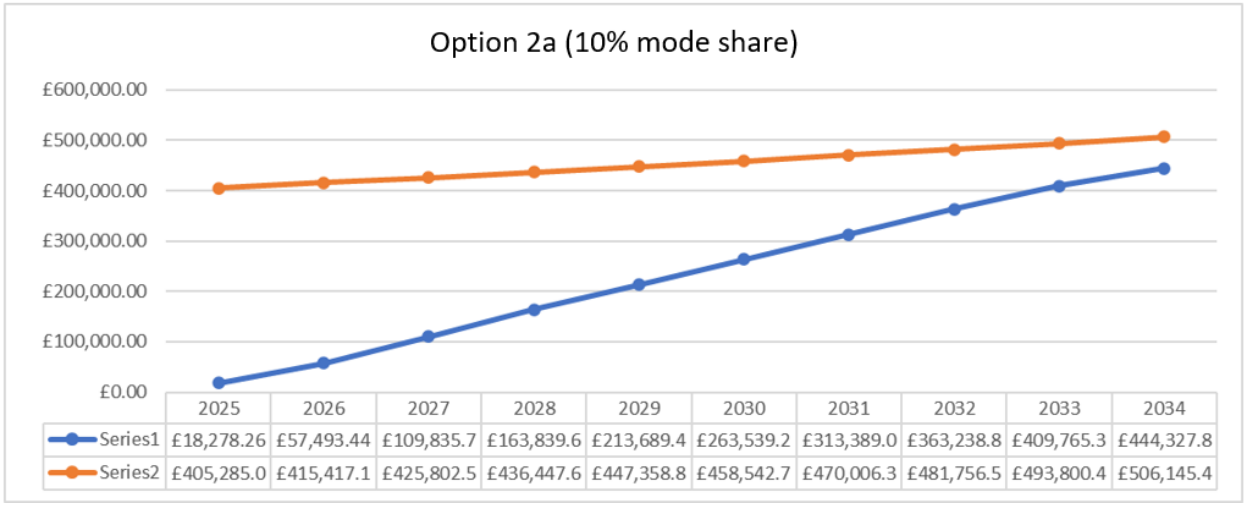


Table 9-12 – Revenue gap for 10% bus mode share (Option 2a)

Revenue gap									
2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
-£387,007	-£357,924	-£315,967	-£272,608	-£233,669	-£195,003	-£156,617	-£118,518	-£84,035	-£61,818

Figure 9-12 - Cost and revenue for 10% bus mode share (Option 2b)

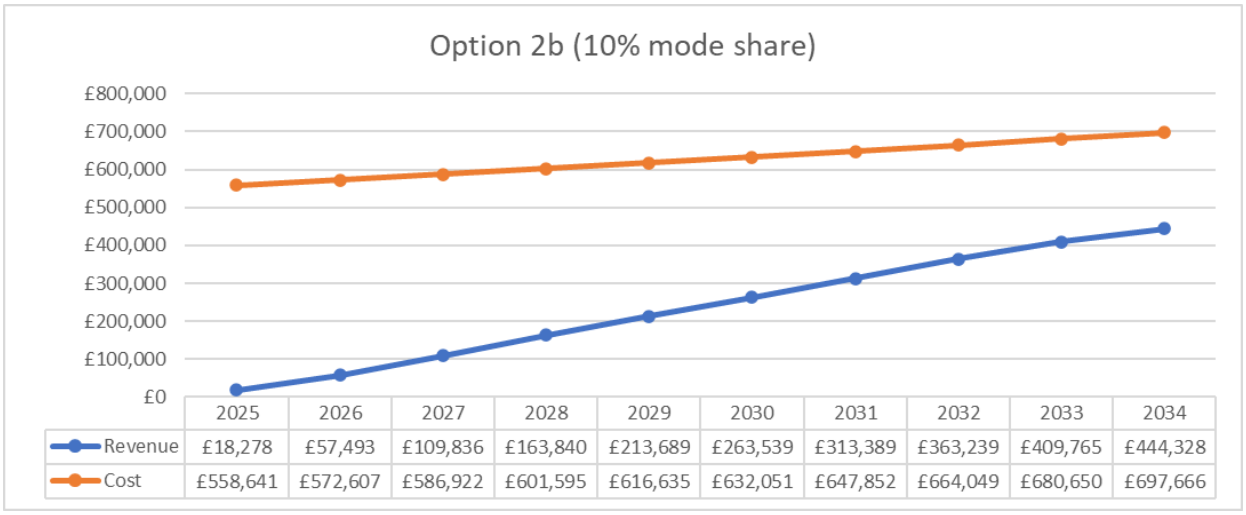


Table 9-13 – Revenue gap for 10% bus mode share (Option 2b)

Revenue gap									
2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
-£540,363	-£515,114	-£477,086	-£437,756	-£402,946	-£368,512	-£334,463	-£300,810	-£270,884	-£253,338

SUMMARY

The proposed bus service will serve most of the built-up area within Paddock Wood and Paddock Wood Railway Station. The service also aims to serve the major proposed housing developments on the eastern and western sides of the town. As a local short distance bus service within Paddock Wood, the service would be more attractive to the residents if it is operated at a minimum 20-minute headway service.

The route is proposed to run as a figure of eight that begins at Paddock Wood Station and passes through the Paddock Wood Station twice. The bus will then return to Paddock Wood Station after going through the West side of Paddock Wood. A phase one bus route is proposed running through the eastern side of development in alignment with the development time frame.

The bus route was based on the most up to date map in the masterplan at the time and it is subject to change. The changes in the housing, employment and other allocations may influence the ultimate routing. In addition, there are other reasons such as the road width that may affect the practicality of the bus route.

The revenue and cost modelling process has factored in the updated housing allocation taking place across the Tunbridge Wells Borough Council area between the financial year 2025/26 to 2034/35. The cost of the bus was modelled according to the inflation rate in the current economic situation. With the unpredictability of the future inflation rate, variation may appear in the operation costs in the future years.