

Appendix G 39209-5534-TN002 Bus Service
Business Case (Supplementary Note)

TECHNICAL NOTE

Job Name: Land West of Park Farm, Thornbury
Job No: 39209
Note No: 5534 002
Date: 17 September 2019
Prepared By: Gabriel Fong / Dave Harrison
Subject: **BUS SERVICE BUSINESS CASE – SUPPLEMENTARY NOTE**

1. Introduction

- 1.1. Peter Brett Associates LLP (PBA), now part of Stantec, has been appointed by Barwood Development Securities Ltd & North West Thornbury Landowner Consortium to provide transport advice in relation to a residential development on Land West of Park Farm, Thornbury, South Gloucestershire.
- 1.2. The proposed development comprises up to 630 residential dwellings, land for a neighbourhood hub, two vehicle access points from Oldbury Lane and a sustainable transport link for buses, cyclists and pedestrians through to the adjacent consented Park Farm development.
- 1.3. This Technical Note provides additional analysis to that contained in the PBA Technical Note *5534 001 Bus Service Business Case* (dated 16 July 2019). That Technical Note outlined a business case for the extension of bus service T1 to the West of Park Farm development on the basis that a bus-only link was provided between the consented Park Farm development and Alexandra Way.
- 1.4. South Gloucestershire Council (SGC) are committed to delivery of the bus link to Alexandra Way and they expect it to be delivered within the next two years. Notwithstanding SGC's confirmation that the Alexandra Way link is committed, at the request of SGC this Technical Note provides an analysis of a further option which assesses a scenario where buses serving the West of Park Farm site would not use this route.

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2. Alternative Option

- 2.1. Service T1, operated by First West of England, links residential areas of Thornbury with the town centre and Bristol city centre. It operates at a frequency of up to two buses per hour during Monday to Saturday daytimes and one bus per hour on Sundays.
- 2.2. The diversion proposed in Technical Note 5534 001 was for buses to leave their current route at the northern end of Morton Way before operating via Butt Lane, Oldbury Lane, West of Park Farm development, Park Farm development, Alexandra Way, Whitfield Road and Gloucester Road to rejoin the current route at Severn View Road. This diversion added 2.4km to the route which equates to eight minutes of additional journey time.
- 2.3. Under this alternative scenario, service T1 could operate via Butt Lane, the Park Farm development, the proposed West of Park Farm development, Oldbury Lane and Butt Lane to return to Gloucester Road at its junction with Morton Way. This route is 2.8km in length and assuming an average speed of 20kph (12.4mph) can be undertaken in nine minutes.
- 2.4. This is an increase of 0.4km and one minute on the 'Both Developments' proposals contained in Technical Note 5534 001.
- 2.5. Without the Alexandra Way bus link in place, we do not consider it to be possible for First to extend service T1 into the Park Farm development as a standalone option because there would be no suitable locations to turn the bus around. The consented development is in the process of delivering a road to the boundary of the West of Park Farm site which will ensure a suitable route can be delivered (subject to the delivery of the works proposed in this application to upgrade that route to enable it to be used as a bus route).

3. Bus Service Business Case

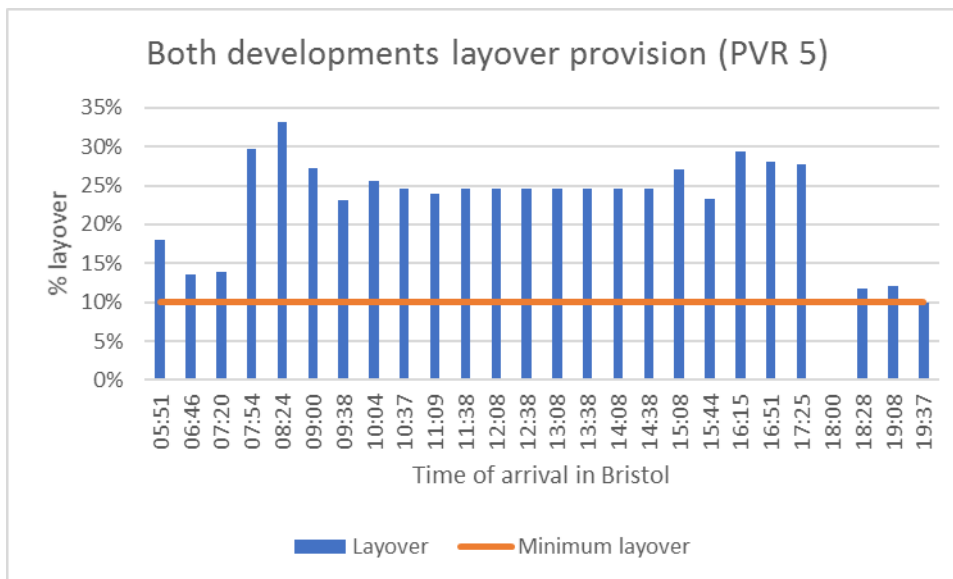
- 3.1. In this Technical Note, only the 'Both Developments' scenario has been remodelled because an option of extending merely to Park Farm is not available for the reasons stated above.
- 3.2. As per Technical Note 5534 001, the intention of the business case is to:
 - identify the operational implications of this route option in terms of vehicles, driver resources and running time; and
 - identify the financial implications of this route option in terms of cost and potential revenue from the West of Park Farm development.
- 3.3. Bus service frequency remains the same at two buses per hour during Monday to Saturday daytimes and one bus per hour on Sundays.

Both Developments (No Bus Link)

- 3.4. It has already been established in Technical Note 5534 001 that extension of the route to Park Farm cannot be achieved with the current allocated PVR of four and that an additional vehicle is required. Therefore, it can be assumed that this would still be in place for a further extension into the West of Park Farm site.
- 3.5. The revised timetable for this scenario is shown in **Appendix A**, utilising the alternative route back to Morton Way. The impact of the additional route length on the layover provision is shown in **Figure 1** overleaf.



Figure 1: Both developments diversion layover provision (alternative option) – PVR 5 (Mondays to Fridays)



- 3.6. **Figure 1** shows that broadly the layover position from the original PVR 5 option has been maintained, although the arrival times in Bristol are now one minute later. The 19:08 and 19:37 arrivals increased layover provision as a result of the existing 19:20 and 19:45 departure from Bristol leaving five minutes later. Most journeys have 20-25% layover provision on a cycle time of 150 minutes, although there are five journeys with layover provision between 10%-15% in the AM and PM peak periods.
- 3.7. As per the bus link scenario, there is no layover identified for the 18:00 arrival as this vehicle is no longer required on service T1 and can return dead to depot unless it is otherwise required on other routes.
- 3.8. **Appendix B** shows the model inputs, outputs and financial implications of the scenario. There is a slight cost increase over the original PVR 5 option, from £871,000 to £876,000 per annum (an increase of £5,000 per annum). This is the result of the minor increases to start times, finish times and distance travelled. The average bus cost increases slightly from £174,000 to £175,000 per annum.
- 3.9. This represents an increase of £120,000 per annum over the current baseline scenario, which can be adequately provided for with the existing Section 106 contributions accrued from Park Farm.
- 3.10. Although the 'Park Farm' only scenario has not been modelled for the alternative route, it can be assumed that £2,000 per annum of this cost is directly attributable to the extra route distance incurred by the West of Park Farm site as per the original option.
- 3.11. The revenue from the two developments would remain as detailed in Technical Note 5534 001 but this and the comparison with annual costs are summarised in **Table 1** overleaf.



TECHNICAL NOTE

Table 1: Both Developments scenario total revenue (summary)

	PF	WoPF	Total
Total development (units)	500	630	1,130
Population	1,180	1,487	2,667
Bus mode share	1.9%	2.5%	

Completed development

Annual bus trips	21,860	36,241	58,101
Average fare	£2.12	£2.12	
TOTAL REVENUE	£46,343	£76,831	£123,174

Total Additional Annual Cost			£120,000
Annual Surplus			£3,174

- 3.12. **Table 1** indicates that on completion of the two developments, sufficient revenue is generated to secure commercial viability of the service extension. A total of £123,174 annual revenue is forecast from both sites as compared to £120,000 annual costs, a surplus of £3,174.
- 3.13. The impact that the cost and revenue profile has on the drawdown of funds from the Park Farm development is shown in **Table 2** below.

Table 2: Schedule of revenue generation and S.106 funds 2023-2029

Year	2023	2024	2025	2026	2027	2028	2029
Occupations: Park Farm	450	500	500	500	500	500	500
Occupations: West of Park Farm	50	150	250	350	450	550	600

Annual cost of extension	£120,000	£120,000	£120,000	£120,000	£120,000	£120,000	£120,000
Revenue: Park Farm	£42,000	£46,000	£46,000	£46,000	£46,000	£46,000	£46,000
Revenue: West of Park Farm	£6,000	£18,000	£30,000	£43,000	£55,000	£67,000	£75,000
Total revenue	£48,000	£64,000	£76,000	£89,000	£101,000	£113,000	£121,000

S106 funds drawdown: Park Farm	£72,000	£56,000	£44,000	£31,000	£19,000	£7,000	£0
Funds from West of Park Farm	£0	£0	£0	£0	£0	£0	£0

- 3.14. **Table 2** indicates that the drawdown of funds from the Park Farm Section 106 agreement (totalling £229,000 to 2028) would not be exhausted until such a time that sufficient completions on the West of Park Farm site have taken place to enable commercial sustainability of the service.
- 3.15. As a result, the cost of serving both Park Farm and West of Park Farm can be adequately met through the committed Section 106 funds from Park Farm; however, a contribution of £10,000 could be made to offset the additional costs of operating to West of Park Farm (as identified in paragraph 3.10) which would allow the Park Farm contribution to be spread over a longer period of time.



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4. Summary and Conclusions

- 4.1. Whilst SGC have committed to delivering the Alexandra Way bus link and expect it to be completed in the next two years, this Technical Note details an alternative option for the extension of service T1 into the development at the request of SGC Highway Officers. In summary, in this event, the Land West of Park Farm site is:
- an ideal location for further development, as it requires minimal additional cost to provide a good level of public transport services;
 - necessary to promote the long-term sustainability of the already consented Park Farm site. The revenue expected to be accrued from the Park Farm development alone is insufficient to provide for long-term commercial viability of the extended bus route. However, the relatively short extension to this through West of Park Farm will result in substantial additional patronage ensuring the combined development can be served by a viable extension to the T1 route;
 - likely to make a significant contribution to ensuring the viability and attractiveness of high-quality public transport links between Thornbury and Bristol; and
 - a site which is not required to fund additional public transport resources given its major contribution to ensuring that existing commitments are commercially sustainable.
- 4.2. The note demonstrates that annual costs of service delivery would increase by £120,000 over the baseline, but that, in the long-term, these costs would be offset entirely by the increased revenue generated; thus ensuring its future commercial sustainability. In the short-term and as the development is underway, the funding already secured from the Section 106 Agreement attached to the Park Farm development will offset the funding gap, enabling a bus to be operated in the interim.
- 4.3. The principal differentiator with this option is that Park Farm could not be served by route T1 without the bus link in place as a result of the lack of a suitable turning point on the site.



TECHNICAL NOTE

Appendix A

Alternative Option – Revised Timetable



TECHNICAL NOTE

T1 Thornbury > Bristol																												Both		
Mondays to Fridays (except Public Holidays)																														
Service Number	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1		
Vehicle	1	2	3	1	4	2	3	5	1	4	2	3	5	1	4	2	3	5	1	4	2	3	5	1	4	2	3	1	4	2
BRISTOL, The Centre C14	...	...	...	06:05	...	07:00	07:35	08:05	08:40	09:15	09:45	10:15	10:45	11:15	11:45	12:15	12:45	13:15	13:45	14:15	14:45	15:15	15:50	16:20	17:05	17:40	18:15	18:45	19:25	19:50
Bristol, Broadmead B1	...	...	...	06:07	...	07:03	07:37	08:07	08:42	09:17	09:48	10:18	10:48	11:18	11:48	12:18	12:48	13:18	13:48	14:18	14:48	15:19	15:54	16:24	17:09	17:44	18:18	18:48	19:27	19:52
Harry Stoke	...	05:17	05:47	06:17	06:41	07:16	07:52	08:22	08:57	09:32	10:01	10:31	11:01	11:31	12:01	12:31	13:01	13:31	14:01	14:31	15:01	15:35	16:10	16:40	17:25	18:00	18:32	19:00	19:38	20:03
Bradley Stoke, Willow Brook	...	05:23	05:53	06:23	06:47	07:23	07:59	08:29	09:04	09:39	10:08	10:38	11:08	11:38	12:08	12:38	13:08	13:38	14:08	14:38	15:09	15:43	16:18	16:48	17:33	18:08	18:39	19:07	19:44	20:09
Almondsbury, The Swan	...	05:30	06:00	06:30	06:54	07:31	08:09	08:39	09:14	09:47	10:16	10:46	11:16	11:46	12:16	12:46	13:16	13:46	14:16	14:46	15:20	15:54	16:29	16:59	17:44	18:16	18:46	19:14	19:51	20:16
Thornbury, Rock Street	04:47	05:42	06:12	06:42	07:07	07:45	08:23	08:53	09:28	10:00	10:29	10:59	11:29	11:59	12:29	12:59	13:29	13:59	14:29	14:59	15:35	16:09	16:44	17:14	17:59	18:29	18:59	19:26	20:02	20:27
Thornbury, Park Farm	05:02	05:57	06:27	06:57	07:23	07:59	08:37	09:07	09:44	10:16	10:45	11:15	11:45	12:15	12:45	13:15	13:45	14:15	14:45	15:15	15:51	16:25	17:00	17:30	18:15	18:45	19:14	19:39	20:15	20:40
THORNBURY, Health Centre	05:08	06:03	06:33	07:03	07:29	08:05	08:43	09:13	09:50	10:22	10:51	11:21	11:51	12:21	12:51	13:21	13:51	14:21	14:51	15:21	15:57	16:31	17:06	17:36	18:21	18:51	19:20	19:45	20:21	20:46
Service Number	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	
Vehicle	1	2	3	1	4	2	3	5	1	4	2	3	5	1	4	2	3	5	1	4	2	3	5	1	4	2	3	1	4	2
THORNBURY, Health Centre	05:10	06:05	06:35	07:05	07:31	08:07	08:45	09:15	09:52	10:24	10:53	11:23	11:53	12:23	12:53	13:23	13:53	14:23	14:53	15:23	15:59	16:33	17:08	17:38	18:23	18:53	19:22	19:47	20:48	
Thornbury, The Plain	05:13	06:08	06:38	07:08	07:35	08:11	08:49	09:19	09:55	10:27	10:56	11:26	11:56	12:26	12:56	13:26	13:56	14:26	14:56	15:27	16:03	16:37	17:12	17:42	18:26	18:56	19:25	19:50	20:51	
Almondsbury, The Swan	05:25	06:20	06:50	07:21	07:49	08:25	09:03	09:33	10:08	10:40	11:09	11:39	12:09	12:39	13:09	13:39	14:09	14:39	15:09	15:40	16:16	16:50	17:25	17:55	18:39	19:09	19:35	20:00	21:01	
Bradley Stoke, Willow Brook	05:33	06:28	06:58	07:28	07:58	08:34	09:12	09:42	10:15	10:47	11:16	11:46	12:16	12:46	13:16	13:46	14:16	14:46	15:18	15:49	16:25	16:59	17:34	18:04	18:46	19:16	19:41	20:06	21:06	
Harry Stoke	05:39	06:34	07:04	07:34	08:04	08:40	09:18	09:48	10:21	10:53	11:22	11:52	12:22	12:52	13:22	13:52	14:22	14:52	15:26	15:57	16:33	17:07	17:42	18:12	18:52	19:22	19:46	20:11	21:11	
Kingsdown, Bristol Royal Infirmary	05:49	06:44	07:17	07:51	08:21	08:57	09:35	10:01	10:34	11:06	11:35	12:05	12:35	13:05	13:35	14:05	14:35	15:05	15:41	16:12	16:48	17:22	17:57	18:25	19:05	19:34	19:58	20:23	21:23	
BRISTOL, The Centre C14	05:51	06:46	07:20	07:54	08:24	09:00	09:38	10:04	10:37	11:09	11:38	12:08	12:38	13:08	13:38	14:08	14:38	15:08	15:44	16:15	16:51	17:25	18:00	18:28	19:08	19:37	20:01	20:26	21:26	
<i>Cycle time</i>	01:18	01:43	01:48	02:35	02:34	02:45	02:40	02:40	02:35	02:30	02:30	02:30	02:30	02:30	02:30	02:30	02:30	02:35	02:35	02:50	02:55	03:00	02:10	02:25	02:20	02:10	01:46	01:41	00:56	01:36
<i>Layover time</i>	00:14	00:14	00:15	00:46	00:51	00:45	00:37	00:41	00:38	00:36	00:37	00:37	00:37	00:37	00:37	00:37	00:37	00:42	00:36	00:50	00:49	00:50	...	00:17	00:17	00:13	...	...	...	...
<i>% layover</i>	18%	14%	14%	30%	33%	27%	23%	26%	25%	24%	25%	25%	25%	25%	25%	25%	25%	27%	23%	29%	28%	28%	...	12%	12%	10%	...	...	...	23%

TECHNICAL NOTE

T1 Thornbury > Bristol																							Both		
Saturdays (except Public Holidays)																									
Service Number	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1			
Vehicle	1	2	1	2	3	1	4	2	3	1	4	2	3	1	4	2	3	1	4	2	3	1	4	2	
BRISTOL, The Centre C14	...	...	07:15	08:15	08:45	09:15	09:45	10:15	10:45	11:15	11:45	12:15	12:45	13:15	13:45	14:15	14:45	15:15	15:45	16:15	16:45	17:15	17:45	18:15	
Bristol, Broadmead B1	...	...	07:17	08:17	08:47	09:17	09:47	10:17	10:48	11:18	11:48	12:18	12:48	13:18	13:48	14:18	14:48	15:18	15:48	16:18	16:48	17:18	17:48	18:18	
Harry Stoke	05:29	06:29	07:27	08:28	08:58	09:28	09:58	10:28	11:00	11:30	12:00	12:30	13:00	13:30	14:00	14:30	15:00	15:30	16:00	16:30	17:00	17:30	18:00	18:30	
Bradley Stoke, Willow Brook	05:35	06:35	07:33	08:34	09:04	09:34	10:04	10:34	11:06	11:36	12:06	12:36	13:06	13:36	14:06	14:36	15:06	15:36	16:06	16:36	17:06	17:36	18:06	18:36	
Almondsbury, The Swan	05:41	06:41	07:40	08:41	09:11	09:41	10:11	10:41	11:13	11:43	12:13	12:43	13:13	13:43	14:13	14:43	15:12	15:42	16:12	16:42	17:12	17:42	18:13	18:43	
Thornbury, Rock Street	05:52	06:52	07:52	08:53	09:23	09:53	10:23	10:54	11:26	11:56	12:26	12:56	13:26	13:56	14:26	14:56	15:25	15:55	16:25	16:55	17:25	17:55	18:26	18:56	
Thornbury, Park Farm	06:07	07:07	08:07	09:08	09:38	10:08	10:38	11:09	11:41	12:11	12:41	13:11	13:41	14:11	14:41	15:11	15:39	16:09	16:39	17:09	17:39	18:09	18:41	19:11	
THORNBURY, Health Centre	06:13	07:13	08:13	09:14	09:44	10:14	10:44	11:15	11:47	12:17	12:47	13:17	13:47	14:17	14:47	15:17	15:45	16:15	16:45	17:15	17:45	18:15	18:47	19:17	
Service Number	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1		
Vehicle																									
THORNBURY, Health Centre	06:15	07:15	08:15	09:16	09:46	10:16	10:46	11:17	11:49	12:19	12:49	13:19	13:49	14:19	14:49	15:19	15:47	16:17	16:47	17:17	17:47	18:17	18:49	19:19	
Thornbury, The Plain	06:18	07:18	08:18	09:19	09:49	10:19	10:49	11:20	11:52	12:22	12:52	13:22	13:52	14:22	14:52	15:22	15:50	16:20	16:50	17:20	17:50	18:20	18:52	19:22	
Almondsbury, The Swan	06:29	07:29	08:30	09:31	10:01	10:31	11:01	11:32	12:04	12:34	13:04	13:34	14:04	14:34	15:04	15:34	16:02	16:32	17:02	17:32	18:02	18:32	19:04	19:32	
Bradley Stoke, Willow Brook	06:35	07:35	08:36	09:37	10:07	10:37	11:08	11:39	12:11	12:41	13:11	13:41	14:11	14:41	15:11	15:40	16:08	16:38	17:08	17:38	18:08	18:39	19:11	19:38	
Harry Stoke	06:40	07:40	08:41	09:42	10:12	10:44	11:15	11:46	12:18	12:48	13:18	13:48	14:18	14:48	15:17	15:46	16:14	16:44	17:14	17:44	18:14	18:46	19:16	19:43	
Kingsdown, Bristol Royal Infirmary	06:50	07:51	08:52	09:53	10:23	10:56	11:27	11:58	12:30	13:00	13:30	14:00	14:30	15:00	15:29	15:58	16:26	16:56	17:26	17:56	18:26	18:58	19:28	19:55	
BRISTOL, The Centre C14	06:52	07:54	08:55	09:56	10:26	10:59	11:30	12:01	12:33	13:03	13:33	14:03	14:33	15:03	15:32	16:01	16:29	16:59	17:29	17:59	18:29	19:01	19:31	19:58	

T1 Thornbury > Bristol													Both	
Sundays and Public Holidays														
Service Number	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1		
Vehicle	1	2	1	2	1	2	1	2	1	2	1	2	1	
BRISTOL, The Centre C14	...	...	09:10	10:10	11:10	12:10	13:10	14:10	15:10	16:10	17:10	
Bristol, Broadmead B1	...	...	09:13	10:13	11:13	12:13	13:13	14:13	15:13	16:13	17:13	
Harry Stoke	07:15	08:15	09:25	10:25	11:25	12:25	13:25	14:25	15:25	16:25	17:25			
Bradley Stoke, Willow Brook	07:20	08:20	09:31	10:31	11:31	12:31	13:31	14:31	15:31	16:31	17:31			
Almondsbury, The Swan	07:25	08:25	09:38	10:38	11:38	12:38	13:38	14:38	15:38	16:38	17:38			
Thornbury, Rock Street	07:36	08:36	09:49	10:49	11:51	12:51	13:51	14:51	15:51	16:49	17:49			
Thornbury, Park Farm	07:50	08:51	10:04	11:04	12:06	13:06	14:06	15:06	16:06	17:04	18:04			
THORNBURY, Health Centre	07:56	08:57	10:10	11:10	12:12	13:12	14:12	15:12	16:12	17:10	18:10			
Service Number	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1	T1			
Vehicle														
THORNBURY, Health Centre	07:58	08:59	10:12	11:12	12:14	13:14	14:14	15:14	16:14	17:12	18:12			
Thornbury, The Plain	08:00	09:02	10:15	11:15	12:17	13:17	14:17	15:17	16:17	17:15	18:15			
Almondsbury, The Swan	08:11	09:14	10:27	11:27	12:29	13:29	14:29	15:29	16:29	17:27	18:27			
Bradley Stoke, Willow Brook	08:17	09:21	10:34	11:34	12:36	13:36	14:36	15:36	16:36	17:34	18:34			
Harry Stoke	08:22	09:27	10:40	11:40	12:43	13:43	14:43	15:43	16:43	17:40	18:41			
Kingsdown, Bristol Royal Infirmary	08:32	09:37	10:50	11:52	12:55	13:55	14:55	15:55	16:55	17:52	18:53			
BRISTOL, The Centre C14	08:34	09:40	10:53	11:55	12:58	13:58	14:58	15:58	16:58	17:55	18:56			



TECHNICAL NOTE

Appendix B

Alternative Option Model Outputs



TECHNICAL NOTE

WEST OF PARK FARM, THORBURY

Viability Model

Demand

12.07.19

v1.1

New Residential

DESCRIPTION	FACTOR	SOURCE
Total Development (units)	630	
Build Out Rate (units)	100	
Household Occupation	2.4	1
Annual Trip Rate	975	2
Adult population (>16)	1,487	
Annual Total Trips	1,449,630	
Residential Bus Mode Share	3%	3

Year	1	2	3	4	5	6	7	8	9	10
Total houses built at yr end	100	200	300	400	500	600	630	630	630	630
Average no of houses	50	150	250	350	450	550	615	630	630	630
Population	118	354	590	826	1,062	1,298	1,451	1,487	1,487	1,487
Annual Total Trips	115,050	345,150	575,250	805,350	1,035,450	1,265,550	1,415,115	1,449,630	1,449,630	1,449,630
Annual Bus Trips	2,876	8,629	14,381	20,134	25,886	31,639	35,378	36,241	36,241	36,241

Sources

- 1 From ONS "Households and Household Composition in England and Wales: 2001-11", Table 1
- 2 From NTS 2017, Table 0303
- 3 From the West of Park Farm Transport Assessment

Ticket Sales Breakdown

Ticket Type	Sales %	SOURCE
Adult Single	18%	1
Adult Return/Day Ticket	13%	
Adult Weekly	20%	
Child	14%	
Concession	35%	

Concession Reimbursement

ENCTS rate		SOURCE
	73.4%	2

Local Fares

	Fare	Price/trip	NTS Sales	SOURCE
Adult				3
Single	£2.50	£2.50	18%	
Return	£5.00	£2.50	13%	
10 Journey	£26.00	£2.60	20%	
Child				
Single	£1.30	£1.30	7%	
Return	£2.60	£1.30	7%	
Concession				
Operator reimbursement	£1.84	£1.84	35%	
Average Fare		£2.12		
Commercial Fare		£2.60		

Sources

- 1 From National Travel Survey: Use of Public Buses Personal Travel Factsheet - March 2010
- 2 <http://passtrans.co.uk/content/index.php/blog/1847-time-for-a-rethink-on-concessions-reimbursement>
- 3 Local First company published information, July 2019



TECHNICAL NOTE

WEST OF PARK FARM, THORNBURY

Viability Model

Costings

12.07.19

v1.1

Variable Costs

	DESCRIPTION	RATE	SOURCE
DRIVER	Hourly Rate	£ 11.50	
	NI Rate above Threshold	13.8%	1
	NI Threshold	£162	1
	Effective NI Rate	9.5%	
	Pension	5.0%	2
	Holidays	12%	
	Sickness	2.0%	3
	DCPC Training	0.4%	4
	Duty Efficiency	90%	5
	Driver Cost Per Hour	£ 15.97	
MAINTENANCE	Maintenance Cost per Hour	£ 1.50	6
FUEL	Pump Price	£ 1.22	
	VAT	20.0%	
	BSOG	£ 0.35	7
	ITSO smartcard	£ 0.03	7
	AVL	£ 0.01	7
	Cost/litre	£ 0.66	
	Consumption (mpg)	6.30	
	Consumption (l/100km)	45.09	
Fuel Cost Per Km	£ 0.30		
TYRES	Tyre Cost Per Km	£ 0.02	

Semi Variable Costs

	DESCRIPTION	RATE	SOURCE
CAPITAL	Vehicle Type	ADL E400MMC	
	Purchase Price	£ 200,000	
	Vehicle Life	10	
	Residual Value	£ 20,000	
	ETM	£ 500	8
	Depreciation Charge	£18,500	
FINANCE	Interest Rate	8%	
	Deposit	20%	
	Loan Period (years)	5	
	Interest (Year 1)	£ 12,800	
	Interest (Year 2)	£ 10,618	
	Interest (Year 3)	£ 8,262	
	Interest (Year 4)	£ 5,717	
	Interest (Year 5)	£ 2,968	
	Total Interest	£ 40,365	
	Finance Cost	£ 4,037	
OPERATING	Insurance	£ 1,800	2
	Licences	£ 500	10
	Maintenance per PVR	£ 7,200	2
	Cleaning	£ 1,500	
	SV Operating Cost	£ 11,000	

Fixed Costs

	DESCRIPTION	RATE	SOURCE
SUPERVISION	Manager	£ 35,000	
	Engineering Supervisor	£ 25,000	
	Inspectors/Supervisors	£ 25,000	
	Admin Assistant	£ 15,000	
MARKETING	Launch Budget	£ 2,000	
	Annual Budget	£ 2,000	
OVERHEADS		5%	8
CONTRIBUTION	Target Rate	15.0%	

Sources

- 1 From HMRC 2018-19
- 2 Operator discussions, November 2015
- 3 From XpertHR sickness absence rates survey 2015 (transport)
- 4 1 day per year
- 5 Default value 90% (Blackpool Transport)
- 6 Operator discussions, November 2015
- 7 Updated 01.04.12
- 8 Operator discussions, February 2018
- 9 Operator discussions, November 2015
- 10 V149, July 2019



TECHNICAL NOTE

WEST OF PARK FARM, THORNBURY
Both Developments Viability Model
NEW RESOURCES

12.07.19 v1.1

Annualisation Factors

Mon-Fri	253
Sat	52
Sun	59

Spare Veh Holding	
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Route km	55.84
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Mon-Fri	Bus	Start	Finish	Hours	Journeys	Km
	1	04:17	20:41	16:24	6.5	362.96
	2	04:47	21:41	16:54	7	390.88
	3	05:17	20:16	14:59	6	335.04
	4	06:11	20:36	14:25	5.5	307.12
	5	07:35	18:15	10:40	4	223.36
Total				73:22		1619.36

Sat	Bus	Start	Finish	Hours	Journeys	Km
	1	04:59	19:16	14:17	5	279.2
	2	05:59	20:13	14:14	7	390.88
	3	08:15	18:44	10:29	5	279.2
	4	09:15	19:46	10:31	7	390.88
Total				49:31		1340.16

Sun	Bus	Start	Finish	Hours	Journeys	Km
	1	06:45	19:11	12:26	6	335.04
	2	07:45	18:10	10:25	5	279.2
Total				22:51		614.24

Annual Hours	22,485
Annual Km	515,627
PVR	5
Fleet	5



TECHNICAL NOTE

WEST OF PARK FARM, THORNBURY
Both Developments Viability Model
NEW SERVICE

12.07.19

v1.1

Year	1	2	3	4	5	6	7	8	9	10
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COSTS (£'000)

Variable Costs

Driver payroll	359	359	359	359	359	359	359	359	359	359
Fuel	153	153	153	153	153	153	153	153	153	153
Tyres	10	10	10	10	10	10	10	10	10	10
Maintenance materials	34	34	34	34	34	34	34	34	34	34
Sub Total: Variable Costs	556	556	556	556	556	556	556	556	556	556

Semi Variable Costs

Depreciation	93	93	93	93	93	93	93	93	93	93
Insurance	9	9	9	9	9	9	9	9	9	9
Finance	20	20	20	20	20	20	20	20	20	20
Licences	3	3	3	3	3	3	3	3	3	3
Maintenance labour	36	36	36	36	36	36	36	36	36	36
Cleaning	8	8	8	8	8	8	8	8	8	8
Sub Total: Semi Variable Costs	168	168	168	168	168	168	168	168	168	168

Fixed Costs

Marketing and Promotion	2	2	2	2	2	2	2	2	2	2
Management and Supervision	0	0	0	0	0	0	0	0	0	0
Overheads	36	36	36	36	36	36	36	36	36	36
Total Fixed Costs	38	38	38	38	38	38	38	38	38	38

TOTAL COSTS (exc. Profit)	762	762	762	762	762	762	762	762	762	762
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Profit Margin

Target Profit	114	114	114	114	114	114	114	114	114	114
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TOTAL COSTS (inc. Profit)	876	876	876	876	876	876	876	876	876	876
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Average Cost per Vehicle	175	175	175	175	175	175	175	175	175	175
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