

Plan for and Deliver Transport Infrastructure Ahead of New Homes

Tewkesbury Borough Council's vision for the Tewkesbury Garden Communities includes 10,000 new homes being built, during the next 20 years, centred around the village of Ashchurch; predominantly on greenfield-land close to the A46, east of the Cheltenham - Birmingham railway line which divides the village.

The draft Programme Charter for the Garden Communities envisages development beginning in 2026.

Tewkesbury Borough Council, Gloucester City Council and Cheltenham Borough Council Strategic and Local Plan (SLP) considers afresh the development strategy for the area, in particular, whether it should continue to be based on the settlement hierarchy envisaged by the Joint Core Strategy, which it will supersede. Six distinct scenarios are presented and it is expected that the final strategy will be a combination of different elements from those options. Thus, it is by no means certain that the Tewkesbury Garden Communities will form part of the final SLP.

It will not be until early 2026 that the Regulation 19 consultation on the pre-submission draft SLP is expected to commence. Only after that is completed can the plan be submitted to the Secretary of State for independent examination and approval.

As detailed planning for supporting infrastructure for the Garden Communities can only be finalised once the SLP has been approved, there is considerable concern about the aspiration to commence construction of new homes as early as 2026.

For the reasons discussed below, the provision of adequate supporting infrastructure must be a key component of any development of the scale envisaged for the Garden Communities.

A traffic survey last July^[1], showed that the residents of the 150 recently completed homes at Barleyfields, Ashchurch, undertook 90 car journeys on the A46 towards Tewkesbury on a weekday morning, between 07:00 and 09:00.

The capacity of the A46 towards Tewkesbury is limited to under 950 vehicles per hour^[2] constrained by the single carriageway design of the Ashchurch rail bridge and the adjacent residential developments.

There are already approvals to develop 1640 homes west of the railway line, in and around Fiddington. Many of the remaining 8360 Garden Community homes are destined to be built in the vicinity of Ashchurch and Pamington. To date, land with capacity for around 8500 homes has been identified in the areas of the proposed Aston-Fields and Seven Bends Garden Communities.

If the residents of these new homes were to demonstrate similar travel patterns to the Barleyfields residents, additional road infrastructure, with capacity approaching 3 times that of the current A46, would be required^[3] to link the new homes to the M5; employment in Ashchurch, Northway, Newtown and Tewkesbury and beyond; and the shops and other amenities provided by Tewkesbury.

^[1] Appendix para 1

^[2] Appendix para 2

^[3] Appendix para 4

Last year, it was announced that there is unlikely to be funding to deliver a bypass for the A46, from Teddington Hands to the M5, before 2036. Currently, during the morning and evening peak travel periods, the A46 operates at around 90% of capacity^[4]. Without a bypass to carry the A46 traffic from the midlands to the M5, in conjunction with new roads to carry local traffic from existing and proposed new homes towards Tewkesbury and beyond, Ashchurch would soon be gridlocked for much of the working day.

Government guidance on proposals for creating garden communities stresses the importance of demonstrating that they support economic growth and include provision for the timely delivery of necessary infrastructure. It also emphasises the importance of communities being built on a sustainable scale – with infrastructure to allow the communities to function self-sufficiently on a day-to-day basis - with capacity for future growth to meet the evolving housing and economic needs of the local area.

It should be clear from the above, that the provision of the A46 bypass is key to the successful delivery of the Tewkesbury Garden Communities programme. Gloucestershire County Council expects to consult on the routing of the proposed bypass this summer. Tewkesbury Borough Council should seize this opportunity to work with Gloucestershire County Council on the routing of the bypass and then plan the locations of new business opportunities with adequate access to the bypass and essential connectivity to the new homes.

Tewkesbury Borough Council should not be contemplating approving building this number of new homes without first addressing the issues of exactly where employment, education, medical and other key facilities will be located, and planning for and working with partners to deliver travel links with adequate capacity.

The current situation, whereby planning permission can be granted for residential development without supporting infrastructure being in place, must not be allowed to continue.

These are not just my concerns. Since the beginning of December 2023, a petition to this effect has been viewed some 5000 times and over 350 people have put their names to it (<https://www.change.org/p/help-save-ashchurch-from-gridlock>).

^[4] Appendix para 3

Appendix

1. Residents of the recently completed 150 homes at Barleyfields, Ashchurch, undertook 90 car journeys on the A46 towards Tewkesbury on a weekday morning, between 07:00 and 09:00.

Prior to completion of these new homes, morning traffic from Pamington Lane towards Tewkesbury was measured as follows^[5]:

Ashchurch - Wednesday 21st May 2014

Junction: Pamington Lane/A46

Approach: Pamington Lane

TIME	Left Turn Out						Right Turn Out					
	Pedestrian	Cycles	Car	LGV	HGV/Bus	TOTAL	Pedestrian	Cycles	Car	LGV	HGV/Bus	TOTAL
0700 - 0715	0	0	1	0	0	1	0	0	0	0	0	0
0715 - 0730	0	0	2	1	0	3	0	0	0	0	0	0
0730 - 0745	0	0	2	0	0	2	0	0	0	0	0	0
0745 - 0800	0	0	2	0	0	2	0	0	1	0	0	1
Hourly Total	0	0	7	1	0	8	0	0	1	0	0	1
0800 - 0815	0	0	1	1	0	2	0	0	0	0	0	0
0815 - 0830	0	0	5	0	0	5	0	0	0	0	0	0
0830 - 0845	0	0	3	0	0	3	0	0	0	0	0	0
0845 - 0900	1	0	8	0	0	9	0	0	0	1	0	1
Hourly Total	1	0	17	1	0	19	0	0	0	1	0	1

24 cars turning left towards M5

After completion of these new homes, morning traffic from Pamington Lane towards Tewkesbury was measured as follows^[6]:

SITE: 3

DATE: 29/06/2023

LOCATION: A46 (E) / ACCESS ROAD / A46 (W)

DAY: THURSDAY

TIME	B TO A FROM ACCESS ROAD TO A46 (E)								B TO C FROM ACCESS ROAD TO A46 (W)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
07:00	1	0	0	0	0	0	0	1	11	3	0	0	0	0	0	14
07:15	0	0	0	0	0	0	0	0	7	1	0	0	0	0	0	8
07:30	0	0	0	0	0	0	0	0	13	0	0	0	0	0	1	14
07:45	1	0	0	0	0	0	0	1	15	2	0	0	0	0	2	19
H/TOT	2	0	0	0	0	0	0	2	46	6	0	0	0	0	3	55
08:00	2	0	0	0	0	0	0	2	17	0	0	0	0	0	0	17
08:15	2	1	0	0	0	0	0	3	22	0	0	0	0	0	0	22
08:30	1	0	0	0	0	0	0	1	20	0	0	0	0	0	0	20
08:45	1	1	0	0	0	0	0	2	9	0	0	0	0	1	0	10
H/TOT	6	2	0	0	0	0	0	8	68	0	0	0	0	1	0	69

114 cars turning left towards M5

114 – 24 = 90 additional cars as a result of the Barleyfields development

^[5] 14/00972/OUT Transport Assessment

^[6] <https://framptons-planning.com/projects/pamington-ashchurch/> Transport Assessment

2. The capacity of the A46 towards Tewkesbury is limited to under 950 vehicles per hour

Vehicle counts on the A46 westbound are monitored at Ashchurch as part of the Highways England WebTRIS programme^[7]. Vehicle counts and average speeds are recorded every 15 minutes. The data was analysed to identify the greatest number of vehicles in any hour with the following results for 2023 (top 10 sorted high to low).

	Total	PM Hour		10:15	10:30	10:45	11:00	11:15	11:30	11:45	12:00	12:15	12:30	12:45	13:00	13:15	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	
		Max	Qtr																												
Sat 13 May 2023 Cheltenham Pride	9803	1560	942	259	226	234	242	220	221	259	206	227	233	177	195	184	185	179	160	135	163	141	159	155	182	167	145	174	165	147	125
Thu 01 Jun 2023 Half Term	11142	2201	940	251	182	194	167	185	155	171	160	175	158	166	199	152	167	193	210	179	212	216	213	251	207	251	231	199	219	198	216
Wed 31 May 2023 Half Term	11187	2151	936	237	155	160	157	150	167	191	163	217	172	174	202	178	202	157	184	210	198	199	233	235	236	228	237	226	194	187	176
Thu 30 Mar 2023 Easter School Holiday	9474	2151	933	244	138	117	142	143	109	144	129	132	176	127	153	151	160	145	163	202	177	215	211	244	215	231	243	220	204	206	162
Wed 03 May 2023	11246	2141	933	245	179	174	200	173	150	178	172	186	185	160	162	179	169	176	207	213	206	224	233	216	227	245	224	237	183	204	148
Fri 17 Mar 2023 Gold Cup	11325	1949	930	245	209	188	203	200	175	208	194	202	190	192	192	186	201	245	217	238	230	223	222	229	202	208	179	162	183	173	168
Tue 23 May 2023	9975	2183	926	242	138	160	161	161	132	133	150	183	146	177	157	170	151	183	194	171	184	238	231	218	214	226	242	228	230	202	154
Tue 14 Feb 2023	9662	2087	923	241	148	155	137	147	150	144	157	143	169	182	141	132	159	178	170	161	181	218	198	232	210	241	240	213	212	167	156
Fri 27 Oct 2023	11670	2166	923	240	186	194	181	171	195	197	189	205	200	179	169	221	199	164	218	201	216	227	221	233	229	240	217	228	202	208	161
Wed 26 Apr 2023	10419	2163	922	238	155	155	132	118	135	158	145	135	151	165	133	159	143	168	183	206	205	211	218	209	215	234	238	235	207	198	198

Similar analysis for 2016 shows slightly higher volumes:

	Total	PM Hour		10:15	10:30	10:45	11:00	11:15	11:30	11:45	12:00	12:15	12:30	12:45	13:00	13:15	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00	18:15	
		Max	Qtr																												
Thu 17 Nov 2016	8695	1831	990	263	111	124	179	178	187	212	232	203	246	252	263	229	231	219	200	212	210	200	194	203	209	205	190	172	177	145	136
Fri 26 Aug 2016 Bank Holiday	10201	2265	982	259	158	152	151	140	147	161	169	153	156	155	159	166	183	165	169	226	232	219	238	259	253	232	227	193	186		
Wed 18 May 2016 Racing 18 May	10082	2295	981	251	107	113	134	127	128	130	146	159	164	137	150	157	137	171	182	165	212	224	225	233	230	242	244	251	244	197	205
Thu 10 Nov 2016 Racing 13 Nov	10633	2155	979	258	182	193	182	196	258	247	239	235	241	202	214	240	237	176	170	190	161	181	200	209	221	226	232	221	238	211	216
Thu 12 May 2016	10565	2195	976	255	138	165	156	156	129	164	153	167	182	172	130	151	162	163	178	196	159	214	206	209	255	245	255	221	219	190	181
Tue 27 Dec 2016	6607	2239	972	259	193	165	132	144	126	135	123	168	170	133	146	171	154	200	147	222	195	235	228	244	217	252	259	185	204	220	195
Thu 11 Aug 2016	10393	2254	970	251	150	155	132	145	139	153	138	135	144	149	138	158	153	156	149	184	172	222	222	238	248	237	234	251	213	206	183
Tue 01 Nov 2016	10402	2257	969	250	149	157	123	129	125	137	161	142	149	134	150	159	169	152	192	139	179	229	215	237	236	250	246	220	200	224	200
Mon 06 Jun 2016	10556	2215	969	256	151	146	174	166	146	165	142	156	161	126	148	173	152	190	171	233	209	245	216	238	256	226	249	209	213	154	
Thu 24 Nov 2016	12011	2220	964	251	165	162	205	202	187	184	209	203	182	201	206	210	185	219	237	229	195	226	216	226	236	246	251	231	229	177	182

The consistency of results for the 2 periods supports the validity of the methodology.

The reduction of around 40 vehicles per hour is attributed to the additional traffic signals at Fiddington Lane, and the changes at Alexander Way.

The annotated 'causes' of the peaks are subjective. The 13 May 2023 Saturday morning traffic 10:15 – 12:15 coincided with the Cheltenham Pride rally which, according to press reporting, attracted around 1000 people from across Gloucestershire. The event kicked off at 11am with the Pride Parade.

3. During the morning and evening peak travel periods, the A46 often operates at around 90% of capacity (850 vehicles per hour).

As explained above, max peak capacity during 2023 was around 940 vehicles per hour.

Figures for the week beginning 27 November 2023 (the latest available) were:

	AM Hr Max	PM Hr Max	07:00	07:15	07:30	07:45	08:00	08:15	16:15	16:30	16:45	17:00	17:15	17:30	17:45	18:00
Mon 27 Nov 2023	854	864	206	218	210	212	214	154	216	208	199	235	222	202	165	173
Tue 28 Nov 2023	859	877	229	227	214	189	188	181	194	224	191	224	238	198	203	204
Wed 29 Nov 2023	869	805	189	212	225	220	212	207	182	201	202	205	197	190	187	200
Thu 30 Nov 2023	834	876	191	211	221	206	196	181	216	211	202	243	220	201	204	156
Fri 01 Dec 2023	839	902	197	214	215	208	202	206	202	203	220	241	227	205	229	184

One should be cautious when interpreting traffic capacity as measured at a single point against potential capacity. For example, the flow at around 13:30 – 15:00 on Friday 1 December 2023 was considerably reduced.

	AM Hr Max	PM Hr Max	13:15	13:30	13:45	14:00	14:15	14:30	14:45	15:00	15:15	15:30	15:45	16:00	16:15	16:30	16:45	17:00
Fri 01 Dec 2023	839	902	191	161	166	176	156	151	158	174	171	186	179	221	202	203	220	241

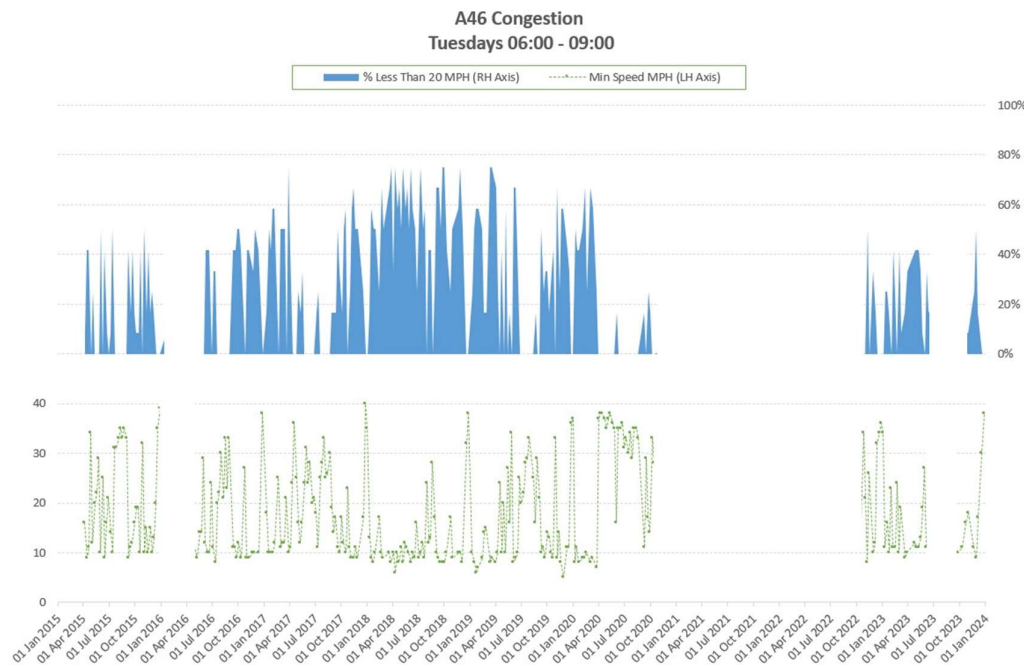
^[7] <https://webtris.highwaysengland.co.uk>

Report Date	Time Period	Avg mph
01/12/2023 00:00	13:14:00	21
01/12/2023 00:00	13:29:00	12
01/12/2023 00:00	13:44:00	12
01/12/2023 00:00	13:59:00	11
01/12/2023 00:00	14:14:00	12
01/12/2023 00:00	14:29:00	12
01/12/2023 00:00	14:44:00	10
01/12/2023 00:00	14:59:00	9
01/12/2023 00:00	15:14:00	12
01/12/2023 00:00	15:29:00	10
01/12/2023 00:00	15:44:00	10
01/12/2023 00:00	15:59:00	16
01/12/2023 00:00	16:14:00	19
01/12/2023 00:00	16:29:00	25
01/12/2023 00:00	16:44:00	27
01/12/2023 00:00	16:59:00	33

However, when traffic speeds are included in the assessment, it becomes clear that other factors were involved.

In this case it is perhaps employees in the vicinity of Alexander Way finishing work from around 13:30 on Fridays, causing traffic to back-up to Aston Cross.

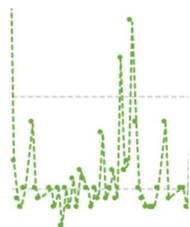
The following graphs attempt to portray when traffic flow has been significantly reduced from the theoretical capacity. The data represents the minimum average speed over 15-minute periods on Tuesday mornings, between 06:00 - 09:00, 2015 – 2024.



The data is incomplete (particularly during the period of the COVID19 pandemic).

The top graph represents the proportion of samples for the morning peak periods where the average speed was less than 20 MPH (RH scale).

The lower graph shows the minimum 15-minute average speeds during the morning peak periods.



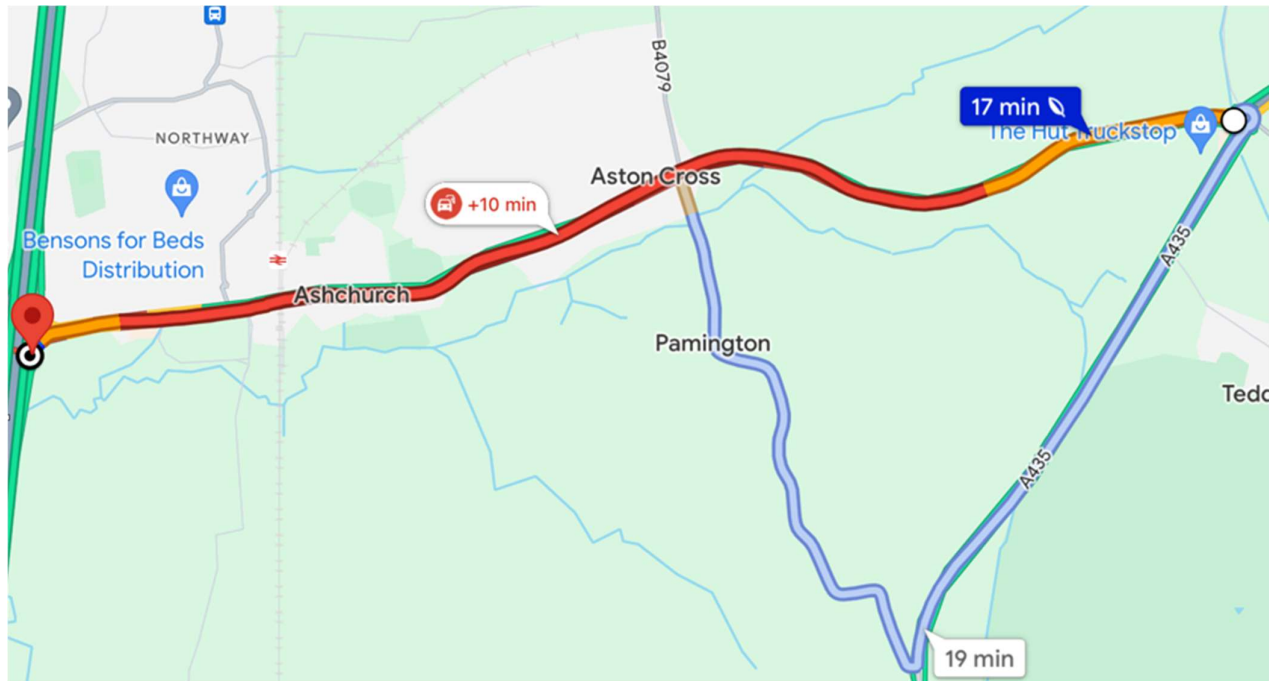
Of particular note is the number of samples around 10 MPH.

Significantly, the situation appears to have been worst during much of the period between January 2018 and January 2019 (the 2 peaks are 31 July and 21 August), with the vast majority of samples being around 10 MPH.



The monitoring is of westbound traffic between Aston Cross and Pamington Lane.

As is often the case during the morning peak period, Google traffic data showed that on 10 January 2024 at 08:00, there was 10 mins queuing traffic between Aston Cross and the M5.



4. If the residents of these new homes were to demonstrate similar travel patterns to the Barleyfields residents, additional road infrastructure, with capacity approaching 3 times that of the current A46, would be required.

Traffic from 150 Barleyfields homes	90 journeys
Traffic from 8000 homes	$8000 / 150 * 90 = 4800$ journeys
Max capacity of A46 per 2 hours	$850 * 2 = 1700$ journeys
Scaling Factor	$4800 / 1700 = 2.8$