

PRG Report response to DC Highways report PTE_14_71 dated 22 October 2014

Flow statistics - Pilton Bridge Junction

In Fig 2 of the DC Highways report identifies the busiest time of day for the Pilton Bridge Junction as 16.00 - 17.00 hours and the busiest leg as being the Southbound direction approaching from the Hospital.



Figure 2 – Traffic volume around PM peak southbound on North Road, Barnstaple

Traffic count data provided in 2013 - 56396 (Devonshire Homes) Traffic Count Data Transport Statement Appendix C shows this to be the case. See the table below.

2013 - 56396 (Devonshire Homes) Traffic Count Data Transport Statement Appendix C

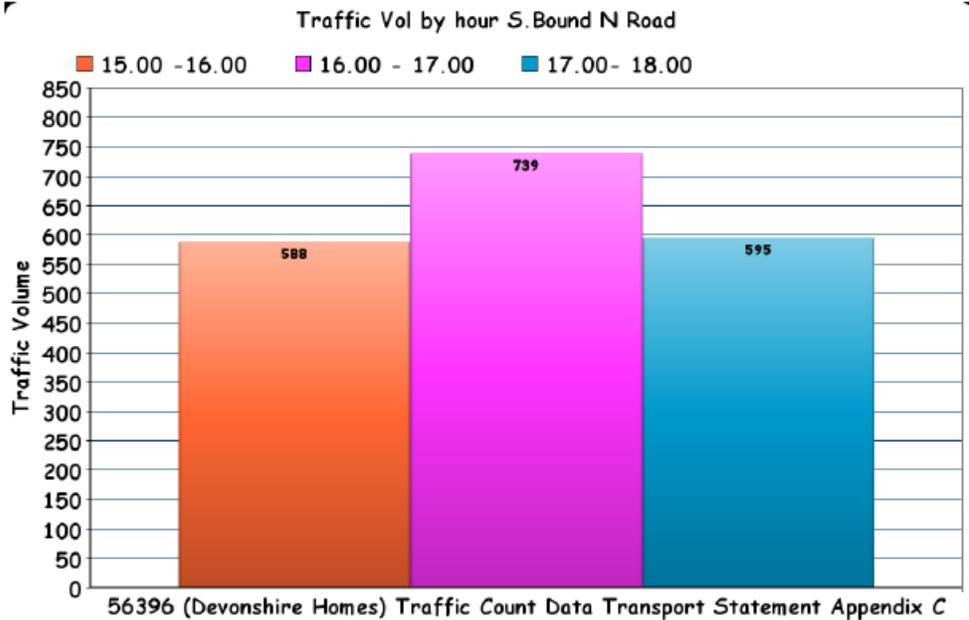
Junction: J2 : A39 (North Arm)/Hospital Access/A39 (South Arm)/Westaway Plain
 Arm: A39 (South Arm)
 Direction: Exiting Junction

Time	PC	MC	CAR	LGV	OGV1	OGV2	PSV	Total
07:00	1	0	35	10	0	0	0	46
07:15	1	0	64	7	3	0	1	76
07:30	0	0	98	25	3	0	1	127
07:45	0	1	115	23	2	0	1	142
08:00	1	1	109	15	2	0	1	129
08:15	0	1	126	18	2	0	1	148
08:30	0	2	106	18	2	0	1	129
08:45	0	1	119	21	0	0	2	143
09:00	0	1	88	18	2	0	3	112
09:15	0	1	90	17	2	0	0	110
09:30	0	0	93	9	4	0	2	108
09:45	0	1	93	14	2	0	3	113
10:00	0	0	94	12	6	1	1	114
10:15	0	0	102	14	4	0	0	120
10:30	0	0	98	18	2	0	1	119
10:45	0	0	114	15	4	1	2	136
11:00	0	0	101	9	3	1	2	116
11:15	0	1	97	8	7	2	0	115
11:30	0	1	97	8	3	0	2	111
11:45	1	0	108	12	3	0	1	125
12:00	1	0	101	12	4	0	1	119
12:15	2	0	107	11	1	0	0	121
12:30	0	2	116	18	2	0	2	140
12:45	0	0	118	14	2	0	1	135
13:00	1	0	97	12	3	0	3	116
13:15	0	1	80	14	5	1	0	101
13:30	0	0	94	13	4	0	2	113
13:45	0	1	91	8	6	0	1	107
14:00	0	0	78	10	4	0	1	93
14:15	1	0	83	14	4	0	0	102
14:30	0	0	129	19	1	0	2	151
14:45	0	0	114	15	1	0	1	131
15:00	0	0	115	9	3	1	3	131
15:15	0	1	108	15	4	0	1	129
15:30	0	0	109	6	1	1	2	119
15:45	1	3	132	21	3	0	1	161
16:00	0	1	164	13	0	0	1	179
16:15	0	1	147	14	3	0	1	166
16:30	2	1	176	8	4	0	2	193
16:45	0	2	157	16	1	1	2	179
17:00	1	1	180	17	0	0	2	201
17:15	0	0	155	15	0	1	3	174
17:30	0	2	140	13	2	0	1	158
17:45	1	1	118	14	2	0	1	137
18:00	1	2	111	8	3	0	1	126
18:15	0	0	78	17	3	0	0	98
18:30	1	3	79	4	2	0	1	90
18:45	1	0	73	6	1	0	1	82
	17	33	5197	647	125	10	62	6091
Total	17	33	5197	647	125	10	62	6091

However, depending on how the 15 min interval counts are grouped, the worst case one hour period scenario for 'existing flow' (baseline 2013) could be as high as 739 vehicles.

This is significantly higher than is specified in Fig 2 of the report.

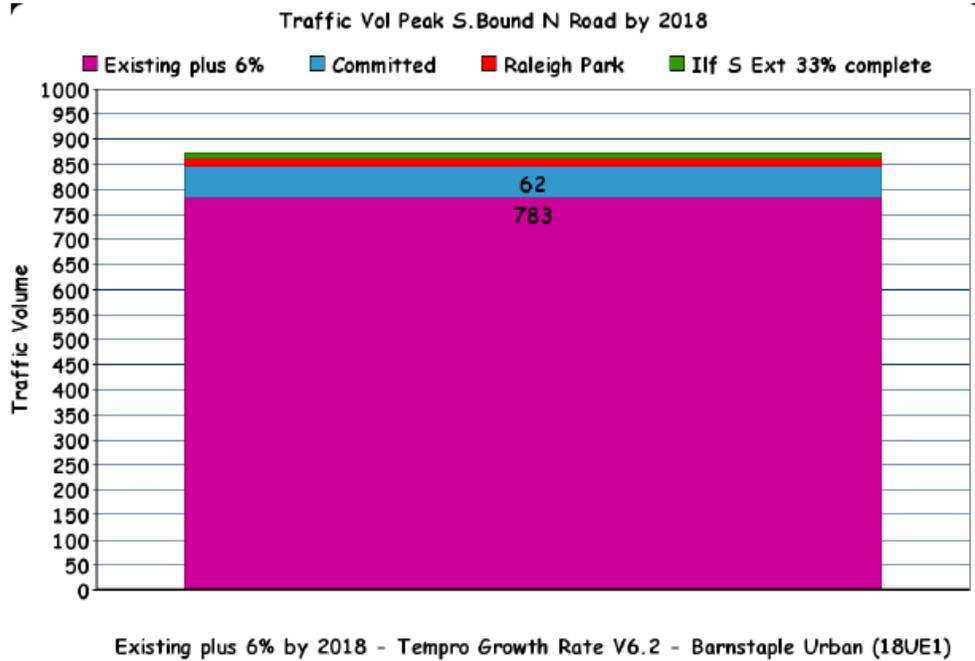
The chart below (2014) shows the numbers for existing flow using the above traffic count data.



The next chart (2018) shows the increased flow predicted for 2018 and takes into account the Tempo Growth Rates over 5 years (see Tempo Growth Rate chart extracted from the Devonshire Homes Transport Assessment Report Part 1 below) together with the additional flow created by proposed Pilton Development and including the approved hospital development along with Raleigh Park and the then partially completed Ilfracombe Southern Extension.

DC highways say in their report that the combined Pilton development will result in an additional 80 vehicles traveling south bound on North Road at p.m. peak.

We are in broad agreement with their calculations using the Trip Rate Model shown in the same Devonshire Homes assessment and factoring in all proposed developments.



TEMPRO growth Rates (Version 6.2) Barnstaple Urban 18UE1 2013 -2018
Extracted from Westway Plain Traffic Impact Assessment Report - Part 1 2013



Westaway Plain / A39 North Road / Hospital Access junction. The distribution of development traffic from the Devonshire Homes development site at these locations has been defined by aggregating the distributions for each highway corridor contained in Appendix I. The results of this exercise are shown on Figure 5.1.

Traffic Impact Assessment – Site Access Junction

- 5.14. The traffic impact assessment has been completed for the year of submission of the planning application and a 5 year future horizon. It therefore considers the following scenarios:
 - 2013 base plus development AM and PM peak; and
 - 2018 base plus development AM and PM peak.
- 5.15. The AM peak (07:45-08:45) and PM peak (16:30-17:30) periods have been established from the existing traffic survey and scoping discussions the DCC.
- 5.16. In order to establish baseline traffic conditions at 2018, TEMPRO growth rates for Barnstaple have been applied to the 2013 MTC peak hour survey. These rates are summarised in Table 5.3:

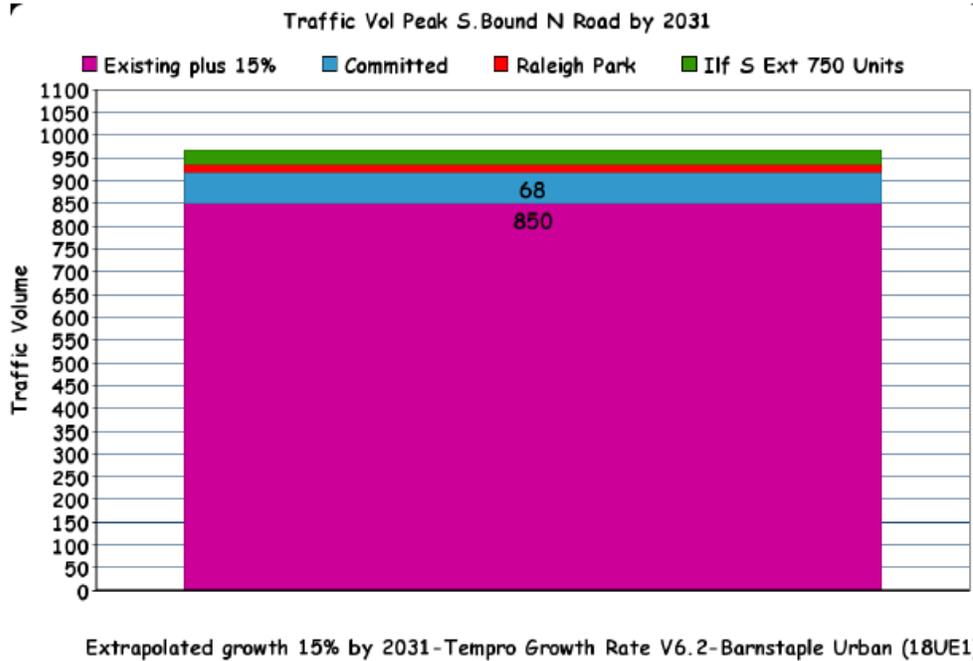
Table 5.3: TEMPRO Growth Rates (version 6.2) – Barnstaple Urban (18UE1)

	AM Peak	PM Peak
2013-2018	1.0573	1.0605

- 5.17. The assigned development traffic flows are shown on Figure 5.2 (contained in Appendix A of this report). This confirms the number of two-way additional trips travelling to/from the east of the site and therefore using the A39 junction is limited to 25 in the AM peak and 23 in the PM peak.
- 5.18. The 2013 and 2018 baseline plus development traffic flows used in the capacity analysis of the site access junction are shown on Figures 5.3 and 5.4 in Appendix A.
- 5.19. In order to assess the suitability of the design for the site access junction, a capacity model has been constructed and tested using PICADY software. This model takes the form of a standard

The final chart (2031) shows the predicted flow by 2031 and takes into account a further extrapolated 10% growth over the next 13 years. This only factors in the currently approved 750 dwellings for the Ilfracombe Southern extension.

This component doubles if all of the proposed 1400 dwellings in the N.D. and T. Draft Local Plan are approved taking the total to approximately 1000 vehicles during this one hour period.



The Trip Rate Model extracted from the Devonshire Homes Transport Assessment Report is shown below.

Trip Rate Model for Westaway Plain extracted from Transport Assessment Report- Part 1

Table 5.2: Vehicle Trip Rates

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	Arr.	Dep.	Total	Arr.	Dep.	Total
Vehicle Trip Rates (per dwelling)	0.129	0.496	0.625	0.370	0.207	0.577
Vehicle Trip Generation (43 units)	6	21	27	16	9	25

Trip Distribution

- 5.9. The distribution of development traffic associated with the site has been established with reference to Travel to Work flow data from the 2001 Census (the most recent available) for the Pilton ward which encompasses the existing residential areas of Barnstaple adjacent to BAR05.
- 5.10. Although the Devonshire Homes site is located within the adjacent Marwood Ward, as it is included within the BAR05 allocation (which spans the boundary of Pilton Ward and Marwood Ward) it is considered appropriate to use data for the Pilton Ward in the assessment as the travel patterns for the adjacent residential areas are likely to be more representative than those for Marwood Ward which predominantly comprises rural hinterland.
- 5.11. Data was extracted from the 2001 Census for journeys to work with Pilton Ward as the origin with the destination set at the Ward level within the North Devon District and at Local Authority level for those travelling to work beyond North Devon.
- 5.12. The resultant trips were then combined and distributed to the various highway corridors leading out of Barnstaple, attributing the trip to the most likely route where a number of routes could be used. The results of this exercise are contained in Appendix I of this report.
- 5.13. The scope of the traffic impact assessment has been agreed with Devon County Council through the initial pre-application consultation stage. This includes the site access junction and the

We must conclude that the figures produced in report PTE_14/71 do not portray an accurate picture of current traffic flow for this 'at capacity' junction and certainly do not take into account the impact of the Ilfracombe Southern Extension and accepted growth factors.

Spare Capacity

Paragraph 3.8 of PTE_14/71 states;

- 3.8 Some queuing and delay, particularly at peak times is to be expected, but there is spare capacity either side of the peak hour to accommodate an increase in car trips outside of peak times if required. Such additional traffic impacting on Pilton Bridge Junction does not cause a severe concern considering its location within an urban area. As part of a plan to improve the operation of the junction it is proposed to incorporate a new signal control system (MOVA). This will assist in reducing queue lengths and congestion. The impact of queuing and delay to vehicles as a consequence of the development is not considered so large as to justify recommending its refusal.
- 3.9 The likelihood that additional vehicles can be accommodated in the peak hour, and the possibility of peak spreading, leads to the conclusion that even when considering all of the development in the area, the cumulative impact is not severe.
- 4.1 To aid pedestrians crossing the A39 at the Pilton Bridge Junction, this development is requested to pay towards adding improved pedestrian facilities in the form of a formal push-button crossing. The current crossing facilities are simply a dropped kerb crossing, but not controlled at the push of button or with indicators for when it is safe for pedestrians to cross.

These statements would appear to be fanciful and hardly rooted in reality.

The proposed spreading of the peak load to encompass the hours either side may work in theory, but many road users do not have the flexibility to alter times at which they need to travel.

Further more, our chart 2014 shows that the hours either side of peak are also rapidly reaching capacity at this junction.

The proposed intelligent MOVA control technology may reduce the worst case queue lengths to a minor extent, but when combined with the proposed 'pedestrian controlled crossing' at Pilton Bridge any advantage will then be lost.

This will also result in their being two pedestrian controlled crossings either side of the junction.

Barnstaple Fire Station.

- 4.5 Barnstaple Fire Station is located in close proximity to the Pilton Bridge Junction on the North Road Arm and fire engines have to travel through the junction regularly to attend incidences in Barnstaple and beyond. The Fire Station has a 'green wave' facility by which at the press of a button a fire engine going through the junction would receive green traffic signals at the detriment to other users of the junction. This is considered an acceptable measure to enable fire engines to access emergencies and the result of additional traffic in the area is unlikely to adversely affect the response time of fire engines.
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Paragraph 4.5 of PTE_14/71 states that Fire Station blue light responses will not be jeopardised by any increased congestion at Pilton Bridge because they have a 'green wave' facility.

We assume that this is not the case for other blue light response vehicles such as Police and Ambulance, so this fails to solve the underlying problem of a heavily congested junction.

We also fail to understand how controlling signals at a junction that is grid locked with all entries and exits blocked will help an emergency vehicle get through?

Access to the site

Paragraph 4.2 of PTE_14/71 discusses access to the site.

- 4.2 The access to the site from the A39 is in the form of a ghost island junction which has a right turn lane in the middle of traffic passing on either side. This is a standard form of junction that is acceptable on urban and rural roads across the country. There will be enough room for 8 cars to wait in the central right turn lane, more than is required to serve 105 dwellings. Visibility provided is 90m forward visibility for through traffic and 120m in both directions from 9m behind the carriageway edge on the new access arm, the requirement for visibility for new accesses on a road with this speed limit is 90m.

The applicants Transport Assessment Report contains a risk assessment which identifies numerous hazards associated with the proposed exit and entry to this site.

You will see that the road safety audit listed a number of safety concerns ranging from 'risk for pedestrians' to 'risks of vehicle strikes/shunts' for which it proposed certain recommendations.

We fail to understand how some of these recommendations can be implemented and made to work safely in what is currently a 40 mph limit.

In the application under the heading of Development Proposals Para 4.2 it states that the DCC were consulted in the early stages of the design and that they agreed that there were no geometric issues with the junction layout.

Further more, DCC Highways in their response appear to be have been quite content with the junction design. In their consultation response, DC Highways includes a paragraph relating to the junction proposal and appears to support the proposed arrangement conditional on some final details being agreed.

See the application Transport Assessment A appendix 3-6A 140611 for reference.

This access arrangement, if accepted, will increase the risk of collision on a fast bend with limited forward visibility.

We trust that the contents of this response will be considered by the Development Management Committee before a decision is taken on any recommendation.

Sincerely,

Geoff Pugsley
Pilton Residents Group