

Baldock Expansion Committee – BPC Comments on the Transport Plan and associated Modelling Work

1. Introduction

To support its application to North Herts Council (NHC) for the development of c3,000 houses, commercial units and associated infrastructure on land surrounding Baldock, Urban and Civic and its advisers (referred to collectively in this note as U&C) have submitted a Transport Assessment. The Transport Assessment (TA) sets out proposed changes to road layouts and public transport provision, along with forecasts of future traffic flows.

Bygrave Parish Council (BPC) have reviewed the TA and have serious concerns regarding both the approach taken and the assumptions adopted for the modelling work. We believe that the TA does not give a realistic nor complete forecast of future traffic flow in and around Baldock and, in particular, does not reflect the **material adverse impact that the development, as proposed, would have on Bygrave villagers.**

We set out below our assessment of the adverse impact of the proposals on people living in Bygrave followed by our comments on the modelling work and its results.

2. Impact of the transport plans on people living in Bygrave (Upper and Lower villages)

We have seen no evidence of any consideration being given to the impact of the development and associated transport changes on people living in Bygrave, despite responses to earlier consultation exercises setting out villagers' concerns and contrary to planning requirements.

Our key concerns are set out below.

Material increase in traffic volumes through Bygrave

There would be a material increase in traffic through the village.

There would be significant traffic from the new houses, particularly those on BA1. There would also be a significant increase in traffic from Ashwell and surrounding villages. Currently, people living in these villages access the A505 by using the junctions at Slip End or Odsey; both of which are extremely dangerous junctions (with no slip roads) onto fast flowing, dual carriageways. There have been numerous accidents, so people are, understandably, nervous about using these junctions and would be expected, instead, to use the proposed new link from Ashwell Road to access the A505. This would **create a rat run through Bygrave.**

Journey times between Bygrave and Baldock would increase materially (time and distance)

Currently, Bygrave villagers access the railway station, shops and businesses in Baldock by traveling along Ashwell Road leading to Bygrave road and then turning left onto Station Road. This is currently a very quick journey taking around 6 minutes to the railway station from Upper Bygrave and 4 minutes from Lower Bygrave. The journey is quick as it's along a quiet country lane with varying speed limits of 30 mph, 40 mph and 60 mph and there is very little waiting time to join Station Road. (Although the traffic is very frequently backed up on Station Road past the junction with Bygrave Road (the Baldock "bottleneck"), most drivers on Station Road let people into the traffic queue.)

From 2033 onwards, accessing Baldock via Station Road will be via the access road through the new development (a low speed road) onto North Road. We would join North Road at a more northerly point and thereby have to queue for longer in the Baldock "bottleneck". As a consequence, **the journey will be materially longer both in terms of time and distance** than the current journey.

Bygrave villagers wishing to travel to Baldock railway station would need to undertake this longer journey, as they would be unable to go via Royston Road, as there would be no right turn permitted from Royston Road to Station Road at the Baldock junction. The reality is that if journeys into Baldock are slow and inconvenient, many Bygrave (and Ashwell) villagers would stop visiting Baldock and instead drive to other nearby towns (eg Stevenage for train travel) which would have a detrimental impact on Baldock businesses and create more pollution and more road congestion in other parts of the county.

In the years from 2028 to 2033 (before the access road and bridge over the railway are to be built) the route into Baldock for Bygrave villagers would be as currently but journey times would be longer, as a one-way shuttle system is to be put in place in 2028 which would reduce the flow of traffic through the Whitehorse Street junction.

Journey times would also be adversely impacted by construction traffic.

No mitigation

No mitigation has been proposed to offset the material adverse impact of the proposed transport plans.

It is also not proposed to include either the Lower or Upper parts of Bygrave on the shuttle bus route. Upper Bygrave residents wishing to use the shuttle bus would need to walk over a mile along an unlit, country lane with no pavement (with increased traffic, as noted above). Even for people living in Lower Bygrave, the walk would be up to half a mile, significantly more the 400 m limit set for people who will live on BA1.

This is another example of no consideration being given to Bygrave villagers with the clear focus being on the people who will live in the new housing. Whilst inclusion on the shuttle bus route would not eradicate the adverse impact of the development on Bygrave village, it would be well received by some villagers (particularly the less mobile – young and old) and help to meet NHC's vision for quality of life which hopefully extends to people living in Bygrave.

3. Choice of model

We understand that the modelling work has been undertaken using a spreadsheet and we assume, therefore, that this is a simplistic, deterministic model (whereby all assumptions, or parameters, are borne out in practice). We do not consider that this is appropriate for such a critical assessment of the suitability and robustness of the proposed traffic plans. We are firmly of the belief that a sophisticated, stochastic model (which allows for random variance in one or more parameters over time and realistic correlation between parameters) should be used.

Use of a stochastic model would avoid the dangerous and inappropriate focus on averages which inevitably happens when a deterministic model is used.

Use of a stochastic model enables the results to be presented showing the “best estimate” along with potential variation around this eg 5th, 25th, 75th and 95th percentile results, often described as a “funnel of doubt”. This would show how good and how bad things might be, which is what local residents are concerned about.

4. Links chosen for assessment

The links (ie stretches of road) identified for detailed modelling work have been determined by U&C but we have identified a further two links that we believe should have been included in the assessment, namely:

- Ashwell Road (from the junction with the new access road to Claybush Road running into Ashwell)

- The junction of the A505 from the new access road

Ashwell Road

People living in Bygrave must use Ashwell Road for all journeys, so traffic volumes on that road have a critical impact on ease of movement but they also impact on residential amenity (many of the houses are set very close to the road) and on road safety (this is a narrow, country lane with a number of blind bends).

We estimate that the proposed transport plan would result in an increase in traffic along Ashwell Road way in excess of the 30% threshold under the European Assessment of Traffic and Movement (EATM) Rule 1 for requiring assessment of the impact of the increased traffic. Supporting data is set out in the appendix.

The junction of the A505 with the new access road

The stretch of the A505 from Baldock towards Royston has a number of notorious collision blackspots but no consideration has been given to the impact of increasing traffic volumes on the road, even though U&C has identified that the A505 is the only major road in North Hertfordshire which has higher traffic volumes now than before COVID. We believe that this link meets the 10% threshold (for highway links of high sensitivity) under EATM Rule 2 for requiring assessment of the impact of the increased traffic.

5. Dates of assessment

The modelling work looks at the traffic position at three distinct dates: current date, 2033 (peak time for construction work) and 2040 (when the development is expected to be complete). This might be reasonable if the position at intermediate dates could be estimated by interpolation but this is not possible. This would only be possible if there were linear progression between the position now and the position in 2033 (and between the position in 2033 and the position in 2040) but this is not the case.

We believe that the traffic flow should be forecast over the entire period of construction and not just at discrete points in time which give a very misleading picture.

6. Baseline data

It is essential that the data used to denote the baseline conditions (ie conditions that apply now) is full, complete and accurate. If that is not the case, the results of the modelling work will be misleading and, therefore, should be disregarded.

We believe that some of the data used in the TA and in the modelling work is inaccurate. Below are some examples of this.

Usage of Baldock railway station car park – data not representative

The Baldock Transport Survey Data Analysis concludes that there is significant spare capacity in the Baldock railway station car park and that the car park "... is not heavily used by commuters ...". This is simply not true. Actual, lived experience is that the station car park is usually full by 9.30 am latest on weekdays (except Friday when commuting levels are typically lower).

The data used by U&C to support its claim over low usage is fundamentally flawed. The week day chosen to measure mid-week usage was 21 July 2022 but usage on that day was not representative of normal usage, as:

- It was immediately preceded by the two hottest days on record in the UK with temperatures recorded locally of c 40° C. This led to major disruption to rail travel which, along with the

risk to health of travelling in these temperatures and suboptimal working conditions, resulted in many people working from home (often on instruction by their employer).

- Working from home patterns were still significantly distorted by COVID and above levels currently being experienced.
- The date was in the peak holiday period, so the number of commuters would, all other things being equal, be below average for the year. The impact of this was amplified by the heatwave which would have resulted in people taking unplanned leave.

Data on queue lengths at junctions

Figure 3.16 of Appendix 4.1 to the Environmental Statement Chapter 4 Transport document states that at peak times (AM and PM) queues along Station Road to the junction with Whitehorse Street average between 30 m and 90 m. This is incorrect. At peak times (and other times throughout the day), traffic backs up from the Whitehorse Street junction past the Bygrave Road junction, a distance of over 300 m. If the traffic queues were as short as U&C claim, there would be no need for the yellow box at the junction with Bygrave Road and by the entrance to the railway station.

7. Assumptions adopted

Rather than making assumptions about future traffic flow based on credible experience, the modelling is based on aspirations regarding future trips. These aspirations include a 30% reduction in journeys along North Road and a significant travel mode shift away from private vehicle use to active travel and use of public transport. There is little evidence provided to support these aspirations but the modelling results are highly sensitive to these assumptions.

The case study provided to demonstrate successful mode shift is not directly relevant to this development. It relates to commuter journeys to and from an industrial/commercial site. It is a very different proposition to achieving mode shift for a largely residential development. It would have been helpful if a directly relevant case study had been included, assuming that one does exist.

8. Results of the modelling work

As stated above, the modelling work undertaken on behalf of U&C is not sufficiently robust and produces results which understate the likely traffic flows both during construction and post construction. Even then, the modelling work reveals some unresolved traffic flow issues which would have major impacts for Baldock, Bygrave and other outlying villages.

The forecast traffic flows post construction are set out in Appendix 4.6 to the Environmental Statement Chapter 4 Transport. These have been presented in a wholly misleading way for traffic along North Road and Station Road. Whilst the traffic volumes are forecast to decrease, the rate of traffic flow through the lights at the junction of Station Road and Whitehorse Street (where virtually all of the traffic on this stretch of road will go) would be at most half the current (baseline) rate, as there would be a one-way shuttle system in operation along Station Road. The rate at which traffic flows through the network is of paramount importance and the results, as presented, do not show this.

Appendix 4.6 shows a significant decrease in traffic volumes along North Road (c40% in all vehicles and c60% in heavy duty vehicles), as a result of the proposed development and associated transport plan. However, the traffic volumes on the A1(M) North of Junction 10 are forecast to increase. It would appear that the assumption of lower traffic along North Road is largely predicated on the assumption that a significant volume of existing traffic will bypass Baldock and not leave/join the A1(M) at Junction 10. If this assumption were not borne out in practice, there would be severe congestion on North Road.

We also note that the forecast figures are annual, daily averages; the results at specific times of the day and days of the week or year are likely to be materially different to the average.

Paragraph 4.5.61 of the Environmental Statement Chapter 4 Transport states that Link 17 (B656 – Whitehorse Street) could experience a “worst-case” increase in traffic volumes of up to 30.5% within Option 2. We believe this statement to be untrue. From the table, it would appear that this is not the “worst-case” but simply the projected annual daily traffic volume under Option 2 assuming that all of U&C’s (optimistic/unrealistic) assumptions are borne out in practice. In any event, no solution has been proposed to mitigate this.

The TA refers to the EATM suggestion that changes in traffic flow of 30%, 60% and 90% are regarded as producing ‘slight’, ‘moderate’ and ‘substantial’ changes in severance respectively. These indicators are based on historical requirements of the Department for Transport and established through planning case law. However, in the TA, these indicators have been “adjusted” and the following ranges applied in analysing the results: less than 30% is deemed negligible; 30%-60%: small; 60%-90%: moderate; and greater than 90%: large. We believe that the “categorisation” of the mid-point of each range of results should be consistent with the categorisation set out in the EATM, eg the mid-point of the range described as moderate should be 60%, not 75% as used in the TA. We suggest that the following ranges and categorisations would be consistent with the EATM: less than 15% negligible; 15%-45% small; 45%-75% moderate and over 75% large.

Traffic volumes along North Road

We are highly sceptical that traffic volumes along North Road would reduce as projected by U&C. Removing the bottleneck at the junction of Station Road and Whitehorse Street is critical to the success of the transport plan. Using highly dubious, aspirational assumptions to prove the plan will work is inappropriate and potentially very damaging for the long-term success of Baldock.

The Monitor and Manage Framework does not identify any actions which could be taken to address the current material levels of congestion. Most of the potential actions would have negligible positive affect on the flow of traffic and the proposals to introduce a one-way directional flow system for traffic along Station Road would make things worse.

Further consultation required

We understand that HCC will be carrying out its own modelling work, hopefully using reliable data, realistic assumptions and a sophisticated (stochastic) model.

The Transport Assessment is critical to assessing the suitability of this proposed development and, therefore, we request that once HCC has carried out its modelling work, the results are published and consultation undertaken.

Bygrave Parish Council
28 November 2025

Appendix

Traffic volumes on Ashwell Road north of Upper Bygrave were measured in conjunction with the application for a solar plant adjacent to Upper Bygrave. The study showed a daily average on 738 vehicles over a 7-day period with 403 travelling northwards and 335 travelling southwards. With just 30 homes between the measurement point and the start of Lower Bygrave, 738 can be used as the current assumption for the typical number of vehicles to be expected on the stretch of Ashwell Road from the A505 junction to Claybush Road. We have been informed by U&C that its modelling work shows that there would be an additional 250 vehicles daily on this stretch of road emanating from development BA1; ie an increase of 33.9%. We believe that the number would be considerably higher as this likely understates the number of people in the new houses using this stretch of road for commuting purposes and makes no allowance for:

- people using the road for other purposes such as visiting businesses and homes in Ashwell and beyond;
- people taking children to school in Ashwell;
- traffic coming off North Road via BA1;
- the increase in people from Ashwell and surrounding villages using this road to access the A505 and creating a rat run through Bygrave (Upper and Lower villages). This will happen because the alternative junctions at Slip End and Odsey are both very dangerous.