**Objection to planning application 17/4034M** 14/11/17

Henbury Parish Council notes that this application is for access only. We assume that, if the present application is approved, the details of the proposed development would be the subject of further applications. **We would be grateful for confirmation of this.**

The following comments and objections are based on the wider scale aspects of the proposal, such as adequacy of infrastructure and roads and the impact on air quality in the local area. We remark particularly that the proposed development is in an area of special interest to Henbury, since the designation of the site for building has seriously reduced the Green Belt between Macclesfield and Henbury, and encroaches on the Cock Wood SBI. We also note that an application 17/4277M has been made for development on the adjacent site LPS 18. The issues we address also apply to that site, and the two should be considered together for the main issues of infrastructure and traffic.

We are also concerned that the two applications do not cover the whole of sites CS40 and CS41. Based on land area, the combined development of the full sites could increase the housing count by 37% and no account is taken of this. There should therefore be a clear statement of policy for the use of the remaining areas, which will inevitably make further similar demands for infrastructure**. It must be the responsibility of CEC to assess the infrastructure requirements of the whole of the planned building areas, and to specify what is needed and how it will be funded.**

We now set out our objections specific to application 17/4034M.

**Objection: Traffic.** The application states: *Traffic flows freely along Chelford Road past the site during peak and off peak period*s (Para 2.10) and *At the Broken Cross roundabout observations indicate that some queuing occurs at times during peak periods but this is relatively limited and generally the junction operates within capacity* (Para 2.11). These statements are not the experience of local residents, who frequently report long queues at Broken Cross, regularly reaching back on the A537 to Henbury. A report commissioned by the Parish Council (submitted to ref 17/4277M) shows that the traffic volume at Broken Cross is near critical already, with queue lengths far greater than those shown in table 7.2. That table, for example, predicts queue lengths of 7 vehicles on Gawsworth Road in 2022 without considering development, while the survey undertaken for Henbury Parish Council shows that measured queue lengths are already many times this, with a combined queue of Gawsworth Road/Princes Way/Pexhill Road reaching 100 cars in the peak hour and exceeding 50 cars for a full one-hour period. The transport assessment gives no detail on actual measured queue lengths, and offers no statement on the method used to validate the modelling, or indeed whether validation has been done. As such there is no evidence produced that would give confidence in the modelling results. There has been no study of the traffic flow, including the effect on minor roads, of adding 232 houses, with the prospect of a further 135 or more on LPS 18 (formerly CS41) and additional houses expected on the additional areas of LPS16/18 not covered by applications 17/4277M and 17/4034M.

Based on the survey commissioned, a transport analysis has been undertaken for Henbury Parish Council by DTPC and their report is also submitted. The report describes the shortcomings of the modelling process in the application 17/4034M and highlights the fact that the Ratio of Flow to Capacity (RFC) values and predicted queue lengths completely under-estimate the actual situation encountered at the Broken Cross roundabout. By producing, and then using a validated model for

the roundabout, the DTPC analysis indicates heavy congestion and delay; for the predicted 2022 traffic levels 'with development' submitted in the application, delays of 421s in the morning along Gawsworth Road and 262s along Chelford Road are predicted. These are not dissimilar to queueing levels already encountered today and hence are considered realistic.

No effective mitigation for increased transport congestion in the local area resulting from the development has been provided in the application.

The 17/4034M transport assessment Section 8.13 considers other developments that may impact the Chelford Road access, and an assumption is made that traffic heading east from LPS18 would use Whirley Road and therefore bypass the LPS16 access. This is not the case as the majority of the planned properties on the LPS18 proposal have no access to Whirley Road. In fact, Henbury Parish Council have recently been informed that there may be NO access to LPS18 from Whirley Road. Furthermore, ongoing housing developments close to the TA centre in Macclesfield, a short distance to the east, and the planned King's School development to the north, will have an impact on traffic flows across Broken Cross and should be considered as a whole. **It must be the responsibility of CEC to survey the present traffic levels in the vicinity of Broken Cross and Henbury, and to assess the effect of the further traffic that would be generated by the development of these, and neighbouring, sites.**

**Objection: Access.** The proposed access will require a new roundabout in the A537, within the extent of the queues frequently encountered in east-bound traffic at Broken Cross. Adding a new junction, with new traffic, to an already overloaded road is unacceptable. **A detailed study of traffic flow has not been provided.**

A further access is also planned for the development on LPS 18, and there are further areas designated for building in the sites CS 40 and CS 41. The cumulative effect of these junctions on the A537 has not been assessed.

In the absence of proper surveys and analysis of these traffic problems, the DTPC study for Henbury Parish Council shows that significant queueing is indeed expected at this junction. In the 2022 timeframe with only the 17/4034M development and using the flows submitted in 17/4034M, an *average* queue length of 55 vehicles is predicted in the morning rush hour, with a delay of 262s, accessing the Broken Cross roundabout from Chelford Rd. Taking the 2017 measured DTPC flows together with 17/4034M and 17/4277M development flows, and using the DTPC validated ARCADY model, a morning queue averaging 80 vehicles is found and a delay of 412s. This therefore puts the access roundabout to the development in the actual queue itself and confirms that egress traffic from the development will experience heavy delays and congestion, whether turning left or right, as only a single access lane is proposed and queueing will therefor occur within the site itself.

Access for sustainable transport modes is not considered in the required level of detail, including the safety aspect. Cycle access to Chelford Road is on to a congested section of road which, eastbound, crosses an AQMA with pollution levels above designated EU safe limits. This is the direction in which most journeys would proceed. The traffic levels are commonly such that cycling would be dangerous and this is not considered. Pedestrian routes towards Macclesfield and its schools are also a problem. In the morning rush hour traffic forms a stationary queue along Pexhill Road and Gawsworth Road and hence pedestrians would have to cross at least one set of queueing traffic. This

will be the case for any children walking to Broken Cross primary school. If the pedestrians also cross the Broken Cross roundabout then they will pass through the Broken Cross AQMA and subject to the illegal NO2 levels. Again, no consideration is given to this.

**Objection: Infrastructure**. The application states that there is adequate provision of schools and medical facilities. The experience of Henbury residents is the opposite. The majority of local schools referenced are full. No evidence has been presented by the applicant to where school places may be available. The same considerations apply to the application 17/4277M for the adjacent site LPS18; a copy of the relevant section of the PC objection is appended.

**Objection: Air Quality.** The application is significant as it will feed traffic into and out of the local AQMA at Broken Cross. The Air Quality Assessment does not refer to any NO2 measurements from the Broken Cross AQMA, instead referring to more distant locations, nor verify any modelling with AQMA results. As such it can not be relied upon to estimate the impact on that AQMA with any accuracy.

The recently published DEFRA report *"UK plan for tackling roadside nitrogen dioxide concentrations"* states that*: "It is vital that action is taken in the shortest time possible to improve air quality in those areas where air pollution is above the legal limit."* To achieve this, CEC are required to produce an Air Quality Action Plan for the AQMA to detail the measures that will be taken to meet the relevant air quality objectives, and this has not yet been done.

The NPPF states that:
*"The planning system should contribute to and enhance the natural and local environment by:*
*[…]*
*preventing both **new** and existing **development** from **contributing to** or being put at unacceptable risk from, or being adversely affected by **unacceptable levels of** soil, **air**, water or noise **pollution**……"*

No permissions for local development should therefore be granted until such an action plan is available and the impact of all combined development (including the likely extra 37% of houses yet to be included in planning applications for LPS16/18) rigorously tested for compliance. It must be assumed that the Broken Cross AQMA will indeed be adversely affected by air pollution as a result of this development, as no serious evidence to the contrary has been submitted with the application.

The pollution occurring at the Broken Cross roundabout mostly results from vehicular traffic. Queuing traffic obviously has a far larger impact on pollution than flowing traffic, and hence the gross under-estimation of traffic queuing, stemming from the transport assessment data, will result in an under-estimation of pollution increase. Small increases in roundabout RFCs are shown to lead to large increases in congestion in the DTPC report. Until the road traffic is correctly modelled there can therefore be little confidence in any of the air quality modelling results. For example, Table 24 of the AQA states that "*There were no exceedances of the annual mean AQO for NO2 or PM10 at any location within the modelling extents* ". The fact that CEC measurements within the Broken Cross AQMA already exceed the annual mean AQO for NO2 highlights the errors in the modelling, and confirms that the report does not indicate with any confidence that the air quality within the AQMA will not be further degraded. There is no reference to any Broken Cross NO2 measurements, i.e. tube CE91, or its replacements – CE252/254/255/256/257, and hence no validation of the modelling regarding this area.

The Broken Cross roundabout area is the location of numerous businesses accessed on foot by the general public (Tesco Express, bookmaker, florist, hairdresser, two public houses, garden machinery

business, petrol station, paint supplies, chiropractor, sandwich shop) and is also a part of a major walking route to local schools (especially Fallibroome). Therefore, the area should be assessed on kerbside hourly NO2 levels, as well as with the annual mean results already used. Appropriate monitoring should be put in place to verify whether hourly mean levels measured this way exceed the required limits; if so, then those people regularly spending time in this area could be unknowingly exposed to short-term dangerous pollution levels. The fact that those walking to school will do so at the peak of the traffic congestion is of particular concern and needs to be given serious consideration. Expansion of the AQMA, which is a likely scenario, could then encompass Whirley Pre-School access which is only a few tens of metres outside the AQMA as it is currently defined.

No effective mitigation for air quality degradation has been provided in the application.

An analysis of the REC report which was quoted in the application is appended to this Objection. The conclusions of this report are:

*No recognition in either report has been given to the combined effect of the two proposed developments, on either side of the Chelford Road.*

*The REC and the BWB report are both invalid. They draw conclusions from modelled results based on inaccurate inputs. In fact, the REC report may be completely invalid due to many of the incorrect assumptions made.*

*Consequently, the REC report presented with 17/4034M, and its associated conclusions, are not fit for making decisions that will ultimately affect people's lives.*

> We note also the recommendation by CEC Environmental Unit for rejection of Application 17/4277M relating to the adjacent site to the north of Chelford road, noting that:
>
> ***Insufficient information has been submitted with the application relating to the potential impact on the soon to be declared AQMA in Broken Cross, Macclesfield.***
>
> and giving the reason for the recommendation of rejection:.
>
> ***Reason: To safeguard residential amenity, public health and quality of* life.**

This recommendation is based on closely similar arguments to our present objections to 17/4034M, and the same recommendation should apply.

**Objection: Ecological**

The Application Form, section 13, states that there are no 'Designated sites, important habitats or other biodiversity features' that would be adversely impacted by this development. The reality is that part of the land is itself designated as a local wildlife site (LWS), namely the Cock Wood Site of Biological Importance, and hence this is completely misleading. There is a proposed road crossing this LWS and therefore it is incorrect to state that it would not be adversely affected. Also, the proximity of the development to this site will naturally have a detrimental impact as there is significantly reduced 'green buffering' to development, affecting the wildlife habitat potential. Such buffering should be increased accordingly.

**Henbury PC therefore strongly objects to the proposal for access to the site. Reason: effect on traffic and air quality, the lack of essential infrastructure and ecological impact on a Local Wildlife Site.**

**Furthermore, the approval of this application would be completely contrary to the statements in the 2018/2019 CEC Pre-Budget Consultation:**

***Outcome 4 – Cheshire East is a green and sustainable place***

*Cheshire East's rural and urban character is protected and enhanced through sensitive development, environmental management, transport and waste disposal policies.*

***Outcome 5 – People live well and for longer***

**This proposed development does not represent 'sensitive development' and will have a negative impact on the local environment and transport infrastructure. The health problems associated with poor air quality are now well known; more than 8% of deaths in the UK are now attributable to this cause. To *knowingly* exacerbate an existing air quality problem at Broken Cross will therefore fail to support outcome 5.**

Attachment:

Report by DTPC containing:

- Local plan context to local plan sites LPS16/18
- validated modelling of traffic queuing/delay through the Broken Cross roundabout
- review of transport documentation in planning applications 17/4277M and 17/4034M

# Appendix

**Extract from Henbury PC objection to application 17/4277M:**

**Infrastructure**

CEC should be open in stating where the children living at this development will be able to find a place at school. The local primary, Whirley School, is already full, as is the local secondary school – Fallibroome. Therefore, travel to more distant schools will be required which raises concerns about travelling and safety, especially when it is likely to involve travelling across the Broken Cross roundabout subject to high traffic levels and illegal air quality. These issues simply can't be ignored and must be considered as part of the review of this application. To grant the application without having the necessary answers on school places and location would be negligent, especially since this site appears to be very family-orientated in terms of the houses proposed.

No comments are made in the assessments about required utility supply, i.e. water, sewerage, electricity, gas and communications, and this needs to be reviewed. It is doubtful that the existing utility supply in the area will cope and hence a major infrastructure expansion may be required, if an impact to the supply to local residents is not to be expected.

It also must be asked whether any consideration has been given to the impact on supporting resources, such as doctors' surgeries, hospitals and the emergency services (including the impact of exacerbated traffic congestion levels). Again, building the houses first and expecting the existing services to cope with the additional pressure is a fundamentally flawed approach, and one which CEC must address.

**Comments on REC Air Quality Report ($NO_x/NO_2$) re 17/4034M -Version 2**

These comments have been amended to incorporate the changes resulting from the publication on the Planning Portal of an amended version of the original document. Changes are highlighted in red font.

**GENERAL**

1. The plan to build 200 residential units has been increased to 232.
2. The latest version has been amended to recognize Broken Cross as an AQMA.
3. The statement that "a review of the CEC Planning Portal indicates that there are no major planning applications in the vicinity of the proposed site" has been removed. Clearly the existence of Planning App 17/4277M has now been recognized, but no mention of its existence has been acknowledged in the latest version of the document, despite its obvious implications on traffic volumes, traffic flow and air quality.
4. Results for the modelling of receptors in the development area are only shown for 2022, with and without the development proposals proceeding. There are no modelled results for earlier years, even though the report mentions negligible increases.
5. States that the four diffusion tubes (CE71, CE73, CE74, and CE86) that were used for the verification are the only ones located in the vicinity of the site. NOT TRUE. Ignores CE91 and the new tubes that have been introduced by CEC.
6. Verification of results from the model is based on monitored (diffusion tube), calculated and modelled results for CE71 (3 Oxford Road), CE73 (124 Chester Road), CE74 (116 Cumberland Street) and CE86 (Hibel Road Flats). These are a long way from the proposed site. Moreover, there is a wide divergence between the 4 points on the Verification Factor graph and the linear regression line. There is no information on the "goodness of fit" or the statistical significance - Graph 1.
7. Sources of errors in the model/reported results for air quality are :
    - Estimates of background concentrations. These are based on DEFRA data and are the same as those used for the BWB report re Planning App 17/4277M.
    - Uncertainties in source data (eg traffic flows). The traffic flow data was provided by CBO Transport and using the DfT matrix. Given the results of the actual survey conducted on behalf of HPC, the traffic is not free flowing at peak times and the associated assumptions are likely to result in a gross underestimate of $NO_2$ levels.
    - Variations in meteorological conditions. Input data was based on Rostherne which is probably more accurate than the data used by BWB for the previous air quality report, which was based on Manchester.
    - Overall model limitations. The report implies that the results from the model are accurate to two decimal places!!!!!
    - Uncertainties associated with monitoring data. The accuracy of diffusion tube data (±25%) is well known, hence the need for automated monitoring in an AQMA.

The increased effect of the additional 32 residential units on air quality has been taken into account resulting in a slight increase in the predicted levels of $NO_2$ and $PM_{10}$ for 2022 after

the proposed development. Despite the slight increase in magnitude of the predicted levels of $NO_2$ ,the value of 22.05μg/m3 for receptor R12 is still significantly below the nearest diffusion tube monitored level in the Broken Cross AQMA (CE91) of 47.42μg/m3 in 2016.

**TG16 PROCESS REQUIREMENTS**

**Reference DEFRA Local Air Quality Management, Technical Guidance – TG16**

7.508 Model validation refers to the general comparison of modelled results against monitoring data carried out by model developers. **The model used should have some form of published validation assessment available and/or should be recognised as being fit for purpose by the regulatory authorities.**

7.509 However, in most cases, the validation studies performed by model developers are unlikely to have been undertaken in the area being considered. **Therefore, it is necessary to perform a comparison of the modelled results versus monitoring results at relevant locations. The results of this comparison should be included in Review and Assessment reports.**

7.513 **It is important that local authorities review the results of their modelling carefully** and bear in mind that model adjustment is not the first step in improving the performance of a dispersion model. Before adjustment of a model is applied, local authorities should check their model setup parameters and input data in order to reduce the uncertainties. Common improvements that can be made to a "base" model include:

- Checks on traffic data;
- Checks on road widths;
- Checks on distance between sources and monitoring as represented in the model;
- Consideration of speed estimates on roads in particular at junctions where speed limits are unlikely to be appropriate;
- Consideration of source type, such as roads and street canyons;
- Checks on estimates of background concentrations; and
- Checks on the monitoring data.

**Has this been done by CEC?**

**COMPARISON OF RESULTS FROM Resource and Environmental Consultants Limited (REC) AND BWB Consulting (BWB) MODELS**

(those used by How Planning for 17/4034M and 17/4722M respectively)

Results from the two modelling exercises (REC and BWB) have only six receptor sites in common. These are located around Broken Cross roundabout. BWB did predicted results for 2019 and 2024, REC did predicted results for 2022. Taking an average for the BWB results

to predict 2022 (to allow comparison), the differences in results for comparable receptor locations (without development) vary between -15.28μg/m3 **(-57%)** and +10.33μg/m3 **(+32%)** .

These wild variations indicate the inaccuracies associated with the modelling.

**CONCLUSIONS**

No recognition in either report has been given to the combined effect of the two proposed developments, on either side of the Chelford Road.

The REC and the BWB report are both invalid. They draw conclusions from modelled results based on inaccurate inputs. In fact, the REC report may be completely invalid due to many of the incorrect assumptions made.

Consequently, the REC report presented with 17/4034M, and its associated conclusions, are not fit for making decisions that will ultimately affect people's lives.