Transport and traffic appraisal

The following section presents a background analysis of transport issues and helps to demonstrate how the concerns of parishioners stem from the interaction between several factors that lead to hotspots of traffic congestion. The facilities and opportunities for people to walk and cycle in and around the village are reviewed together with looking at access to bus and train services.

Pedestrian and cycle access

The walking routes through Wye village are typically concentrated around footways alongside the road network. Often these are immediately next to the carriage way or, in the case of Churchfield Way, separated from the road by a narrow grassed verge. The width of the footways varies across the village, as a function of when the street was created. Hence, the more historic routes in the centre of the village have quite narrow footways whereas the more recent routes are wider more typical of modern residential streets. In most instances the routes are able to cater for the usual, village oriented volumes of pedestrian traffic but closer to the centre of the village around the shops, the school and other local facilities it is possible for the routes to become congested, especially when there are push-chairs or similar on the narrow footways.

Away from the roadside, there is an important footpath link between Churchfield Way and Bridge Street that is often used to access the primary school and the Village Hall. Other footpath connections give additional permeability between the residential streets around Little Chequers and Chequers Park.

Whilst there are as yet no defined cycle paths in and around the village the road topography is not steep and traffic speeds are not excessive. A traffic survey conducted close to the Wolfson Building showed that the 85%ile speeds were just below 30mph. Overall traffic flows are not high but congestion regularly occurs related to the primary school run and the level crossing. The greatest challenge to cycling in the village is the narrower historic roads with on street parking further squeezing space and creating some hotspots of vehicle conflict. Wye lies on the National Cycle Route 18 and feeds onto the North Downs Way; the Pilgrims Way and the Stour Valley path so is already a popular thoroughfare and destination for long distance walking and cycling.

The village has only one river and rail crossing, with both of these including footpath crossings. Within the station there is a separate footbridge (unsuitable for wheelchairs) that can be used when the road crossing is closed to traffic.

Public transport access - bus

There is a regular bus service (Route 1) that serves the village operated by Stagecoach. The overall route runs between Canterbury city centre and Ashford town centre, essentially along the A28 corridor, but diverts into Wye to serve the village. This means that the route loops through the centre of the village, and is affected by closures of the level crossing both inbound and outbound. The route is typically operated by double-decker buses, and these large vehicles can also sometimes get stuck on the narrow village streets, particularly if there is indiscriminate parking.
The bus route is vitally important to the village. It provides two benefits that the railway cannot. Firstly, it is important to older and infirm residents of the village who may find it difficult to navigate the hill down to or up from the station, and second, the bus service does provide a wider and more diverse range of intermediate stops and facilities for users compared with the relatively limited range of railway stations. The bus service ends relatively early in the day, and this is consistent with the provision being targeted at daytime trips and perhaps some secondary school pupils travelling out of the village.

Public transport access - train
Wye is served very well by train with the village station providing two trains per hour in either direction through the bulk of the day with late night services continuing until 01:00hrs from London and 23:00hrs from Canterbury. Direct trains run largely to London Charing Cross. Connections at Ashford give access to the High Speed line. The journey between Ashford and Wye takes 6 minutes and Canterbury and Wye 15 minutes. London is reached in approximately 90 minutes via Tonbridge or 50-60 minutes to St Pancras allowing for a timely change at Ashford.

Trains arrive at Wye at approximately 11 minutes and 41 minutes past the hour from Ashford/London and 19 minutes and 51 minutes past the hour from Canterbury/Margate. There are services that would be very appropriate for school use.

There has been some debate regarding the possibility that HS1 services could stop at Wye, and this is a very topical issue in the village. It is understood that South-Eastern (the operators of the HS1 service) are not keen to introduce more intermediate stops to these services in Eastern Kent. HS1 is intended to be a “premium” service, and the operators have been keen to ensure that the service links the major towns and population centres on their route network. Commuters and others do drive into the village from some of the outlying hamlets to access the rail services here. The increasing number of HS1 trains passing through Wye has led to increasing closures of the level crossing with significant impact on the build-up of queues into and out of the village. If HS1 trains were to stop at Wye closure times would be significantly increased. Network rail have indicated that signalling upgrades are planned for the Ashford to Canterbury line by 2020. It is expected that automatic gates will not be operating before this date. Automation is expected to reduce closure times only by about 5 min during each hour, but may allow for more rapid opening and closure thereby facilitating faster clearing of queues.

Highway access
The roads in the village have developed over many centuries, alongside the growth of the village. The original medieval centre, around the church and Church Street date from hundreds of years ago. However, the majority of the village was developed in the last century, and much of it after the Wars. The network is consistent with a village environment, with varying road widths, and priority junctions providing the intersections. In the heart of the village the roads are narrow, even at the intersections, with limited visibility for drivers, for example the Little Chequers/Bridge Street junction.

The village effectively sits on a cross-road of smaller rural routes – Olantigh Road arrives in the village from the north, Scotton Street / Coldharbour Lane from the east, Oxenturn Road from the south and Bramble Lane / Harville Road from the west. The north, east and south connections remain rural lanes as they depart the village. Oxenturn Road to the south and
Olantigh Rd to the north are increasingly used by many villagers to access Ashford and Canterbury respectively, as ways of avoiding being caught at the level crossing. Harville Road and Bramble Lane meet immediately to the west of the level crossing, and then provide connections out of the village towards the A28 – to the south and north respectively. These two routes are the busiest access points to the village, converging on the level crossing.

The river bridge was widened at the start of the last century to enable two-way traffic and an additional parallel crossing was considered but never pursued. The issue of traffic congestion has to be considered against the view that Wye is not currently used as a through route other than by those local to the village.

Parking

In some of the older parts of the village – particularly the conservation core - on-street and off-street parking is in short supply with buildings tight to the road and limited kerb space available. Scotton Street and Bridge Street are of particular concern but the newer and wider routes present less of an issue, albeit with concern expressed about Churchfield Way. Typically speeds are not high through village as a consequence of the tight road network. Churchfield Way has a more flowing alignment and speeds can rise, especially out of peak times. Worrying development are parking over dropped kerbs thereby restricting access for wheelchairs, pushchairs and the disabled, and blocking of pedestrian routes by cars parked on pavements eg. Upper Bridge Street and the Co op Corner. A car park is located next to Gregory court off Churchfield Way.

The Village Design Statement 2000 considered that on-street parking problems were exacerbated by local houses being in multiple-occupancy by car owning students. This may have only been a small proportion of the issues observed, as the college closure has seen the departure of the students whilst the parking issues have worsened. The results of a parking survey are provided in Appendix BD4. It is essential that parking provision for any development should be in accordance with the ABC Parking SPD for a rural location and have the following standards:

**Rural Location Guidance (A) infill and small scale developments:**
- 1 bed flat – 1 space
- 2 flat – 2 spaces
- 1 bed house – 1 space
- 2 bed houses – 2 spaces
- 3+ bed houses – 2 spaces

For proposals of 5 or more dwellings then 0.2 visitor parking spaces per dwelling should be provided. Side-by-side parking should be provided

**Rural Location Guidance (B) larger schemes creating new streets e.g. WYE1 and WYE2**
- 1 bed flat – 1.5 spaces
- 2 bed flat – 1.5 spaces
- 1 bed house – 1.5 spaces
- 2 bed houses – 2 spaces
- 3+ bed houses – 2 spaces

Visitor parking should be provided at 0.2 spaces per dwelling and if tandem parking is provided for dwellings then another 0.5 spaces per dwelling should be provided

A link to the parking SPD can be found here: [http://www.ashford.gov.uk/residential-parking-spd](http://www.ashford.gov.uk/residential-parking-spd)
B4.2 Parish consultation

Results of the Neighbourhood Plan questionnaire highlight the concerns that parishioners have about traffic in Wye (see BD1). More written comments were received about transport than any other topic – specific points cited were as follows.

- Traffic management, calming devices, 20mph restriction **168 comments**
- Control parking at danger points eg dropped kerbs, pavements **136**
- Pavements and footpaths need improvement **133**
- Improve school run chaos **122**
- Install automatic crossing gates **106**
- Public transport good as it is particularly the train service **83**
- Parking restrictions to allow buses easy access **71**
- High speed train to stop at Wye **67**
- Improve crossing but not necessarily by automatic gates **46**

B4.3 Analysis of the present situation

In order to understand the likely impact of development on traffic movements around Wye we have used a modelling approach based on recent transport surveys. Our analysis has incorporated three datasets - the 2006 Village Speed Survey, junction data for July 2012 kindly provided by PBA and a study on the Little Chequers/Bridge St and Church St/Bridge St junctions commissioned by the PC in December 2013. We have focused on traffic flows at peak times 7.00 -10.00 and 15.00-19.00 during the school term. Particular attention has been paid to the impact of closure of the level crossing on the build-up of traffic queues. Junctions analysed are shown in Fig.1.
Vehicle trips around Wye at the peak hours am and pm are shown in Figs 2 and 3 (Appended PDF files). The location operating close to capacity is the Bridge St/ Harville Rd/ Bramble Lane junction that is dominated by the level crossing.

*Figures 2 and 3 (Appended) Vehicle trips am and pm from PBA data and PC analysis of the Little Chequers/Bridge St junction (only available for am)*

The patterns of closure of the level crossing recorded during the peak hours am and pm from the PBA data (2012) and a manual assessment of closure carried out by the PC 2013/14 are presented in Fig. 4. *The introduction of HS1 has led to a doubling of crossing closures compared with the time when Wye College was most active.* The recent increases in numbers of trains passing through the Wye station have led to even more prolonged closure times this year.
The extent of queuing predicted to be caused by closure of the gates, derived using current traffic records and the LINSIG junction model, is illustrated in Table 1.

**Table 1 Validation of LINSIG modelling of vehicle numbers based on data from July 11th 2012**

<table>
<thead>
<tr>
<th>Closure</th>
<th>Existing - Recorded</th>
<th>Existing - Modeled</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In to Village</td>
<td>Out of Village</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>28</td>
</tr>
<tr>
<td>Closure 1</td>
<td>25</td>
<td>20</td>
</tr>
<tr>
<td>Closure 2</td>
<td>26</td>
<td>14</td>
</tr>
<tr>
<td>Closure 3</td>
<td>28</td>
<td>20</td>
</tr>
<tr>
<td>Closure 4</td>
<td>22</td>
<td>20</td>
</tr>
</tbody>
</table>

Note that the modelling accurately reproduces the actual queues recorded on 11/07/2012. The assessment of current traffic conditions developed by the modelling programme accords with observations that closure of the crossing already leads to tails backs along Churchfield Way, Bramble Lane, Harville Rd and Bridge St as shown for January 7th and 9th am in Fig. 5a, b.
Fig. 5a and b Diagrams showing the extent of queuing on January 7th and 9th am with existing traffic.

Although other junctions do not appear to approach capacity, several are sufficiently constrained (eg Little Chequers/Bridge St and Scotton St/High St) to raise safety concerns at peak times. The numbers of vehicle movements at these junctions are shown in Figs 2 and 3 (Appended).
BD4.4 The impact of development proposed

**BD4.4.1 Estimation of traffic from an active Wye College** There is a need to establish the capacity of roads within Wye and the level of development that the infrastructure of the village would sustain. One approach is to attempt to establish/estimate traffic flows that occurred when Wye College was fully operational. The village might be expected to cope with such a level of activity that represents the extant planning status for the WYE3 site.

Traffic surveys completed in 2006 by Jacobs as part of the KCC Village Speed Survey and as collected by Wye College provide some useful data from a time when the College was active, but they are restricted to relatively few sampling sites and do not include junction analysis. Assessment of an equivalent tertiary education site from the TRICS database would also be expected to provide baseline data. Scanning the database indicates that there are very few sites that might be considered directly comparable to Wye College. For example, one might include the University of the West of England and Exeter University’s Penrhyn campus but both are within easy access of major trunk roads. Traffic movement that is acceptable for such sites would not be accommodated in Wye. Fortunately, Plumpton College, Sussex provides TRICS data closely equivalent to Wye College.

The features of Wye College and Plumpton College are compared in Table 2. The reported flow of traffic at Plumpton is summarised in Fig. 6.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Wye College</th>
<th>Plumpton College</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjects covered</td>
<td>agriculture, agricultural economics, biological sciences, business management, environmental science, equine science</td>
<td>agriculture/machinery, animal care, caravan handling, beekeeping, blacksmithing, countryside conservation, craft skills, floristry, forestry, garden design, horse studies, horticulture, information technology, wine studies.</td>
</tr>
<tr>
<td>Total number of students</td>
<td>700 (500 undergraduate and 200 post graduate)</td>
<td>800 (400 full time and 400 part time)</td>
</tr>
<tr>
<td>Students in campus/village accommodation</td>
<td>450²</td>
<td>130</td>
</tr>
<tr>
<td>Number of staff (academic, administration and technical)</td>
<td>140 (note some staff also registered as postgraduate students)</td>
<td>150</td>
</tr>
<tr>
<td>Commercial activities other than education</td>
<td>None</td>
<td>Weekend horse management/riding courses, retail plant shop</td>
</tr>
<tr>
<td>Site features and area</td>
<td>Large site area including glasshouse complex and formal gardens College campus 27k sq m (41k with glasshouse complex)</td>
<td>Large site area with small golf course Buildings floor area 50k sq m 700 ha estate</td>
</tr>
</tbody>
</table>
Transport links

| Good train and bus links – more than 70 bus/train trips per day | Poor links, 20-39 bus/train trips per day - extra bus service provided by the College |

Accessibility by road

| Access to Wye restricted by closure of the level crossing | Good access onto B2116 |

Car parking

| Facilities available for students | Facilities available for students |

a Data from the most active years mid 1990s; Reports of the Principal to the Governing Body 1994/5 and appendices in the book “Wye College and its world – a centennial history” by Stewart Richards, publ. 1994

b Data from the TRICS database

c Accommodation provided in halls of residence at Withersdane, Wolfson Hall in Upper Bridge St, and postgraduate flats in houses throughout the village

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**Fig. 6 TRICS output for Plumpton College, considered to represent the impact of permitted development**

We have decided that, given the close similarity between the two sites, we should use the Plumpton data as a good first principles assessment for our baseline to describe an equivalent education activity that has extant planning permission for WYE3. This approach is supported by DfT guidelines and is considered more realistic than operating with data averaged from a few inappropriate sites on the database. In proposing development on the site we are therefore using the Plumpton College baseline as a fallback level of development that might be considered permitted in Wye.
**BD4.4.2. Development supported by the WNP**

The three allocated sites for development – WYE1, 2 and 3 represent opportunities to redefine the centralised village concept and generate business and community activity. We extended our analysis of traffic flow to estimate the effect of potential development as follows.

WYE1  Land off ChurchfieldWay ......................25 houses
WYE2  Luckley Field  ........................................15 houses
WYE3  Campus
  - 50 new dwellings
  - The Free School at maximum capacity 600 pupils/ 90 staff
  - 5000 sq m Business space in the Kempe centre and other sites *including Withersdane*
  - 2.500 sq m of mixed Business and Community use of the Grade I buildings
    There is an element of uncertainty here, depending on the nature of business activities.

Change of use and windfall......50 dwellings

The trip generation associated with each of the developments is estimated to be for WYE1 - 16, WYE2 -9, WYE3 – 355 (minimum) and windfall/change of use – 50.

Incorporation of the developments into the two models based on level crossing closures as described in Fig 5 reveals the patterns of queuing as shown in Figs. 7a and b.

*Note that planning approval has now been given for 25 houses on WYE2 and for 27 houses on WYE1 (March 2015). The traffic generation figures therefore underestimate impact from these developments. There is flexibility in the allocation of activities on the WYE3 site but the overall quantum of mixed development remains as analysed.*
Fig 7a and b Maximum length of traffic queues predicted with levels of development including house building proposed for the Neighbourhood Plan. Existing traffic, and queues expected after proposed development are shown for level crossing closures observed on Jan 7th and 9th.

It is apparent that the development we propose on WYE1, 2 and 3, and expected additions through change of use/windfall, will together increase traffic levels considerably above those estimated for permitted development as shown in Table 3 and Fig. 8. The inconvenience of traffic queues is, however, offset by the benefits for the community that would accrue by the level of development identified.

It is acknowledged that further increases in traffic would probably have severe effects on the operation of the Parish, unless the bottleneck of the river and level crossing can be
addressed. We also have to consider that long queues (particularly stretching up Bridge St passed the school entrance) would cause unacceptable delays for emergency services entering (ambulance) and also leaving Wye (from the fire station in Little Chequers).

Note that further modelling analysed the impact of additional housing on WYE3, 75, 100 and 200 houses. Results are also presented in Table 3 and as queue diagrams in Fig 8.

Table 3 Summary of increases in traffic queues with different levels of development on WYE3

a. With crossing closures observed on January 7th 2014
b. With crossing closures observed on January 9\textsuperscript{th} 2014

Some queues at the crossing are considered acceptable, but it is recognised that the situation becomes severe if queues fail to disperse when vehicles are unable to clear the crossing once the gates have opened. We conclude that future development, beyond the timescale of this NP, will have to be constrained to a level that does not cause severe and unacceptable impacts on village life.
Fig. 8 a and b Traffic queues predicted with varying levels of house building on WYE3. Existing traffic, fallback (permitted) and proposed development are shown.
An aerial view of queuing at the crossing is shown in Figure 9.

![An aerial view of queuing at the crossing is shown in Figure 9.](image)

**Figure 9.** Aerial view showing queues at the level crossing on June 19th, 9.25am. Note the tail back extending along Bridge Street following the school drop off (image provided by High-flying Productions).

**BD4.4.3 Traffic management and parking**

Projects have been proposed to address speeding and parking in Wye (see Appendix B). The NP questionnaire identified traffic speeding into and through Wye as a major safety issue. The new housing, business and education activities supported by our plan will increase the need for improved traffic calming and management. New electronic speeding signs are needed on each of the gateways into Wye – Scotton Street, Oxenturn Rd., Harville Rd and Bramble Lane.

Following general restriction of speed in Wye the need for more off road parking was also highlighted in the questionnaire (see BD1). Recent parking surveys (appended) highlight the need for parking close to the Co-op and Church St. Both surveys indicated that the Village Hall car park was busiest due to parents dropping off children at the primary school. The Gregory court car park was considered under-used. The PC now owns Churchfield Green
and this site has been identified for the construction of a small short stay car park to alleviate parking problems close to the Co-op as outlined in Appendix B and illustrated below.

**OPTION 1**
- circa 20no. defined spaces (circa 8 existing lots)
- Simple design / low impact on existing
- Footpath diverted to rear of parking
- New tree / shrub planting

**OPTION 2**
- circa 30no. defined spaces (circa 17 existing lots)
- Improved pedestrian environment through enhanced landscaping to front of Gregory Court
- Footpath maintained to front of parking
- New tree / hedge planting