



## Inglewood, Paignton

Torbay Council

### Review of Transport Impact

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## 1. Introduction

This report summarises the findings from a review of documentation submitted as part of a planning application to Torbay Council for land to The South Of White Rock, Adjacent To Brixham Road (Inglewood, Paignton). The Planning Application number is P/2017/1133.

The application is for outline consent for a residential led development of up to 400 dwellings (C3) with the means of vehicular and pedestrian/cycle access, together with the principle of a public house (A3/A4 use), primary school (420 places) with nursery (D1), internal access roads and the provision of public open space (formal and informal) and strategic mitigation. The proposal includes amendments to Brixham Road, Long Road junction and Windy Corner junction. Details of access to be determined with all other matters reserved.

This report covers a review of the following documentation:

- Transport Assessment (November 2017) produced by Key Transport Consultants (KTC)
- Framework Travel Plan (October 2017) also produced by KTC

This report includes comments on the application and highlights areas where clarification is required.

## 2. The Application

The Outline Planning Application covers up to 400 residential dwellings, a two-form entry primary school and a public house.

A four arm roundabout is proposed on A3022 Brixham Road, north of its junction with Hunters Tor Drive as the vehicular access to the site. Pedestrian and cycle crossing facilities are proposed on Brixham Road and a footway/cycleway link into the White Rock development in the north enabling access by active modes to South Devon College. Bus stops are proposed in close proximity to the access roundabout to provide access by public transport.

The application includes proposed highway improvements at:

- Windy Corner (junction of the A3279 Dartmouth Road and A3022 Brixham Road);
- The junction of A3022 Brixham Road, Long Road and Goodrington Road;
- The A3022 Brixham Road.

Enhancements to Stagecoach service 23 are also proposed so that the service is extended to the site, providing access to Paignton and South Devon College.

## **3. Comments**

### **3.1 Sustainable Access**

The Torbay Local Plan (2012-2030) sets out the requirement for all major developments that are likely to have significant transport implications to include a Travel Plan. This Travel Plan should set out how at least 30% of the potential users can gain access by foot, cycle or public transport and how this will be monitored.

#### ***Walking***

From the development site, there are pedestrian routes proposed that provide access to White Rock and Brixham Road to the north and south of the site and link with existing routes. It has not been demonstrated within the Transport Assessment that the pedestrian/cycle route to the north through White Rock (drawing 0734-055 in Appendix F) has been secured. Evidence of this is important to show that the route can be delivered.

The road network within the development includes a mix of footways and shared use surfaces for pedestrians. A Toucan crossing is proposed to the north of the access junction and an uncontrolled crossing to the south. There are also uncontrolled crossings at the roundabout. The visibility at the southern uncontrolled crossing could be impeded by vegetation, which is also a point raised in the Road Safety Audit (Appendix H). Suitable visibility at the crossing should be ensured at detailed design stage.

#### ***Cycling***

Cycle access to and from the site is proposed at the north (access to White Rock), onto Brixham Road north of the roundabout and following the road network. As raised above, evidence to demonstrate the link to White Rock is required.

There is no cycle access proposed to the south of the site and therefore cyclists would have to exit via the roundabout in order to leave the site and travel south on Brixham Road. It is considered that provision for cyclists to the south of the site would be beneficial and should be explored further.

#### ***Public transport***

The closest existing bus stops are located on Hunters Tor Drive, approximately 490m from the proposed site access junction. Bus stops are proposed within the development site, adjacent to the access junction and are planned to be served by an extended Stagecoach service 23. This would provide access to Paignton and South Devon College.

Given the existing location of bus stops/services, the extension to the Stagecoach 23 service needs to be secured in order to provide adequate opportunities for bus travel to and from the site.

#### ***Framework Travel Plan***

The Framework Travel Plan assumes a base mode share in line with Census 2011 data for Torbay. As a result, it is assumed that 64.8% initially will travel as single occupancy car journeys. The target included is to change this by 10% to a 5-year mode share of 58.3%. No change is anticipated to walking or cycling, with people expected to divert primarily to the bus. It is recommended that the targets do consider an increase in trips made by active modes.

### 3.2 Existing Traffic

Automatic Traffic Count data is available for the A379 Dartmouth Road at two locations (north and south of Windy Corner) and the A3022 Brixham Road.

The AM peak hour has been identified as 08:00 – 09:00 and the PM peak hour has been identified as 17:00 – 18:00. According to the traffic data collected, the highest volume of traffic in the PM peak is between 16:00 and 17:00 rather than the hour chosen. Between 16:00 and 17:00, two-way traffic flow is 142 vehicles higher than the hour later at A3022 Brixham Road. Traffic on the A379 is also higher between 16:00 and 17:00 than between 17:00 and 18:00 with a difference of 91 to the north and 43 to the south of Windy Corner. It is not stated in the TA why the PM peak hour of 17:00 – 18:00 has been chosen when it is not found to be the hour with most traffic. For a more robust assessment, the peak hour modelled would correspond with the highway peak.

### 3.3 Development Traffic

Trip rates have been calculated using the TRICS database. The rates identified appear realistic and in line with other developments in the vicinity.

The primary school has 420 places, with 100 pupils from within the development and 320 from outside the development. The assumption has been made that all primary school age children within the development will attend the newly constructed primary school on site. This assumption removes 39 vehicles from the 'external' network development traffic in the AM peak and 4 vehicles in the PM peak. In reality, whilst a high proportion are likely to attend their closest school it is considered unrealistic for every primary school age child within the development to attend this school, with much more taken into account during decision making than proximity alone. Therefore, it would be recommended that a proportion of children within the development travel out of the site for schooling.

Table 6.16 displays the total development external vehicular trips expected to be generated from the site. These figures are included in the Traffic Flow diagrams in Appendix K. Table 6.16 and Appendix K correspond with each other, with the exception of the Residential PM peak traffic. The information in Appendix K suggests arrivals of 103 and departures of 62 and a two-way total of 165 trips. This differs from the Table in the report which suggests 201 trips in total, i.e. 36 vehicles less. This inconsistency follows through to the total development traffic.

As the data included in the Traffic Flow diagrams matches the input to the modelling, the PM development traffic appears to have been under-represented.

### 3.4 Traffic Impact

The TA submitted as part of the planning application includes junction modelling to ascertain the impact. LinSig has been used for the signalised junctions and ARCADY for the access roundabout. The model set-up has been reviewed by Jacobs to ensure suitable assumptions have been made and the network is correctly coded. The traffic flows used match those in Appendix K, unless stated. As raised in Section 3.3 of the TA, the PM development traffic is 36 vehicles lower than listed in the body of the TA in Table 6.16.

#### ***A3022 Brixham Road / Long Road / Goodrington Road***

The modelling demonstrates the junction to be operating within its saturation and design capacity within the PM peak in forecast years. However, a 97.3% degree of saturation (DOS) is recorded with 2024 base flows, rising to over 100% with the addition of development traffic. As a result, highway improvements have been proposed. These improvements return the DOS to a similar level to the base with a DOS of approximately 97%. The

junction is still expected to exceed theoretical capacity, although the impact of the Inglewood development traffic appears to have been mitigated.

#### ***A3022 Brixham Road / Kingsway Avenue / White Rock Way***

The modelling completed shows the junction to operate within capacity in future years, both with and without development. There is a decrease in the Practical Reserve Capacity (PRC), but not to an extent that is expected to cause delay or extensive queuing at the junction.

#### ***A3022 Brixham Road / A379 Dartmouth Road (Windy Corner)***

Three layouts of Windy Corner have been assessed – the existing layout, Torbay Council's proposed improvement and KTC's proposed improvement.

With the existing geometry, the junction is calculated to exceed capacity in the AM base year (2017) and in subsequent years. For the PM, the junction is at design capacity in the base year and subsequently operation deteriorates in the forecast years. Introducing development traffic further exacerbates this.

Modelling Torbay Council's proposed layout improves the AM peak situation, suggesting an acceptable PRC of 12.9% in the 2024 'base'. However, the PM is suggested to exceed design capacity from 2019, although remain under 100% DOS. The addition of Inglewood development traffic worsens the situation.

As a result, KTC have put forward an alternative junction improvement scheme to that proposed by Torbay Council. These improvements are predicted to reduce the DOS to under 90%, which is considered acceptable.

There appears to be a discrepancy between the traffic flows shown in Appendix K and those used in the model. The ahead lane from A379 Dartmouth Road (North) is shown in Appendix K to have 648 vehicles in the AM peak (3.2% HGV) and 595 vehicles in the PM peak (1.6% HGV). The values modelled are 646 and 565 respectively (which should also include PCU factors). Therefore, in the PM peak, there are approximately 40 vehicles travelling south at Windy Corner that are not accounted for.

#### ***Site Access Roundabout***

The modelling undertaken suggests the roundabout layout is of a suitable design to cater for the expected traffic as part of the development. There is a level of spare capacity, with the highest DOS recorded as 76%, with a queue of less than 4 PCUs on A3022 Brixham Road South.

### **3.5 Summary**

In summary, the following key points are raised:

- Cycle access to and from the south of the site would be desirable to provide better access and options should be explored.
- It is unclear whether land has been secured in order to deliver the pedestrian/cycle route to the north.
- Adequate visibility at the southern crossing needs to be provided and should be included at detailed design.
- It is recommended that an increase in walking and cycling to/from the site is included within the Travel Plan mode share targets.
- The PM peak modelled is 17:00 – 18:00. This does not match the highway network PM peak of 16:00 – 17:00.



- The assumption that 100% of primary aged pupils from the development would attend the new primary school is not considered to be wholly realistic, with more than just proximity forming part of the decision making process.
- The development trips displayed in Table 6.16 and shown in the traffic flow diagrams in Appendix K do not correlate for the Residential PM flows. This means that 36 fewer development trips are included in the flow diagrams, and subsequently modelled.
- The traffic flows modelled for the A379 Dartmouth Road North approach to Windy Corner do not match those included within Appendix K.

## 4. Conclusions

The inconsistencies in the traffic flows modelled, e.g. the choice of PM peak, a possible error in the PM development traffic throughout the study area and a possible error in base traffic at Windy Corner, means it is difficult to ascertain the true impact of the development upon the junctions modelled.

In principle, junction modifications have been proposed where the impact of the development traffic exacerbates junctions already under stress and returns them to forecast predicted conditions without the development, i.e. mitigates the additional development traffic. As there are some discrepancies in the modelling, it is not possible to conclude that the development traffic is fully mitigated.