

## **2 THE PURPOSE OF THE SCHEME**

### **2.1 Introduction**

2.1.1 This Chapter explains why the A380 Kingskerswell Bypass is required. It provides a brief description of the background and details the problems currently being experienced along the existing A380 and surrounding area due to the existing usage of the A380. The section concludes by providing outline details of the traffic effects of the Scheme, in particular, the anticipated redistribution of traffic from the existing road to the new road.

### **2.2 The Existing Problems**

2.2.1 The existing A380 from its junction with the A38 Exeter to Plymouth Trunk Road, west of Exeter, to the southern end of Newton Abbot bypass, at Penn Inn, is a dual carriageway standard highway. The next section of the A380, running southwards from Penn Inn to pass through Kingskerswell to Kerswell Gardens at the junction with the Torbay Ring Road, is a single carriageway, on average 10m wide.

2.2.2 Penn Inn to Kerswell Gardens is the most heavily trafficked section of the A380 with an annual average daily traffic (AADT) flow in 2000 of up to 32,000 vehicles, of which approximately 9% were heavy goods vehicles.

2.2.3 The personal injury accident rate between Penn Inn and Kerswell Gardens for the period from 1999 – 2003 is 0.44 accidents per million-vehicle km compared to 0.20 accidents per million-vehicle km on the A380 between the A38 Splatford Split west of Exeter and Penn Inn. These figures arise from 141 personal injury accidents on the 4.56km length of road from Penn Inn roundabout to Kerswell Gardens in comparison to 158 personal injury accidents on the 16.3km length of the A380 north of Penn Inn. In addition, the A380 between Penn Inn Roundabout and Kerswell Gardens has experienced 209 damage only accidents, in comparison with 230 on the remainder of the A380.

2.2.4 The personal injury accident rate between Kerswell Gardens and Gallows Gate on the A380 Torbay Ring Road, for the period 1999 – 2004, is 0.2 accidents per million-vehicle km. These figures arise from 26 personal injury accidents on the 2.01km length of road. The road standard over this length of highway, between Kerswell Gardens and Gallows Gate, varies from a single carriageway to dual carriageway cross section.

2.2.5 The route's regional importance stems from its main function of serving the business and commercial needs of Torbay throughout the year as well as being the main route for tourist recreational traffic in the summer. The result of this high volume of vehicles having to pass through Kingskerswell is severe traffic congestion throughout the year. It also results in a significant number of drivers using minor sub standard routes parallel to the A380 to avoid the congestion. These routes are shown on Figure 2.0. The two most significant of these routes are via Edginswell Lane/Huxnor Road – Yon Street/Greenhill Road or Church End Lane/Foredown Lane - Old Newton Road – Kingskerswell Road – Decoy Road and secondly via Barton Hill Road – St Marychurch Road – Shaldon Road. Another route is Kingskerswell Road off Riviera Way and then Fluder Hill into Kingskerswell.

2.2.6 The built up area of Kingskerswell, sitting astride the A380, is effectively bisected by the high traffic flows making it hazardous for those wishing to get from one side to the other. The existing road has footways on both sides with widths varying between 1.0 and 4.0 metres. Horizontal and vertical alignments and visibility are substandard at several locations. There are 31 other public highways, 8 public footpaths and 141 private drives or field gates having direct access onto the road. The main primary school lies to the east of the road together with a large proportion of the modern residential development. The historic centre with its associated shops and health

care facilities lies to the west. The level of the noise and pollution experienced by those living alongside the existing A380 gives rise to a further general deterioration of the quality of life.

2.2.7 Historic traffic flow data shows that the existing A380 through Kingskerswell is at capacity and if the bypass were not built the volume of traffic using sub standard alternative routes would increase. Consequently there would be a continuing deterioration of the quality of life in Kingskerswell and the surrounding area arising from severance, noise and pollution.

## 2.3 Scheme Objectives

2.3.1 Government has specified five criteria for assessing investment in road improvements, namely accessibility, integration, environmental impact, safety and economy. These objectives have been developed by Devon County Council and Torbay Council for this Scheme with respect to the wider Government objectives as listed below:

- **Accessibility:** To improve access to local facilities and the wider transport network for all road users. To improve access from Newton Abbot to south Devon through the bypassing of Kingskerswell. To maintain access to local public transport and facilities. To maintain and improve access for non-motorised users (pedestrians, cyclists and equestrians) through this route corridor. To improve facilities for public transport users.
- **Integration:** To support the creation of a transport system which encourages access by the most appropriate form of transport that is integrated with land use planning. Integration of the existing A380 and the local road network enhanced by the two grade separated junctions, which would reduce effectively conflicting movements between through traffic and local traffic. The dualling of the existing A380 and the offline section and the parallel bus route would facilitate improvements in the public transport service.
- **Environmental Impact:** To reduce the impact of the Scheme (and land take) upon the area's sensitive ecological habitats. To take full account of the environmental sensitivities of the area in terms of hydrology, archaeology/cultural heritage, landscape/visual, noise/air quality receptors and agriculture/soils. To deliver an environmentally acceptable Scheme that protects and enhances the built and natural environment;
- **Safety and Accidents:** To reduce the number of accidents along this section of A380 by providing a new road of higher standard and by removing high flows of traffic through the Kingskerswell area.
- **Economy:** To improve journey time – eg. Reduce congestion on the A380 particularly during the summer months, at weekends and at rush hour by removing the bottleneck of the single carriageway section. The Scheme is also anticipated to support the two local authority objectives for regeneration and employment.

2.3.2 The Scheme proposals have been developed and assessed in accordance with the above criteria.

## 2.4 Traffic Effects

2.4.1 A detailed traffic analysis has been carried out as part of the assessment of the Scheme proposals. Figure 2.1 shows the 24 hour Annual Average Daily Traffic (AADT) flows in 2000. Figures 2.2 and 2.3 show predicted traffic flows in 2011 and 2026, respectively both with and without the Scheme. Traffic flows for 2011 and 2026 are predicated using both NRTF (National Road Traffic Factors) low and high growth factors. Traffic flows are provided for these years for the following reasons:

- Year 2000 provides a representation of the current situation;

- Year 2011 represents the anticipated Scheme Opening year; and
- Year 2026 represents the Design year for the Scheme 15 years after opening.

2.4.2 Figure 2.1 shows 24 hour AADT for the existing A380 between Penn Inn to Kerswell Gardens between 28,200 and 32,000 for year 2000.

2.4.3 Figures 2.2 and 2.3 illustrate that in 2011 and 2026, without the Scheme, the existing A380 between Penn Inn and Kerswell Gardens would continue to experience traffic flows of 29,200 to 35,700 (AADT).

2.4.4 The figures illustrate that if the Scheme were to be constructed, between Aller and Kerswell Gardens the vast majority of the traffic would be redistributed onto the new road. Traffic flows along the existing section of the A380 between Aller and Kerswell Gardens are predicted to reduce by an average of 71% in the year of the Scheme opening. This represents a 98% reduction in through traffic using the existing A380 at Kingskerswell. Penn Inn roundabout would experience a reduction in traffic flow up to approximately 9% in the year of Scheme opening.

2.4.5 Scheme opening would also cause a redistribution of traffic on the associated roads. Traffic on Addison Road would experience an increase in traffic flow especially from public transport, as this road would become a bus route. The existing A380 between Aller and Kerswell Gardens would experience reductions in traffic flow. There are reductions in traffic using both unsuitable rural routes, particularly in the south of the corridor and the A379 coast road.

2.4.6 As traffic continues to grow, driving conditions will deteriorate. Evidence from national data sources indicates that the number of accidents is likely to increase with increased traffic flows. The accident savings predicted by COBA that would result with the construction of the Scheme, for the period 30-year period from 2011 - 2040 are shown in Table 2.0 below.

Accident Savings	Low Growth	High Growth
Reduction in No of accidents	822	898
Reduction in No of Casualties (Total)	1346	1464
Fatal Casualties	8	9
Serious Casualties	109	119
Slight Casualties	1229	1336

Table 2.0: Accident Savings predicted by COBA (includes predicted accidents on the dualled section of the Torbay Ring Road)

2.4.7 The Scheme would meet Government and local objectives by:

- Reducing congestion and thereby improving the local environment in Kingskerswell.
- Reducing accidents to improve the safety of all travellers in Kingskerswell.
- The economic appraisal of the Scheme demonstrates that it is cost effective and good value for money.
- Accessibility and Integration of the transport system would be improved in Kingskerswell.

2.4.8 The current estimated cost of the Scheme (construction works plus land acquisition) is approximately £78 million (excluding VAT) at 2004 prices.