

## 18 TRAFFIC AND TRANSPORTATION

### 18.1 EXISTING ENVIRONMENT

- 18.1.1 Poole is relatively well connected to the main road network. The most direct access into Poole from the Port is across the lifting bridge over Little Channel. The bridge is timetabled to open seven times a day but also opens on demand for commercial vessels using the Backwater Channel. On average the bridge open 17 times a day for a variable period of time, which is dependant on the amount of vessel traffic navigating up or downstream (Gifford and Partners, 2004). This route links in with a number of 'A' roads which connect to the main roads heading north, east and west from the Poole/Bournemouth conurbation (i.e. the A31, A350 and A35). The A31 runs directly onto the M27 to the west of Southampton.
- 18.1.2 Poole is served by the national rail network, with a principal route connecting the town with London and Southampton to the east and Weymouth to the west. The Port is served by a branch line that connects to the main rail network.
- 18.1.3 As described in Section 9, Poole is an important port for cross-channel ferries. Brittany Ferries operate a regular cross-channel service between Poole and Cherbourg and, from April to October, Condor Ferries also operate a fast ferry service which connects Poole with the Channel Islands of Guernsey and Jersey. From May to September this service also runs to St. Malo.
- 18.1.4 Poole Bridge is used by, on average, 18,000 vehicles a day and up to 22,000 vehicles a day in summer. The existing lifting bridge can open for anything up to twenty-five minutes an hour to allow boats through. This can cause severe congestion to the local road traffic network, making journey times unreliable and affecting public transport timetables.
- 18.1.5 At the time of writing, the Borough of Poole is putting forward proposals to construct a second opening bridge across the backwater channel. The aim of this scheme is to alleviate traffic congestion which the opening of the current bridge generates and to facilitate the regeneration of the area. If constructed, the second bridge would provide a more reliable journey time for users of the Port of Poole.
- 18.1.6 The Port generates traffic from domestic cars and commercial vehicles embarking and disembarking ferries and also from conventional freight traffic. The *M/V Barfleur* has a capacity of 590 cars, whilst *M/V Coutances* has a capacity of 40 HGVs. The Condor ferries typically have a capacity of 185 vehicles. Between March 2003 and March 2004 a total of 212,324 passenger vehicles and 70,149 freight vehicles passed through the Port.
- 18.1.7 In addition to the ferry traffic described above, traffic is generated by HGVs loading and unloading conventional cargo at the port. In the 12 months for 2003/2004, a total of 439,498 tonnes of conventional cargo was handled at the port. Assuming that all of this cargo was moved by road, and the average capacity of a HGV is 20 tonnes, this movement of cargo would generate 21,975 HGV return journeys per year (43,950 movements).

18.1.8 Although the background traffic levels local to the Port (i.e. along New Quay Road) are likely to be dominated by Port-generated traffic, particularly during the peak holiday season in the summer months, it is considered that this traffic is rapidly diluted within Poole by traffic from other sources.

18.1.9 Given that in summer there are typically four sailings of Brittany Ferries per day; two for the *M/V Barfleur* (typically carrying a maximum of about 250 cars and 50 HGVs) and two for the *M/V Coutances* (typically carrying a maximum of about 40 HGVs) and three Condor ferries sailings (185 cars each) take place each day, it is estimated that the port generates up to 2590 traffic movements per day at peak periods (see Table 18.1). This takes into account embarkation and disembarkation of ferries and a daily average figure for HGVs transporting conventional cargo. In total, ferry and conventional cargo traffic generated by the Port represents around 10% of traffic using Poole Bridge.

**Table 18.1 Summary of summer daily traffic movements generated by ferries (embarkation and disembarkation) and conventional cargo traffic**

	<i>Barfleur</i>	<i>Coutances</i>	Condor	Conventional cargo	Sub-total
<b>Cars</b>	1000	-	1110	-	2110
<b>HGVs</b>	200	160	-	120	480
<b>Total</b>	<b>1200</b>	<b>160</b>	<b>1110</b>	<b>120</b>	<b>2590</b>

18.1.10 Given that the traffic levels on the road network are related to the arrival and departure times of the ferries, the number of vehicle movements arising in relation to the schedule of the ferries have been estimated (see Table 18.2).

**Table 18.2 Summary of traffic movements associated with embarkation and disembarkation of the *Coutances* and *Barfleur* based on a typical summer schedule**

Sailing	Ferry	Cars	HGVs	Total
07:15	<i>Coutances</i>	-	80	80
12:30	<i>Barfleur</i>	500	100	600
19:15	<i>Coutances</i>	-	80	80
23:45	<i>Barfleur</i>	500	100	600

## 18.2 POTENTIAL IMPACTS ASSOCIATED WITH THE APPROACH CHANNEL DEEPENING

### Construction phase

#### *Implications for traffic levels on the local road network*

18.2.1 The construction phase associated with dredging the approach channel does not have the potential to affect traffic levels and, therefore, there would be **no impact** in this respect.

*Mitigation and residual impact*

No mitigation measures are required and there would be **no residual impact**.

**Operational phase**

*Potential for increased traffic levels on the local road network*

- 18.2.2 The proposed channel deepening is required in view of the intention of Brittany Ferries to withdraw the *M/V Coutances* (which carries entirely freight) and to replace this vessel with a larger ferry (likely to carry a mixture of passengers and freight). Such a change could have implications for traffic levels in the vicinity of the Port.
- 18.2.3 Based on details of existing ferries which are operated by Brittany Ferries elsewhere, a typical larger ferry could accommodate either up to about 600 cars or up to 85 HGVs. The operation of a larger vessel would probably be to the same schedule as that for the *M/V Coutances* at present (i.e. two sailings per day in the summer).
- 18.2.4 Should the *M/V Coutances* be withdrawn and replaced with a larger vessel of typical capacity described above, there could be an increase of either up to 2400 car movements per day (based on two sailings per day and allowing for full embarkation and disembarkation) or up to 180 HGV movements (based on the range of typical HGV capacity of larger ferries) compared with the existing situation. Therefore, the increase in total vehicle movements compared with the existing situation would be up to 2400 (assuming a full cargo of cars) per day. In reality, a typical cargo of a larger vessel would be about 250 cars and 50 HGVs (i.e. similar to the existing situation for the *M/V Barfleur*) which would generate 1200 total traffic movements per day. Given that the *M/V Coutances* can generate up to 160 movements per day, the typical increase in vehicle movements based on the above car/HGV split movements would be 1040 movements.
- 18.2.5 It is, however, important to consider the characteristics of such an increase in movements. Given that traffic flows due to ferry movements are entirely related to the arrival and departure times of the ferries, the predicted increase in traffic levels would occur at times when the replacement vessel for the *M/V Coutances* would be embarking and disembarking. There would be no change to traffic levels associated with the activities of the *M/V Barfleur* should a larger vessel be introduced to replace the *M/V Coutances*.
- 18.2.6 The embarkation/disembarkation of the *M/V Coutances* gives rise to an estimated 80 vehicle movements (see Table 18.2) compared with either an estimated 80 to 170 HGV movements or 1280 to 1370 vehicle movements that would occur from embarkation/disembarkation of a larger vessel (1200 cars and between 80 and 170 HGVs), representing an increase of between 1200 and 1290 vehicle movements per turnaround.
- 18.2.7 Given that the traffic flow is associated with the arrival of ferries, it is predicted that there would be increased flows of cars and HGVs on roads to and from the Port at times when the ferry is loading and unloading. The peak traffic flows would be unchanged from the

existing situation given that the rate of embarkation/disembarkation would be the same as at present and the timing, number of vessels operating and the frequency of ferry movements would be unchanged compared with the existing situation. However, the introduction of a larger vessel would extend the duration of peak traffic flows at the slot times presently used by the Coutances.

- 18.2.8 Data on the capacity of the local road network has been obtained from the Second Opening Bridge ES (Gifford and Partners, 2004). This states that under a Do Nothing scenario, i.e. with measures in place which could reasonably be anticipated to be used to improve the traffic flow, but without the construction of the second bridge, traffic flows at Poole Bridge would be at 78% and 55% of their capacity during peak am and pm flows. However, with increased traffic in 2010 it is predicted that these roads will be operating above capacity. With the second bridge in place, there would be a significant increase in capacity and movements to and from the Port would be improved providing a more reliable journey for users of the ferries (Gifford and Partners, 2004).
- 18.2.9 In the future, the deepened channel could attract additional business to the port because a greater range of vessels could access the port (i.e. vessels of a greater draft than at present). It is possible that this could generate additional freight traffic in the future; however, this is limited by berthing facilities. and, would continue to promote the movement of the additional freight by rail. Any new berth developments would be subject to further consent and, therefore, would require impact assessment.
- 18.2.10 The predicted increase in traffic flows described above would occur at particular times of the day and are related to the schedule of the ferries and would result in more short term congestion near the Port. The effect on traffic levels are predicted to be localised to the immediate vicinity of the Port, as is currently the case. It is predicted that the increased flows would make a minor contribution to existing traffic flows beyond the immediate vicinity of the Port, with a low magnitude of effect in terms of implications for overall road capacity. In light of the above, the impact is considered to be of **minor adverse significance** local to the Port, with an impact of **negligible significance** on road capacity beyond this area.

*Mitigation and residual impact*

The construction of a second opening bridge would significantly improve the flow of traffic on the local road network and ease congestion. It is also expected to have the capacity to accommodate any additional traffic generated by the Port in the future (Gifford and Partners, 2004). However, in the immediate vicinity of the Port a residual impact of **minor adverse significance** would remain with a residual impact of **negligible significance** on the road network beyond the immediate vicinity of the Port.

### 18.3 POTENTIAL IMPACTS ASSOCIATED WITH THE OFFSHORE DISPOSAL OF DREDGED MATERIAL

#### Construction phase

*Implications for traffic levels on the local road network*

- 18.3.1 The disposal of dredged material does not have the potential to affect traffic levels and therefore there would be **no impact** in this respect.

*Mitigation and residual impact*

No mitigation measures are required and there would be **no residual impact**.

#### Operational phase

*Implications for traffic levels on the local road network*

- 18.3.2 The disposal of maintenance dredgings during the operational phase does not have the potential to affect traffic levels and, therefore, there would be **no impact** in this respect.

*Mitigation and residual impact*

No mitigation measures are required and there would be **no residual impact**.

### 18.4 POTENTIAL IMPACTS ASSOCIATED WITH BEACH NOURISHMENT

#### Construction phase

*Effect on local road network due to presence of construction plant*

- 18.4.1 The mechanical plant required during the construction phase for the beach nourishment works is described in Section 2.1.15. This plant would access the site via the local road network. Throughout the duration of the construction phase, the plant would remain on site for the majority of the time but it is estimated that that there would be some movement of plant to and from the construction site. The significance of the potential impact would be dependent on the exact location of any beach nourishment scheme being progressed. However, given the low numbers of construction plant involved (i.e. two bulldozers and two excavators), the limited number and intermittent nature of movements and the short duration of the effect, the impact on the local road network would be of **negligible significance**.

*Mitigation and residual impact*

No mitigation measures are required and the residual impact would be of **negligible significance**.

## Operational phase

*Effect on local road network due to presence of construction plant during renourishment works*

- 18.4.2 During the operational phase, it is recognised that there is the potential for using appropriate material that arises from the maintenance dredging of the approach channel in a beneficial manner for beach renourishment within Poole Bay. The potential environmental impacts of such renourishment would be dependant on the location where it is considered that nourishment is required, the volume of material that is to be placed on the beach and the nature of the material.
- 18.4.3 Given that there is no scheme for renourishment at present, this is outside the scope of this EIA which focuses on the potential impacts of the initial nourishment scheme. The potential environmental impacts associated with any renourishment scheme that may be required would need to be taken into account during the application for the Food and Environment Protection Act and Coast Protection Act consents that would be required.