

7 POTENTIAL FOR CUMULATIVE IMPACTS

7.1 Introduction

7.1.1 As part of the EIA process, it is important to consider the potential for the significant impacts that are predicted to arise as a result of the proposed development to interact with each other and with those of other past, current or reasonably foreseeable future plans or projects. Cumulative effects imply interaction between potential impacts, possibly resulting in an impact of greater (or lesser) significance than the effects in isolation. The scope of plans or projects to be included in a cumulative impact assessment can be defined as those projects whose effects may overlap with the proposed scheme in space or time.

7.1.2 The assessment of cumulative impacts is limited to plans or projects for which sufficient information exists to allow consideration of the potential for a cumulative effect to arise. In the absence of publicly available information (usually in the form of a planning application), it is not possible to properly consider cumulative effects (i.e. if proposals are speculative or where assumptions regarding potential impacts may be contentious).

7.2 Potential cumulative impacts associated with the proposed approach channel deepening

7.2.1 It is considered that there is one proposed project that has the potential to cause cumulative impacts to arise in conjunction with the proposed channel deepening; the proposed second opening bridge at Poole.

7.2.2 Any impacts arising from already implemented projects (e.g. previous capital dredging of the approach channel and the development of the Poole Quay Boat Haven) are manifest in the baseline conditions against which the influence of the scheme has been assessed. No other proposed projects are sufficiently developed for consideration here.

Second Opening Bridge, Poole

7.2.3 The Borough of Poole is proposing to construct a second opening bridge across the Backwater Channel between Poole Town Centre and Hamworthy. The element of bridge construction that has the most potential to give rise to impacts on the natural environment (and that could generate a cumulative impact in conjunction with the approach channel deepening) is the capital dredging that would be required in the Backwater Channel to create a new navigation channel, for a holding area and for the construction of the piers. The total volume of material to be dredged has been estimated to be 6,000m³.

7.2.4 At the time of writing (November 2004), a draft Environmental Statement for the proposed second opening bridge has been prepared (Gifford Consulting, 2004). The bridge construction is currently planned to commence in 2006 and the earliest completion date is expected to be late 2007.

7.2.5 The scope for cumulative impacts to arise is judged to be limited to the potential impacts of the projects on the hydrodynamic and sedimentary regime of the Harbour (and hence on marine ecology, including the shellfish resource) and traffic and transportation. The

potential for cumulative impacts to arise on other parameters is considered to be minimal for one or more of the following reasons:

- Based on the proposed programmes for the works, the construction phases of the two schemes are not predicted to overlap in space or time;
- A significant impact is not predicted with respect a particular parameter as a result of one or the other (or both) of the proposed schemes during the operational phase (e.g. neither scheme would have a significant impact on geology); and,
- Impacts that are predicted to occur during the operational phases of the two proposed projects do not affect the same receptors.

Potential for cumulative environmental impacts arising from hydrodynamic and sedimentary effects

7.2.6 The potential for cumulative impacts to arise as a result of the proposed approach channel deepening and the second opening bridge relates to the following aspects:

- Changes in current velocities and patterns of erosion and accretion;
- Sediment deposition arising from capital dredging; and
- Increased suspended sediment concentrations and the release of contaminated sediments.

7.2.7 The proposed approach channel deepening is not predicted to have any significant effect on current velocities or the pattern of erosion and deposition in Holes Bay or the Backwater Channel. As a result, no significant cumulative impacts on current flows and patterns of erosion and accretion are predicted.

7.2.8 Given that the construction phases of the two projects would not overlap, no cumulative impact is predicted in terms of sediment deposition from capital dredging. Even if the construction phases were to overlap due to, for example, a change in the programme for one of the projects, no significant cumulative impact is predicted given that the approach channel deepening is not predicted to have a significant effect in the Backwater Channel.

7.2.9 There is no potential for a cumulative impact on shellfish beds within Poole Harbour to occur as a result of the two projects, given that sediment plumes arising from the second opening bridge would not affect shellfish beds.

Potential for cumulative environmental impacts on traffic and transportation

- 7.2.10 The second opening bridge is predicted to reduce congestion in Poole town centre by maintaining traffic movement and improving access to the Port. Movements to and from the Port would be improved for both cars and HGVs. HGVs would be able to approach the Port via either the existing Poole Bridge or the proposed second opening bridge.
- 7.2.11 The proposed channel deepening is predicted to give rise to a minor adverse impact on traffic flows local to the Port during the operational phase. This would arise due to the increased number of vehicles that could be transported by the ferry which would replace the *M/V Coutances*, given that the *M/V Coutances* is a freight only ferry and the replacement ferry would be likely to carry both freight and passengers.
- 7.2.12 However, with the significant improvements to traffic flows that would arise from the construction of the second opening bridge, it is predicted that the overall situation would be improved when compared to existing conditions, should both the channel deepening and second opening bridge projects proceed. Given the above, the cumulative impact would be of moderate beneficial significance.

