

3 CONSIDERATION OF ALTERNATIVES

Approach channel deepening

- 3.1.1 Given that the main approach channel already exists, there are no practicable alternatives to the general alignment of the channel. However, a variety of alternative approaches could be adopted for the local widening of the approach channel. The proposed scheme was arrived at through a combination of navigation simulation studies and navigation risk assessment.

Beach nourishment

- 3.1.2 The alternative locations considered for beach nourishment at the outset were Poole, Bournemouth and Swanage, given the need identified for beach nourishment at these locations in the coastal strategy. Other potential locations for beach nourishment outside of Poole Bay are considered to be too far afield with respect to their economic implications for the works.

Offshore disposal of dredged material

- 3.1.3 The proposed offshore disposal ground near Swanage is the preferred location for the disposal of the dredged arisings for the following reasons:

- It has been used as a disposal ground by the PHC since the 1930s (for both maintenance and capital dredged material);
- It has received a comparable quantity of material in the past;
- The material that would be deposited at the site is similar in nature to previous material deposited at the site;
- No accumulation at the site has been detected as a result of historic disposal; and,
- The site is the closest licensed site to the location of the channel dredging and is, therefore, the most economic option for disposal.

- 3.1.4 The closest alternative licensed offshore disposal grounds are located off the Needles (Isle of Wight) (some 26km from the entrance to Poole Harbour) and at Nab Tower (some 75km from the entrance to Poole Harbour). For the volume of dredged material that requires disposal, disposal at the Nab Tower offshore disposal ground would be economically unviable. In addition, it is considered that there is no justification for recommending the use of a site other than that off Swanage on the basis of the predicted environmental impacts of disposal at this site. For example, concern has been expressed about the nature conservation implications of disposal at the Needles and, therefore, on environmental and economic grounds disposal at the Needles is not preferable to disposal at the Swanage disposal ground. Therefore, disposal at the Needles is not considered a viable option.

Beneficial use of dredged material

- 3.1.5 In addition to the offshore disposal of dredged material and the use of a proportion of the dredged material for beach nourishment, other options have been investigated for beneficial initiatives that could use the fine sediment arising from the dredging.

3.1.6 It is considered that a viable beneficial use is to limit the offshore disposal of dredged material through the proposed agitation dredging in the Turning Basin, thereby retaining fine sediment within the system.