

Appendix C – Photographs

The following photographs show the general setting of North Bay, Scarborough and the coastal defence assets.



Aerial view of North Bay looking south towards Castle Headland. The Sands development (white high rise curved apartment buildings) is visible approximately halfway along the frontage; this marks the boundary between the North Bay Cliffs Management Unit and the Clarence Gardens Management Unit.



Aerial view of North Bay looking north-west across the Castle Headland. The Sands development is again visible approximately halfway along the frontage, along with the Sea Life Centre (white pyramid buildings towards top right of photo) which is at the northern limit of the North Bay Cliffs Management Unit.



Aerial view of North Bay looking south-west showing alignment of existing coastal defence assets. The Sands development is visible at the boundary between the management units and the Sea Life Centre is visible at the northern end of the study area (bottom right of photo).



Aerial view of Clarence Gardens Management Unit showing proximity of properties at top of cliff and tie in of East Pier, Castle Headland, and the Holms Coast Protection Scheme completed in 2005.



Existing coastal defence assets in the Clarence Gardens Management Unit. Rock revetment of the East Pier, Castle Headland and the Holms Coast Protection Scheme (completed in 2005) is visible in bottom left of photograph. The Sands development (white apartment buildings) which marks the start of the North Bay Cliffs Management Unit is visible in the top right of the photograph.

The following photographs illustrate the range of defects identified for the priority assets included within the Phase 1 repair works for the preferred option, Option 1 Phased Repair Scheme. Photographs presented by NFCDD asset reference number.

Asset Reference 1221D901D1201C24

 <p>NB24_1 Undercutting of asset looking north</p>	 <p>NB24_2 Undercutting of asset looking south</p>
 <p>NB24_3 Close up of undercutting</p>	 <p>NB24_4 Undercut north face of access steps at south end of asset</p>
 <p>NB24_5 Undercut access steps at south end of asset</p>	 <p>NB24_6 Crack on promenade running parallel to front face of wall</p>

Asset Reference 1221D901D1201C07



NB07_1 Example of loss of mortar between joints



NB07_2 Abrasion of surface of toe blocks (Chainage 5)



NB07_3 First signs of vertical crack appearing (Chainage 45)



NB07_4 Vertical crack which has been previously repaired (Chainage 55)



NB07_5 Surface abrasion of toe blocks (Chainage 65)



NB07_6 Exposure of vertical edge of concrete toe protection (Chainage 85)



NB07_7 Vertical crack which has previously been repaired (Chainage 90)



NB07_8 Undercutting of concrete toe protection (Chainage 95)



NB07_9 Repairs to horizontal joint (Chainage 125-182)



NB07_10 Abrasion of toe blocks and concrete toe protection (Chainage 125-130)



NB07_11 Overview of concrete apron



NB07_12 Undercutting on north face of concrete apron (Chainage 135)



NB07_13 Undercutting at corner of front with north face exposing sheet piles (Chainage 135)



NB07_14 Repair work to northern wall of access steps (Chainage 182)



NB07_15 Northern and back walls of access steps showing vertical cracks (Chainage 182)



NB07_16 Southern wall of access steps showing previous repair works and abraded coping (Chainage 182)



NB07_17 Bottom of access steps showing reduction in beach level (Chainage 182)

Asset Reference 1221D901D1201C21



NB21_1 Abrasion of surface of apron and loss of blocks from toe (Chainage 0-24)



NB21_2 Exposure and undercutting of toe (Chainage 0-24)



NB21_3 Change in alignment of toe (Chainage 24)



NB21_4 Undercutting of toe (Chainage 24-44)



NB21_5 Abrasion of coping stones (Chainage 47)



NB21_6 Undercutting of toe with signs of possible previous repair work (Chainage 95)



NB21_7 Previous repair work to large vertical crack (Chainage 97)



NB21_8 Previous repair work to large vertical crack (Chainage 114)



NB21_9 Undercutting of toe (Chainage 114-180)



NB21_10 Vertical crack in slipway support wall (Chainage 125)



NB21_11 Vertical crack in slipway support wall (Chainage 135)



NB21_12 Overview of buttress showing abrasion of blockwork (Chainage 180-185)



NB21_13 Close up of an example of a void developing between blocks



NB21_14 Beginnings of undercutting at toe of buttress



NB21_15 Cracks on north face of buttress



NB21_16 Cracks on front face of buttress at corner with south face



NB21_17 Cracks in south face of buttress, at join with next asset



NB21_18 Cracks in south face of buttress at corner with front face



NB21_19 Large void in corner of front face
of buttress

Asset Reference 1221D901D1201C08

 <p>NB08_1 Example of superficial surface abrasion of blockwork on buttresses</p>	 <p>NB08_2 Example of horizontal cracks in lower level of blockwork</p>
 <p>NB08_3 Abrasion and loss of blocks from toe apron</p>	 <p>NB08_4 Example of cracks in berm between upper and lower sections of wall</p>
 <p>NB08_5 Example of crack in promenade</p>	 <p>NB08_6 Horizontal crack through blockwork with loss of surface material below crack (Chainage 65)</p>



NB08_7 Undercutting of toe on 6th buttress



NB08_8 Previous replacement of blockwork in lower level of wall (Chainage 160)



NB08_9 Example of cracking in secondary wall behind promenade