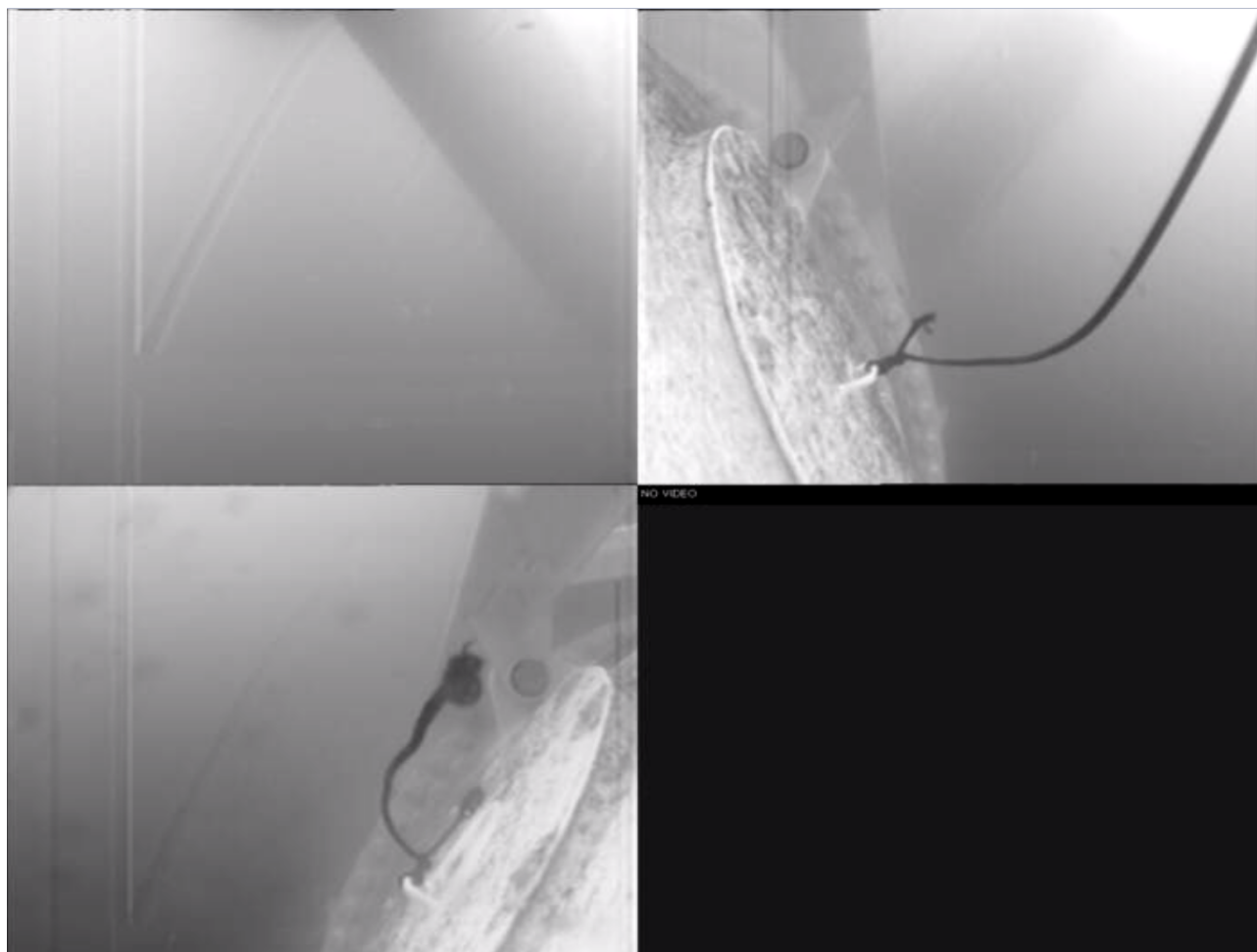


of the cameras. However, it should be noted that it has not been possible to ascertain whether the final positioning of the cameras was limited by technical considerations which may have prevented their positioning elsewhere on the turbine.

Figure 1.3 Field-of-view from cameras (camera 1 on monopile - top left, camera 2 on nacelle - top right and camera 3 on nacelle - bottom left). Video still is from May when biofouling coverage was at its minimum.



Biofouling of lenses

Initially, all three cameras provided clear images of the turbine rotors both when the turbine was at standstill and when it was in operation (see Figure 1.3). Some level of interference was visible on all cameras in the form of vertical lines constantly moving horizontally across the screen. Towards the end of May (approximately two weeks after deployment), biofouling began to appear on the lens of Camera 3. Two small dark areas appeared on the top of the lens of Camera 3 around 21 June. It is thought that these were barnacles, as an alternating patch of light and dark grey in their centre is consistent with the opening and closing of the shell plates which occurs during the feeding behaviour of barnacles. This biofouling got progressively worse until nothing could be seen from Camera 3 by mid-June. Biofouling began to appear on Camera 1 on 24 June, which got progressively worse; however biofouling on this camera did not appear to occur as quickly or severely as it did on Camera 3 and a relatively clear image is still visible by 13 July (see Figure 1.4). Camera 2 stayed free of biofouling and a clear image is available throughout the data gathering period.