Information on supplementary material

"Regimes of wettability dependent and independent bouncing of a drop on a solid surface"
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Movie-1: Temporal evolution of a drop impacting a solid surface trapping a gas layer beneath it for $Re = 10.35$ and $We = 1.07$. No visible capillary wave oscillations can be noticed.

Movie-2: Temporal evolution of a drop impacting a solid surface trapping a gas layer beneath it for $Re = 517.5$ and $We = 1.07$. The gas layer is too thin to be noticed at this scale. The upper surface of the drop exhibits strong capillary wave oscillations.

Movie-3: Entrapment of a gas bubble during drop impact with $Re = 1035$ and $We = 3.21$. Strong capillary wave oscillations causes the interface to collapse upon itself trapping a gas bubble inside it.

Movie-4: Evolution of a water drop impacting a superhydrophobic surface (contact angle=160°) at $Re = 716$ and $We = 6.1$. A small gas bubble is captured from the upper side of the drop.

Supplementary figure-1: Time evolution of drop-gas interface profiles near the solid surface during its spreading phase obtained from simulations (dashed curves) overlaid on experimentally profiles of de Ruiter *et al.*, Phys. Fluids (2015) for the following cases: (a) $We = 0.83, Re = 233$, (b)$We = 1.82, Re = 345$, (c)$We = 3.19, Re = 457$. All other parameters are identical to those given in de Ruiter *et al.*. The finest grid size at the drop-gas interface is $\Delta/R_0 = 4.425 \times 10^{-4}$ in these simulation. This supplementary figure complements figures 4 and 5 in the manuscript.