

Table 3.1: Estimated existing Kiln Place discharge rates

| Site | Catchment Area (ha) | Hard Standing Area (ha) | 1 in 1 year Discharge Rate (l/s) | 1 in 30 year Discharge Rate (l/s) | 1 in 100 year Discharge rate (l/s) | Greenfield Run-off rate (l/s) |
|--------|---------------------|-------------------------|----------------------------------|-----------------------------------|------------------------------------|-------------------------------|
| Site 1 | 0.073 | 0.017 | 2.5 | 6.1 | 8.0 | 0.9 |
| Site 2 | 0.037 | 0.014 | 1.8 | 4.5 | 5.9 | 0.4 |
| Site 3 | 0.006 | 0.006 | 0.8 | 2.0 | 2.7 | 0.1 |
| Site 4 | 0.006 | 0.006 | 0.8 | 2.0 | 2.7 | 0.1 |
| Site 5 | 0.015 | 0.015 | 2.1 | 5.1 | 6.7 | 0.2 |

3.7. Flood zones and flood modelling

Fluvial/ tidal flooding

- 3.7.1. According to the EA website and the North London SFRA (Mouchel, 2008), the site falls within Flood Zone 1, due to the absence of nearby fluvial surface water features and the coastline. In addition, there are no flood defences within close proximity to the site.
- 3.7.2. Technical guidance to the NPPF (2012) states that Flood Zone 1 is assessed as having a less than 1 in 1000 annual probability of river or sea flooding in any given year (<0.1%).

Reservoir breach

- 3.7.3. The EA website on flooding shows that the maximum extent of reservoir flooding from Hampstead Heath Pond No. 1 extends to the northern part of the site (refer to Figure 3.1). This is the largest area that might be flooded if a reservoir were to fail and release the water it holds. Since this is the worst case scenario, it is unlikely that an actual flood in the case of a breach would be this large.

Groundwater

- 3.7.4. Groundwater flooding is caused by the emergence of water from the sub-surface permeable strata. In a groundwater flooding event, water levels rise sufficiently to intersect the surface and inundate low lying land.
- 3.7.5. The BGS mapping indicates a negligible susceptibility to groundwater flooding at the site based on the underlying geology. Moreover, the North London SFRA identifies the site as lying within an area where groundwater typically lies at a depth between 70-80 mbgl within the Chalk aquifer which underlies the confining London Clay Formation. Due to this depth to the potentiometric surface, and the confining layer of the London Clay, the potential for groundwater flooding at the site as a result of water pressure within the Chalk is low.
- 3.7.6. Perched water, however, is likely to be present within the Brickearth head deposits, as discussed in paragraph 3.4.4.