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FLOOD RISK ASSESSMENT for:

PROPOSED MINOR DEVELOPMENT AT:

10 GROVE TERRACE TW11 8AU

5th December 2024 First Issue
9th December 2024 Planning Application

EXISTING SITE

According to the Environment Agency's floor risk map, 10 Grove Terrace is in flood zone 1, an area with a low probability of flooding. Please refer to the Environment Agency 'Flood Map for Planning' which shows this.

The site also has a low surface water risk. Please refer to the GOV.UK surface water map.

However, the site is located in a Critical Drainage Area according to the London Borough of Richmond Surface Water Management Plan (Group8_006), in other words, where development could have an influence of the risk of flooding. As a consequence this report will set out proposals for how the development will not increase the current surface water flood risk.

Existing Non-Permeable Areas: 197.2sqm

- Main House 93.5sqm
- Garage 16.7sqm
- Shed 3sqm
- Patio 38sqm
- Driveway 35sqm
- Footpath 11sqm

Proposed Non-Permeable Areas: 137.5sqm

- Main House 93.5sqm (no change)
- Extension 33sqm (served by 2 No. slow-drain water butts)
- Footpath 11sqm

Proposed Permeable Areas: 62sqm (to replace existing)

- Patio 28sqm (38sqm less 10sqm taken from extension)
- Driveway 30sqm

Presently the roof drainage to the house discharges into the local surface water system, the driveway has an impermeable surface and any surplus discharges into the street. The front of the

garage roof also discharges onto the driveway. The main roof to the garage discharges into a water butt, and it appears to have a slow-drain discharge into the existing surface water drain.

The existing surface water drainage serving the main house will remain unchanged. A new rainwater pipe to the front and rear of the proposed extension will discharge into two slow-drain 500 litre water butts to allow each tank to be maintained half full allowing space for the next time it rains. A French drain should be installed to collect any overtopping from the butts at times of extreme storms and it should run to the lawn and/or driveway/side planting area for attenuation.

The existing non-permeable paving to the driveway and patio will be removed and replaced with new permeable paving / gravel. The surface water run-off drainage to these areas will therefore be much improved.

Patio:

- Typical permeable paving to comprise:
- 50mm block pavers
- 50mm laying course
- Upper Geo-textile membrane
- Permeable sub-base min 200mm thick (as advised by specialist paver installer)
- Lower Geo-textile membrane
- Subgrade base layer DT Type 1 (MOT)

Gravel Driveway:

- 50mm gravel / shingle (driveway golden gravel 14mm)
- Gravel grid (made from recycled plastics)
- Permeable sub-base min 200mm thick (as advised by specialist paver installer)
- Geotextile membrane
- Subgrade base layer DT Type 1 (MOT)

Note: The local soilscape is freely draining, slightly acid loamy soil.

Conclusion

The proposals will reduce the overall area of non-permeable surfaces from 197.2sqm to 137.5sqm (31% less) thereby reducing the overall surface water run-off from the site. Water collected from the roof of the proposed extension will be stored in two water butts designed to slowly release the water into the garden/driveway so as not to overwhelm the current drainage system. This allows the tanks to be maintained half full to be able to deal with peak flow, the stored water can be used for window and car washing, plant and garden watering etc.. The Critical Drainage Area therefore remains unaffected by this proposed development.