

## **Lamarsh Road, Oxford, flood mitigation measures: a provisional report for Oxford Flood Alliance by a member of its Steering Group, October 2010**

**Aims:** This provisional statement analyses recent flood data and assesses the potential for reducing risk of a repetition. It has been carried out by interested flood-plain residents, and does not pretend to be definitive.

**Sources:** The analysis is based on the following information:

1. Surface levels data for Lamarsh Road (source Oxford City Council);
2. Topographical survey of the Kingerlee site (Appendix to Flood Report, Application 09/00247/FUL)
3. Informal interviews with staff at Army Surplus Stores and Jewsons.
4. Value of OD 57.25 for proposed pedestrian hump at the Botley Road end of Earl Street (plus one course of sand bags = 57.30 m), source Environment Agency.

**Flood Level in 2007:** Working from the above, it appears that the Army Surplus shop floor level is at OD 57.16 m and that the water level reached at least 57.30 (stock was said to have been damaged on a shelf that was 240 mm above floor level, which would be OD 57.40 m). At Jewsons it is reported that there had been 300 mm of water in their timber yard, where stock was also damaged.

For present purposes we have assumed a conservative estimate of OD 57.30 m for 2007 flood level.

**Relationship of above to proposed flood defense at Earl St:** It will be noted that this conservative value for commercial property flooding equals what would be achieved by a single course of sand-bags on top of the proposed Earl St pedestrian hump. It remains possible that the Lamarsh Road levels data used here relate to a previous road makeup or a non-standard datum, and this needs to be checked on the ground.

**Provisional Implications for surface flooding in 2007:** The provisional flood level of OD 57.30 m matches the lowest spot height shown just inside the gate to the Kingerlee site, the others being 57.37 and 57.39. This would imply that any water coming over the Botley Road at this point would have built up in Lamarsh Road until it reached OD 57.30 when it would have started to flow across the Kingerlee site. The existing 9 inch surface water drain that runs southwards here would have taken time to get this amount of water away.

**Flood mitigation proposed under Application 09/00247/FUL:** Under Condition 24 the Kingerlee retail development is committed to establishing a 'flood flow path' with starting level of OD 57.00 m at the site entrance. This would leave the next worst obstruction as the public road outside the proposal site, where the west gully is shown as 80 mm higher, and in turn gives only 80 mm fall from the floor levels of Army Surplus shop.

**Protection of Earl St:** With the proposed Earl St pedestrian hump and one course of sandbags, the Kingerlee flood flow path on its own will help to reduce flood risk, irrespective of any adjustment to the adopted surface of Lamarsh Road. It would appear to reduce the Lamarsh Road flooding by 220 mm based on the conservative estimate, or by 320 mm based on the worst case report, and thereby lessen the risk of backing up to the Earl Street pedestrian hump.

**To protect Army Surplus shop etc. fronting Lamarsh Road:** The implied reduction of at least 220 mm in flood level offers some benefit to all commercial users. However the difference in levels of only 80 mm between the Lamarsh Road west gully and the Army Surplus shop may pose a continued risk to retail stock, and the threat is worse at the Jewson timber yard where the estimate of 300 mm of flood water in 2007 would imply that the yard surface might be as low as OD 57.00, and that will therefore continue to hold water. All these properties, whether shops or open yards, would therefore appear to get benefit from a further re-profiling of the adopted surface at the south end of Lamarsh Road, including reduction by 80 mm of the gully on west side where it crosses Jewsons West Yard entry.

**Residential access under flood conditions:** Re- vehicle access, implementation of the proposed flood flow path would appear to mean that water in Lamarsh Road would settle at OD 57.08 m, at least 220 mm lower than previously. This would make vehicle access easier, although there remain places at the north end where there will still be up to 180 mm of flood water, cleared (slowly?) by the existing 9" SW drain (said to run south across the Kingerlee site).

Re- pedestrian access (Oriel Mews; Rewley Press site; Kingerlee's own residential site), given that the Botley Road would be closed to traffic at flood times anyway, pedestrian access and egress is the bigger issue. Assuming the proposed flood flow path functions as designed, the pedestrian route will presumably cross it at the entry to the Kingerlee retail site. It is not clear what depth of water would be expected.

**Disclaimer:** OFA takes no responsibility for inaccuracies in the above account, which is presented purely as a framework for discussion. All dimensions should be checked on the ground.

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