

Overland flow in the tree planted shelter belt

2 overland flow traps have been installed in the tree planted shelter belt (5 m x 5 m).

An observation was made that although both traps are almost adjacent to each other there appeared to be differences in the soil texture.

April/06? During the monitoring period 12/04 – 21/04 the amount of overland flow as a % of the rainfall measured at RG3 was > 15.9 % and 4.2 % in Trap 1 and 2 respectively.

This compares with 19.75 % overland flow measured in the bowl area for the same time period.

04/04/06 OLF trap2: ~50cm of the gutter guide plastic had come away from the soil. Reinserted the guide plastic by cutting laterally into the soil with a knife, and pushing one edge in the slit, nailing it into place. Soil was then squashed on top to cover the seam.
A 2-cloved footprint was noticed in trap2, probably a sheep.

OLF 1 & 2: cleaned gutters of leaf litter; re-inserted the top lawn-edging and cleared behind of leaf litter.

21/04/06 Cleared gutter in OLF traps.

02/08/06 cleaned gutters of olf of litter and soil. Black plastiv needs attention on olf traps. OLF bucket RH upslope 103mm1330GMT and LH upslope 88mm1335GMT. Bucket standing a bit dodgy, ground uneven.

21/08/06 T2 Pipe connecting to barrel found disconnected.

27/09/06 Replaced gutter guide plastic with stainless steel strips on OLF 1 and 2. Trap 1 (left) was not connected to barrel and the barrel was empty. This was reconnected after the metal strip was inserted. Trap 2 (right) was already connected and the barrel quite full but the hole into the drain pipe was clogged up with debris. Setup needs to be checked after rain.
Covers placed over gutters to prevent rain going directly in.

08/03/07 Gutters cleared of leaves and soil.

29/08/08 Installed Tipping bucket monitoring systems to OLF in the tree shelter belts

04/09/08 Trap 1 blocked. Unblocked at around 1200 GMT. Take account of tips then. Installed some devices to try and stop blockage. Will check next week.

06/10/08 TB1 blocked also the bottom of the collection gutter had come

away. Took it back to the lab for repair.

10/10/08 Reinstalled TB1.

31/11/08 Trap 1 has TB5 calibrated prior to installation (169.5 ml/tip)
Trap 2 has TB4 calibrated prior to installation (185.2 ml/tip)
Looking at the data for T1 10/10 – 31/10 it would appear that it was suffering from blockages resulting in build up of water then large flows.
There appears to be some time stamp issue and an overlap in terms of time from the previous download. It is assumed the time stamp this time is wrong, comparing last record of the download with estimated actual time. Therefore the time is adjusted and assumed to follow on immediately after the last record from the previous download.

02/12/08 Trap 1 tiny tag failure – I think due to dampness. Replaced with a tiny tag logger. Should put them in plastic bags.

20/02/09 It was discovered on the 17/02/09 that there was leak in the down pipe of trap 1. This was removed, fixed and reinstalled on the 20/02/09. There is therefore some question over the quality of the data from T1 during the last monitoring period.

13/03/09 Trap 1 is still showing odd runoff response. It is hard to ascertain what exactly the problem is

06/04/09 There appears to be a time stamp issue with the tiny tag loggers possibly as a result of the change from GMT to BST. This is accounted for in the analysed data.
