

DNL's EXPLAINED

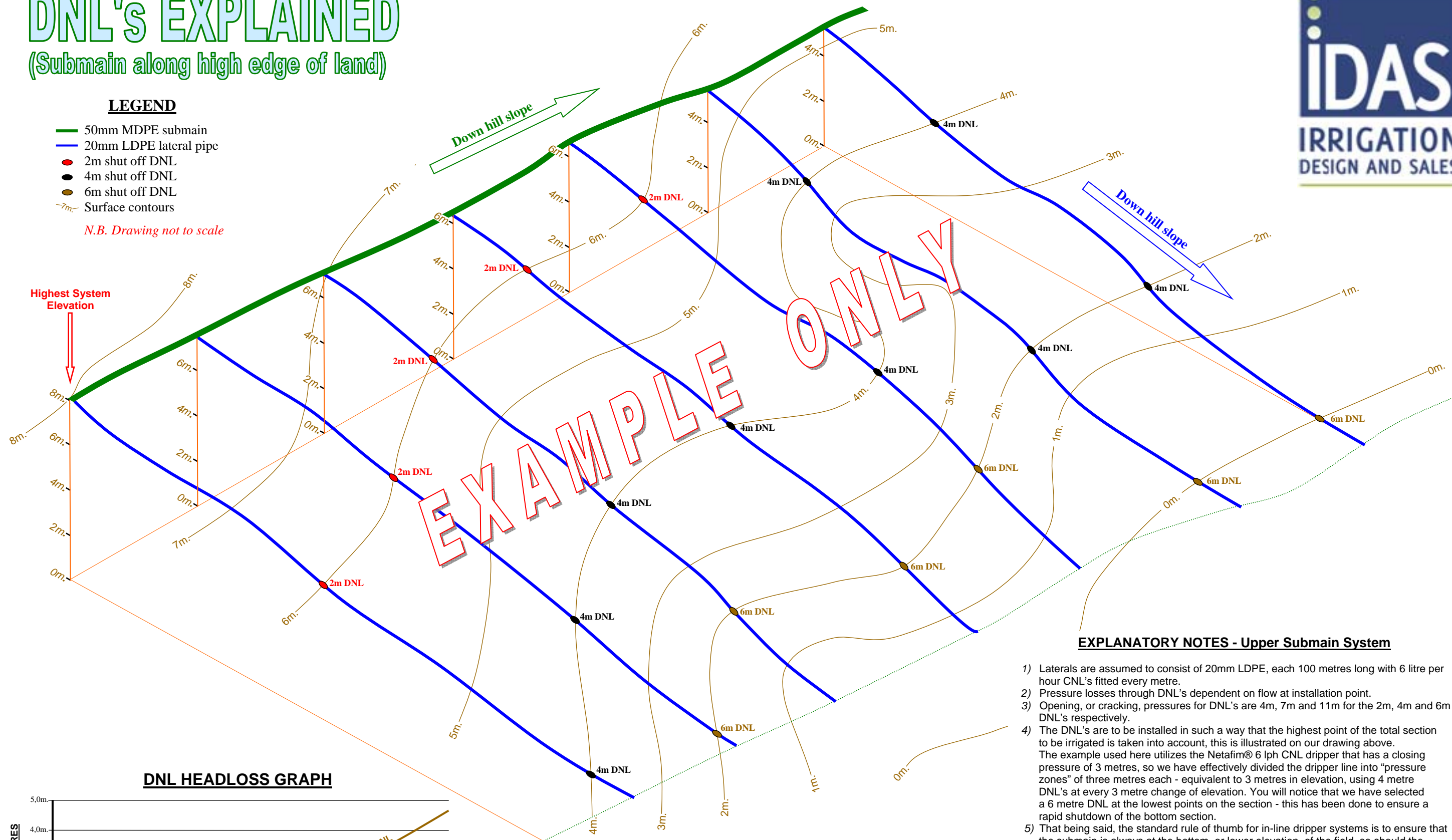
(Submain along high edge of land)



LEGEND

- 50mm MDPE submain
- 20mm LDPE lateral pipe
- 2m shut off DNL
- 4m shut off DNL
- 6m shut off DNL
- Surface contours

N.B. Drawing not to scale



EXPLANATORY NOTES - Upper Submain System

- 1) Laterals are assumed to consist of 20mm LDPE, each 100 metres long with 6 litre per hour CNL's fitted every metre.
- 2) Pressure losses through DNL's dependent on flow at installation point.
- 3) Opening, or cracking, pressures for DNL's are 4m, 7m and 11m for the 2m, 4m and 6m DNL's respectively.
- 4) The DNL's are to be installed in such a way that the highest point of the total section to be irrigated is taken into account, this is illustrated on our drawing above. The example used here utilizes the Netafim® 6 lph CNL dripper that has a closing pressure of 3 metres, so we have effectively divided the dripper line into "pressure zones" of three metres each - equivalent to 3 metres in elevation, using 4 metre DNL's at every 3 metre change of elevation. You will notice that we have selected a 6 metre DNL at the lowest points on the section - this has been done to ensure a rapid shutdown of the bottom section.
- 5) That being said, the standard rule of thumb for in-line dripper systems is to ensure that the submain is always at the bottom, or lower elevation, of the field, so should the system develop any leaks at all, this setup will ensure that all the water will remain at the lowest point in the submain and not drain down the entire systems water when it completes it's relatively short irrigation cycle. A huge advantage. The other, and most probably the most important advantage of using DNL's dividing the dripper lines into "pressure zones" is the almost immediate and simultaneous start up of all the drippers, ensuring maximum uniformity across the crop.
- 6) Please see our other "DNL's Explained" sheet for a "Bottom Submain Fed System" - the same principles apply throughout bar the fact that the simple non-return type valves can be used in the laterals on a bottom fed system, for obvious reasons.

DNL HEADLOSS GRAPH

