

DNL's EXPLAINED

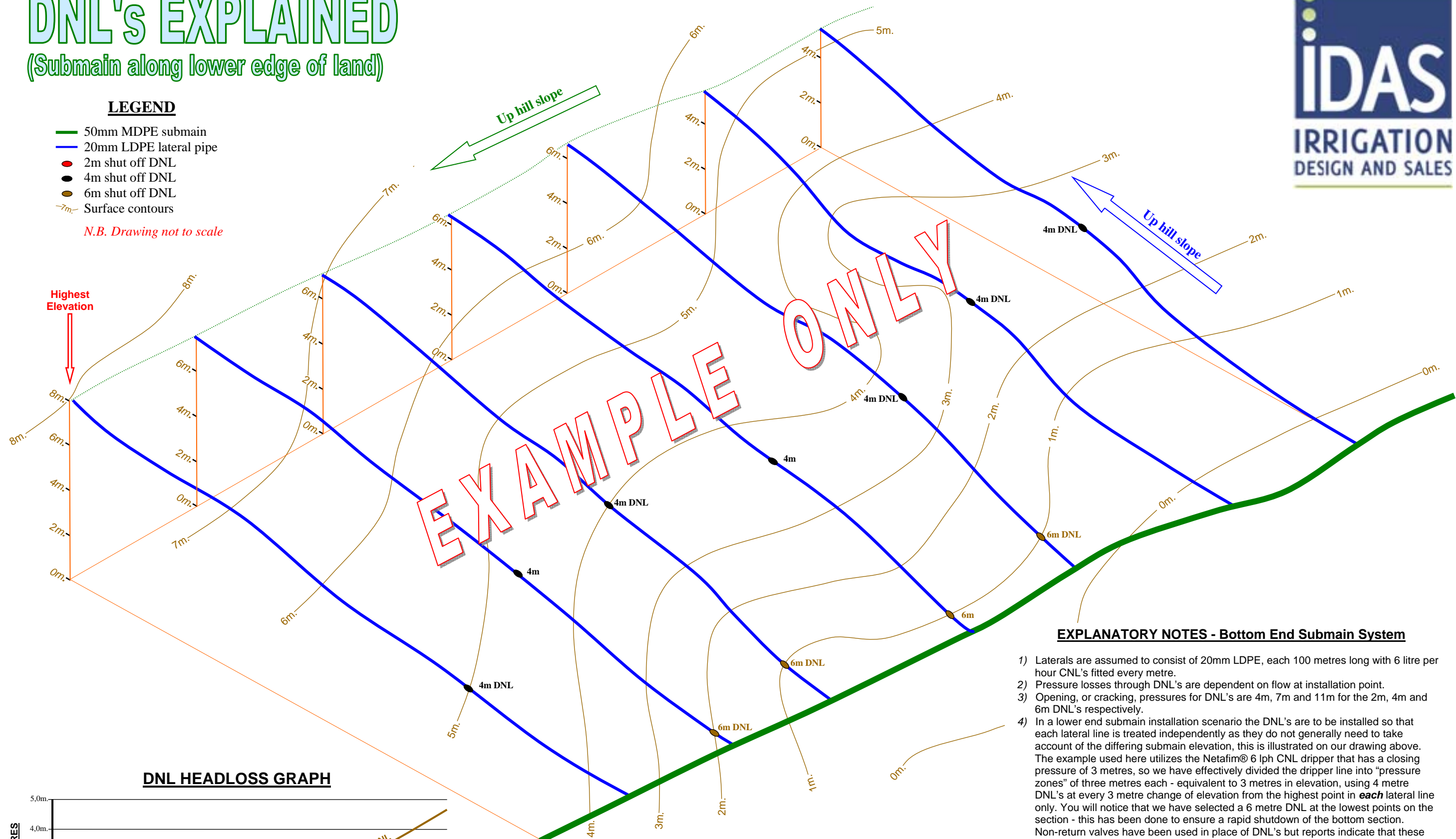
(Submain along lower edge of land)



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



EXAMPLE ONLY

EXPLANATORY NOTES - Bottom End 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 are 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) In a lower end submain installation scenario the DNL's are to be installed so that each lateral line is treated independently as they do not generally need to take account of the differing submain elevation, 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 from the highest point in **each** lateral line only. 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. Non-return valves have been used in place of DNL's but reports indicate that these have been unreliable at times.
- 5) That being said, the standard rule of thumb in-line dripper systems anyway is ensure that the submain is always at the bottom, or lower elevation, of the field. 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 when the system completes it's relatively short irrigation cycle. A huge advantage. The other, and 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 "Upper Submain Fed System".
- 7) As can be seen from our example, and it is only an example, there are fewer DNL's required in this particular option of system installation.

DNL HEADLOSS GRAPH

