

Calculation sheet to establish levels at the limit of benefited land.

- 1). South side of the pao opposite the Downie burn, scaled dimension from the centre of the pao to the limit of benefited land is 230m.

From the O.S. - 1:25000 map:-

Contour 40m - scales 250m from the centre of the pao.

Contour 50m - scales 460m from the centre of the pao.

So this gives a gradient of  $\left(\frac{460-250}{10}\right) = 1 \text{ in } 21 \text{ or } 4.76\%$ .

If we then interpolate a level for the benefited limit the

calculation is  $40 - \left(\frac{250-230}{21}\right) = 39.05 \text{ m above sea level.}$

- 2). Similarly at 500m West of the Downie burn and on the South side of the pao the scaled dimension from the centre of the pao to the limit of benefited land is 90m.

From the O.S. - 1:25000 map:-

Contour 40m - scales 100m from the centre of the pao.

Contour 50m - scales 240m from the centre of the pao.

So this gives a gradient of  $\left(\frac{240-100}{10}\right) = 1 \text{ in } 14 \text{ or } 7.143\%$

If we then interpolate a level for the benefited limit the

calculation is  $40 - \left(\frac{100-90}{14}\right) = 39.29 \text{ m above sea level.}$

Taking the mean of the two calculations this gives an altitude of 39.17m

- 3) At Nethermains of Gorthy we are looking to establish a level at a distance of 537 m from the poe (the distance shown on our longitudinal section to the boundary).

From the OS - 1:25000 map:-

Contour 40m - scales 570 m from the centre of the poe

Contour 50m - scales 1120 m from the centre of the poe

So this gives a gradient of  $\left(\frac{1120-570}{10}\right) = 1 \text{ in } 55 \text{ m or } 1.82\%$

If we then interpolate a level for the boundary fence.

the calculation is  $40 - \left(\frac{570-537}{55}\right) = 39.40 \text{ m above sea level.}$

Now that we have established that contour 40m passes very close to or through Centre cottage, we can relate the original section to Ordinance Datum and can extend the section south of the poe to confirm and substantiate our previous calc's