



surface water drainage

Increased area of rainwater run-off at Ox Pasture Hall Hotel

Proposed areas of patios, paths and roofs = 990 m<sup>2</sup>  
 run-off rate - total area = 990 m<sup>2</sup>  
 intensity of 150mm/h may occur for 3 minutes once in 50 years  
 rate of run-off =  $\frac{\text{effective area (m}^2\text{)} \times \text{rainfall intensity (mm/h)}}{3600}$   
 $= \frac{990 \times 0.150}{3600}$   
 $= 0.04125 \text{ m}^3/\text{s}$   
 therefore run off in 3 minutes =  $0.04125 \times 180$   
 $= 7.425 \text{ m}^3$

therefore excess volume of water to be stored in larger pipes = 7.425 litres  
 large pipe storage  
 750 diameter pipe area =  $\pi r^2$   
 $= 3.142 \times .375 \times .375$   
 cross sectional area = 0.441 m<sup>2</sup>  
 therefore length of pipe required for total storage = 16.875 m

Proposal  
 A pipe of 750mm diameter and 16.875 m long will provide the required storage for rainwater run off with 63 diameter hydro valve outlet draining into pond

foul drainage



existing hotel suites

12 JAN 2016

**AMENDED**  
 Notes

drainage - foul and surface

John Blaymires 56 Pasture Lane  
 Dip. Arch (Leeds) RIBA Seamer Scarborough YO12 4QR  
 CLIENT Ox pasture hall hotel scale 1: 100@A1  
 PROJECT proposed spa complex and suites  
 2016/27 - 13 drainage