

[illegible]

Existing surface water Manhole

A diagram illustrating the concept of a light path. It shows a horizontal beam of light (represented by a green line) passing through a series of optical elements. From left to right, the elements are: a blue rectangular block, a black rectangular block, a green rectangular block, a blue rectangular block, and a blue rectangular block. The beam of light is shown as a solid green line that starts at the left, passes through the black block, and then continues as a dashed blue line through the blue blocks. The beam is shown as a solid green line again after the final blue block.

Soakaway  
Crate

## New Manhole for Bradenstoke Play Park.

The manhole is constructed with concrete base of thickness 150mm.

Silt chamber constructed using high density concrete blocks. One level below pipe level

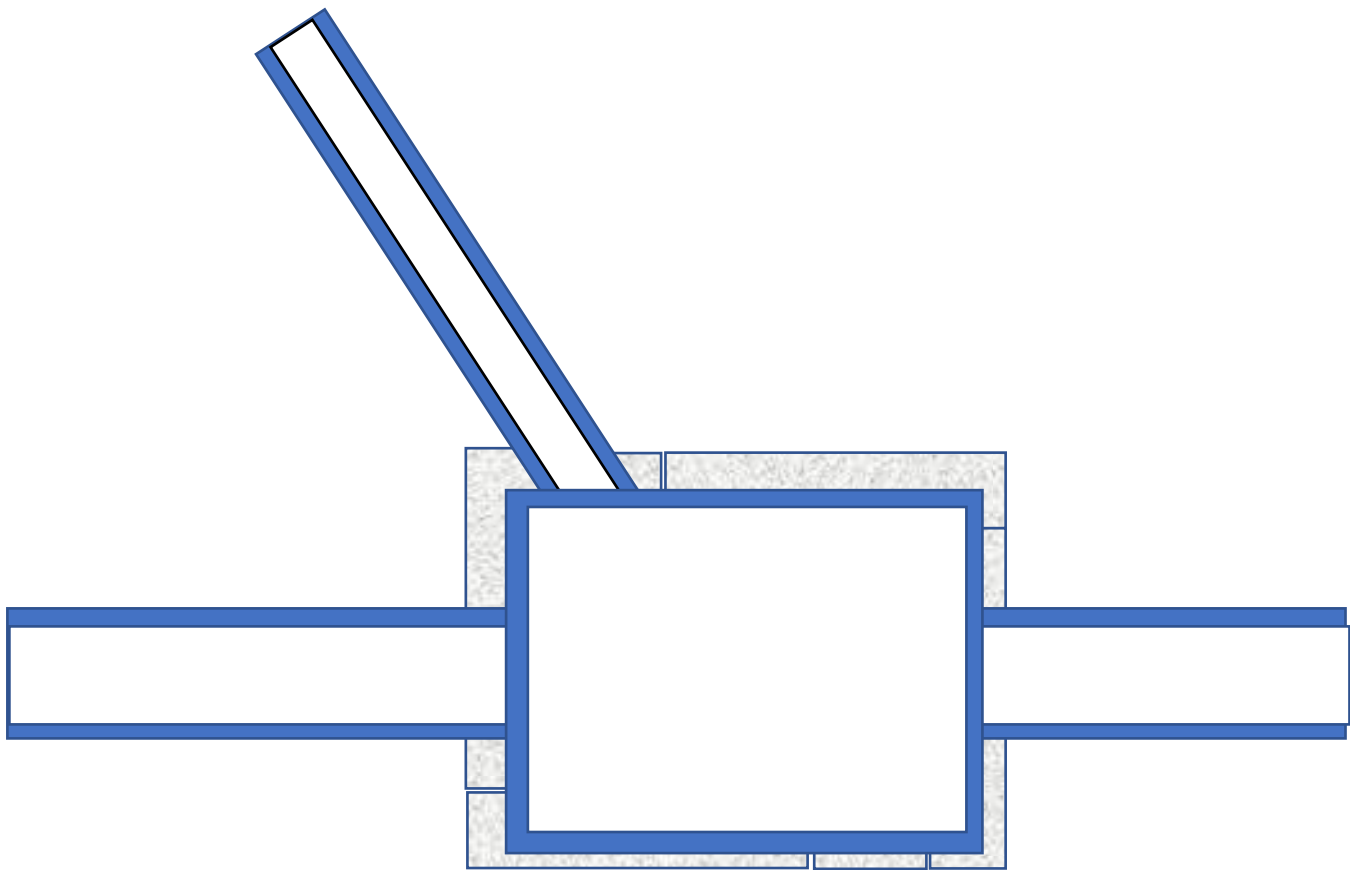
There is a layer of blocks at pipe level and one above level . The pipes are sealed with cement mortar.

The chamber is constructed using Duct access chamber Easyliner MELXX from BP plastics

The French drain is cut into the chamber and flaunched with cement mortar. Laid in pea gravel.

Outside of the chamber is back filled with earth and a concrete surround is put in at ground level to a depth of 150mm to support the manhole cover.

The manhole cover has a reducer to 350mm to limit access.



Blockwork using 225x 100 x 450 high density



600mm x 450mm x 320mm

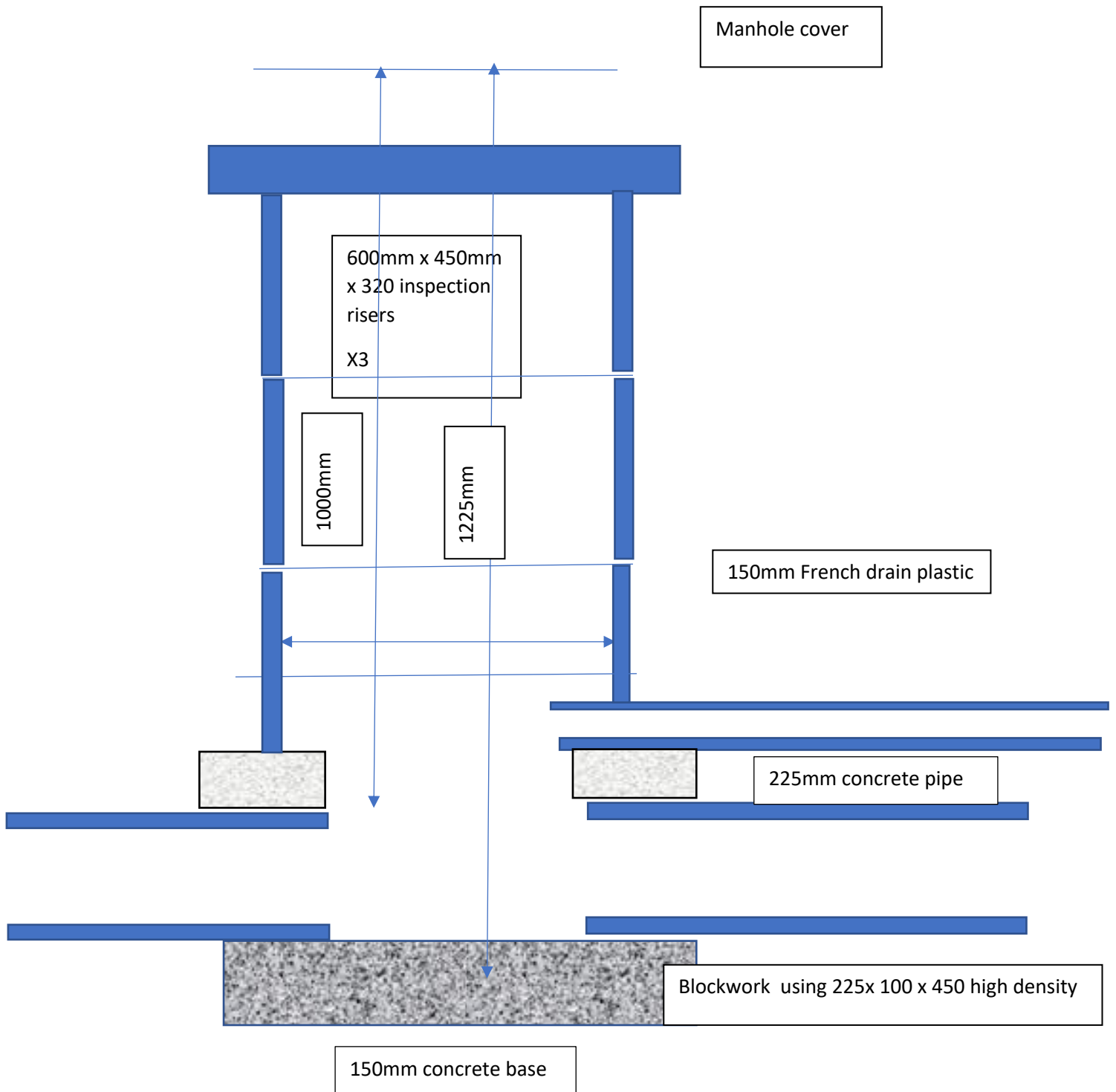
600 x 450 manhole cover

manhole with haunching

Duct access chamber X 2

Easyliner MELXX

BP PLASTICS see <https://www.plasticdrainage.co.uk/>



## Costings

Concrete base 800 x 650 x 150 (166KG)

Cement 2 bags (50kg) (42kg) = 2 x £4.75 (wickes) = £9.50

Ballast 6 bags (150kg) (124 kg) = 6 x £2.30(wickes) = £13.80

Blocks Standard dense block 7.3NM 440 x 215 x 100 = 5 @ £1.75 at Wickes = £8.75

Mortar

Cement 1bags = 3 X £4.75 (wickes) = £ 4.75

Sand 4 bags = 4 x £2.00 (wickes) £8.00

Duct Access Easy Liner = 3 x £22.68(BP Plastics)£68.04

Manhole to fit above liner =(BP Plastics) £151.20

Total £264.04

French Drain

150mm x 6M perforated pipe =4 x £22.68 £90.72

150mm pipe couplers =4 x £3.08 £9.24

150mm seals =8 x £2 £16.00

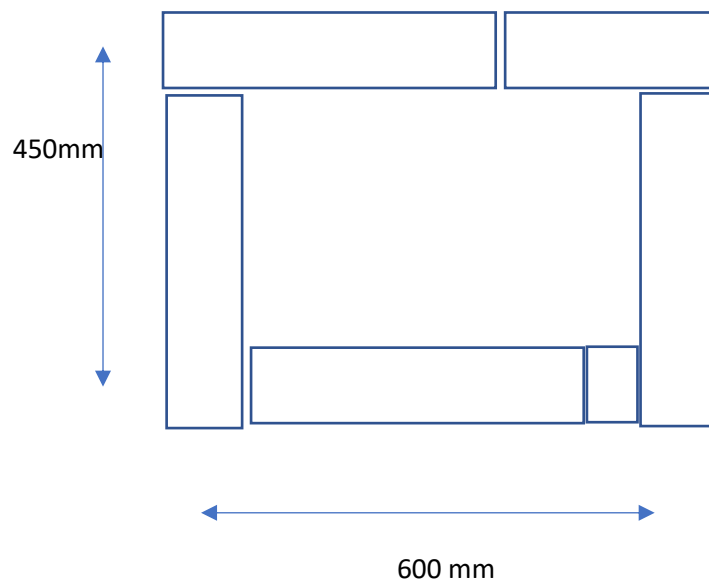
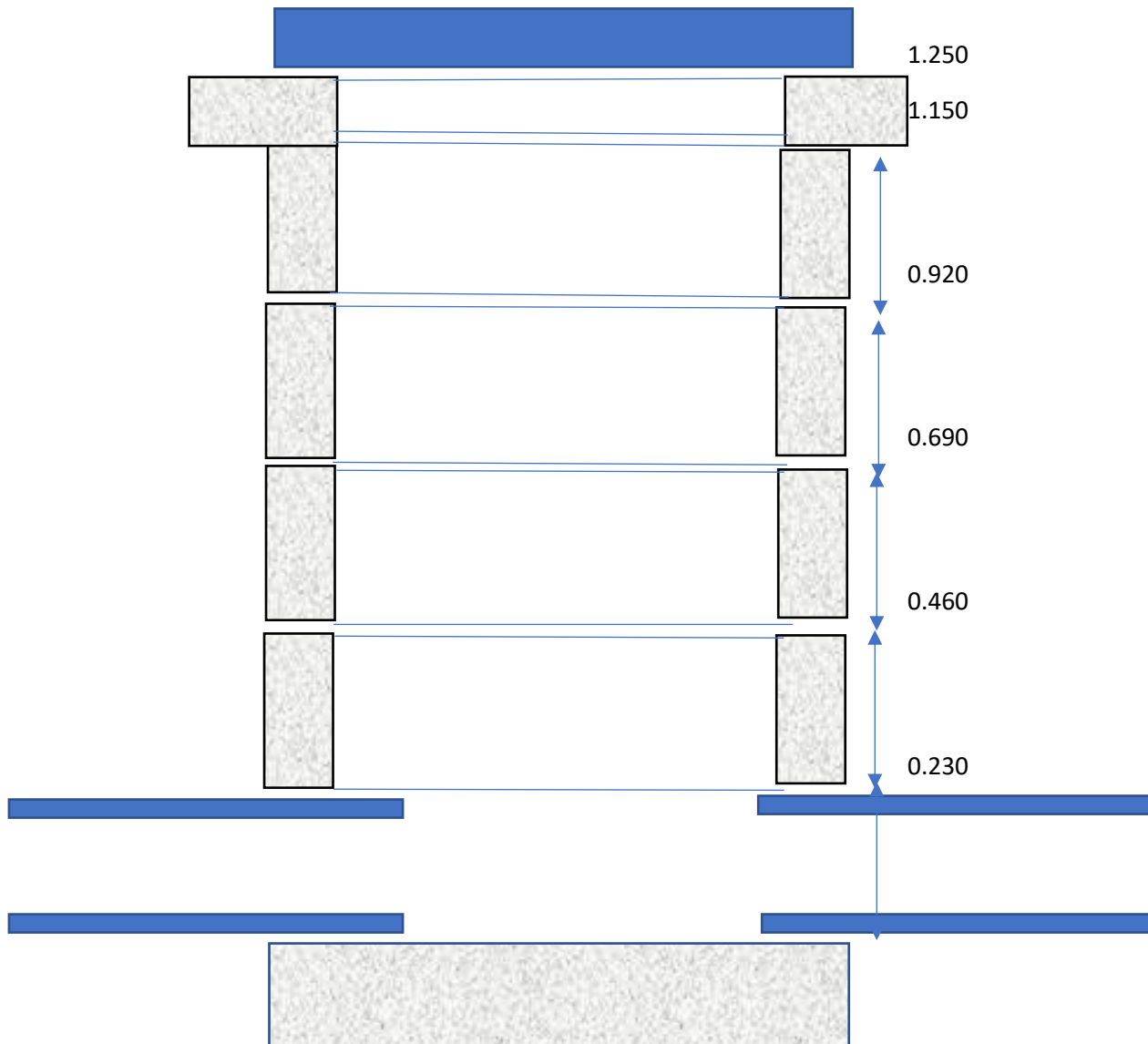
Crate = 1 x £31.05 £31.05

Membrane 10m x 1 m =1 x £21.59 £21.59

Total £168.60

Grand Total £432.64

## Alternative construction



Top level concrete blocks laid flat.  
X5

Each level 5 concrete block

5 levels = 25 blocks 440 x 215 x 100

Total blocks = 30 blocks

## Materials Required

Concrete base 800 x 650 x 150 (166KG)

Cement 2 bags (50kg) (42kg) = 2 x £4.75 (wicks) = £9.50

Ballast 6 bags (150kg) (124 kg) = 6 x £2.30(wicks) = £13.80

Blocks Standard dense block 7.3NM 440 x 215 x 100 = 30 @ £1.75 at Wicks = £52.25

Mortor

Cement 3bags = 3 X £4.75 (wicks) = £ 14.25

Sand 15 bags = 15 x £2.00 (wicks) £30.00

Manhole cover 600 x 450 Clark-Drain Manhole Cover and Frame Ductile Iron 450mm x 600mm

854105 = £99. (Travis Perkins)

Total £218

French Drain

150mm x 6M perforated pipe =4 x £22.68 £90.72

150mm pipe couplers =4 x £3.08 £9.24

150mm seals =8 x £2 £16.00

Crate = 1 x £31.05 £31.05

Membrane 10m x 1 m =1 x £21.59 £21.59

Total £168.60

Grand total £386.60