

Case Study of Pipe and Standard Fittings Vs Bespoke Fabrications

After speaking with the Contractors Purchasing Dept. we were invited to a particular site to review the planned drawings to ascertain whether Plasflow could offer a commercially beneficial alternative to the initially proposed standard pipe and fittings package which would be assembled / installed using electrofusion couplers and/or on-site butt fusion. After careful review of the drawings we submitted our quotations in accordance with the planned drawings.

Option 1

Standard fittings as per the standard enquiry c/w E/F Couplers.

Option 2

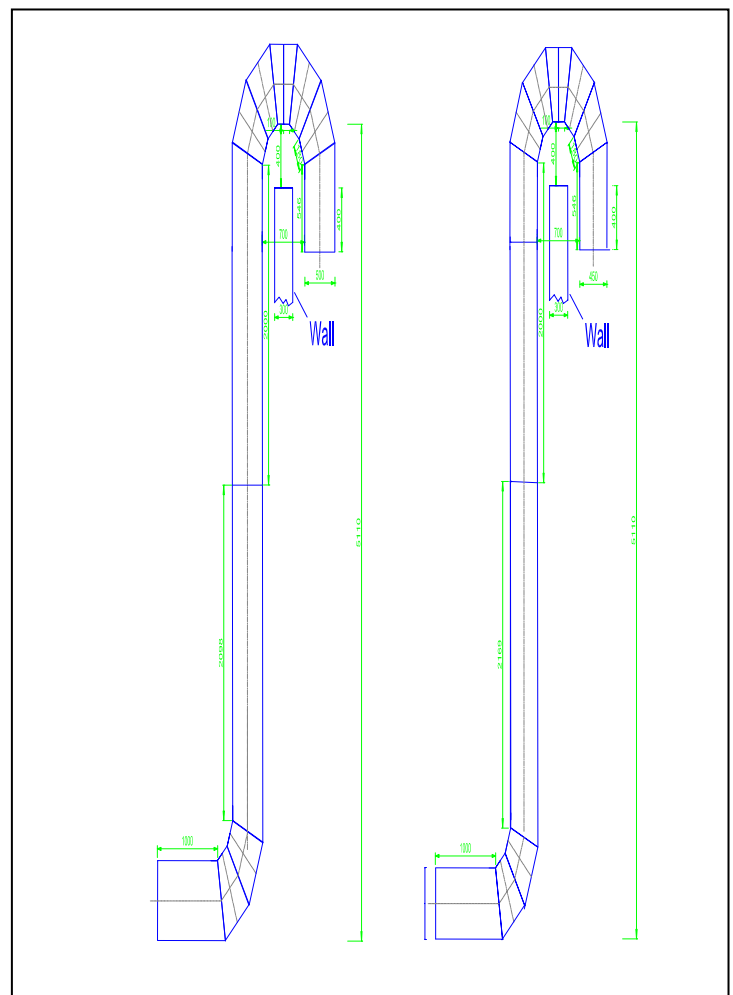
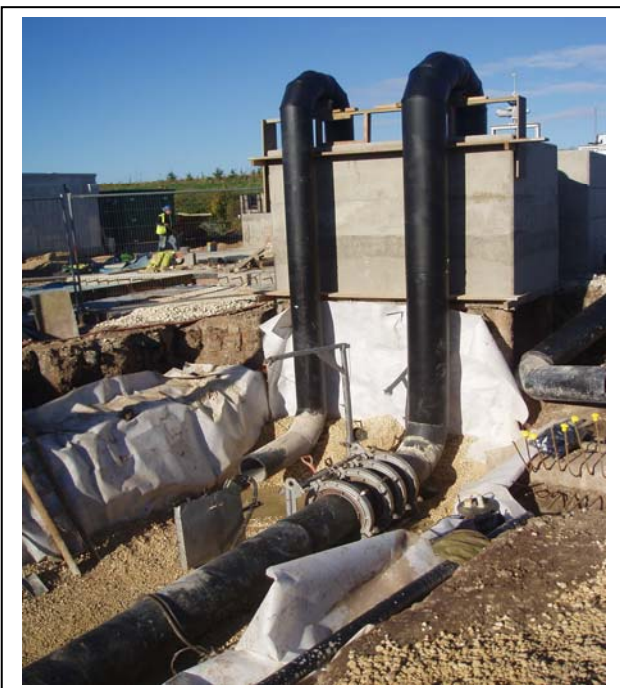
Fabrications supplied to the Installers requirements in order for them to be joined by the butt fusion machine or E/F Couplers.

Option 3

Bespoke fabrications designed and drawn, taking into consideration the ongoing civils work being carried out, a desire to reduce installation time and overall cost. We were also asked if we could recommend an Installer, for which we nominated a company who we had worked closely with in the past.

Area 1 - "S" Fabrications

- 1 x 250mm PE100 SDR17 "S" Fabrication
- 1 x 400mm PE100 SDR17 "S" Fabrication
- 1 x 450mm PE100 SDR17 "S" Fabrication
- 1 x 500mm PE100 SDR17 "S" Fabrication



Notes

It has been assumed that for cost comparison the amount of pipe required for the 3 options would be the same and that 3 x 90° Bends would be needed.

Option 1

If this was to be supplied as standard parts then they would consist of:-

3 x 90° Bends – each size

5m of pipe – each size

To install would then require:-

- 3 x 250mm Ø E/F Couplers - £60.27 each = £180.81
- 3 x 400mm Ø E/F Couplers - £175.24 each = £525.72
- 3 x 450mm Ø E/F Couplers - £208.65 each = £625.95
- 3 x 500mm Ø E/F Couplers - £298.24 each = £894.72

Material Total = £2,227.23

Labour of the Installers men

2 men cutting pipe to length, preparing, aligning and E/F welding would possibly assemble all 4 items in 2 days including machine hire = £600.00/day

Labour Total = £1,200.00

JOB TOTAL = £3,427.23

Option 2

If this was to be supplied as standard parts then they would consist of:-

3 x 90° Bends – each size

5m of pipe – each size

To install would then require:-

- 1 x 250mm Ø E/F Couplers - £60.27 each
- 1 x 400mm Ø E/F Couplers - £175.24 each
- 1 x 450mm Ø E/F Couplers - £208.65 each
- 1 x 500mm Ø E/F Couplers - £298.24 each

Material Total = £742.40

The Butt Fusion machines of the Installer have limited capabilities, therefore should this option be taken the fabrications would have to have the 180° bends at the top made by E/F coupling 2 of the 90° bends together then 2 butt fusion welds to join to the 5m of pipe.

Labour of the Installers men

2 men cutting pipe to length, preparing, aligning and E/F welding and butt fusion welding would possibly assemble all 4 items in 2 days including machine hire = £600.00/day

Labour Total = £1,200.00

JOB TOTAL = £1,942.40

Option 3

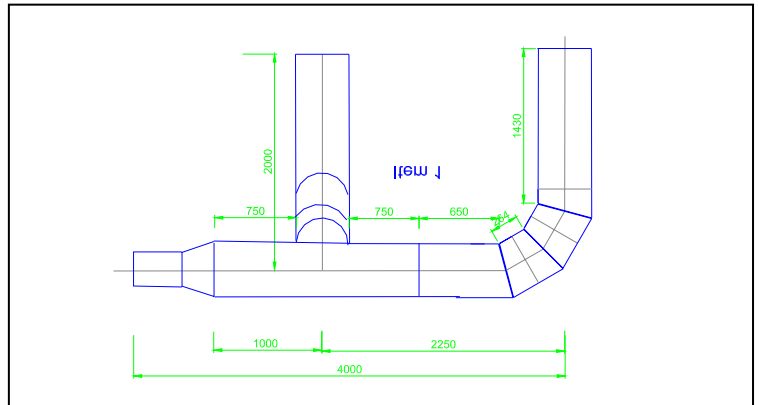
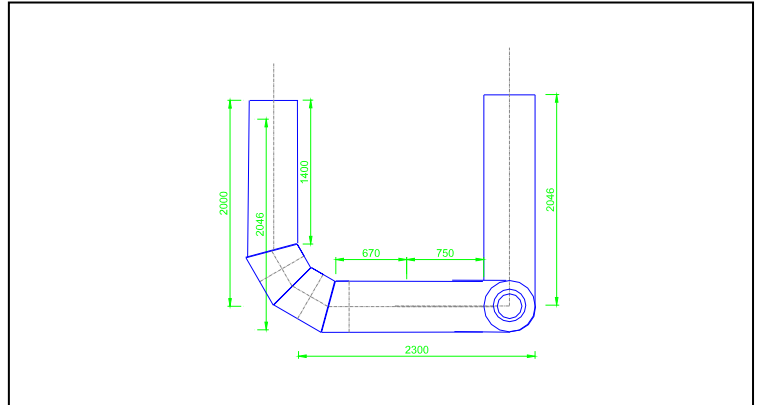
With Bespoke Fabrications, the material required and labour content are exactly the same as supplying standard fittings and pipe. On such fabrications there would be a premium cost added to cover the handling/setting up etc in the machines.

Premium = £500.00

Summary

Bespoke fabrication saves £2,027.23 over Option 1 and £1,442.40 over Option 2.

Area 2 - 500mm Ø Connection to Storm Tank/Flushing Point Fabrication



Notes

It has been assumed that for cost comparison the amount of pipe required for the 3 options would be the same and that 2 x 90° Bends, 1 x Equal T and 1 x 500 to 315 Concentric Reducer would be needed.

Option 1

If this was to be supplied as standard parts then they would consist of:-

- 2 x 500mm Ø 90° Bends
- 1 x 500mm Ø Equal T
- 1 x 500mm to 315mm Concentric Reducer

To install would then require:-

- 3 x 500mm Ø E/F Couplers - £298.24 each = £894.72

Material Total = £894.72

Labour of the Installers men

2 men cutting to length, preparing, aligning and E/F welding would possibly assemble all 3 joints in a day including machine hire = £600.00/day

Labour Total = £600.00

JOB TOTAL = £1,494.72

Option 2

This would be almost impossible to do in a butt fusion machine on site to the dimensions required

Option 3

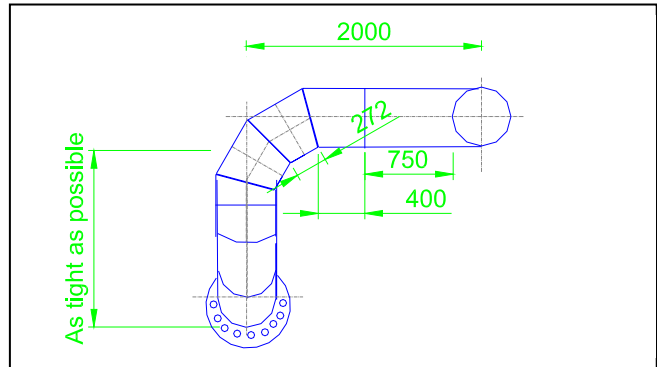
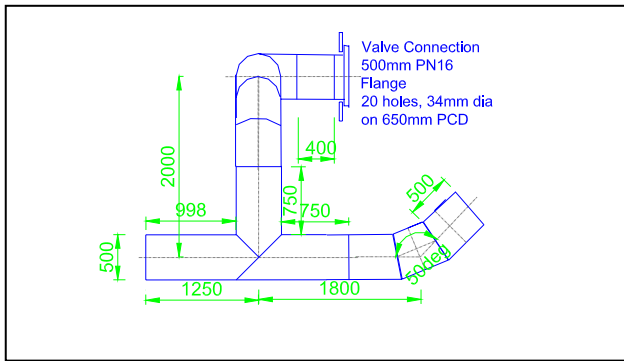
With Bespoke Fabrications, the material required and labour content are exactly the same as supplying standard fittings and pipe. On such fabrications there would be a premium cost added to cover the handling/setting up etc in the machines.

Premium = £300.00

Summary

Bespoke fabrication saves £1,194.75 over Option 1

Area 3 – 500mm Ø Drain Point Valve Connection



Notes

It has been assumed that for cost comparison the amount of pipe required for the 3 options would be the same and that 2 x 90° Bends, 1 x Equal T, 1 x 50° Bend and 1 x 500 Stub Flange Assembly would be needed.

Option 1

If this was to be supplied as standard parts then they would consist of:-

- 2 x 500mm Ø 90° Bends
- 1 x 500mm Ø Equal T
- 1 x 500mm Ø 50° Bend
- 1 x 500mm Ø PN16 Stub Flange Assembly

To install would then require:-

- 4 x 500mm Ø E/F Couplers - £298.24 each = £1,192.96

Material Total = £1,192.96

Labour of the Installers men

2 men cutting to length, preparing, aligning and E/F welding would possibly assemble all 4 joints in a day including machine hire = £600.00/day

Labour Total = £600.00

JOB TOTAL = £1,792.96

Option 2

This would be almost impossible to do in a butt fusion machine on site to the dimensions required

Option 3

With Bespoke Fabrications, the material required and labour content are exactly the same as supplying standard fittings and pipe. On such fabrications there would be a premium cost added to cover the handling/setting up etc in the machines.

Premium = £300.00

Summary

Bespoke fabrication saves £1,492.96 over Option 1

Conclusion

Benefits

- **Cost Savings on these 3 area's amounted to £4,714.94 – conservative calculation**
- **Pre-fabrication in our factory is a more controlled environment for quality purposes**
- **Off – site fabrication is not weather dependant.**
- **Fabrications can be made, held in our yard to deliver 'just in time' – saves site space and potential damage.**
- **Manipulation of large items is easier and safer within in our factory.**
- **Generally the more complex and larger the fabrication the most economic route is factory fabricated.**
- **The leadtime is often no longer than buying the individual parts.**

Downside

- **Transportation of such items.**
- **There is a greater dependency on drawings and site measures for 'right first time'**