

Project: Kirkby BESS L33 7TT	Date: 03/02/2026		
	Designed by: NS	Checked by:	Approved By:
Report Details: Type: Inflows Storm Phase: Phase	Company Address: Barnsley Marshall Limited B60 4FG		





Catchment Area

Type : Catchment Area

Area (ha)	0.005
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.005	0.750	100

Weighted Averages

Area (ha)	0.005
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (1)

Type : Catchment Area

Area (ha)	0.018
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.018	0.750	100

Weighted Averages

Area (ha)	0.018
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (2)

Type : Catchment Area

Area (ha)	0.018
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.018	0.750	100

Weighted Averages

Area (ha)	0.018
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (3)

Type : Catchment Area

Area (ha)	0.009
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.009	0.750	100

Weighted Averages

Area (ha)	0.009
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (4)

Type : Catchment Area

Area (ha)	0.005
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.005	0.750	100

Weighted Averages

Area (ha)	0.005
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (5)

Type : Catchment Area

Area (ha)	0.018
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.018	0.750	100

Weighted Averages

Area (ha)	0.018
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (6)

Type : Catchment Area

Area (ha)	0.018
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.018	0.750	100

Weighted Averages

Area (ha)	0.018
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (7)

Type : Catchment Area

Area (ha)	0.009
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.009	0.750	100

Weighted Averages

Area (ha)	0.009
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (8)

Type : Catchment Area

Area (ha)	0.022
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.022	0.750	100

Weighted Averages

Area (ha)	0.022
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (9)

Type : Catchment Area

Area (ha)	0.024
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.024	0.750	100

Weighted Averages

Area (ha)	0.024
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (10)

Type : Catchment Area

Area (ha)	0.014
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.014	0.750	100

Weighted Averages

Area (ha)	0.014
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (11)

Type : Catchment Area

Area (ha)	0.013
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.013	0.750	100

Weighted Averages

Area (ha)	0.013
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (12)

Type : Catchment Area

Area (ha)	0.022
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.022	0.750	100

Weighted Averages

Area (ha)	0.022
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (13)

Type : Catchment Area

Area (ha)	0.012
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.012	0.750	100

Weighted Averages

Area (ha)	0.012
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (14)

Type : Catchment Area

Area (ha)	0.036
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.036	0.750	100

Weighted Averages

Area (ha)	0.036
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (15)

Type : Catchment Area

Area (ha)	0.019
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.019	0.750	100

Weighted Averages

Area (ha)	0.019
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (16)

Type : Catchment Area

Area (ha)	0.013
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.013	0.750	100

Weighted Averages

Area (ha)	0.013
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (17)

Type : Catchment Area

Area (ha)	0.011
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.011	0.750	100

Weighted Averages

Area (ha)	0.011
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (18)

Type : Catchment Area

Area (ha)	0.028
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.028	0.750	100

Weighted Averages

Area (ha)	0.028
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (19)

Type : Catchment Area

Area (ha)	0.012
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.012	0.750	100

Weighted Averages

Area (ha)	0.012
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (20)

Type : Catchment Area

Area (ha)	0.03
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.03	0.750	100

Weighted Averages

Area (ha)	0.03
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (21)

Type : Catchment Area

Area (ha)	0.008
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.008	0.750	100

Weighted Averages

Area (ha)	0.008
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (22)

Type : Catchment Area

Area (ha)	0.009
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.009	0.750	100

Weighted Averages

Area (ha)	0.009
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (23)

Type : Catchment Area

Area (ha)	0.022
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.022	0.750	100

Weighted Averages

Area (ha)	0.022
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (24)

Type : Catchment Area

Area (ha)	0.01
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.01	0.750	100

Weighted Averages

Area (ha)	0.01
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (25)

Type : Catchment Area

Area (ha)	0.025
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.025	0.750	100

Weighted Averages

Area (ha)	0.025
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (26)

Type : Catchment Area

Area (ha)	0.027
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.027	0.750	100

Weighted Averages

Area (ha)	0.027
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (27)

Type : Catchment Area

Area (ha)	0.007
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.007	0.750	100

Weighted Averages

Area (ha)	0.007
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

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Catchment Area (28)

Type : Catchment Area

Area (ha)	0.003
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Land Use/Soil Type

Land Use Properties

Name	Area (ha)	Volumetric Runoff Coefficient	Percentage Impervious (%)
Default	0.003	0.750	100

Weighted Averages

Area (ha)	0.003
Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100

Project: Kirkby BESS L33 7TT	Date: 03/02/2026		
	Designed by: NS	Checked by:	Approved By:
Report Details: Type: Junctions Storm Phase: Phase	Company Address: Barnsley Marshall Limited B60 4FG		



Name	Junction Type	Easting (m)	Northing (m)	Cover Level (m)	Depth (m)	Invert Level (m)	Chamber Shape	Diameter (m)
S23	Manhole	343600.437	397167.202	41.360	1.204	40.156	Circular	0.600
S24	Manhole	343643.900	397159.597	42.120	2.222	39.898	Circular	0.600
S25	Manhole	343682.030	397153.321	42.870	3.128	39.742	Circular	0.600
S22	Manhole	343678.979	397134.793	42.590	2.944	39.646	Circular	0.600
S19	Manhole	343677.983	397128.817	42.590	2.972	39.618	Circular	0.600
S16	Manhole	343675.211	397112.195	42.230	2.696	39.534	Circular	1.200
SFC	Manhole	343673.914	397108.914	41.960	2.465	39.495	Circular	2.100
S20	Manhole	343620.677	397144.290	41.670	0.975	40.695	Circular	0.600
S21	Manhole	343649.681	397139.600	42.260	1.765	40.495	Circular	0.600
S17	Manhole	343619.356	397138.318	41.700	0.975	40.725	Circular	0.600
S18	Manhole	343648.791	397133.686	42.250	1.711	40.539	Circular	0.600
S00	Manhole	343558.306	397170.741	41.490	1.050	40.440	Circular	0.600
S01	Manhole	343587.587	397165.818	41.400	1.158	40.242	Circular	0.600
S02	Manhole	343592.987	397161.598	41.350	1.204	40.146	Circular	0.450
S03	Manhole	343590.254	397146.840	41.390	1.344	40.046	Circular	0.600
S06	Manhole	343610.802	397116.324	41.570	0.600	40.970	Circular	0.600
S23a	Manhole	343614.346	397164.755	41.583	1.505	40.078	Circular	0.600
S07	Manhole	343672.084	397106.237	41.760	1.151	40.609	Circular	1.200
S26	Manhole	343672.707	397137.084	42.560	1.060	41.500	Circular	0.600
S27	Manhole	343653.009	397140.327	42.330	0.963	41.367	Circular	0.600
S28	Manhole	343632.350	397143.727	41.910	0.683	41.227	Circular	0.600
S29	Manhole	343620.120	397145.740	41.670	0.670	41.000	Circular	0.600
S30	Manhole	343614.675	397136.333	41.730	1.200	40.530	Circular	0.600
S32	Manhole	343611.930	397120.780	41.750	1.850	39.900	Circular	0.600
S11	Manhole	343604.312	397148.416	41.570	0.950	40.620	Circular	0.450
S04	Manhole	343609.445	397118.339	41.558	1.684	39.875	Circular	1.200
S23b	Manhole	343612.874	397156.910	41.550	0.606	40.944	Circular	0.450
S03a	Manhole	343602.404	397128.817	41.512	1.568	39.944	Circular	0.600
S03b	Manhole	343605.865	397131.352	41.790	0.600	41.190	Circular	0.450

Project: Kirkby BESS L33 7TT	Date: 03/02/2026		
	Designed by: NS	Checked by:	Approved By:
Report Details: Type: Junctions Storm Phase: Phase	Company Address: Barnsley Marshall Limited B60 4FG		



Name	Lock
S23	None
S24	None
S25	None
S22	None
S19	None
S16	None
SFC	None
S20	None
S21	None
S17	None
S18	None
S00	None
S01	None
S02	None
S03	None
S06	None
S23a	None
S07	None
S26	None
S27	None
S28	None
S29	None
S30	None
S32	None
S11	None
S04	None
S23b	None
S03a	None
S03b	None

Project: Kirkby BESS L33 7TT	Date: 03/02/2026		
	Designed by: NS	Checked by:	Approved By:
Report Details: Type: Junctions Storm Phase: Phase	Company Address: Barnsley Marshall Limited B60 4FG		

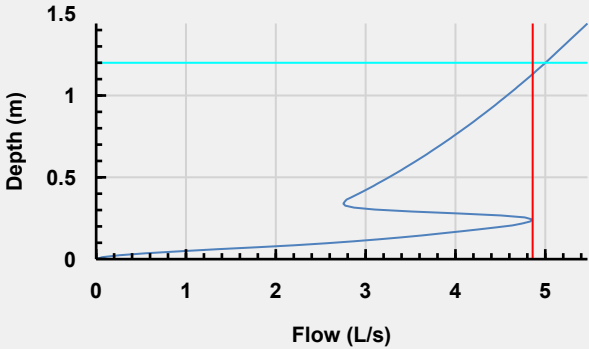


Inlets

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
S23	Inlet	Catchment Area (10)	(None)	No Restriction
S24	Inlet (1)	Catchment Area (24)	(None)	No Restriction
	Inlet (2)	Pipe 22a	(None)	No Restriction
S25	Inlet (3)	Catchment Area (22)	(None)	No Restriction
	Inlet	Pipe 23	(None)	No Restriction
S22	Inlet (1)	Catchment Area (27)	(None)	No Restriction
	Inlet	Pipe 24	(None)	No Restriction
S19	Inlet (1)	Pipe 20	(None)	No Restriction
	Inlet (2)	Catchment Area (26)	(None)	No Restriction
	Inlet	Pipe 21	(None)	No Restriction
	Inlet (1)	Pipe 17	(None)	No Restriction
S16	Inlet (2)	Catchment Area (19)	(None)	No Restriction
	Inlet (3)	Catchment Area (28)	(None)	No Restriction
SFC	Inlet	Pipe 18	(None)	No Restriction
	Inlet (1)	Catchment Area (21)	(None)	No Restriction
	Inlet	Pipe 15	(None)	No Restriction
S20	Inlet (1)	Pipe 7	(None)	No Restriction
	Inlet (2)	Pipe 25	(None)	No Restriction
S21	Inlet	Catchment Area (23)	(None)	No Restriction
	Inlet (1)	Pipe 19	(None)	No Restriction
S17	Inlet (1)	Catchment Area (25)	(None)	No Restriction
	Inlet	Catchment Area (16)	(None)	No Restriction
S18	Inlet	Pipe 16	(None)	No Restriction
	Inlet (1)	Catchment Area (17)	(None)	No Restriction
S00	Inlet	Catchment Area (8)	(None)	No Restriction
S01	Inlet	Pipe 0	(None)	No Restriction
	Inlet (1)	Catchment Area (9)	(None)	No Restriction
S02	Inlet	Pipe 1	(None)	No Restriction
S03	Inlet	Pipe 2	(None)	No Restriction
	Inlet (1)	Catchment Area (11)	(None)	No Restriction
	Inlet (2)	Pipe 10	(None)	No Restriction
S06	Inlet	Catchment Area (13)	(None)	No Restriction
	Inlet (1)	Catchment Area (14)	(None)	No Restriction
	Inlet (2)	Catchment Area (15)	(None)	No Restriction
S23a	Inlet	Pipe 22	(None)	No Restriction
	Inlet (1)	Pipe22b	(None)	No Restriction
S07	Inlet	Catchment Area (18)	(None)	No Restriction
	Inlet (1)	Pipe 6	(None)	No Restriction
S26	Inlet	Catchment Area (4)	(None)	No Restriction
S27	Inlet	Pipe 26	(None)	No Restriction
	Inlet (1)	Catchment Area (5)	(None)	No Restriction
S28	Inlet	Pipe 27	(None)	No Restriction
	Inlet (1)	Catchment Area (6)	(None)	No Restriction
S29	Inlet	Pipe 28	(None)	No Restriction
	Inlet (1)	Catchment Area (7)	(None)	No Restriction
S30	Inlet	Pipe 29	(None)	No Restriction
S32	Inlet	Pipe 30	(None)	No Restriction
S04	Inlet	Pipe 3a	(None)	No Restriction
S23b	Inlet	Catchment Area (12)	(None)	No Restriction
S03a	Inlet	Pipe 3	(None)	No Restriction
	Inlet (1)	Pipe 3b	(None)	No Restriction

Project: Kirkby BESS L33 7TT		Date: 03/02/2026			
		Designed by: NS	Checked by:		Approved By:
Report Details: Type: Junctions Storm Phase: Phase		Company Address: Barnsley Marshall Limited B60 4FG			

Outlets

Junction	Outlet Name	Outgoing Connection	Outlet Type
S23	Outlet	Pipe 22	Free Discharge
S24	Outlet	Pipe 23	Free Discharge
S25	Outlet	Pipe 24	Free Discharge
S22	Outlet	Pipe 21	Free Discharge
S19	Outlet	Pipe 18	Free Discharge
S16	Outlet	Pipe 15	Free Discharge
SFC	Outlet	(None)	Hydro-Brake®
	Invert Level (m)	39.495	
	Design Depth (m)	1.200	
	Design Flow (L/s)	5.0	
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☐	
	Unit Reference	CHE-0098-5000-1200-5000	
			
S20	Outlet	Pipe 19	Free Discharge
S21	Outlet	Pipe 20	Free Discharge
S17	Outlet	Pipe 16	Free Discharge
S18	Outlet	Pipe 17	Free Discharge
S00	Outlet	Pipe 0	Free Discharge
S01	Outlet	Pipe 1	Free Discharge
S02	Outlet	Pipe 2	Free Discharge
S03	Outlet	Pipe 3	Free Discharge
S06	Outlet	Pipe 6	Free Discharge
S23a	Outlet	Pipe 22a	Free Discharge
S07	Outlet	Pipe 7	Free Discharge
S26	Outlet	Pipe 26	Free Discharge
S27	Outlet	Pipe 27	Free Discharge
S28	Outlet	Pipe 28	Free Discharge
S29	Outlet	Pipe 29	Free Discharge
S30	Outlet	Pipe 30	Free Discharge
S32	Outlet	Pipe 31	Free Discharge
S11	Outlet	Pipe 10	Free Discharge
S04	Outlet	Pipe 5	Free Discharge
S23b	Outlet	Pipe22b	Free Discharge
S03a	Outlet	Pipe 3a	Free Discharge
S03b	Outlet	Pipe 3b	Free Discharge

Project: Kirkby BESS L33 7TT	Date: 03/02/2026		
	Designed by: NS	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Company Address: Barnsley Marshall Limited B60 4FG		



Cellular Storage

Type : Cellular Storage

Dimensions	
Exceedance Level (m)	41.750
Depth (m)	1.600
Base Level (m)	39.495
Number of Crates Long	5
Number of Crates Wide	121
Number of Crates High	4
Porosity (%)	95
Crate Length (m)	1
Crate Width (m)	0.5
Crate Height (m)	0.4
Total Volume (m³)	460.455

Project: Kirkby BESS L33 7TT	Date: 03/02/2026		
	Designed by: NS	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Phase	Company Address: Barnsley Marshall Limited B60 4FG		



Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Pipe 31
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (1)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (3)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (2)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (4)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (3)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (5)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (20)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (6)

Inlet Type	Point Inflow
Incoming Item(s)	Pipe 5
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	Pipe 25
Outlet Type	Free Discharge

Project: Kirkby BESS L33 7TT		Date: 03/02/2026			
		Designed by: NS	Checked by:		Approved By:
Report Details: Type: Connections Storm Phase: Phase		Company Address: Barnsley Marshall Limited B60 4FG			

Name	Length (m)	Connection Type	Slope (1:X)	Manning's n	Colebrook-White Roughness (mm)	Diameter / Base Width (mm)	Upstream Cover Level (m)	Upstream Invert Level (m)
Pipe 23	38.643	Pipe	247.724		0.6	225	42.120	39.898
Pipe 24	18.778	Pipe	195.586		0.6	225	42.870	39.742
Pipe 21	6.058	Pipe	215.043		0.6	225	42.590	39.646
Pipe 18	16.851	Pipe	200.000		0.6	225	42.590	39.618
Pipe 15	3.528	Pipe	91.469		0.6	225	42.230	39.534
Pipe 19	29.381	Pipe	146.894		0.6	225	41.670	40.695
Pipe 20	29.689	Pipe	34.970		0.6	225	42.260	40.495
Pipe 16	29.797	Pipe	160.000		0.6	225	41.700	40.725
Pipe 17	29.596	Pipe	32.136		0.6	225	42.250	40.539
Pipe 0	29.692	Pipe	149.958		0.6	150	41.490	40.440
Pipe 1	6.853	Pipe	71.390		0.6	150	41.400	40.242
Pipe 2	15.009	Pipe	150.551		0.6	150	41.350	40.146
Pipe 22a	30.001	Pipe	166.671		0.6	225	41.583	40.078
Pipe 6	62.107	Pipe	172.042		0.6	225	41.570	40.970
Pipe 7	3.243	Pipe	2.911		0.6	225	41.760	40.609
Pipe 26	19.963	Pipe	150.000		0.6	150	42.560	41.500
Pipe 27	20.937	Pipe	150.000		0.6	150	42.330	41.367
Pipe 28	12.394	Pipe	54.520		0.6	225	41.910	41.227
Pipe 29	10.869	Pipe	23.126		0.6	225	41.670	41.000
Pipe 30	15.794	Pipe	25.070		0.6	225	41.730	40.530
Pipe 31	1.697	Pipe	339.421		0.6	225	41.750	39.900
Pipe 25	2.023	Pipe	0.000		0.6	525	41.750	39.495
Pipe 3	21.736	Pipe	212.467		0.6	225	41.390	40.046
Pipe 22	14.122	Pipe	181.431		0.6	225	41.360	40.156
Pipe 10	14.146	Pipe	24.658		0.6	150	41.570	40.620
Pipe 5	2.946	Pipe	7.762		0.6	225	41.558	39.875
Pipe22b	7.982	Pipe	9.217		0.6	150	41.550	40.944
Pipe 3a	12.623	Pipe	181.647		0.6	225	41.512	39.944
Pipe 3b	4.290	Pipe	3.443		0.6	150	41.790	41.190

Project: Kirkby BESS L33 7TT		Date: 03/02/2026			
Report Details: Type: Connections Storm Phase: Phase		Designed by: NS	Checked by:		Approved By:
		Company Address: Barnsley Marshall Limited B60 4FG			

Name	Downstream Cover Level (m)	Downstream Invert Level (m)	Part Family	Lock	Culvert Type	Culvert Entrance	Wall Thickness (mm)	Material
Pipe 23	42.870	39.742		None	(None)	(None)	0	
Pipe 24	42.590	39.646		None	(None)	(None)	0	
Pipe 21	42.590	39.618		None	(None)	(None)	0	
Pipe 18	42.230	39.534		None	(None)	(None)	0	
Pipe 15	41.960	39.495		None	(None)	(None)	0	
Pipe 19	42.260	40.495		None	(None)	(None)	0	
Pipe 20	42.590	39.646		None	(None)	(None)	0	
Pipe 16	42.250	40.539		None	(None)	(None)	0	
Pipe 17	42.590	39.618		None	(None)	(None)	0	
Pipe 0	41.400	40.242		None	(None)	(None)	0	
Pipe 1	41.350	40.146		None	(None)	(None)	0	
Pipe 2	41.390	40.046		None	(None)	(None)	0	
Pipe 22a	42.120	39.898		None	(None)	(None)	0	
Pipe 6	41.760	40.609		None	(None)	(None)	0	
Pipe 7	41.960	39.495		None	(None)	(None)	0	
Pipe 26	42.330	41.367		None	(None)	(None)	0	
Pipe 27	41.910	41.227		None	(None)	(None)	0	
Pipe 28	41.670	41.000		None	(None)	(None)	0	
Pipe 29	41.730	40.530		None	(None)	(None)	0	
Pipe 30	41.750	39.900		None	(None)	(None)	0	
Pipe 31	41.750	39.895		All	(None)	(None)	0	
Pipe 25	41.960	39.495		None	(None)	(None)	0	
Pipe 3	41.512	39.944		None	(None)	(None)	0	
Pipe 22	41.583	40.078		None	(None)	(None)	0	
Pipe 10	41.390	40.046		None	(None)	(None)	0	
Pipe 5	41.750	39.495		None	(None)	(None)	0	
Pipe22b	41.583	40.078		None	(None)	(None)	0	
Pipe 3a	41.558	39.875		None	(None)	(None)	0	
Pipe 3b	41.512	39.944		None	(None)	(None)	0	

Project: Kirkby BESS L33 7TT		Date: 03/02/2026			
		Designed by: NS	Checked by:		Approved By:
Report Details: Type: Connections Storm Phase: Phase		Company Address: Barnsley Marshall Limited B60 4FG			

Name	Trench Width (mm)	Bedding Material	Surrounding Material
Pipe 23	0		
Pipe 24	0		
Pipe 21	0		
Pipe 18	0		
Pipe 15	0		
Pipe 19	0		
Pipe 20	0		
Pipe 16	0		
Pipe 17	0		
Pipe 0	0		
Pipe 1	0		
Pipe 2	0		
Pipe 22a	0		
Pipe 6	0		
Pipe 7	0		
Pipe 26	0		
Pipe 27	0		
Pipe 28	0		
Pipe 29	0		
Pipe 30	0		
Pipe 31	0		
Pipe 25	0		
Pipe 3	0		
Pipe 22	0		
Pipe 10	0		
Pipe 5	0		
Pipe22b	0		
Pipe 3a	0		
Pipe 3b	0		

Project: Kirkby BESS L33 7TT		Date: 03/02/2026			
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: NS	Checked by:		Approved By:
		Company Address: Barnsley Marshall Limited B60 4FG			

Name	Cover Level (m) Invert Level (m)		Connection Details				Type
Coordinates (m)	Depth (m)	Manhole Size (m)	Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S23	41.360 40.156	Diameter / Length: 0.600					Manhole
E:343600.437 N:397167.202	1.204						
			{a} Pipe 22	Pipe	40.156	Diam/Width:225	Not Applicable
S24	42.120 39.898	Diameter / Length: 0.600	{1} Pipe 22a	Pipe	39.898	Diam/Width:225	Manhole
E:343643.900 N:397159.597	2.222						
			{a} Pipe 23	Pipe	39.898	Diam/Width:225	Not Applicable
S25	42.870 39.742	Diameter / Length: 0.600	{1} Pipe 23	Pipe	39.742	Diam/Width:225	Manhole
E:343682.030 N:397153.321	3.128						
			{a} Pipe 24	Pipe	39.742	Diam/Width:225	Not Applicable
S22	42.590 39.646	Diameter / Length: 0.600	{1} Pipe 24	Pipe	39.646	Diam/Width:225	Manhole
E:343678.979 N:397134.793	2.944		{2} Pipe 20	Pipe	39.646	Diam/Width:225	
			{a} Pipe 21	Pipe	39.646	Diam/Width:225	Not Applicable

Project: Kirkby BESS L33 7TT		Date: 03/02/2026			
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: NS	Checked by:		Approved By:
		Company Address: Barnsley Marshall Limited B60 4FG			

Name	Cover Level (m) Invert Level (m)		Connection Details				Type
Coordinates (m)	Depth (m)	Manhole Size (m)	Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S19	42.590 39.618	Diameter / Length: 0.600	{1} Pipe 21	Pipe	39.618	Diam/Width:225	Manhole
E:343677.983 N:397128.817	2.972		{2} Pipe 17	Pipe	39.618	Diam/Width:225	
			{a} Pipe 18	Pipe	39.618	Diam/Width:225	Not Applicable
S16	42.230 39.534	Diameter / Length: 1.200	{1} Pipe 18	Pipe	39.534	Diam/Width:225	Manhole
E:343675.211 N:397112.195	2.696						
			{a} Pipe 15	Pipe	39.534	Diam/Width:225	Not Applicable
SFC	41.960 39.495	Diameter / Length: 2.100	{1} Pipe 15	Pipe	39.495	Diam/Width:225	Manhole
E:343673.914 N:397108.914	2.465		{2} Pipe 7	Pipe	39.495	Diam/Width:225	
			{3} Pipe 25	Pipe	39.495	Diam/Width:525	
							Not Applicable
S20	41.670 40.695	Diameter / Length: 0.600					Manhole
E:343620.677 N:397144.290	0.975		{a} Pipe 19	Pipe	40.695	Diam/Width:225	Not Applicable

Project: Kirkby BESS L33 7TT		Date: 03/02/2026			
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: NS	Checked by:		Approved By:
		Company Address: Barnsley Marshall Limited B60 4FG			

Name	Cover Level (m) Invert Level (m)		Connection Details				Type
Coordinates (m)	Depth (m)	Manhole Size (m)	Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S21	42.260 40.495	Diameter / Length: 0.600	{1} Pipe 19	Pipe	40.495	Diam/Width:225	Manhole
E:343649.681 N:397139.600	1.765						
			{a} Pipe 20	Pipe	40.495	Diam/Width:225	Not Applicable
S17	41.700 40.725	Diameter / Length: 0.600					Manhole
E:343619.356 N:397138.318	0.975						
			{a} Pipe 16	Pipe	40.725	Diam/Width:225	Not Applicable
S18	42.250 40.539	Diameter / Length: 0.600	{1} Pipe 16	Pipe	40.539	Diam/Width:225	Manhole
E:343648.791 N:397133.686	1.711						
			{a} Pipe 17	Pipe	40.539	Diam/Width:225	Not Applicable
S00	41.490 40.440	Diameter / Length: 0.600					Manhole
E:343558.306 N:397170.741	1.050						
			{a} Pipe 0	Pipe	40.440	Diam/Width:150	Not Applicable
S01	41.400 40.242	Diameter / Length: 0.600	{1} Pipe 0	Pipe	40.242	Diam/Width:150	Manhole
E:343587.587 N:397165.818	1.158						
			{a} Pipe 1	Pipe	40.242	Diam/Width:150	Not Applicable

Project: Kirkby BESS L33 7TT		Date: 03/02/2026			
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: NS	Checked by:		Approved By:
		Company Address: Barnsley Marshall Limited B60 4FG			

Name	Cover Level (m) Invert Level (m)		Connection Details				Type
Coordinates (m)	Depth (m)	Manhole Size (m)	Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S02	41.350 40.146	Diameter / Length: 0.450	{1} Pipe 1	Pipe	40.146	Diam/Width:150	Manhole
E:343592.987 N:397161.598	1.204						
			{a} Pipe 2	Pipe	40.146	Diam/Width:150	Not Applicable
S03	41.390 40.046	Diameter / Length: 0.600	{1} Pipe 2	Pipe	40.046	Diam/Width:150	Manhole
E:343590.254 N:397146.840	1.344		{2} Pipe 10	Pipe	40.046	Diam/Width:150	
			{a} Pipe 3	Pipe	40.046	Diam/Width:225	Not Applicable
S06	41.570 40.970	Diameter / Length: 0.600					Manhole
E:343610.802 N:397116.324	0.600						
			{a} Pipe 6	Pipe	40.970	Diam/Width:225	Not Applicable
S23a	41.583 40.078	Diameter / Length: 0.600	{1} Pipe 22	Pipe	40.078	Diam/Width:225	Manhole
E:343614.346 N:397164.755	1.505		{2} Pipe22b	Pipe	40.078	Diam/Width:150	
			{a} Pipe 22a	Pipe	40.078	Diam/Width:225	Not Applicable

Project: Kirkby BESS L33 7TT		Date: 03/02/2026			
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: NS	Checked by:		Approved By:
		Company Address: Barnsley Marshall Limited B60 4FG			

Name	Cover Level (m) Invert Level (m)		Connection Details				Type
Coordinates (m)	Depth (m)	Manhole Size (m)	Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S07	41.760 40.609	Diameter / Length: 1.200	{1} Pipe 6	Pipe	40.609	Diam/Width:225	Manhole
E:343672.084 N:397106.237	1.151						
			{a} Pipe 7	Pipe	40.609	Diam/Width:225	Not Applicable
S26	42.560 41.500	Diameter / Length: 0.600					Manhole
E:343672.707 N:397137.084	1.060						
			{a} Pipe 26	Pipe	41.500	Diam/Width:150	Not Applicable
S27	42.330 41.367	Diameter / Length: 0.600	{1} Pipe 26	Pipe	41.367	Diam/Width:150	Manhole
E:343653.009 N:397140.327	0.963						
			{a} Pipe 27	Pipe	41.367	Diam/Width:150	Not Applicable
S28	41.910 41.227	Diameter / Length: 0.600	{1} Pipe 27	Pipe	41.227	Diam/Width:150	Manhole
E:343632.350 N:397143.727	0.683						
			{a} Pipe 28	Pipe	41.227	Diam/Width:225	Not Applicable
S29	41.670 41.000	Diameter / Length: 0.600	{1} Pipe 28	Pipe	41.000	Diam/Width:225	Manhole
E:343620.120 N:397145.740	0.670						
			{a} Pipe 29	Pipe	41.000	Diam/Width:225	Not Applicable

Project: Kirkby BESS L33 7TT		Date: 03/02/2026			
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: NS	Checked by:		Approved By:
		Company Address: Barnsley Marshall Limited B60 4FG			

Name	Cover Level (m) Invert Level (m)		Connection Details				Type
Coordinates (m)	Depth (m)	Manhole Size (m)	Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S30	41.730 40.530	Diameter / Length: 0.600	{1} Pipe 29	Pipe	40.530	Diam/Width:225	Manhole
E:343614.675 N:397136.333	1.200						
			{a} Pipe 30	Pipe	40.530	Diam/Width:225	Not Applicable
S32	41.750 39.900	Diameter / Length: 0.600	{1} Pipe 30	Pipe	39.900	Diam/Width:225	Manhole
E:343611.930 N:397120.780	1.850						
			{a} Pipe 31	Pipe	39.900	Diam/Width:225	Not Applicable
S11	41.570 40.620	Diameter / Length: 0.450					Manhole
E:343604.312 N:397148.416	0.950						
			{a} Pipe 10	Pipe	40.620	Diam/Width:150	Not Applicable
S04	41.558 39.875	Diameter / Length: 1.200	{1} Pipe 3a	Pipe	39.875	Diam/Width:225	Manhole
E:343609.445 N:397118.339	1.684						
			{a} Pipe 5	Pipe	39.875	Diam/Width:225	Not Applicable
S23b	41.550 40.944	Diameter / Length: 0.450					Manhole
E:343612.874 N:397156.910	0.606						
			{a} Pipe22b	Pipe	40.944	Diam/Width:150	Not Applicable

Project: Kirkby BESS L33 7TT		Date: 03/02/2026			
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: NS	Checked by:		Approved By:
		Company Address: Barnsley Marshall Limited B60 4FG			

Name	Cover Level (m) Invert Level (m)		Connection Details				Type
Coordinates (m)	Depth (m)	Manhole Size (m)	Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S03a	41.512 39.944	Diameter / Length: 0.600	{1} Pipe 3	Pipe	39.944	Diam/Width:225	Manhole
E:343602.404 N:397128.817	1.568		{2} Pipe 3b	Pipe	39.944	Diam/Width:150	
			{a} Pipe 3a	Pipe	39.944	Diam/Width:225	Not Applicable
S03b	41.790 41.190	Diameter / Length: 0.450					Manhole
E:343605.865 N:397131.352	0.600		{a} Pipe 3b	Pipe	41.190	Diam/Width:150	Not Applicable

Project: Kirkby BESS L33 7TT		Date: 03/02/2026			
		Designed by: NS	Checked by:		Approved By:
Report Details: Type: Inflow Summary Storm Phase: Phase		Company Address: Barnsley Marshall Limited B60 4FG			

Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
Catchment Area	Cellular Storage		Time of Concentration	0.005	100	0	100	0.005
Catchment Area (1)	Cellular Storage		Time of Concentration	0.018	100	0	100	0.018
Catchment Area (2)	Cellular Storage		Time of Concentration	0.018	100	0	100	0.018
Catchment Area (3)	Cellular Storage		Time of Concentration	0.009	100	0	100	0.009
Catchment Area (4)	S26		Time of Concentration	0.005	100	0	100	0.005
Catchment Area (5)	S27		Time of Concentration	0.018	100	0	100	0.018
Catchment Area (6)	S28		Time of Concentration	0.018	100	0	100	0.018
Catchment Area (7)	S29		Time of Concentration	0.009	100	0	100	0.009
Catchment Area (8)	S00		Time of Concentration	0.022	100	0	100	0.022
Catchment Area (9)	S01		Time of Concentration	0.024	100	0	100	0.024
Catchment Area (10)	S23		Time of Concentration	0.014	100	0	100	0.014
Catchment Area (11)	S03		Time of Concentration	0.013	100	0	100	0.013
Catchment Area (12)	S23b		Time of Concentration	0.022	100	0	100	0.022
Catchment Area (13)	S06		Time of Concentration	0.012	100	0	100	0.012
Catchment Area (14)	S06		Time of Concentration	0.036	100	0	100	0.036
Catchment Area (15)	S06		Time of Concentration	0.019	100	0	100	0.019
Catchment Area (16)	S17		Time of Concentration	0.013	100	0	100	0.013
Catchment Area (17)	S18		Time of Concentration	0.011	100	0	100	0.011
Catchment Area (18)	S07		Time of Concentration	0.028	100	0	100	0.028
Catchment Area (19)	S19		Time of Concentration	0.012	100	0	100	0.012
Catchment Area (20)	Cellular Storage		Time of Concentration	0.030	100	0	100	0.030

Project: Kirkby BESS L33 7TT		Date: 03/02/2026			
		Designed by: NS	Checked by:		Approved By:
Report Details: Type: Inflow Summary Storm Phase: Phase		Company Address: Barnsley Marshall Limited B60 4FG			

Catchment Area (21)	S16		Time of Concentration	0.008	100	0	100	0.008
Catchment Area (22)	S24		Time of Concentration	0.009	100	0	100	0.009
Catchment Area (23)	S20		Time of Concentration	0.022	100	0	100	0.022
Catchment Area (24)	S24		Time of Concentration	0.010	100	0	100	0.010
Catchment Area (25)	S21		Time of Concentration	0.025	100	0	100	0.025
Catchment Area (26)	S22		Time of Concentration	0.027	100	0	100	0.027
Catchment Area (27)	S25		Time of Concentration	0.007	100	0	100	0.007
Catchment Area (28)	S19		Time of Concentration	0.003	100	0	100	0.003
TOTAL		0.0		0.467				0.467

Project: Kirkby BESS L33 7TT		Date: 03/02/2026			
		Designed by: NS	Checked by:		Approved By:
Report Details: Type: Network Design Criteria Storm Phase: Phase		Company Address: Barnsley Marshall Limited B60 4FG			

Flow Options

Peak Flow Calculation	(UK) Modified Rational Method
Min. Time of Entry (mins)	5
Max. Travel Time (mins)	30

FSR

Type: FSR

Return Period (years)	1.0
Region	England And Wales
M5-60 (mm)	19.4
Ratio R	0.390

Pipe Options

Lock Slope Options	None
Design Options	Minimise Excavation
Design Level	Level Soffits
Min. Cover Depth (m)	0.750
Min. Slope (1:X)	500.00
Max. Slope (1:X)	40.00
Min. Velocity (m/s)	1.0
Max. Velocity (m/s)	3.0
Use Flow Restriction	☐
Reduce Channel Depths	☐

Pipe Size Library

Default

Add. Increment (mm)	75
Max. Diameter (mm)	0

Diameter (mm)	Min. Slope (1:X)	Max. Slope (1:X)
100	0.00	0.00
150	0.00	0.00

Project: Kirkby BESS L33 7TT	Date: 03/02/2026		
	Designed by: NS	Checked by:	Approved By:
Report Details: Type: Network Design Criteria Storm Phase: Phase	Company Address: Barnsley Marshall Limited B60 4FG		



Manhole Options

Apply Offset ☐

Manhole Size Library

Default

Diameter / Width

Connection (mm)	Diameter / Length (m)	Width (m)
0	1.200	0.000
375	1.350	0.000
500	1.500	0.000
750	1.800	0.000

Additional Sizing

Connection (mm)	900
Diameter / Length (m)	0.900
Width (m)	0.000

Depth

Depth (m)	Diameter / Length (m)	Width (m)
0.000	1.050	0.000
1.500	1.200	0.000

Access

Depth (m)	Ladder Protrusion (mm)
0.000	130
3.000	230

Benching Requirements

Landing Width (mm)	500
Benching Width (mm)	225

Project: Kirkby BESS L33 7TT	Date: 03/02/2026			
	Designed by: NS	Checked by:	Approved By:	
Report Details: Type: Outfall Details Storm Phase: Phase	Company Address: Barnsley Marshall Limited B60 4FG			

Outfalls

Outfall	Outfall Type	Gated	Fixed Surcharged Level (m)	Level Curve
SFC	Free Discharge			

Project: Kirkby BESS L33 7TT	Date: 03/02/2026		
	Designed by: NS	Checked by:	Approved By:
Report Details: Type: Rainfall Analysis Criteria	Company Address: Barnsley Marshall Limited B60 4FG		



Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	0
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	☐

Rainfall

FSR	Type: FSR
-----	-----------

Region	England And Wales
M5-60 (mm)	19.4
Ratio R	0.390
Summer	☒
Winter	☒

Return Period

Return Period (years)	Increase Rainfall (%)
1000.0	0.000

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
240	480
360	720
480	960
960	1920
1440	2880

Project: Kirkby BESS L33 7TT	Date: 03/02/2026			
	Designed by: NS	Checked by:		Approved By:
Report Details: Type: Inflows Summary Storm Phase: Phase	Company Address: Barnsley Marshall Limited B60 4FG			



FSR: 1000 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Inflow

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow Volume (m³)
Catchment Area	FSR: 1000 years: +0 %: 15 mins: Summer	0.01	3.5	1.523
Catchment Area (1)	FSR: 1000 years: +0 %: 15 mins: Summer	0.02	12.0	5.215
Catchment Area (2)	FSR: 1000 years: +0 %: 15 mins: Summer	0.02	12.1	5.251
Catchment Area (3)	FSR: 1000 years: +0 %: 15 mins: Summer	0.01	6.1	2.651
Catchment Area (4)	FSR: 1000 years: +0 %: 15 mins: Summer	0.01	3.5	1.523
Catchment Area (5)	FSR: 1000 years: +0 %: 15 mins: Summer	0.02	12.1	5.251
Catchment Area (6)	FSR: 1000 years: +0 %: 15 mins: Summer	0.02	12.1	5.251
Catchment Area (7)	FSR: 1000 years: +0 %: 15 mins: Summer	0.01	6.1	2.651
Catchment Area (8)	FSR: 1000 years: +0 %: 15 mins: Summer	0.02	14.8	6.421
Catchment Area (9)	FSR: 1000 years: +0 %: 15 mins: Summer	0.02	16.4	7.102
Catchment Area (10)	FSR: 1000 years: +0 %: 15 mins: Summer	0.01	9.5	4.121
Catchment Area (11)	FSR: 1000 years: +0 %: 15 mins: Summer	0.01	8.9	3.866
Catchment Area (12)	FSR: 1000 years: +0 %: 15 mins: Summer	0.02	14.9	6.442
Catchment Area (13)	FSR: 1000 years: +0 %: 15 mins: Summer	0.01	8.0	3.467

Project: Kirkby BESS L33 7TT		Date: 03/02/2026			
		Designed by: NS	Checked by:		Approved By:
Report Details: Type: Inflows Summary Storm Phase: Phase		Company Address: Barnsley Marshall Limited B60 4FG			

Catchment Area (14)	FSR: 1000 years: +0 %: 15 mins: Summer	0.04	23.9	10.376
Catchment Area (15)	FSR: 1000 years: +0 %: 15 mins: Summer	0.02	12.6	5.467
Catchment Area (16)	FSR: 1000 years: +0 %: 15 mins: Summer	0.01	8.4	3.644
Catchment Area (17)	FSR: 1000 years: +0 %: 15 mins: Summer	0.01	7.1	3.083
Catchment Area (18)	FSR: 1000 years: +0 %: 15 mins: Summer	0.03	18.6	8.082
Catchment Area (19)	FSR: 1000 years: +0 %: 15 mins: Summer	0.01	8.2	3.569
Catchment Area (20)	FSR: 1000 years: +0 %: 15 mins: Summer	0.03	20.0	8.682
Catchment Area (21)	FSR: 1000 years: +0 %: 15 mins: Summer	0.01	5.3	2.318
Catchment Area (22)	FSR: 1000 years: +0 %: 15 mins: Summer	0.01	6.2	2.687
Catchment Area (23)	FSR: 1000 years: +0 %: 15 mins: Summer	0.02	15.0	6.502
Catchment Area (24)	FSR: 1000 years: +0 %: 15 mins: Summer	0.01	6.9	2.984
Catchment Area (25)	FSR: 1000 years: +0 %: 15 mins: Summer	0.02	16.6	7.213
Catchment Area (26)	FSR: 1000 years: +0 %: 15 mins: Summer	0.03	18.1	7.839
Catchment Area (27)	FSR: 1000 years: +0 %: 15 mins: Summer	0.01	4.5	1.955
Catchment Area (28)	FSR: 1000 years: +0 %: 15 mins: Summer	0.00	1.8	0.795

Project: Kirkby BESS L33 7TT	Date: 03/02/2026		
	Designed by: NS	Checked by:	Approved By:
Report Details: Type: Junctions Summary Storm Phase: Phase	Company Address: Barnsley Marshall Limited B60 4FG		





FSR: 1000 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S23	FSR: 1000 years: +0 %: 30 mins: Summer	41.360	40.156	40.685	0.529	6.4	0.150	0.000	6.2	5.540	Surcharged
S24	FSR: 1000 years: +0 %: 30 mins: Summer	42.120	39.898	40.657	0.759	23.6	0.215	0.000	22.0	21.005	Surcharged
S25	FSR: 1000 years: +0 %: 30 mins: Summer	42.870	39.742	40.580	0.838	25.1	0.237	0.000	24.4	22.394	Surcharged
S22	FSR: 1000 years: +0 %: 15 mins: Summer	42.590	39.646	40.543	0.897	62.1	0.254	0.000	57.9	37.437	Surcharged
S19	FSR: 1000 years: +0 %: 15 mins: Summer	42.590	39.618	40.422	0.804	82.7	0.228	0.000	78.1	47.265	Surcharged
S16	FSR: 1000 years: +0 %: 480 mins: Winter	42.230	39.534	40.544	1.011	94.0	1.143	0.000	11.7	169.492	Surcharged
SFC	FSR: 1000 years: +0 %: 960 mins: Summer	41.960	39.495	40.587	1.092	376.3	3.781	0.000	4.9	673.361	OK
S20	FSR: 1000 years: +0 %: 15 mins: Summer	41.670	40.695	40.789	0.094	15.0	0.027	0.000	14.5	6.502	OK
S21	FSR: 1000 years: +0 %: 15 mins: Summer	42.260	40.495	40.589	0.094	31.1	0.027	0.000	26.3	13.672	OK
S17	FSR: 1000 years: +0 %: 15 mins: Summer	41.700	40.725	40.796	0.071	8.4	0.020	0.000	8.1	3.643	OK
S18	FSR: 1000 years: +0 %: 15 mins: Summer	42.250	40.539	40.598	0.059	15.2	0.017	0.000	14.8	6.696	OK
S00	FSR: 1000 years: +0 %: 15 mins: Summer	41.490	40.440	40.804	0.364	14.8	0.103	0.000	11.2	6.408	Surcharged
S01	FSR: 1000 years: +0 %: 15 mins: Summer	41.400	40.242	40.674	0.432	27.6	0.122	0.000	24.6	13.512	Surcharged
S02	FSR: 1000 years: +0 %: 15 mins: Summer	41.350	40.146	40.499	0.353	24.6	0.056	0.000	22.5	13.509	Surcharged
S03	FSR: 1000 years: +0 %: 360 mins: Winter	41.390	40.046	40.422	0.376	5.3	0.106	0.000	5.3	47.749	Surcharged
S06	FSR: 1000 years: +0 %: 15 mins: Summer	41.570	40.970	41.189	0.219	44.5	0.062	0.000	40.1	19.303	OK
S23a	FSR: 1000 years: +0 %: 30 mins: Summer	41.583	40.078	40.683	0.605	16.2	0.171	0.000	14.8	14.225	Surcharged
S07	FSR: 1000 years: +0 %: 15 mins: Summer	41.760	40.609	40.683	0.074	58.7	0.084	0.000	57.9	27.377	OK
S26	FSR: 1000 years: +0 %: 15 mins: Summer	42.560	41.500	41.548	0.048	3.5	0.014	0.000	3.4	1.521	OK

Project: Kirkby BESS L33 7TT		Date: 03/02/2026				
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: NS	Checked by:	Approved By:		
		Company Address: Barnsley Marshall Limited B60 4FG				

S27	FSR: 1000 years: +0 %: 15 mins: Summer	42.33 0	41.36 7	41.499	0.133	15.5	0.038	0.000	14.4	6.769	OK
S28	FSR: 1000 years: +0 %: 15 mins: Summer	41.91 0	41.22 7	41.331	0.103	26.5	0.029	0.000	26.0	12.018	OK
S29	FSR: 1000 years: +0 %: 15 mins: Summer	41.67 0	41.00 0	41.091	0.091	32.1	0.026	0.000	31.7	14.668	OK
S30	FSR: 1000 years: +0 %: 15 mins: Summer	41.73 0	40.53 0	40.615	0.085	31.7	0.024	0.000	31.3	14.668	OK
S32	FSR: 1000 years: +0 %: 360 mins: Summer	41.75 0	39.90 0	40.429	0.529	6.8	0.150	0.000	6.7	39.685	Surcharge d
S11	FSR: 1000 years: +0 %: 15 mins: Summer	41.57 0	40.62 0	40.620	0.000	0.0	0.000	0.000	0.0	0.000	OK
S04	FSR: 1000 years: +0 %: 360 mins: Winter	41.55 8	39.87 5	40.422	0.547	5.3	0.619	0.000	4.9	47.007	Surcharge d
S23b	FSR: 1000 years: +0 %: 15 mins: Summer	41.55 0	40.94 4	40.994	0.050	14.9	0.008	0.000	14.8	6.441	OK
S03a	FSR: 1000 years: +0 %: 360 mins: Winter	41.51 2	39.94 4	40.422	0.478	5.3	0.135	0.000	5.3	47.456	Surcharge d
S03b	FSR: 1000 years: +0 %: 15 mins: Summer	41.79 0	41.19 0	41.190	0.000	0.0	0.000	0.000	0.0	0.000	OK

Project: Kirkby BESS L33 7TT		Date: 03/02/2026			
		Designed by: NS	Checked by:		Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Company Address: Barnsley Marshall Limited B60 4FG			



FSR: 1000 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Avg. Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Residual Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Cellular Storage	FSR: 1000 years: +0 %: 360 mins: Winter	40.422	40.422	0.927	0.927	42.1	266.397	0.000	0.000	12.7	161.920	42.145	OK

Project: Kirkby BESS L33 7TT		Date: 03/02/2026			
Report Details: Type: Connections Summary Storm Phase: Phase		Designed by: NS	Checked by:		Approved By:
		Company Address: Barnsley Marshall Limited B60 4FG			



FSR: 1000 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
Pipe 23	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	S24	S25	42.120	40.651	0.225	16.193	0.7	0.75	24.5	Surcharged
Pipe 24	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	S25	S22	42.870	40.578	0.225	17.099	0.8	0.82	30.4	Surcharged
Pipe 21	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	S22	S19	42.590	40.543	0.225	37.301	1.5	1.64	57.9	Surcharged
Pipe 18	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	S19	S16	42.590	40.422	0.225	47.072	2.0	2.13	78.1	Surcharged
Pipe 15	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	S16	SFC	42.230	39.976	0.225	48.492	2.1	1.5	81.6	Surcharged
Pipe 19	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	S20	S21	41.670	40.789	0.094	6.502	0.9	0.34	14.5	OK
Pipe 20	FSR: 1000 years: +0 %: 15 mins: Winter	Pipe	S21	S22	42.260	40.582	0.225	13.671	0.7	0.32	28.6	OK
Pipe 16	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	S17	S18	41.700	40.796	0.065	3.643	0.8	0.2	8.1	OK
Pipe 17	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	S18	S19	42.250	40.598	0.225	6.696	0.4	0.16	14.8	OK
Pipe 0	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	S00	S01	41.490	40.804	0.150	6.408	0.6	0.77	11.2	Surcharged
Pipe 1	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	S01	S02	41.400	40.674	0.150	13.512	1.4	1.17	24.6	Surcharged
Pipe 2	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	S02	S03	41.350	40.499	0.150	13.509	1.3	1.56	22.5	Surcharged
Pipe 22a	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	S23a	S24	41.583	40.647	0.225	10.605	0.5	0.41	16.6	Surcharged
Pipe 6	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	S06	S07	41.570	41.189	0.147	19.303	1.5	1.01	40.1	OK

Project: Kirkby BESS L33 7TT			Date: 03/02/2026			
			Designed by: NS	Checked by:	Approved By:	
Report Details: Type: Connections Summary Storm Phase: Phase			Company Address: Barnsley Marshall Limited B60 4FG			

Pipe 7	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	S07	SFC	41.760	40.683	0.222	27.377	1.8	0.19	57.9	OK
Pipe 26	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	S26	S27	42.560	41.548	0.090	1.521	0.3	0.23	3.4	OK
Pipe 27	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	S27	S28	42.330	41.499	0.118	6.769	1.0	1	14.4	OK
Pipe 28	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	S28	S29	41.910	41.331	0.097	12.018	1.6	0.37	26.0	OK
Pipe 29	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	S29	S30	41.670	41.091	0.088	14.668	2.2	0.29	31.7	OK
Pipe 30	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	S30	S32	41.730	40.615	0.131	14.668	1.3	0.3	31.3	OK
Pipe 31	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	S32	Cellular Storage	41.750	40.078	0.162	14.631	1.0	1.1	30.7	OK
Pipe 25	FSR: 1000 years: +0 %: 1440 mins: Winter	Pipe	Cellular Storage	SFC	41.750	40.250	0.525	154.293	2.5	2.37	384.4	Surch arged
Pipe 3	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	S03	S03a	41.390	40.219	0.159	17.373	1.0	0.85	30.3	OK
Pipe 22	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	S23	S23a	41.360	40.676	0.225	4.124	0.4	0.2	7.7	Surch arged
Pipe 10	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	S11	S03	41.570	40.620	0.086	0.000	0.0	0	0.0	OK
Pipe 5	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	S04	Cellular Storage	41.558	39.945	0.225	17.255	2.9	0.15	29.0	OK
Pipe22b	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	S23b	S23a	41.550	40.994	0.150	6.441	0.9	0.25	14.8	OK
Pipe 3a	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	S03a	S04	41.512	40.089	0.108	17.366	1.6	0.77	29.7	OK
Pipe 3b	FSR: 1000 years: +0 %: 15 mins: Summer	Pipe	S03b	S03a	41.790	41.190	0.073	0.000	0.0	0	0.0	OK