Imported Construction Volumes

External Works	Volume (m³)
Tarmac Collector Road Const Depth - Adoptable Standard	934
Tarmac Footway Const Depth -Adoptable Standard	855
Tarmac shared cycleway/Footway	417
Block Paved Carriageway - Permeable	1307
Block Paved Carriageway - Impermeable	382
Tarmac Access road Const Depth - Adoptable Standard	2916
Heavy Vehicle Tarmac Footway Cross Over Construction	15
Private Plot Slab paving Const Depth - to NHBC standard	528
Block Paved Driveways/Parking Bays - Impermeable - to NHBC standard	426
Private tarmac drive construction	1307
Block Paved Shared Drived - Impermeable - to NHBC standard	599
Block Paved Parking Court construction - Permeable - Marshalls Design Guide	1327
Private Tarmac Road Construction -to NHBC standard	433

Landscaping	Volume (m³)
Private Garden Areas	7125
Public Open Space Landscaped Areas	100
Private Open Space Landscaped Areas	4257
Adoptable Verge	155

Drainage	Volume (m³)
Mains Surface Water	542
Storage tanks	684
Mains Foul	979
Private Drainage	1690

Foundations	Volume (m³)
Pile and Strip Footings, Slab and Void (All Plots)	16679

Retaining Walls	Volume (m³)
Retaining Walls	281
Total	**43,937**

Parameters / Assumptions

CBR assumed to be 3.0%, on site testing to be undertaken	3.00%
Tarmac Collector Road Const Depth - Adoptable Standard	0.965
Tarmac Footway Const Depth -Adoptable Standard	0.270 m
Block Paved Carriageway Const Depth - Permeable - Adoptable Standard	0.795
Block Paved Driveways/Parking Bays - Impermeable - to NHBC standard	0.425
Block Paved Parking Court construction - Permeable	0.575
Block Paved Carriageway Const Depth - Impermeable - Adoptable Standard	0.795
Private Plot Slab paving Const Depth - to NHBC standard	0.150 m
Tarmac shared cycleway/Footway	0.27
Tarmac Access road Const Depth - Adoptable Standard	0.94
Private tarmac drive construction	0.41
Block Paved Shared Drived - Impermeable - to NHBC standard	0.485
Public open space landscaping construction depth (300 mm capping)	0.45
Private open space landscaping construction depth (300 mm capping)	0.45
Private Landscape Garden (600 mm capping)	0.75
Adoptable Verge	0.45
Top Soil depth in Garden Areas	0.15 m
Top Soil depth in POS Landscaped Areas	0.15 m
Private Tarmac Road Construction	0.525
Imported Construction volume per plot for private drainage	10m³
Assumed 250 mm depth of site strip required through out	0.25
Typical Pile foundation depth	15 m
Earthworks Boundary (m²)	55150
Number of plots (at ground floor only)	169

Cut & Fill Summary

	Volume (m³)
Cut (from Surface Comparison of Ex Ground to Proposed Ground)	*1,103*
Imported Construction Volume	*43,937*
Site Strip (m ²)	***13,788***
Cut + Imported Construction Volume - Site Topsoil Strip	**31,253**
Fill (from Surface Comparison of Ex Ground to Proposed Ground)	**54,739**
Net (import)	**23,485**

Topsoil Volumes Summary

	Volume (m³)
Volume of site won, screened topsoil (within development area only)	0
Volume of topsoil needed for Gardens & POS	3213
Topsoil to be imported	**-3213**

External Works - Imported Materials

	Depth (m)	Area (m2)	Vol (m3)
Tarmac Carriageway Const Depth - Adoptable Standard	0.715	4046	2893
Tarmac Footway Const Depth -Adoptable Standard	0.27	3104	838
Tarmac shared cycleway/Footway	0.27	1510	408
Block Paved Carriageway - Permeable	0.795	1838	1461
Adoptable Verge	0.45	3185	1433
Puplic open space landscaping construction depth (300 mm capping)	0.45	6789	3055
Block Paved Carriageway - Impermeable	0.795	440	350

	Depth (m)	Area (m2)	Vol (m3)
Private open space landscaping construction depth (300 mm capping)	0.45	1850	833
Private Garden Areas (600 mm capping)	0.75	9595	7196
Private Plot Slab paving Const Depth - to NHBC standard	0.15	3518	528
Block Paved Driveways/Parking Bays - Impermeable - to NHBC standard	0.43	998	424
Private tarmac drive construction	0.41	3384	1387
Block Paved Shared Drived - Impermeable - to NHBC standard	0.49	583	283
Block Paved Parking Court construction - Permeable - Marshalls Design Guide	0.58	2807	1614
Private Tarmac Road Construction -to NHBC standard	0.53	607	319

Landscaping	Depth (m)	Area (m2)	Vol (m3)
Top Soil Private Garden Areas (refer to developer const spec - Typically 150mm - max 300mm to BS3882)	0.15	9595	1439
Top Soil Public Open Space Landscaped Areas (refer to developer const spec - Typically 150mm - max 300mm to BS3882)	0.15	6789	1018
Top Soil Private Open Space Landscaped Areas (refer to developer const spec - Typically 150mm - max 300mm to BS3882)	0.15	1850	278
Top Soil Adoptable Verge (refer to developer const spec - Typically 150mm - max 300mm to BS3882)	0.15	3185	478
		SUM	3213

Total Foundation Arrising for Terraced Units

Item	Number of Plots	Average Volume per plot (m³)	Volume (m³)
Plots Strip Foundations	0	0	0
Plots Pile Foundations	139	91	12641
Appartment Block Arrisings			4038
Total	139		16679

Note: Number of Units excludes for appartment blocks arisings.

Garage Trench Foundations, Slab arisings

Item	Length of foundations		Ave width of foundations	Ave depth of foundations	Volume
Foundations	0		0.6	1.8	0.00
Item	**Area m²**	**Floor Finish**	**Slab thick**	**Cavity**	**Volume**
Slab and void	0	Level with external level	0.175	0.225	0.00
Average volume per area					
Total Volume per garage	**0.00**	**m³**			
Total number of garages on site	**0**				
Total for site	**0**	**m³**			

Average Retaining Wall Arisings -

Item		
2m high Retaining Wall cross Sectional Area	3.60	m²
Total length of Retaining Wall	78	m
Retaining Wall Arisings	281	m³

Plot Piled Foundations, Slab and void arisings - Based on Plot no-01

Item	Number		Dia	Ave depth of Pile	Volume
Pile	10		0.45	15	23.844375
Item	**Length of beam**		**Ave width of beam**	**Ave depth of beam**	**Volume**
Ground Beam	46.5		0.6	0.45	12.555
Item	**Area m²**	**Floor Finish**	**Slab thick**	**Cavity**	**Volume**
Slab and void	80.8	0.15 above external level	0.375	0.3	54.54

Plot Piled Foundations, Slab and void arisings - Block (A &A1)

Item	Number		Dia	Ave depth of Pile	Volume
Pile	270		0.45	15	643.798125
Item	**Length of beam**		**Ave width of beam**	**Ave depth of beam**	**Volume**
Ground Beam	220		0.6	0.35	46.2
Item	**Area m²**	**Floor Finish**	**Slab thick**	**Cavity**	**Volume**
Slab and void	1045	0.15 above external level	0.375	0.3	705.375
Pile Cap	**Area m²**	**Number**	**Pile Cap thick**		**Volume**
PC1	0.5625	28	0.3		4.725
PC2	1.575	44	0.3		20.79
PC3	3.241	18	0.3		17.5014
PC4	4.41	10	0.3		13.23
PC6	7.245	2	0.3		4.347
PC7	5.625	2	0.3		3.375
PC8	12.6	2	0.3		7.56
PC10	25.5	2	0.3		15.3
				SUM	**86.8284**
Average volume per area					
Total Volume	**1482**	**m³**			

Plot Piled Foundations, Slab and void arisings - Block (B)

Item	Number		Dia	Ave depth of Pile	Volume
Pile	258		0.45	15	615.184875
Item	**Length of beam**		**Ave width of beam**	**Ave depth of beam**	**Volume**
Ground Beam	200		0.6	0.35	42
Item	**Area m²**	**Floor Finish**	**Slab thick**	**Cavity**	**Volume**
Slab and void	1051	0.15 above external level	0.375	0.3	709.425
Pile Cap	**Area m²**	**Number**	**Pile Cap thick**		**Volume**
PC1	0.5625	30	0.3		5.0625
PC2	1.575	49	0.3		23.1525
PC2.2	1.8	1	0.3		0.54
PC3	3.241	15	0.3		14.5845
PC4	4.41	7	0.3		9.261
PC5	4.6125	1	0.3		1.38375
PC6.1	7.245	1	0.3		2.1735
PC6.2	7.245	2	0.3		4.347
PC8	19.617	1	0.3		5.8851
PC10.1	25.5	1	0.3		7.65
PC10.2	20.15	1	0.3		6.045
				SUM	**80.08485**
Average volume per area					
Total Volume	**1447**	**m³**			

Plot Piled Foundations, Slab and void arisings - Block (C)

Item	Number		Dia	Ave depth of Pile	Volume
Pile	140		0.45	15	333.82125
Item	**Length of beam**		**Ave width of beam**	**Ave depth of beam**	**Volume**
Ground Beam	255		0.7	0.45	80.325
Item	**Area m²**	**Floor Finish**	**Slab thick**	**Cavity**	**Volume**
Slab and void	1030	0.15 above external level	0.375	0.3	695.25
Average volume per area					
Total Volume	**1109**	**m³**			

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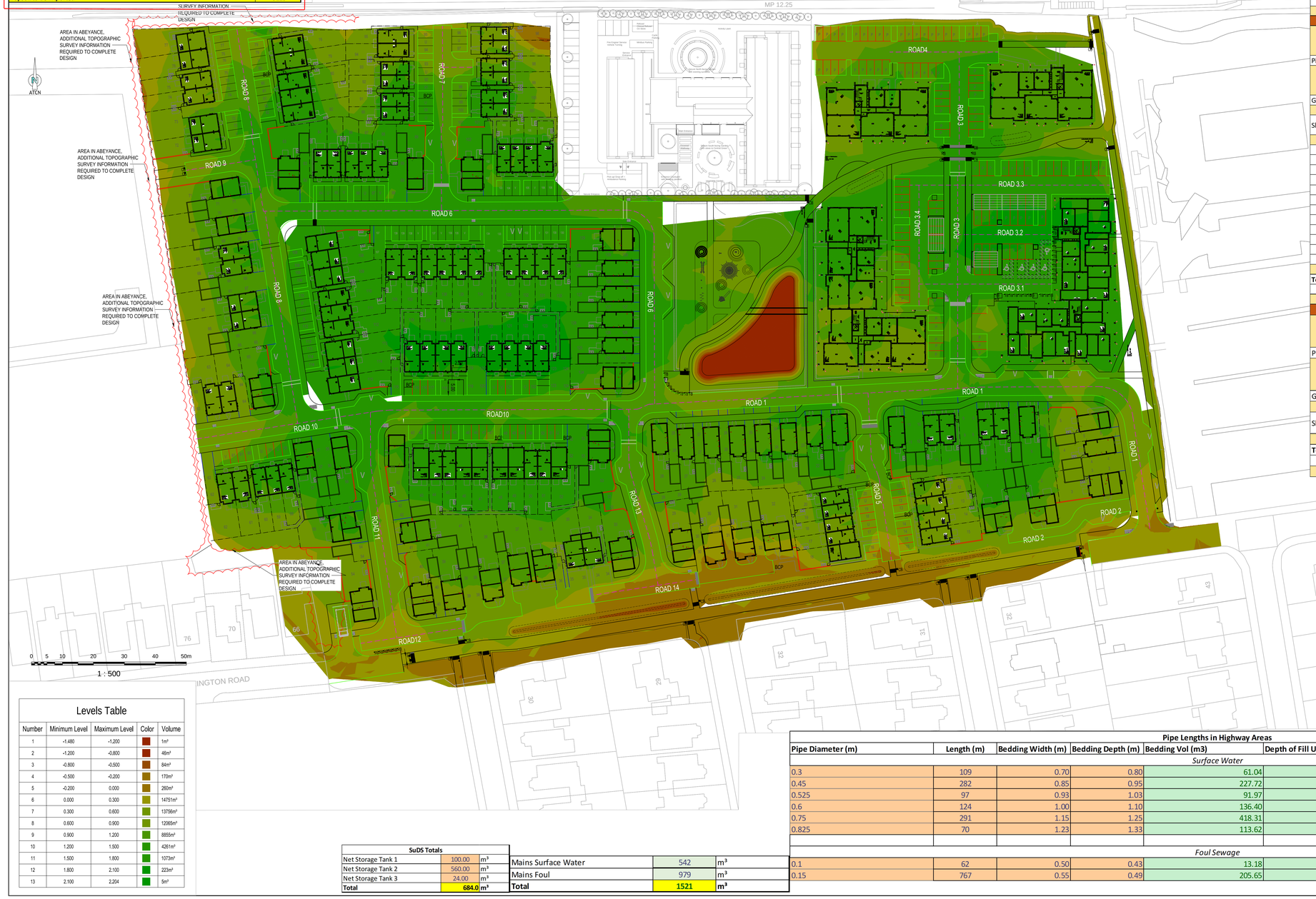
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The details on this drawing have been prepared on the assumption that a competent contractor will be carrying out the works. If the contractor(s) considers that there is insufficient Health and Safety information on this drawing, this should immediately be brought to the attention of the designer.

HAZARD IDENTIFICATION BOX

This table is provided to assist the Principal Contractor to fulfil their obligations under the CDM Regulations 2015

Hazard Ref	Hazard Type (Construction/Maintenance/ Cleaning/Demolition/Adjacent Land)	Hazard Description	Mitigation Measures/ Residual Risk
⚠			



Levels Table

Number	Minimum Level	Maximum Level	Color	Volume
1	-1.480	-1.200		1m³
2	-1.200	-0.800		46m³
3	-0.800	-0.500		84m³
4	-0.500	-0.200		170m³
5	-0.200	0.000		260m³
6	0.000	0.300		14751m³
7	0.300	0.600		13786m³
8	0.600	0.900		12065m³
9	0.900	1.200		8855m³
10	1.200	1.500		4261m³
11	1.500	1.800		1073m³
12	1.800	2.100		223m³
13	2.100	2.204		5m³

SuDS Totals

Net Storage Tank 1	100.00	m³
Net Storage Tank 2	560.00	m³
Net Storage Tank 3	24.00	m³
Total	**684.0**	**m³**

Mains Surface Water	542	m³
Mains Foul	979	m³
Total	**1521**	**m³**

Mains Drainage - Imported Materials

Manholes	Values	Unit
No of SW Manholes	33	NO.
Average Diameter	1.5	M
Total Conc Surround	0.3	M
Average Depth of SW Manholes	1.74	M
Volume of SW Manholes	65	M³
No of FW Manholes	30	NO.
Average Diameter	1.2	M
Total Conc Surround	0.3	M
Average Depth of FW Manholes	2.9	M
Volume of FW Manholes	103	M³

Pipe Lengths in Highway Areas

Pipe Diameter (m)	Length (m)	Bedding Width (m)	Bedding Depth (m)	Bedding Vol (m3)	Depth of Fill Under Road (less Bedding) (m)	Vol of Fill Under Road (m3)	Total Bedding and Fill Vol (m3)
Surface Water							
0.3	109	0.70	0.80	61.04	-0.03	-1.91	59.13
0.45	282	0.85	0.95	227.72	-0.18	-41.95	185.77
0.525	97	0.93	1.03	91.97	-0.25	-22.43	69.54
0.6	124	1.00	1.10	136.40	-0.33	-40.30	96.10
0.75	291	1.15	1.25	418.31			
0.825	70	1.23	1.33	113.62	-0.55	-47.16	66.46
							477
Foul Sewage							
0.1	62	0.50	0.43	13.18	1.51	46.81	59.99
0.15	767	0.55	0.49	205.65	1.45	610.63	816.28
							876

C1	17/03/2023	Construction Issue- Subject to Approval	SM / KM / AAA
T3	20/02/2023	Updated as Clouded	SM / KM / AAA
T2	17/02/2023	T2 Tender Issue	SM / KM / AAA
T1	29/11/2022	Tender Issue	SM / KM / AAA
Rev.	Date	Description	Drn / Chk'd / App'd

Suitability: A1 - Approved/Stage Complete

Client Logo: Bellway

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Client: Bellway Homes Limited

Job: Barrington Road, Durrington

Title: Cut and Fill Plan

Classification: FI_60_20
Scale @ A1: 1:500

Certified Environmental Management
Certified Health & Safety

Project - Originator - Volume/System - Level/Location - Type - Discipline - Number: K43058ATCN90-00-DR-C-2007
Document/Drawing Number

Revision: C1

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