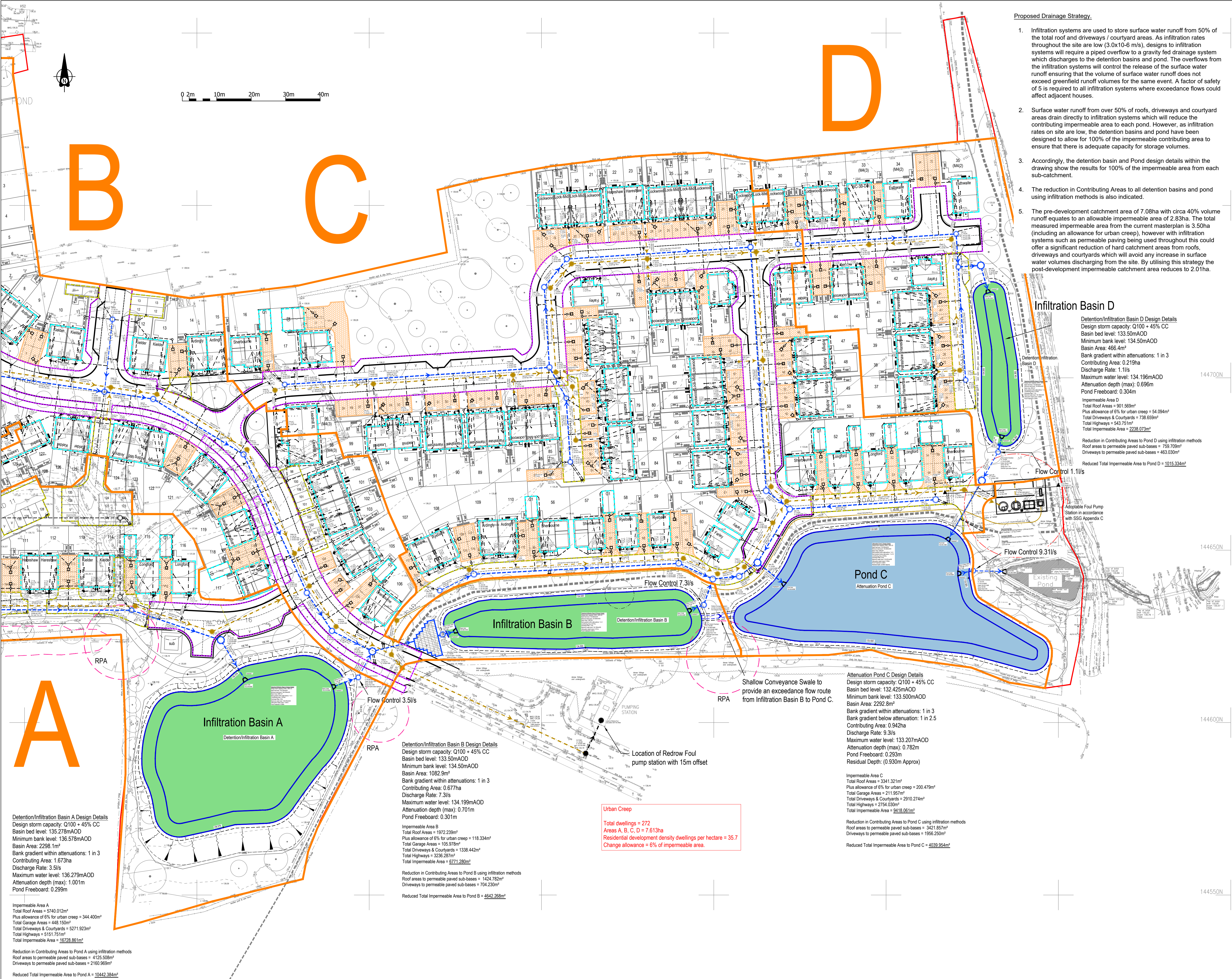




- Proposed Drainage Strategy.**
- Infiltration systems are used to store surface water runoff from 50% of the total roof and driveways / courtyard areas. As infiltration rates throughout the site are low (3.0x10-6 m/s), designs to infiltration systems will require a piped overflow to a gravity fed drainage system which discharges to the detention basins and pond. The overflows from the infiltration systems will control the release of the surface water runoff ensuring that the volume of surface water runoff does not exceed greenfield runoff volumes for the same event. A factor of safety of 5 is required to all infiltration systems where exceedance flows could affect adjacent houses.
 - Surface water runoff from over 50% of roofs, driveways and courtyard areas drain directly to infiltration systems which will reduce the contributing impermeable area to each pond. However, as infiltration rates on site are low, the detention basins and pond have been designed to allow for 100% of the impermeable contributing area to ensure that there is adequate capacity for storage volumes.
 - Accordingly, the detention basin and Pond design details within the drawing show the results for 100% of the impermeable area from each sub-catchment.
 - The reduction in Contributing Areas to all detention basins and pond using infiltration methods is also indicated.
 - The pre-development catchment area of 7.08ha with circa 40% volume runoff equates to an allowable impermeable area of 2.83ha. The total measured impermeable area from the current masterplan is 3.50ha (including an allowance for urban creep), however with infiltration systems such as permeable paving being used throughout this could offer a significant reduction of hard catchment areas from roofs, driveways and courtyards which will avoid any increase in surface water volumes discharging from the site. By utilising this strategy the post-development impermeable catchment area reduces to 2.01ha.

Infiltration Basin D

Detention/Infiltration Basin D Design Details
Design storm capacity: Q100 + 45% CC
Basin bed level: 133.50mAOD
Minimum bank level: 134.50mAOD
Basin Area: 466.4m²
Bank gradient within attenuations: 1 in 3
Contributing Area: 0.219ha
Discharge Rate: 1.1l/s
Maximum water level: 134.196mAOD
Attenuation depth (max): 0.696m
Pond Freeboard: 0.304m

Impermeable Area D
Total Roof Areas = 301.569m²
Plus allowance of 6% for urban creep = 54.094m²
Total Driveways & Courtyards = 738.659m²
Total Highways = 543.751m²
Total Impermeable Area = 2238.073m²

Reduction in Contributing Areas to Pond D using infiltration methods
Roof areas to permeable paved sub-bases = 759.709m²
Driveways to permeable paved sub-bases = 463.030m²

Reduced Total Impermeable Area to Pond D = 1015.334m²

Flow Control 1.1l/s

Adoptable Foul Pump Station in accordance with SSG Appendix C

Flow Control 9.3l/s

Pond C
Attenuation Pond C

Attenuation Pond C Design Details
Design storm capacity: Q100 + 45% CC
Basin bed level: 132.425mAOD
Minimum bank level: 133.500mAOD
Basin Area: 2292.8m²
Bank gradient within attenuations: 1 in 3
Bank gradient below attenuation: 1 in 2.5
Contributing Area: 0.942ha
Discharge Rate: 9.3l/s
Maximum water level: 133.207mAOD
Attenuation depth (max): 0.782m
Pond Freeboard: 0.293m
Residual Depth: (0.930m Approx)

Impermeable Area C
Total Roof Areas = 3341.321m²
Plus allowance of 6% for urban creep = 200.479m²
Total Garage Areas = 211.957m²
Total Driveways & Courtyards = 2910.274m²
Total Highways = 2754.030m²
Total Impermeable Area = 9418.061m²

Reduction in Contributing Areas to Pond C using infiltration methods
Roof areas to permeable paved sub-bases = 3421.857m²
Driveways to permeable paved sub-bases = 1966.250m²

Reduced Total Impermeable Area to Pond C = 4039.954m²

Detention/Infiltration Basin B Design Details
Design storm capacity: Q100 + 45% CC
Basin bed level: 133.50mAOD
Minimum bank level: 134.50mAOD
Basin Area: 1082.9m²
Bank gradient within attenuations: 1 in 3
Contributing Area: 0.677ha
Discharge Rate: 7.3l/s
Maximum water level: 134.199mAOD
Attenuation depth (max): 0.701m
Pond Freeboard: 0.301m

Impermeable Area B
Total Roof Areas = 1972.239m²
Plus allowance of 6% for urban creep = 118.334m²
Total Garage Areas = 105.978m²
Total Driveways & Courtyards = 1338.442m²
Total Highways = 3236.287m²
Total Impermeable Area = 6771.280m²

Reduction in Contributing Areas to Pond B using infiltration methods
Roof areas to permeable paved sub-bases = 1424.782m²
Driveways to permeable paved sub-bases = 704.230m²

Reduced Total Impermeable Area to Pond B = 4642.268m²

Detention/Infiltration Basin A Design Details
Design storm capacity: Q100 + 45% CC
Basin bed level: 135.278mAOD
Minimum bank level: 136.578mAOD
Basin Area: 2298.1m²
Bank gradient within attenuations: 1 in 3
Contributing Area: 1.673ha
Discharge Rate: 3.5l/s
Maximum water level: 136.279mAOD
Attenuation depth (max): 1.001m
Pond Freeboard: 0.299m

Impermeable Area A
Total Roof Areas = 5740.012m²
Plus allowance of 6% for urban creep = 344.400m²
Total Garage Areas = 448.150m²
Total Driveways & Courtyards = 5271.923m²
Total Highways = 5151.751m²
Total Impermeable Area = 16728.861m²

Reduction in Contributing Areas to Pond A using infiltration methods
Roof areas to permeable paved sub-bases = 4125.508m²
Driveways to permeable paved sub-bases = 2160.969m²

Reduced Total Impermeable Area to Pond A = 10442.384m²

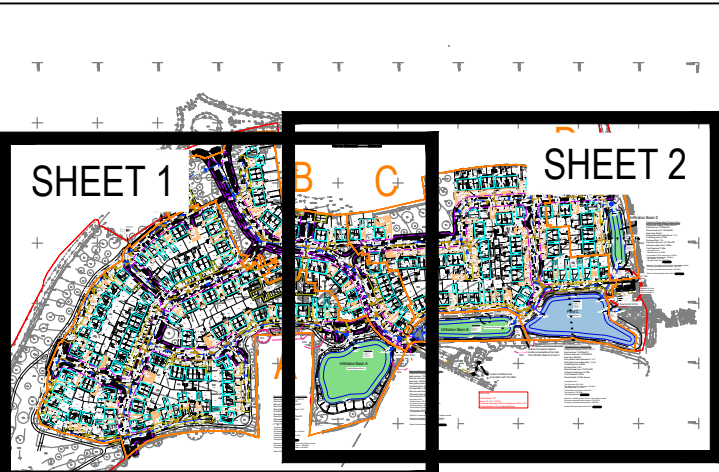
Urban Creep
Total dwellings = 272
Areas A, B, C, D = 7.613ha
Residential development density dwellings per hectare = 35.7
Change allowance = 6% of impermeable area.

Notes:

- Drainage designs in accordance with CIRIA C753 The SuDS Manual, Sewerage Sector Guidance Appendix C - Design and Construction Guidance, Building Regulations 2010 Approved Document Part H and BS EN 752:2017.

Legend:

- Proposed Surface Water Sewer
- Proposed Foul Water Sewer
- Proposed Detention/Infiltration Basin
- Proposed Attenuation Pond (with residual depth of water)
- Proposed Attenuation Storage (Cellular Crates)
- Proposed Shallow Swale (Exceedance Flow Route)
- Proposed Permeable Paving
- Impermeable Roof Areas
- Impermeable Highways Area
- Impermeable Driveway / Parking Area
- Detention/Infiltration Basin & Attenuation Pond Catchment Areas
- Site Boundary



Rev	Date	Description	By	Apvd
P11	18/02/26	Updated to suit current layout & Icos requirements for adoptable drainage.	EPH	WH
P10	07/10/25	Impermeable area measurements updated following detailed design	EPH	WH
P9	23/09/25	Drainage Layout updated to suit Foul Drainage Inlet to offsite Pump Station.	EPH	WH
P8	16/07/25	Surface Water Drainage Strategy updated to suit comments received by Wiltshire Council Drainage Engineers dated 23rd June 2025 in relation to Planning Application No. PL/2025/01523.	EPH	KM
P7	12/06/25	Surface Water Drainage Strategy updated to suit comments received by Wiltshire Council Drainage Engineers dated 29th May 2025 in relation to Planning Application No. PL/2025/01523.	EPH	KM
P6	22/04/25	Surface Water Drainage Strategy updated to suit comments received by Wiltshire Council Drainage Engineers dated 20th March 2025 in relation to Planning Application No. PL/2025/01523.	EPH	KM
P5	11/04/25	Surface Water drainage strategy updated to allow for revised levels design, 45% allowance for climate change, 30% betterment against revised green field runoff rates and 6% allowance for urban creep. Pond sizes adjusted to suit.	EPH	KM
P4	26/02/25	Scale bar added as required.	S.H	K.M
P3	29/01/25	Updated to suit current Masterplan	EPH	KM
P2	21/08/24	Permeable paving reduced to 50%	KM	EPH
P1	26/06/24	Preliminary issue	EPH	KM

PROJECT:
VICTORIA ROAD
WARMINSTER

TITLE:
PROPOSED DRAINAGE STRATEGY
SHEET 2 OF 2

CLIENT:
KEEPMOAT HOMES LTD

SCALE@A1:
1:500

PROJECT REF:
24233

DRAWING No:
24233-JUB-ZZ-XX-DR-C-501

REV:
P11

Revision Referencing

P = Preliminary A = Approval T = Tender C = Construction

Jubb

Bristol, Cardiff, Plymouth, Winchester
St James Court, St James Parade, Bristol BS1 3LH

jubb.uk.com
+44(0)117 922 6266