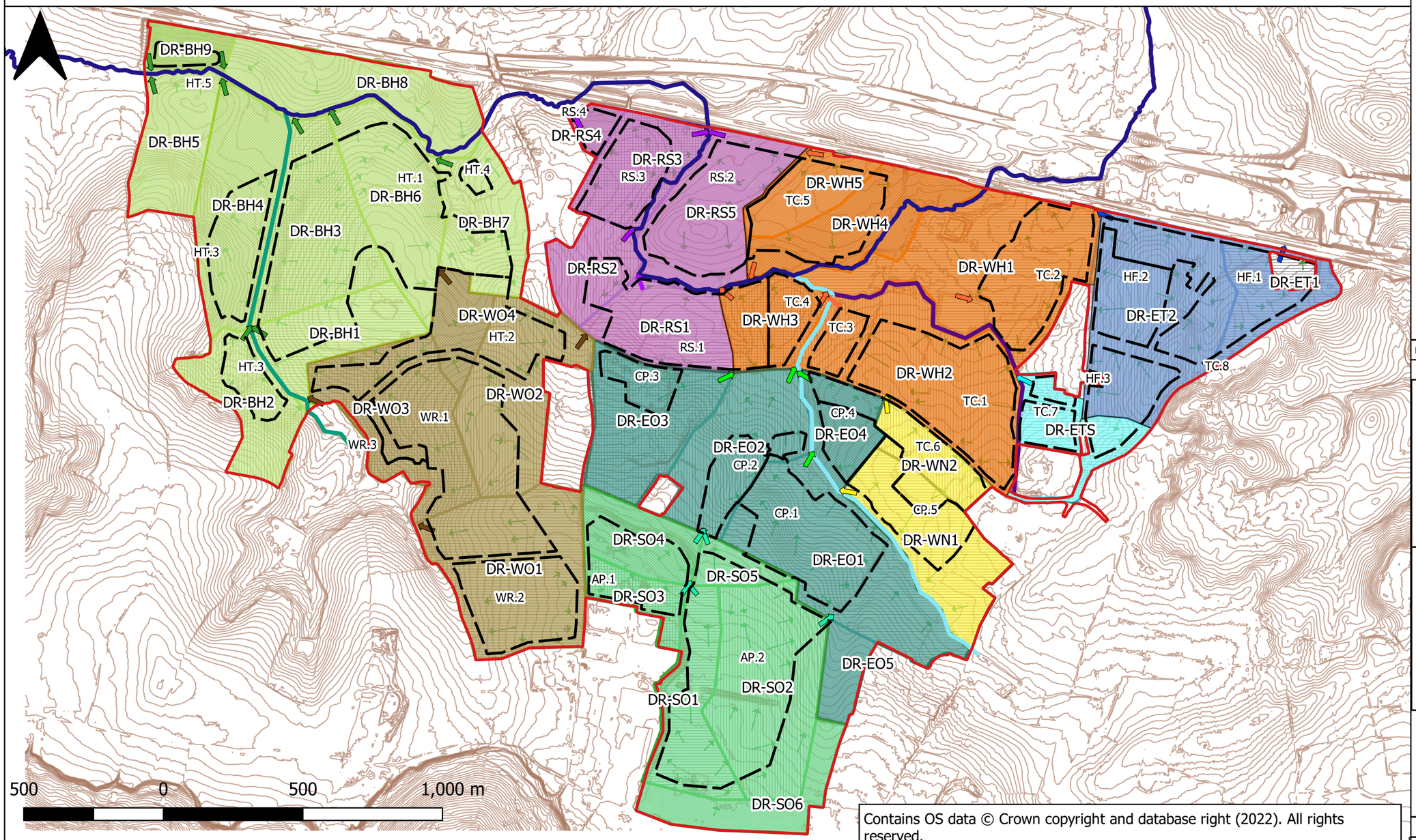
APPENDIX E

SuDS strategy plans and discharge rates

Drainage Zone Name	Positively Drained Area (ha)	Remaining Permeable Area (ha)	Drainage Zone Name	Positively Drained Area (ha)	Remaining Permeable Area (ha)
DR-WH1	10.90	21.90	DR-S06	0.00	9.88
DR-WH2	18.41	12.07	DR-W01	13.10	14.68
DR-WH3	7.25	2.97	DR-W02	10.30	10.59
DR-WH4	5.42	10.37	DR-W03	11.74	10.42
DR-WH5	5.00	3.42	DR-W04	5.31	1.11
DR-E01	11.51	18.09	DR-BH1	3.07	9.31
DR-E02	4.26	13.74	DR-BH2	2.56	10.19
DR-E03	2.95	15.66	DR-BH3	10.96	9.81
DR-E04	5.55	2.51	DR-BH4	5.42	15.62
DR-E05	0.00	4.84	DR-BH5	1.06	11.70
DR-WN1	8.40	9.52	DR-BH6	10.00	8.64
DR-WN2	5.16	1.39	DR-BH7	4.19	9.61
DR-ET1	4.43	4.20	DR-BH8	0.00	19.77
DR-ET2	19.88	11.41	DR-BH9	1.36	3.35
DR-ETS	4.89	4.42	DR-RS1	9.44	3.29
DR-S01	7.18	7.04	DR-RS2	1.71	6.90
DR-S02	12.68	13.50	DR-RS3	6.48	5.70
DR-S03	3.02	2.68	DR-RS4	1.29	0.96
DR-S04	4.02	5.48	DR-RS5	12.45	7.01
DR-S05	1.68	2.23	**TOTAL**	**253.01**	**335.99**

Post-Development Case

Drainage Zone	Allowable Positively Drained Runoff			Runoff From Permeable Areas			Drainage Zone	Allowable Positively Drained Runoff			Runoff From Permeable Areas		
	1 in 1 year (l/s)	1 in 30 year (l/s)	1 in 100 year (l/s)	1 in 1 year (l/s)	1 in 30 year (l/s)	1 in 100 year (l/s)		1 in 1 year (l/s)	1 in 30 year (l/s)	1 in 100 year (l/s)	1 in 1 year (l/s)	1 in 30 year (l/s)	1 in 100 year (l/s)
DR-WH1	9.8	22.9	32.7	19.7	46.0	65.7	DR-S06	0.0	0.0	0.0	8.9	20.7	19.8
DR-WH2	16.6	38.7	55.2	10.9	25.3	36.2	DR-W01	11.8	27.5	26.2	13.2	30.8	29.4
DR-WH3	6.5	15.2	21.8	2.7	6.2	8.9	DR-W02	9.3	21.6	20.6	9.5	22.2	21.2
DR-WH4	4.9	11.4	16.3	9.3	21.8	31.1	DR-W03	10.6	24.6	23.5	9.4	21.9	20.8
DR-WH5	4.5	10.5	15.0	3.1	7.2	10.3	DR-W04	4.8	11.2	10.6	1.0	2.3	2.2
DR-E01	10.4	24.2	23.0	16.3	38.0	36.2	DR-BH1	2.8	6.4	6.1	8.4	19.6	18.6
DR-E02	3.8	8.9	8.5	12.4	28.9	27.5	DR-BH2	2.3	5.4	5.1	9.2	21.4	20.4
DR-E03	2.7	6.2	5.9	14.1	32.9	31.3	DR-BH3	9.9	23.0	21.9	8.8	20.6	19.6
DR-E04	5.0	11.7	11.1	2.3	5.3	5.0	DR-BH4	4.9	11.4	10.8	14.1	32.8	31.2
DR-E05	0.0	0.0	0.0	4.4	10.2	9.7	DR-BH5	1.0	2.2	2.1	10.5	24.6	23.4
DR-WN1	7.6	17.6	25.2	8.6	20.0	28.6	DR-BH6	9.0	21.0	20.0	7.8	18.2	17.3
DR-WN2	4.6	10.8	15.5	1.3	2.9	4.2	DR-BH7	3.8	8.8	8.4	8.7	20.2	19.2
DR-ET1	4.0	9.3	13.3	3.8	8.8	12.6	DR-BH8	0.0	0.0	0.0	17.8	41.5	39.5
DR-ET2	17.9	41.8	59.6	10.3	24.0	34.2	DR-BH9	1.2	2.9	2.7	3.0	7.0	6.7
DR-ETS	4.4	10.3	14.7	4.0	9.3	13.3	DR-RS1	8.5	19.8	28.3	3.0	6.9	9.9
DR-S01	6.5	15.1	14.4	6.3	14.8	14.1	DR-RS2	1.5	3.6	5.1	6.2	14.5	20.7
DR-S02	11.4	26.6	25.4	12.2	28.4	27.0	DR-RS3	5.8	13.6	19.4	5.1	12.0	17.1
DR-S03	2.7	6.3	6.0	2.4	5.6	5.4	DR-RS4	1.2	2.7	3.9	0.9	2.0	2.9
DR-S04	3.6	8.5	8.0	4.9	11.5	11.0	DR-RS5	11.2	26.1	37.3	6.3	14.7	21.0
DR-S05	1.5	3.5	3.4	2.0	4.7	4.5	**TOTAL**	**227.7**	**531.3**	**627.1**	**302.4**	**705.6**	**777.5**



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Legend

- OPA Site Boundary
- East Stour River

Key Site Tributaries

- Harringe Brook
- North Lympne Drain
- Racecourse Drain
- Surface Flow Direction
- Indicative Key Drainage Outfall Locations
- XX.X Proposed Development Area Reference
- Proposed Development Boundary

Drainage Zones

- Barrow Hill (DR-BH1 to DR-BH9)
- East Otterpool (DR-EO1 to DR-EO5)
- East Triangle (DR-ET1 to DR-ET2)
- East Triangle South (DR-ETS)
- River Stour (DR-RS1 to DR-RS5)
- South Otterpool (DR-SO1 to DR-SO6)
- West Newingreen (DR-WN1 to DR-WN2)
- West Otterpool (DR-W01 to DR-WO4)
- Westhanger (DR-WH1 to DR-WH5)

Notes.
1. The indicative outfall locations and discharge rates may be refined during the detailed design stage, using the principles set out in this drawing and associated Arcadis report 10029956-AUK-XX-XX-RP-CW-0010-P3-Flood Risk Assessment and Surface Water Drainage Strategy.
2. Allowable runoff rates (l/s/ha) from all positively drained areas where good infiltration is feasible in permeable soil types subject to further soakaway testing and ensuring suitable 50% storage drain-down time: Q1 = 0.9: Q30 = 2.1; Q100 = 2.0.
3. Allowable runoff rates (l/s/ha) from all positively drained areas where infiltration is infeasible due to impermeable soil types: Q1 = 0.9: Q30 = 2.1; Q100 = 3.0.
4. Proposed positive drainage outfalls must have a suitable staged discharge arrangement to limit the above allowable runoff rates for Q1, Q30 and Q100.
5. All permeable areas that are not positively drained will continue to discharge at the existing greenfield runoff rates (l/s/ha): Q1 = 0.9: Q30 = 2.1; Q100 = 3.0.
6. The outline drainage strategy demonstrates that post-development runoff for Q1 and Q30 are unchanged whereas as a minimum there will be a reduction of 362 l/s for Q100 when compared with the pre-development runoff.

Revision	Date	Status	Author	Checker	Approver
P7	03/03/2022	FINAL	JP	AG	RG

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OTTERPOOL PARK
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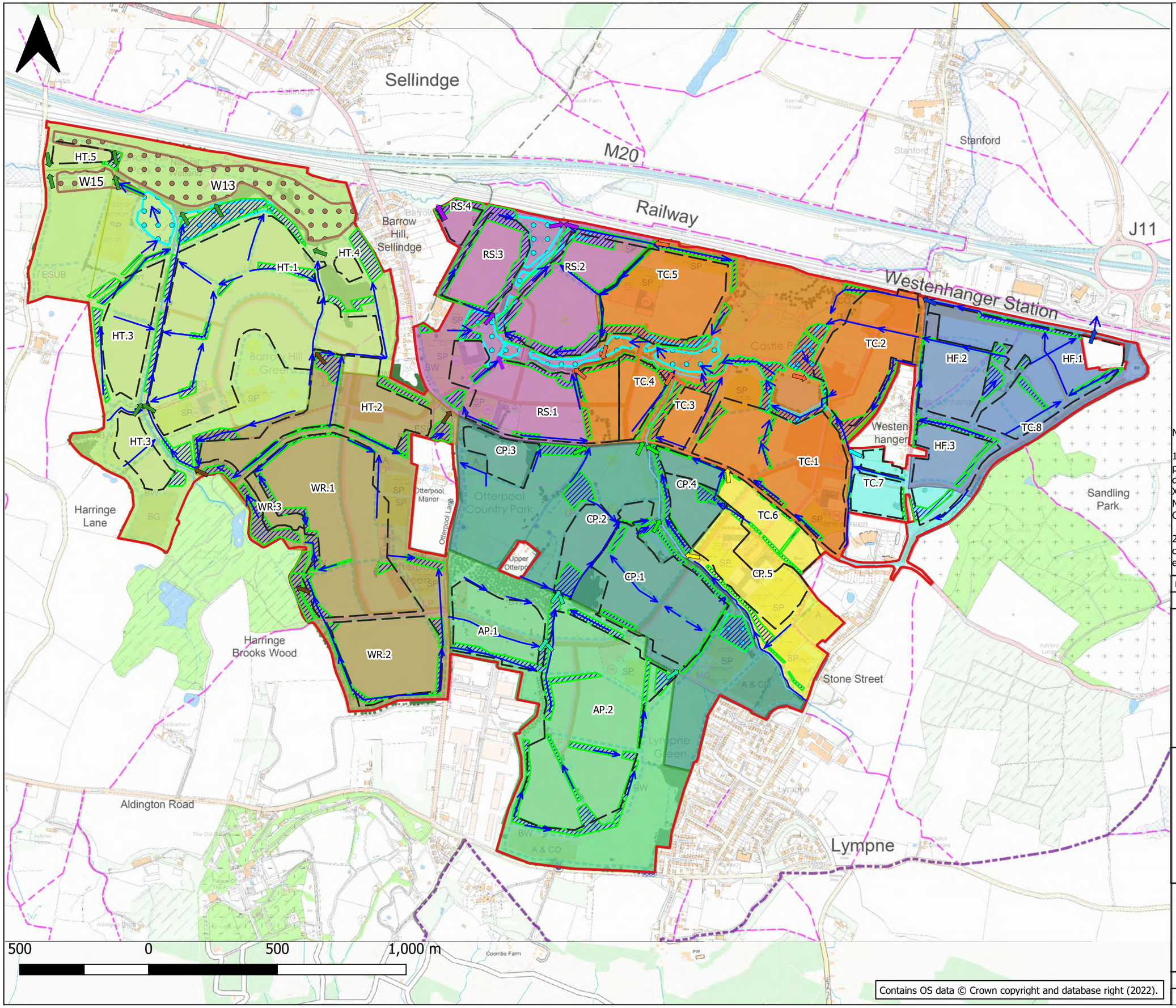
Surface Water Drainage Zones & Runoff Rates
Drawing: 10029956-AUK-XX-XX-DR-CW-0007-P7

Scale	Original Size	Datum	Grid
1:15000	A3	mAOD	OSGB 27700



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Legend

- OPA Site Boundary
- Proposed_SuDS
- Proposed Conveyance Swales / SuDS Flow Direction
- Indicative Key Drainage Outfall Locations
- Existing Watercourses
- Proposed Development Boundaries
- XX.X Proposed_Development_Area_Ref
- Wetlands Stormwater
- Wetlands Wastewater

Drainage Zones

- Barrow Hill
- East Otterpool
- East Triangle
- East Triangle South
- River Stour
- South Otterpool
- West Newingreen
- West Otterpool
- Westenhanger

Note:

1. The nutrient mitigation requirements and mitigation proposals for the OPA and OFMA Development are fully detailed in Arcadis Water Cycle Report 10029956-AUK-XX-XX-RP-CW-0011-P3 and Proposed Nutrient Neutrality Mitigation Strategy Drawing 10029956-AUK-XX-XX-DR-CW-0041-P3.

2. Wastewater Wetland W15 is not required for the current OPA but it will be needed to accommodate the extra 1500 dwellings within the OFMA.

Revision	Date	Status	Author	Checker	Approver
P4	03/03/2022	FINAL	MG	AG	RG

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OTTERPOOL PARK
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Surface Water Drainage Strategy Overview
Drawing: 10029956-AUK-XX-XX-DR-CW-0014-P4

Scale	Original Size	Datum	Grid
1:13,500	A3	mAOD	OSGB 27700