DISCHARGE RATES FROM EACH ELEMENT

THAMES WATER CATCHMENT

OUTFALL No.	SUB CATCHMENT m²	STORAGE METHOD	TOTAL CATCHMENT / m²	RESTRICTED TO: L/S
OUTFALL 3	ENERGY BLOCK	BLUE ROOF	512	0.5
	BLOCK D1/2	BLUE ROOF	1153	1.0
	BLOCK D3	BLUE ROOF	181	0.3
	BLOCK C3	BLUE ROOF	301	0.3
	BLOCK C1/2/6	BLUE ROOF	1536	1.3
	RG 1	RAIN GARDEN	192	0.5
	RG2	RAIN GARDEN	339	1.0
	PP4	PERMEABLE PAVING	556	0.5
	PP5	PERMEABLE PAVING	3008	5.3
	SANDOW SQ TREE PIT	WITHIN TREE PIT	860	0.5
		SUBTOTAL	8638	SUBTOTAL 11.2
OUTFALL 4	BLOCK C4/5/6	BLUE ROOF	1621	1.4
	PODIUM C	BLUE ROOF	2284	1.6
	PP6	PERMEABLE PAVING	4175	10.0
	RG 3	RAIN GARDEN	396	1.0
	RG 4	RAIN GARDEN	588	1.0
		SUBTOTAL	9064	SUBTOTAL 15.0
OUTFALL 5 (NETWORK 5)	PP7	PERMEABLE PAVING	2979	11.5
	RG 5	RAIN GARDEN	469	4.5
	RG 6	RAIN GARDEN	659	
	GC2	BGL CRATES	544	18.0(TOTAL DISCHARGE TO OUTFALL 5)
	BLOCK G	BLUE ROOF	1078	1.2
		SUBTOTAL	5729	SUBTOTAL 18.0
		TW TOTAL	23,431	TOTAL 44.2 l/s* (ALLOWABLE 44.5l/s)

* DISCHARGE TO OUTFALL 5 REDUCED BY 2/L/S/Ha TO MITIGATE AGAINST ADDITIONAL RUN OFF VOLUME

DISCHARGE RATES FROM EACH ELEMENT

CANAL CATCHMENT

OUTFALL No.	SUB CATCHMENT m²	STORAGE METHOD	TOTAL CATCHMENT / m²	RESTRICTED TO: L/S
OUTFALL 1	BLOCK E	BLUE ROOF	1644	1.2
	BLOCK B 5,6,7	BLUE ROOF	1893	1.2
	BLOCK B8	BLUE ROOF	411	0.5
	BLOCK B4	BLUE ROOF	300	0.8
	BLOCK B1,2,3,9	BLUE ROOF	2411	1.6
	PODIUM B	BLUE ROOF	2320	2.4
	PP1	PERMEABLE PAVING	464	
	PP2	PERMEABLE PAVING	1235	REFER DRAINAGE PLAN
	PP3	PERMEABLE PAVING	3015	
	RG7	RAIN GARDEN	146	0.5
	RG8	RAIN GARDEN	265	0.5
	RG9	RAIN GARDEN	437	1.0
	RG10	RAIN GARDEN	272	1.0
		SUBTOTAL	14813	SUBTOTAL 10.7l/ (EXCLUDING PERMEABLE PAVING)
OUTFALL 2	GC1	BGL CRATES	3941	15.0
	BLOCK F3,4	BLUE ROOF	1038	INCLUDED IN ABOVE
		SUBTOTAL	4979	SUBTOTAL 15.0l/s

NOTE: FURTHER AREA OF 1141m² DOES NOT BELONG TO A SUB CATCHMENT.

NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH C151867/C/001, C151867/C/002 AND C151867/C/101,102 AND 104.
2. THE PROPOSED ATTENUATION AREAS WITHIN THE THAMES WATER CATCHMENT HAVE BEEN DETERMINED BASED ON LIMITING DISCHARGE FLOWS TO THE 100yr GREENFIELD RUNOFF RATE.
3. THE PROPOSED ATTENUATION AREAS WITHIN THE CANAL CATCHMENT HAVE BEEN DETERMINED BASED ON LIMITING DISCHARGE FLOWS USING METHODOLOGY STIPULATED BY THE CAN AL AND RIVER TRUST. A FURTHER 30% BETTERMENT HAS ALSO BEEN ALLOWED FOR.
4. ATTENUATION VOLUMES SUBJECT TO CHANGE PENDING APPROVAL OF PROPOSED DISCHARGE RATES.
5. CONDITION OF EXISTING DRAINAGE CONNECTIONS FROM SITE TO BE CONFIRMED AND RETAINED IF FEASIBLE.

PERMEABLE PAVING ATTENUATION AREA. DEPTH TO BE CONFIRMED BY SPECIALISTS.

PODIUM ATTENUATION AREA . 150mm DEEP. SPECIALIST TO CONFIRM.

GEOCELLULAR ATTENUATION CRATES DEPTH AS STATED

BLUE ROOF WITH GREEN ROOF OVERLAID. AREAS SHOWN ARE BLUE ROOF AREAS BASED UPON 75% OF ROOF AREA HAVING BLUE ROOF. 150mm DEEP. SPECIALIST TO CONFIRM

RAIN GARDEN WITH PERFORATED PIPE. REFER DETAIL

NOTES:

TOTAL PROPOSED DISCHARGE TO CANAL = 60 l/s
TOTAL PROPOSED DISCHARGE TO THAMES WATER SEWERS = 44.2 l/s
DISCHARGE RATES ARE SUBJECT TO APPROVAL

GENERAL COMMENTARY:

CANAL CATCHMENT

OUTFALL 1:
BLUE ROOFS TO BE RESTRICTED AT ROOF/ PODIUM LEVEL VIA ORIFICES. DISCHARGE FROM BLUE ROOF TO DRAIN TO PERMEABLE PAVING. PERMEABLE PAVING TO CONVEY WATER TO POINT OF OUTFALL.

EXTERNAL AREA TO DRAIN TO PERMEABLE PAVING/ RAIN GARDENS. PIPED NETWORK TO CONVEY WATER TO OUTFALL.

OUTFALL 2:
BLOCK F3 AND 4 TO BE ATTENUATED VIA BLUE ROOFS, RESTRICTED AT HIGH LEVEL. PORTION OF EXISTING BLOCK F AND EXTERNAL AREAS TO DRAIN TO BELOW GROUND ATTENUATION VIA DRAINAGE CHANNELS/ GULLIES. PIPED NETWORK TO CONVEY WATER TO OUTFALL

THAMES WATER CATCHMENT

OUTFALL 3 AND 4:
BLUE ROOFS TO BE RESTRICTED AT ROOF LEVEL VIA ORIFICES. DISCHARGE FROM BLUE ROOF TO DRAIN TO PERMEABLE PAVING. PERMEABLE PAVING TO CONVEY WATER TO POINT OF OUTFALL.

EXTERNAL AREA TO DRAIN TO PERMEABLE PAVING/ RAIN GARDENS. PERMEABLE PAVING AND/OR RAIN GARDENS TO CONVEY WATER TO OUTFALL.

OUTFALL 5:
BLOCKS AND EXTERNAL AREAS TO DRAIN TO PERMEABLE PAVING/ RAIN GARDENS. WALLIS WALK TO DRAIN VIA GULLIES TO A PIPED NETWORK. PIPED NETWORK TO CONVEY WATER TO OUTFALL

Rev	Date	Description	By	Ckd
P10	25.01.18	IN ABEYANCE REMOVED FROM CANAL CATCHMENT	JH	JB
P9	22.01.18	SITE LAYOUT REVISED, LBH COMMENTS INCORPORATED	JH	JB
P8	08.08.17	ISSUED FOR PLANNING	JH	JB
P7	21.04.17	UPDATED SITE LAYOUT	AB	JH
P6	27.01.17	UPDATED SITE LAYOUT GC2 ATTENUATION CRATES AMENDED	AB	JH
P5	25.01.17	PRELIMINARY- GREEN ROOF ADDED, TABLE REMOVED	AB	JH
P4	22.12.16	PRELIMINARY- TABLE DATA, CATCHMENTS AND ATTENUATION AREAS AMENDED	AB	JH
P3	19.12.16	PRELIMINARY- TABLE DATA, CATCHMENTS AND ATTENUATION AREAS AMENDED	AB	JH
P2	31.10.16	PRELIMINARY- TABLE DATA AMENDED	AB	JH
P1	25.10.16	PRELIMINARY	AB	JH

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Client :

BARRATT LONDON

Project Title:

FORMER NESTLÉ SITE
HAYES

Drawing Title:

PROPOSED SURFACE WATER ATTENUATION LOCATIONS

Drawing Status:

PRELIMINARY ISSUE

Hydrock Job No:

C151867

Drawn	Checked	Scale @ A1	Date	Issue Date
AB	JH	1:1000	27.01.17	27.01.17

Drawing Number: C151867/C/102

Revision: P10