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A0 ORIGINAL

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SURFACE WATER KEY:

- PROPOSED SURFACE WATER SEWER AND MANHOLE
- PROPOSED SURFACE WATER SEWER AND MANHOLE (OUTSIDE MAIN AVENUE APPLICATION)
- PROPOSED SURFACE WATER SWALE
- PROPOSED SURFACE WATER ATTENUATION TANK
- DIRECTIONAL FLOW/FALL OF PROPOSED SURFACE WATER AND ROADS
- INDICATIVE EXCEEDANCE FLOW ROUTE
- CATCHMENT BOUNDARY 01
- CATCHMENT BOUNDARY 02
- CATCHMENT BOUNDARY 03
- SUB CATCHMENT BOUNDARY 03
- CATCHMENT BOUNDARY 04
- CATCHMENT BOUNDARY 05
- PN: XX.XXX MICRODRAINAGE PIPE NUMBER LABELS

BLACK DITCH

Black Ditch

ATTENUATION TANK
Total Catchment Area = 4,700m²
Impermeable Area = 2410m²
CL(min)= 3.85m (min) AOD
IL (U/S)= 1.99m AOD
Soffit (U/S)= 2.74m AOD
Min cover above tank= 0.90m
Plan Area= 88m²
22m (l) x 4m (w) x 0.75m (dp) x 95% Void Ratio
Usable Volume= 63m³

TODDINGTON DITCH

CATCHMENT 1
Total Area= 0.47 Hectares

OUTFALL 01
(Catchment 01)
To Central Wetland
Peak discharge 50l/s
IL=1.05m AOD

TOTAL COMBINED DISCHARGE FROM DEVELOPED PARCELS NOT TO EXCEED 377l/s
- **364l/s from Phase 5 & main avenue reserved matters application (currently being determined)**
- **13l/s from planning approved Phase 4**

CATCHMENT 01:
0.47 HECTARES

CATCHMENT 2
Total Area= 6.50 Hectares

CATCHMENT 02:
6.50 HECTARES

EAST OF WETLANDS TOTAL AREA

New Build Catchments
- Catchment 01: 0.47 Hectares
- Catchment 02: 6.5 Hectares
- Catchment 03: 15.8 Hectares
- Catchment 04: 1.53 Hectares

TOTAL AREA: 24.3 Hectares
TOTAL DISCHARGE: 364 Litres/sec

OUTFALL 02A (Catchment 2)
to existing ditch
Peak discharge flow 75l/s

OUTFALL 03A (Catchment 3)
to existing ditch
Peak discharge flow 5l/s

TOP WATER LEVEL
Swales 03, 04, 05, 06 & 07 and are interconnect and have the same a top of bank level of 4.1m AOD. Therefore, the top water level for extreme storm events will equlise across the 5 swales

CATCHMENT 3
Total Area= 15.80 Hectares

CATCHMENT 03:
15.80 HECTARES

OUTFALL 02B
(Catchment 02)
To Central Wetland
Peak discharge flow 75l/s

OUTFALL 04 - To Central Wetland
(Catchment 04 & 05)
- Catchment 04: Peak discharge flow 120l/s
- Catchment 05: Free discharge

OUTFALL 03B (Catchment 3)
to Norway Stream
Peak discharge flow 5l/s

CATCHMENT 05:
0.25 HECTARES

CATCHMENT 04:
1.53 HECTARES

CATCHMENT 4
Total Area= 1.53 Hectares

OUTFALL 03C (Catchment 3)
To Central Wetland
Peak discharge flow 34l/s

CENTRAL WETLAND
1 in 100 Yr Flood Level
(incl CC): 1.83m AOD

BEBO ARCH

Surface water drainage from individual properties (rwps) to discharge into the sewers identified in the roads

Swale 01
1.8m deep swale, 1in3 side slopes
Conveyance and Storage.
Attenuation Volume:
13.5m2 x 108m long = 1,460m3
300mm Freeboard: 9.75m2 x 108m long = 1,050m3

Proposed Swale 03
2m deep swale, 1in3 side slopes
for conveyance and storage.
Attenuation Volume:
18.6m2 x 132m long = 2,455m3
300mm Freeboard: 13.8m2 x 132m long = 1,821m3

Proposed Swale 05
1.90m deep swale, 1in3 side slopes
for conveyance and storage
Attenuation Volume:
14.7m2 x 114m long = 1,675m3
300mm Freeboard: 10.8m2 x 114m long = 1,231m3

Swale 02
1.8m deep swale, 1in3 side slopes
Conveyance and Storage.
Attenuation Volume:
Full: 13.5m2 x 120m long = 1,620m3
300mm Freeboard: 9.75m2 x 120m long = 1,170m3

Proposed Swale 04
1.25m deep swale, 1in3 side slopes
for conveyance and storage
Attenuation Volume:
6m2 x 178m long = 1,068m3
300mm Freeboard: 3.7m2 x 179m long = 662m3

Proposed Swale 06
1.90m deep swale, 1in3 side slopes
for conveyance and storage
Attenuation Volume:
14.7m2 x 131m long = 1,925m3
300mm Freeboard: 10.8m2 x 131m long = 1,414m3

Proposed Swale 07
2.0m deep swale, 1in3 side slopes
for conveyance and storage
Attenuation Volume:
15m2 x 237m long = 3,555m3
300mm Freeboard: 11.2m2 x 237m long = 2,654m3

ATTENUATION TANK 01
Total Catchment Area = 15,300m²
Impermeable Area = 9,650m²
Critical Storm: 1in100yr+40%CC, 120min duration
CL(min)= 3.50m (min) AOD
IL (U/S)= 1.99m AOD
Soffit (U/S)= 2.99m AOD
Top Water Level= 3.19m AOD
Min cover above tank= 0.55m
Plan Area= 220m²
25m (l) x 9m (w) x 1.0m (dp) x 95% Void Ratio
Usable Volume= 213m³

FLOW CONTROL MH (Hydro-brake)
Peak discharge flow restricted to 50l/s
CL=3.60
IL=1.90

FLOW CONTROL MH (Hydro-brake)
Peak discharge flow restricted to 75l/s
CL=3.40
IL=1.45

FLOW CONTROL SW09A (Hydro-brake)
Peak discharge flow restricted to 75l/s
CL=3.40
IL=1.45

FLOW CONTROL SW18 (Hydro-brake)
Peak discharge flow restricted to 34l/s
IL=1.85m AOD

FLOW CONTROL SW22 (Hydro-brake)
Peak discharge flow restricted to 120l/s
IL=1.76m AOD

FLOW CONTROL MH (Hydro-brake)
Peak discharge flow restricted to 5l/s
IL=2.350m AOD

TOP WATER LEVEL
Swales 03, 04, 05, 06 & 07 and are interconnect and have the same a top of bank level of 4.1m AOD. Therefore, the top water level for extreme storm events will equlise across the 5 swales

Permanent Water Level: 2.00
(Surveyed Water Level in Lake 2.17m)

ATTENUATION POND
(Existing lake partially filled in)

ATTENUATION VOLUME
Approx. = 7,300m³ (up to TWL of 4.1)

Existing embankment separating Norway Stream and the existing lake to be raised to 4.10m AOD

New Box Culvert on Norway Stream (Dims tbc)

Outfall into Norway Stream IL:1.20 (TBC)

Max Discharge 5 litres/sec

Max Discharge 50 litres/sec

Max Discharge 75 litres/sec

Max Discharge 34 litres/sec

Max Discharge 5 litres/sec

Bridge 01

Bridge 02

Bridge 03

Foot Bridge

Five Stones Nursery

Westholme Nursery

Tulley Nurseries

SCHOOL SITE
1.3Ha

Toddington

Foxdale Nursery

Co Const, ED & Ward Bdy

2907

2600

FOR INFORMATION
NOT FOR CONSTRUCTION

rev.	amendment	checked	date
P6	General updates. (TC)	SF	03/05/2024
P5	Pipe labels added to suit revised drainage models. Discharge rates revised and general drainage updates. (TC)	SF	05/02/2024
P4	Drawing updated following revised report submission. (TC)	SF	21/09/2022
P3	Culverts replaced with footbridges in the central wetland (no other changes). (IC)	SF	01/03/2022
P2	Central wetland drainage information updated. (TC)	SF	02/12/2021
P1	Initial Issue. (TC)	SF	21/06/2021

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client
PERSIMMON HOMES THAMES VALLEY

project
NORTH LITTLEHAMPTON
MAIN AVENUE & PARCELS EAST OF WETLANDS

scale	drawn by	checked by
1:1000	TC	SF

date	cad file
JUNE 2021	01.DWG

title
MAIN AVENUE & EAST OF WETLANDS
SURFACE WATER DRAINAGE STRATEGY

Mayer Brown Limited jobcode	suitability	revision
A/PHLITTLE-MAIN.10		P6

drawing number
A/PHLITTLE-MAIN.1/01