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# Phase 1 - 53 plots

## NOTES:

ALL SERVICE PROVIDERS FOR ADOPTED ITEMS & SECTION 104 AGREEMENT OF THE WATER INDUSTRY ACT 1991 TO BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE WATER UK SPECIFICATION FOR SEWERS & WATER MAINS OF DOMESTIC DISTRIBUTION (INCLUDING ENGLAND & WALES) (WRAS 2015).

FOUL DRAINAGE CONNECTIONS TO BE 150mm dia. (cl28 SW PLASTER TRAP) OR 100mm dia. (cl28 SW PLASTER TRAP) OR 100mm dia. (cl28 SW PLASTER TRAP) C.I.A.S. PRICE SEATING. (CHARLES H. ROAD, CHELTENHAM, GLOUCESTER).

ALL SEWERS AND LATERAL DRAINS WITHIN DOMESTIC CURTILAGE OF DWELLING 100mm dia. (100mm TO BE PVC-U TO BS EN 1401-1:1999 & BS 4660:2000).

ALL PIPEWORK TO BE LAID DIRECT TO SAFETY UNLESS OTHERWISE STATED.

ALL FOUL 150mm dia. (150mm dia. TO BE PROVIDED WITH CLEAN E-SEEKING) (Tempo - Lane GRAVEL RED AND GUERNSEY).

ALL FOUL 150mm dia. (150mm dia. TO BE PROVIDED WITH CLEAN E-SEEKING) (Tempo - Lane GRAVEL RED AND GUERNSEY).

PRECAST CONCRETE PRODUCTS AND BLOCK CONCRETE TO CONFORM & REMOVED PLACES 1-3 ALL.

ALL PIPEWORK TO BE IN ACCORDANCE WITH BS 1125:1976 AND PART BS 4720:1982 (SEALED TYPE WHERE REINFORCED) AND (BS EN 10 ALL STEEL FITTINGS).

CAST CONCRETE SHALL BE PROVIDED TO PROVIDE A "FAIR" SURFACE WHERE EXPOSED AND SHALL HAVE A "SMOOTH" FINISH OR ALL STEEL EXPOSURE.

TYPICAL WORK SHALL BE IN ACCORDANCE WITH DETAILS.

ALL MANHOLE COVERS TO BE 450x450 CLEAR OPENING IN ACCORDANCE WITH B.S. 497-1:2 CLASS D400 AND EMBOSSED TO

## Drainage Notes

Ref. | BOUNDED CARAVAN PLOT NUMBER
BL 1.000 | BOUNDED COLLECTED CLEAR OF SWEEPED FLOOR LEVEL, NORMALLY 450mm ABOVE EXISTING GROUND LEVEL, max 1.000m ABOVE
CL 0.0 | BOUNDED EXISTING GROUND LEVEL

- 150mm Ø new UPVC FOUL WATER SEWER (Gravity)
- 125mm Ø new UPVC FOUL WATER PUMPING MAIN (Gravity)
- 100mm Ø new UPVC FOUL WATER DRAIN (PRIVATE)
- 100mm Ø, 150mm Ø, 150mm Ø VERTICAL WATER LINE DRAIN (PRIVATE).

- GAS VENTING
- WATER MAIN / WATER / SURFACE ABSTRACTOR
- POLYPROPYLENE MINI ACCESS CHAMBER TYPE 1 (PRIVATE) - FOUL
- POLYPROPYLENE ACCESS CHAMBER TYPE 1 (PRIVATE) - SURFACE WATER
- 1200mm Ø PRECAST CONCRETE MANHOLE (PRIVATE) - FOUL
- 1200mm Ø PRECAST CONCRETE MANHOLE (PRIVATE) - SURFACE WATER
- RECTANGULAR UNITS - LARGE GENERAL PURPOSE PRE-FORMED HEADWALL UNIT (SEE DETAILS)

POLYPROPYLENE ACCESS CHAMBERS (TYPE 1) TO BE DESIGN TO BS 7566-4:2021
ALL CHAMBERS TO BE CONSTRUCTED IN ACCORDANCE WITH BS EN 1917:2002 AND BS 5911-1:2010+A1:2016 (INCLUDING NA.2.1:2019).
ALL CHAMBERS WITHIN CARRIAGEWAYS AREAS, FOOTPATHS AND PAVED AREAS TO BE DESIGN TO WITHSTAND LOAD CLASS D400 (22.5 TONNES).
ALL CHAMBERS WITHIN YOUR GARDEN AREAS OR WITHIN AREAS THAT WILL NOT BE DESIGN TO WITHSTAND LOAD CLASS B 400 (20TONNES) UNLESS OTHERWISE NOTED. (Grease BEEP CH CONCRETE CHEAP).
WHERE CHAMBERS ARE WITHIN 1.0m OF ANY BUILDING AND THE DEPARTURE OF THE CHAMBERS IS MORE THAN 600mm DEEP DRAINS BUILDING FOUNDATIONS SHALL BE ADJUSTED OR BE DESIGNED TO ACCOMMODATE THE CHAMBERS. (Grease BEEP CH CONCRETE CHEAP).
DOMESTIC HEADWALLS TO BE PVC-U TO BS EN 1401-1:1998 & BS 4660:2000.
150mm DOMESTIC HEADWALLS (see Table) THE SUBE UNDER PLASTER TRAP (1:40 Small) (1:100 Conference) CHAMBERS UNLESS OTHERWISE STATED.
150mm DOMESTIC HEADWALLS (see Table) THE SUBE UNDER PLASTER TRAP (1:40 GRADIENT UNLESS OTHERWISE STATED).

1.028 191.20m long Foul Water Pumping Main 125mm OD HPPE SDR11, laid at a constant gradient of 1:300 falling. Foul Pumping Main marked with non-degradable marker tape containing a trace wire terminating with 1m of wire coiled inside valve chamber. Marker tape to be provided above the rising main. The marker tape should include a tracer wire that is terminated at the valve chamber and outfall manhole in such a way as to facilitate the easy connection of a location signal generator.

Road 1 Fiber Strip 1.
Chainage 0.00m - 270.00m
2.250x10-5m/s infiltration rate.
trench width = 450mm
trench depth = 900mm
Trench filled with Type 3 (UGA) granular sub base (40mm to 10mm grading 30% voids) to BS EN 13242:2002, lined with geotextile to prevent migration of fines.
1:100 year + 40% climate change results.
fill depth = 615mm
50% drain down time = 30 mins

Turner Acorn Road Fiber Strip 4.
Chainage 320.00m - 561.60m
2.250x10-5m/s infiltration rate.
trench width = 1000mm
trench depth = 900mm
Trench filled with Type 3 (UGA) granular sub base (40mm to 10mm grading 30% voids) to BS EN 13242:2002, lined with geotextile to prevent migration of fines.
1:100 year + 40% climate change results.
fill depth = 935mm
50% drain down time = 42 mins

Road 3 Fiber Strip 4.
Chainage 122.00m - 298.40m
2.250x10-5m/s infiltration rate.
trench width = 700mm
trench depth = 900mm
Trench filled with Type 3 (UGA) granular sub base (40mm to 10mm grading 30% voids) to BS EN 13242:2002, lined with geotextile to prevent migration of fines.
1:100 year + 40% climate change results.
fill depth = 735mm
50% drain down time = 32 mins

Road 3 Fiber Strip 1.
Chainage 0.00m - 52.00m
2.250x10-5m/s infiltration rate.
trench width = 900mm
trench depth = 900mm
Trench filled with Type 3 (UGA) granular sub base (40mm to 10mm grading 30% voids) to BS EN 13242:2002, lined with geotextile to prevent migration of fines.
1:100 year + 40% climate change results.
fill depth = 735mm
50% drain down time = 34 mins

Road 10 Fiber Strip 2 / Road 10 Fiber Strip 1.
Chainage 53.00m - 83.30m / 0.00m - 73.50m
2.250x10-5m/s infiltration rate.
trench width = 900mm
trench depth = 900mm
Trench filled with Type 3 (UGA) granular sub base (40mm to 10mm grading 30% voids) to BS EN 13242:2002, lined with geotextile to prevent migration of fines.
1:100 year + 40% climate change results.
fill depth = 1050mm
50% drain down time = 51 mins

Road 1 Fiber Strip 3.
Chainage 88.30m - 122.40m
2.250x10-5m/s infiltration rate.
trench width = 450mm
trench depth = 900mm
Trench filled with Type 3 (UGA) granular sub base (40mm to 10mm grading 30% voids) to BS EN 13242:2002, lined with geotextile to prevent migration of fines.
1:100 year + 40% climate change results.
fill depth = 735mm
50% drain down time = 30 mins

Road 1 Fiber Strip 2.
Chainage 0.00m - 88.30m
2.250x10-5m/s infiltration rate.
trench width = 450mm
trench depth = 900mm
Trench filled with Type 3 (UGA) granular sub base (40mm to 10mm grading 30% voids) to BS EN 13242:2002, lined with geotextile to prevent migration of fines.
1:100 year + 40% climate change results.
fill depth = 615mm
50% drain down time = 30 mins

Road 2 Fiber Strip 1.
Chainage 0.00m - 270.00m
2.250x10-5m/s infiltration rate.
trench width = 450mm
trench depth = 900mm
Trench filled with Type 3 (UGA) granular sub base (40mm to 10mm grading 30% voids) to BS EN 13242:2002, lined with geotextile to prevent migration of fines.
1:100 year + 40% climate change results.
fill depth = 615mm
50% drain down time = 30 mins

existing road signs to be relocated to new road layout.

existing ground track to be reinstated to suit new track levels.

existing ground track to be reinstated to suit new track levels.

50mm rolled limestone or gravel topping
250mm Type1 sub base (clause 8.1)
Geotextile

Private FWPS (Ø=1+2/3) - 300 plots
Ø -3.100
Ø -1.118
Ø -2.300
Ø 1.800

Lime with hydrostatone, 3" rounded Dolomitised limestone or gravel laying to manufacturers spec and base (Dingy R.T. Surfacing)
50x150 PTC edgings.

Bell-mouth W11 ground level: 3.200 groundwater: 0.200

F140 valve chamber
Ø 3.100
Ø -1.118
Ø 1.500
Ø -1.900
2400x1800

F139 wet well
Ø 3.100
Ø -1.118
Ø 1.500
Ø -1.900
C2100

F138
Ø 2.950
F 2.940
C1200a

F129
Ø 3.500
Ø -0.742
C1200a

F113
Ø 3.150
Ø -0.487
C1200a

F112
Ø 2.950
Ø -0.003
C1200a

F111
Ø 2.950
Ø -0.003
C1200a

F122
Ø 2.900
Ø 0.347
C1200b

F124
Ø 3.050
Ø -0.003
C1200a

F123
Ø 2.900
Ø 0.102
C1200b

F125
Ø 3.150
Ø -0.221
C1200a

F137
Ø 3.500
Ø -0.000
C1200a

F126
Ø 3.500
Ø -0.533
Ø 1.665
C1200a

F128
Ø 3.500
Ø -0.533
Ø 1.665
C1200a

Plot 01 Ø3.550 (2.90) — Cut 4.5mm (0 mm) — 2.920
Plot 02 Ø3.600 (2.95) — Cut 4.5mm (0 mm) — 2.888
Plot 03 Ø3.650 (3.00) — Cut 4.5mm (0 mm) — 3.184
Plot 04 Ø3.500 (2.85) — Cut 4.5mm (0 mm) — 3.562
Plot 05 Ø3.400 (2.75) — Cut 4.5mm (0 mm) — 3.536
Plot 06 Ø3.250 (2.60) — Cut 4.5mm (0 mm) — 3.429
Plot 07 Ø3.100 (2.45) — Cut 4.5mm (0 mm) — 3.339
Plot 08 Ø3.450 (2.80) — Cut 4.5mm (0 mm) — 2.879
Plot 09 Ø3.550 (2.90) — (cover @ 4mm) — 2.739
Plot 10 Ø3.300 (2.65) — (cover @ 4mm) — 2.656
Plot 11 Ø3.300 (2.65) — Cut 4.5mm (0 mm) — 2.535
Plot 12 Ø3.150 (2.50) — Cut 4.5mm (0 mm) — 2.423
Plot 13 Ø3.100 (2.45) — Cut 4.5mm (0 mm) — 2.423
Plot 14 Ø3.100 (2.45) — Cut 4.5mm (0 mm) — 2.423
Plot 33 Ø3.300 (2.65) — Cut 4.5mm (0 mm) — 2.423
Plot 34 Ø3.350 (2.70) — Cut 4.5mm (0 mm) — 2.544
Plot 35 Ø3.250 (2.60) — Cut 4.5mm (0 mm) — 2.616
Plot 36 Ø3.350 (2.70) — Cut 4.5mm (0 mm) — 2.670
Plot 37 Ø3.600 (2.95) — Cut 4.5mm (0 mm) — 2.761
Plot 38 Ø3.600 (2.95) — Cut 4.5mm (0 mm) — 2.978
Plot 39 Ø3.450 (2.80) — Cut 4.5mm (0 mm) — 2.695
Plot 40 Ø3.200 (2.55) — Cut 4.5mm (0 mm) — 2.553
Plot 41 Ø3.650 (3.00) — Cut 4.5mm (0 mm) — 2.636
Plot 42 Ø3.600 (2.95) — Cut 4.5mm (0 mm) — 2.620
Plot 43 Ø3.400 (2.75) — Cut 4.5mm (0 mm) — 2.463
Plot 44 Ø3.150 (2.50) — Cut 4.5mm (0 mm) — 2.509
Plot 45 Ø3.250 (2.60) — Cut 4.5mm (0 mm) — 2.609
Plot 46 Ø3.350 (2.70) — Cut 4.5mm (0 mm) — 2.620
Plot 47 Ø3.350 (2.70) — Cut 4.5mm (0 mm) — 2.882
Plot 48 Ø3.350 (2.70) — Cut 4.5mm (0 mm) — 3.049
Plot 49 Ø3.350 (2.70) — Cut 4.5mm (0 mm) — 3.039
Plot 50 Ø3.650 (3.20) — Cut 4.5mm (0 mm) — 3.457
Plot 51 Ø3.600 (2.95) — Cut 4.5mm (0 mm) — 2.890
Plot 52 Ø3.950 (3.30) — Cut 4.5mm (0 mm) — 3.228
Plot 53 Ø3.600 (2.95) — Cut 4.5mm (0 mm) — 2.982
Plot 54 Ø3.550 (2.90) — Cut 4.5mm (0 mm) — 2.890
Plot 55 Ø3.600 (2.95) — Cut 4.5mm (0 mm) — 2.94
Plot 56 Ø3.550 (2.90) — Cut 4.5mm (0 mm) — 2.889
Plot 57 Ø3.600 (2.95) — Cut 4.5mm (0 mm) — 2.987
Plot 58 Ø3.600 (2.95) — Cut 4.5mm (0 mm) — 2.990
Plot 59 Ø3.600 (2.95) — Cut 4.5mm (0 mm) — 2.956

Road 1 — Road 2 — Road 3 — Road 10

2.288 — 2.361 — 2.421 — 2.445 — 2.345 — 3.064 — 3.059 — 3.436 — 3.457 — 3.124 — 3.629 — 3.595 — 3.149 — 3.203 — 3.164 — 3.197 — 3.433 — 3.741 — 2.546 — 2.602 — 2.854 — 2.950 — 2.695 — 2.553 — 2.808 — 2.793 — 2.636 — 2.509 — 2.597 — 2.498 — 2.496 — 2.834 — 2.475 — 2.820 — 2.617 — 2.518 — 2.589 — 2.493 — 2.513 — 2.439 — 2.383 — 2.668 — 2.665 — 3.051 — 3.221 — 3.133 — 3.221 — 2.305 — 2.859 — 2.982 — 2.890 — 2.889 — 2.539 — 3.187 — 3.163 — 3.117 — 3.184 — 2.940 — 2.888 — 2.949 — 3.013 — 3.556 — 2.913 — 3.536 — 3.562 — 3.429 — 3.488 — 2.529 — 2.812 — 2.739 — 2.879 — 2.625 — 2.535 — 2.355 — 2.309 — 2.142 — 1.861 — 1.909

Drain

3.4m

Mast

MP 0.25

SP

Potable water connection point
150mm DI main

Lineside Cottage

CLOSE BOARD WOODEN FENCE

METAL GATE

CONCRETE SURFACE

tree to be retained

hedge

Table 1: Summary of soakaway results

| Trial pit | Fill 1 (m/s) | Fill 2 (m/s) | Fill 3 (m/s) |
|---|---|---|---|
| TP1 | $1.56x10^{-6}$m | $8.43x10^{-6}$m | $1.06x10^{-6}$m |
| TP2 | $9.27x10^{-7}$m | $7.07x10^{-6}$m | $5.78x10^{-6}$m |
| TP3 | $2.41x10^{-6}$m | $5.44x10^{-6}$m | $2.21x10^{-6}$m |
| TP4 | $1.12x10^{-6}$m | $1.88x10^{-6}$m | $1.38x10^{-6}$m |
| TP5 | No infiltration | No infiltration | No infiltration |
| TP6 | No infiltration | No infiltration | No infiltration |
| TP7 | $1.31x10^{-6}$m | $2.63x10^{-6}$m | $2.39x10^{-6}$m |
| TP8 | $8.51x10^{-6}$m | $5.09x10^{-6}$m | $6.58x10^{-6}$m |
| TP9 | $1.28x10^{-6}$m | $5.09x10^{-6}$m | $5.17x10^{-6}$m |

sheet 11 of 11 | sheet 10 of 11 | sheet 9 of 11 | sheet 8 of 11 | sheet 7 of 11 | sheet 6 of 11 | sheet 5 of 11 | sheet 4 of 11 | sheet 3 of 11 | sheet 2 of 11 | sheet 1 of 11

Road Widths (including channel widths)

| Road No. | Type | Material | Width (m) |
|---|---|---|---|
| 1 | 2 way | Tarmac | 6.00 |
| 2 | 1 way | Stone | 3.50 |
| 3 | 1 way | Stone | 3.50 |
| 4 | 1 way | Stone | 3.50 |
| 5 | 2 way | Stone | 5.00 |
| 6 (1) | 2 way | Stone | 5.00 |
| 6 (2) | 1 way | Stone | 3.50 |
| 7 | 1 way | Stone | 3.50 |
| 8 | 1 way | Stone | 3.50 |
| 9 | 1 way | Stone | 3.50 |
| 10 | 2 way | Stone | 5.00 |
| 11 | 1 way | Stone | 3.50 |
| 12 | 1 way | Stone | 3.50 |
| 13 | 1 way | Stone | 3.50 |

**DO NOT SCALE. USE FIGURED DIMENSIONS ONLY. CHECK ON SITE AND ALL DISCREPANCIES TO BE REPORTED TO HALL infrastructure DESIGN Ltd.**

**AMENDMENTS:**

| REF. | DESCRIPTION. | DATE. | BY. |
|---|---|---|---|
| A | Provisional surface water drainage added. | 14.02.20 | LMH |
| B | Updated roads for submission to Boston Borough Council for planning condition discharge. | 19.03.21 | LMH |
| C | Adoptable FWPS moved to clear easements. | 30.03.21 | LMH |

**CLIENT:**
Boston West Holiday Park Ltd

**PROJECT:**
Boston West Golf Centre

**TITLE:**
Road and Sewer Layout
sheet 3 of 11

| SCALE: | DATE: | SIZE: |
|---|---|---|
| 1:250 | November 2020 | A0 |

| DRAWING No: | DRAWN BY: | CHECKED BY: |
|---|---|---|
| 2011/06-C | | |

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