NORTH

4.0m wide turning head to be constructed off private drive serving plots 187-191 to allow access to the Storage Tank and S16. End of turning head to be a maximum distance of 5.0m from S16. Private drive serving and turning head to be constructed to adoptable specification for use by Yorkshire Water vehicles.

Access 2 CL 72.625

Access 3 CL 72.418

S50

Carlow Pre Cast Storage Tank

3000 insitu dry flow channel @ 1:500 1:500.0/29.5m

S51

Access 1 CL 73.570

Access 4 CL 72.356

Manhole S16 fitted with a Hydrobrake Optimum flow control unit, ref. SHE-0215-3260-3100-3260 limiting flows to 32.6 litres/second and having a design head of 3.100m.

OPEN SPACE

S16 300Ø 1:200.0 5.0m

S17

1200Ø 1:100.0 5.0m

S18 300Ø/

150Ø/1:95.7/69.8m

150Ø/1:50.5/59.1m

150Ø 1:100.0 5.0m

S15

450Ø/1:10.1/42.8m

F13 150Ø/1:10.3/13.6m

F14

S35

750Ø/1:640.2/29.0m

IC66 cl70.05 il69.00

IC67 cl70.05 il68.80

150Ø/1:10.3/27.2m

750Ø/1:478.3/28.2m

S34

F15

150Ø/1:149.5/20.9m

Existing tree to be remov

Marshalls RT R14 HD Retractable Bollards positioned at 1.35m centres

Road 13

Road 14

Road 1

Road 7

Road 7-TH

F11 S13 F12 S14 F22 F21 S23

IC23 cl77.55 il75.55

IC24 cl77.85 il76.12

IC25 cl79.35 il78.15

IC26 cl79.80 il78.49

IC27 cl75.45 il74.25

IC28 cl75.00 il73.87

150Ø/1:137.0/41.1m

450Ø/1:60.5/41.1m

150Ø/1:10.0/8.8m

150Ø/1:10.0/23.2m

225Ø/1:10.0/34.3m

Marshalls RT R14 HD Retractable Bollards positioned at 1.35m centres

F41 S45 F42 S46 F43 S47 F44

IC40 cl80.60 il79.40

IC41 cl80.75 il79.15

IC42 cl75.76 il74.56

IC43 cl75.84 il74.07

IC44 cl75.55 il74.35

IC45 cl75.55 il74.05

Highway Drain 150Ø/1:24.8/51.6m

150Ø/1:13.3/19.3m

375Ø/1:13.9/30.6m

150Ø/1:13.3/25.2m

150Ø/1:13.2/18.4m

450Ø/1:12.1/29.2m

150Ø/1:10.0/45.9m

4500/1:14.6/36.2m

F54 S33 F16 S33a F17 F18 F19

IC64 cl74.15 il72.80

IC65 cl74.05 il72.45

150Ø/1:19.4/10.9m

225Ø/1:144.9/3.8m

Pumping Station

Foul Pumping Station Max Pump Rate 10 litres/second

600Ø/1:12.9/43.4m

1500/1:148.9/19.2m

600Ø/1:18.2/25.7m

1500/1:148.9/19.2m

525Ø/1:19.5/58.2m

1500/1:19.4/52.2m

Side door to be omitted to plot 114

Side door to be omitted to plot 113

No access to garden

CH.BLOCK

[78.30] [77.70] [77.25] [76.65] [76.20] [75.75] [74.85] [74.10] [73.65] [72.90] [72.45] [72.30] [71.85] [71.55] [71.40] [70.80] [70.05] [80.55] [80.25] [79.80] [79.20] [78.75] [78.00] [77.40] [76.65] [75.90] [74.70] [72.75] [72.00] [81.00] [79.50] [81.60] [81.30] [81.15] [79.95] [80.85] [81.45] [82.35] [82.65] [83.10] [85.35] [84.75] [83.25] [82.95] [81.90] [81.00] [75.30] [75.45] [76.05] [74.55] [74.70] [74.85] [75.15] [73.65]

[M]

Existing foul public sewer.

Existing foul public sewer (to be removed/grouted up).

Proposed combined manhole and sewer.

Proposed foul water manhole and sewer.

Proposed foul water rising main.

Proposed surface water manhole and sewer.

Proposed surface water rising main.

Catch-pit manhole.

Proposed surface water lateral drain.

Proposed surface water drain with manhole deeper than 1.2m.

Proposed surface water inspection chamber and invert level.

Proposed surface water gully.

Proposed rainwater down pipe.

Proposed rodding eye.

Proposed ACO channel drain.

Proposed dished channel and gully.

Proposed surface water back drop.

Proposed rainwater butt connected to downpipe and surface water drain.

Proposed foul water lateral drain.

Proposed foul water drain with manhole deeper than 1.2m.

Proposed foul water inspection chamber and invert level.

Proposed foul water access chamber, max. 0.6m deep.

Proposed soil vent pipe/back inlet gully.

Proposed back drop.

Proposed retaining wall.

Proposed additional facing bricks below D.P.C.

Proposed D.P.C. level.

Proposed ground level.

Existing ground level.

Proposed street lighting.

LEGEND

Health and Safety Notes/CDM Regulations 2007

In line with the above regulations we are obliged to inform the Contractor of the abnormal risks that may be encountered in the construction of these works. As a result of the investigations carried out, the following risks have been taken into consideration and these are observed within the designs viewed on this document. Although considerable effort is undertaken to eliminate risks, the very nature of the project gives rise to some hazards and risks.

Significant risks that cannot be eliminated by design and could not be foreseen by a competent contractor are noted in the risk assessment boxes on the drawings.

NOTES

1. Manholes, sewers etc. and any other part of the works intended for adoption under a Section 104 Agreement or gullies etc. intended for adoption as Highway Drainage are to be constructed in accordance with the W.A.A specification "Sewers for Adoption" 6th Edition, and to any requirements of the Adopting Authority and the Local Council.
2. Unadopted FW and SW drainage is to be constructed in accordance with the Building Regulations, BS. 8301 and relevant Agreement Certificates.
3. All private drainage to be 100mmØ unless indicated otherwise. All connections from private to adoptable manholes/sewers to be 150mmØ(min).
4. Private drainage with less than 0.9m of cover in drives and car parking areas to have minimum 150mm concrete bed and surround.
5. Private Drains are to be constructed using flexibly-jointed vitrified clay pipes to BS. 65 "Super Strength" specification and BS EN 295 (e.g. Hepworth SuperSleeve or similar) or uPVC Building Drainage system pipe work to EN 1401-1, bedded and back filled in accordance with the manufacturers instructions and the specifications listed in Note 2.
6. Backfilling of drain trenches adjacent to dwellings or other structures to be in accordance with BS. 8301-Fig.9.
7. Access fittings and inspection chambers less than 1m deep are to be clayware or pre-formed polypropylene as appropriate to the depth and number of connections. Chambers greater than 1.2m deep are to be of pre-cast concrete construction with 150mm in-situ concrete surround, or polypropolene reduced access system. Inspection chamber sizes are to be in accordance with Table 8 of BS.8301.
8. Cover levels indicated on the drawing are nominal and may be adjusted to suit finished ground levels as necessary. Private inspection chamber covers should be Grade B in areas accessible to wheeled vehicles and Grade C elsewhere.
9. Rainwater down pipes to be connected direct to drain using an appropriate adapter and removable section of down pipe to permit rodding access.
10. Where drains pass through foundations or other rigid structures, a lintel or sleeve is to be used and provision for flexibility is to be made with "rocker pipes".
11. The positions of SVPs, stub-stacks, W.C. outlets etc. and rainwater down pipes are to be accurately located from the house-type working drawings.
12. Gullies situated in areas accessible to wheeled vehicles are to be of suitable construction. Typically Hepworth square gully ref. SG2/1 with driveway grating ref. 1H2C for a single private drive. For communal parking areas refer to the detail shown on iD Civils Design drawing number XXXX-C-D3-01.
13. Drains within areas of "made ground" to be constructed by first making up the area to approx. finished level and then excavating through the fill material into undisturbed ground. The drain trench is then to be back filled to formation level using suitable granular fill material well-compacted in layers not exceeding 225mm.
14. Drains to be constructed under dwellings with suspended floor slabs should either be installed using a proprietary hanger system where "beam and pot" or similar construction is used, or should be cast into local slab thickening where reinforced concrete ground slabs are to be poured in-situ.
15. Finished ground levels have been prepared assuming that the level threshold to the building, is in accordance with part M of the building regulations, is at the front of the property unless otherwise stated.
16. For all details of fences/walls and enclosures refer to architect for details.

CONSTRUCTION RISKS		
CONSTRUCTION RISKS	MAINTENANCE RISKS	DEMOLITION RISKS
Collapse of excavations.	Caution should be exercised when working in and adjacent to the surface water storage tank.	No future abnormal demolition risks associated with Roads and Sewers.
Un-charted buried existing services.		
Working on live sewers.		
Working adjacent to the public highway.		
Working within existing watercourses.		

In addition to the hazards/risks normally associated with this type of work detailed on this drawing take note of the above. iD Civils Design are only required to provide information about any significant risks associated with the design.

Rev	Description	By	Date
G	External works amendment to achieve level access to plots 110, 196, 200, 201 and 202.	DL	11.05.17
F	Plots 113-116a, 186-188a, 199-205 amended and shared private drive to plots 186-190 widened.	DL	23.03.17
E	Plots 114-237 FFLs checked against revised road levels and amended where required.	DL	25.01.17
D	Road 7, 7-TH, 14 amended, plots re-numbered, plots 189-198 amended and all associated external levels and drainage amended accordingly.	DL	16.12.15
C	Outgoing pipe on hydrobrake manhole S16 dropped by 50mm, hydrobrake design and downstream pipe gradients amended accordingly and bed and normal water levels shown in watercourse.	DL	06.11.15
B	Sewer gradients rationalised between F12-FS1, F27-F29, F37-F39, F43-F38, S28-S30, S42-S44, S52-S58 and S65-S70. Manhole schedules amended accordingly.	DL	07.10.15
A	IC7, IC15, IC46, IC47, IC54 and IC55 relocated from rear gardens. MH S20 and S62 relocated. S1, S20, S23, S38, S40, S52, S55, S56, S58, S65, S66, S71 and F5, F8, F25, F30, F38, F42, F49 and F50 chamber sizes increased by an increment. Phase 2 SW storage structure and hydrobrake amended. Notes added to access roads to hydrobrake manholes S16 and S62. Demarcation chamber IC69 and manhole F55 deepened.	DL	05.10.15

Client:

Persimmon Homes West Yorkshire

Project Title:

Wilthorpe Road, Barnsley

Drawing Title:

1:200 Engineering Layout Sheet 4

Scale	Date
1:200 @ A0	04.06.15
Drawing No	Revision / Status
4015-C-D1-07	G / Approval

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