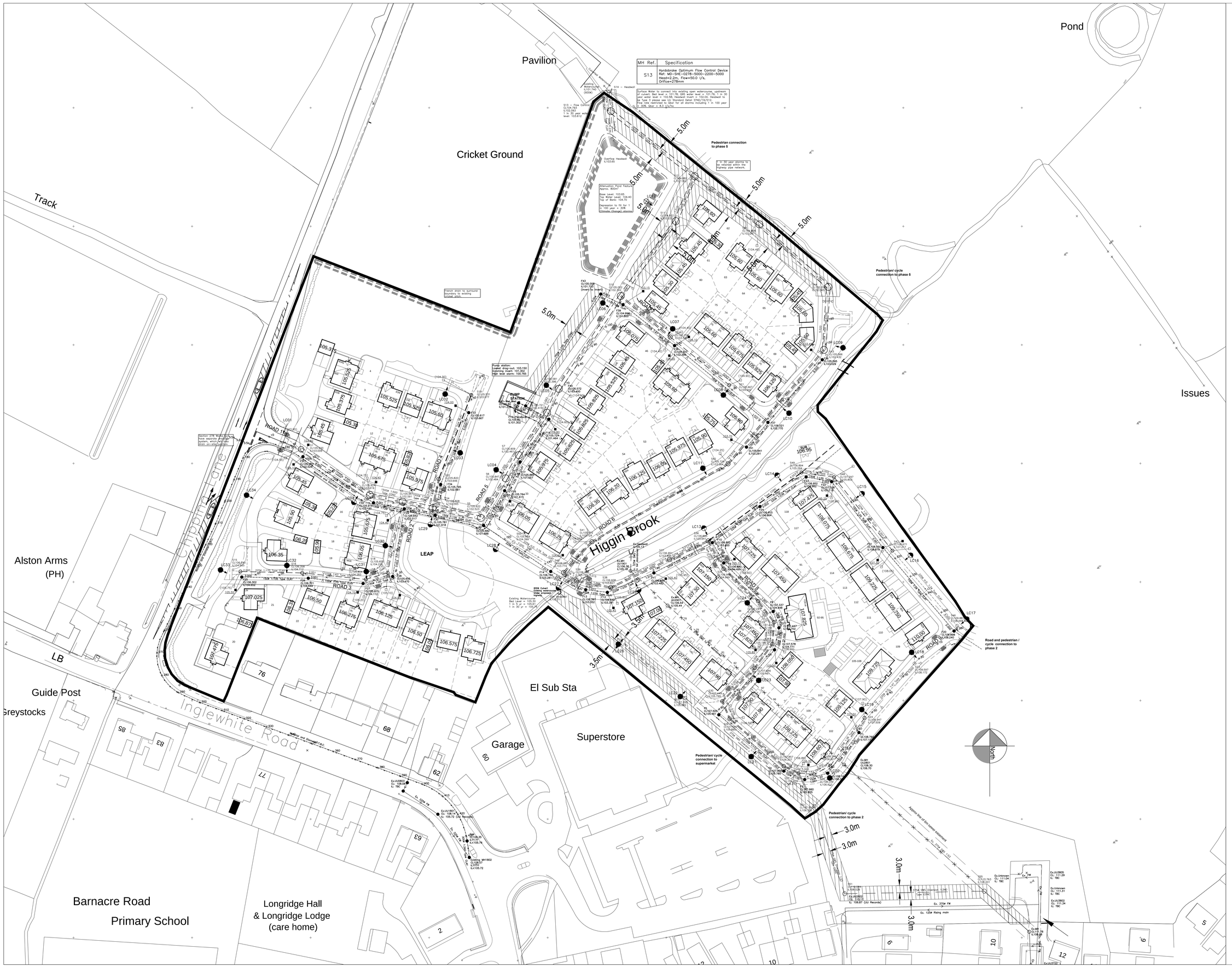

MH Ref.	Specification
S13	Hydrobrake Optimum Flow Control Device Ref: MD-SHE-0278-5000-2200-5000 Head=2.2m, Flow=50.0 l/s, Orifice=278mm

Surface Water to connect into existing open watercourse, upstream of culvert. Bed level = 101.78; QBS water level = 101.79; 1 in 30 year water level = 102.58; Headwall Invert = 102.04; Headwall to be Type 3 please see UU Standard Detail STND/19/012. S = 308; Qbar = 8.3 l/s/ha for all storms including 1 in 100 year

WARNING TO HOUSE-PURCHASERS

Property Misdescriptions Act 1991

Buyers are warned that this is a working drawing and is not intended to be treated as descriptive material describing, in relation to any particular property or development, any of the Specified matters prescribed by any Order made under the above Act. The contents of this drawing may be subject to change at any time and alterations and variations can occur during the progress of the works without revision of the drawing. Consequently the layout, form, content and dimensions of the finished construction may differ materially from those shown. Nor do the contents of this drawing constitute a contract, part of any contract or warranty.

ENGINEERING LAYOUT NOTES

1. All adoptable drainage works have been designed and are to be constructed in accordance with 'Sewers for Adoption, 6th Edition', and United Utilities 'Guidelines for Sewer for adoption 6th Edition'. Where specification conflicts, UU guidelines shall take precedence.

United Utilities Standard details to be used are:

STND/19/001A	Manhole Type 1
STND/19/002A	Manhole Type 2 and Invert Access Detail
STND/19/003A	Shallow Manhole Detail for Small Diameter Pipes (Type 4)
STND/19/004A	Shallow Surface Water Manhole Detail – Restricted Headroom (less than 2.0m) – For Pipe Sizes 450Dia and Above
STND/19/005A	Flow Control Manhole Detail
STND/19/007A	External Backdrop Detail
STND/19/008A	Pipe Bedding Detail
STND/19/010A	Variable Manhole – Guidance Notes
STND/19/011A	Headwall Type 1 and Typical Outlet Grille Detail
STND/19/012A	Typical Outfall Details Type 2 & Type 3

2. All clay pipe work shall be Extra Strength Clayware to BS 295 and BS 65 (SW pipes only).

3. All precast concrete pipework shall be to Class 120 in accordance with BS3911 Part 1, BS EN 1916 and bear the BS kitemark.

4. All adoptable drainage to be bedded in Class S granular surround unless otherwise stated.

5. All Concrete manholes and Soakaways rings, Concrete cover slabs and Con to be manufactured to BS EN 1917 and BS 5911:Part 3.

6. Rising Mains to be Black Polyethylene Pipes complying to BS EN 13244-2. Polyethylene fittings, including fusion joints, and electro-fusion fittings shall comply with BS EN 13244-2.

7. All levels relate to Ordnance Datum. Contractor to ensure that this drawing is read in conjuction with the site specific Topographical Survey provided by Barratt Manchester and the Benchmark information provided.

8. This drawing is to be read in accordance with all other relevant drawings.

9. The contractor shall be responsible for ensuring that any existing invert levels indicated on the drawings are correct before work commences.

10. All proposed connections to the sewer shall be 150M unless stated otherwise.

11. All private house drainage shall be 100M and all drag-out connections shall be 150M at a minimum gradient of 1:80 unless otherwise stated and laid in accordance with Part H of the the Building Regulations.

12. Runoff from private surfaces shall not discharge across the highway. Gullies or channels shall be provided as appropriate to prevent this.

13. Prom crossings shall be provided at the inner tangent points of all junctions.

14. Pipes shall be protected from concentrated loading by construction traffic during the construction period when insufficient cover to the pipe may make them vulnerable to damage.

15. Insitu CBR tests of the road formation level are to be carried out to determine the depth of pavement construction required. This is to be approved by the adopting authority prior to construction of the road pavements.

16. Groundwater to ensure that plot drainage be within the curtilage of the plot they serve where possible and inspection covers kept within hardstandings where possible.

17. Contractor to provide United Utilities with sufficient notice prior to commencement of Sewer works on their Inspections telephone number. Tel 0845 602 0406.

18. Contractor to obtain all necessary Highway opening notices from the relevant Local Authority, obtain approval to work on United Utilities Sewerage System, obtain approval to method statement from the Environment Agency for any works affecting a watercourse.

19. All manholes adopted by TWBC to have a minimum 150mm S14 concrete surround to full depth.

ENGINEERING KEY

S1 — Adoptable S.W. Sewer & Manhole	F1 — Adoptable F.W. Sewer & Manhole
Existing S.W. Sewer Proposed Route	Existing S.W. Sewer Diverted Section
(00.00) S.W. Drag-Out and Invert	000.00 F.W. Drag-Out and Invert
Adoptable Road Gully	

FLOW CONTROL DETAILS

MH Ref.	Specification
S13	Hydrobrake Optimum Flow Control Device Ref: MD-SHE-0278-5000-2200-5000 Head=2.2m, Flow=50.0 l/s.

STREET LIGHTING KEY

10M TUBULAR STEEL LIGHTING COLUMN WITH GLASS EPOXY ROOT TREATMENT C/W SINGLE ARM BRACKET (1.5M OUTREACH @ 5°). TO BE INSTALLED AS PART OF SECTION 278

6M TUBULAR STEEL LIGHTING COLUMN WITH GLASS EPOXY ROOT TREATMENT COLUMN TO BE FITTED WITH 1NO. POST-MOUNTED ZG LIGHTING CIVITEC S3/B2 LANTERN TO BE FITTED WITH A ZODION SS12A PHOTOCELL 20 LUX SWITCHING

6M TUBULAR STEEL LIGHTING COLUMN WITH GLASS EPOXY ROOT TREATMENT COLUMN TO BE FITTED WITH 1NO. POST-MOUNTED ZG LIGHTING CIVITEC S3/B2 LANTERN TO BE FITTED WITH A ZODION SS12A PHOTOCELL 20 LUX SWITCHING

6M TUBULAR STEEL 'SINGLE' LIGHTING COLUMN WITH GLASS EPOXY ROOT TREATMENT. COLUMN TO BE FITTED WITH 1NO. POST-MOUNTED ZG LIGHTING CIVITEC S3/B2 LANTERN TO BE FITTED WITH A ZODION SS12A PHOTOCELL 20 LUX SWITCHING

LC01 COLUMN IDENTIFICATION NUMBER.

STREET LIGHTING NOTES

1. Feeder pillar shall be factory supplied and include a compliance test certificate. Lighting Special Details are specified on sheets NL2, NL4 and NL5, if required. Maximum cable size with feeder pillars shall be 16mm² conductor size.
2. The 'NL' series for Lighting Special Details shall be used in conjunction with this drawing.
3. All new lighting columns and illuminated signs/bollards number specifications shall be in accordance with NL12. A numbering schedule shall be obtained for all new columns from Lancashire County Council (01772 531052) upon completion. Seven days notice is required following submission of an as-built plan.
4. The regional electric company is Electricity North West Ltd. An Independent Connections Provider can be used within the LCC area for single phase connections, transfers and disconnections.
5. All supply cables to new or existing lighting columns shall be enclosed in 50/100mm internal diameter orange, medium/high density polyethylene service duct, unless otherwise stated.
6. All street lighting equipment shall be sited within the specified adoptable footpath or verge. Lighting columns shall be sited at the back of the footway with the door facing across the road.

REV	DESCRIPTION	DATE	DRAWN
D	FFLs REVISED; NAME PLATES, TACTILE CROSSINGS AND STREET LIGHTS ADDED; F40 REMOVED; F39-F42 REVISED; DIVERSION ROUTE REVISED	07.10.16	FB/CD
C	REVISED IN LINE WITH NEW 1:20 MANHOLE SCHEDULES; FOUL ONLINE STORAGE ADDED; DIVERSION LEVELS ADDED	11.08.16	CD
B	FULL DRAINAGE DESIGN DUE TO OUTFALL CHANGES & POND PUT IN	06.04.16	CD
A	FULL DRAINAGE DESIGN DUE TO FLOW RATE CHANGES & POND REMOVED.	24.03.16	CD

BARRATT HOMES

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Job
Chipping Lane
Longridge

Title
Engineering Layout

Design By	Date	Drawing Number	Rev
CD	Feb 2016	459/ED/02	D
C.A.D By CD	Scale 1:500 @ A0		