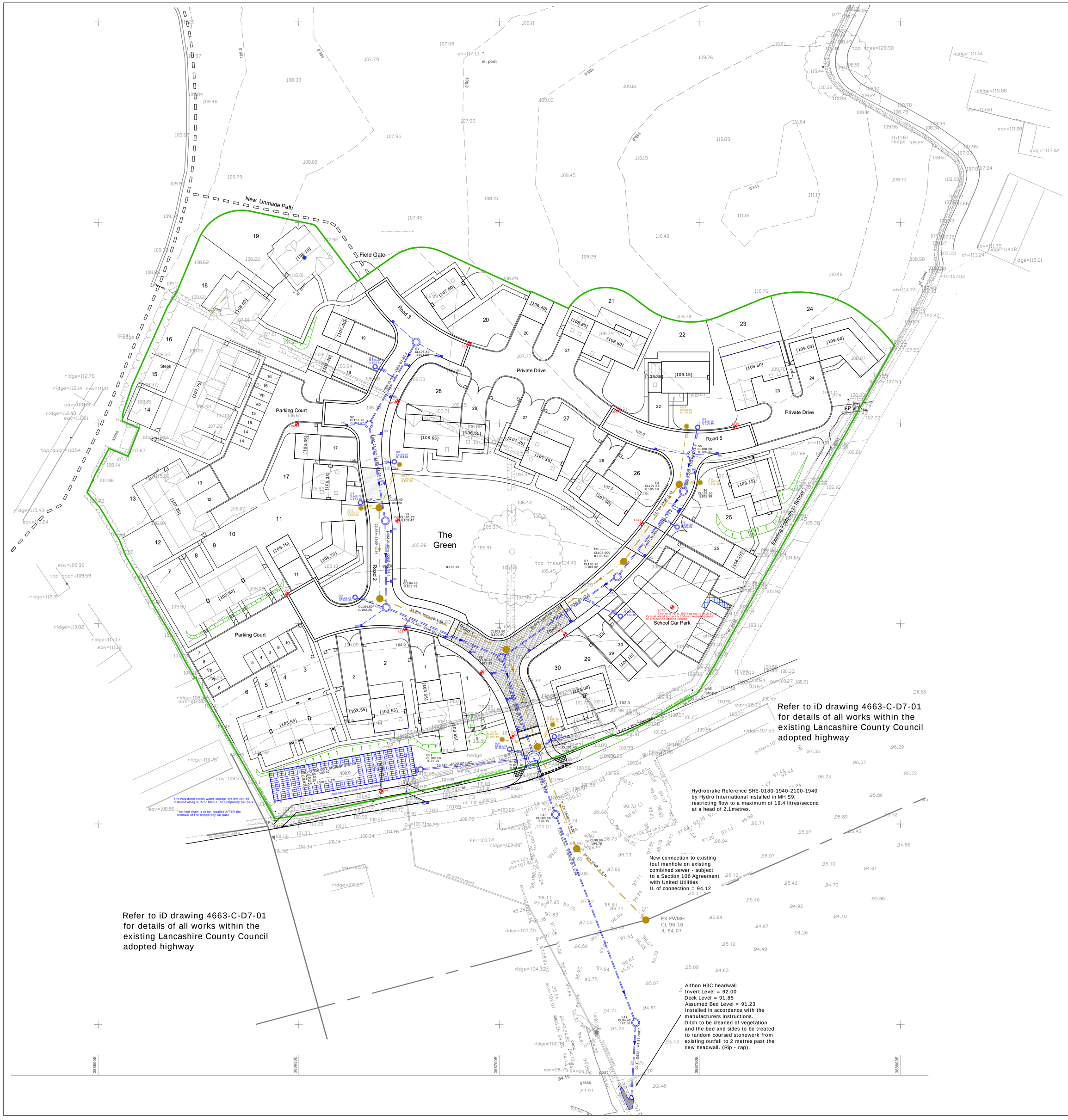

LEGEND

- Existing public foul sewer
- Existing public surface water sewer
- Proposed foul water manhole and sewer. All proposed adoptable drainage to be in Polypipe Twinwall..
- Proposed surface water manhole and sewer. All proposed adoptable surface water drainage up to and including 300mmØ to be "Polypipe Twinwall" - labelled (P) on the Engineering Layouts All proposed adoptable surface water drainage larger than 300mmØ to be concrete Class C120 - labelled (C).
- Proposed surface water lateral drain. "Polypipe Twinwall".
- Proposed surface water gully.
- Proposed foul water lateral drain. "Polypipe Twinwall"
- [13.35] Proposed FFL.
- Proposed Street Lighting - refer to Lancashire CC design

SURFACE WATER MANHOLE SCHEDULE.

MANHOLE REFERENCE	COVER LEVEL	INVERT LEVEL	DEPTH TO INVERT (m)	DEPTH TO SOFFIT (m)	PIPE SIZE	MANHOLE RING SIZE	MANHOLE TYPE	COVER CLASS
S1	106.59	104.90	1.69	1.54	150Ø	1200Ø	UU Type 1	D400
S2	106.20	104.47	1.73	1.50	225Ø	1200Ø	UU Type 1	**D400**
S3	105.25	103.47	1.78	1.55	225Ø	1200Ø	UU Type 1	**D400**
S4	104.43	102.59	1.84	1.61	225Ø	1200Ø	**UU Type 1**	D400
S5	108.00	106.30	1.70	1.55	150Ø	1200Ø	**UU Type 1**	**D400**
S6	107.55	105.90	1.65	1.50	150Ø	1200Ø	**UU Type 1**	**D400**
S7	105.70	103.92	1.78	1.55	225Ø	1200Ø	UU Type 1	D400
S8	103.45	101.23	2.22	1.92	300Ø	1200Ø	UU Type 1	**D400**
S9	101.10	98.98	2.12	1.82	300Ø	2700Ø	See drg. 4663-C-D4-03	**D400**
S10	100.30	98.79	1.51	1.28	225Ø	1200Ø	UU Type 1	**D400**
S11	94.40	92.36	2.04	1.81	225Ø	1200Ø	UU Type 1	**D400**
CP1	102.20	99.20	3.00	2.55/2.77	450Ø/225Ø	1200Ø	Catchpit	C250

FOUL WATER MANHOLE SCHEDULE.

MANHOLE REFERENCE	COVER LEVEL	INVERT LEVEL	DEPTH TO INVERT (m)	DEPTH TO SOFFIT (m)	PIPE SIZE	MANHOLE RING SIZE	MANHOLE TYPE	COVER CLASS
F1	105.40	103.20	2.20	2.05	150Ø	1200Ø	UU Type 1	D400
F2	104.50	102.25	2.25	2.10	150Ø	1200Ø	UU Type 1	D400
F3	107.65	105.60	2.05	1.90	150Ø	1200Ø	UU Type 1	D400
F4	105.90	103.62	2.28	2.13	150Ø	1200Ø	UU Type 1	D400
F5	103.50	100.90	2.60	2.45	150Ø	1200Ø	UU Type 1	D400
F6	101.40	99.70	1.70	1.55	150Ø	1200Ø	UU Type 1	D400
F7	98.90	96.78	2.12	1.97	150Ø	1200Ø	UU Type 1	D400

DRAINAGE CONSTRUCTION DETAILS
For construction details of all main drainage, refer to United Utilities Standard details STND/19/001 to STND/19/012
Link:
http://www.unitedutilities.com/documents/developer-services-construction-details.pdf

CONSTRUCTION RISKS		
CONSTRUCTION RISKS	MAINTENANCE RISKS	DEMOLITION RISKS
Public gaining access to the site, - risk of accidents, injury, death. ensure site fully fenced off and secured. The site is adjacent to a school, the existing car park is the current school car park, and as such, the Contractor should be aware of children and parents attempting access to ths site. The site is adjacent to a public highway risk of conflict with road users. This is a rural area, road users could include livestock, horses, large farm vehicles. Working close to existing services, both known and unknown - risk of injury or death. ensure all services located prior to commencement of works. Working with existing sewers and watercourses - risk of Lymes Disease and Wells Disease		
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.		

Health and Safety Notes/CDM Regulations 2015

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 part of the design process all the salient health & safety aspects are given full 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 United Utilities standard details (see separate note and link below)and 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 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 2.0m deep are to be of pre-cast concrete construction with 150mm in-situ concrete surround, or polpropolene 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. 1HZC for a single private drive. For communal parking areas refer to the detail shown on iD Civils Design drawing number 4663-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.
17. ACO type drainage to all car parking areas serving more than two cars to be ACO Multidrain MD, 200mm wide channel with min. C250 covers with "heelguard" type openings. ACO type drainage to private garages to be minimum 150mm wide channels and to door thresholes minimum 100mm wide channels. SHALLOW DEPTH CHANNELS SHALL NOT BE USED

Rev	Description	By	Date
D	ISSUED FOR CONSTRUCTION	AH	05:07:17
C	Attenuation and off site sewers revised	AH	19:06:17
B	Street lighting added, omissions & erratta corrected	AH	29:03:17
A	SW outlet located	AH	16:12:16

Client:

HILLCREST HOMES

Project Title:

WHALLEY ROAD, HURST GREEN

Drawing Title:

1:500 ENGINEERING LAYOUT

Scale	Date
1:500 @ A1	OCTOBER 2016

Drawing No	Revision	Status
4663-C-D1-01	D	Constr.

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