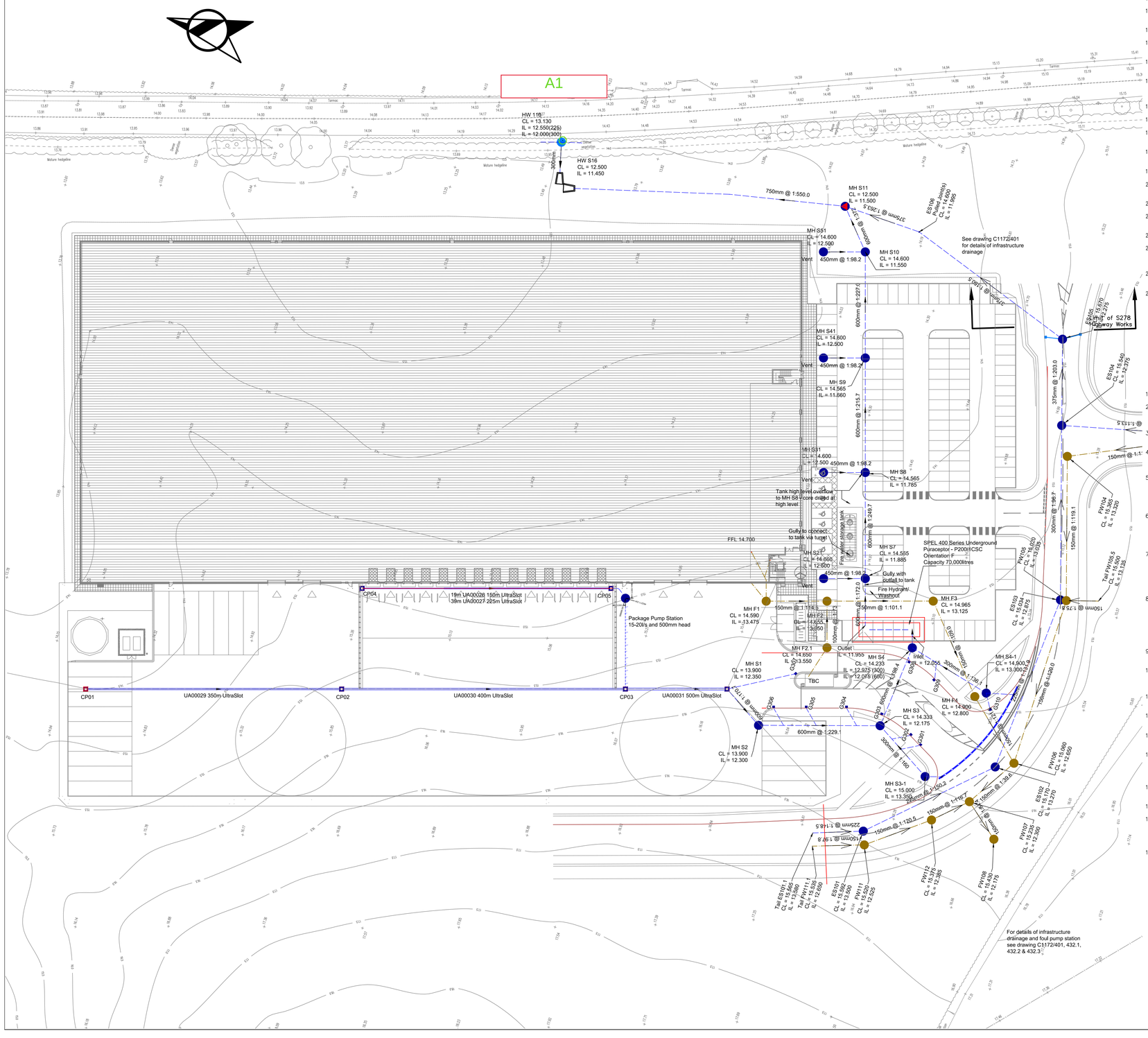

NOTES

1. This drawing is to be read in conjunction with all Architects and Engineers drawings and specifications
2. All drainage works to be in accordance with the Civil Engineering Specification for the Water Industry (CESW) as included in Sewers for Adoption 7th edition, the requirements of Approved Document H (2002 edition), Building Regulations 2000 relevant British Standards and codes of practice and the details provided on the contract drawings.
3. Line and level of all existing drainage to be confirmed by site inspection before works take place and reported back to engineer. Any redundant manholes to be broken out and backfilled with granular material. Any redundant pipes to be filled with 10:1 pfa/cement mix or broken out.
4. All foul and surface water drains upto and including 225mm diameter to be clay ware as Hepworth Supersleve/Hepsleve plus or similar approved. All pipes 300mm diameter and above to be concrete Class M
5. Any part of an existing drainage system retained as part of the new works is to be cleaned and inspected. Any structural defects are to be repaired or replaced by methods approved by the Engineer.
6. As an alternative the contractor may use approved unplasticised polyvinyl chloride (PVCu).
7. All pipes are to be laid in a Class S bedding. pipes laid under road and car parking pavements with less than 900mm of cover shall be laid in a Class Z bedding with flexible joints.
8. All drainage pipelines shall be protected during construction where intermediate cover is less than 900mm.
9. All precast concrete units used in drainage works to be sulphate resisting
10. All gradients of drainage runs are indicative. All pipes to be laid invert to invert as shown on plan and manhole schedule
11. Sewer trench backfill under roads and parking pavements to be granular material.
12. All cover levels are approximate. All covers to be set at finished pavement level, refer to appropriate Architects drawing.
13. Where existing manhole, gullies and access fittings are to be retained the covers and frame shall be adjusted to suit the finished level. Manhole covers to be recessed and double seated.
14. Manhole covers and frames shall be BSEN 124 and kitemarked. Covers and frames shall be heavy duty D400. In block paved areas covers shall be recessed fabricated steel. Internal covers shall be recessed and double sealed
15. For manhole, pipe bedding and other details refer to the typical drainage details drawing.
16. For setting out to sw's,rw's etc, refer to Architects or Mechanical Engineers drawings
17. All connections passing through bases or edge beams to be in sealed sleeves. Alternatively connections may be cast-in with flexible joints not greater than 150mm from face of concrete
18. All internal covers to be Howe Green 5000 series or similar approved, mechanically jointed corners and double sealed.
19. All external gully connections, channel drain gully/sump connections to be 150mm dia.
20. All gully and channel drain outlets and termination points to be trapped and roddable. internal gullies and channel drains to be specified by others.
21. For specific external manhole details and cover sizes see manhole schedules.
22. Channels in all manholes to be set at the appropriate incoming and outgoing pipe gradients and shall be pre-formed up to 225ø.
23. All branch connections to be made with swept bends in the direction of flow in the main sewer.
24. External linear channel drains shall be designed and constructed in accordance with the manufacturers requirements and shall discharge via trapped roddable gully units unless advised otherwise. Linear channels to be to load class D400 specification and have a 200mm minimum concrete bed and haunch.
25. The surface drainage system shall be Gatic Ultraslot f900 channels as supplied by Gatic, Poultin Close, Dover, Kent, CT17 0UF – see separate specification/notes
26. The interceptor shall be a class 1 full retention type and shall be installed in complete accordance with the manufacturers instructions. It shall be alarmed with probe and automatic shut off and vented via 75mmø pipework terminating above ground level as directed on site. Size of interceptor noted on drawing. For installation details see separate drawing.

1. Specification – Gatic Slotdrain Surface Water Drainage System
2. Gatic Slotdrain surface water drainage system as manufactured by Gatic (www.gatic.com). The manufacturer should work in accordance with the Quality Management System BS EN ISO 9001:2015.
3. The channel system should have a horizontal slot design to ensure maximum intake and to resist 'wash–over' of surface liquids.
4. The system shall comply with load classes up to F900 dependant on product type when installed in accordance with the manufacturer's installation instructions in accordance with the relevant parts of BS EN 1433:2002.
5. The channels units are to have no removable parts and the top edge, throat and channel body should be formed from a steel profile. Units should have a hexagonal channel body with v–shaped channel base for improved self–cleaning and optimum flow characteristics. FacadeSlot channels to have a half–hexagon body.
6. Channel units to have a 9, 10 or 30mm wide intake slot dependant of product type and a tapered throat. The channel throat should be supported and fixed by 'Throat Spacers' fitted at regular intervals along the channel unit, to provide increased rigidity. Channels fitted with ductile iron electropainted throat sections will be used in areas where there is slow turning vehicular traffic.
7. Channels should be impact resistant and manufactured from pre–galvanised sheet steel to BS EN 10346:2015 DX51D+Z275–M–A–C. Channel material should have 0% water absorption. All materials used in the manufacture of channel units should be heat–resistant and recyclable. The manufacturer's production facility should ideally operate in accordance with the European Environmental Standard BS EN 14001:2015.
8. Channel units should be level invert and supplied in 3.0m, 1.0m and 0.5m lengths. CastSlot, UltraSlot and PaveSlot channels should be available in seven sizes; 100mm, 150mm, 225mm, 300mm, 350mm, 400mm, 500mm and 600mm wide. FacadeSlot channel units should be available in three standard sizes (50mm, 75mm,115mm). A 'Stepped Fall' channel configuration can be achieved if required by using increasing channel sizes installed within a single channel run. This creates an installed positive gradient towards the channel outlet.
9. Channel units should incorporate a socket and spigot joint and support feet that are integral within the design of each unit.
10. To prevent debris from entering the slot and throat area during installation, where possible, channels are to be fitted with a removable throat protection strip / tape prior to installation.
11. The system shall be supplied with appropriate 'End Cap', End Cap Outlet & Inlet'and 'Drop Connector'accessories, relevant to the channel system specified
12. Please refer to manufactures product literature for reference numbers of relevant End Caps/ End Cap Outlet & Inlet/ Drop Connectors to be specified and installed.
13. All components and accessories within the scope of this system shall be obtained from the manufacturer.
14. The system shall be installed in accordance with the manufacturer's guidelines and the work carried out as specified by the project structural / mechanical engineer in accordance with recognised good practice. Standards of workmanship should generally be as specified in BS EN 752:2008 and BS 8000: 2014.
15. Channel units are available in stainless steel if specially requested. Please quote the grade of stainless steel required.
16. Access, Outlet and Silt Boxes
17. The system can be supplied with a range of access, outlet and silt boxes complete with covers and gratings designed to withstand loads of 400kN (D400) and 900kN (F900) supplied by the manufacturer. Please refer to the product technical brochure for details of gratings available.
18. Access chambers can be formed from concrete on site. If this method of construction is preferred the system will require purpose made 'Chamber Connectors'(Catch–Pit Connectors) to be used with each concrete chamber. These are available from Gatic, and provide simple connection of channel units to concrete chambers formed on site. The size and type of Gatic access cover or grating required for the chamber will depend on the chamber clear opening.

KEY:

- EXISTING SURFACE WATER DRAIN
- PROPOSED SURFACE WATER SEWER
- PROPOSED SURFACE WATER CHANNEL DRAIN. ACO RoadDrain P200F 10.1 OR SIMILAR
- S104 CL.152.371 IL.149.250 — PROPOSED SURFACE WATER MANHOLE WITH MANHOLE REFERENCE, AND COVER AND/OR INVERT LEVEL
- PROPOSED CELLULAR ATTENUATION TANK WITH DETAILS
- PROPOSED SURFACE WATER GULLY
- PROPOSED FILTER/FIN DRAIN
- MANHOLE COVER TO BE VENTED
- EXISTING FOUL WATER SEWER
- PROPOSED FOUL WATER SEWER
- PROPOSED FOUL RISING MAIN
- S105 CL.150.004 IL.148.250 — PROPOSED FOUL WATER MANHOLE WITH MANHOLE REFERENCE, AND COVER LEVEL AND/ OR INVERT LEVEL
- 150 @ 1:42 — INDICATES DIRECTION OF FLOW, PIPE DIAMETER AND PIPE GRADIENT
- SECONDARY SIPHONIC DRAINAGE OUTFALL

C8	Fire water storage tank and associated gully and connections added	SWM	28/06/2018
C7	Labels added to on site gullies	AM	26/01/2018
C6	Revisions to MHs 21, 31, 41, 51.	SWM	09/01/2018
C5	Infrastructure drainage added. Building plan updated to KPP 3002 Rev E	SWM	02/01/2018
C4	Setting out to pump station added	SWM	10/11/2017
C3	Revised dock leveller channel and associated pump station location	SWM	08/11/2017
C2	Surface water outfall revised. Secondary syphonic drainage outfalls relocated	SWM	09/10/2017
C1	Updated following LA highway review. Secondary syphonic drainage outfalls added. Package treatment plant deleted Issued for construction	SWM	13/09/2017
T2	Surface water revised with free discharge to swale	SWM	13/06/2017
T1	Tender Issue	SWM	24/03/2017
Rev	Description	Rev. by	Date

Client/Architect
dbsymmetry

Project
SYMMETRY PARK
DONCASTER

Title
DRAINAGE LAYOUT

Date	23/01/2017	Drawn By	SWM
Size	A1	Checked By	SWM
Scale	1 : 500	Approved By	EAJ

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Issue
FINAL CONSTRUCTION ISSUE

Drawing Number
C1172/310–1

Revision
C8

Filename: K:\PROJECTS\JOB-NOS C1100-1200\C1172 BLYTH VALLEY\00 CIVILS\C1172-310-108 310-208 310-308 & 315C4 DRAINAGE REVD S278
Plot Date/Time: 10/07/2018 3:51 PM
INTERFACE