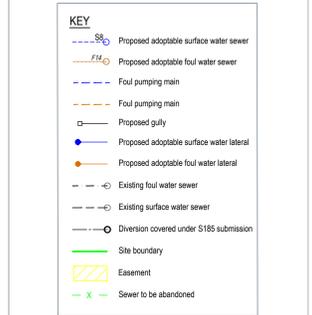


- Notes:**
- To be read in conjunction with Eastwood Consulting Engineers drawings 4867.
  - All pipes shall be either:
    - A - Vitreous clay to BS EN 256 with a minimum crushing strength as follows:
      - 1000mm dia - 40 kN/m
      - 750mm dia - 40 kN/m
      - 500mm dia - 40 kN/m
      - 300mm dia - 72 kN/m
    - B - PVC (certified to BS EN 12201EN 1916)
    - C - Class 100 concrete to BS EN 12201EN 1916
  - All pipes should always connect to a stiff unless noted otherwise.
  - All sewers to have BS1 kitemark status (certified to BS EN 12201EN 1916). Maximum pipe length to be 2m. Plastic chamber sections in manholes are not acceptable. Clay chamber sections shall be used.
  - Sewers to be laid in Class 2 bedding (150mm granular bed and surround). Where depth of cover to top of the sewer is less than 1.2m a highway and verge (or less than 100mm in some vehicular access areas) then a concrete slab should be provided above granular bed and surround. Bedding and backfill concrete to conform to the requirement of BS EN 12201EN 1916.
  - Manholes covers shall have a clear opening of 600mm and shall be class D400 to BS EN 124 with 150 deep frames in highways.
  - Pipes entering manholes and road gullies shall have a flexible joint with 600 of the inside the manhole or gully jointing with a short rocker pipe.
  - The adoptable sewers should be a minimum of 1m and manholes 0.5m from kerbs faces and service charges.
  - Sewers must have 5m clearance from trees and hedges or the width of the canopy and main trunk.
  - All trenches in roads and paved areas shall be backfilled with Type 1 DOT granular sub-base material or other granular material approved by the highway authority.
  - Filled ground must be filled and consolidated under the supervision and to the satisfaction of ICOSA. Water before any sewer works are carried out.
  - All inlets concrete to be designated mix FN20 to BS 8000-1 unless agreed otherwise.
  - The invert levels at the proposed points of connection to existing public sewers shall be checked before any new drains are constructed. Any variation to the levels shown on the drawing shall be notified to Eastwood Consulting Engineers.
  - The chamber size of manholes with more than one connection in them may need to be increased an increment to accommodate the connections and bends.
  - Cover levels are indicative only. Covers to be set to suit camber/gradient of existing and proposed roads.
  - Cover slabs must carry the BS1 kitemark or will be certified by ICOSA Water Inspector. Where the clear opening of the kitemarked product is different to that of the cover and frame, a loading bearing slab should be fitted above the cover slab to bring the slab down to 600mm for the ICOSA Water specified cover size. Please refer to Concrete Pipe Systems Association (CPSA), 'Technical Bulletin' issued Autumn 2004 for kitemarked cover slab opening sizes.
  - All foul lateral sewers and drains to be 1500mm unless noted otherwise.
  - Manholes covers shall have a clear opening of 600mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways.
  - Where a B125 cover and frame has been approved this must not be coated in plastic and must have wing nuts suitably used to accommodate standard flange rings. Screw down covers are not acceptable.
  - All adoptable sewer works and materials to be in accordance with 'Code for Adoption'. The relevant British Standards and ICOSA Water's Standard Requirements Leaflet 'Practice for Adoption of Small Submersible Pumps and Surface Water Pumping Stations and Kitemarks'.
  - ICOSA Water is not obliged to accept the drain/drainage run-off into the public sewer network or adoptable drainage system (directly or indirectly). An alternative method of disposal of the load drainage run-off will therefore be required and you will have to liaise with the Local Authority, Land Drainage Section with regard to the disposal of the final drainage drainage run-off.
  - Sublime resistant cement (S20-C2) and precast concrete products must be used or a laboratory report provided proving that such products are not necessary.
  - Adoptable plastic sewer pipes to be BS1 kitemarked (certified to BS EN 12201EN 1916 and BS EN 12201EN 1916). Adoptable plastic sewer pipes to be set in maximum 3 metre lengths unless there is a specific operation need to be longer lengths. Plastic chamber sections in manholes are not acceptable and ICOSA Water would prefer clayware chamber in manholes.
  - There must be enough clearance at crossovers to accommodate bedding to both pipes, approx. 300mm if clearance is near the rocker then the clearance needed may need to be increased.
  - All adoptable laterals to be 1500mm and PVC unless stated otherwise.
  - All FFLs to be a minimum 150mm above external levels and drainage cover levels.



REV	DESCRIPTION	SIG	CHK	DATE
P15	Manholes P23, S27, S017, S021, F014 and F017-F020 amended to latest highway levels and external works.	AT	CH	14.11.2025
P14	F40 and S51 details amended with updated road 4.	AT	CH	29.10.2025
P13	Minor amendments to drainage at roads 13-15. Easements added at all laterals in line with the S104 submission.	AT	CH	24.10.2025
P12	Minor updates to laterals to suit latest plot drainage.	AT	CH	12.09.2025
P11	Drainage updated to suit LLFA requirements, S104 comments and Foul Water southern diversion.	AT	PNW	29.08.2025
P10	Manhole S59 invert level lifted, Tank and Pipe 1.020 slackened.	AT	CH	03.07.2025
P09	Manhole S58 invert level lifted.	AT	PNW	27.06.2025
P08	Layout updated for S104 submission	AT	CH	19.06.2025
P07	S104 Layout updated to suit amended drainage model	AT	PNW	30.05.2025
P06	Pipe Material Amended from Clay to PVC	JR	CH	24.04.2025
P05	Revised to suit latest drainage layout.	GT	PNW	24.02.2025
P04	Revised to suit latest site layout (Rev X)	TB	CH	18.12.2024
P03	Optional exceedance tank in North East of site removed.	JB	TB	11.10.2024
P02	Easements added.	DAB	TB	26.06.2024
P01	First Issue.	GT	TB	06.06.24

**HARRON HOMES**

**MERCHANT FIELDS**

**S104 DRAINAGE LAYOUT SHEET 1 OF 2**

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ECE PROJECT No: **48867** SCALE: A0 STATUS: **Initial** SUITABLE FOR: **Initial**

DRAWING NUMBER: **48867 - ECE - XX - XX - DR - C - 0001** REV: **P15**

Project Originator Zone Level Type Role Number