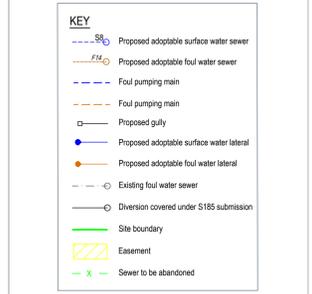


- Notes:**
- To be read in conjunction with Eastwood Consulting Engineers drawings 48867
  - All pipes shall be either:
    - A - Verified clay to BS EN 295 with a minimum crushing strength as follows:
      - 1000 dia - 40 N/m<sup>2</sup>
      - 225 dia - 43 N/m<sup>2</sup>
      - 300 dia - 72 N/m<sup>2</sup>
    - B - PVC (certified to WIS 4-35-01 & BS EN 13476)
    - C - Class 120 concrete to BS EN 12059-1:2002EN 12059
  - All pipes should always connect to a stiff unless noted otherwise.
  - All sewers to have BS1 kitemark status (certified to WIS 4-35-01 & BS EN 13476). Minimum pipe length to be 3m. Plastic channel sections in manholes are not acceptable. Clay channel 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 2m in highway and less than 100mm in any other vehicle access areas then a concrete slab should be provided above granular bed and surround. Bedding and backfill contents to conform to the requirement of British Standards BS 5911:2002EN 12059.
  - Manholes covers shall have a clear opening of 600 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 within 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 margins.
  - Sewers must have 5m clearance from trees and hedges or the width of the canopy at main height.
  - 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 designed in accordance with 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 to them may need to be increased in accordance to accommodate the connections and berms.
  - Cover levels are indicative only. Covers to be set to suit camber/gradients of existing and proposed roads.
  - Cover slabs must carry the BS1 kitemark or will be accepted 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 size down to 600mm x 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 150mm unless noted otherwise.
  - Manhole 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 lifting eyes suitably spaced to accommodate standard lifting rings. Screw down covers are not acceptable.
  - All adoptable sewer works and materials to be in accordance with 'Codes for Adoption'. The Relevant British Standards are ICOSA Water's Standard Requirements Code Practice for the Adoption of Small Submersible Foul and Surface Water Pumping Stations and Kitemarked.
  - ICOSA Water is not obliged to accept the drainage run-off into the public sewer network or adoptable drainage systems 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 run-off.
  - Subsides resistant cement (S100-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 WIS 4-35-01 and BS EN 13476). Adoptable plastic sewer pipes to be laid in maximum 3 metre lengths unless there is a specific operational need to lay longer lengths. Plastic channel sections in manholes are not acceptable and ICOSA Water would prefer clay/brick channel in manholes.
  - There must be enough clearance at coverovers to accommodate bedding to both pipes, approx. 300mm if coverover is near the rocker then the clearance needed may need to be increased.
  - All adoptable laterals to be 150mm and PVC unless stated otherwise.
  - All FFLs to be a minimum 150mm above external levels and drainage cover levels.



REV	DESCRIPTION	SIG	CHK	DATE
P18	Manhole S59 invert level lifted. Tank and Pipe 1.020 slackened.	AT	CH	03.07.2025
P19	Manhole S58 invert level lifted.	AT	PNW4	27.06.2025
P20	S60 Outlet pipe size increased to 2250.	AT	CH	19.06.2025
P21	Manholes F44, F45, F48, S58 & S57 cover levels revised. S60 backdrop invert level amended.	AT	PNW4	06.06.2025
P26	S104 Layout updated to suit amended drainage model.	AT	PNW4	30.05.2025
P25	Pipe Material Amended from Clay to PVC.	JR	CH	24.05.2025
P24	Revised to suit latest drainage layout.	GT	PNW4	24.02.2025
P23	Revised to suit latest site layout (Rev X)	TB	CH	18.12.2024
P22	Easements added.	DAB	TB	26.06.2024
P21	First Issue.	GT	TB	06.06.2024

**HARRON HOMES**

**MERCHANT FIELDS**

**S104 DRAINAGE LAYOUT**  
SHEET 2 OF 2



ECE PROJECT No: **48867** SCALE: **A0** STATUS: **S0** SUITABLE FOR: **Initial**

DRAWING NUMBER	REV
<b>48867 - ECE - XX - DR - C - 0002</b>	<b>P10</b>
Project Originator Zone Level Type Role Number	