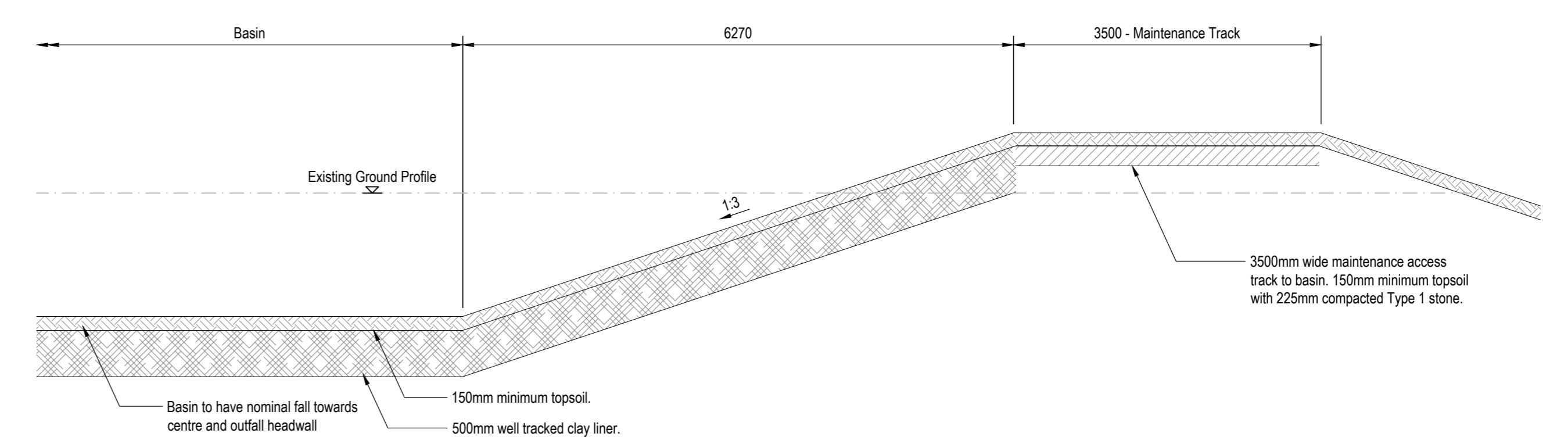


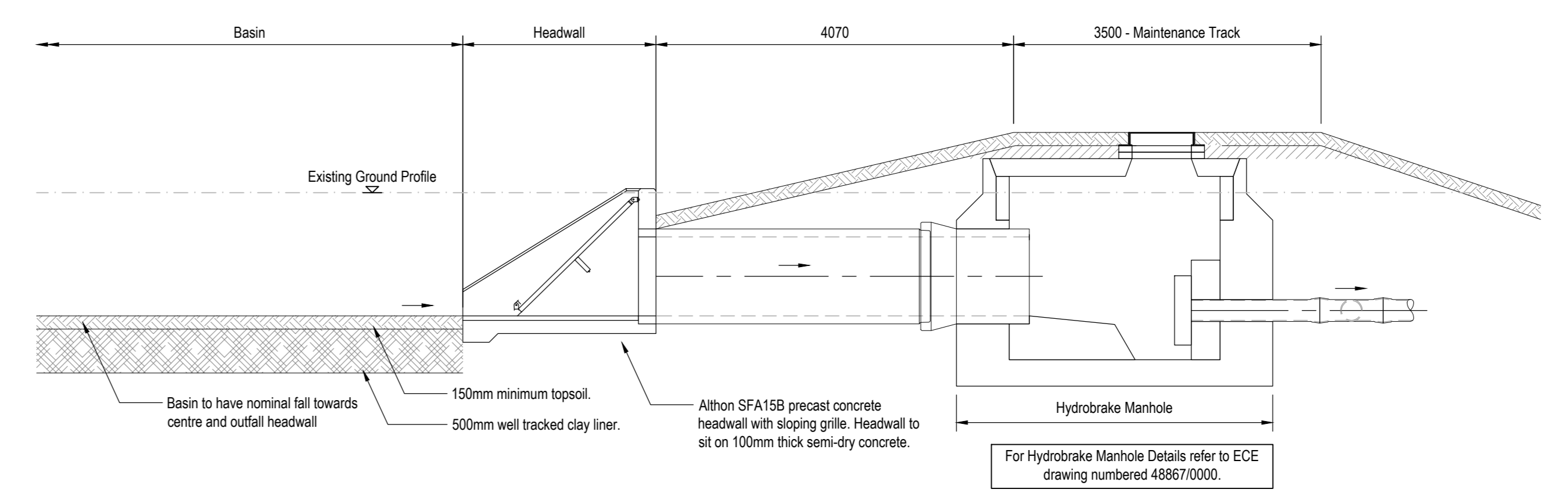
S14 Flow Control
SHE-0178-1750-1650-1750
Flow: 17.500l/s
Head: 1.650m
24000 manhole

Surface Water Attenuation Basin
100 year + 40% CC + 5% UC
1.65m depth storage depth
300mm freeboard
2949m³ capacity
IL: 82.197m
TWL: 83.847m
Access track level: 84.287m

PLAN ON SUDS BASIN
SCALE 1:200



TYPICAL SECTION THROUGH SUDS BASIN
SCALE 1:50



TYPICAL SECTION THROUGH OUTFALL HEADWALL
SCALE 1:50

- NOTES:**
- To be read in conjunction with Eastwood Consulting Engineers drawing 48867.
 - All pipes shall be either:
 - A - Verified clay to BS EN 296 with a minimum crushing strength as follows:
 - 150 dia - 40kN/m
 - 225 dia - 40 kN/m
 - 300 dia - 75kN/m
 - B - PVC (verified to W5 4-35-01 & BS EN 13470)
 - C - Class 120 concrete to BS 5911-1:2002/EN 1916.
 - All pipes should always connect to stiff to stiff unless noted otherwise.
 - All sewers to have BS1 Kitemark status (certified to W5 4-35-01 & BS EN 13470). Maximum pipe length to be 5m. Plastic channel sections in manholes are not acceptable. Clay channel sections shall be used.
 - Sewers to be laid in Class 'D' Bedding (150mm granular bed and surround). Where depth of cover to top of the sewer is less than 1.2m in highways and verges (or less than 800mm in non-vehicular access areas), then a concrete slab should be provided above granular bed and surround.
 - Manhole covers shall have a clear opening of 675mm and shall be Class D400 to BS EN 124 with 150 deep frames in highways.
 - Pipes entering manholes and outlet gullies shall have a flexible joint within 600 of the inside the manhole or gully joint to a rigid flange pipe.
 - The adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins.
 - Sewers must have 5m clearance from trees and hedges.
 - All trenches in roads and paved areas shall be backfilled with Type 1 D07 granular sub-base material or other granular material approved by the highway authority.
 - Fill ground must be flat and consolidated under the supervision and to the satisfaction of ICOSA before any sewer works are carried out.
 - All inlets concrete to be designed in accordance with BS 8001-1 unless agreed otherwise.
 - The inlet levels of the proposed points of connection to existing public sewers shall be checked before any drains are constructed. Any variation to the levels shown on the drawing shall be notified to Eastwood & Partners.
 - The diameter size of manholes with more than one connection in them may need to be increased in order to accommodate the connections and bends.
 - 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 rejected by ICOSA inspectors. 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 675mm x 675mm for the ICOSA specified cover size. Please refer to Concrete Pipe Systems Association (CPSA) Technical Bulletin 'Load Action 2004' for Kitemarked cover slab opening sizes.
 - All foul lateral sewers and drains to be 150mm unless noted otherwise.
 - ICOSA policy is that 'C' type manholes and 150mm dia manhole rings are not preferred. Instead it is preferred that you use a 'D' type manhole with 150mm dia or 1500mm dia rings, with the opening clear over the channel where depth of cover to pipe is 1.1 - 1.5m.
 - Manhole covers shall have a clear opening of 675mm and shall be Class D400 to BS EN 124 with 150mm deep frames in highways.
 - Where a B12 cover and frame has been approved, this must not be coated in plastic and must have lifting eyes suitably sized to accommodate standard lifting keys. Some down covers are not acceptable.
 - All adoptable sewer works and material to be in accordance with 'Codes for Adoptors'. The relevant British/European and ICOSA's Standards/Requirements/Adopters to the Mechanical and Electrical Specification and Kitemark.
 - ICOSA is not obliged to accept their standard drainage run-off into the public sewer network or adoptable drainage system (solidity or in-situ). An alternative method of disposal of the land drainage runoff will therefore be required and you will have to liaise with the Local Authority, Land Drainage Section with regard to the disposal of the their standard drainage runoff.
 - Sulphur resistant cement (S20 S2C) and precast concrete products must be used or a laboratory report provided proving that such precautions are not necessary.
 - Bedding and backfill material to conform to the requirement of Water Industry Specification 4-08-02 (Table A2).
 - Adoptable plastic sewer pipes to be BS1 Kitemark (certified to W5 4-35-01 & BS EN 13470). Adoptable plastic sewer pipes to be laid in maximum 3 metre lengths unless there is a specific operational need for longer lengths. Plastic channel sections in manholes are not acceptable and ICOSA would prefer drystone channels in manholes. The base found that plastic channels are difficult to set in concrete because they float and a satisfactory finish cannot be obtained on the bedding.
 - The clearance of the crossover points (min 300mm) between the surface water, foul sewers, rising main and other services should be sufficient clearance to provide 150mm surround of a certain mm that exceeds the 200mm.
 - All adoptable laterals to be 150mm and VC unless stated otherwise.
 - All external ground levels to plots are at least 150mm below finished ground level to avoid flooding of plots from excess foot water flows.

pg3	Basin embankment reprofiled to avoid watercourse buffer zone.	RJ	CH	02.08.2024
pg2	Basin embankment reprofiled to avoid watercourse buffer zone.	RJ	CH	30.07.2024
PH1	First Issue.	CTB	TB	06.06.2024
REV	DESCRIPTION	SIG	CHK	DATE

HARRON HOMES

MERCHANT FIELDS, CLECKEATON

ATTENUATION BASIN DETAILS



ECE PROJECT No: 48867 SCALE AT A0 STATUS: SUITABLE FOR
As Stated SO Initial

DRAWING NUMBER: 48867 - ECE - XX - XX - DR - C - 0024 P03
Project Originator Zone Level Type Role Number