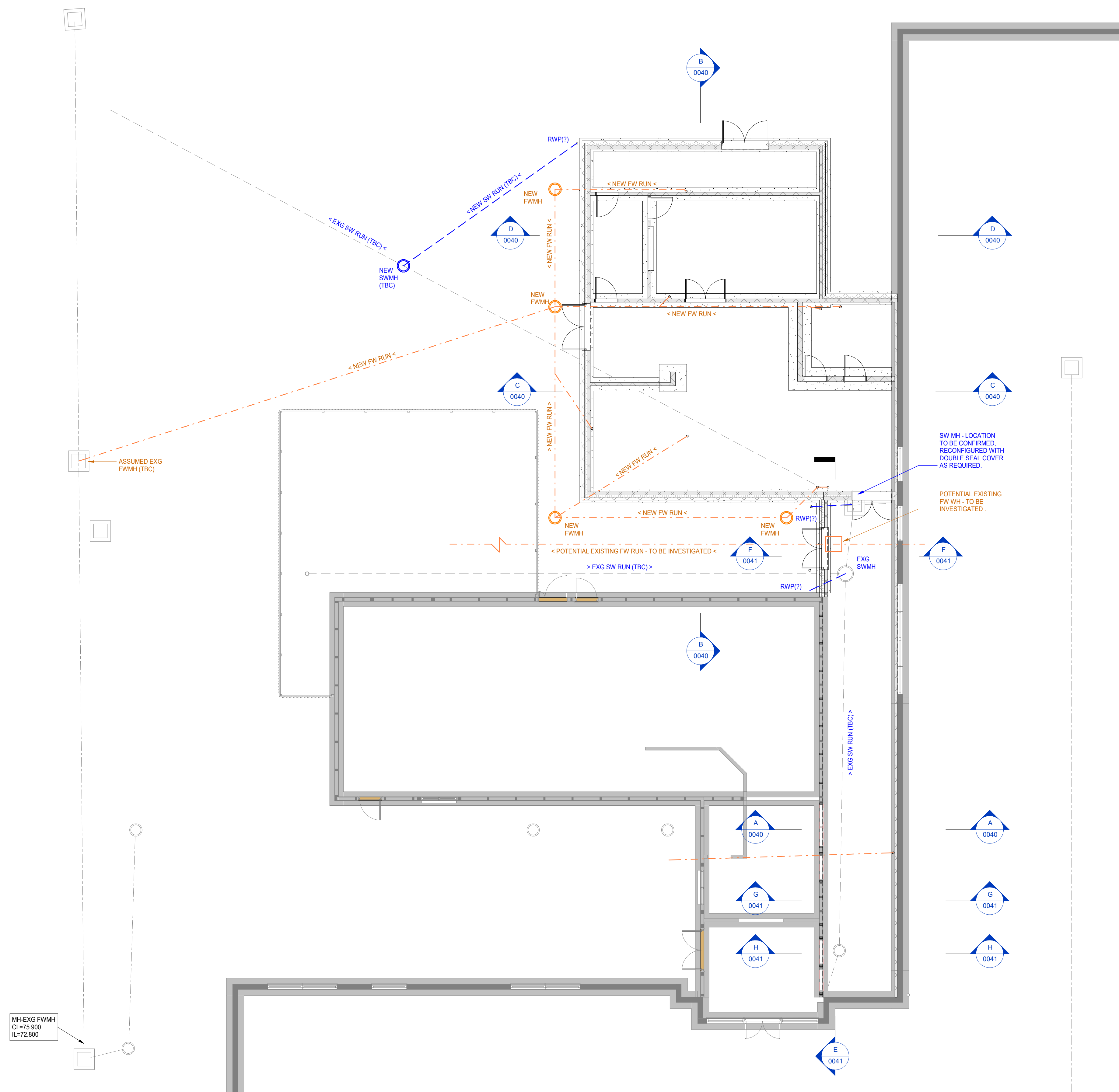


ALL DIMENSIONS TO BE CHECKED BY CONTRACTOR



00 DRAINAGE LAYOUT
1:100

Drainage Notes

- Sewers to be adopted under Section 104 of the Water Industries Act 1991 shall comply with the Water Authorities Association "Sewers for Adoption 6th Edition" together with any STWL Amendments.
- All pipes to be used in adoptable sewers shall be either Extra Strength Vitrified Clay to BS EN 295-1:2013 or concrete to BS 5911-1:2002+A2:2010 with Class S bedding unless otherwise stated. All channels in manholes shall be clay or concrete.
- The minimum requirement for pipes to be used in adoptable sewers is to be as follows:
 - 150mm dia. - Class 187 - min. crushing strength 28kN/m
 - 225mm dia. - Class 120 - min. crushing strength 28kN/m
 - 300mm dia. - Class 120 - min. crushing strength 36kN/m
 - Larger than 300mm dia. - Class H concrete
 - Alternatively PVCu drainage may be used up to 300mm dia. subject to approval by the adopting authority and demonstration that the pipe work satisfies the long-term deformation criteria.
 - Sewer Demarcation Chamber construction details:
 - For depth less than 1m from top of pipe to ground, the chamber's internal dimensions shall be 900mm long and 675mm wide. The chamber can be constructed using rectangular concrete sections or in Class B engineering brick.
 - For depth between 1.0-1.5m from top of pipe to ground, the chamber's internal dimensions shall be 1040mm long and 675mm wide. The chamber can be constructed using rectangular concrete sections or Class B engineering brick.
 - For depth greater than 1.5m from top of pipe to ground, the chamber's internal dimensions shall be a minimum of 1200mm diameter. The chamber shall be constructed using precast concrete rings.
- Where cover to pipes is less than 1200mm under carriageway or vehicular access areas they shall be surrounded with min. 150mm concrete mix ST2, flexibility of joints being maintained by using compressible fibreboard at intervals not exceeding 5.0m. Where cover is less than 600mm under garden areas and 900mm under drive areas they shall be protected with concrete paving slabs laid as bridging with at least 75mm of granular material between top of pipe and underside of slab. All drainage with less than 450mm cover shall be surrounded with 150mm concrete.
- Where cover to pipes is less than 1200mm under carriageway or vehicular access areas they shall be surrounded with min. 150mm concrete mix ST2, flexibility of joints being maintained by using compressible fibreboard at intervals not exceeding 5.0m. Where cover is less than 600mm under garden areas and 900mm under drive areas they shall be protected with concrete paving slabs laid as bridging with at least 75mm of granular material between top of pipe and underside of slab. All drainage with less than 450mm cover shall be surrounded with 150mm concrete.
- Excavations over 1.2m deep shall have sloped sides unless appropriately supported.
- Precast concrete manholes to be in accordance with BS 5911. Manhole covers and frames to be 150mm deep and to BS EN 124.
 - Access chambers nom. 300mm dia. - max. 600mm deep
 - Inspection chambers nom. 480mm dia. - max. 1000mm deep
 - Deep inspection chambers 1050mm dia. - max. 1500mm deep
 - Manholes min. 1200mm dia. - greater than 1500mm deep
- Inspection chambers located within garages to have double seal bolt down covers.
- All private drainage outlets and inspection chamber sizes and positions are shown indicatively. They may be adjusted to suit Architectural layout and site conditions. This drawing is not intended to detail drainage bends or junctions and must not be used for detailed setting out. Drainage cover levels should not be used as site levels. Cover levels may be adjusted on site to suit falls.
- All pipework laid soffit to soffit. Invert levels refer to outgoing levels at change in pipe size locations or backdrop manholes.
- All existing drainage invert levels, diameters and locations are to be checked by the Contractor prior to the commencement of any proposed drainage work. Any difference between actual and drawn details is to be reported immediately.
- Positions of existing services / statutory undertakers apparatus adjacent to or crossing proposed sewers is to be checked by the Contractor prior to starting work.
- Building drainage shall comply with BS EN 752:2008 and the Building Regulations 2000 Part H: 2010.
- All house drainage to be 100mm diameter unless shown otherwise.
- Connections to adoptable sewers to be min. 150mm diameter.
- Pipes penetrating walls shall have at least 50mm clearance around pipe. Brickwork over shall be supported by a lintel. The opening is to be masked each side with rigid sheet material. Pipes embedded in walls shall have a joint formed within 150mm of each wall face. A rocker pipe of max. 600mm length shall be used to continue the pipework.
- Pipes running under buildings without suspended floors shall have 100mm granular surround.
- If a pipe trench is within 1.0m of a building it shall be filled with concrete up to the lowest level of the adjacent foundation.
- If a pipe trench is greater than 1.0m from a building the trench shall be filled with concrete up to a level below the building equal to the distance from the building less 150mm.
- All private drives are to be provided with channels and gullies to prevent water discharging onto the public highway where the drive falls away from the dwelling. Where the drive falls towards the dwelling channels and gullies are to be provided to prevent water damaging the building. Additionally where entrance footpaths fall towards level access doorways proprietary threshold drainage shall be provided. Road gullies must be used in communal car parking areas.
- Gully gratings and frames in adoptable and communal areas to be BS EN 124, grade D400, non-rocking with captive left hand hinge. Minimum waterway area 900cm². Frame to be black-coated ductile iron 100mm in depth.
- Where two or more water service boundary boxes are situated together, multi-meter boundary boxes are to be installed as specified by Severn Trent Water.
- Manhole cover slabs and ironwork to be rotated to avoid block work feature bands and kerbs. Manhole covers within 1m of kerb face, (ie. within two wheeled vehicle tracks) to be skid resistant.

P01	PRELIMINARY ISSUE	BY: [initials]	DATE: 04.07.23
REV	AMENDMENT	BY: [initials]	DATE
<p>CE PROJECT EXECUTION CLASS: N/A</p> <p>All materials supplied in relation to those specified on this drawing are to be CE marked in accordance with the European Union Declaration of conformity</p>			
DRAWING STATUS			
PRELIMINARY			
<p>COUCH Consulting Engineers Civil & Structural</p> <p>The Old Forge, Priory, 14-16 St. Nicholas, Genesis Centre, 18 Innovation Way, London Road, Cannock, Warwick, Stoke-on-Trent, Sutton Coldfield, CV34 4JD, ST16 4BE Tel: 0121 308 7557 Tel: 01929 499 036 Tel: 01782 366 160 info@cceeng.co.uk www.cceeng.co.uk</p>			
CLIENT			
SHREWSBURY AND TELFORD HOSPITAL NHS TRUST			
PROJECT			
PROPOSED GAMMA CAMERA BUILDING			
DRAWING TITLE			
DRAINAGE LAYOUT			
SHEET SIZE	SCALE	DATE	DRAWN CHECKED STATUS
A1	1:100	06/06/23	BoR YA P01
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8477	8477-CCE-XX-XX-DR-S-0200	P01	