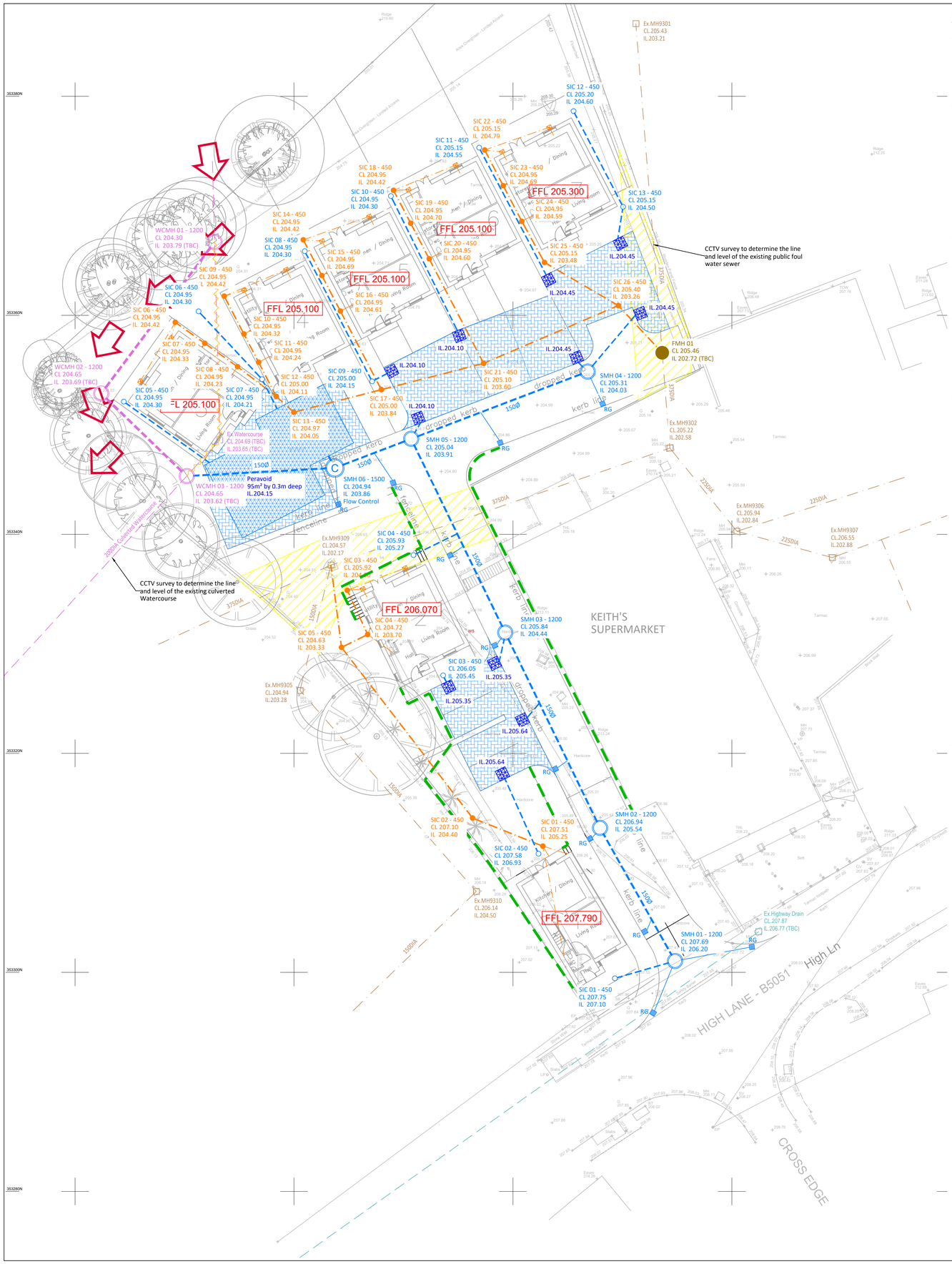


General Notes - Residential

A. The Contractor shall check all tie-ins for line and level with existing before commencing any works. The Engineer shall be notified immediately, in writing, should any errors be found.

B. Any discrepancies, of whatever nature, must be reported to the Engineer prior to the commencement or continuance of any further works. It is the responsibility of the contractor to locate any service apparatus in the vicinity of the works. Engineer will accept no claims whatsoever in respect of any losses or damage caused in respect of such apparatus, however caused.

C. It is the responsibility of the Contractor to execute the works at all times in strict accordance with the requirements of the Health and Safety At Work Act 1974, and CDM regulations 2007. The contractor will be deemed to have allowed for full compliance, including full liaison with the planning supervisor, within his rates.

D. All private drainage works to be in accordance with the requirements of Building Regulations 2000, Part H, "Drainage and waste disposal".

E. Should any departure from the slab level be considered, agreement shall be sought from the Engineer immediately and prior to commencement or continuance of any works, and should take full account of all restrictions to the slab level.

The Contractor is to comply in all respects with current building legislation - British Standard Specifications, Building Regulations, CDM Regulations etc., whether or not specifically stated on this drawing.

The drawing must be read with and checked against any structural, geotechnical or other specialist documentation provided.

Where existing trees are shown to be retained they should be subject to a full Arboricultural inspection for safety. Pollarding of large trees may be required to maintain a clear height of 5.1m over carriageways and 2.4m over footways, subject to Council approval.

All trees are to be planted so as to ensure that they do not have any detrimental effect on buildings, drainage and services. A suitable method of foundation is to be provided to accommodate the proposed tree planting and the tree pit designs are to be to the Landscape Architects details.

All materials unless specified otherwise shall comply with the relevant British Standard. Sources of materials are to be agreed with the adopting authority in advance of the works.

Any discrepancies in the details shown on this drawing to be reported to the Engineer prior to construction.

This drawing is to be read in conjunction with all relevant architectural and engineering drawings.

Levels indicated in blocks are finished floor levels.

Level access platforms at dwelling entrances to be 1200x1200mm and fall 10-15mm from entrance doors to allow for water run off. Pedestrian ramped areas of paths to have max 1 in 12 gradient.

Roads, footpaths and parking bays which form part of the highway to be adopted under Section 38 of the Highways Act 1980 shall comply with the relevant council highway specification and the D.O.T. Specification for Highway Works 1994.

Sewers to be adopted under Section 104 of the Water Industries Act 1991 shall comply with the Design and Construction Guidance for foul and surface water sewers together with any STWL Amendments.

All pipes to be used in adoptable sewers shall be either Extra Strength Vitrified Clay to BS EN 295 or concrete to BS 5911 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 120 - min. crushing strength 28kN/m
225mm dia. - Class 120 - min. crushing strength 28kN/m
300mm dia. - Class 160 - 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.

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.

Requirements for inspection chambers to be as follows:

Access chambers nom. 300mm dia. - max. 600mm deep
Inspection chambers nom. 450mm dia. - max. 2000mm deep
Deep inspection chambers 1200mm dia. - max. 3000mm 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: 1998 and the Building Regulations 2000 Part H: 2002.

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 garage floor levels to be min. 150mm below attached house slab level unless shown otherwise.

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.

No obstructions exceeding 600mm in height or anything that interferes with visibility shall be placed within the visibility envelopes indicated, as stated by the conditions contained in the plot Deed of Sale.

Boundary walls and fencing to Architects details. Boundary walls will not be adopted.

All kerbing to comply with relevant provisions of BS 7263 Part 1. 2001. Bedding and backing to be concrete mix ST1.

150mm x 50mm flat top edging kerbs shall be laid flush at footway crossovers and verges.

Gully gratings and frames in adoptable and communal areas to be to 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, (i.e.. within two wheeled vehicle tracks) to be skid resistant.

Hand laying of bituminous materials is not permitted on adoptable carriageway.

A 450mm depth of road construction is required where constructed on frost susceptible sub grades.

CBR values and calculations may be required to determine sub-base thickness. For road construction details where CBR values are less than 5% refer to the Engineer.

All substrata structures and any pockets of soft or unconsolidated material, within the construction width of the highway, are to be removed and replaced with well-compacted granular material. All formations shall be compacted to make good any disturbance caused by excavation. The formation shall not be exposed for any period of time during inclement weather.

Road markings shall be white, unless stated otherwise, complying with BS 381 Cl. 355 and statutory requirements contained in the Traffic Signs Regulations And General Directions, 2002 and subsequent amendments and be in accordance with the Specification for Highway Works.

Road markings shall be formed with thermoplastic material complying with BS 3262 Part 1 Class A.

Traffic safety measures for works on or adjacent to an existing highway shall be in accordance with Chapter 8 of the Traffic Signs Manual.

The provision of a CCTV survey of any highway drainage, at the developers' expense, is required prior to laying the surface course.

Street name plate positions to be determined on site in consultation with the Local Authority and ordered through the council.

Street lighting shall be designed to the Local Authority standards. On completion of the street lighting works, as required by BS 7671 and the IEE Wiring Regulations 16th Edition, a Completion Certificate in the form set out in Appendix 6 of the British Standard shall be provided to the Council. Alternatively a Certificate may be adapted from BS 7671 for use in street lighting installations given in the ILE Code Of Practice for Electrical Safety in Public Lighting Operations.

General Notes

1. This drawing is to be read in conjunction with all other project drawings and specifications.
2. All dimensions are in millimetre's unless otherwise stated
3. Should there be any conflict between the details indicated on this drawing and those indicated on other drawings the Project Engineer shall be informed PRIOR to construction on site.
4. Until technical approval has been obtained from the relevant Authority, it should be understood that all drawings issued are Preliminary and NOT for construction. Should the Contractor commence site work prior to such approval being given, it is entirely at his own risk

KEY:

- Site boundary
- FFL 130.900 — Finished Floor Level
- Existing Public Foul Water Sewer taken from public sewer record (STW)
- Existing Highway Drain (SCC)
- Existing Culverted Watercourse
- Existing Culverted Watercouere to be Abandoned
- Proposed Adoptable Manhole
- Proposed Orifice Plate Control Chamber (Max. Flow 5 l/s, Design Head 1.3m)
- Proposed Private Surface Water Drain (100Ø UNO)
- Proposed Private Foul Water Drain (100Ø UNO)
- Proposed Private Storm Water Inspection Chamber Plastic (PPIC)
- Proposed stormwater drain and diffuser collection unit
- Permeable Paving with varying deeps of open graded stone for storm water storage
- Permeable Paving with 2 layers of 150mm deep permavoid sub-base replacement geocellular units and open graded stone for storm water storage
- Proposed Private Foul Inspection Chamber Plastic (PPIC)
- Proposed Back Inlet Gully
- Proposed Sewer Easement
- Existing Culverted Watercourse
- Future Pluvial Flooding Flow Path

REV	AMENDMENT	BY	CHK	DATE
P03	Notes amended.	AW	SC	14/12/21
P02	Drawing amended.	AW	SC	14/10/21
P01	Preliminary Issue.	AW	SC	20/09/21

PROJECT EXECUTION CLASS:

All materials supplied in relations to those specified on this drawing are to be CE marked in accordance with the European Union Declaration of conformity

DRAWING STATUS

PRELIMINARY

CONSULTING ENGINEERS LTD
CIVIL | STRUCTURAL | DESIGN

The Old Church Offices
Shelton New Road
Hartshill, Stoke on Trent
ST4 6DP
Email: mail@c2cconsulting.co.uk Telephone: 01782 980330

CLIENT: DB Staffordshire Developments

PROJECT: High Lane Brown Edge

DRAWING TITLE: Drainage Strategy

SHEET SIZE	SCALE	DATE	DRAWN	CHECKED	STATUS
A1	1:200	20/09/2021	AW	SC	S1

PROJECT No.	DRAWING No.	REV
210432	C2C - P - 00 - M2 - D 500	P03

CAD File Path: /Andrew/Microdesk_C/Temp/210432 - High Lane, Brown Edge/01 DRAWINGS/01 CIV/11 CAD/210432-C2C-P-00-M2-D-500_Rev_P03-390_Rev_P04 - Drainage Strategy

© Copyright: This drawing and any design therein is the copyright of C2C Consulting Engineers Ltd and must not be reproduced or utilised without their written consent