

- General Notes:
- DO NOT USE THIS DRAWING IN ISOLATION. This drawing has been prepared as part of a set, and must therefore be read in conjunction with all other drawings. Any discrepancies or design queries must be reported to the engineer prior to completion of tender and commencement of works. Following completion of tender it is assumed that developer and Contractor are in full agreement with the design drawings (with the exception of pre tender queries only).
 - Third party information is used to prepare the engineering design (including architectural layout, ground investigation, existing utilities records, and specialist design items). The engineering design must therefore be read in conjunction with all third party information prior to commencing work. Queensberry Design Ltd are not responsible for any third party information or details.
 - House type working drawings are to be used in conjunction with the plot setting out drawing.
 - Drawing status will remain preliminary until full technical approval is received from local authority and sewerage undertaker. Works commenced prior to technical approval are done at risk and may be subject to change.
 - The Contractor is expected to prepare appropriate construction method statements for all aspects of appointed work. This should include any temporary protection works.
 - Land drainage is not permitted to discharge into the public sewer network. Any need for land drainage should be assessed by the ground worker and landscaper during construction and placement of gardens on an individual plot basis. If land drainage designs are required, they should be appointed prior to plot completion.
 - The Contractor is expected to cross check all drainage inverts prior to commencing work, this may involve completion of trial holes if invert levels have been interpolated.
 - The Contractor must monitor the 'as built' progress of each construction stage (roads/sewer/pit works/ etc) to enable the next stages of construction to be checked before installation. For this reason the design of, floor levels, external works, retaining walls, and plot drainage are to be read as guidance only.
- Highways
- All highway works to be carried out in accordance with the Design Manual for Roads and Bridges (DMRB), the Manual of Contract Documents for Highway Works, Specification for Highway Works (MCHW SHW) and the current local authority highway design guide.
 - All excavations below proposed and existing highways to be back-filled with granular type 1 sub-base and well compacted in layers not exceeding 150mm, unless otherwise agreed.
 - Highway authority to be notified by the Contractor prior to the commencement of works.
 - All statutory consents opening notices etc. as required under the Highways act are to be obtained by the Contractor.
 - Position, size and depth of all existing owners and services shall be established by main Contractor prior to commencement on site.
 - The Contractor shall allow for the protection, temporary and permanent support, and temporary and permanent diversion works, as necessary to all existing services.
 - The Contractor shall allow for keeping sewer trenches and excavations as dry as practicable by pumping from temporary sumps and dewatering as appropriate. The point and method of discharge to be agreed with the drainage authority.
 - In situ and precast concrete units shall have sulphate resisting portland cement to BS 4027, unless agreed otherwise with the adopting authority.
 - Precast concrete products shall comply with the relevant provisions of BS 5911 and be kitemarked.
 - Concrete pipes to be Class H unless noted otherwise.
 - Manhole covers and frames shall comply with the relevant provisions of BS EN 124, have minimum 675 x 675 clear openings with 150 deep frames unless otherwise specified. Manhole covers and frames to be a non-slip design without cutout inserts and be kitemarked. Load class d400 in vehicular trafficked areas and load class b125 in footways and pedestrian areas.
 - Class X bedding detail shall be provided where cover to the pipe barrel is less than 1.0m in vehicular trafficked areas and 0.75m elsewhere, to all road gully connections and within areas of deep rooting vegetation.
 - Where Class X trench bedding detail is used, the concrete bed and surround shall be discontinued at each pipe joint over the full cross section by means of a shaped compressible filler.
 - Selected backfill material shall consist of uniform material free from stones larger than 40mm, clay lumps larger than 15mm, tree roots, organic matter and frozen soil. Selected backfill material shall be placed in layers not exceeding 225mm, each layer compacted to form a stable trench backfill.
 - General backfill material to be free from stones larger than 40mm. General backfill material to be placed in layers not exceeding 150mm thickness and each layer compacted by hand. No mechanical compaction of fill material shall be permitted within 300mm above the crown/barrel of the pipe.
 - Backfill to drainage trenches in hard paved areas shall be Type 1 granular sub-base.
 - The Contractor must ensure that any of the existing drainage which is live, is kept clear of debris and that all retained connections are proved and jetted through upon completion.
 - Contractor to take measures to protect operatives with respect to the presence of gas in sewer trenches and manholes through the use of gas monitoring equipment and breathing.
 - Road gully grating frames shall be set 0-10mm below finished carriageway surface level.
 - Gully leads that cross the carriageway shall have a minimum cover of 150mm.
 - Gully spacings are calculated in accordance with DMRB CDS26 with a nominal allowable flow width against kerb of 0.75m.
 - Refer to drawing sheet number QD1776-08-01 for adoptable drainage details.
 - Refer to drawing sheet numbers QD1776-03-11 for engineering layout.
 - Refer to drawing sheet numbers QD1776-02-00-11 for site clearance details.
 - Refer to drawing sheet numbers QD1776-07-00-11 for road pavement details, 0700-21 and 'K'Klees Highways Standard Details 2022 to 2024' for construction details.
 - Refer to drawing sheet numbers QD1776-11-00-11 for kerbs, footways, cycleways and paved areas details.
- Existing Services
- Any existing services which may be affected by the proposed works should be located by means of a hand dig in close liaison with the statutory service authorities. The Contractor shall inform the developer of any services that may affect the proposed design. Contractor to notify statutory service authorities prior to commencement of work.
- As Constructed Information
- Refer to General Note 8 above. It is the Contractors responsibility to provide the following as constructed drawings to the developer upon the completion of the works covered by the contract:
- Position/coordinates of all adoptable manholes.
 - Invert and cover levels of all adoptable manholes.
 - New gully positions and connections.
 - Position and depth of service ducts for water, gas, electric, BT, cable and street lighting, stating size and number of ducts.
- CONTRACTOR TO NOTE THAT MATERIALS TESTING IS REQUIRED THROUGHOUT. CONTRACTOR TO LAISE WITH KC HIGHWAYS TESTING LABORATORY REGARDING THE REQUIRED TESTING STANDARDS. TYPICALLY INCLUDING FOR FILL, ASPHALT, HOT APPLIED BOND COAT, STRUCTURAL CONCRETE AND ROAD MARKINGS.

SAFETY HEALTH AND ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, ALL CLIENTS/CONSULTANTS AND CONTRACTORS SHOULD REFER TO THE FOLLOWING RISKS AND INFORMATION PRIOR AND DURING CONSTRUCTION OPERATIONS:

NONE.

HAZARD WARNING INDICATIVE LOCATION MARKER SYMBOL

THE CONTRACTOR MUST REFER TO THE SUPPLIED UNDERGROUND MAPPING SURVEYS/CONSTRAINTS PLANS/STATUTORY UNDERTAKERS' APPARATUS RECORDS AND GEOTECHNICAL INFORMATION PRIOR TO ANY CONSTRUCTION WORKS

FOR INFORMATION RELATING TO DEMOLITION, USE, CLEANING AND MAINTENANCE; SEE THE HEALTH AND SAFETY FILE

RISKS LISTED HERE ARE NOT EXHAUSTIVE. REFER TO DESIGNERS RISK ASSESSMENT FOR FULL DETAILS

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT

Key:

- Proposed affected impermeable area whether existing gully position retained approximately as is or new gully proposed at new channel location with connection to the existing network relocated.
- Existing impermeable area from the equivalent run-off catchment.

Total Areas:

PROPOSED AFFECTED = 0.07ha

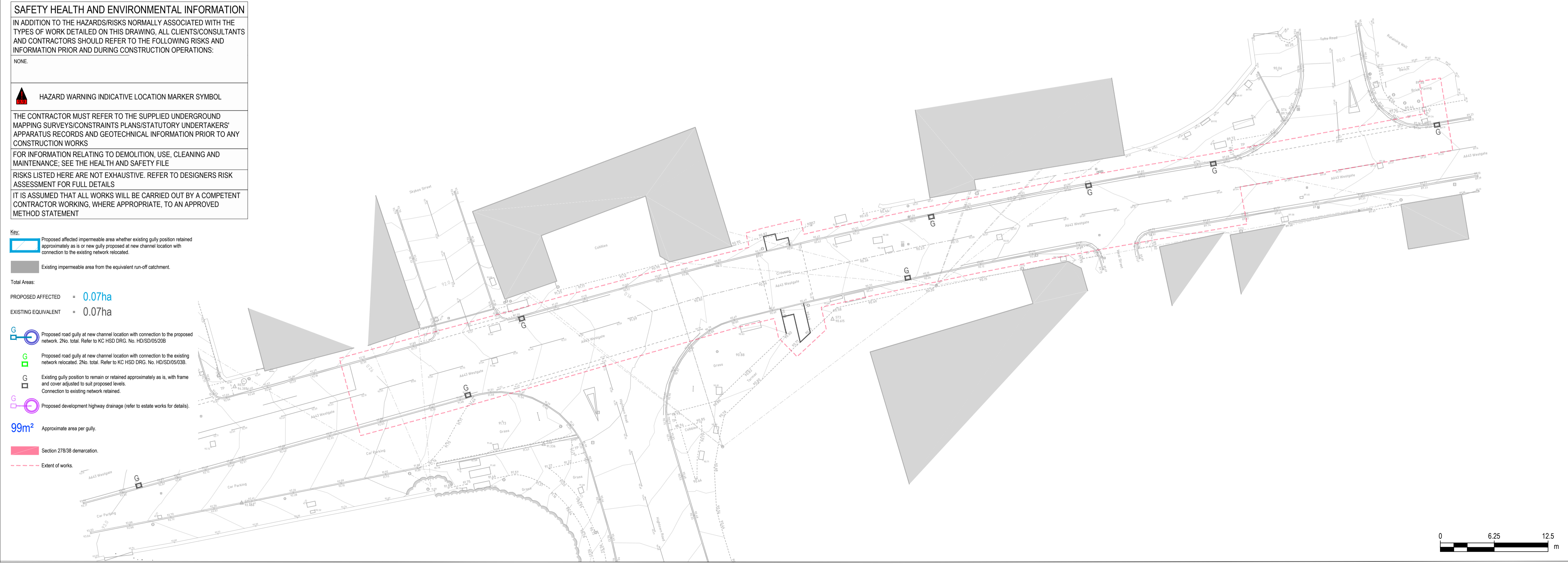
EXISTING EQUIVALENT = 0.07ha

- Proposed road gully at new channel location with connection to the proposed network. 2No. total. Refer to KC HSD DRG. No. HD/SD/05/02B
- Proposed road gully at new channel location with connection to the existing network relocated. 2No. total. Refer to KC HSD DRG. No. HD/SD/05/03B
- Existing gully position to remain or retained approximately as is, with frame and cover adjusted to suit proposed levels.
- Proposed development highway drainage (refer to estate works for details).

99m² Approximate area per gully.

Section 278/38 demarcation.

Extent of works.



A	10.10.2023	FOR KC DESIGN REVIEW.	MK	ND
-	29.09.2023	INITIAL ISSUE, DRAFT, FOR CLIENT COMMENT AND TENDER.	MK	ND
Rev	Date	Revision Details	Drawn	Checked

© This drawing is the property of Queensberry Design Limited and the information can only be reproduced with their prior permission.

QUEENSBERRY DESIGN
CIVIL, STRUCTURAL, ARCHITECTURE & GEOTECHNICAL CONSULTANTS

NORTH-EAST OFFICE
UNIT 5, THE STATION, THE WATERMARK,
METRO RIVERSIDE, GATESHEAD, NE11 5GN
0191 490 8006

NORTH-WEST & YORKSHIRE OFFICE
2A ST MARTIN'S LANE, YORK, YO1 6LN
0191 490 0663

www.queensberrydesign.co.uk

Client: STRATA HOMES

Project: Westgate Cleckheaton

Title: Section 278 Drainage Network and Impermeable Catchment Areas

Drawn: MK, ND, SEPTEMBER 2023

Checked: ND, SEPTEMBER 2023

Date: SEPTEMBER 2023

Drawing Number: QD1776-0500-11

Scale: 1:250 (@ A1)

Revision: A