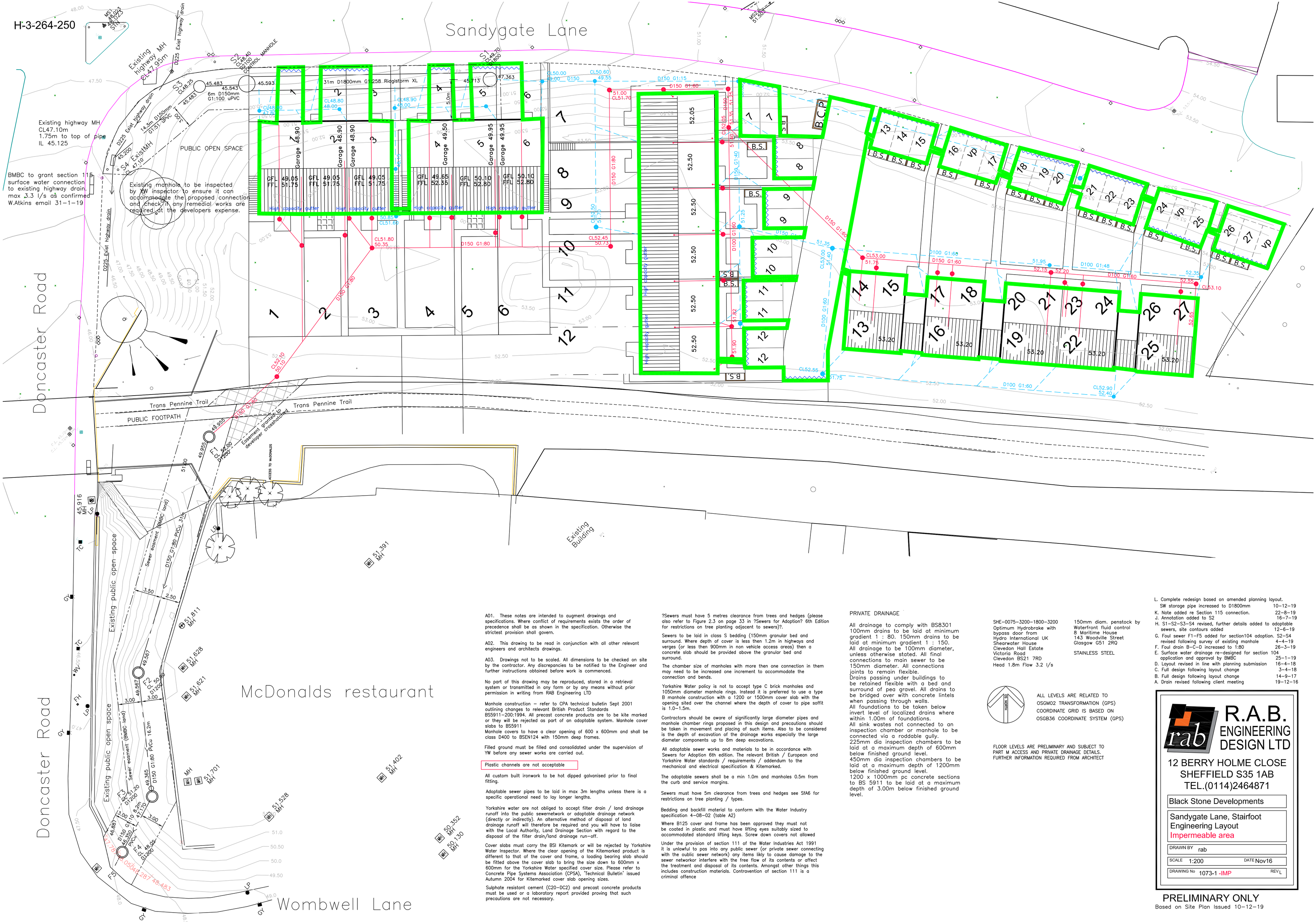
H-3-264-250



A01. These notes are intended to augment drawings and specifications. Where conflict of requirements exists the order of precedence shall be as shown in the specification. Otherwise the strictest provision shall govern.

A02. This drawing to be read in conjunction with all other relevant engineers and architects drawings.

A03. Drawings not to be scaled. All dimensions to be checked on site by the contractor. Any discrepancies to be notified to the Engineer and further instructions obtained before work is commenced.

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Manhole construction – refer to CPA technical bulletin Sept 2001 outlining changes to relevant British Product Standards BS5911-200:1994. All precast concrete products are to be kite marked or they will be rejected as part of an adoptable system. Manhole cover slabs to BS5911
Manhole covers to have a clear opening of 600 x 600mm and shall be class D400 to BSEN124 with 150mm deep frames.

Filled ground must be filled and consolidated under the supervision of YW before any sewer works are carried out.

Plastic channels are not acceptable

All custom built ironwork to be hot dipped galvanised prior to final fitting.

Adoptable sewer pipes to be laid in max 3m lengths unless there is a specific operational need to lay longer lengths.

Yorkshire water are not obliged to accept filter drain / land drainage runoff into the public sewernetwork or adoptable drainage network (directly or indirectly). An alternative method of disposal of 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 filter drain/land drainage run-off.

Cover slabs must carry the BSI Kitemark or will be rejected by Yorkshire 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 Yorkshire Water specified cover size. Please refer to Concrete Pipe Systems Association (CPSA), 'Technical Bulletin' issued Autumn 2004 for Kitemarked cover slab opening sizes.

Sulphate resistant cement (C20-DC2) and precast concrete products must be used or a laboratory report provided proving that such precautions are not necessary.

?Sewers must have 5 metres clearance from trees and hedges (please also refer to Figure 2.3 on page 33 in ?Sewers for Adoption? 6th Edition for restrictions on tree planting adjacent to sewers)?.

Sewers to be laid in class S bedding (150mm granular bed and surround. Where depth of cover is less then 1.2m in highways and verges (or less then 900mm in non vehicle access areas) then a concrete slab should be provided above the granular bed and surround.

The chamber size of manholes with more then one connection in them may need to be increased one increment to accommodate the connection and bends.

Yorkshire Water policy is not to accept type C brick manholes and 1050mm diameter manhole rings. Instead it is preferred to use a type B manhole construction with a 1200 or 1500mm cover slab with the opening sited over the channel where the depth of cover to pipe soffit is 1.0-1.5m.

Contractors should be aware of significantly large diameter pipes and manhole chamber rings proposed in this design and precautions should be taken in movement and placing of such items. Also to be considered is the depth of excavation of the drainage works especially the large diameter components up to 8m deep excavations.

All adoptable sewer works and materials to be in accordance with Sewers for Adoption 6th edition. The relevant British / European and Yorkshire Water standards / requirements / addendum to the mechanical and electrical specification & Kitemarked.

The adoptable sewers shall be a min 1.0m and manholes 0.5m from the curb and service margins.

Sewers must have 5m clearance from trees and hedges see SfA6 for restrictions on tree planting / types.

Bedding and backfill material to conform with the Water Industry specification 4-08-02 (table A2)

Where B125 cover and frame has been approved they must not be coated in plastic and must have lifting eyes suitably sized to accommodated standard lifting keys. Screw down covers not allowed

Under the provision of section 111 of the Water Industries Act 1991 it is unlawful to pas into any public sewer (or private sewer connecting with the oublic sewer network) any items likly to cause damage to the sewer networkor interfere with the free flow of its contents or affect the treatment and disposal of its contents. Amongst other things this includes construction materials. Contravention of section 111 is a criminal offence

PRIVATE DRAINAGE

All drainage to comply with BS8301
100mm drains to be laid at minimum gradient 1 : 80. 150mm drains to be laid at minimum gradient 1 : 150.
All drainage to be 100mm diameter, unless otherwise stated. All final connections to main sewer to be 150mm diameter. All connections joints to remain flexible.
Drains passing under buildings to be retained flexible with a bed and surround of pea gravel. All drains to be bridged over with concrete lintels when passing through walls.
All foundations to be taken below invert level of localized drains where within 1.00m of foundations.
All sink wastes not connected to an inspection chamber or manhole to be connected via a roddable gully.
225mm dia inspection chambers to be laid at a maximum depth of 600mm below finished ground level.
450mm dia inspection chambers to be laid at a maximum depth of 1200mm below finished ground level.
1200 x 1000mm pc concrete sections to BS 5911 to be laid at a maximum depth of 3.00m below finished ground level.

SHE-0075-3200-1800-3200
Optimum Hydrobrake with bypass door from
Hydro International UK
Shearwater House
Clevedon Hall Estate
Victoria Road
Clevedon BS21 7RD
Head 1.8m Flow 3.2 l/s

150mm diam. penstock by
Waterfront fluid control
8 Maritime House
143 Woodville Street
Glasgow G51 2RQ

STAINLESS STEEL

ALL LEVELS ARE RELATED TO OSGM02 TRANSFORMATION (GPS)
COORDINATE GRID IS BASED ON OSGB36 COORDINATE SYSTEM (GPS)

FLOOR LEVELS ARE PRELIMINARY AND SUBJECT TO PART M ACCESS AND PRIVATE DRAINAGE DETAILS. FURTHER INFORMATION REQUIRED FROM ARCHITECT

L. Complete redesign based on amended planning layout. SW storage pipe increased to D1800mm 10-12-19
K. Note added re Section 115 connection. 22-8-19
J. Annotation added to S2 16-7-19
H. S1-S2-S3-S4 revised, further details added to adoptable sewers, site contours added 12-6-19
G. Foul sewer F1-F5 added for section104 adoption. S2-S4 revised following survey of existing manhole 4-4-19
F. Foul drain B-C-D increased to 1:80 26-3-19
E. Surface water drainage re-designed for section 104 application and approval by BMBC 25-1-19
D. Layout revised in line with planning submission 16-4-18
C. Full design following layout change 3-4-18
B. Full design following layout change 14-9-17
A. Drain revised following client meeting 19-12-16

R.A.B. ENGINEERING DESIGN LTD
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Black Stone Developments

Sandygate Lane, Stairfoot
Engineering Layout
Impermeable area

DRAWN BY rab
SCALE 1:200 DATE Nov16
DRAWING No 1073-1 -IMP REV L

PRELIMINARY ONLY
Based on Site Plan Issued 10-12-19