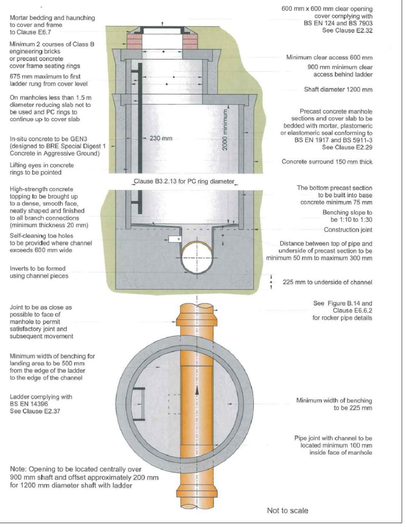
DO NOT SCALE from this drawing

All dimensions must be varified on the site before setting out : commencing work, with any discrepancies reported to REFA

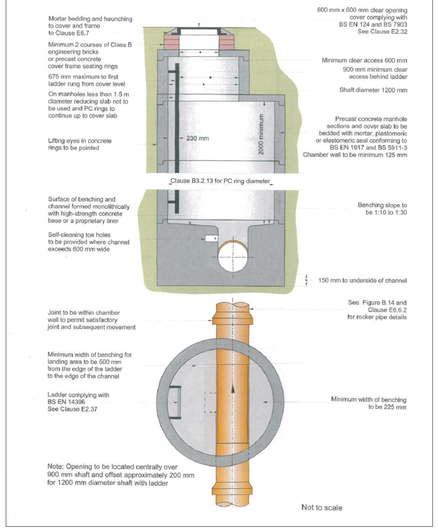
FIGURE B.8
TYPICAL MANHOLE DETAIL - TYPE 1A
Depth from cover level to soffit of pipe 3 m to 6 m



Note: Opening to be located centrally over 900 mm shaft and offset approximately 200 mm for 1200 mm diameter shaft with ladder

Not to scale

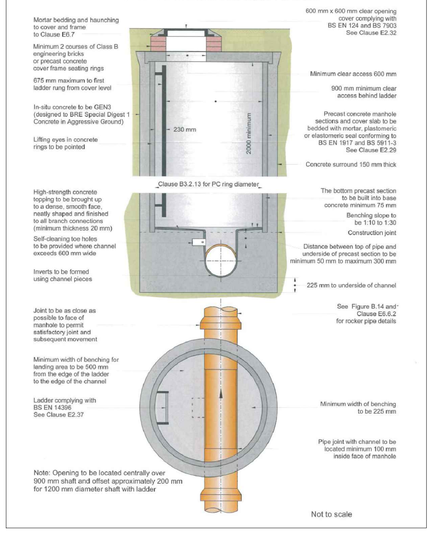
FIGURE B.9
TYPICAL MANHOLE DETAIL - TYPE 1A (Alternative construction detail)
Depth from cover level to soffit of pipe 3 m to 6 m



Note: Opening to be located centrally over 900 mm shaft and offset approximately 200 mm for 1200 mm diameter shaft with ladder

Not to scale

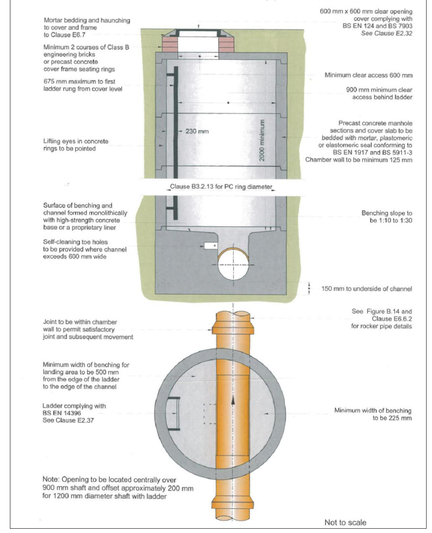
FIGURE B.10
TYPICAL MANHOLE DETAIL - TYPE 1B
Depth from cover level to soffit of pipe 3 m to 6 m



Note: Opening to be located centrally over 900 mm shaft and offset approximately 200 mm for 1200 mm diameter shaft with ladder

Not to scale

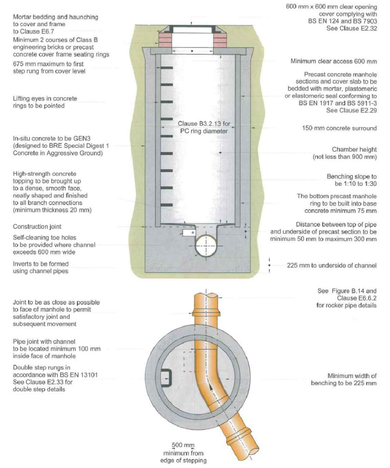
FIGURE B.11
TYPICAL MANHOLE DETAIL - TYPE 1B (Alternative construction detail)
Depth from cover level to soffit of pipe 3 m to 6 m



Note: Opening to be located centrally over 900 mm shaft and offset approximately 200 mm for 1200 mm diameter shaft with ladder

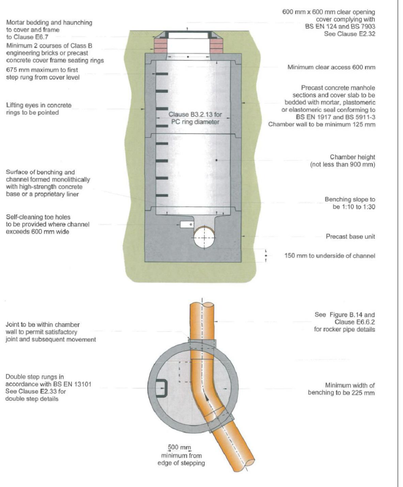
Not to scale

FIGURE B.12
TYPICAL MANHOLE DETAIL - TYPE 2
Maximum depth from cover level to soffit of pipe 3.0 m



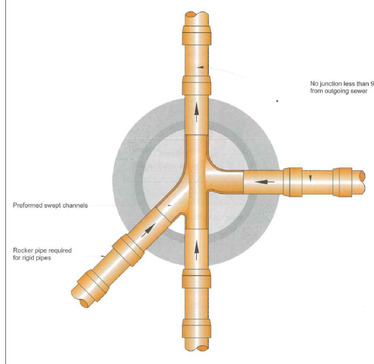
Not to scale

FIGURE B.13
TYPICAL MANHOLE DETAIL - TYPE 2 (Alternative construction detail)
Maximum depth from cover level to soffit of pipe 3.0 m



Not to scale

FIGURE B.14
TYPICAL ARRANGEMENT OF PIPE JUNCTIONS WITHIN MANHOLES



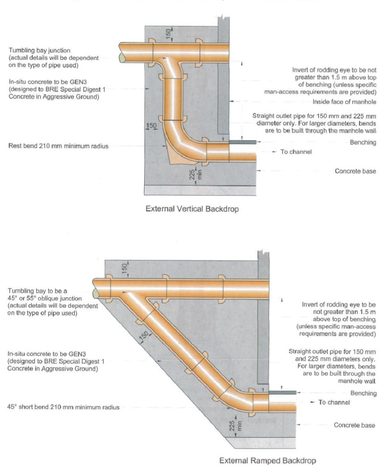
Sectional Plan

Rigid pipes built into manhole should have a flexible joint as close as feasible to the external face of the structure and the length of the next rocker pipe should be as shown.

Nominal diameter (mm)	Maximum effective length (m)
150 - 600	0.6
601 - 750	1.00
over 750	1.25

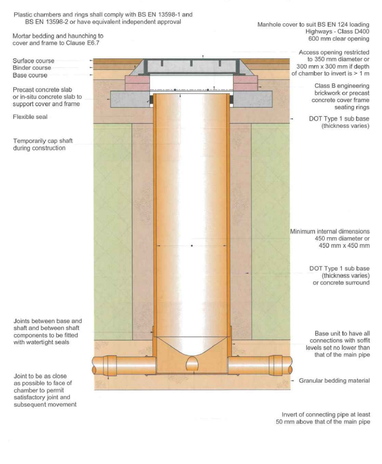
All pipes entering the bottom of the manhole to have soffits level.

FIGURE B.15
TYPICAL VERTICAL AND RAMPED BACKDROP DETAIL
Note: Steeper gradients are preferred to the use of backdrops.
Type of backdrop to be used to be agreed with Undertaker.



Not to scale, dimensions in millimetres

FIGURE B.16
TYPICAL INSPECTION CHAMBER DETAIL - TYPE 3 (Flexible material detail)
Maximum depth from cover level to soffit of pipe in areas subject to vehicle loading 3 m, non-entry



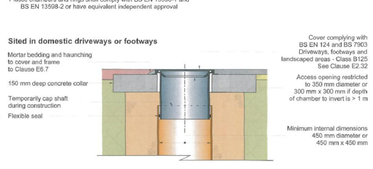
Note: Where the access chamber is in the highway the Highway Authority can have specific requirements

Not to scale

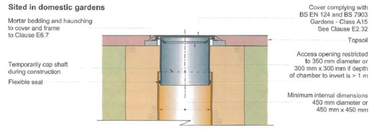
FIGURE B.17
ALTERNATIVE TOP DETAILS FOR LIGHT VEHICLE LOADING AND LANDSCAPED AREAS - TYPE 3

Plastic chambers and rings shall comply with BS EN 13598-1 and BS EN 13598-2 or have equivalent independent approval

Sited in domestic driveways or footways



Sited in domestic gardens



Note: Where the access chamber is in the highway the Highway Authority can have specific requirements

Not to scale

GENERAL

1. All adoptable sewers and associated works are to comply fully with "Sewers for Adoption" 7th.Edition dated August 2012.
2. All highway works to be to adoptable standards and to to comply fully with the Local Authority specification.
3. All private drainage works are to comply fully with part H of the Building Regulations
4. All existing invert levels to be checked by the Contractor at the start of works and any discrepancies notified to REFA. All levels are based on topographical survey information provided by others.
5. All materials to bear the relevant B.S.Kitemark and comply fully with the specifications. All concrete & concrete products must use Sulphate resistant cement (unless the site investigation report proves that sulphate attack from soils and groundwater will not occur)
6. All opening notices etc. as required under highways acts etc. are to be obtained prior to commencement of works. All works are to be inspected by L.A., NHBC or Relevant Water Authority as applicable.

C.D.M. REGULATIONS 2015

In line with the above regulations we are obliged to inform the Client of their responsibilities under section CDM 15/1, and residual risks that may be encountered in the construction of these works. All design work has been carried out with Health and Safety aspects given full consideration. Wherever possible risks have been eliminated from the design, however due to the very nature of this type of work it is not possible to remove all the risks from the design.
We would also respectfully remind the Client of his obligations to take all reasonable steps in ensuring that only competent Contractors who have a valid safety policy are employed.
They should also provide satisfactory responses at tender stage as to the manner in which they will deal with the elements of risk involved in this type of work and in particular those highlighted by REFA below:-

1. Support / treatment for ALL excavation work.
2. Guarding to edges of excavations to prevent people,materials and vehicles falling into excavation.
3. Guarding of excavations outside working hours to prevent unauthorised access.
4. Undermining to adjacent roads or structures.
5. Confined space operations.
6. Dealing with existing services.
7. Traffic management on existing highways.
8. Procedure to be followed in event of accident or emergency.
9. Method of working where contaminated ground is present on site.
10. Confirmation will be required that all operatives are adequately trained, copies of relevant training certificates to be supplied.

The above list is by no means exhaustive but it does highlight operations that present a risk to contractors and the general public.
For clarification on any item please contact REFA.

rev	Revision details	Date

Drawing Stage			Drawing Status		
	Draft		Comments	●	Tender
●	Issued		Information		Construction
		●	Approval		As Built

Client

SG ESTATES LIMITED

Job title

WATTS DYKE RD LLAY

Drawing title

SEWERS FOR ADOPTION 7 STANDARD DETAILS 1

REFA
45 Bridgeman Terrace
Wigan, Lancs
WN1 1TT
Tel: -(01942) 826020
Fax: -(01942) 230816
CONSULTING ENGINEERS
CIVIL• STRUCTURAL
GEOTECHNICAL•ENVIRONMENTAL

Date	Scale	Drawn
07.12.23	N.T.S.	AS

DRAWING No 20072/108/1 Rev

© This drawing is the property of REFA and should not be copied, used or its contents divulged without prior written consent.