## PRIVATE DRAINAGE

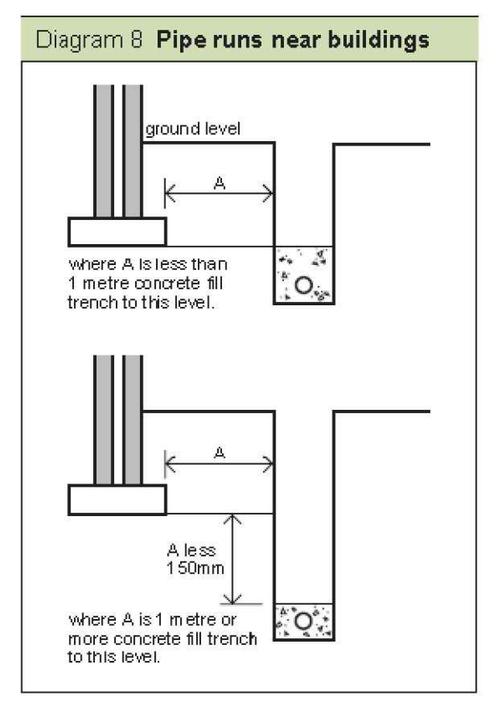
All private drainage is to comply with Part H of the Building Regulations.
Where a drain run is to be excavated lower than the foundations of any building and the trench is within 1m of the foundation the trench is to be filled with concrete up to the lowest level of the foundation or where the trench is further than 1m from the building, the trench is filled with concrete to a level below the lowest level for the building equal to the distance from the building less 150mm (refer to diagram 8)

All private drainage to be 110mm ø unless indicated otherwise Dragout manhole sizes to be in accordance with table 11 & 12 in the above document

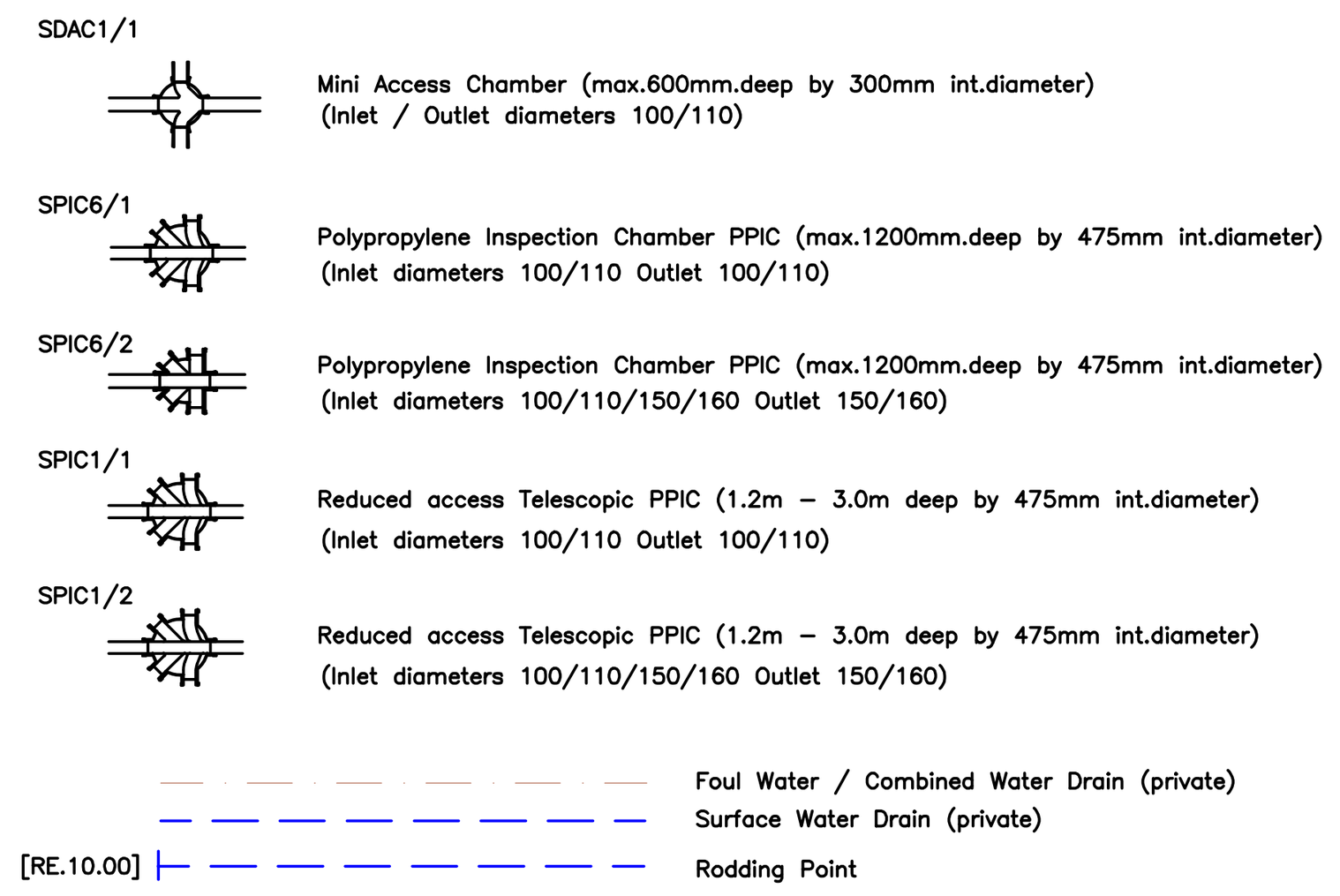
**Gradients**
Foul water –110mm. diam. :– 1 in 80 minimum (min. of 1 W.C. connected)
Foul water –150mm. diam. :– 1 in 150 minimum (min. of 5 W.C.'s connected)

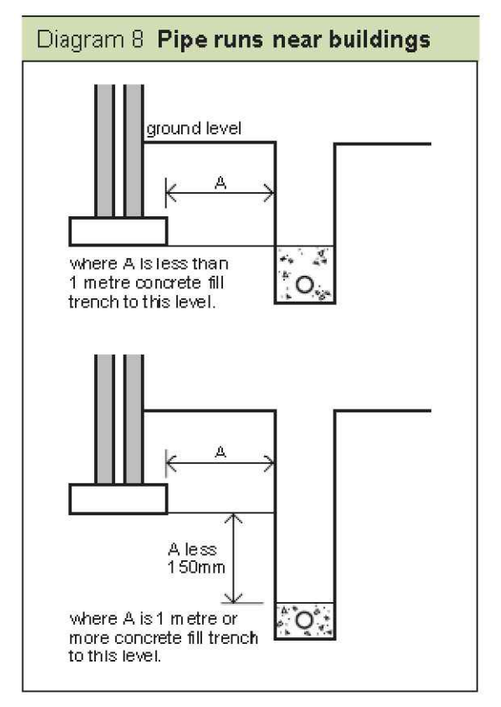
Surface water –110mm. diam. :– 1 in 100 minimum
Surface water –150mm. diam. :– 1 in 150 minimum
Surface water –225mm. diam. :– 1 in 225 minimum

**Levels**
{10.00} denotes a foul water invert level.
(10.00) denotes a surface water invert level.




## UNIVERSAL ACCESS SYSTEM (Hepworth Building products)




PLEASE REFER TO LATEST REVISION OF HOUSE TYPE WORKING DRAWINGS FOR EXACT LOCATIONS OF DRAINAGE PICK UP POINTS. PLEASE REPORT ANY DISCREPANCY TO REFA BEFORE COMMENCING CONSTRUCTION.

ALL MANHOLE COVERS AND FRAMES MUST COMPLY WITH BS EN124. COVERS IN ROAD TO BE GRADE D400 AND BE 150mm DEEP. MANHOLE COVERS IN CAR PARKING AREAS AND DRIVES TO BE GRADE B125. WHILST LANDSCAPED AREAS MAY BE GRADE A15. ALL TO BE SIZED IN ACCORDANCE WITH PART H OF THE BUILDING REGULATIONS 2002 TABLES 11 & 12

PLEASE NOTE ALL HOUSE ROOF AND DRIVEWAY RAIN WATER GULLIES ARE TO BE TRAPPED.

FOUNDATIONS TO BE DESIGNED / CONSTRUCTED TO TAKE INTO ACCOUNT THE PROXIMITY AND DEPTH OF ADJACENT SEWERS AND DRAINS IN ACCORDANCE WITH SFA 7TH EDITION PART B.

FOR LOCATION OF ACO DRAINS TO PRIVATE & SHARED DRIVEWAYS REFER TO EXTERNAL WORKS LAYOUT. ACO DRAINS TO CONNECT TO PRIVATE SURFACE WATER SYSTEM AT MOST CONVENIENT LOCATION.

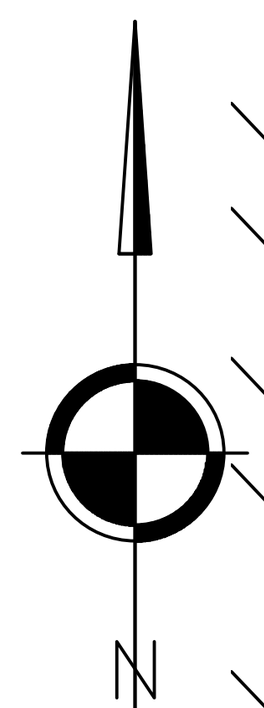
ALL EXISTING SERVICES TO BE LOCATED AT COMMENCEMENT IN ACCORDANCE WITH UNDERTAKERS REQUIREMENTS AND PROTECTED ACCORDINGLY DURING THE WORKS.

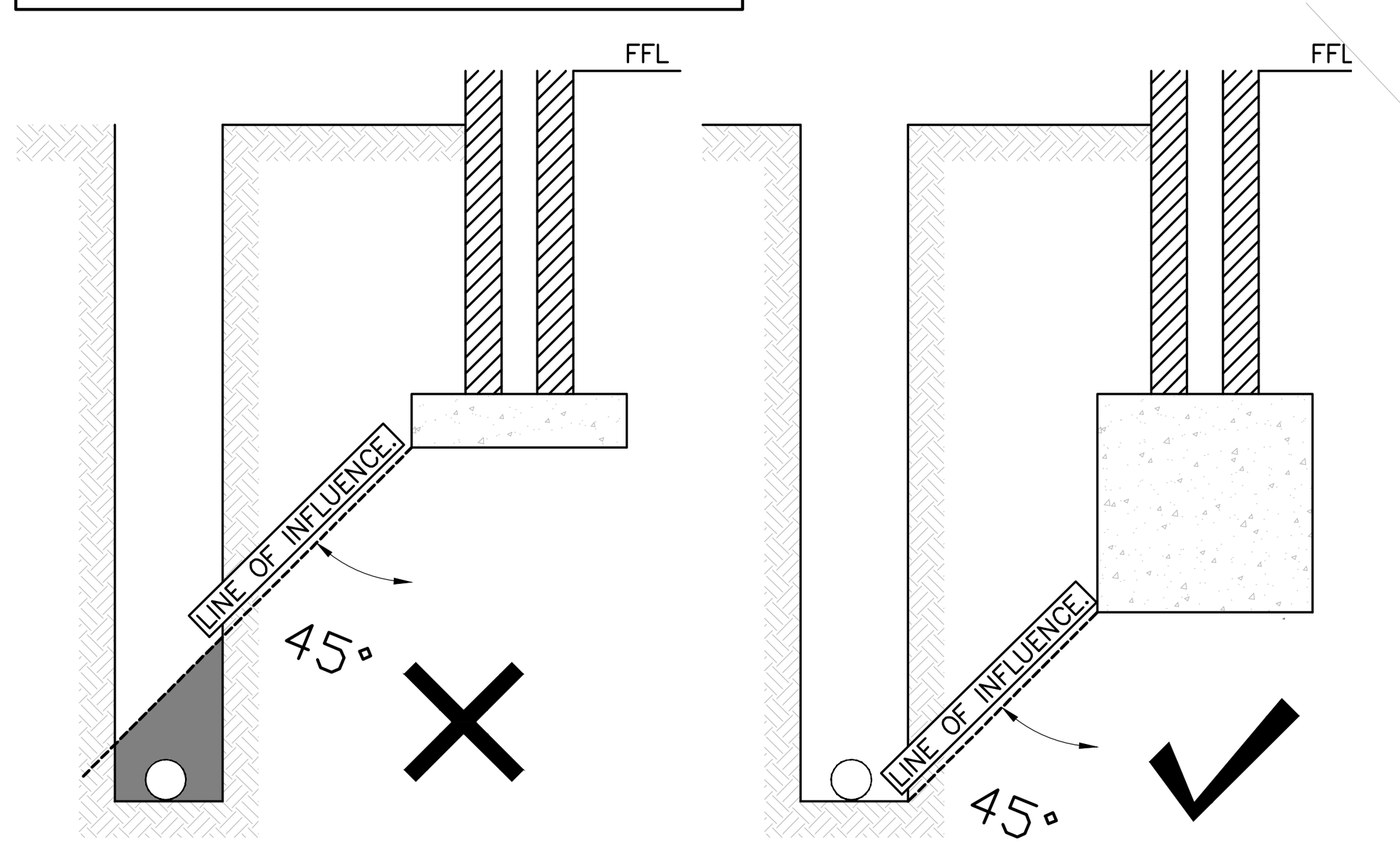
ALL PIPES TO HAVE CLASS "S" BED AND SURROUND UNLESS SHOWN OTHERWISE ALL CONCRETE PIPES TO BE CLASS 120 ALL CLAY PIPES TO BE EXTRA STRENGTH VITRIFIED CLAY ALL UPVC PIPES TO COMPLY WITH BS 4660:2000 & BS EN 1401–1 STRUCTURED WALL UPVC PIPES TO COMPLY WITH WIS 4–35–01 MAX. PIPE LENGTH TO BE 3.0m

TO CATER FOR ANY DEVIATIONS IN THE AS CONSTRUCTED ROAD / FOOTPATH LEVELS IN RELATION TO THE DESIGN LEVELS, THE PROPOSED FLOOR LEVELS SHOWN MUST BE CHECKED ON SITE BY THE SITE AGENT OR ENGINEER IN RELATION TO AS BUILT ROAD LEVELS TO ENSURE COMPLIANCE WITH PART M OF THE BUILDING REGULATIONS

CONTRACTOR TO BE AWARE OF AND TAKE APPROPRIATE ACTION TO ENSURE DE–STABILISATION OF ANY EXISTING STRUCTURES, TREES, EMBANKMENTS OR OTHER FEATURES DOES NOT OCCUR AS A RESULT OF ANY EXCAVATIONS WORKS UNDERTAKEN IN ACCORDANCE WITH THE DESIGNS SHOWN ON THIS DRAWING IF CONTRACTOR IS UNSURE ABOUT ANY ASPECT OF THE ABOVE HE SHOULD SEEK ADVICE %%UBEFORE COMMENCING EXCAVATION WORK.

IF THE CLIENT OR CONTRACTOR IDENTIFIES ANY DISCREPANCIES BETWEEN THE DRAWINGS PRODUCED BY REFA FOR THIS PROJECT THEN THEY SHOULD CONTACT REFA IMMEDIATELY AND BEFORE ANY WORKS COMMENCE OR PROCEED IF IN DOUBT ASK !!!



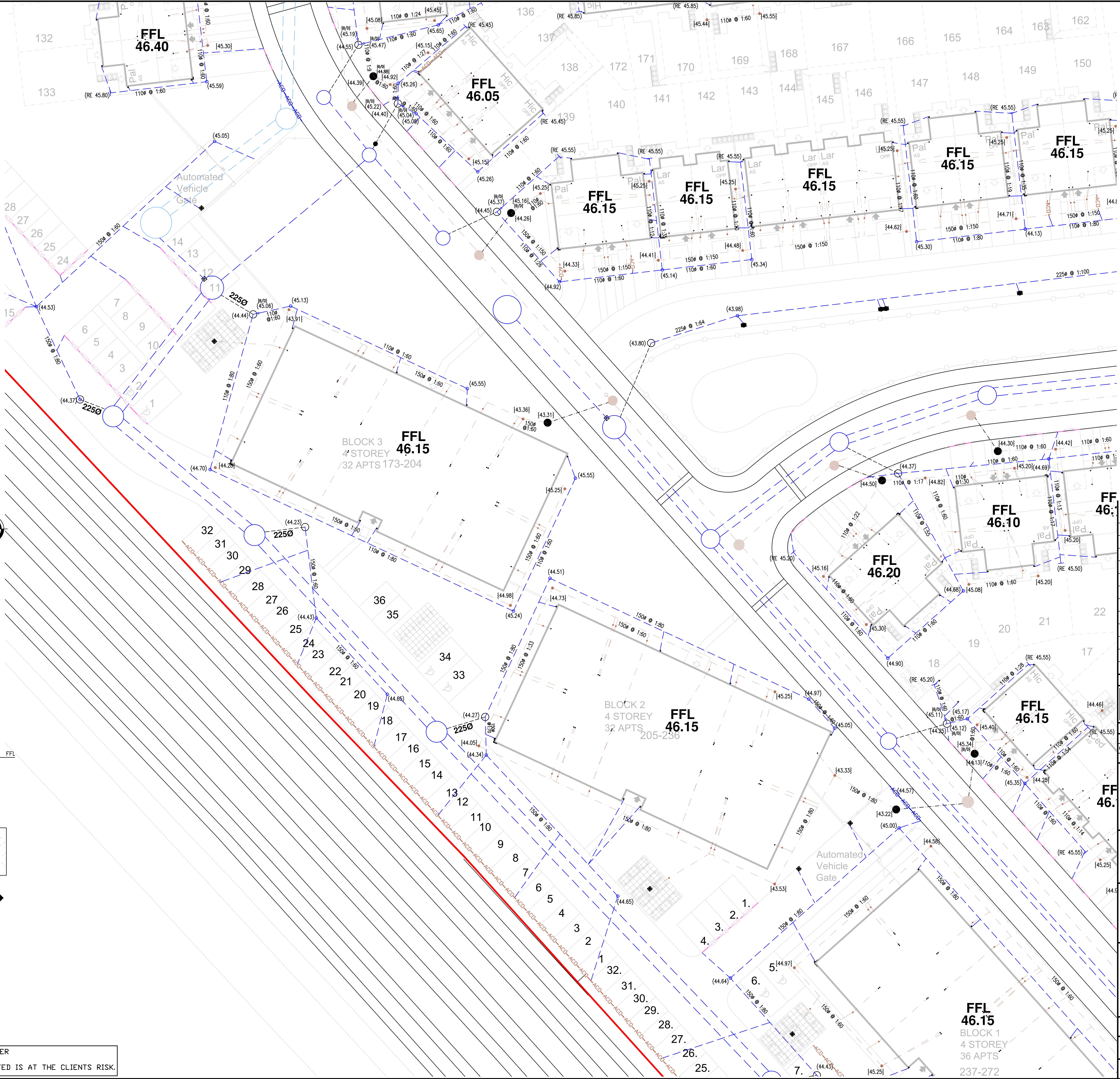

EXCAVATION AND DRAIN/SERVICE TRENCHES SHOULD BE ABOVE 45° LINE.

150mm CONCRETE BED AND SURROUND REQUIRED IF FOUNDATIONS DO NOT EXTEND BELOW INFLUENCE OF DRAIN.

CONTRACTOR TO ENSURE DRAINAGE EXCAVATIONS DO NOT EXCEED THE 45° LINE OF INFLUENCE. IF EXCAVATION IS BELOW INFLUENCE LINE THEN CONCRETE BED AND SURROUND WILL BE NEEDED. IF UNSURE STOP AND CONSULT REFA

THIS DRAWING IS BASED ON PLANNING LAYOUT PROVIDED BY CLIENT
DRAWING NUMBER:- KH006 A-100
REVISION:- O
CLIENT TO ENSURE THE ABOVE LAYOUT IS CURRENT BEFORE USING THIS DRAWING FOR CONSTRUCTION PURPOSES

PLEASE NOTE THAT THIS DRAWING IS ISSUED FOR INFORMATION/TENDER PURPOSES ONLY UNTIL TECHNICAL APPROVAL HAS BEEN GRANTED.
ANY WORK UNDERTAKEN PRIOR TO TECHNICAL APPROVAL BEING GRANTED IS AT THE CLIENTS RISK.




### GENERAL

1. All adoptable sewers and associated works are to comply fully with "Design and Construction Guidance" & Local Practices
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 | Rev.By | Date |
|---|---|---|---|
| G | REVISED FOLLOWING CLIENTS COMMENTS | RW | 06.11.23 |
| F | TO PLANNING LAYOUT REV O | RW | 24.10.23 |
| E | TO PLANNING LAYOUT REV Q | RW | 19.10.23 |
| D | TO PLANNING LAYOUT REV M FFL'S REVISED | RW | 13.07.23 |
| C | UPDATED TO PLANNING LAYOUT REV L | RW | 11.04.23 |
| B | TO LATEST R&S DESIGN | AS | 24.02.23 |
| A | UPDATED TO PLANNING LAYOUT REV H | RW | 25.01.23 |

smas worksafe designer www.smasltd.com — as recognised by SSIP SAFETY SCHEMES IN PROCUREMENT

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

Client
**KELLEN HOMES**

Job title
**BENNETT STREET MANCHESTER**

Drawing title
**PLOT DRAINAGE DRG 6**

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| Date | Scale | Drawn |
|---|---|---|
| 08.12.22 | 1/250 | RW |

DRAWING No 22122/107/6 Rev G

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A1 SHEET