

FALL ARROWS SHOWING DIRECTION OF WATER FLOW ALONG SITE ROAD DURING EXTREME WEATHER EVENTS OR POSSIBLE BLOCKAGES

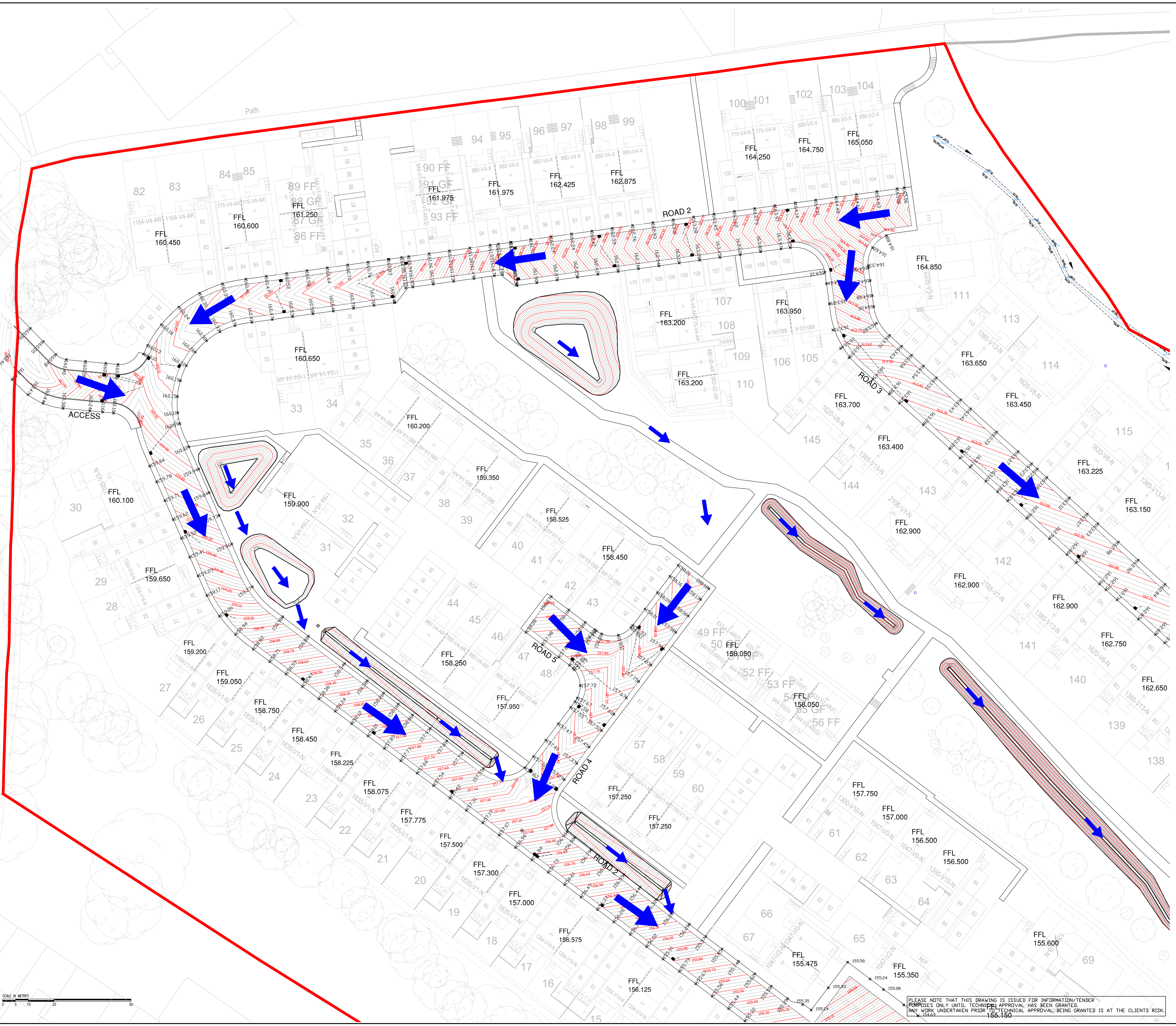
- GENERAL**
- All adoptable sewers and associated works are to comply fully with "Design and Construction Guidance" & Local Practices
 - All Highway works to be to adoptable standards and to comply fully with the Local Authority specification.
 - All private drainage works are to comply fully with part II of the Building Regulations
 - All existing level levels to be checked by the Contractor at the start of work and any discrepancies to be reported to the Designer. All levels are based on topographical survey information provided by others.
 - All materials to bear the relevant BS/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)
 - All opening notices etc. as required under Highway Act etc. are to be obtained prior to commencement of works. All works are to be inspected by L.A., MESC 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:
- Support / treatment for all excavation work.
 - Guarding to edges of excavations to prevent pedestrians and vehicles falling into excavation.
 - Guarding of excavations outside working hours to prevent unauthorised access.
 - Underpinning to adjacent roads or structures.
 - Confined space operations.
 - Dealing with existing services.
 - Traffic management on existing highways.
 - Procedure to be followed in event of accident or emergency.
 - Method of working where contaminated ground is present on site.
 - 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.

SECTION 104 & 38 NOTES

- All adoptable drainage works have been designed and are to be constructed in accordance with "Design and Construction Guidance" & Local Practices
 - All clay pipe work shall be Extra Strength Clayware to B.S. EN 245:1991 Part 1
 - All precast concrete pipework shall be to the class stated on the drawings in accordance with BS EN 1916:2002. All manholes and chambers shall be to BS EN 1917:2002
 - All plastic pipes being offered for adoption under S104 must be structural wall and must comply with BS EN 13476-1 and BS EN 13476-2. MAX. PIPE LENGTH TO BE 3.0m
 - All levels relate to an Ordnance Datum.
 - This drawing is to be used in conjunction with all other relevant drawings.
 - House drainage connections to sewers must be 150mm Ø and unless otherwise stated lead to the drop-off level shown.
 - Levels given on drop off chambers are incoming pipe levels.
 - House drainage runs to be kept within the curtilage of the plot they serve wherever possible.
 - The Contractor shall be responsible for ensuring that any existing invert levels indicated on drawings are correct before work commences.
 - The Contractor should satisfy himself as to the position and depth of any existing Statutory Underdrains which could affect the works before the works are commenced.
 - Good gully connections are to be 100mm Ø connecting either directly to manholes shown, or to sewer runs using pre-formed junctions.
 - All connections to adoptable sewers shall be by manufactured junction pipes. Saddle connections will not be permitted.
 - All sewers for adoption with greater than 1.20 metres cover in roads or 0.9m metres cover in fields shall have Class 5 granular bed and surround.
 - Any sewer for adoption with less than 1.2 metres cover in roads or 0.9 metres cover in fields shall have a minimum of 100mm S14 concrete surround. Flexibility shall be maintained by the provision of Flapvalve or similar approved joint filter breaks in the concrete surround at each pipe joints
 - Pumping Station to be designed and constructed in accordance with Design and Construction Guidance and United Utilities Pumping Station Addendum
- All pipes to have class "S" bed and surround unless otherwise stated
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 14011
structured wall uPVC pipes to comply with BS EN 13476-1
Max. pipe length to be 3.0m
Foundations to be designed / constructed to take into account the proximity and depth of adjacent sewers and drains in accordance with Design & Construction Guidance
- Contractor to be aware of and take appropriate action to ensure de-stabilisation of any existing structures, embankments or other features does not occur as a result of any excavation works undertaken in accordance with the designs shown on this drawing. Contractor is to ensure that any support of the above is to be made before commencing excavation work.
- Contractor/Client should note the existence of existing buried pipes and/or overhead power cables.
Before work commences contractor must undertake risk assessment and provide method statement for working in this area in accordance with HSE and power suppliers guidelines to satisfaction of the principal designer.
- To cater for any decisions 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 II of the Building Regulations.
- All existing services to be located at commencement in accordance with underwriters requirements and protected accordingly during the work.
- All existing manhole invert levels are to be located and surveyed prior to start on site to ensure that they are correct and also to ensure that level stakes are installed and that interpolated invert levels are correct. Any discrepancy is to be reported to REFA prior to start to enable any changes to be made to design that prove necessary

THIS DRAWING IS BASED ON PLANNING LAYOUT PROVIDED BY CLIENT
DRAWING NUMBER: HG001 PHASE 1
REVISION: K
CLIENT TO ENSURE THE ABOVE LAYOUT IS CURRENT BEFORE USING THIS DRAWING FOR CONSTRUCTION PURPOSES



Revision	Description	By	Date
H	REVISED FOLLOWING CLIENTS COMMENTS	RV	20/04/23
G	ADDITIONAL FLOW ARROWS ADDED	RV	14/04/23
F	TD PLANNING LAYOUT REV J	RV	20/04/23
E	TD PLANNING LAYOUT REV I	RV	03/04/23
D	RED EDGE UPDATED	RV	21/03/23
C	TD LATEST PLANNING LAYOUT	RV	05/03/23
B	TD PLANNING LAYOUT REV G	RV	03/03/23
A	TD PLANNING REV F	RV	03/03/23
1	Revision details	RV	03/03/23

Drawing Stage	Drawing Status
Issue	For Construction
Approval	As Built

Client
NORTHSTONE LIMITED
Job title
HORWICH GOLF CLUB HORWICH
Drawing title
FLOOD WATER EXCEEDANCE PLAN 2

REFA
CONSULTING ENGINEERS
CIVIL STRUCTURAL
GEOTECHNICAL ENVIRONMENTAL

43 Bridgeman Terrace
Wagon, Giron
Walsby, Lincoln
Tel: 01522 423200
Fax: 01522 423095

Date: 20/04/23 Scale: 1:200 Drawn: RV
DRAWING No: 22108/107/5 Rev: H

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.