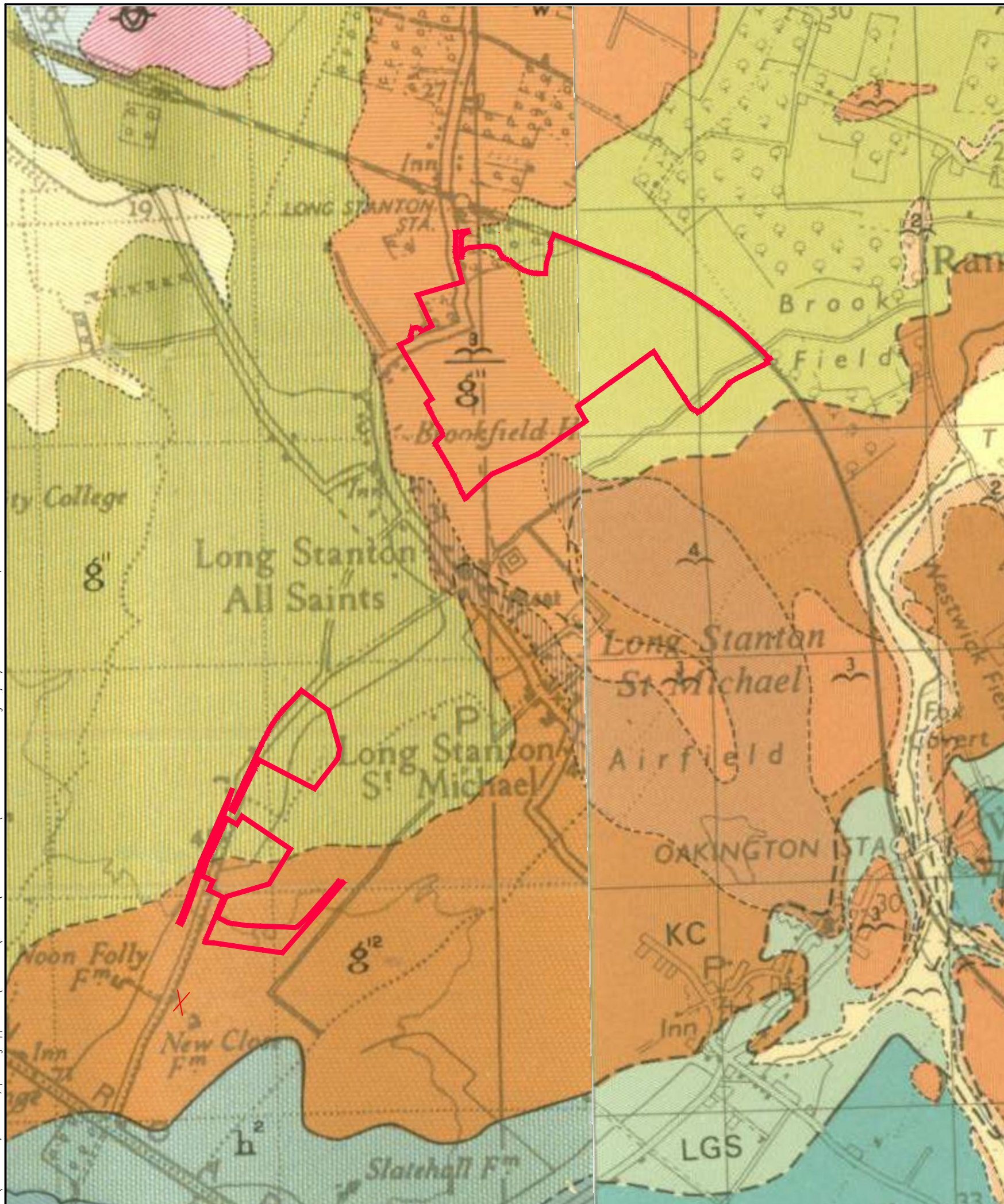


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# Appendix G BGS Map Extract

N:\Northstowe, Phase 1, planning application\DRAWINGS\AUTOCAD\CNS Constraints\2988-CNS-PH1-02.dwg 02/02/2012 17:06:55 Ward, John



INDEX AND EXPLANATION OF GEOLOGICAL SYMBOLS AND COLOURS

DRIFT QUATERNARY

- Blown Sand
- Lacustrine Deposits
- Shell Marl
- Peat
- Alluvium
- 1st Terrace Deposits
- 2nd Terrace Deposits
- 3rd Terrace Deposits
- 4th Terrace Deposits
- Head
- Head Gravel and Observatory Gravels

- Glacial Sand and Gravel
- Boulder Clay
- Glacial Silt

SOLID CRETACEOUS

- UCK Upper Chalk  
Chalk Rock
- MCK Middle Chalk  
Melbourn Rock
- LCK Lower Chalk  
Totternhoe Stone  
Cambridge Greensand
- G Gault
- LGS Lower Greensand

JURASSIC

- KC Kimmeridge Clay
- AmC Amptill Clay
- WWB West Walton Beds including Upware Limestone
- OxC Oxford Clay

See also Generalized Vertical Section

- Horizontal strata
- Inclined strata, dip in degrees
- Anticline
- General or regional dip of strata
- Geological boundary, Drift
- Geological boundary, Solid
- Fault at surface; crossmark indicates downthrow side
- Broken lines denote uncertainty
- Borehole
- Water well or borehole

RECENT AND PLEISTOCENE

DO NOT SCALE

KEY:

SITE BOUNDARY

| REV | DATE     | BY  | DESCRIPTION              | CHK | APD |
|-----|----------|-----|--------------------------|-----|-----|
| B   | 01/02/12 | JW  | REVISED PHASE 1 BOUNDARY | ALA | ALA |
| A   | 13/12/11 | MJW | FIRST ISSUE              | MJW | ALA |

DRAWING STATUS: PLANNING APPLICATION



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<http://www.wspgroup.com>

CLIENT: GALLAGHER

ARCHITECT: TOR

PROJECT: NORTHSTOWE  
NEW TOWN

TITLE: BRITISH GEOLOGICAL  
SURVEY MAP ABSTRACT

|                              |                            |                        |
|------------------------------|----------------------------|------------------------|
| SCALE @ A3:<br>1:15000       | CHECKED:<br>MJW            | APPROVED:<br>ALA       |
| CAD FILE:<br>2988-CNS-PH1-02 | DESIGN-DRAWN:<br>MJW       | DATE:<br>December 2011 |
| PROJECT No:<br>11011768      | DRAWING No:<br>2988/CNS/02 | REV:<br>B              |

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# Appendix H Surface Water Drainage Strategy Drawings & Calculations

**Quick Storage Estimate**

Micro Drainage

**Variables**

FEH Rainfall  Cv (Summer)   
 Return Period (years)  Cv (Winter)   
 Site Location  Impermeable Area (ha)   
 Maximum Allowable Discharge (l/s)   
 C (1km)  D3 (1km)   
 D1 (1km)  E (1km)  Infiltration Coefficient (m/hr)   
 D2 (1km)  F (1km)  Safety Factor   
 Climate Change (%)

Analyse OK Cancel Help

Enter Return Period between 1 and 1000

**Quick Storage Estimate**

Micro Drainage

**Results**

**Global Variables require approximate storage of between 72087 m<sup>3</sup> and 72087 m<sup>3</sup>.**

**These values are estimates only and should not be used for design purposes.**

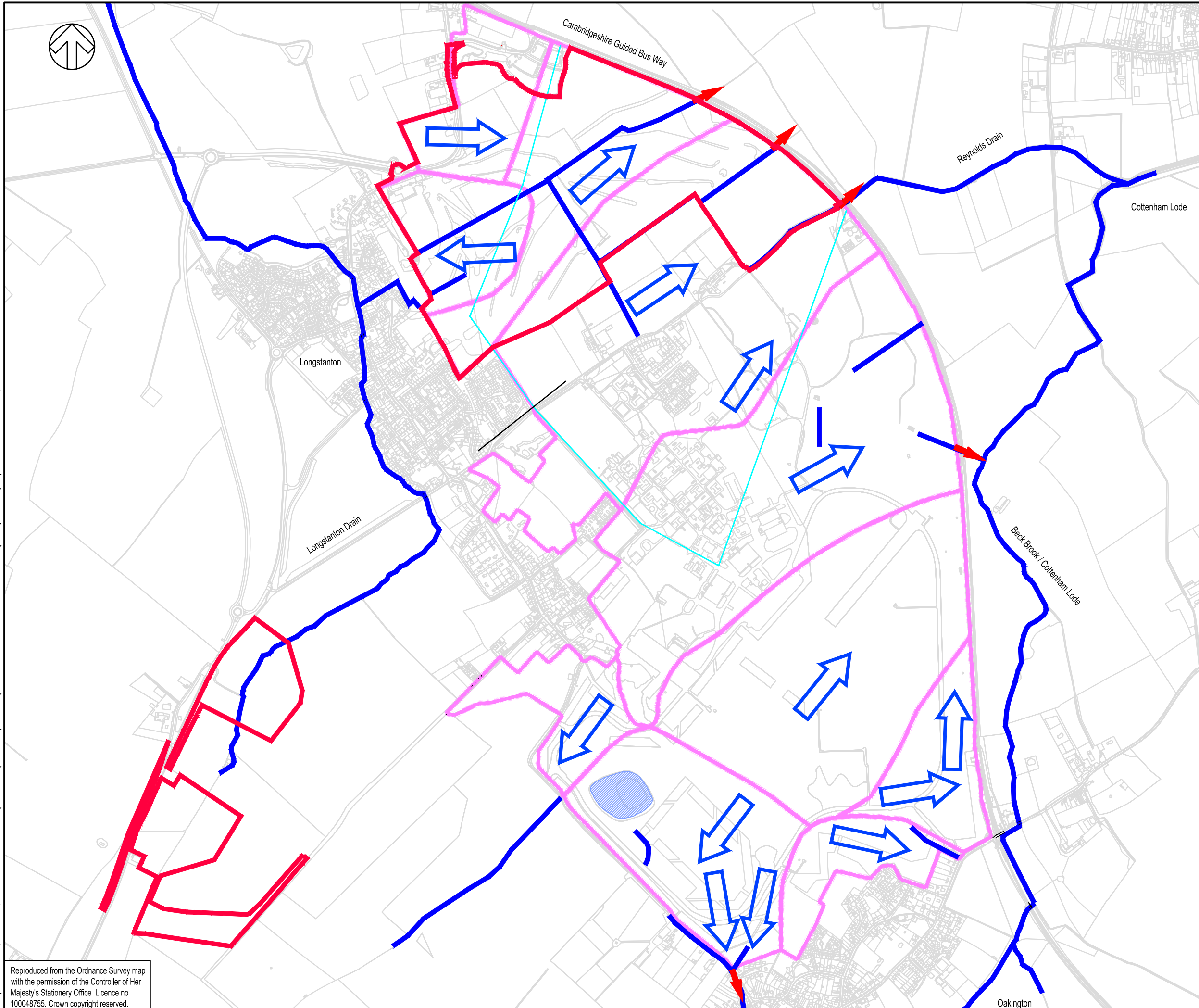
Variables  
**Results**  
 Design  
 Overview 2D  
 Overview 3D  
 Vt

Analyse OK Cancel Help

Enter Return Period between 1 and 1000

N:\NORTHSTOWE, PHASE 1, PLANNING APPLICATION\DRAWINGS\AUTOCAD\FIGURES\FIGURE 25 - PH1 CATCHMENT PLAN (INFRA).DWG 01/02/2012 14:09:29 Ward, John

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**KEY:**

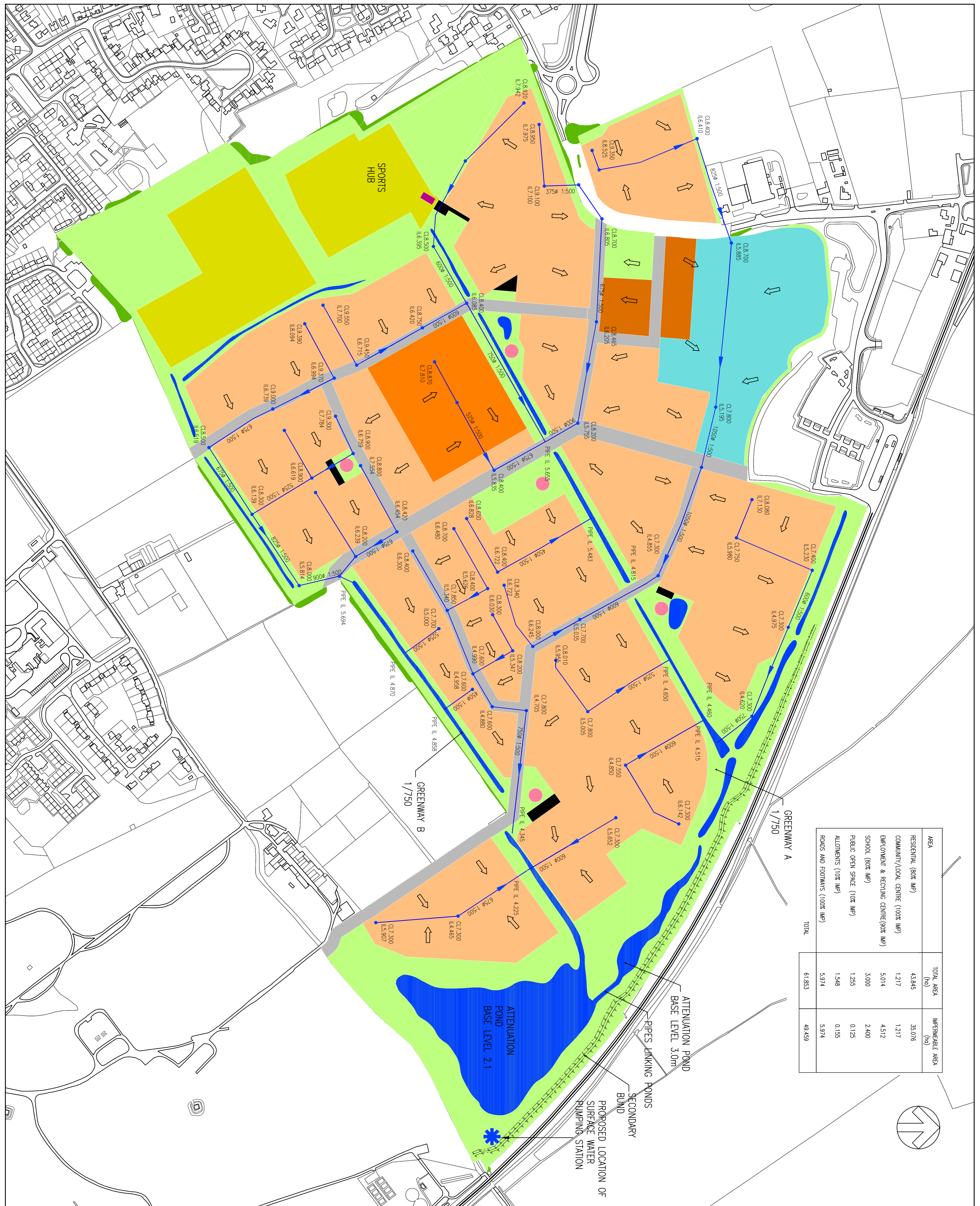
- RURAL CATCHMENT BOUNDARY
- DIRECTION OF EXISTING LAND DRAINAGE
- PROPOSED DEVELOPMENT BOUNDARY
- EXISTING WATERCOURSE
- EXISTING POND
- EXISTING I.D.B. CATCHMENT BOUNDARY
- EXISTING CULVERTS UNDER DISUSED RAILWAY



**WSP**

TITLE:  
NORTHSTOWE PHASE 1  
CATCHMENT PLAN

FIGURE No:  
PHASE 1, FIGURE 3



| AREA                                    | TOTAL AREA (ha) | IMPERMEABLE AREA (ha) |
|---|-----------------|-----------------------|
| RESIDENTIAL (90% IMP)                   | 43845           | 35,076                |
| COMMUNITY/LOCAL CENTRE (100% IMP)       | 1217            | 1217                  |
| EMPLOYMENT & RECYCLING CENTRE (90% IMP) | 5,014           | 4,512                 |
| SCHOOL (80% IMP)                        | 3,000           | 2,400                 |
| PUBLIC OPEN SPACE (10% IMP)             | 1,255           | 0,125                 |
| ALLOTMENTS (10% IMP)                    | 1,548           | 0,155                 |
| ROADS AND FOOTWAYS (100% IMP)           | 5,974           | 5,974                 |
| <b>TOTAL</b>                            | <b>61,853</b>   | <b>49,459</b>         |

**DO NOT SCALE**

1. SCHEME BASED ON TERRACE O'Rourke LTD MASTERPLAN DRAWING: 155316/PH1/SK001 REV B.
2. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH 'NORTHSTOWE PHASE 1 SURFACE WATER STRATEGY' TECHNICAL NOTE.
3. PERCENTAGE IMPERMEABILITY RATES LISTED IN THE KEY FOR PLOT AREAS INCLUDE FOR ON-SITE SUDS BEING USED AT SOURCE. THE RESULTANT SURFACE WATER RUN OFF GENERATED FROM EACH PLOT WILL BE CONNECTED TO THE ON-SITE ATTENUATION PONDS VIA PIPE SYSTEMS AND GREENWAYS AS SHOWN.
4. AT THE HEAD OF EACH SEWER RUN AN ALLOWANCE OF 1.5m COVER DEPTH HAS BEEN ASSUMED.
5. MINIMUM PIPE GRADIENTS USED WITHIN THE SEWER DESIGN ARE 1:500.
6. LONGEST ROUTE FROM PLOT TO SPINE SEWER DIVIDED INTO THIRDS. THE FIRST THIRD ASSUMED TO HAVE A GRADIENT OF 1 IN 60 WITH A MINIMUM COVER OF 0.6m AT HEAD OF RUN. THE REMAINING TWO THIRDS A GRADIENT OF 1 IN 200.
7. SEWER DESIGNED TO ENSURE NO SURFACE FLOODING FOR UP TO THE 1 IN 30 YEAR DESIGN STORM EVENT.

- KEY:**
- RESIDENTIAL (90% IMPERMEABLE)
  - COMMUNITY/LOCAL CENTRE (100% IMPERMEABLE)
  - EMPLOYMENT & RECYCLING CENTRE (90% IMPERMEABLE)
  - SCHOOL (80% IMPERMEABLE)
  - SPORTS HUB (NOT INCLUDED)
  - PUBLIC OPEN SPACE/PARK/PLAY SPACES AND ALLOTMENTS (10% IMPERMEABLE)
  - ROADS AND FOOTWAYS (100% IMPERMEABLE)
  - SURFACE WATER SEWER
  - DIRECTION OF FLOW

| REV | DATE     | BY | DESCRIPTION       | CHK | APP |
|-----|----------|----|-------------------|-----|-----|
| A   | 12/12/11 | SF | ISSUE FOR PERMITS | HWP | HWP |
| B   | 12/12/11 | SF | ISSUE FOR PERMITS | HWP | HWP |
| C   | 07/02/12 | SF | ISSUE FOR PERMITS | HWP | HWP |

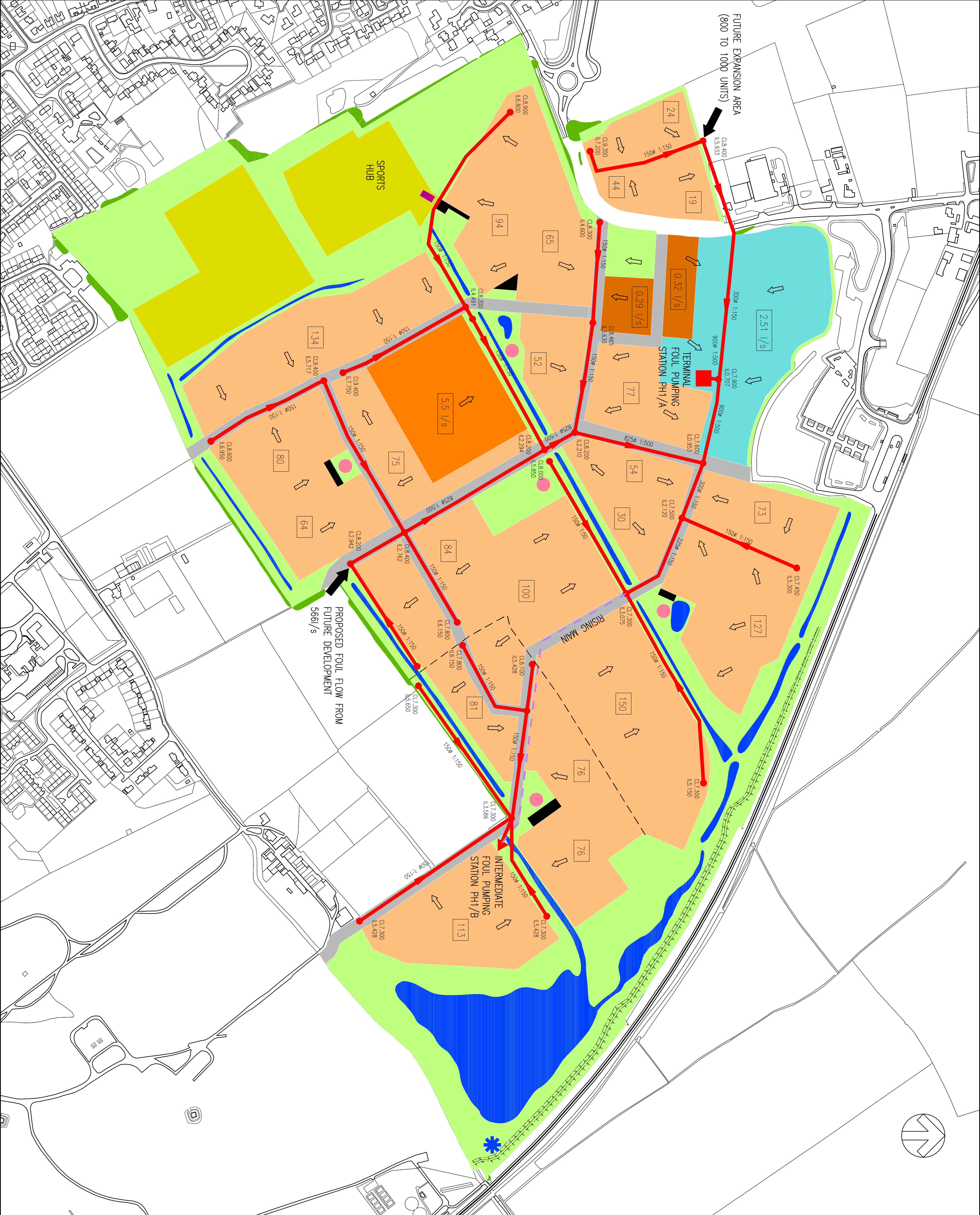
**FOR INFORMATION ONLY**

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|                    |   |
|--------------------|---|
| <b>CLIENT:</b>     | GALLAGHERS  |
| <b>ARCHITECT:</b>  | TOR   |
| <b>PROJECT:</b>    | NORTHSTOWE PHASE 1                                      |
| <b>TITLE:</b>      | PROPOSED SURFACE WATER STRATEGY FOR PIPES AND GREENWAYS |
| <b>SCALE @ A1:</b> | 1:2500  |
| <b>DATE:</b>       | 29/10/11  |
| <b>PROJECT NO:</b> | 11012951  |
| <b>DRAWING NO:</b> | 2951-D-01-C   |
| <b>DATE:</b>       | February 2012   |
| <b>REV:</b>        | C   |

---

# Appendix I Foul Drainage Strategy



DO NOT SCALE

- 1. SCHEME BASED ON TERENCE O'Rourke LTD MASTERPLAN DRAWING: 155316/PH1/58001 REV B.
- 2. SEWER DESIGNED TO SENSERS FOR ADOPTION 6TH EDITION

**KEY:**

- 77 NO. OF UNITS ON PLOT
- 5.5 l/s ASSUMED FLOW FROM NON-RESIDENTIAL AREA
- FOUL WATER SEWER
- DIRECTION OF ON PLOT F.W. FLOWS
- RISING MAIN

FOR INFORMATION ONLY

| REV | DATE     | BY  | DESCRIPTION  | CHK | APP |
|-----|----------|-----|--|-----|-----|
| A   | 14/02/12 | SJF | FOUL DRAINAGE AND HOUSE DRAINAGE AMENDED TO SUIT TOP PLAN 1/A MASTERPLAN TEP 12. | HMP | HMP |
| B   | DEC 2011 | HMP | FIRST ISSUE  | HMP | HMP |

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**GALLAGHERS**

TOR

**NORTHSTOWE PHASE 1**

**PROPOSED FOUL WATER STRATEGY OPTION 2**

SCALE @ 1:2500

|                      |                           |                     |
|----------------------|---------------------------|---------------------|
| CAD FILE: 2951-D-03  | ISSUED-DRAWN: SJF         | DATE: December 2011 |
| PROJECT NO: 11012951 | DRAWING NO: 2951/200/D-03 | REV: B              |

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# Appendix J Proposed Hatton's Road Attenuation Ponds/ Flood Mitigation



DO NOT SCALE

School Lane

DITCH DIVERSION

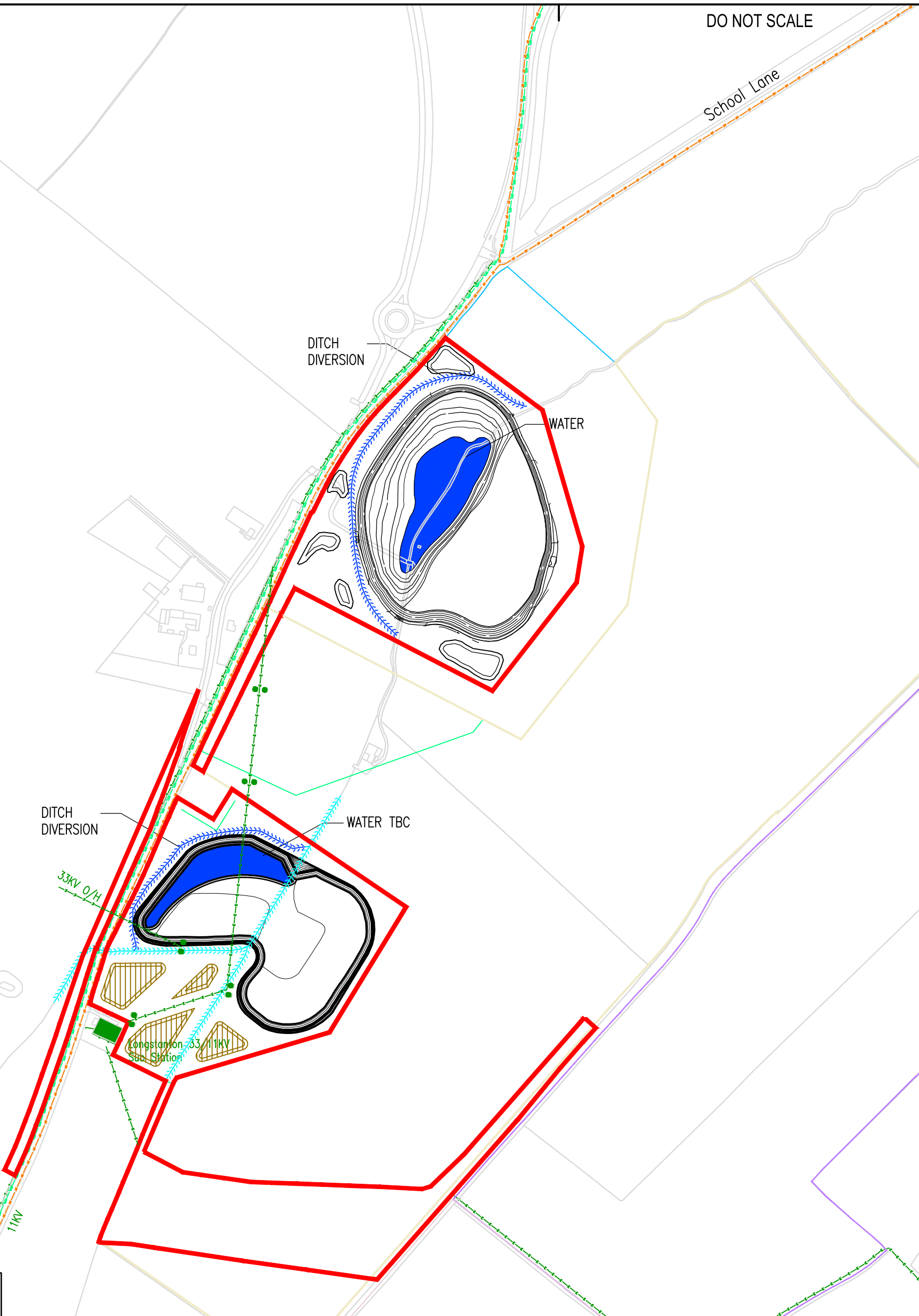
WATER

DITCH DIVERSION

WATER TBC

33KV O/H

Longstanton 33/11KV Sub Station



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N:\Northstowe, Phase 1, planning application\DRAWINGS\AUTOCAD\FLD Flood Modelling\2988-FLD-302.dwg 02/02/2012 17:11:04 Ward, John

| REV | DATE     | BY | DESCRIPTION   | CHK | APD |
|-----|----------|----|---|-----|-----|
| D   | 31/01/12 | JW | REVISED PHASE 1 BOUNDARY & ELECTRICAL PLANT TO MATCH TOPOGRAPHICAL SURVEY | ALA | ALA |
| C   | 21/12/11 | CC | TEXT REMOVED  | MJV | ALA |
| B   | 02/12/11 | JW | BASIN DESIGN ALTERATION   | MJV | ALA |
| A   | 09/11/11 | CC | FIRST ISSUE   | ALA | ALA |

|              |               |              |
|--------------|---------------|--------------|
| CAD FILE:    | DESIGN-DRAWN: | DATE:        |
| 2988-FLD-302 | CC            | January 2012 |



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PROJECT:  
NORTHSTOWE PHASE 1

TITLE:  
LONGSTANTON BROOK OFF SITE MITIGATION

DRAWING STATUS:  
FOR INFORMATION ONLY

CLIENT:  
GALLAGHER

|                       |                 |                  |
|-----------------------|-----------------|------------------|
| SCALE @ A3:<br>1:5000 | CHECKED:<br>ALA | APPROVED:<br>ALA |
|-----------------------|-----------------|------------------|

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ARCHITECT:  
TOR

|                         |                             |           |
|-------------------------|-----------------------------|-----------|
| PROJECT No:<br>11012988 | DRAWING No:<br>2988/FLD/302 | REV:<br>D |
|-------------------------|-----------------------------|-----------|

