



# **West Winch Housing Access Road**

## **Environmental Statement Chapter 11: Water: Appendix C BGS Logs**

Author: Geological Survey and Museum

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Date: 1977



## Contents

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## **1 Introduction**

- 1.1.1 This document contains details of historical borehole logs in the vicinity of the West Winch Housing Access Road extracted from the British Geological Survey Geology of Britain Viewer. If you require this document in a more accessible format please contact [westwinchhar@norfolk.gov.uk](mailto:westwinchhar@norfolk.gov.uk).

145/79.

N273A.

# RECORD OF WELL (SHAFT OR BORE)

For Survey use only.  
1 inch Map Registered No.  
TF 61 NW/243  
NCR. 6428 -  
1611

At Grange Farm,  
Town or Village North Runcton.  
County Norfolk. Six-inch quarter sheet 45 NE/W  
For Mr. Garner.

Exact site of well \_\_\_\_\_ Attach a tracing from a map, or a sketch-map, if possible.

Level of ground surface above sea-level (O.D.) 108 ft. <sup>fc 2</sup>  
If well-top is not at ground level, state how far ... (above; below; \_\_\_\_\_ ft.)

SHAFT 20 ft.; diameter 6 ft. Details of headings \_\_\_\_\_

BORE \_\_\_\_\_ ft.; diameter of bore: at top \_\_\_\_\_ ins.; at bottom \_\_\_\_\_ ins. Lengths, diameters, perforations, etc. of lining tubes \_\_\_\_\_

Water struck at depths below well top. of (feet) \_\_\_\_\_  
Rest-level of water 0 ft. <sup>above</sup> well-top. Suction at \_\_\_\_\_ ft. Yield on \_\_\_\_\_ hours' pumping, \_\_\_\_\_ gal. per \_\_\_\_\_ with depression to \_\_\_\_\_ ft. below well-top, Capacity of pump \_\_\_\_\_ g.p.h. Recovery to rest level in \_\_\_\_\_ mins. Date of measurements \_\_\_\_\_ Date of well \_\_\_\_\_

Quality of water (attach copy of analysis if available) \_\_\_\_\_  
Well made by A. W. Barnham, Bridewell Street, Walsingham, Norfolk.  
Information from as above.

### Additional notes in space overleaf.

| GEOLOGICAL CLASSIFICATION           | THICKNESS |      | DEPTH |      |
|-------------------------------------|-----------|------|-------|------|
|                                     | Feet      | Ins. | Feet  | Ins. |
| Soil.                               | 2         |      | 2     | -    |
| Sand and Brick Earth.               | 4         |      | 2     | -    |
| Green Sand.                         | 5         |      | 1     | -    |
| Hard Sand Mixture.                  | 8         | 6    | 3     | 6    |
| Rock.                               | 10        |      | 1     | 6    |
| Hard Dark Sand.                     | 16        | 6    | 6     | 6    |
| Sand and Clay Mixture.              | 18        | 9    | 2     | 3    |
| Hard Chalk Stone. <u>Limestone?</u> | 20        | -    | 2     | 3    |

*Sandingham Sands*

*M/S  
20/6/77*

Visited Owner L. Fowler, Abbey Farm, St. Bressan. Could find no trace of well - write D + c 72 30-9.6.02  
20 ft from owner. Well is as it was but not used and all at present Well is under water tower in yard. Well is presumably covered with cement slabs and is inaccessible. *OK*

Continued over leaf

GEOLOGICAL SURVEY AND MUSEUM, SOUTH KENSINGTON, LONDON, S.W.7.

Date received 28-7-49 Correspondence File No. \_\_\_\_\_ 1" N.S. Map No. 145 1" O.S. Map No. \_\_\_\_\_ Site marked on 1" Map 0 on 6" Map 0

# RECORD OF WELL (SHAFT OR BORE)

1-inch Map Registered No.

TF 61/7  
145/79

At Grange Farm,  
Town or Village North Runcton.  
County Norfolk. Six-inch quarter sheet 45 NE/W  
For Mr. Garner.

Exact site of well TF 6428 1611  
*SHEET 665 102348*

Attach a tracing from a map, or a sketch map, if possible.

Level of ground surface above sea-level (O.D.) 100 <sup>to 72</sup> ft.

If well-top is not at ground level, state how far ... {above; below; } ft.

SHAFT 20 ft.; diameter 6 ft. Details of headings

BORE \_\_\_\_\_ ft.; diameter of bore: at top \_\_\_\_\_ ins.; at bottom \_\_\_\_\_ ins. Lengths, diameters, perforations, etc., of lining tubes

Water struck at depths, below well top, of (feet)

Rest-level of water 8 ft. <sup>above</sup> below well-top. Suction at \_\_\_\_\_ ft. Yield on \_\_\_\_\_ hours' pumping, \_\_\_\_\_ gal. per \_\_\_\_\_ with depression to \_\_\_\_\_ ft. below well-top, Capacity of pump \_\_\_\_\_ g.p.h. Recovery to rest level in \_\_\_\_\_ mins. hours Date of measurements \_\_\_\_\_ Date of well \_\_\_\_\_

Quality of water (attach copy of analysis if available)

Well made by A.W. Barnham, Bridewell Street, Walsingham, Norfolk.

Information from \_\_\_\_\_ as above.

Additional notes in space overleaf.

| (For Survey use only)<br>GEOLOGICAL CLASSIFICATION   | NATURE OF STRATA  | THICKNESS |      | DEPTH |      |
|--|---|-----------|------|-------|------|
|  |   | Feet      | Ins. | Feet  | Ins. |
|  | If measurements start below ground surface, e.g., from bottom of an existing shaft, state how far |           |      |       |      |
|  | Soil.   | 2         |      | 2     | -    |
| <i>Sandlingham</i>   | Sand and Brick Earth.   | 4         |      | 2     | -    |
|  | Green Sand.   | 5         |      | 1     | -    |
| <i>Sands.</i>  | Hard Sand Mixture.  | 8         | 6    | 3     | 6    |
|  | Rock.   | 10        |      | 1     | 6    |
| <i>pu</i>  | Hard Dark Sand.   | 16        | 6    | 6     | 6    |
| <i>Mr. Simmonds</i>  | Sand and Clay Mixture.  | 18        | 9    | 2     | 3    |
| <i>20.6.77</i>   | Hard Chalk Stone. ???   | 20        | -    | 1     | 3    |
| <p>Visited Owner L. Towler, Abbey Farm, St Bessians<br/>                     Could find no trace of well - write<br/>                     D + c 72. 30-9.600R<br/>                     Inf from owner Well is as it was but not used at<br/>                     all at present Well is under water tower in yard. 12.10.60. WA<br/>                     Well is presumably covered with cement slabs and is<br/>                     inaccessible. OK</p> |   |           |      |       |      |
| <p><b>Data</b> <b>Page</b> Continued over leaf</p>   |   |           |      |       |      |

|  |                                 |                         |                               |                 |  |
|--|---------------------------------|-------------------------|-------------------------------|-----------------|--|
| GEOLOGICAL SURVEY AND MUSEUM,<br>SOUTH KENSINGTON,<br>LONDON, S.W.7. | Date received<br><b>28.7.49</b> | Correspondence File No. | 1" N.S. Map No.<br><b>145</b> | 1" O.S. Map No. | Site marked (use symbol on 1" Map on 6" Map)<br><b>○ ○</b> |
|--|---------------------------------|-------------------------|-------------------------------|-----------------|--|

(For Survey use only)  
GEOLOGICAL  
CLASSIFICATION

NATURE OF STRATA (Continued)  
British Geological Survey

THICKNESS

DEPTH

Feet Ins.

Feet Ins.

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

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British Geological Survey

ADDITIONAL NOTES

Sited by *Barnham* on *Norfolk* *45 NE/W* *6-9-49*  
AN

Data Bank

British Geological Survey

British Geological Survey

British Geological Survey

145 TF 61/7  
14579  
Norfolk & Suffolk County Laboratories,  
Clement Court,  
Bedwell Street,  
Norwich.  
79  
5th October, 1948

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W. Lincolne Sutton, F.R.I.C.,

No. 122803 Book ZZ

British Geological Survey

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CERTIFICATE OF ANALYSIS OF WATER

Sample received from: **Mr. T. W. Garner, North Rington.**  
Mark or Seal: **"Scheme 617, Home Yard: ex well after treatment 4.10.48."**  
Appearance when received:

British Geological Survey

British Geological Survey

British Geological Survey

RESULTS OF CHEMICAL ANALYSIS

Grains per gallon/Parts per million

|   |         |         |         |         |         |
|---|---------|---------|---------|---------|---------|
| Total Solids in Solution .. .. .                        | .. .. . | .. .. . | .. .. . | .. .. . | .. .. . |
| Free and Saline Ammonia .. .. .                         | .. .. . | .. .. . | .. .. . | .. .. . | trace   |
| Albuminoid Ammonia .. .. .                              | .. .. . | .. .. . | .. .. . | .. .. . | .005    |
| <b>Combined Chlorine</b> <del>in solution</del> .. .. . | .. .. . | .. .. . | .. .. . | .. .. . | 1.9     |
| Nitrogen as Nitrates . . . . .                          | .. .. . | .. .. . | .. .. . | .. .. . | nil     |
| Nitrites .. .. .  | .. .. . | .. .. . | .. .. . | .. .. . | nil     |
| Oxygen absorbed from Permanganate .. .. .               | .. .. . | .. .. . | .. .. . | .. .. . |         |
| Hardness - Total .. .. .                                | .. .. . | .. .. . | .. .. . | .. .. . |         |
| " - Permanent . . . . .                                 | .. .. . | .. .. . | .. .. . | .. .. . |         |

Bacteriological Results:-

|  |         |         |         |         |                       |
|--|---------|---------|---------|---------|-----------------------|
| Colonies per ml. on agar at 37° C. .. .. . | .. .. . | .. .. . | .. .. . | .. .. . | .. .. .               |
| Bacillus Coliform:-                        |         |         |         |         |                       |
| Present in .. .. .                         | .. .. . | .. .. . | .. .. . | .. .. . | .. .. .               |
| Absent in .. .. .                          | .. .. . | .. .. . | .. .. . | .. .. . | .. .. .               |
| Physical Characters .. .. .                | .. .. . | .. .. . | .. .. . | .. .. . | Slight rusty sediment |

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REMARKS

Opinion:- This is a good water, quite fit for drinking and dairy purposes.

(sgd) W. Lincolne Sutton.

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British Geological Survey

285  
101  
45.6

286  
102  
49.6

British Geological Survey

British Geological Survey

British Geological Survey

Plot 0004

K1785 4477

1.2500

British Geological Survey

British Geological Survey

British Geological Survey

292  
108  
54.6

287  
103  
55.0

British Geological Survey

293  
109  
55.8

British Geological Survey

British Geological Survey

British Geological Survey

British Geological Survey

295  
111  
55.2

288  
104  
56.2

294  
110  
59.9

British Geological Survey

British Geological Survey

British Geological Survey

304  
120  
53.2

306  
122  
40.0

British Geological Survey

British Geological Survey

British Geological Survey

303  
119  
61.2

289  
105  
60.2

302  
118  
61.1

305  
121  
49.8

296  
112

TF61NW | 285-306

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101  
45.6

102  
49.6

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British Geological Survey

108  
54.6

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British Geological Survey

103  
55.0

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104  
56.2

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British Geological Survey

107  
48.4  
291

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106  
52.7  
290

119  
61.2

105  
60.2

112  
60.1

# BOREHOLE LOG

Sheet 2 of 3

BOREHOLE No. 46

SITE: Norwich

TF/62SW/17

BOREHOLE DIAMETER 6"

6379.1442

WATER STRUCK AT 5'0" (1.52m)

| DATE   | DEPTH OF BORING | DEPTH OF CASING | DEPTH TO WATER | STRATA DESCRIPTION  | DEPTH    | O.D. LEVEL     | SAMPLE DETAILS       |                 |              |
|--------|-----------------|-----------------|----------------|---|----------|----------------|----------------------|-----------------|--------------|
|        |                 |                 |                |   |          |                | LEVEL                | NUMBER OF BLOWS | TYPE AND USE |
| 6.3.70 |                 |                 |                | TOP SOIL.   |          | 18.0 (5.49m)   |                      |                 |              |
|        | 3'0"            | NIL             | WET            | 6" seam of peaty clay   | (0.91m)  | (4.57m)        |                      |                 |              |
|        |                 |                 | 5'0" STRIKE    | SAND with occasional GRAVEL. Initially grey brown F.M. silty sand (slightly organic) changing to orange brown steeply graded medium sand from middle of stratum. (Glacial Sand)     | 3'0"     | 15.0           | 3'0" to 4'6" to 4'0" | 7               | NR           |
|        | 8'0"            | 8'0"            | 7'0"           |   |          |                |                      |                 |              |
| 6.3.70 | 10'0"           | 10'0"           | 8'0"           |   |          |                |                      |                 |              |
| 6.3.70 | 10'0"           | 10'0"           | 6'0"           |   |          |                |                      |                 |              |
|        | 13'6"           | 13'0"           | 10'0"          |   | (3.96m)  | (11.57m)       |                      |                 |              |
|        |                 |                 | SEALED         | SILTY CLAY. Firm, grey with occasional small shells, and traces of organic matter. Very silty; friable. (Probably older alluvium)   | 13'0"    | 5.0            | 13'6" to 15'0"       |                 |              |
|        | 17'6"           | 17'0"           | MOIST          |   |          |                | 17'6" to 19'0"       |                 |              |
|        | 21'0"           | 21'0"           | MOIST          |   |          |                | 21'0" to 22'6"       |                 |              |
|        | 24'6"           | 24'0"           | MOIST          |   |          |                | 24'6" to 26'0"       |                 |              |
|        |                 |                 | STRIKE         | 3" band of hard dark brown shaly peat.  | (8.0m)   | (-2.31m)       |                      |                 |              |
|        | 28'0"           | 28'0"           | 15'0"          |   | 26'3"    | -8.25          |                      |                 |              |
|        |                 |                 |                | SILTY FINE SAND. Grey, finely laminated with traces of peat.  |          |                | 28'0" to 29'6"       |                 |              |
| 7.3.70 | 30'0"           | 30'0"           | 15'0"          |   |          |                |                      |                 |              |
| 8.3.70 | 30'0"           | 30'0"           | 12'0"          |   |          |                |                      |                 |              |
|        | 31'6"           | 31'6"           | 15'0"          |   |          |                |                      |                 |              |
|        |                 |                 |                | SILTY FINE SAND. Greenish grey. Very occasional fine gravel sized CHALK and shells. Stratified in places with thin seams of sandy and clayey silt. (Glacial lake deposit)           | 31'0"    | -13.0          | 31'6" to 33'0"       |                 |              |
|        |                 |                 |                |   | (10.97m) |                |                      |                 |              |
|        | 37'0"           | 37'0"           | 15'0"          |   | 36'0"    | -18.0 (-5.49m) | 37'0" to 38'6"       |                 |              |
|        |                 |                 |                | SILTY CLAY/SAND. Soft to firm, greenish grey silty clay with many laminations of fine sand and silt. Stratified with bands of greenish grey silty fine sand. (Glacial lake deposit) |          |                | 42'0" to 43'6"       |                 |              |
|        | 42'0"           | 42'0"           | 15'0"          |   |          |                |                      |                 |              |
| 8.3.70 | 45'0"           | 42'0"           | 15'0"          |   |          |                |                      |                 |              |

Scale: 5 FEET TO 1 INCH  
 UNDISTURBED SAMPLES □ DISTURBED SAMPLES ○ BLOWS FOR THREE FEET S. P. TESTS X  
 NO RECOVERY OF SAMPLE □ NR BULK SAMPLE ⬆



# BOREHOLE LOG

BOREHOLE No. 46

SITE: Norwich

TF/61SW/17

BOREHOLE DIAMETER 6"

WATER STRUCK AT

| DATE   | DEPTH OF BORING | DEPTH OF CASING | DEPTH TO WATER | STRATA DESCRIPTION  | DEPTH             | O.D. LEVEL | SAMPLE DETAILS                                     |                 |               |
|--------|-----------------|-----------------|----------------|---|-------------------|------------|--|-----------------|---------------|
|        |                 |                 |                |   |                   |            | LEVEL  | NUMBER OF BLOWS | TYPE AND REP. |
| 9.3.70 | 45'0"           | 42'0"           | 12'0"          | SILTY CLAY/SAND:<br>Soft to firm, greenish grey silty clay with many laminations of fine sand and silt. Stratified with bands of greenish grey silty fine sand.<br>(Glacial lake deposit) |                   |            | 47'0" to 48'6" to 50'0" to 51'6" to 52'0" to 53'0" | 51              | I             |
|        | 47'0"           | 42'0"           | 15'0"          |   |                   |            |  |                 |               |
|        | 48'6"           | 42'0"           | 15'0"          |   |                   |            |  |                 |               |
|        | 50'0"           | 42'0"           | 15'0"          |   |                   |            |  |                 |               |
|        | 51'6"           | 42'0"           | 15'0"          |   |                   |            |  |                 |               |
| 9.3.70 | 53'0"           | NIL             | 4'0"           | End of Borehole   | (16-15m)<br>53'0" | -35.0      |  |                 |               |
|        |                 |                 | FINAL LEVEL    |   |                   |            |  |                 |               |

SCALE: 5 FEET TO 1 INCH  
 UNDISTURBED SAMPLES  DISTURBED SAMPLES  WATER SAMPLES  S. P. TESTS X  
 NO RECOVERY OF SAMPLE  NR BULK SAMPLE

Date 6th July 1966

From

Miss S.A. Lucas.

MEMORANDUM

R. Crallois.

CEGB presentation.

The core specimens presented by CEGB (around Kings Lynn, etc.)  
have now been registered ZM 9449-9522.

Shirley.