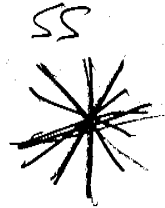


REPORT TO
Messrs. C.H. Brennam Ltd.

SS 3 SW / 62-79



Test bore holes at Bickington, Near Barnstaple, Devon.

Date operations commenced Oct. 11th 1972
No. of bore holes drilled 18
Date operations completed Oct. 19th 1972

General description of work

Boreholes, of a nominal diameter of 4", were put down to a maximum depth of 41 feet, at various points chosen by you. To drill through the overburden a rotary-percussive hammer was used and no attempt was made to obtain and retain samples of the over burden, which was dispersed to atmosphere by the return circulation air from the hammer.

On penetrating the interface between the over burden and the clay the rotary percussive hammer was withdrawn and substituted by an auger. The auger was so constructed as to penetrate the clay with a minimum of disturbance to the material and, upon withdrawal, to bring up to the surface a sample of the clay measuring approximately 24" in length.

These samples, at 24" intervals, were bagged and labelled and passed to you for evaluation.

Each hole, after completion, was plugged with sand.

Drilling Report

HOLE NUMBER	OVER BURDEN FEET	CLAY FEET	DESCRIPTION
5341 3158 62 - 1	20	NIL	Dry
5346 3152 63 - 2	25	8+	From 25' to 33' clay. Clay continues below 33' Dry. Clay samples submitted every 2 feet from 25 feet to 33 feet.
5354 3160 64 - 3	13	14+	From 13' to 27' clay. Clay continues below 27'. Dry. Quality of clay worsened beyond 21'. Clay samples submitted every 2 feet from 13 feet to 27 feet.
5349 3170 65 - 4	11	19+	From 11' to 30' clay. Water at 15'. Clay samples submitted every 2 feet from 11 feet to 30 feet, those from 11 feet to 19 feet being discarded on Mr. Brennam's instructions. Clay continues below 30'. A lot of water in this hole.
5349 3188 66 - 5	16	16+	From 16' to 32' clay. Clay continues beyond 32'. Water at 16'. Samples submitted every 2 feet from 16 feet to 32 feet.
5349 3200 67 - 6	13	12	From 13' to 23' clay. At 23' clay runs out into gravel at 25'. Almost no water. Samples submitted every 2 feet from 13 feet to 25 feet.
5374 3162 68 - 7	13	12+	Over burden very sandy, particularly from 7' to 13'. Dry. Clay 13' to 25'. Clay continues beyond 25'. Clay samples submitted every 2 feet from 13 feet to 25 feet.
5403 3162 69 - 8	11	18+	Over burden largely sand. Dry. Clay from 11' to 29' Clay continues below 29'. Clay samples submitted every 2 feet from 11 feet to 29 feet.

HOLE NUMBER	OVER BURDEN FEET	CLAY FEET	DESCRIPTION
5398 3131 70-9	9	20+	Sandy over burden but water encountered at 9' clay from 9' to 29'. Clay continues below 29'. This hole was very wet throughout. Clay samples submitted every 2 feet from 9 feet to 29 feet.
5406 3131 71-10	9	16+	Dry. Clay from 9' to 25'. Clay continues below 25'. Clay samples submitted every 2 feet from 9 feet to 25 feet.
5415 3125 72-11	9	32+	Dry. Clay from 9' to 41'. Clay continues below 41'. Samples submitted every 2 feet from 9 feet to 41 feet.
5296 3149 73-12	12	18	Dry. Clay from 12' to 30'. At 30' hole had penetrated clay and entered gravel. Clay samples submitted every 2 feet from 12 feet to 30 feet.
5295 3153 74-13	9	20	Over burden to 9'. Dry. Clay 9' to 29'. Runs into gravel at 29'. Samples submitted every 2 feet from 9 feet to 29 feet.
5290 3152 75-14	9	14	Over burden to 9'. Dry. Clay 9' to 23'. Runs into gravel at 23'. Samples submitted every 2 feet from 9 feet to 23 feet.
5284 3161 76-15	9	18	Over burden to 9'. Dry. Clay 9' to 27'. Runs into gravel at 25'. Samples submitted every 2 feet from 9 feet to 27 feet.
5283 3152 77-16	9	12	Over burden to 9'. Dry. Clay 9' to 21'. Runs into gravel at 21'. Samples submitted every 2 feet from 9 feet to 21 feet.
5302 3192 78-17	11	22	Dry, sandy over burden to 11'. Clay 11' to 33'. Runs into gravel at 31'. Samples submitted every 2 feet from 11 feet to 33 feet.
5299 3192 79-18	7	24	Dry, sandy overburden to 7'. Clay 7' to 31' running into gravel at 31'. Samples submitted every 2 feet from 7 feet to 31 feet



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Test Borings made in areas of Roundswell Plain,

Brynsworthy and Claypits, 9-19 October 1972

Repeated rumours of large to deep deposits of good clay in this area appeared to be confirmed by a seismological survey carried out by Mr Wood of Bangor University, circa. 1958.

This survey recommended the most likely areas to be Brynsworthy, both N. and S. of the Turnpike Road, and the bottom of Roundswell Hill, between Clanton and the S.W.E.B. depot.

The borings made in 1972 proved that whereas in a geological sense there was certainly clay of a sort in these areas, and in considerable depth, it was contaminated with mud, sand, flints and lignite etc., to an extent which rendered it useless for pottery purposes down to a depth of at least 20 ft, below which it was not considered economical to extract it.

A deeper test in the Roundswell area (Bore No. 11) showed that clean clay was not reached until a depth of 40 ft.

In all cases the material was identical with, or very similar to, the "dirty" clay appearing at the Claypits in recent years.

Bore No. 6, in Gaydens field N. of the road and fairly near the stream, was the only one which produced good clay and here there was about 9 ft usable under 13 ft. of overburden.

The fields S. of the Dump Lane, very near the old workings under the rubbish tip and Dennis' pit, showed 10-13 ft. of good clay under 13-17 ft. of overburden, but the seam thinned to 6-8 ft. half-way to the Turnpike Road.

Hollands land, N. of present workings, produced approximately 20 ft of excellent clay at two bores approximately half-way down the field, under an average

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overburden of 9 ft, and it seems this land, with perhaps a little to the East, and Tuckers land to the West as far as the Copse, represent the next reserves available.

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| <u>Bore No. 1</u> | W. edge of Brynsworthy field 50 yds. from road.

No clay found at 20 ft. | <i>Overburden</i> 17-
20 |
| <u>Bore No. 2</u> | E. edge of Brynsworthy field 100 yds. from road.

Dirty clay commenced at 25 ft. At 31 ft it was cleaner but still contained small grits etc. | <i>Overburden</i> 25
<i>Dirty clay</i> 6
<i>Cleaner clay but w. small stones</i> 2 |
| <u>Bore No. 3</u> | Close to hedge W. of Hazeldens, 100 yds. from road.

Earthy clay at 13 ft. proceeding thro' dirty to 25 ft. still with grits. No clean clay to 25 ft. | <i>Overburden</i> 13
<i>Earthy clay passing to dirty clay w. small stones</i> 14 |
| <u>Bore No. 4</u> | In Gaydens field N. of road and adjoining Mack's property 50 yds. from road. Water at 17 ft; dirty clay with large grits etc., at 19 ft; no clean clay down to 30 ft. | <i>Overburden</i> 11
<i>Clay w. stones</i> 19 |
| <u>Bore No. 5</u> | In Gaydens field as above, near dividing hedge about 200 yds. from road. Clay with deads at 18 ft., dirty clay with grits etc., down to 30 ft. Seemed slightly better at this level but no clean clay. | <i>Overburden</i> 16
<i>Clay w. small stones</i> 14
<i>Sl. cleaner clay</i> 2 |
| <u>Bore No. 6</u> | Centre of Gaydens lower field; about 350 yds. from road. Horseflesh at 13 ft., thence good clay with only very occasional grits to approximately 22 ft. Gravel at 23 ft. i.e. about 9 ft of fairly good clay. | <i>Overburden</i> 13
<i>Thin Horseflesh on good clay w. v. occ. small stones</i> 10
<i>Gravel</i> 2 |
| <u>Bore No. 7</u> | By electricity pylon immediately S.W. of Brynsworthy Nurseries, approximately 200 yds. from road. Clayey soil to 13 ft., then dirty clay to 23 ft. All very dry. | <i>Sandy Overburden</i> 13
<i>(v. sandy below 7')</i>
<i>Dirty clay</i> 12 |

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- Bore No. 8 By wire fence of second field South of Hele Manor Farm, and level with centre of farm sheds. Approximately 250 yds. from road. Clayey soil at 11 ft., then dirty clay all the way to 27 ft. Some water.
- Overt. (sandy) 11
Dirty clay 18
- Bore No. 9 Clay at 9 ft. continuing dirty to 27 ft. This seemed dirtier and more earthy and sandy than the others. This bore was in the same field as No. 8 but at the Southern end, i.e. near about 500 yds. from Old Bideford road.
- Overt. (sandy) 9
Dirty clay 20
- Bore No. 10 Same latitude as No. 9 but one field nearer to Old Torrington Road approximately 200 yds. from same. Dirty clay from 11 ft to 23 ft., with water at latter depth. This clay seemed shorter and more earthy than any hitherto.
- Overt. 9
Dirty clay 16
- Bore No. 11 As Nos. 9 and 10, but in field adjoining Old Torrington Road., about 75 yds. from same. This bore was taken much deeper, to ascertain if any good clay did in fact exist in this area. It was dirty from 9 ft. to 29 ft., at which depth some improvement occurred, and what appeared to be good clean clay was reached at 40 ft.
- Overt. 9
Dirty clay 20
Cleaner clay 11
Clean clay 1
- Bore No. 12 S.E. corner of Gaydens field adjoining Dump Lane, 30 yds. from road. Earthy "short" clay from 14 ft. to 28 ft; not so much dirt and flints however as previous bores. Just about usable thro' filter presses.
- Overt. 12
Earthy clay 18
Gvl (found)
- Bore No. 13 N.E. corner of above; 20 yds. from lane. Good clay, with some layers of "finey" from 13 ft. to 26 ft.; the usual gravel and water at 27 ft.
- Overt. 9
? Dirty clay 4
Clean clay 13 (? 16)
Gvl 2 (? fine)

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| <u>Bore No. 14</u> | Half-way along W. hedge of above; about 150 yds from road.
Dirty clay at 11 ft.; fairly clean at 13 ft; thence good clay to approximately 20 ft, with some finey at 17 ft.
Probably only about 6-8 ft. usable. | Overb. 9
Dirty clay 2
Fairly clean clay 2
Good clay 7
? dirty clay 3
Gvl (touched) |
| <u>Bore No. 15</u> | N.W. corner of field to W. of Gaydens above; 20 yds. from Dump Lane.
Dirty clay at 15 ft. Clean from 17 to 27 ft. A bit earthy in parts. About 10 ft. usable. | Overb. 9
Dirty clay 8
Mainly clean clay 10
Gvl |
| <u>Bore No. 16</u> | S.W. Corner of above; about 100 yds. S. of lane.
Clay from 11 ft. to 21 ft. with some "finey" at 15 ft. and the clay below this rather sandy and short. | Overb. 9
Clay, sandy below 12
Gvl (touched) |
| <u>Bore No. 17</u> | By E. hedge of Hollands field immediately N. of Pits.
Good clay from 11 ft. to 31 ft. | Overb. (sandy) 11
Good clay 20
Gvl 2 |
| <u>Bore No. 18</u> | By W. hedge of above (half-way down field in both cases).
Horseflesh at 17 ft.; good clay from 11 ft. to 29 ft. | Overb. (sandy) 7
? Dirty clay 4
Good clay 18
? Dirty clay 2
Gvl (touched) |