

20 March 2007

A. Goulds Esq.
White Young Green
Sunley House
Bedford Park
Croydon
Surrey CR0 2AP

Environmental

Environmental Consultancy
Environmental Management
Geotechnical Engineering
Ground Investigations
Health & Safety
Sustainability Management
Contaminated Land

Dear Alex,

RE: Hollingbourne Soakaways (K.I.G. Hollingbourne)

1.0 Introduction

White Young Green Consulting (WYG), instructed White Young Green Environmental (WYGE) to carry out an investigation at the Kent International Gateway (KIG) Site at Hollingbourne, Kent (See Figure SK01). Instructions to proceed were contained in an email from WYG, dated 23 January 2007.

2.0 Clients Brief

It is understood the client is intending to develop the site, located to the east of Maidstone, at approximate National Grid Reference (NGR) 580089E, 155600N. The proposed development area is approximately 120ha and is roughly triangular in shape.

The proposed development consists of eight industrial units acting as a multi-modal distribution hub alongside the London to Dover railway with associated new sidings, new access roads into and around the site, paved areas for parking and hard standing, and service installations.

The recent investigation was requested by the client in order to obtain preliminary data on soil infiltration rates, which could be used to aid subsequent soakaway design by others.

3.0 Fieldworks

Seven trial pits (TP1, TP2, TP3A, TP3B and TP4 to TP6, inclusive) were excavated on 06 March 2007 to a maximum depth of 3.0mbgl using a JCB 3CX. The trial pits were logged, sampled and then adopted for soakage testing broadly in accordance with BRE Digest 365. The location of each soakaway test pit is indicated in Figure SK02 and an engineering log of the encountered soil conditions is presented in Appendix B.



Sunley House, 4 Bedford Park, Croydon, Surrey, CR0 2AP

Tel: +44 (0)20 8649 6600 Fax: +44 (0)20 8649 6629 Email: enviro.london@wyg.com

Website: www.wyg.com



INVESTOR IN PEOPLE



3.1 Geology

In summary, ground conditions comprised a thin layer of Made Ground / Topsoil over Gault Formation over the Folkestone Beds.

In brief, the Made Ground / Topsoil existed from ground level to between 0.3 and 0.4mbgl and generally comprised slightly gravelly soft clay.

The Gault Formation was encountered at depths between 0.3 and 0.4mbgl, ranged in thickness between 0.3 (TP2) and 1.7mbgl (TP3B) and generally consisted of brown clay with horizons of sand and / or gravelly clay throughout.

The Folkestone Beds were encountered between 0.7 (TP2) and 2.0mbgl (TP3B), persisted to the base of each investigation location and predominantly consisted of medium to coarse sand with occasional pockets of slightly sandy very gravelly clay (TP1 & 2) and very sandy clayey gravel (TP3A).

3.2 Hydrogeology

Groundwater seepage was encountered in TP3A and TP3B between 1.40 and 1.90mbgl, and 1.70 to 2.00mbgl, respectively. The seepages were associated with pockets of very sandy clayey gravel (TP3A), within the Folkestone Beds, and very gravelly clay (TP3B) within the Gault Formation.

3.3 Field Testing

All soakaway tests were carried out within the Folkestone Beds. Pit side collapse occurred in all but one of the trial pits (TP5). Consequently, it has been necessary to extrapolate most of the field data to allow subsequent assessment of infiltration rates.

Also, due to instability in the Folkestone Beds it was not possible to undertake deep soakage tests as this immediately resulted in collapse of the pits.

The results of this testing are presented in Appendix C.

4.0 Soil Infiltration Testing Assessment

Using predominantly extrapolated data within the calculation method provided in the BRE Digest 365, infiltration rates have been calculated for each test as detailed in Table 4.0 below:

| Trial Pit No. | Test Stratum | Infiltration Rate (m/s) | |
|---------------|-----------------|---|-----------------------|
| | | Test 1 | Test 2 |
| TP1 | Folkestone Beds | Trial pit abandoned due to collapse after 2mins | |
| TP2 | Folkestone Beds | 2.97×10^{-5} | Test Abandoned* |
| TP3a | Folkestone Beds | Trial pit abandoned due to immediate collapse | |
| TP3b | Folkestone Beds | 3.33×10^{-5} | 1.12×10^{-5} |
| TP4 | Folkestone Beds | 3.87×10^{-5} | 2.07×10^{-5} |
| TP5 | Folkestone Beds | 4.12×10^{-5} | Test Abandoned* |
| TP6 | Folkestone Beds | Trial pit abandoned due to collapse after 0.5mins | |

* test abandoned due to major sides collapse

Table 4.0 Summary of Soil Infiltration Rates

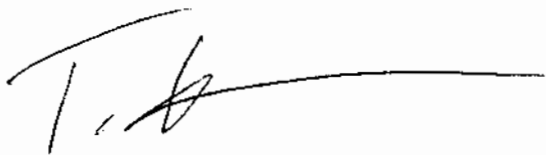
Based on the infiltration rates presented above, for preliminary design purposes the lowest value obtained from the testing should be used. Based on this, an indicative soil infiltration rate of 1.12×10^{-5} m/s should be assumed. Although the majority of the values have been assessed using extrapolated data, it is suggested that the relative consistency between results with that obtained from a non-extrapolated datum set (TP5) suggests that these are representative of the tested soils. Similarly, when compared to the published literature the infiltration values are within the lower end of the values expected in equivalent soil condition type (sands) (CIRIA Report 113, 1986).

As noted above the depth of penetration of the soakage pits into the Folkestone Beds were limited due to difficulties with instability. It is therefore suggested that it might be possible to obtain improved soakage values for deeper soakaways, particularly if the observed clay / clayey horizons become less abundant with depth. Deeper soakaway testing should be undertaken to confirm if improved soakage conditions exist. As and when such testing is undertaken it is recommended that the test pits are supported by a granular backfill material.

Also note, any drainage design should pay special attention to the need to design and implement a satisfactory soakaway design system having regard to the calculated levels of permeability and should take advice from suitably qualified engineers.

We note that site levels are likely to be modified significantly as a part of the site development. Clearly it will be necessary to reassess soakage characteristics of the near surface soils once regrading has been undertaken in order to obtain truly representative data.

With kind regards
For **WHITE YOUNG GREEN ENVIRONMENTAL**

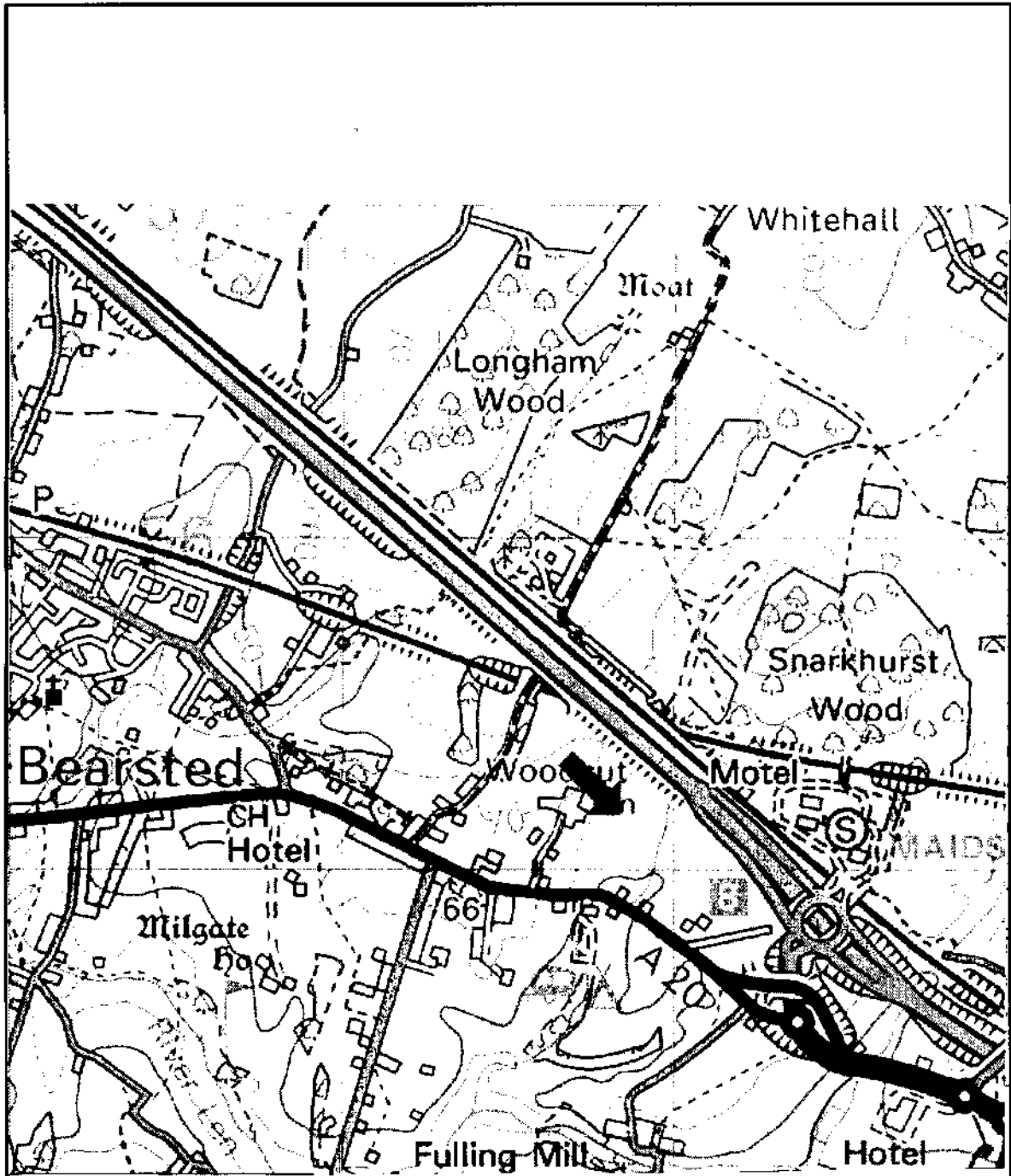


TRENT SCHERER
Geo Environmental Engineer



JON VENN
Associate Director

FIGURE SK01
Site Location Plan



White Young Green Environmental Ltd.
 Bentley House Tel: 020 8948 0000
 4 Bedford Park Fax: 020 8948 0020
 Craydon CR0 3NP e-mail: info@wyge.com



Environmental Consultancy

Old Street Industrial Estate, Pinner, Tel: 020 8948 0000

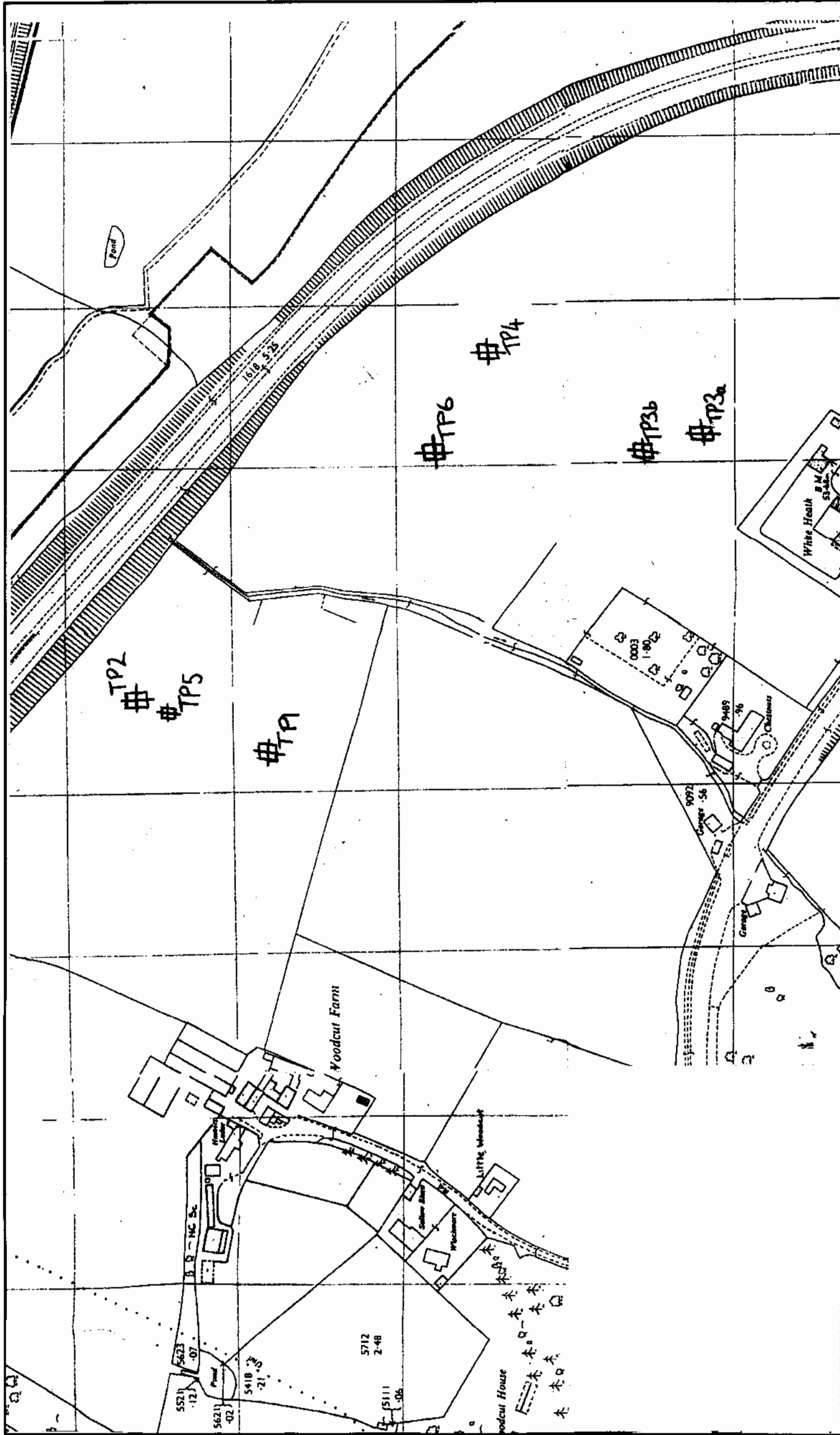
**Hollingbourne Soakaways
 (K.I.G. Hollingbourne)**

| | | | | | |
|----|-------|----|----|-----|-----|
| Dr | Scale | Dr | Ch | App | Rev |
|----|-------|----|----|-----|-----|

SITE LOCATION PLAN

| Sheet | North | Scale | Sheet | North | Scale |
|-------|-------|---------|-------|-------|-------|
| 40 | SW | E011814 | 8K | 01 | |

FIGURE SK02
Site Investigation Layout Plan



| | | | |
|--|----------------|---|-------------------|
| White Young Green Environmental Ltd. Surrey House 4 Bedford Park Croydon CR0 2AP | | White Young Green Environmental Project Management | |
| Environmental Consultancy Civil Structural Mechanical Electrical Process Rail Traffic Environmental Project Management | | | |
| Project: Hollingbourne Soakaways (K.I.G. Hollingbourne) Client: | | | |
| Drawing Title: PROPOSED SITE INVESTIGATION LAYOUT PLAN | | | |
| Scale: A3 | Drawn By: S.T. | Checked By: T.S. | Approved By: Date |
| Class: 40 | Type: ENV | Project No: E011814 | Drawing No: SK.02 |

WHITE YOUNG GREEN ENVIRONMENTAL

APPENDIX A - REPORT CONDITIONS (STAGE 2)

GROUND INVESTIGATION

This report is produced solely for the benefit of the White Young Green Consulting (WYG) and their Consultant Partners and no liability is accepted for any reliance placed on it by any other party unless specifically agreed in writing otherwise. This report refers, within the limitations stated, to the condition of the site at the time of the inspections. No warranty is given as to the possibility of future changes in the condition of the site as characteristics, especially liquid and gaseous materials, are likely to vary with time.

This report is based on readily available geological records, the recorded physical investigation, the strata observed in the works, together with the results of completed site tests. Whilst skill and care has been taken to interpret these conditions likely between or below investigation points, the possibility of other characteristics not revealed cannot be discounted, for which no liability can be accepted. The impact of our assessment on other aspects of the development requires evaluation by other involved parties.

Whilst confident in the findings detailed within this report because ground conditions is not an exact science, subject to risk analysis, we are unable to give categorical assurances that they will be accepted by others as they may have differing objectives. This report is prepared for the proposed uses stated in the report and should not be used in a different context without reference to WYGE. In time improved practices or amended legislation may necessitate a re-assessment.

The opinions expressed cannot be absolute due to the limitations of time and resources within the context of the agreed brief and the possibility of unrecorded previous in ground activities.

APPENDIX B

Engineering Logs

WHITE YOUNG GREEN ENVIRONMENTAL

Trial Pit Log

Location Reference **TP1**
Sheet 1 of 1

Job Number: E011814
Project: Hollingbourne Soakaway (K.I.G. Hollingbourne)
Site Location: Hollingbourne, Maidstone
Client:

Co-ordinates:
Ground Level:
Start Date: 06/03/2007 TP Width : 0.90
Finish Date: 06/03/2007 TP Length : 3.00
Logged By : S.B.
Method: JBC 3CX

| Stratum Description | Legend | Reduced Level (mOD) | Depth (m) | Water Strike (m) | Backfill Details | Samples and In Situ Testing | | |
|--|--------|---------------------|-----------|------------------|------------------|-----------------------------|------|----------------------|
| | | | | | | Depth (m) | Type | In Situ Test Results |
| Brown slightly sandy slightly gravelly soft clay. Gravels of fine to coarse angular to sub-angular flint and brick. Frequent roots and rootlets present. (MADE GROUND) | | | 0.30 | | | | | |
| Brown very gravelly slightly sandy firm CLAY. Gravels comprise fine to coarse sub-angular to sub-rounded flint, occasional cobbles of sub-angular to sub-rounded flint. (GAULT FORMATION) | | | 0.90 | | | 0.90 | B | |
| Yellow medium to coarse SAND. (FOLKESTONE BEDS) ...Between 0.90 and 1.30mbgl: Pocket of Brown slightly sandy very gravelly clay. Gravels comprise medium to coarse sub-angular flint and fine to medium sub-angular to sub-rounded white chalk. | | | 1.30 | | | 1.30 | B | |
| ----- Trial Pit completed at 2.90 m | | | | | | | | |

Backfill Details:
Backfilled with arisings

Groundwater Details:
No groundwater encountered

Additional Observations:

Stability:
Trial pit sides unstable within Folkstone Beds

Checked

Verified

WHITE YOUNG GREEN ENVIRONMENTAL

Trial Pit Log

Location Reference **TP2**
Sheet 1 of 1

Job Number: E011814
Project: Hollingbourne Soakaway (K.I.G. Hollingbourne)
Site Location: Hollingbourne, Maidstone
Client:

Co-ordinates:
Ground Level:
Start Date: 06/03/2007 TP Width : 1.30
Finish Date: 06/03/2007 TP Length : 3.20
Logged By : S.B.
Method: JBC 3CX

| Stratum Description | Legend | Reduced Level (mOD) | Depth (m) | Water Strike (m) | Backfill Details | Samples and In Situ Testing | | |
|---|--------|---------------------|-----------|------------------|------------------|-----------------------------|------|----------------------|
| | | | | | | Depth (m) | Type | In Situ Test Results |
| Brown slightly sandy slightly gravelly soft clay. Gravels of fine to coarse angular to sub-angular flint. Frequent roots and rootlets present. (TOPSOIL) | | | 0.40 | | | 0.40 | B | |
| Brown very gravelly slightly sandy firm CLAY. Gravels comprise fine to coarse sub-angular to sub-rounded flint, occasional cobbles of angular to sub-rounded flint. (GAULT FORMATION) | | | 0.70 | | | | | |
| Dark yellow medium to coarse SAND. (FOLKESTONE BEDS) ...Between 0.70 and 1.10mbgl: Pocket of Brown slightly sandy very gravelly clay. Gravels comprise medium to coarse sub-angular to sub-rounded flint and fine to medium sub-rounded white chalk. | | | 1.40 | | | 1.40 | B | |
| ----- Trial Pit completed at 3.00 m | | | | | | | | |

Backfill Details:

Backfilled with arrisings

Groundwater Details:

No groundwater encountered

Additional Observations:

Stability:

Trial pit sides unstable within Folkstone Beds

Checked

Verified

WHITE YOUNG GREEN ENVIRONMENTAL

Trial Pit Log

Location Reference **TP3A**
Sheet 1 of 1

Job Number: E011814
Project: Hollingbourne Soakaway (K.I.G. Hollingbourne)
Site Location: Hollingbourne, Maidstone
Client:

Co-ordinates:
Ground Level:
Start Date: 07/03/2007 TP Width : 1.00
Finish Date: 07/03/2007 TP Length : 2.10
Logged By : S.B.
Method: JBC 3CX

| Stratum Description | Legend | Reduced Level (mOD) | Depth (m) | Water Strike (m) | Backfill Details | Samples and In Situ Testing | | |
|--|--------|---------------------|-----------|------------------|------------------|-----------------------------|------|----------------------|
| | | | | | | Depth (m) | Type | In Situ Test Results |
| Brown slightly sandy slightly gravelly soft clay. Sand is fine to medium, gravels of fine to medium sub-angular to sub-rounded flint. (TOPSOIL) | | | 0.30 | | | | | |
| Brown slightly sandy CLAY (GAULT FORMATION) | | | 0.65 | | | 0.65 | B | |
| Light brown CLAY. (GAULT FORMATION) ...Between 1.00 and 1.40mbgl: Becomes sandy. | | | 1.40 | | | | | |
| Yellow medium to coarse SAND. (FOLKESTONE BEDS) ...Between 1.40 and 1.90mbgl: Pocket of very sandy clayey gravel. Gravels comprise fine to medium angular to sub-rounded flint. | | | 2.40 | | | | | |
| ----- Trial Pit completed at 2.40 m | | | | | | | | |

Backfill Details:
Backfilled with arisings

Groundwater Details:
Groundwater seepages between 1.40 and 1.90mbgl

Additional Observations:

Stability:
Trial pit sides unstable within Folkstone Beds

Checked

Verified

Job Number: E011814
Project: Hollingbourne Soakaway (K.I.G. Hollingbourne)
Site Location: Hollingbourne, Maidstone
Client:

Co-ordinates:
Ground Level:
Start Date: 07/03/2007 TP Width : 1.00
Finish Date: 07/03/2007 TP Length : 3.90
Logged By : S.B.
Method: JBC 3CX

| Stratum Description | Legend | Reduced Level (mOD) | Depth (m) | Water Strike (m) | Backfill Details | Samples and In Situ Testing | | |
|--|--------|---------------------|-----------|------------------|------------------|-----------------------------|------|----------------------|
| | | | | | | Depth (m) | Type | In Situ Test Results |
| Brown slightly sandy slightly gravelly clay. Gravels of fine to medium angular to sub-rounded flint. (TOPSOIL) | | | 0.30 | | | | | |
| Brown slightly sandy CLAY. (GAULT BEDS) | | | 0.90 | | | | | |
| Brown very gravelly CLAY. Gravels comprise of fine to coarse angular to sub-rounded flint. (GAULT BEDS) | | | 1.20 | | | 1.20 | B | |
| Brown CLAY. (GAULT BEDS) | | | 1.70 | | | | | |
| Brown very gravelly CLAY. Gravels of fine to coarse angular to sub-rounded flint. Occasional cobbles of angular to sub-rounded flint. (GAULT BEDS) | | | 2.00 | | | 2.00 | B | |
| Yellow medium to coarse SAND. (FOLKESTONE BEDS) | | | 2.50 | | | | | |
| ----- Trial Pit completed at 2.50 m | | | | | | | | |

Backfill Details:
Backfilled with arisings

Additional Observations:

Stability:
Trial pit sides unstable within Folkstone Beds

Groundwater Details:

Groundwater seepages present between 1.70 and 2.00mbgl associated with an horizon of very gravelly clay within the gault beds.

Checked

Verified

WHITE YOUNG GREEN ENVIRONMENTAL

Trial Pit Log

Location Reference **TP4**
Sheet 1 of 1

Job Number: E011814
Project: Hollingbourne Soakaway (K.I.G. Hollingbourne)
Site Location: Hollingbourne, Maidstone
Client:

Co-ordinates:
Ground Level:
Start Date: 07/03/2007 TP Width : 1.00
Finish Date: 07/03/2007 TP Length : 3.90
Logged By : S.B.
Method: JBC 3CX

| Stratum Description | Legend | Reduced Level (mOD) | Depth (m) | Water Strike (m) | Backfill Details | Samples and In Situ Testing | | |
|--|--------|---------------------|-----------|------------------|------------------|-----------------------------|------|----------------------|
| | | | | | | Depth (m) | Type | In Situ Test Results |
| Brown slightly sandy clay. Occasional fine to medium angular to sub-angular flints and rare coarse angular brick tile. (MADE GROUND) | | | 0.35 | | | 0.35 | B | |
| Brown sandy firm CLAY. (GAULT BEDS) | | | 0.75 | | | | | |
| Brown firm CLAY. (GAULT BEDS) | | | 1.00 | | | 1.00 | B | |
| Yellow medium to coarse SAND. (FOLKESTONE BEDS) | | | 1.90 | | | | | |
| ----- Trial Pit completed at 1.90 m | | | | | | | | |

Backfill Details:
Backfilled with arisings

Groundwater Details:
No groundwater encountered

Additional Observations:

Stability:
Trial pit sides unstable within Folkstone Beds

Checked

Verified

WHITE YOUNG GREEN ENVIRONMENTAL

Trial Pit Log

Location Reference **TP5**
Sheet 1 of 1

Job Number: E011814
Project: Hollingbourne Soakaway (K.I.G. Hollingbourne)
Site Location: Hollingbourne, Maidstone
Client:

Co-ordinates:
Ground Level:
Start Date: 06/03/2007 TP Width : 1.00
Finish Date: 06/03/2007 TP Length : 3.40
Logged By : S.B.
Method: JBC 3CX

| Stratum Description | Legend | Reduced Level (mOD) | Depth (m) | Water Strike (m) | Backfill Details | Samples and In Situ Testing | | |
|--|--------|---------------------|-----------|------------------|------------------|-----------------------------|------|----------------------|
| | | | | | | Depth (m) | Type | In Situ Test Results |
| Brown slightly sandy slightly gravelly soft clay. Gravels of fine to coarse angular to sub-angular flint and brick. Frequent roots and rootlets present. (MADE GROUND) | | | 0.40 | | | | | |
| Brown very gravelly slightly sandy firm CLAY. Gravels of fine to coarse sub-angular to sub-rounded flint, occasional cobbles of sub-angular to sub-rounded flint. (GAULT BEDS) | | | 1.20 | | | 1.20 | B | |
| Dark yellow medium to coarse SAND. (FOLKESTONE BEDS) | | | 1.90 | | | | | |
| ----- Trial Pit completed at 1.90 m | | | | | | | | |

Backfill Details:
Backfilled with arisings

Groundwater Details:
No groundwater encountered

Additional Observations:

Stability:
Trial pit sides unstable within Folkstone Beds

Checked

Verified

WHITE YOUNG GREEN ENVIRONMENTAL

Trial Pit Log

Location Reference **TP6**
Sheet 1 of 1

Job Number: E011814
Project: Hollingbourne Soakaway (K.I.G. Hollingbourne)
Site Location: Hollingbourne, Maidstone
Client:

Co-ordinates:
Ground Level:
Start Date: 07/03/2007 TP Width : 1.00
Finish Date: 07/03/2007 TP Length : 3.30
Logged By : S.B.
Method: JBC 3CX

| Stratum Description | Legend | Reduced Level (mOD) | Depth (m) | Water Strike (m) | Backfill Details | Samples and In Situ Testing | | |
|---|--------|---------------------|-----------|------------------|------------------|-----------------------------|------|----------------------|
| | | | | | | Depth (m) | Type | In Situ Test Results |
| Brown slightly sandy clay. Occasional fine to medium angular to sub-angular flints and rare coarse angular brick tile. (MADE GROUD) | | | 0.30 | | | | | |
| Brown gravelly CLAY. Gravels comprise fine to coarse angular to sub-rounded flints. (GAULT BEDS) | | | 1.00 | | | 1.00 | B | |
| Brown CLAY. (GAULT BEDS) | | | 1.60 | | | | | |
| Yellow medium to coarse SAND. (FOLKESTONE BEDS) | | | 2.30 | | | 1.60 | B | |
| ----- Trial Pit completed at 2.30 m | | | | | | | | |

Backfill Details:
Backfilled with arisings

Groundwater Details:
No groundwater encountered

Additional Observations:

Stability:
Trial pit sides unstable within Folkstone Beds

Checked

Verified

APPENDIX C
In situ Testing Results

Soakaway Calculations

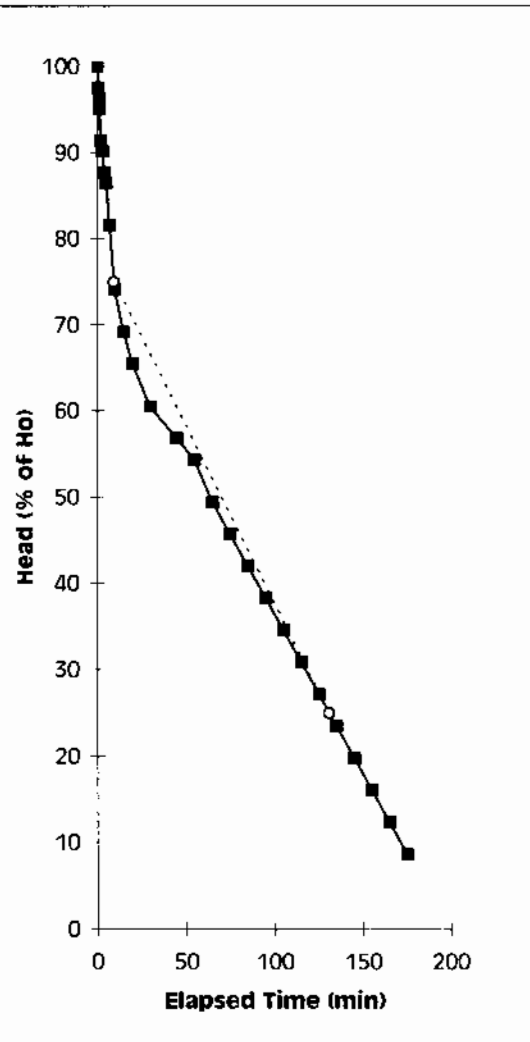


| | |
|-------------------|----------------------|
| Soakaway Test No. | TP2 Test 1 |
| Contract: | K.I.G. Hollingbourne |
| Contract No. | E011814 |

| | | |
|---------------------|-----------------------|---|
| Field Test | | Trial Pit Log (include details of groundwater): See trial Pit record |
| Depth of Pit | 2.65 m | |
| Width of Pit | 1.30 m | |
| Length of Pit | 3.20 m | |
| Depth of Pit Soaked | 0.81 m | |
| ap50 | 7.805 m ² | |
| Vp75-25 | 1.6848 m ³ | |
| t75-25 | 121.2 min | |
| water used | 3.3696 m ³ | |
| f | 2.968E-05 m/sec. | |

Field Data

| Depth to Water (m) | Elapsed Time (min) | Head of Water (% of Ho) | Head of Water (m) |
|--------------------|--------------------|-------------------------|-------------------|
| 1.84 | 0 | 100 | 0.81 |
| 1.86 | 0.5 | 98 | 0.79 |
| 1.87 | 1 | 96 | 0.78 |
| 1.88 | 1.5 | 95 | 0.77 |
| 1.91 | 2 | 91 | 0.74 |
| 1.92 | 3 | 90 | 0.73 |
| 1.94 | 4 | 88 | 0.71 |
| 1.95 | 5 | 86 | 0.70 |
| 1.99 | 7 | 81 | 0.66 |
| 2.05 | 10 | 74 | 0.60 |
| 2.09 | 15 | 69 | 0.56 |
| 2.12 | 20 | 65 | 0.53 |
| 2.16 | 30 | 60 | 0.49 |
| 2.19 | 45 | 57 | 0.46 |
| 2.21 | 55.0 | 54 | 0.44 |
| 2.25 | 65.0 | 49 | 0.40 |
| 2.28 | 75.0 | 46 | 0.37 |
| 2.31 | 85.0 | 42 | 0.34 |
| 2.34 | 95.0 | 38 | 0.31 |
| 2.37 | 105.0 | 35 | 0.28 |
| 2.40 | 115.0 | 31 | 0.25 |
| 2.43 | 125.0 | 27 | 0.22 |
| 2.46 | 135.0 | 23 | 0.19 |
| 2.49 | 145.0 | 20 | 0.16 |
| 2.52 | 155.0 | 16 | 0.13 |
| 2.55 | 165.0 | 12 | 0.10 |
| 2.58 | 175.0 | 9 | 0.07 |



Comments
Pit collapse after 45 minutes, data extrapolated thereafter.

Soakaway Calculations

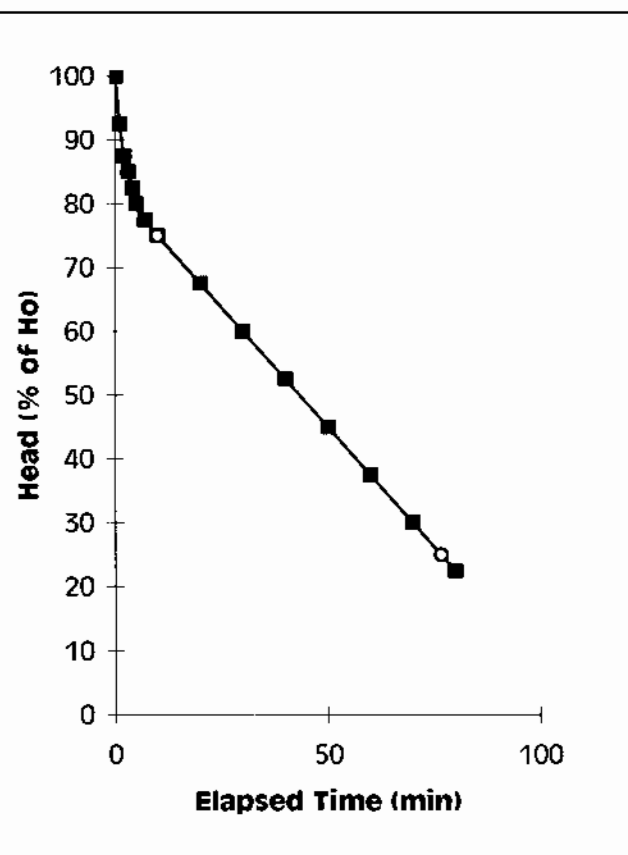


| | |
|-------------------|----------------------|
| Soakaway Test No. | TP3b Test 1 |
| Contract: | K.I.G. Hollingbourne |
| Contract No. | E011814 |

| | | |
|---------------------|-----------------------|--|
| Field Test | | Trial Pit Log (include details of groundwater): See trial Pit record |
| Depth of Pit | 2.50 m | |
| Width of Pit | 1.00 m | |
| Length of Pit | 3.90 m | |
| Depth of Pit Soaked | 0.40 m | |
| ap50 | 5.86 m ² | |
| Vp75-25 | 0.78 m ³ | |
| t75-25 | 66.7 min | |
| water used | 1.5600 m ³ | |
| f | 3.328E-05 m/sec. | |

Field Data

| Depth to Water (m) | Elapsed Time (min) | Head of Water (% of Ho) | Head of Water (m) |
|--------------------|--------------------|-------------------------|-------------------|
| 2.10 | 0 | 100 | 0.40 |
| 2.13 | 1 | 93 | 0.37 |
| 2.15 | 2 | 88 | 0.35 |
| 2.16 | 3 | 85 | 0.34 |
| 2.17 | 4 | 83 | 0.33 |
| 2.18 | 5 | 80 | 0.32 |
| 2.19 | 7 | 78 | 0.31 |
| 2.20 | 10 | 75 | 0.30 |
| 2.23 | 20 | 68 | 0.27 |
| 2.26 | 30 | 60 | 0.24 |
| 2.29 | 40 | 53 | 0.21 |
| 2.32 | 50 | 45 | 0.18 |
| 2.35 | 60 | 38 | 0.15 |
| 2.38 | 70 | 30 | 0.12 |
| 2.41 | 80 | 23 | 0.09 |



| | | |
|--------|--------|-----------------------|
| T75 | 10.000 | 75 |
| T25 | 76.667 | 25 |
| T75-25 | 66.667 | Derived from Best Fit |

Comments
Pit collapse after 20 minutes, data extrapolated thereafter.

Soakaway Calculations



Soakaway Test No. TP3b Test 2
 Contract: K.I.G. Hollingbourne
 Contract No. E011814

Field Test

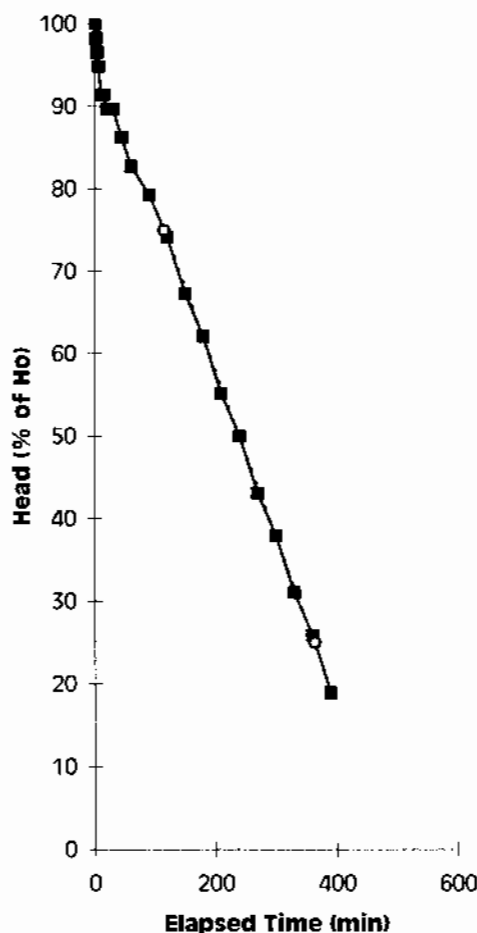
| | |
|---------------------|--------|
| Depth of Pit | 2.50 m |
| Width of Pit | 1.00 m |
| Length of Pit | 3.90 m |
| Depth of Pit Soaked | 0.58 m |

ap50 6.742 m²
 Vp75-25 1.131 m³
 t75-25 248.8 min
 water used 2.2620 m³
 f 1.124E-05 m/sec.

Trial Pit LOG (include details of groundwater):
 See trial Pit record

Field Data

| Depth to Water (m) | Elapsed Time (min) | Head of Water (% of Ho) | Head of Water (m) |
|--------------------|--------------------|-------------------------|-------------------|
| 1.92 | 0 | 100 | 0.58 |
| 1.93 | 1 | 98 | 0.57 |
| 1.93 | 2 | 98 | 0.57 |
| 1.94 | 3 | 97 | 0.56 |
| 1.94 | 4 | 97 | 0.56 |
| 1.94 | 5 | 97 | 0.56 |
| 1.95 | 7 | 95 | 0.55 |
| 1.97 | 10 | 91 | 0.53 |
| 1.97 | 15.0 | 91 | 0.53 |
| 1.98 | 20.0 | 90 | 0.52 |
| 1.98 | 30.0 | 90 | 0.52 |
| 2.00 | 45.0 | 86 | 0.50 |
| 2.02 | 60.0 | 83 | 0.48 |
| 2.04 | 90.0 | 79 | 0.46 |
| 2.07 | 120.0 | 74 | 0.43 |
| 2.11 | 150.0 | 67 | 0.39 |
| 2.14 | 180.0 | 62 | 0.36 |
| 2.18 | 210.0 | 55 | 0.32 |
| 2.21 | 240.0 | 50 | 0.29 |
| 2.25 | 270.0 | 43 | 0.25 |
| 2.28 | 300.0 | 38 | 0.22 |
| 2.32 | 330.0 | 31 | 0.18 |
| 2.35 | 360.0 | 26 | 0.15 |
| 2.39 | 390.0 | 19 | 0.11 |



| | | |
|--------|---------|-----------------------|
| T75 | 115.000 | 75 |
| T25 | 363.750 | 25 |
| T75-25 | 248.750 | Derived from Best Fit |

Comments
 Pit collapse after 120 minutes, data extrapolated thereafter.

Soakaway Calculations

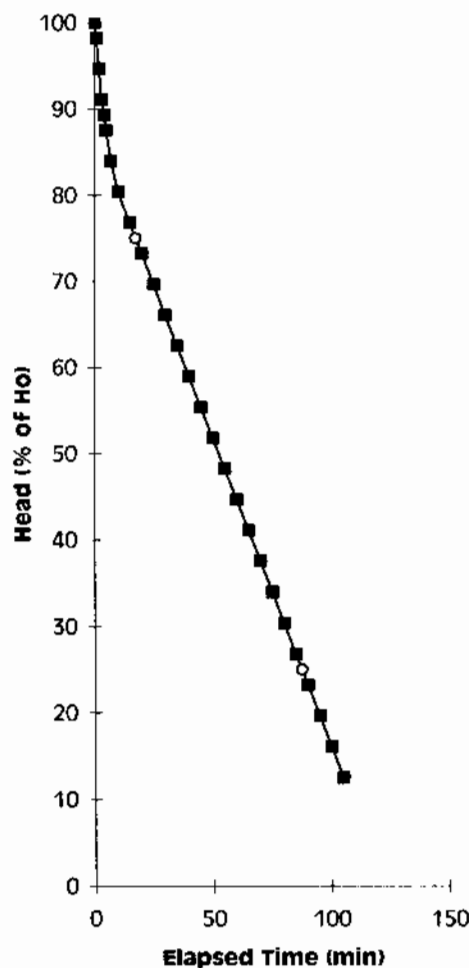
White
Young
Green
Environmental

| | |
|-------------------|----------------------|
| Soakaway Test No. | TP4 Test 1 |
| Contract: | K.I.G. Hollingbourne |
| Contract No. | E011814 |

| | | | | | | | | | | | | | |
|--|------|------|---|--|------|---|--|------|---|--|------|---|--|
| Field Test Depth of Pit <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 80%;"></td><td style="text-align: right;">1.90</td><td style="text-align: left;">m</td></tr></table> Width of Pit <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 80%;"></td><td style="text-align: right;">1.00</td><td style="text-align: left;">m</td></tr></table> Length of Pit <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 80%;"></td><td style="text-align: right;">3.40</td><td style="text-align: left;">m</td></tr></table> Depth of Pit Soaked <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 80%;"></td><td style="text-align: right;">0.56</td><td style="text-align: left;">m</td></tr></table> ap50 5.864 m2 Vp75-25 0.952 m3 t75-25 70.0 min water used 1.9040 m3 f 3.865E-05 m/sec. | | 1.90 | m | | 1.00 | m | | 3.40 | m | | 0.56 | m | Trial Pit LOG (include details of groundwater); See trial Pit record |
| | 1.90 | m | | | | | | | | | | | |
| | 1.00 | m | | | | | | | | | | | |
| | 3.40 | m | | | | | | | | | | | |
| | 0.56 | m | | | | | | | | | | | |

Field Data

| Depth to Water (m) | Elapsed Time (min) | Head of Water (% of Ho) | Head of Water (m) |
|--------------------|--------------------|-------------------------|-------------------|
| 1.34 | 0 | 100 | 0.56 |
| 1.35 | 1 | 98 | 0.55 |
| 1.37 | 2 | 95 | 0.53 |
| 1.39 | 3 | 91 | 0.51 |
| 1.40 | 4 | 89 | 0.50 |
| 1.41 | 5 | 88 | 0.49 |
| 1.43 | 7 | 84 | 0.47 |
| 1.45 | 10 | 80 | 0.45 |
| 1.47 | 15.0 | 77 | 0.43 |
| 1.49 | 20.0 | 73 | 0.41 |
| 1.51 | 25.0 | 70 | 0.39 |
| 1.53 | 30.0 | 66 | 0.37 |
| 1.55 | 35.0 | 63 | 0.35 |
| 1.57 | 40.0 | 59 | 0.33 |
| 1.59 | 45.0 | 55 | 0.31 |
| 1.61 | 50.0 | 52 | 0.29 |
| 1.63 | 55.0 | 48 | 0.27 |
| 1.65 | 60.0 | 45 | 0.25 |
| 1.67 | 65.0 | 41 | 0.23 |
| 1.69 | 70.0 | 38 | 0.21 |
| 1.71 | 75.0 | 34 | 0.19 |
| 1.73 | 80.0 | 30 | 0.17 |
| 1.75 | 85.0 | 27 | 0.15 |
| 1.77 | 90.0 | 23 | 0.13 |
| 1.79 | 95.0 | 20 | 0.11 |
| 1.81 | 100.0 | 16 | 0.09 |
| 1.83 | 105.0 | 13 | 0.07 |



| | | |
|--------|--------|-----------------------|
| T75 | 17.500 | 75 |
| T25 | 87.500 | 25 |
| T75-25 | 70.000 | Derived from Best Fit |

Comments
Pit collapse after 20 minutes, data extrapolated thereafter.

WHITE YOUNG GREEN ENVIRONMENTAL

Sunley House, Bedford Park, Croydon
Surrey CR0 2AP

Telephone: (020) 8649 6600
Facsimile: (020) 8649 6629

Soakaway Calculations

White
Young
Green
Environmental

Soakaway Test No. TP4 Test 2
 Contract: K.I.G. Hollingbourne
 Contract No. E011814

Field Test

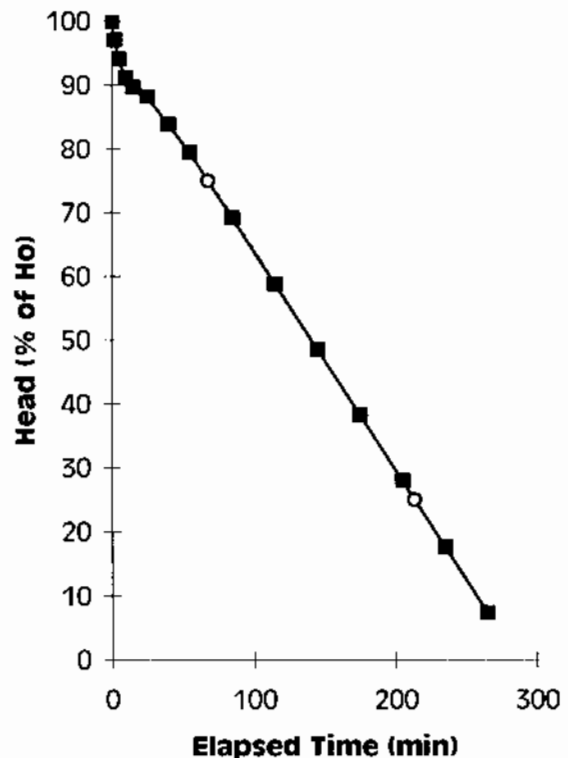
Depth of Pit 1.90 m
 Width of Pit 1.00 m
 Length of Pit 3.40 m
 Depth of Pit Soaked 0.68 m

Trial Pit Log (include details of groundwater):
 See trial Pit record

ap50 6.392 m²
 Vp75-25 1.156 m³
 t75-25 145.7 min
 water used 2.3120 m³
 f 2.069E-05 m/sec.

Field Data

| Depth to Water (m) | Elapsed Time (min) | Head of Water (% of Ho) | Head of Water (m) |
|--------------------|--------------------|-------------------------|-------------------|
| 1.22 | 0 | 100 | 0.68 |
| 1.24 | 2 | 97 | 0.66 |
| 1.26 | 5 | 94 | 0.64 |
| 1.28 | 10 | 91 | 0.62 |
| 1.29 | 15 | 90 | 0.61 |
| 1.30 | 25 | 88 | 0.60 |
| 1.33 | 40 | 84 | 0.57 |
| 1.36 | 55 | 79 | 0.54 |
| 1.43 | 85.0 | 69 | 0.47 |
| 1.50 | 115 | 59 | 0.40 |
| 1.57 | 145.0 | 49 | 0.33 |
| 1.64 | 175 | 38 | 0.26 |
| 1.71 | 205.0 | 28 | 0.19 |
| 1.78 | 235 | 18 | 0.12 |
| 1.85 | 265.0 | 7 | 0.05 |



| | | |
|--------|---------|-----------------------|
| T75 | 67.857 | 75 |
| T25 | 213.571 | 25 |
| T75-25 | 145.714 | Derived from Best Fit |

Comments

Pit collapse after 85 minutes, data extrapolated thereafter.

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Soakaway Calculations

White
Young
Green

Soakaway Test No. TP5 Test 1
 Contract: K.I.G. Hollingbourne
 Contract No. E011814

Field Test

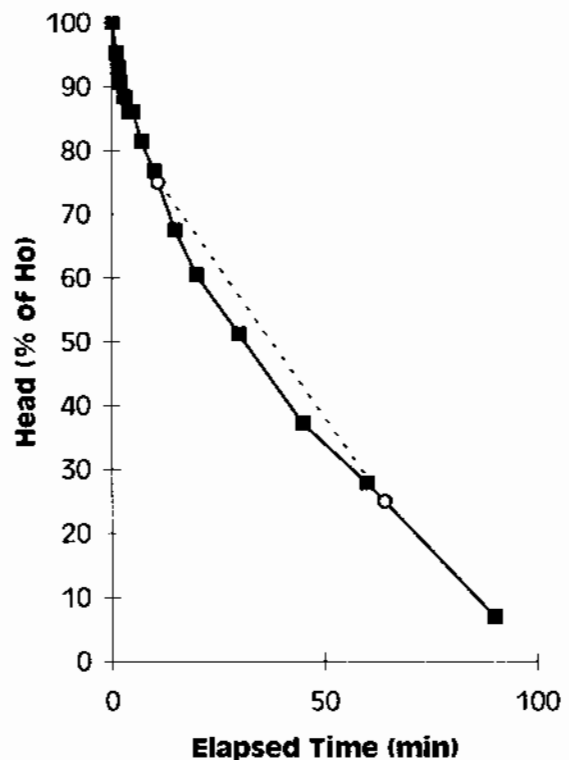
Depth of Pit 1.90 m
 Width of Pit 1.00 m
 Length of Pit 2.10 m
 Depth of Pit Soaked 0.43 m

Trial Pit Log (include details of groundwater):
 See trial Pit record

ap50 3.433 m²
 Vp75-25 0.4515 m³
 t75-25 53.2 min
 water used 0.9030 m³
 f 4.118E-05 m/sec.

Field Data

| Depth to Water (m) | Elapsed Time (min) | Head of Water (% of Ho) | Head of Water (m) |
|--------------------|--------------------|-------------------------|-------------------|
| 1.47 | 0 | 100 | 0.43 |
| 1.49 | 1 | 95 | 0.41 |
| 1.50 | 1.5 | 93 | 0.40 |
| 1.51 | 2 | 91 | 0.39 |
| 1.52 | 3 | 88 | 0.38 |
| 1.53 | 4 | 86 | 0.37 |
| 1.53 | 5 | 86 | 0.37 |
| 1.55 | 7 | 81 | 0.35 |
| 1.57 | 10.0 | 77 | 0.33 |
| 1.61 | 15.0 | 67 | 0.29 |
| 1.64 | 20.0 | 60 | 0.26 |
| 1.68 | 30.0 | 51 | 0.22 |
| 1.74 | 45.0 | 37 | 0.16 |
| 1.78 | 60.0 | 28 | 0.12 |
| 1.87 | 90.0 | 7 | 0.03 |



T75 10.938 75
 T25 64.167 25
 T75-25 53.229 Derived from Best Fit

Comments

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 Surrey CR0 2AP

Telephone: (020) 8649 6600
 Facsimile: (020) 8649 6629

Soakaway Calculations

White
Young
Green
Environmental

Soakaway Test No. TP4 Test 1
 Contract: K.I.G. Hollingbourne
 Contract No. E011814

Field Test

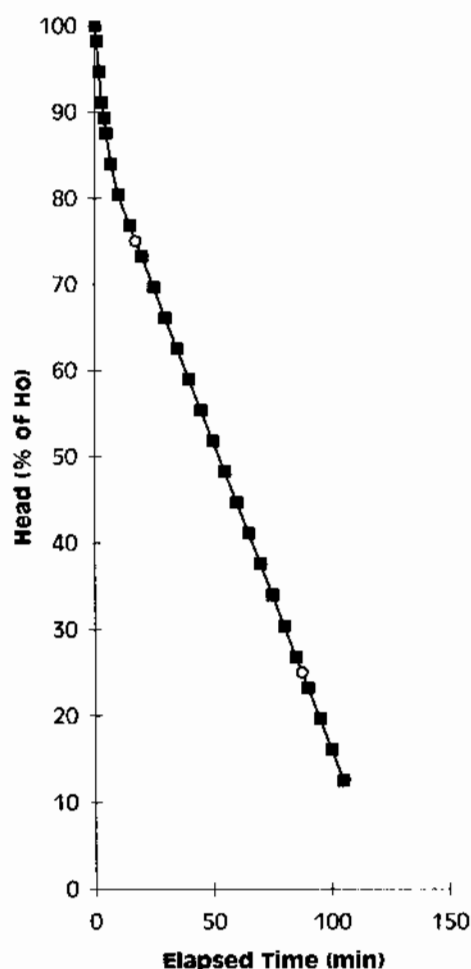
Depth of Pit 1.90 m
 Width of Pit 1.00 m
 Length of Pit 3.40 m
 Depth of Pit Soaked 0.56 m

Trial Pit LOG (include details of groundwater);
 See trial Pit record

ap50 5.864 m²
 Vp75-25 0.952 m³
 t75-25 70.0 min
 water used 1.9040 m³
 f 3.865E-05 m/sec.

Field Data

| Depth to Water (m) | Elapsed Time (min) | Head of Water (% of Ho) | Head of Water (m) |
|--------------------|--------------------|-------------------------|-------------------|
| 1.34 | 0 | 100 | 0.56 |
| 1.35 | 1 | 98 | 0.55 |
| 1.37 | 2 | 95 | 0.53 |
| 1.39 | 3 | 91 | 0.51 |
| 1.40 | 4 | 89 | 0.50 |
| 1.41 | 5 | 88 | 0.49 |
| 1.43 | 7 | 84 | 0.47 |
| 1.45 | 10 | 80 | 0.45 |
| 1.47 | 15.0 | 77 | 0.43 |
| 1.49 | 20.0 | 73 | 0.41 |
| 1.51 | 25.0 | 70 | 0.39 |
| 1.53 | 30.0 | 66 | 0.37 |
| 1.55 | 35.0 | 63 | 0.35 |
| 1.57 | 40.0 | 59 | 0.33 |
| 1.59 | 45.0 | 55 | 0.31 |
| 1.61 | 50.0 | 52 | 0.29 |
| 1.63 | 55.0 | 48 | 0.27 |
| 1.65 | 60.0 | 45 | 0.25 |
| 1.67 | 65.0 | 41 | 0.23 |
| 1.69 | 70.0 | 38 | 0.21 |
| 1.71 | 75.0 | 34 | 0.19 |
| 1.73 | 80.0 | 30 | 0.17 |
| 1.75 | 85.0 | 27 | 0.15 |
| 1.77 | 90.0 | 23 | 0.13 |
| 1.79 | 95.0 | 20 | 0.11 |
| 1.81 | 100.0 | 16 | 0.09 |
| 1.83 | 105.0 | 13 | 0.07 |



T75 17.500 75
 T25 87.500 25
 T75-25 70.000 Derived from Best Fit

Comments

Pit collapse after 20 minutes, data extrapolated thereafter.

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 Facsimile: (020) 8649 6629

Soakaway Calculations

White
Young
Green
Environmental

Soakaway Test No. TP4 Test 2
 Contract: K.I.G. Hollingbourne
 Contract No. E011814

Field Test

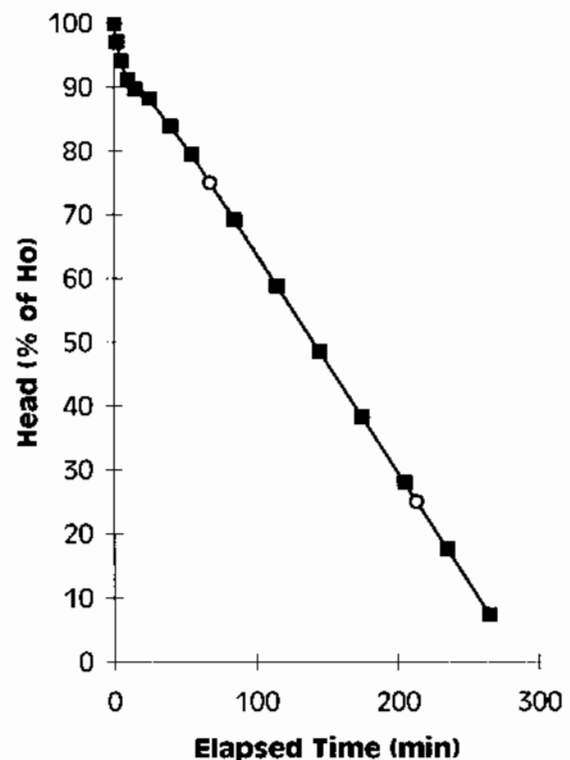
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| 1.28 | 10 | 91 | 0.62 |
| 1.29 | 15 | 90 | 0.61 |
| 1.30 | 25 | 88 | 0.60 |
| 1.33 | 40 | 84 | 0.57 |
| 1.36 | 55 | 79 | 0.54 |
| 1.43 | 85.0 | 69 | 0.47 |
| 1.50 | 115 | 59 | 0.40 |
| 1.57 | 145.0 | 49 | 0.33 |
| 1.64 | 175 | 38 | 0.26 |
| 1.71 | 205.0 | 28 | 0.19 |
| 1.78 | 235 | 18 | 0.12 |
| 1.85 | 265.0 | 7 | 0.05 |



| | | |
|--------|---------|-----------------------|
| T75 | 67.857 | 75 |
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Comments

Pit collapse after 85 minutes, data extrapolated thereafter.

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Soakaway Calculations

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Young
Green

Soakaway Test No. TP5 Test 1
 Contract: K.I.G. Hollingbourne
 Contract No. E011814

Field Test

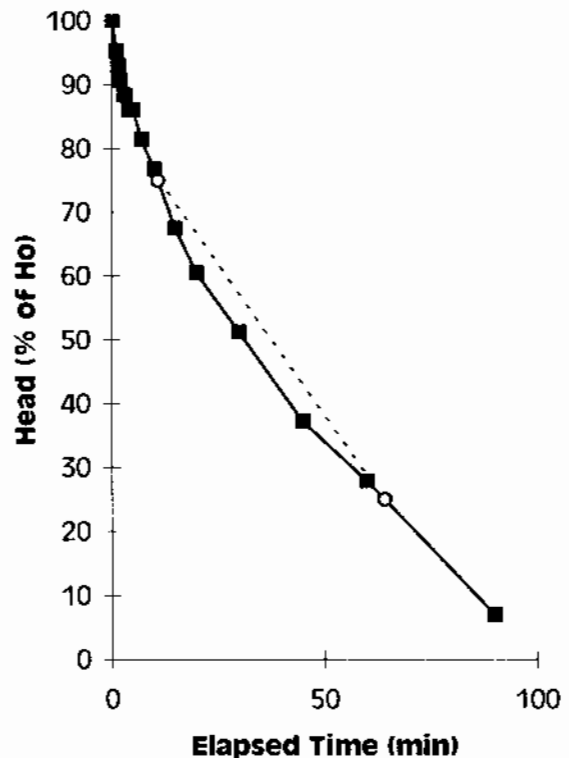
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| 1.47 | 0 | 100 | 0.43 |
| 1.49 | 1 | 95 | 0.41 |
| 1.50 | 1.5 | 93 | 0.40 |
| 1.51 | 2 | 91 | 0.39 |
| 1.52 | 3 | 88 | 0.38 |
| 1.53 | 4 | 86 | 0.37 |
| 1.53 | 5 | 86 | 0.37 |
| 1.55 | 7 | 81 | 0.35 |
| 1.57 | 10.0 | 77 | 0.33 |
| 1.61 | 15.0 | 67 | 0.29 |
| 1.64 | 20.0 | 60 | 0.26 |
| 1.68 | 30.0 | 51 | 0.22 |
| 1.74 | 45.0 | 37 | 0.16 |
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T75 10.938 75
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