Tonbridge and Malling Local Plan

Publication Stage Representation Form

Ref: (for official use only)

The Regulation 19 Local Plan consultation runs for six weeks from 11th September 2026 to 11.59 pm on 25th October 2026. You can return this form to the Planning Policy Team at Tonbridge and Malling Borough Council, Gibson Building, Gibson Drive, Kings Hill, West Malling, Kent, ME19 4LZ.

Alternatively, you can return the form by email to localplan@tmbc.gov.uk.

Data protection and confidentiality

We are required to publish and make publicly available all comments submitted in response to this consultation. As such, we are unable to accept anonymous representations or representations from individuals who do not wish for their comments to be made public. Please note that representations submitted to the Council cannot therefore be treated as confidential.

In accordance with Regulation 22(1)(c) of the Town and Country Planning (Local Planning) (England) Regulations 2012, all representations received during the Regulation 19 Publication consultation will be submitted to the Secretary of State. This requires the Council to make publicly available copies of all representations received, together with the name of the individual submitting the representation and, where applicable, the organisation they represent.

All other personal information, including postal addresses, email addresses and telephone numbers, will remain confidential and will not be published.

As responses will be published, respondents are asked to ensure that all representations are respectful and appropriate. Comments that are racist, derogatory, offensive or inflammatory in nature should not be submitted.

Information about how the Council processes personal data can be found in the Data protection policy https://www.tmbc.gov.uk/council/data-protection-policy Please also note that information held by public authorities is subject to the provisions of the Freedom of Information Act 2000 and the Environmental Information Regulations 2004. Information may be disclosed in response to a request where it is appropriate and lawful to do so.

Please provide your details below to confirm acceptance of our privacy notice

Name: Peter Gillin	
Signature: 	**Date:** **22/10/2026**

This form has two parts:

Part A – Personal Details. This only needs to be completed once if you wish to make more than one representation and representations are returned together.

Part B – Your representation(s). Please fill in a separate Part B form for each matter you wish to make a representation on.

We have also published guidance to assist you in completing this form. This can be accessed via https://reg19tmbcconsult.commonplace.is where you can alternatively complete your representation(s). Completing your representation(s) via our consultation platform is our preferred way for you to take part in the consultation.

The Planning Inspectorate have also released a guidance note on how to complete the form. https://www.gov.uk/government/publications/model-representation-form-for-local-plans/model-representation-letter-for-local-plans

Late representations

Representations received after the consultation deadline will be recorded as late representations. The Council is not obliged to treat these as duly made representations. However, late representations will be retained and forwarded to the Secretary of State as part of the submission documentation, clearly identifying them as having been received after the consultation period closed. The weight to be given to late representations is a matter for the appointed Planning Inspector.

Part A - This needs to be completed once if more than one Part B responses are returned together

	1. Personal Details	2. Agent's Details (if applicable)
If an agent has been appointed by you, please complete only the Title, Name and Organisation (if applicable) in the boxes below (in Column 1), but complete the full contact details of the Agent in Column 2.		
Title	Cllr	
First Name	Peter	
Last Name	Gillin	
Job Title (if relevant)	Chairman	
Organisation (if applicable)	Wrotham Parish Council	
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Part B – Please use a separate Part B form for each representation

Ref: (for official use only)

1: To which **part** of the Local Plan does this representation relate to?

This is important as it will be assessed by the Planning Inspector against the stated policy/section/site allocation. Reminder: If you would like to comment on more than one matter in the Plan, please complete a separate Form B for each matter you wish to make a representation on. We appreciate this takes additional time, but the Inspector requires comments to be submitted in this format.

Paragraph (please tick)		Policy	**BG1**	Policies Map	

Which Chapter or Annex does this representation relate to? (e.g Chapter 4)	CHAPTER 14 CHAPTER 13 - INFRASTRUCTURE
Which paragraph or Policy or aspect of the Policies Map would you like to make a representation on? (e.g Paragraph 4.1 or Policy CC1)	Site allocation and the lack of infrastructure for BG1
If your representation relates to a site allocation, please state which site. Please note you will need to make a representation for each site you wish to comment on. (e.g. Site AN1)	Borough Green Gardens

2: Do you consider the Local Plan to be legally compliant? (Please tick)

Yes		No	✓	Unsure	

3: Please provide your comments here. Please also provide a summary of any attachments, such as supplementary evidence, submitted alongside your representation.

Wrotham Parish Council & The Parish Council Alliance continue to raise serious concerns about the soundness of the TMBC local plan, particularly regarding policy BG1 on the allocation of Borough Green Gardens.

It is painfully apparent that TMBC has pushed this allocation forward without any real understanding of the site's serious contamination and complex land ownership structure.

We attach all evidence of contamination and protected species that WPC previously submitted. Policy BG1 has completely ignored contamination, protected species, and ground instability in 'made ground' as constraints on the development of Borough Green Gardens.

Together with the sewage network at capacity, these factors render the site undeliverable for the plan's lifetime and beyond.

As the plan's largest allocation, so much of the spatial strategy rests on its deliverability. The Council has not shown it understands the significant obstacles preventing this site from coming forward, and both the relief road and housing and employment development are severely constrained by the time it would take to backfill and decontaminate the land.

For these reasons, the plan fails the tests set out at paragraph 35 of the NPPF. It would not be a sound strategy for the Borough and would fail to deliver the areas' objectively assessed needs

(Please note if you are completing this form in Word this cell will automatically expand). Alternatively, please use additional sheets of paper and submit these with your representation form, indicating which question you are answering.

Question 4: Do you consider the Local Plan to be sound? (Please tick)

Yes		No	✓	Unsure	

5: If you do not consider the Local Plan to be sound, please specify on what grounds (please select one option).

Positively Prepared	✓	Consistent with National Policy	
Justified	✓	Unsure how to answer	
Effective	✓		

6: Please provide your comments here. Please also provide a summary of any attachments, such as supplementary evidence, submitted alongside your representation.

Please refer to the paragraphs above and the supplementary evidence at the end of this document.

(Please note if you are completing this form in Word this cell will automatically expand). Alternatively, please use additional sheets of paper and submit these with your representation form, indicating which question you are answering.

7: Please set out any modification(s) you consider necessary to make the Local Plan to be legally compliant or sound as relevant to the matter you have identified above. Please state why the modification you suggest will make the Local Plan legally compliant or sound. It would be helpful if you are able to put forward your suggested revised wording of any policy or text. Please be as precise as possible.

Borough Green Gardens should be completely removed from the Local Plan because it is simply not deliverable before 2042. Quarries will still be operating, making development impossible.

(Please note if you are completing this form in Word this cell will automatically expand). Alternatively, please use additional sheets of paper and submit these with your representation form, indicating which question you are answering.

Please note: In your representation you should provide succinctly all the evidence and supporting information necessary to support your representation and your suggested modification(s). You should not assume that you will have a further opportunity to make submissions. This is because, after this stage, further submissions may only be made if invited by the Inspector, based on the matters and issues he or she identifies for examination.

8: If your representation is seeking a modification to the plan, do you consider it necessary to participate in the examination hearing session(s)? (Please tick)

No, I do not wish to participate in the hearing session(s)	☐
Yes, I wish to participate in the hearing session(s)	☑

9: If you wish to participate in the hearing session(s), please outline why you consider this to be necessary.

As a Rule 6 Party at a previous Inquiry into the development of Ightham Sandpit, WPC holds evidence of contamination, unstable ground, and the presence of protected species.

Some of the evidence is attached to this document.

(Please note if you are completing this form in Word this cell will automatically expand). Alternatively, please use additional sheets of paper and submit these with your representation form, indicating which question you are answering.

Please note the Inspector will determine the most appropriate procedure to adopt to hear those who have indicated that they wish to participate in the hearing session(s). You may be asked to confirm your wish to participate when the Inspector has identified the matters and issues for examination. If you wish to participate in the hearing, please ensure that you have provided your telephone number in Form A.

Wrotham Parish Council
& The Parish Alliance

Regulation 19 Consultation by TMBC

Chapter 14 – Development Allocation

Policy BG1 – Borough Green Gardens

Author: Pete Gillin BSc. Hons



Nepicar Sandpit October 2026

Author Credentials

My name is Peter Gillin BSc Hons, and I have a degree in Physics and Applied Sciences. I have served as Vice Chairman and later Chairman of Wrotham Parish Council (WPC) since I was elected in 2005. I also served as Hon Secretary to the Tonbridge and Malling branch of CPRE for twelve years.

I attended the call-in Planning Inquiry into the H+H Celcon proposal to build an aircrete factory and bypass road in the AONB in Ightham Sandpit in 2007 as a Rule 6 member of WPC, and I observed proceedings throughout. WPC retains all of the expert evidence presented to the Call In Inquiry.

Section 1: Ightham Sandpit

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1. Planning and Quarrying History
2. Contamination
3. Bearing Capacity and Foundation Considerations
4. Contamination Conclusions for Ightham Sandpit
5. Ightham Sandpit Ecology

Section 2: Quarries East of the A227

6. Quarry Discussion
7. Conclusions

Appendix

A. KCC Planning Letter EB/FG/JS/TM/85/1436, dated 8 April 1992
B. Map of Trial Pits and Boreholes in Ightham Sandpit
C. Letter to Barrister re the discovery of contamination
D. Southern Testing Borehole and Test Pit Logs for Area B
E. Expert Witness Proofs of Evidence re contamination

1.0 Relevant Planning and Quarrying History

1.1 Celcon applied for and KCC granted two principal consents on Ightham Sandpit, TM/85/1436 and TM/87/1851. Relevant conditions follow:-

- Condition 1 – Completion of quarrying and backfill by 31 March 1992
- Condition 4 – Scheme of Working
- Condition 5 – Scheme of Restoration
- Condition 7 – Scheme of landscaping and tree planting
- Condition 18 – Scheme of agricultural aftercare
- Variation of Condition 1 to extend backfill to 30 September 1992

KCC approved a variation of the consent subject to the following:-

> *"Conditions 4, 5, 7 & 18 are all subject to the following provisos:*
>
> *a) the importation of hassock for use in embankment fill beneath the route of the proposed Borough Green Bypass shall be emplaced in sufficient quantities such that by 30 September 1992 condition 24 on Planning Permission TM84/1436 and condition 26 on planning permission TM/87/1851 are fully complied with; and*
>
> *b) all tipped material shall be confined to inert, non-toxic, non-putrescible material.*
>
> *Finally, please note that with the exception of the embankment fill required to be emplaced along the route of the proposed Borough Green Bypass,* ***a site licence needs to be obtained prior to the importation of any other materials for the purposes of restoring the remainder of the site."***
> ***Reference: KCC Planning letter in Appendix A*** *(WPC Emphasis)*

1.2 Kingsway Group PLC (Celcon) was a manufacturer of autoclaved aerated concrete (AAC) and built the factory in Borough Green in 1992. They owned Ightham Sandpit but had no in-house quarrying expertise. The site was shared with Trodell Plant Ltd, which owned Cricketts Farm and a small sand quarrying concession next to Celcon's. Jim Bailley was the proprietor.

1.3 Kingsway and later H+H contracted out the quarrying operations and backfill to Trodell Plant Ltd. **Crucially, they failed to apply for the site licence to import backfill materials.**

> *"Trodell Plant Ltd may have also been involved in the back filling. Having made enquiries with Mr J Bailey of Trodell Plant Ltd, no information was available regarding the type or quantity of material used to infill the pit. Further research is advised in this respect given the potential for land gas and contamination."*
> ***Reference: ES Addendum J9015 Phase 11 Report 24 November 2006*** *(WPC Emphasis)*

1.4 Most people who have lived in the area know Jim Bailey and his work. I personally knew his wife, Sonya Bailey, who conducted arts classes in one of the outbuildings of Cricketts Farm. It was located next to the quarry.

1.5 Trodell Plant controlled the backfill operation that was conditioned to be backfilled under 'site licence' regulation. Kingsway and later H+H were the site owners and held the planning consents; it was therefore their responsibility to ensure that conditioning on the consents was adhered to.

1.6 **What followed was a catastrophic failure of compliance, regulation and enforcement**. The facts are as follows:-

- **No backfill licence was applied for by Celcon** before starting the backfill operation. It appears that although KCC issued the consent and was aware that the exhausted quarry would require huge quantities of backfill material, no site inspections took place.
- Likewise, the Environment Agency did not follow up or inspect the quarry
- Kingsway and, from November 2011, H+H had their head office next to the aircrete factory and yet made no effort to check that the site tipping licence was in place or to inspect the nature of the backfill material that hundreds of tippers were depositing in their quarry.
- **Trodell Plant Ltd did not keep any records of what was tipped in the quarry, and there was no oversight of their operations.**

2.0 Contamination within Ightham Sandpit

2.1 For the purposes of the Local Plan, Ightham Sandpit has been split into two areas. Area B is to provide the start of a bypass road between Dark Hill in Ightham and Nepicar on the A20, Wrotham Heath.

2.2 In April 2007, H+H Celcon applied for consent to build an aircrete block factory in Ightham Sandpit. Part of the application included a bypass road along the line of Area B. The consent was 'called in', and a Planning Inquiry was held. **Ref: APP/W2275/V/06/1199658**

2.3 The Environment Agency and KCC required the applicant (H+H Celcon) to carry out intrusive testing for contamination of the backfilled quarry.

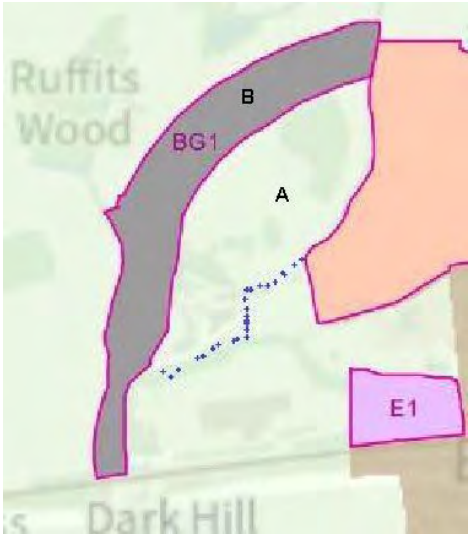


Figure 1: Ightham Sandpit in Local Plan

2.4 The Inquiry became aware of the results of the tests when an EIS Addendum was published in April 2007, very late in the day. It included a letter informing Celcon's barrister of severe site contamination, in advance of informing the Environment Agency, Southern Water and KCC.

> *"The intrusive investigation by Southern Testing Ltd has to date identified* ***noxious fill materials, comprising hydrocarbon stained and odorous sandy clayey made ground including large quantities of metal, pipe work, occasional drums (unknown content), concrete, brick, plastic and polythene.*** *They have advised material of this nature is usually*

*found to contain elevated concentrations of contaminants and given the unknown source and age of the materials a concern remains regarding the possibility of asbestos contamination. In response to the advice from Southern Testing Ltd gas monitoring and ground water testing equipment has been fitted to the boreholes because of the potential threat to the groundwater and from landfill gas". **Reference: Barton Wilmore letter of 24th October 2006 updating barrister In Appendix C*** (WPC emphasis)

2.5 All infill had been conditioned to be inert and non-putrescent, and the line of the bypass was conditioned to use hassock from a local quarry to provide a stable base for the road. No conditioning was adhered to.

2.6 The contamination is site-wide due to the indiscriminate dumping of waste and the contamination of groundwater.

*"13.15 Groundwater contamination in the form of heavy metals, semi-metals and organic contaminants. Of greatest concern are the elevated PAHs and Petroleum Hydrocarbons (EPH), which have been identified in **all boreholes, and appear to be widespread across the site**.(WPC emphasis)*

13.16 In addition, elevated methane, carbon dioxide and a corresponding depletion of oxygen has been detected in the majority of boreholes across the site. On the basis of the results to date, the site would be classified as Gas Regime D, necessitating specific protection measures to buildings and services on the site.
Reference: Barton Wilmore EIS Addendum 2

2.7 Analysis of the map in Appendix B demonstrates that the following Test Pits and Bore Holes are in, or close to, Ightham sandpit Area B, and consequently impacting the line of the proposed new road in the Local Plan.

Bore Holes (BH) 3, 5, 9, 10, 11, 12 & Test Pits (TP) 5, 6, 7, 9, 10, 11

2.8 If you cross-reference the findings in the Logs of Test Pits and Bore Holes in Appendix B, then the following is apparent.

a) No evidence of hassock exists, which was the conditioned sub-strata base for the road.

b) Frequent mention of aircrete, presumably factory spoil. Aircrete is soft and porous and totally unsuitable as a foundation material.

c) Organic and solvent odours.

d) Recordings of plastic, metal and wood, which are not suitable foundation materials as they are unstable.

e) Strong hydrocarbon odours in BH5 and BH12, both within Area B and close to the proposed road and close to each other geographically. This would indicate significant hydrocarbon contamination at the exit point for the road from Area B. This also coincides with the start of proposed development in the Borough Green Landfill quarry.

2.9 Southern Testing Environment and Geotechnical ("ST") produced a table of Hydrocarbons they measured in 'Made Ground', as tabulated by excavation reference from the map in Appendix B. They are either a test pit dug with a JCB or

a Bore Hole drilled with a 150 mm auger. The results that affect Local Plan Area B are in Appendix D

2.10 The emboldened text is ST emphasis denoting the most serious examples of contamination. The yellow highlight is WPC emphasis denoting those locations impacting Area B, as in paragraph 1.7.

2.11 It is notable that the north east of the quarry, the area between TP5 and 6 in the south and TP9, BH12 and BH5 in the north is the area most heavily affected by petroleum hydrocarbon contamination.

Petroleum Hydrocarbens in Made Ground

Description	Volatile Hydrocarbons C5-C12	Extractable Hydrocarbons C12-C35	Total Petroleum Hydrocarbons C5-C35	Extractable Petroleum Hydrocarbens C10-C40	Possible Fuel Type
TP1 @ 1.0m	**<0.01**	**1100**	**1100**	**-**	**-**
TP1 @ 2.5m	-	-	-	360	Unresolved – possible PAHs
TP2 @ 2.0m	-	-	-	300	Unresolved – possible PAHs
TP3 @ 3.0m	-	-	-	260	Unresolved – possible PAHs
TP4 @ 1.5m	-	-	-	120	Unresolved
TP5 @ 2.0m	**<0.01**	**840**	**840**	**-**	**-**
TP5 @ 2.8m	**-**	**-**	**-**	**1300**	**Unresolved – possible PAHs**
TP6 @ 2.0m	**-**	**-**	**-**	**9900**	**Unresolved**
TP7 @ 2.5m	-	-	-	140	Unresolved
TP8 @ 2.5m	<0.01	41	41	-	-
TP9 @ 1.5m	**-**	**-**	**-**	**3700**	**Unresolved – possible PAHs**
TP9 @ 2.9m	-	-	-	100	Unresolved
BH1 @ 7.5m	-	-	-	29	Unresolved
BH2 @ 1.0m	**-**	**-**	**-**	**630**	**Unresolved – possible PAHs**
BH2 @ 6.0m	-	-	-	450	Unresolved – possible PAHs
BH2 @ 7.0m	-	-	-	58	Unresolved
BH3 @ 6.0m	-	-	-	140	Unresolved
BH5 @ 5.0m	-	-	-	55	Unresolved
BH6 @ 2.0m	-	-	-	320	Unresolved – possible PAHs
BH6 @ 6.0m	-	-	-	25	Unresolved
BH7 @ 6.0m	-	-	-	86	Unresolved – possible PAHs
BH7 @ 7.0m	-	-	-	280	Unresolved – possible PAHs
BH11 @ 2.0m	-	-	-	52	Unresolved
BH12 @ 9.0m	**-**	**-**	**-**	**2800**	**Unresolved – possible PAHs**
BH12 @ 10.0m	**-**	**-**	**-**	**3500**	**Unresolved – possible PAHs**

Reference: Southern Testing Contamination Analysis (Environmental Statement Addendum – April 2007)

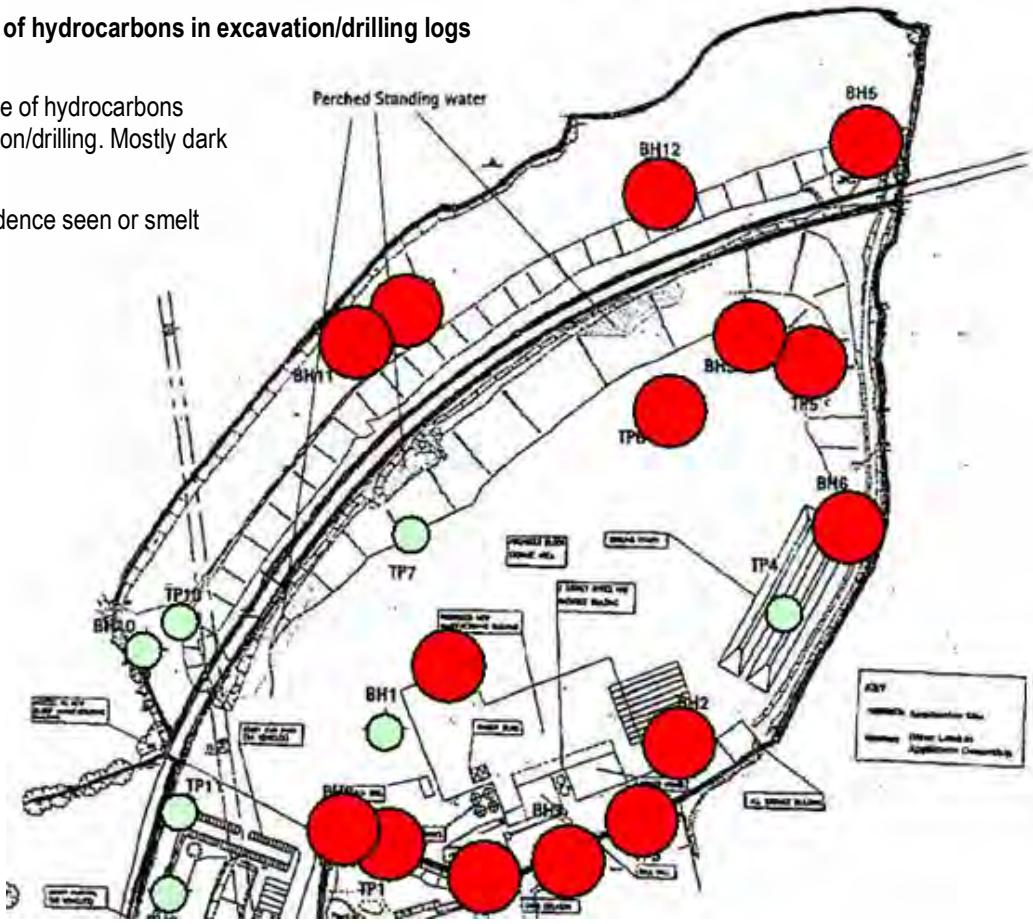
2.12 CPRE presented expert hydrologist Sean Furey (MSc MCIWEM FRGS), whose evidence further demonstrated widespread site contamination and a failure to comply with planning conditions. Sean Furey's Proofs of Evidence are included in Appendix E.

2.13 Sean Furey analysed the Southern Testing analysis results and then presented them spatially on the Southern Testing map of excavations, to highlight the hottest areas of contamination.

Figure 3 – Evidence of hydrocarbons in excavation/drilling logs

Red Circle – evidence of hydrocarbons found during excavation/drilling. Mostly dark stains and odour .

Green Circle- no evidence seen or smelt

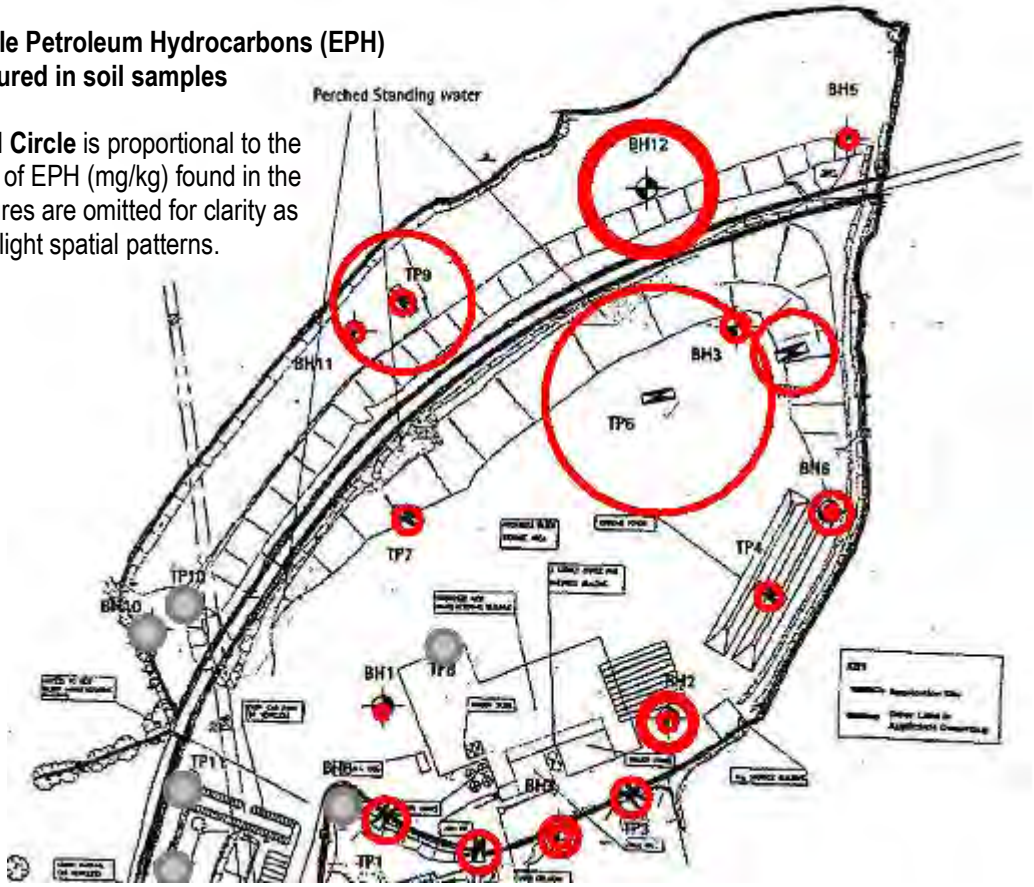


Reference: Figure 3 from Sean Furey's Proof of Evidence (Appendix E)

Figure 4 – Extractable Petroleum Hydrocarbons (EPH) concentration measured in soil samples

The area of each **Red Circle** is proportional to the relative concentration of EPH (mg/kg) found in the soil at each site. .Figures are omitted for clarity as the purpose is to highlight spatial patterns.

Grey Circle- no data



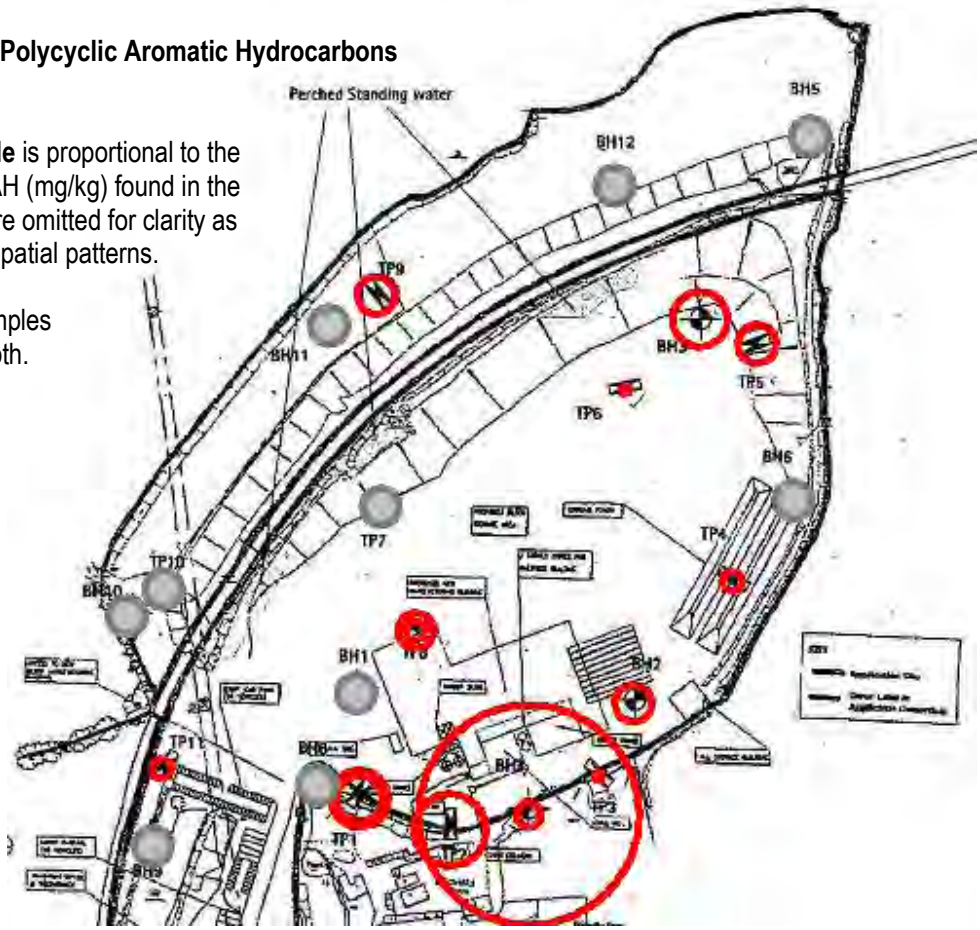
Reference: Figure 4 from Sean Furey's Proof of Evidence (Appendix E)

Figure 5 – Distribution of Polycyclic Aromatic Hydrocarbons (PAH) in soil samples

The area of each **Red Circle** is proportional to the relative concentration of PAH (mg/kg) found in the soil at each site. .Figures are omitted for clarity as the purpose is to highlight spatial patterns.

Multiple circles indicate samples taken at more than one depth.

Grey Circle- no data



Reference: Figure 5 from Sean Furey's Proof of Evidence (Appendix E)

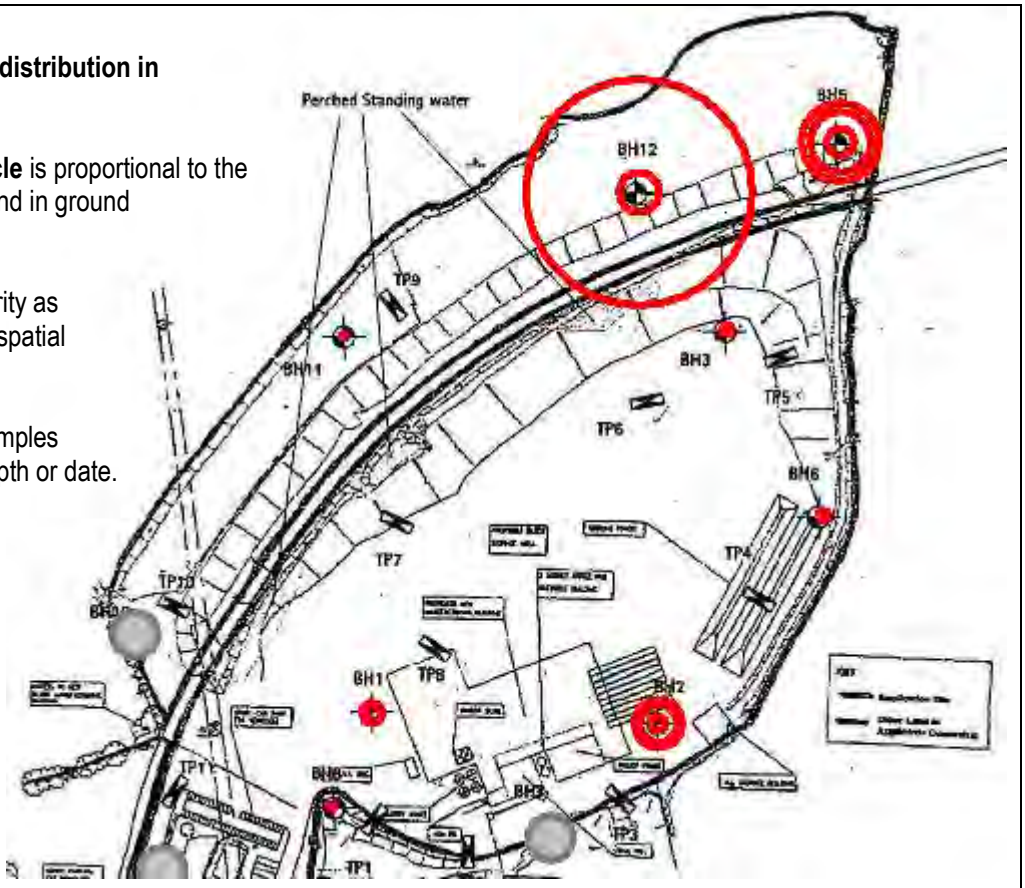
Figure 6 – Hydrocarbon distribution in groundwater samples

The area of each **Red Circle** is proportional to the relative concentrations found in ground water at each site.

Figures are omitted for clarity as the purpose is to highlight spatial patterns.

Multiple circles indicate samples taken at more than one depth or date.

Grey Circle- no data



Reference: Figure 6 from Sean Furey's Proof of Evidence (Appendix E)

Definitions

Petroleum Hydrocarbons		Petroleum fuels and oils are complex mixtures of hydrocarbons that vary, not only among the fuel types, but also within each fuel type depending upon manufacturer, geographic location, and seasonal use. The compositions of these products are made up of several hundred hydrocarbon compounds. Of these hundreds of compounds, toxicological information is available on only a very few. This makes determining the health risk posed by petroleum hydrocarbons difficult.
Extractable Petroleum Hydrocarbons	EPH	These aliphatic and aromatic hydrocarbon ranges correspond to a boiling point range between approximately 150 °C and 500 °C and have 12 to 35 carbon atoms per molecule. These include most diesels, lubricating oils, greases, waxes, hydraulic oils.
Polycyclic Aromatic Hydrocarbons	PAH	Polycyclic aromatic hydrocarbons is a group name for several substances present in petroleum based products such as coal tar. The standard is 0.1 µg/l for the sum of all the substances. Some PAHs are known carcinogens. The molecular structure is based on multiple benzene rings (rings of 6 carbon atoms). Benzo(a)pyrene is one of several PAHs. Their source in drinking water is as a result of deterioration of coal tar which many years ago was used to line water pipes. Due to extensive water mains refurbishment and renewal it is now rare to detect this substance in drinking water. The standard is 0.01 µg/l.
Volatile Hydrocarbons	VH	Hydrocarbons that vaporise readily into the atmosphere. They are typically defined as having 5 to 12 carbon atoms per molecule.
Total Petroleum Hydrocarbons	TPH	This is the total amount of hydrocarbons that was found in a given sample, this includes EPHs, PAHs and volatile hydrocarbons.

Reference: Definitions from Sean Furey's Proof of Evidence (Appendix E)

3.0 Bearing Capacity and Foundation Considerations

3.1 The line of the road was conditioned to have been based on hassock imported from a local quarry. If you consider the ST BH12 excavation log, there is 0.6m of low-medium strength sandy clay, clinker fragments 3-4m, crushed aircrete blocks 5-6m and then low strength silty, sandy, clay with aircrete blocks, brick and strong hydrocarbon odours. A total of 10m of unsuitable base material that is heavily contaminated and contains no hassock.

3.2 The ES Addendum, published in light of the ST report, said this.

> *A maximum depth of Made Ground of 12.4m has been established in the pit floor, with average depths in the range 6-12m, Fill soils placed in a relatively uncontrolled manner will be subject to significant primary and secondary 'creep' settlement that may continue for many years.* ***This gives rise to potentially significant problems with respect to any settlement sensitive structures (i.e. buildings, drains, roads/parking areas etc) as large differential settlements can occur as a result of variations in the fill density and fill type****. (WPC Emphasis) Older fill soils are not as susceptible to large settlements as those recently placed. Special foundations such as piles will therefore be required. and due consideration given to the potential effects of continued settlement on piles and other foundations as well as drains and other services, parking areas and roads (which may also require special foundations}.*
> ***Reference: Section 18 Environmental Statement Addendum – April 2007***

3.3 Given the highlighted unstable nature of the 'Made Ground' and it's significant depth of up to 12.4m, then structural surveys will be required to establish the foundations necessary to support the road and associated infrastructure. Cycle ways, pedestrian pavements, drainage, and lighting columns will all be necessary in addition. For example, piling the made ground will likely be necessary to give civil engineers confidence in the design. The ES Addendum had this warning in that respect.

> *Any scheme for foundations, services or other intrusive work shall need to be considered in the context of changing or potentially worsening the contaminative state of the soils and groundwater (for example, piles providing a conduit for soil contaminants to enter the groundwater) and design details should be agreed with the regulatory authorities prior to any ground works being carried out.*
> ***Reference: Environmental Statement Addendum – April 2007***

4.0 Conclusions on Contamination

4.1 Celcon failed to obtain a site licence before starting backfill operations, and the import of materials without a site licence is an unlawful activity. Celcon contracted out the backfill management to Trodell Plant Ltd.

4.2 There were decades of unlawful tipping in Ightham Sandpit with no Celcon Management oversight, no Mineral Planning Authority oversight and no intervention from the Environment Agency.

4.3 ST excavated ten test holes with a JCB, and the holes were scattered across 20 ha. Test pits are typically a few square meters in area. They found the following.

> ***"…noxious fill materials, comprising hydrocarbon stained and odorous sandy clayey made ground including large quantities of metal, pipe work, occasional drums (unknown content), concrete, brick, plastic and polythene."***
> ***Ref: Appendix C***

In area and volume terms, only a small proportion of the ground has been investigated. Given the complete lack of oversight and the decades of unchecked backfill, there are likely to be many more sources of contamination underground.

4.4 Of particular concern are the metal drums of unknown content. Such drums take a long time to rust and leak their contents, and they are a concentrated and localised source of contamination. They could contain dangerous substances; without records, we just don't know what the potential dangers and consequences are.

4.5 A letter from Barton Willmore (24 October 2006) states:

> *"The site is partly located on a Catchment Source Protection Zone and the aquifer status is considered sensitive. The EA in their consultation response to the scheme considered the potential to cause groundwater contamination was high…"*
> ***Reference: Appendix C***

4.6 The Environment Statement Addendum considered the risk to the water table as follows:-

> *"A Zone of Special Interest is located 599m east and a groundwater source point (possibly a well, borehole or spring) is found 918m east of the site. Based on the distribution of SPZ's, the predominant hydraulic gradient within the aquifer would appear to be to the north. We therefore anticipate groundwater contaminant transport will also be predominantly to the north*."
> ***Reference EDSR Para 2.3.1 headed 'Groundwater Vulnerability***

4.7 Section 3.0 of this document establishes that the made ground was laid deep and in an uncontrolled manner.

> *"A maximum depth of Made Ground of 12.4m has been established in the pit floor, with average depths in the range 6-12m, Fill soils placed in a relatively uncontrolled manner will be subject to significant primary and secondary 'creep' settlement that may continue for many years".*
> Reference: Section 18 Environmental Statement Addendum – April 2007

4.8 The most important aspect of this response is to realise that all of the problems outlined above and in the numerous reports of the Public Inquiry have not been addressed. H+H Celcon withdrew its application without explanation.

4.9 The obvious reason would be that the cost of remediation and the hugely increased cost of road and factory construction made the project unviable. They

had expected an inert and structured infill and a road base of imported hassock. Instead, they had remediation, potential subsidence and Great Crested Newts.

4.10 That decision came as a welcome relief to all of the agencies that had failed in their duty to regulate. KCC, the EA, Southern Water and Celcon turned a blind eye to the environmental catastrophe that had come to light and walked away.

4.11 Since then, the site has been left to fester away, shrubs have grown, a few sheep have been spotted grazing, and the Great Crest Newts have multiplied.

4.12 Time and natural processes slowly remediate land to some degree, but 'drums of unknown content' don't disappear easily. Remediation and the costs of piling the foundations of a road cannot be predicted, and developers want certainty.

4.13 A Planning Inspector will need to establish whether a policy in the local plan is both viable and deliverable within the required time frame. This is the first stage of a hugely challenging development across active working quarries and is unfunded by associated housing or commercial development within the quarry.

5.0 Quarry Ecology

5.1 Ecology Solutions was commissioned by Barton Willmore, on behalf of H & H Celcon Limited, to undertake an ecological assessment of the land at the former mineral extraction site at Ightham Sandpit (see plan ECO2, Figure 2) for inclusion within an Environmental Statement.

5.2 This ecological assessment included surveys to establish the presence/absence of protected species within the site. Accordingly, Ecology Solutions undertook specific surveys for Great Crested Newts and common reptiles, together with several other protected species.

5.3 Natural England raised concerns and objected during the application process, mainly due to insufficient survey work on protected species. These species included Great Crested Newts, other amphibians, reptiles, lizards, and snakes found on the site. The potential risk to existing protected species populations was also a factor.

5.4 The report highlights the main ecological issues concerning Great Crested Newts within the application site and details the survey methods employed and the results of the survey work undertaken by Ecology Solutions in April, May and June 2006. It also details the results of surveys undertaken during the same time period to ascertain the population size of common reptile species which are known to be present at the site.

5.5 The ecologists used torch, bottle trap and netting in the breeding ponds during the breeding season, and the results are listed in the Summary Tables in Figure 7. GKNs were present in most ponds, as were palmate and smooth newts. A total of 38 GKNs were caught in pond OW1 in 1 survey.

5.6 The survey is summarised as follows: -

"The results show that the application site supports a medium meta-population of GCNs as evidenced from the pond surveys." (Figure 2).

"Maximum counts of 24 Common Lizards and 6 grass snakes were recorded in the application site during the reptile site as well as one slow worm. One grass snake was recorded in the water."

5.7 Since the surveys were conducted in 2005/6 the area has been left relatively untouched. Given that there are nine established GKN breeding ponds, populations of all the protected species will likely have increased.

5.8 Ecology Solutions concluded their report with the following proposal.

"5.3.1. It is predicted that without any mitigation measures there would be some negative impacts upon the Great Crested Newt, Common Lizard, Slow Worm and Grass Snake populations as a result of the development proposals. As such, it is proposed to undertake a relocation and exclusion exercise, combined with a habitat creation / enhancement programme of a receptor area, in order to ensure that there would be no detriment to the maintenance of the populations ….."
Reference: Ecology Solutions Report for Environmental Statement Addendum

5.9 Further surveys will be needed to establish current populations, and mitigation strategies will be required. A donor area of additional suitable land will be necessary, somewhere that the species affected by development can be translocated into. Area A of Ightham Sandpit is unlikely to be enough land to accommodate translocated species.

5.10 Protected species do not prevent development per se; they add time and costs as follows.

1. Translocation can only occur outside of the breeding season, which is species dependent.

2. A donor site (extra land) is required with the necessary habitat.

3. There is the cost of preparing the donor site, the cost of contracting ecological expertise to trap and move the protected species.

4. The cost of the donor site land that is effectively sterilised for further development.

Figure 7: Ecology Solutions Survey Results

5. SURVEY RESULTS



POND OW1

Survey Number	Great Crested Newts			GCN*	Smooth	Palmate
	Bottle Trapping	Netting	Torching			
1	1	0	32	32	7	1
2	0	0	21	21	4	1
3	0	0	9	9	6	0
4	1	2	35	35	0	0
5	0	0	0	0	0	0
6	0	0	0	0	0	0

POND OW2

Survey Number	Great Crested Newts			GCN*	Smooth	Palmate
	Bottle Trapping	Netting	Torching			
1	0	1	5	5	1	2
2	2	0	6	6	0	0
3	0	0	2	2	2	0
4	0	0	4	4	2	0
5	1	2	13	13	2	1
6	1	0	9	9	2	0

POND OW4

Survey Number	Great Crested Newts			GCN*	Smooth	Palmate
	Bottle Trapping	Netting	Torching			
1	1	0	2	2	1	0
2	1	0	1	1	2	1
3	0	0	0	0	4	0
4	0	0	4	4	6	1
5	0	0	0	0	0	0
6	Pond dried up					

POND OW5

Survey Number	Great Crested Newts			GCN*	Smooth	Palmate
	Bottle Trapping	Netting	Torching			
1	0	0	0	0	0	0
2	0	1	0	1	3	0
3	0	1	2	2	2	1
4	0	0	1	1	8	1
5	0	0	1	1	0	0
6	1	0	3	3	0	0

POND OW6

Survey Number	Great Crested Newts			GCN*	Smooth	Palmate
	Bottle Trapping	Netting	Torching			
1	0	0	0	0	5	2
2	1	0	0	1	3	0
3	0	0	0	0	0	0
4	0	0	0	0	0	0
5	0	0	0	0	0	0
6	0	0	0	0	0	0

POND OW7

Survey Number	Great Crested Newts			GCN*	Smooth	Palmate
	Bottle Trapping	Netting	Torching			
1	0	0	0	0	1	0
2	0	0	13	13	7	0
3	1	0	3	3	6	0
4	2	0	7	7	1	0
5	0	0	2	2	2	0
6	0	0	0	0	3	1

POND OW8

Survey Number	Great Crested Newts			GCN*	Smooth	Palmate
	Bottle Trapping	Netting	Torching			
1	0	0	2	2	1	0
2	1	0	0	1	2	0
3	0	0	2	2	2	1
4	0	1	0	1	0	0
5	1	0	0	1	1	0
6	3	1	1	3	0	0

POND OW10

Survey Number	Great Crested Newts			GCN*	Smooth	Palmate
	Bottle Trapping	Netting	Torching			
1	0	0	0	0	0	0
2	0	0	15	15	6	0
3	0	0	0	0	1	0
4	0	0	2	2	1	0
5	0	0	0	0	1	0
6	0	0	3	3	0	0

Reptile & Amphibian Survey Report October 2006

6.0 Quarry Discussions



Figure 8- Land Adj A20 Nepicar & Rear of Nepicar Hse

6.1 These two plots contain minerals that are safeguarded by the MPA's Mineral Plan. The integrity of the Mineral Plan is dependent on the non-sterilisation of its reserves.

6.2 The plots are currently green fields that benefit from a Mineral Quarrying Option. The company holding the legal option is fully committed elsewhere in Tonbridge and Malling on a remote quarry with many years left of extraction.

6.3 For BGG to be deliverable, a road needs to be constructed across these plots and a roundabout junction constructed on additional land and the A20.

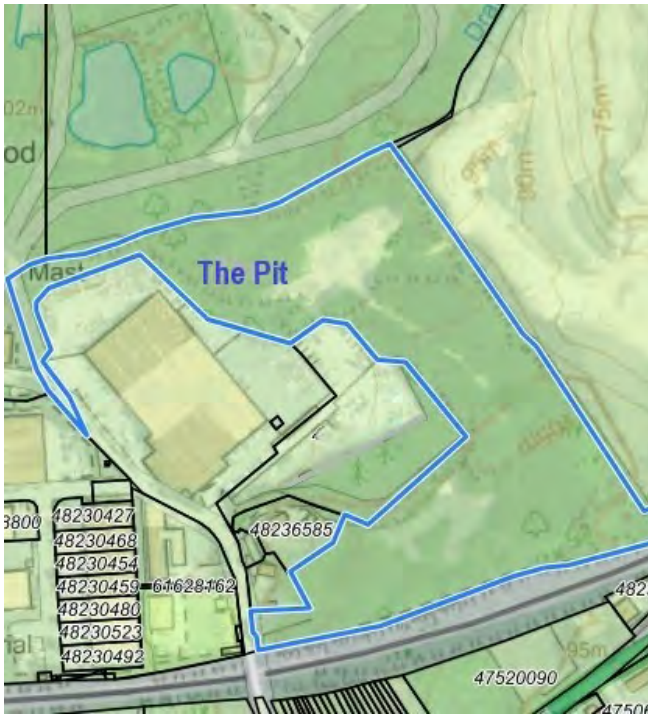


Figure 10- Westerly Extension



Figure 9- Nepicar Sand Quarry ("NSQ")

6.4 The Nepicar Sand Quarry "NSQ" found that the water table was deeper than originally considered, allowing a deepening of the quarry floor by 2m to 63m AOD. This will eventually result in an additional 190,000 tonnes of mineral.

6.5 There was also the opportunity of extending the quarry westerly, towards the industrial estate. This is normally a sequential process where the existing reserves are near exhaustion before moving into an extension area. However, in this case, the opportunity to extend the workings presents itself now.

6.6 Essentially, this means the quarry's current depth allows for westward extension at various levels without needing to significantly backfill the remaining area, ensuring all existing infrastructure and haul roads can be used to process the extracted reserve.

6.7 KCC required NSQ to complete an intrusive contamination investigation of an area of previously 'made ground', known as 'The Pit', located to the north of the site in Fig 3 above. The following are extracts from the Remediation Method Statement for Asbestos Fibre Ground Contamination that was identified.

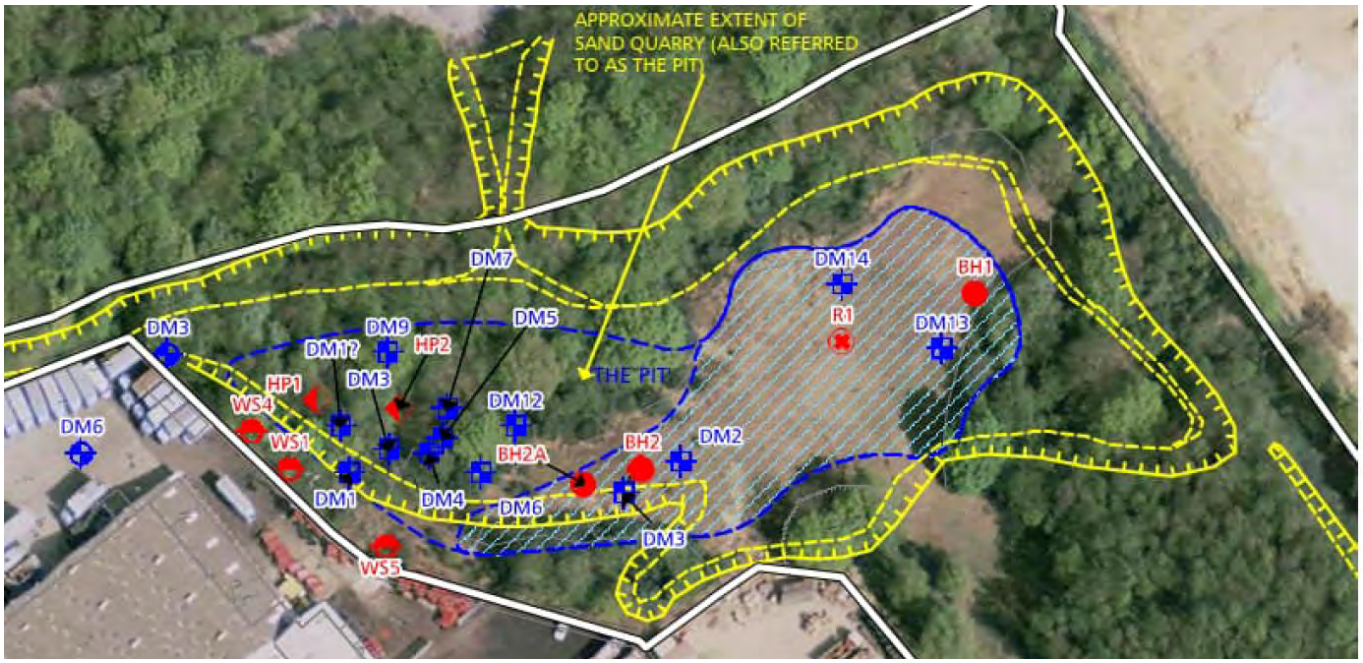


Figure 11: Remediation Method Statement for Asbestos Ground

"Asbestos Contamination has been discovered in previous workings known as 'The Pit'
In this case there are a number of stakeholders associated with the extension of the site other than the Developer itself. These include the Environment Agency and the Planning Authority.

4.1 Human Health Risks
Asbestos becomes a risk to human health if loose asbestos fibres are inhaled. There are four main
diseases commonly associated with asbestos inhalation; namely:

- *Mesothelioma;*
- *Lung cancer;*
- *Asbestosis; and*
- *Plural thickening.*

Asbestos is a Category 1A carcinogen and as such harm to human health could occur at any level of exposure. In practice however, elevated risk comes from being exposed to concentrations of
respirable fibres that are considered elevated above normal 'background' concentrations. The Health and Safety Executive (HSE) provides a variety of information in relation to working with asbestos and asbestos risks are controlled in the UK by CAR, 2012.

5.1 Clarification of Potential Pollution Linkages
As discussed in Section 2.3, and based on a review of the 2024 SOCOTEC report (with which SLR is in general agreement) the relevant PPL's are:

- *PPL 1 - Inhalation of airborne asbestos free fibres by current and future users of the site, resulting in a Severe consequence, Likely probability and High risk;*
- *PPL2 - Inhalation of airborne asbestos free fibres by neighbouring site occupants, resulting in a Severe consequence, Low probability and Moderate risk.*

Both of the above relate to recorded concentrations of loose asbestos fibres in soils within the area of the Pit. *PPLs associated with other contaminants within the Pit area are not considered to be present due to the reasons discussed in the sections above. This Remediation Strategy relates to asbestos, which is considered to be the only contaminant of concern.*

5.4 Outline Remediation Strategy

Given the commentary above no one remediation technique is likely to be appropriate in this case. Essentially off-site disposal is costly and unsustainable, treatment may not be achievable and is, again, costly and in-situ remediation/capping cannot be delivered due to the need to remove mineral beneath Made Ground in the Pit area.

From the above the following outline remediation is proposed:
1. Management of short-term asbestos risks during the excavation/stockpiling/placement of any Made Ground from the Pit area via the production of a Regulation 6 asbestos risk assessment and Regulation 7 Plan of Work;
2. Incorporate the above risk assessment into an AMP, which will provide more detail in terms of roles, responsibilities and methodologies;
3. Selectively excavate the Pit area in layers while maintaining an asbestos watching brief for possible visible asbestos;
4. Undertake an asbestos watching brief and remove of any visible asbestos by hand (and/or evaluate the need for a mobile treatment permit depending on the amount of asbestos
encountered) to provide environmental betterment;
5. Temporary stockpiling of Made Ground excavated from the Pit;
6. Inspection and testing of "clean" sand beneath Made Ground to determine whether this material remains a viable mineral resource;
7. Following extraction of mineral, replacement of the Made Ground within the void as part of a low-level restoration under controlled conditions;
8. Provision of a clean cover system comprising overburden from other areas of the site and/or clean soils imported from off-site."
Ref: Remediation Method Statement for Asbestos Ground Contamination - 28 May 2025

6.8 The Westerly Extension releases a further 940,000 tonnes into the mineral reserve, which is deliverable in the short term. The timeframe of the estimated quarry extension of ten years is now in doubt due to the time necessary to deal with the asbestos remediation issues. It is, however, positive that a significant human health risk has been identified and ongoing quarrying will remediate the risk.

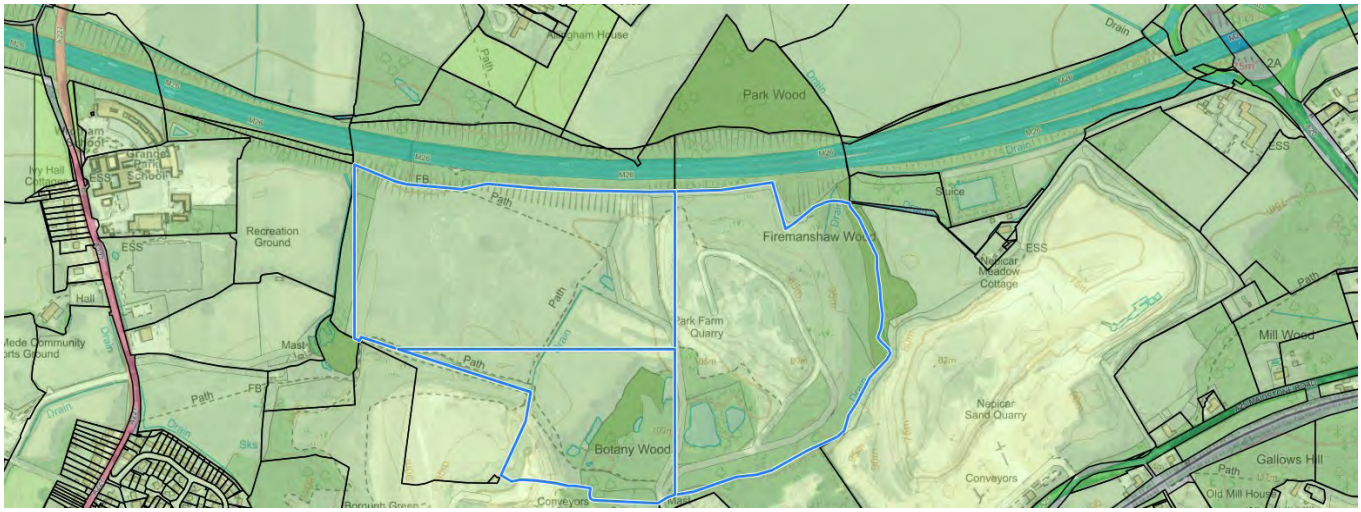


Figure 12- Park Farm Quarry

6.9 Park Farm Quarry has consents for the extraction of clay and sand. Most of the clay was quarried to supply local brickworks that eventually closed and have been subsequently demolished. The sand extraction consent is still extant until 2040, although not currently quarried. There remains an overburden of clay with underlying sand.

6.10 There has been no take-up of the sand quarrying opportunity for decades, so it would seem logical that it is considered unviable

6.11 There was a restoration order on the land to be completed by 2042, but no restoration has taken place.

6.12 The land has remained stable for decades, which allows height and distance measurements from OS Mapping. The peak of the basin in the west is just over the 100m contour. In the east, it rises past the 95m contour, with the centre dipping to 75m.

6.13 There is therefore a fall in ground level of 25m, immediately rising by 22m over a distance of 270m. This is not a land profile that can easily be developed in terms of housing or road building. Given that the works have been abandoned for decades, how will the BGG development proposals be achieved?



Figure 13: Ancient Woodland, Google Earth

6.14 The area was once all ancient woodland, but the quarry and then the motorway took their toll, and now there are sections left.

6.15 Fortunately, Firemanshaw Wood is contiguous with Botany Wood, and a tunnel under the motorway provides a wildlife corridor linking all three woods.

6.16 The route of the bypass has not been specified, but there is a danger that it could fragment what remains



Figure 14: Borough Green Sandpit

of the ancient woodland.

6.17 Borough Green Sandpit have submitted a series of applications to the MPA over the course of 2025.

6.18 They all coordinate the cessation of quarrying activities for the 31st December 2030.

7.0 Conclusions

7.1 Park Farm Quarry lies between the M26, ancient woodland and the Platt Industrial Estate. A Relief Road must be routed through somehow for the Plan to be deliverable.

7.2 Over just 270m, the land falls 21m and then rises 25m east to west, and there is a similar pattern north to south. There is a shortfall in land volume of hundreds of thousands of tonnes of minerals that was never replaced. Since quarrying, the land has been sold on, but no one is interested in mining the remaining resource and the consequent restoration, possible due to viability issues.

7.3 The plot would be very expensive to develop in terms of housing, and the road and the site cuts BGG in two.

7.4 The discovery of asbestos fibre in the soil of the pit is of great concern. Wind-blown fibres are the most dangerous form of asbestos as they can be absorbed directly into the lungs.

7.5 The Pit is located adjacent to the Platt Industrial Estate, where many people work daily.

7.6 The remediation strategy sounds robust and very necessary. Double handling of large quantities of dangerous material will cause significant delays, and the time factor may be difficult to predict with accuracy.

7.7 The green fields towards the A20 are safeguarded under the mineral plan and benefit from a legal quarrying option. However, the option has not been taken up because the mining company is busy with a remote quarry.

7.8 Borough Green Gardens is riddled with unknown factors that make its deliverability uncertain. Unknown factors equate to unknown costs and viability issues.

7.9 Planning Inspectors dislike local plans that are dependent on a single large development, as they take too long and are prone to unforeseen issues.

7.10 The Parish Alliance questions what an inspector will make of a single large development on a series of active quarries, two of which are known to be contaminated.

7.11 The previous TMBC Local Plan failed on a legal technicality at the outset, resulting in a significant loss of public funds and preventing the Borough Green Gardens (BGG) policy from being scrutinised at the inquiry. Given this precedent, the Parish Alliance questions the wisdom of committing extensive administrative effort and substantial public funding to such a high-risk policy within the new Local Plan.

County Planning Officer Robin Thompson MA, Dip TP, PPRTPI

Kent County Council
PLANNING

County Planning Department
Springfield
Maidstone
Kent ME14 2LX
Fax: (0622) 687620
Tel: (0622) 671411

Kingsway Group plc
Celcon House
289-293 High Holborn
London
WC1V 7HU

Ext: 696142
Ask for: Mrs F Gooch
Your ref: JBT/PAN
Our ref: EB/FG/JS/TM/85/1436
Date: 8 April 1992

FAO Mr J B Tebbit

Dear Sir

PLANNING PERMISSIONS TM/85/1436 (PART) AND TM/87/1851: IGHTHAM SANDPIT, BOROUGH GREEN

The County Council as County Planning Authority has now formally considered the request for a variation of condition (i) imposed on each of the above planning permissions dated 26 May 1988, to allow for an extension of time for a further period of 6 months.

The Authority hereby approves the request as set out in your letter dated 21 October 1991 and as amended by the letter from Keith Funnel Associates dated 24 March 1992, as a variation of the aforesaid condition.

Condition (i) now should state as follows:

"Extraction of minerals from the site and all filling operations hereby required and permitted shall be completed on or before 30 September 1992 or within such longer period as the County Planning Authority may approve;"

and the planning permissions in respect of TM/85/1436 (part) and TM/87/1851 shall be read accordingly.

You are reminded that the remaining conditions imposed on each of the planning permissions continue to apply.

In addition, the County Council as County Planning Authority has now formally considered the details submitted pursuant to the following conditions imposed on each of the above planning permissions:

condition (iv) - scheme of working
condition (v) - scheme of restoration

Made with Recycled Fibre

condition (vii) - scheme of landscaping and tree planting
condition (xviii) - scheme of agricultural aftercare

The Authority hereby approves the details as follows:

- Your letter dated 21 October 1991 with enclosed document 'Working, Restoration and Aftercare Proposals' dated October 1991 prepared by Keith Funnell Associates;

- your letter dated 12 November 1991 with accompanying drawing nos. CS/L5 Rev. No. A and CS/L9 ("typical cross section");

- letter from Keith Funnell Associates dated 21 February 1992 with accompanying drawing nos. CS/L5 Rev. No. B and CS/L8 Rev. No. A ("sections");

- letter from Keith Funnell Associates dated 5 March 1992 with accompanying drawing no . CS/L5 Rev. No. B showing the limit to which it is proposed to restrict excavations in the north eastern area of the site between chainages 900-1100;

- fax from Keith Funnell Associates dated 17 March 1992;

- fax from Keith Funnell Associates dated 24 March 1992,

as satisfying the requirements of the aforesaid conditions (iv), (v), (vii) and (xviii), subject to the following provisos:

a) the importation of hassock for use in embankment fill beneath the route of the proposed Borough Green Bypass shall be emplaced in sufficient quantities such that by 30 September 1992 condition (xxiv) on planning permission TM/85/1436 (part) and condition (xxvi) on planning permission TM/87/1851 are fully complied with; and

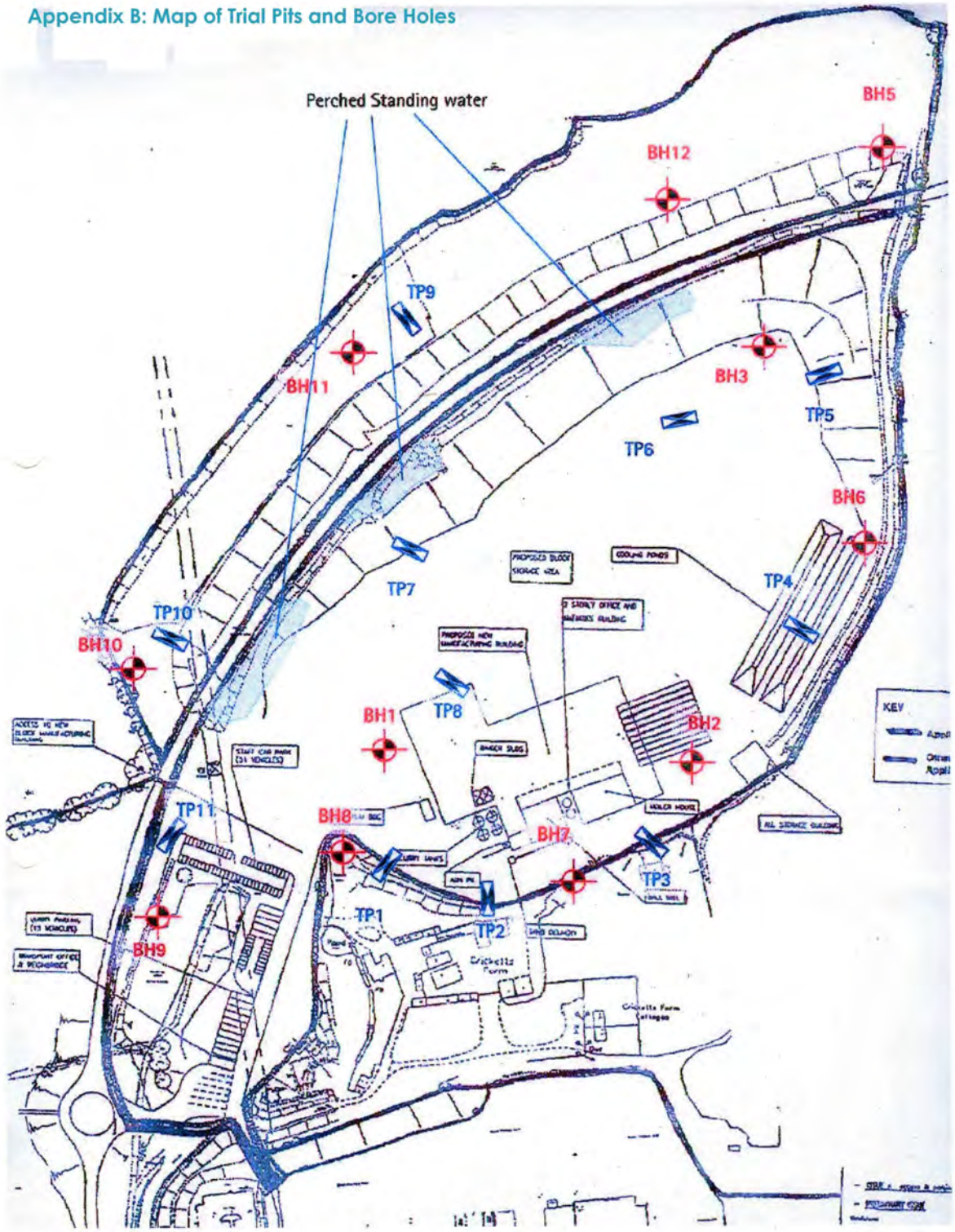
b) all tipped material shall be confined to inert, non-toxic, non-putrescible material.

Finally, please note that with the exception of the embankment fill required to be emplaced along the route of the proposed Borough Green Bypass, a site licence needs to be obtained prior to the importation of any other materials for the purposes of restoring the remainder of the site.

Yours faithfully

for County Planning Officer

Appendix B: Map of Trial Pits and Bore Holes



Copy from

BARTON WILLMORE

Venture House
27 - 29 Glasshouse Street
London
W1B 5BW

t 020 7446 6888
f 020 7446 6889

STL			
25 OCT 2006			
JMH		ALG	
MWS		CJP	
RCS		ENG	LB
DV		Accounts	
RB		Durkins	
HLS		Lab	
		S Mid	

The Clerk to Mr John Pugh-Smith
Chambers
39 Essex Street
London
WC2R 3AT

Our Ref: 12583/A2/AM

24th October 2006

Dear Sir

TOWN AND COUNTRY PLANNING ACT 1990 – SECTION 77
TOWN AND COUNTRY PLANNING (GENERAL DEVELOPMENT PROCEDURE) ORDER 1995

TOWN AND COUNTRY PLANNING (INQUIRIES PROCEDURE) (ENGLAND) RULES 2000

PLANNING APPLICATION REF: TM/03/2563 – DEVELOPMENT OF NEW FACTORY TO MANUFACTURE AERATED CONCRETE (JAMERA) PRODUCTS WITH OUTSIDE STORAGE, PARKING, NEW ACCESS AND ASSOCIATED FACILITIES AT IGHTHAM SANDPIT, BOROUGH GREEN ROAD, IGHTHAM, SEVENOAKS

We write with reference to the above in advance of our conference call with John Pugh-Smith, on Friday 27th October 2006 at 2.00 p.m. Other participants to the conference call will be Stuart Brittle from H + H Celcon Ltd, and Laura Brearley and Stuart Pratt from Southern Testing Ltd.

The purpose of the conference call is to consider the issue of potential site contamination identified during the ongoing intrusive site investigation being conducted by Southern Testing Ltd and the implications for the call-in inquiry.

Prior to the investigation work the assessment of ground conditions and water resources prepared by Southern Testing Ltd had been confined to desk-top analysis. Consultations with the Environment Agency (EA) and investigations by the applicant had found no records of the type of materials tipped at the site under the site's approved restoration scheme which had required use of inert materials and a site licence.

The site is partly located on a Catchment Source Protection Zone and the aquifer status is considered sensitive. The EA in their consultation response to the scheme considered the potential to cause ground water contamination was high and proposed a condition seeking determination of past and present uses of the site and adjacent area to ascertain the likelihood of contamination existing on site, with appropriate remediation being determined. Mid Kent Water commented that a detailed Environmental Assessment was required and requested to be involved in the consideration of groundwater protection. Kent CC's resolution to approve the scheme was subject to the applicant providing within 3 months further details to address groundwater protection. Counsel's advice confirmed that the intrusive investigation work should be undertaken and an ES Addendum be submitted to ensure robustness of the EIA process in advance of the call-in inquiry.

Certificate No. FS 28/97

The Barton Willmore Planning Partnership - London

Bristol Cambridge Edinburgh Leeds London Reading Solihull West Malling

In-filling at the site had been assumed to have been confined to inert material in accordance with the approved variation of condition (i) of planning permissions ref: TM/85/1436 (part) and TM/87/1851 dated 8 April 2002 which required that all tipped material be confined to inert, non-toxic and non-putrescible material and a site licence be obtained for the restoration work (see permission letter dated 8 April 2002 enclosed). Subsequent unauthorised over-filling of the site, understood to have taken place between 1991-2002, was regularised with a retrospective approval ref: TM/02/583 dated 3rd April 2002 for a revised restoration and aftercare scheme (see copy of permission dated 6 February 2002 enclosed).

The intrusive investigation by Southern Testing Ltd has to date identified noxious fill materials, comprising hydrocarbon stained and odorous sandy clayey made ground including large quantities of metal, pipework, occasional drums (unknown content), concrete, brick, plastic and polythene. They have advised material of this nature is usually found to contain elevated concentrations of contaminants and given the unknown source and age of the materials a concern remains regarding the possibility of asbestos contamination. In response to the advice from Southern Testing Ltd gas monitoring and ground water testing equipment has been fitted to the boreholes because of the potential threat to the groundwater and from landfill gas. However, the contamination test results required to provide an accurate analysis of the contaminative content and guide the appropriate remediation are still awaited (see e-mail dated 19th October 2006 received from Southern Testing Ltd providing a summary of findings to date and fax dated 17th October 2006 providing borehole information).

The construction of the proposed factory requires significant land remodelling across the entire site with the estimated movement of 250,000 cubic metres of material around on site to provide the level base area required for the factory. Southern Testing Ltd have undertaken leachate tests to consider the effects the material may have on a designed landfill should the tipped material require removal off-site. The removal of material off-site would fall outside the scope of the existing planning application. Potential revisions to the landform and the building design would also fall outside the scope of the application.

In view of the sensitive nature of the information no consultation has yet taken place with the EA, Mid Kent Water and KCC regarding the scope of the intrusive investigation work and the remediation scheme.

The issues for discussion and matters on which Counsel's views are sought include:

1. Update on the ongoing investigation work;
2. Potential for the contamination to be localised and require minimal remediation or the contrary;
3. Potential position of the EA, Mid Kent Water and KCC and the implications for H +H Celcon Ltd;
4. Factory design implications;
5. Need for additional planning applications to be made to KCC;
6. Implications for the call-in inquiry work programme including ES addendum and the proposed March 2007 inquiry date;
7. Any other matters arising.

If you have any queries please do not hesitate to contact us.

Yours faithfully

pp **ALASDAIR MACKENZIE**
Associate

cc:	Stuart Brittle	:	HHCL (with enclosures)
	Laura Brearley	:	Southern Testing Ltd (with enclosures)
	Keith Funnell	:	KFA (with enclosures)

bcc: EL

Enc.

Southern Testing
Environmental & Geotechnical

TEST HOLE LOG

National Grid Reference		TQ 601 577	
Job No	J9015	Date	11/10/2006
Logged by	LJB	Engineer	LJB

Site : Borough Green Sand Pits, H&H Celcon, Ightham

Client : H&H Celcon

Excavation Method : JCB

Hole No TP1

Water strikes: None
Water level: None
Pit sides: Stable

Depth m/mm	Sample Type	Test Type & Value	Depth (Thickness)	Key	Soil Description
300 400	D	⊥ 150	(1.0)	MADE GROUND	Medium-high strength mid-orange brown fine sandy clay MADE GROUND with much brick, concrete, ceramic fragments, flint and chalk gravel.
1.0	D		1.0 (500)	MADE GROUND	Grey/black stained and odorous hardcore MADE GROUND with blacktop and strong hydrocarbon odour - possibly diesel
1.5	D	▽ 25	1.5 1.6	MADE GROUND	Medium dense pale grey fine sand MADE GROUND
2.5	D		(1.6)	MADE GROUND	Grey/black stained and odorous hardcore MADE GROUND with blacktop and slight hydrocarbon odour
3.2	D		3.2		

Hole No TP2

Water strikes: Seeps from 2.5m
Water level: 3.2m after 5 mins
Pit sides: Slightly unstable

Depth m/mm	Sample Type	Test Type & Value	Depth (Thickness)	Key	Soil Description
500	D		(2.4)	MADE GROUND	Compacted mid-dark brown fine sandy clay MADE GROUND with much brick, concrete, chalk and patches of grey/black staining and odours. Crushed metal drums, metal wire and odours from 1.0m
1.5	D		2.4 (1.0)	MADE GROUND	Loosely compacted grey/black sodden gravelly clay MADE GROUND. Slight hydrocarbon odours
2.0	D		3.4		
2.5	D				

Hole No TP3

Water strikes: None
Water level: None
Pit sides: Unstable

Depth m/mm	Sample Type	Test Type & Value	Depth (Thickness)	Key	Soil Description
400	D		(1.1)	MADE GROUND	Compacted mid brown sandy clay MADE GROUND with brick footings, concrete, whole bricks, flint gravel, plastic and metal piping. Much polyethene sheeting at 1.0m
1.2	D		1.1 (1.8)	MADE GROUND	Loose yellow/pale grey silty fine-medium sand MADE GROUND with occasional medium-coarse flint gravels
1.5		▽ 3 5	2.9 3.0	CONCRETE	Large concrete obstruction
3.0	D		3.2	MADE GROUND	Grey brown silty sandy MADE GROUND with concrete, brick, black staining and slight odours

Hole No TP4

Water strikes: None
Water level: None
Pit sides: Unstable

Depth m/mm	Sample Type	Test Type & Value	Depth (Thickness)	Key	Soil Description
400	D		(2.8)	MADE GROUND	Compacted mid brown silty fine sandy clay MADE GROUND with brick, blacktop, flint gravels and roots. Occasional plastic sheeting. Large concrete obstruction at 2.4m
1.5	D		2.8 (900)	MADE GROUND	Compacted green/yellow silty clayey sand MADE GROUND with fragments of chalk and occasional iron stained patches. Becoming clayey from 3.4m
2.0		⊥ 140	3.7		
2.9	D				
3.4	D				

▽: Perth Penetration Test, 'N' value; ▼: Standard Penetration Test, 'N' values; ⊥: Unconfined Compression Strength by hand penetrometer, kN/m2; V: Shear Vane test, kN/m2; X: CBR by Mexe cone penetrometer, %; D: Disturbed sample; U: Undisturbed sample; B: Bulk sample; W: Water sample

Southern Testing
Environmental & Geotechnical

TEST HOLE LOG

National Grid Reference		TQ 601 577	
Job No	J9015	Date	11/10/2006
Logged by	LJB	Engineer	LJB

Site : Borough Green Sand Pits, H&H Celcon, Ightham

Client : H&H Celcon

Excavation Method : JCB

Hole No TP5

Water strikes: Slight seep at 1.9m
Water level: None
Pit sides: Collapsed

Depth m/mm	Sample Type or Test Type & Value	Depth (Thickness)	Key	Soil Description
600	D ⊥ 90	(1.1)	MADE GROUND	Medium strength mid brown slightly sandy silty clay MADE GROUND with brick and roots
1.5	D	1.1 (800)	MADE GROUND	Mid-dark brown and black stained patches silty clayey MADE GROUND with large lumps of reinforced concrete, brick polyethene, and metal sheeting
2.0	D	1.9 (1.1)	MADE GROUND	Black, sodden, stained and odorous (hydrocarbon) MADE GROUND with metal, concrete and pipework. From 2.5 moderate hydrocarbon odours
2.8	D	3.0		

Hole No TP6

Water strikes: Seep at 2m
Water level: None
Pit sides: Unstable

Depth m/mm	Sample Type or Test Type & Value	Depth (Thickness)	Key	Soil Description
600	D	(1.8)	MADE GROUND	Compacted orange brown with pale grey sandy patches, clayey MADE GROUND with brick, rounded flint gravel, yellow and grey aircrete blocks, chalk fragments and slight hydrocarbon odour from 1.5m
1.5	D	1.8		
2.0	D	2.0	MADE GROUND	Medium strength orange/yellow grey sandy clay MADE GROUND with patches of black staining, brick and metal
2.2	⊥ 150		MADE GROUND	Loosely compacted sodden dark grey stained and slightly odorous sandy clay MADE GROUND with whole bricks and concrete
3.6	D	(2.0) 4.0		

Hole No TP7

Water strikes: None
Water level: None
Pit sides: Unstable

Depth m/mm	Sample Type or Test Type & Value	Depth (Thickness)	Key	Soil Description
600	D	(800)	MADE GROUND	Compacted mid brown silty sandy clayey MADE GROUN with flint gravel, chalk, concrete and tiles
1.5	D	800	MADE GROUND	Mid-dark brown silty sandy MADE GROUND with occasional blue grey patches, large concrete fragments, wooden poles, metal wire and brick
2.5	D	(2.9) 3.7		

Hole No TP8

Water strikes: None
Water level: None
Pit sides: Collapsed

Depth m/mm	Sample Type or Test Type & Value	Depth (Thickness)	Key	Soil Description
500	D	(1.0)	MADE GROUND	Compacted mid brown silty very sandy clay MADE GROUND with frequent concrete and brick, coal and flint gravels
1.0	⊥ 150	1.0	MADE GROUND	Medium strength orange brown mottled grey silty sandy clay MADE GROUND with occasional brick, concrete, with much pipework, large concrete fragments, steel RSJ and slight hydrocarbon odours from 2.0m
1.5	D	(2.0)		
2.5	D	3.0	MADE GROUND	Medium strength orange brown slightly clayey very sandy MADE GROUND with occasional flint and brick.
3.1	D	(700) 3.7		

▽: Perth Penetration Test, 'N' value; ▼: Standard Penetration Test, 'N' values; ⊥: Unconfined Compression Strength by hand penetrometer, kN/m2;
V: Shear Vane test, kN/m2; X: CBR by Mexe cone penetrometer, %; D: Disturbed sample; U: Undisturbed sample; B: Bulk sample; W: Water sample

Southern Testing
Environmental & Geotechnical

TEST HOLE LOG

National Grid Reference		TQ 601 577	
Job No	J9015	Date	11/10/2006
Logged by	LJB	Engineer	LJB

Site : Borough Green Sand Pits, H&H Celcon, Ightham

Client : H&H Celcon

Excavation Method : JCB

Hole No TP9

Water strikes: None
Water level: None
Pit sides: Unstable

Depth m/mm	Sample Type or Test Type & Value	Depth (Thickness)	Key	Soil Description
500	D	(1.2)	MADE GROUND	Compacted orange brown fine sandy silty clay MADE GROUND with occasional flint gravels, polyethene and brick
1.3	D	1.2	MADE GROUND	Compacted dark grey silty clay MADE GROUND with brick, chalk, wire and slight organic/ weathered hydrocarbon odours
1.5	D	(500)	MADE GROUND	Compacted off white hard chalk MADE GROUND with matrix material comprising grey brown silty clay and brick. Large lumps of reinforced concrete
2.0	D	1.7	MADE GROUND	Compacted dark grey silty clay MADE GROUND with brick, chalk, wire and slight organic/ weathered hydrocarbon odours
2.9	D	(500)		
		2.2		
		(700)		
		2.9		

Hole No TP10

Water strikes: None
Water level: None
Pit sides: Unstable

Depth m/mm	Sample Type or Test Type & Value	Depth (Thickness)	Key	Soil Description
		(500)	MADE GROUND	Compacted mid-orange brown silty fine sandy clay MADE GROUND with much brick and grey aircrete blocks
		500	MADE GROUND	Loosely compacted grey crushed and whole aircrete blocks MADE GROUND
		(2.0)		
		2.5		

Hole No TP11

Water strikes: None
Water level: None
Pit sides: Stable

Depth m/mm	Sample Type or Test Type & Value	Depth (Thickness)	Key	Soil Description
600	D	(900)	CLAY	Medium-high strength mid-orange brown fine sandy CLAY with frequent fine-coarse angular-subangular flint gravel
1.0	D 17	900	SAND	Medium dense yellow/orange fine SAND. Clayey patches from 1.6m. Becoming dense with weakly cemented patches from 2.0m
1.8	36	(1.9)		
2.0	D	2.8		

Hole No

Water strikes:
Water level:
Pit sides:

Depth m/mm	Sample Type or Test Type & Value	Depth (Thickness)	Key	Soil Description

▽: Perth Penetration Test, 'N' value; ▼: Standard Penetration Test, 'N' values; ⊥: Unconfined Compression Strength by hand penetrometer, kN/m2;
V: Shear Vane test, kN/m2; X: CBR by Mexe cone penetrometer, %; D: Disturbed sample; U: Undisturbed sample; B: Bulk sample; W: Water sample

Southern Testing
Environmental & Geotechnical

Job No: **J9015** Hole No: **3**

National Grid Reference		TQ 601 577	
Start date	30/12/1899	End date	30/12/1899
Ground level	80.50	Backfill date	30/12/1899
Logged by	LJB	Engineer	LJB
Final depth	15.00	Page	1 of 1

Site : Borough Green Sand Pits,, H&H Celcon, Ightham

Client : **H&H Celcon**

Drilling Method : Shell and Auger (150mm)

Piezometer	Testing Depth	Testing SPT/SPT(c) (N-value) Uplows	Samples Depth	Samples Type	Strata Thickness	Strata Level	Strata Legend	Strata Depth	Strata Descriptions	
			0.50	D	-				MADE GROUND	Medium strength mid brown sandy clay MADE GROUND with brick, gravel, wood and concrete
			1.00	D						
	1.50	SPT(c) (22)	1.50	D	2.60					
			2.50	D		77.90		2.60		
	3.00	SPT(c) (11)	3.00	D	0.30	77.60		2.90	MADE GROUND	High strength brown grey clay MADE GROUND with much concrete.
					0.50	77.10		3.40	MADE GROUND	Medium strength dark brown clay MADE GROUND with aircrete blocks, concrete, chalk, brick and blackened patches.
			4.00	D						
	4.50	SPT(c) (11)			2.40				MADE GROUND	Grey sandy clay MADE GROUND with concrete, brick and plastic
						74.70		5.80		
	6.00	SPT (7)	6.00	D	0.90				MADE GROUND	Loose yellow grey sandy clay MADE GROUND with slight solventy odour.
			6.00	D		73.80		6.70		
			7.00	B					MADE GROUND	Dark blue/grey gravelly sandy clay MADE GROUND with lumps of concrete
			8.00	D	3.10					Slight organic odours
			9.00	D						Slight organic odours
			10.00	D		70.70		9.80		
			10.00	W					MADE GROUND	Dark blue/grey sandy clay MADE GROUND with occasional fine flint gravel and sandy patches
			11.00	D	2.60					
			12.00	D						
			12.40	B		68.10		12.40	SAND	Dense yellow brown fine-medium SAND
					0.80					
			13.50	B		67.30		13.20	SAND	Dense pale grey fine-medium SAND with occasional sandstone gravel
					1.80					
			15.00	B		65.50		15.00		End of Borehole

Hole Diameters		
Depth (m)	Hole (mm)	Casing (mm)
7.50	200	200
15.00	150	150

Water Strikes						
Date	Water (m)	Casing (m)	Time (mins)	Rose to (m)	Sealed (m)	
30/12/99						

Chiselling Time		
From (m)	To (m)	Time (hrs)

General Remarks

Southern Testing
Environmental & Geotechnical

Job No: **J9015** Hole No: **5**

National Grid Reference		TQ 601 577	
Start date	30/12/1899	End date	30/12/1899
Ground level	85.00	Backfill date	30/12/1899
Logged by	LJB	Engineer	LJB
Final depth	10.00	Page	1 of 1

Site : Borough Green Sand Pits,, H&H Celcon, Ightham

Client : H&H Celcon

Drilling Method : Shell and Auger (150mm)

Piezometer	Testing		Samples		Strata					
	Depth	SPT/CPT(c) (N value) U(blows)	Depth	Type	Thickness	Level	Legend	Depth		Strata Descriptions
			0.50	D					MADE GROUND	Low-medium strength mid brown sandy clay MADE GROUND with frequent flint concrete and brick fragments.
			1.00	D						
			2.00	D	3.70					
			3.00	D						Blue stained from 3m - no odours
			4.00	D		81.30		3.70	MADE GROUND	Mid brown sandy clay MADE GROUND with frequent flint and brick fragments.
			5.00	D						Slightly stained blue grey
			6.00	D						Strong hydrocarbon odours and black staining from 5-7m
			7.00	D	6.30					
			8.00	D						
			9.00	D						
			10.00	D		75.00		10.00		End of Borehole

Hole Diameters			Water Strikes						Chiselling Time			General Remarks
Depth (m)	Hole (mm)	Casing (mm)	Date	Water (m)	Casing (m)	Time (mins)	Rose to (m)	Sealed (m)	From (m)	To (m)	Time (hrs)	
4.50	200	200	30/12/99	6.90	6.00	20		7.20				
10.00	150	150										

Southern Testing
Environmental & Geotechnical

Job No: **J9015** Hole No: **9**

National Grid Reference		TQ 601 577	
Start date	30/12/1899	End date	30/12/1899
Ground level	79.30	Backfill date	30/12/1899
Logged by	LJB	Engineer	LJB
Final depth	4.50	Page	1 of 1

Site : Borough Green Sand Pits,, H&H Celcon, Ightham

Client : H&H Celcon

Drilling Method : Shell and Auger (150mm)

Piezometer	Testing		Samples		Strata					
	Depth	SPT/SCPT (N value)	Depth	Type	Thickness	Level	Legend	Depth		Strata Descriptions
			0.30	D	0.70	78.60		0.70	CLAY	High strength orange brown very silty fine sandy CLAY with occasional fine-medium subangular flint gravel. Becoming increasingly sandy by 0.5m
			0.50	D					SAND	Medium dense orange brown/yellow brown fine SAND with occasional fine sandstone gravel
			1.00	B	3.80					
			3.00	B						
			4.50	B		74.80		4.50		End of Borehole

Hole Diameters			Water Strikes						Chiselling Time			General Remarks
Depth (m)	Hole (mm)	Casing (mm)	Date	Water (m)	Casing (m)	Time (mins)	Rose to (m)	Sealed (m)	From (m)	To (m)	Time (hrs)	
4.50	200	200	30/12/99	DRY		20						

Southern Testing
Environmental & Geotechnical

Job No: **J9015** Hole No: **10**

National Grid Reference		TQ 601 577	
Start date	30/12/1899	End date	30/12/1899
Ground level	85.60	Backfill date	30/12/1899
Logged by	LJB	Engineer	LJB
Final depth	2.60	Page	1 of 1

Site : Borough Green Sand Pits,, H&H Celcon, Ightham

Client : **H&H Celcon**

Drilling Method : Shell and Auger (150mm)

Piezometer	Testing		Samples		Strata				
	Depth	SPT/SPT(c) (N-value) Ub(cu)	Depth	Type	Thickness	Level	Legend	Depth	Strata Descriptions
					2.40				MADE GROUND: High strength mid-dark brown silty clay MADE GROUND with flint gravel, roots, brick, concrete and clinker
					0.20	83.20 83.00		2.40 2.60	SAND: Medium dense mid brown fine-medium SAND End of Borehole

Hole Diameters			Water Strikes						Chiselling Time			General Remarks
Depth (m)	Hole (mm)	Casing (mm)	Date	Water (m)	Casing (m)	Time (mins)	Rose to (m)	Sealed (m)	From (m)	To (m)	Time (hrs)	
2.60	200	200	30/12/99									

Southern Testing
Environmental & Geotechnical

Job No: **J9015** Hole No: **11**

National Grid Reference		TQ 601 577	
Start date	30/12/1899	End date	30/12/1899
Ground level	88.35	Backfill date	30/12/1899
Logged by	LJB	Engineer	LJB
Final depth	10.00	Page	1 of 1

Site : Borough Green Sand Pits,, H&H Celcon, Ightham

Client : H&H Celcon

Drilling Method : Shell and Auger (150mm)

Piezometer	Testing		Samples		Strata					
	Depth	SPT/SCPT(c) (N value) U(bore)	Depth	Type	Thickness	Level	Legend	Depth		Strata Descriptions
			1.00	D					MADE GROUND	Medium strength mid-dark brown sandy silty clay MADE GROUND with frequent fine flint gravel, brick, concrete and grey patches
			2.00	D						
			3.00	D	6.00					
			4.00	D						Clinker fragments and black stained patches. No odours.
			5.00	D						
			6.00	D		82.35		6.00	MADE GROUND	Grey aircrete block MADE GROUND with clay matrix in patches
			7.00	D						
			8.00	D	4.00					
			9.00	D						
			10.00	D		78.35		10.00		End of Borehole

Hole Diameters			Water Strikes						Chiselling Time			General Remarks
Depth (m)	Hole (mm)	Casing (mm)	Date	Water (m)	Casing (m)	Time (mins)	Rose to (m)	Sealed (m)	From (m)	To (m)	Time (hrs)	
4.50	200	200	30/12/99	DRY		20						
10.00	150	150										

Southern Testing
Environmental & Geotechnical

Job No: **J9015** Hole No: **12**

National Grid Reference		TQ 601 577	
Start date	30/12/1899	End date	30/12/1899
Ground level		Backfill date	30/12/1899
Logged by	LJB	Engineer	LJB
Final depth	10.00	Page	1 of 1

Site : Borough Green Sand Pits,, H&H Celcon, Ightham

Client : **H&H Celcon**

Drilling Method : Shell and Auger (150mm)

Piezometer	Testing: Depth	Testing: SPT/CPT(c) (Values) U(Blows)	Samples: Depth	Samples: Type	Strata: Thickness	Strata: Level	Strata: Legend	Strata: Depth	Strata Descriptions	
					0.60			0.60	MADE GROUND	Low-medium strength dark brown sandy clay MADE GROUND with large pieces of concrete and brick
					8.70				MADE GROUND	Low-medium strength grey brown/blue grey silty sandy clay MADE GROUND with brick, concrete, polythene and wood Clinker fragments 3-4m Grey crushed aircrete blocks 5-6m
					0.70			9.30 10.00	MADE GROUND	Low strength grey brown/blue grey silty sandy clay MADE GROUND with aircrete bloacks, brick and strong hydrocarbon odours
										End of Borehole

Hole Diameters

Depth (m)	Hole (mm)	Casing (mm)
4.50	200	200
10.00	150	150

Water Strikes

Date	Water (m)	Casing (m)	Time (mins)	Rose to (m)	Sealed (m)
30/12/99	7.10		20		

Chiselling Time

From (m)	To (m)	Time (hrs)

General Remarks

Campaign to Protect Rural England

CPRE Kent

Mrs Debbie Smith
The Planning Inspectorate
4/04 Kite Wing
Temple Quay House
2 The Square
Temple Quay
Bristol BS1 6PN

01 May 2007

Dear Mrs Smith

Proposal:	**Development of new factory to manufacture aerated concrete (Jamera) products with outside storage and parking and new access and associated facilities**
Location:	Ightham Sandpit, Borough Green Road, Ightham, Sevenoaks, Kent TN15 9JB
Application:	TM/03/2563
Appeal:	App/W2275/V/06/1199658

The following report supplements the comments submitted previously by Mr Ron Saunders, dated 20 April 2007. However, I would like to make a correction in that all correspondence should be addressed to:

CPRE Kent
3 Evegate Park Barn
Station Road
Smeeth, Ashford
Kent TN25 6SX

Please could the attached be copied to the main parties for the application so that this can be considered within the enquiry that is due to start on 15 May 2007.

The following proof of evidence has been produced on behalf of CPRE Kent. It is focused on the land contamination issues identified in the document: *Additional supportive information and second environmental statement addendum* (Barton Wilmore, April 2007).

This document was received on 17 April 2007, which has given very limited time to analyse the information provided and no time for additional research to verify its findings. The site investigation report was completed on 24th November 2006, and to our knowledge, has not been released for consultation before. The remediation strategy by EDSR is undated,

or has had the dates removed, which is not standard practice for consultancy reports. This makes it difficult to judge whether the applicants could have given consultees more time to assess the material presented prior to the public enquiry.

Given the magnitude of the soil and groundwater contamination found, this raises serious concerns about how thoroughly the risks and implications can be resolved through the public enquiry.

Yours sincerely

Sean Furey

Deputy Director

CPRE Kent

Direct dial: 01303 815186

E-mail: sean.furey@cprekent.org.uk

cc.

Mr Ron Saunders, CPRE Kent (Tonbridge & Malling)

Mr John Cannon, CPRE Kent (Tonbridge & Malling)

1 Witness Credentials

1.1 My name is Sean Graham Furey MSc MCIWEM FRGS. I have a Bachelor of Science degree in Environmental Sciences and a Masters degree is in Infrastructure Engineering (Community Water Supply & Sanitation). I am a Chartered Water & Environment Manager.

1.2 Since February 2007 I have been Deputy Director of CPRE Kent and for the previous seven years I worked with the Kent Area of the Environment Agency as a Water Resources Officer and then a Project Manager for Integrated Water Management.

1.3 The Kent Branch of the Campaign to Protect Rural England exists to promote the beauty, tranquillity and diversity of rural England by encouraging the sustainable use of land and other natural resources in town and country.

2 Summary of position

2.1 **We object** to permission being granted for this proposal on the grounds that:

- There is an unacceptable risk to public water supplies and environmental water quality from the contamination identified on the site;
- There is insufficient data and understanding of the local hydrogeological and hydrological conditions in relation to the known, and unknown, contaminants, on the site and how both will be affected by the construction of the proposed factory.

2.2 If the inspector is minded to grant permission, after the public enquiry, then we strongly recommend that the following conditions are imposed:

- That further monitoring of surface and groundwater quality and flow is undertaken, including the area where the foundations of the factory will go;
- Geological mapping, by the British Geological Survey, to identify potential fissures or other geological structures that may facilitate the flow of groundwater to or from the site;
- That a groundwater model be developed to simulate the potential movement of contaminants from the site, the impact of the proposed development and the effectiveness of the proposed remediation strategy.
- Long-term monitoring to verify that there has been no residual impact of groundwater and surface water quality as a result on the contamination nor the proposed factory.
- Investigation of the hydroecology of the upper Bourne to assess whether or not there has been an impact.

2.3 The presence of high level of hydrocarbons in an area that should have only been filled with "*inert, non-toxic, non-putrescible material*" suggests that enforcement action should be taken by the Environment Agency and Kent County Council.

2.4 It needs to be made clear to the applicant that they will need to undertake full site remediation, whether or not this planning permission is granted. **Remediation should not, and cannot, be made conditional to planning permission being granted.**

2.5 It should also be determined whether 12 months is adequately long for effective bioremediation of the site.

3 Analysis

3.1 Identified contamination

3.1.1 A thorough and impartial site investigation appears to have been carried out by Southern Testing Ltd. The report identifies problems with soil contamination, groundwater contamination and landfill gases. The source of this contamination appears to be what is described as 'Made Ground', which is material that has been buried at this site at some time in the past.

3.1.2 The distribution of boreholes and trial pits is uneven and does not include the footprint of the proposed buildings. This is important because there is a risk, however small, that construction of the foundations may create a contaminant pathway through the Gault Clay into the underlying Folkestone Formation.

3.1.3 Table 1, below, summarises those chemical parameters highlighted as potential problems in the Environmental Statement. Of greatest concern is the soil and groundwater contamination by hydrocarbons that could potentially drain from the site into nearby watercourses or aquifers used for public water supply.

Table 1 – Contamination problems identified by the Environmental Statement Addendum

Medium	Chemical Parameter	Problem
Landfill Gas	Methane (CH_4)	Monitoring of the gases in the 11 boreholes showed "elevated methane, carbon dioxide and corresponding depletion of oxygen has been detected in the majority of boreholes across the site". The Site Investigation & Risk Assessment Report reports that methane was found in 6 of the 11 boreholes and the readings were such that: "The risk of methane gases affecting human health and buildings and services is therefore considered to be moderate to high".
	Carbon Dioxide (CO_2)	The measured levels of carbon dioxide in the boreholes were also considered to present a potentially unacceptable risk to human health, buildings and services.
Soil	Hydrocarbons	The report states that the 'Made Ground', which comes from past waste dumping activity, has *"Significantly elevated levels*" of Extractable Petroleum Hydrocarbons (EPH), " > *1,000mg/kg were identified in approximately one third of the samples tested."* Polycyclic Aromatic Hydrocarbons (PAH) and ammoniacal nitrogen were found at high levels. Appendix B '*Exploratory Hole Logs'* identifies the type of material found across the site. The information from the eight trial pits gives an indication of the material and hydrocarbon content found. Similar results were presented for the 11 boreholes.
Groundwater	Hydrocarbons	*"Groundwater contamination… Of greatest concern are the elevated PAHs and Petroleum Hydrocarbons (EPH)"* Polycyclic Aromatic Hydrocarbons (PAHs) and EPHs were found in all the boreholes and appeared to be widespread across the site.

3.2 Further Analysis of Soil Contamination

3.2.1 The data provided in the excavation and drilling logs show widespread burial of construction across the site. (Table 2) Brick was found in 20 of the 22 pits and boreholes, and concrete in 19.

3.2.2 Evidence of hydrocarbons, through odours and black staining, was found in 15 of the 22 excavations. Figure 3 shows the distribution of those trial pits and boreholes where evidence of hydrocarbons was noted, and it shows that they occur throughout the quarry, except in the southwest, near the site entrance.

3.2.3 The evidence of Figure 3 is backed up by the distribution of EPHs and PAHs found in soil samples (Figure 4, Figure 5). Interestingly, the relative distribution of EPH is more biased towards the north of the site, whereas PAH have no overall pattern but with high concentrations in the south. However, there is no data for the BH12, which shows other signs of high hydrocarbon levels.

3.2.4 The log for Trial Pit 2 refers to crushed metal drums, which may have been how the hydrocarbons were transported to the site. Blacktop (tarmac) is mentioned in only two sites (Trial Pits 1 and 2), which are in the area that appears to have the highest levels of PAHs.

3.2.5 We can conclude that EPH and PAHs are widespread across the site, but not uniform. The inconsistent data collection hampers further analysis and hence further monitoring, and a more uniform spatial spread of sites is recommended.

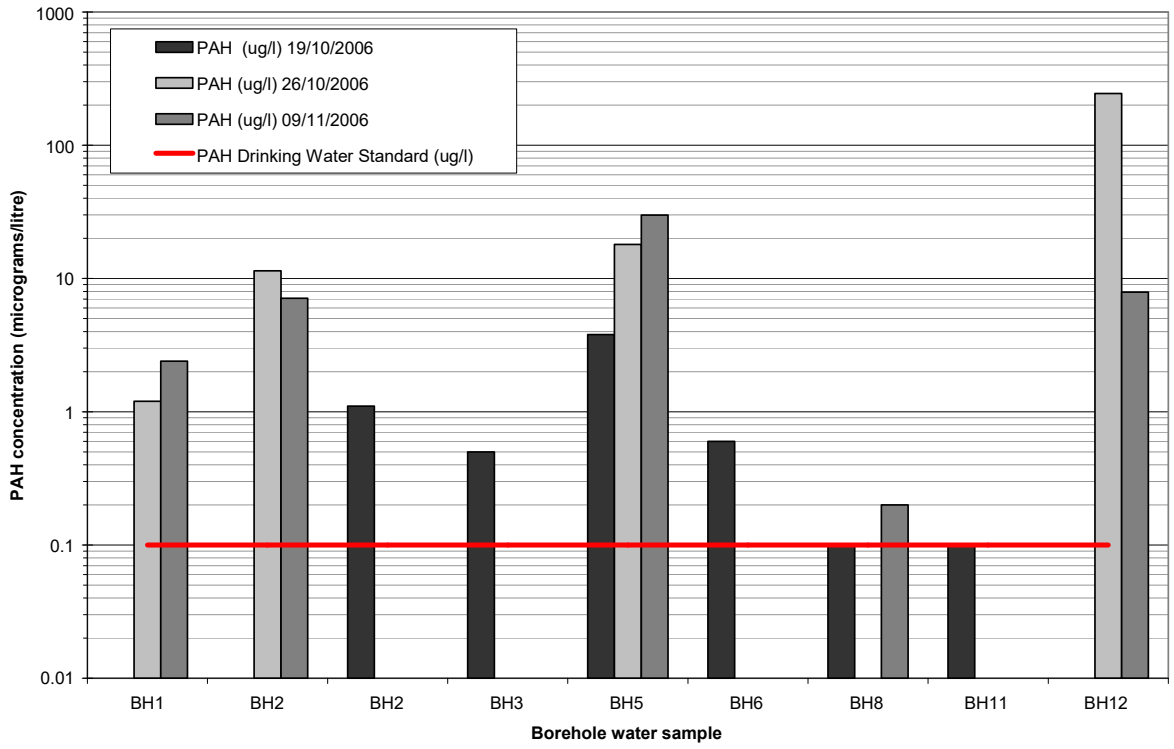
3.3 Further Analysis of Groundwater Contamination

3.3.1 While the data provided in the addendum is thorough, the reproduction that we received has the ring-binding holes through the line that reports the EPH data for the 26 October, so that only two of the five monitored boreholes are readable.

3.3.2 The European/UK drinking water standard for PAHs is 0.1 µg/l, which is the Limit of Detection (LOD) shown in the Table of Results, in the Southern Testing report. The boreholes were monitored on three dates: 19 October, 26 October, and 9 November. The pattern of which boreholes were tested is not consistent. However, 15 samples showed concentrations of PAHs at or above 0.1 µg/l, the highest being 245 µg/l (Figure 1).

3.3.3 Figure 6 is an attempt to discern a spatial pattern. The distribution of PAHs in the soil and groundwater does not compare well, but this appears to have more to do with the data availability than any physical discrepancies. This is a pity because it might have been possible to suggest whether PAHs were being transported away from the contaminated soil, and hence which direction the contaminants have been moving.

Figure 1 - PAH concentrations found in on-site borehole water



4 Commentary

4.1 Hydrogeological conditions and vulnerabilities

4.1.1 The site is geologically complex because it is on the boundary of the Folkestone Formation (a sandstone that is a minor aquifer) and the overlying Gault Clay (which is largely impermeable). In addition, there is also overlying Alluvium, which is usually old river deposits comprising silts, sands and gravels.

4.1.2 The Bartin Wilmore summary states in paragraph 13.7 that "The site is not located on a groundwater Source Protection Zone (SPZ)"

4.1.3 However, in Appendix F, a letter from Barton Willmore (24 October 2006) states: *"The site is partly located on a Catchment Source Protection Zone and the aquifer status is considered sensitive. The EA in their consultation response to the scheme considered the potential to cause groundwater contamination was high…"*

4.1.4 The Site Investigation & Risk Assessment Report states:

4.1.5 "Significant groundwater contamination has been identified as part of this investigation, resulting in risks to groundwater, the underlying aquifer, and surface watercourses."

Over the past five years, South East Water has commissioned detailed hydrogeological investigations of the Folkestone and Hythe Beds in the adjacent Darent catchment, around Sevenoaks and Kemsing. The work demonstrated the complexity and variability of the Lower Greensand series. Consequently, although

4.1.6 Figure 2 shows that the majority of the site is not in a Source Protection Zone, such boundaries should not be treated as an absolute.

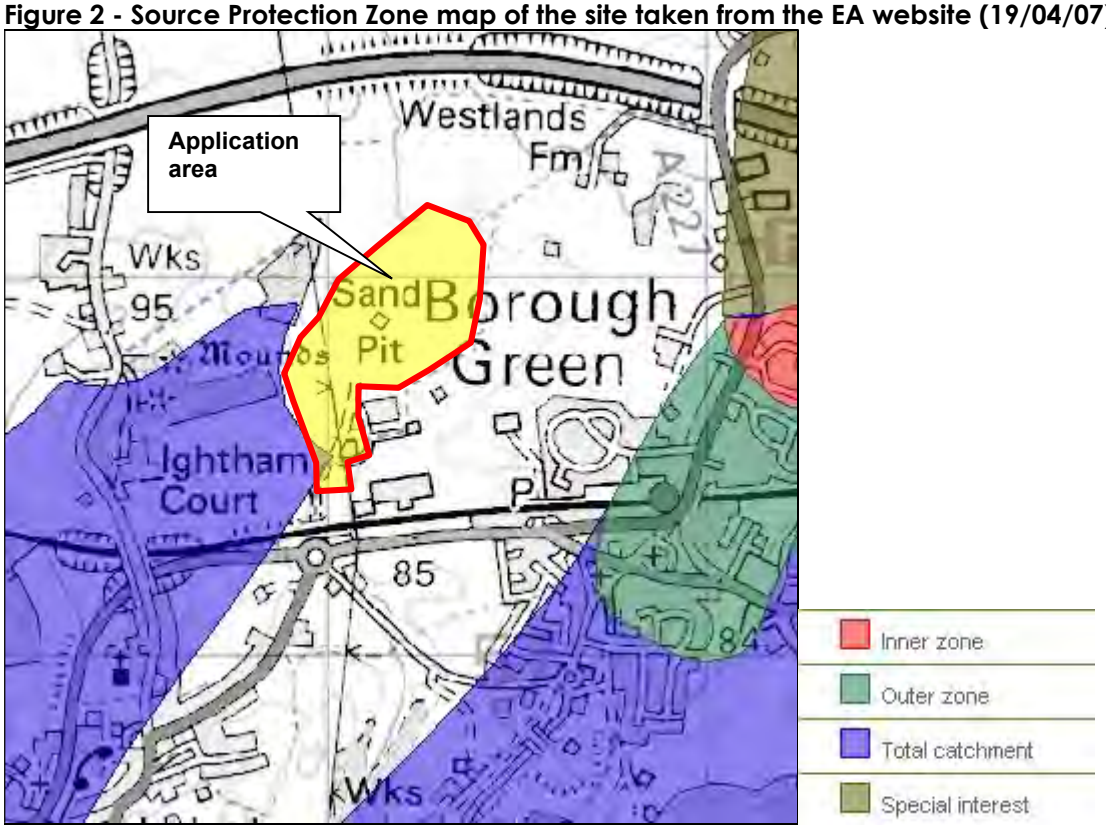
4.1.7 In addition, SPZ boundaries are determined by groundwater models that work at a larger scale and hence have quite coarse resolution and have uncertainties arising from the modelling process, the data available and the disturbance to the ground conditions caused by the quarrying activity. Given the presence of Folkestone Formation on the site and the proximity to SPZs to the east and west, and the level of contamination that has been found, it seems justifiable to take a precautionary approach to decisions on this site.

4.1.8 The report states that groundwater flow is northwards from the site. This would be consistent with the general dip of the Folkestone Formation underneath the Gault Clay, however local topography and drainage is southward into the River Bourne.

4.1.9 The word 'bourne' is often used to describe an ephemeral chalk stream, however the River Bourne is fed by perennial chalk springs at the foot of the North Downs where the chalk meets the Gault Clay. It is not easy to identify how much the Folkestone Formation contributes to this stream.

4.1.10 Therefore, further work is recommended to determine whether groundwater flow from the site does indeed go north into the confined aquifer, or south to feed the River Bourne. This is needed to ensure that remediation strategy, which calls for a permeable reactive barrier, targets the correct areas and flow directions.

Figure 2 - Source Protection Zone map of the site taken from the EA website (19/04/07)



4.2 Pollution Risks

4.2.1 The River Bourne joins the River Medway between Tonbridge and Yalding, consequently the flow helps support public water supply abstractions at Yalding, which feeds Bewl Reservoir, and the Springfield pumping station in Maidstone.

4.2.2 In 2005, Southern Water applied to abstract from the Medway under a Drought Order, this allowed them to abstract when the flow in the river is lower than their usually 'Hands Off Flow' condition and outside the period of their licence allows. At times of low flow in the river, there will be higher concentrations of any chemicals coming from point-source discharges (like wastewater treatment works) and diffuse sources (like leached pollutants from contaminated land) will be increased. Although, the water treatment process will remove the major of harmful substances, pollution from sites like Ightham Sandpit increases the risk to supply quality and, potentially, the treatment cost.

4.2.3 Equally, this site presents a potential risk to the Mid Kent Water public water supply source in Borough Green that could result in greater risk and cost. As well as the aquifer, Southern Testing notes that some of the contaminants could affect plastic water service pipes, which are likely to be common in Borough Green.

4.2.4 Leaching of hydrocarbons, or other harmful substances into the River Bourne may also have a long-term ecological impact. Due to time constraints, it was not

possible to prepare a case on this aspect. Hence, further work should be undertaken to examine the impact caused by this site.

4.3 Planning condition non-compliance

4.3.1 We have serious concerns about how this site has been managed and monitored in the past. The situation is complicated by the combination of the site works itself and any preparatory work and permissions for the proposed Borough Green-Platt bypass, which passes through it.

4.3.2 Planning Consent TM/87/18511 contains a number of relevant conditions that may have been breached:

Condition	Comment
"(xvii) precautions shall be taken, to the satisfaction of the County Planning Authority, to prevent tipping by an unauthorised person, including the provision where necessary of fencing and gates; any unauthorised material on the site shall be removed within 24 hours of such tipping taking place;".	This condition also exists as condition (xvi) in planning consent TM/85/1436, which applies to this site. If the hydrocarbons were deposited at this site by an unauthorised party, then this condition has clearly not been adhered to.
"(xxii) (a) the material to be used as 'approved fill' as shown on drawing No. 15/SP/1 shall be hassock from Stangate Quarry…" and *"(c) the Kent County Council Highways Laboratory shall carry out testing of the placed and compacted fill to determine the acceptability of the material and its compactions…"* and *"(d) "any material which does not meet the requirements of these conditions shall be removed or recompacted, as directed by the Kent County Council Highways Laboratory at the expense of the operator;"*	We can infer that either the contaminated material was deposited at a later time, or that samples from this site were not tested, or they would have undoubtedly encountered the waste material shown in Table 2 and then removed. ("hassock" is a loosely consolidated sandstone from Hythe Beds in the Lower Greensand series).
"(vi) no materials shall be imported for use in general restoration except for solid inert waste, which shall be 'Waste Category A – inert waste";	The material present on the site is largely inert (bricks, concrete, wood etc), suggesting compliance with this condition. If it was imported at this time and not later, then where did the hydrocarbons come from?

4.3.3 Planning consent MK/4/71/532, dated 5 November 1971, was for an extention to the original quarrying. It included two relevant conditions:

Condition	Comment
"(x) no filling materials shall be introduced to the site without the consent of the Local Planning Authority"	From this, we can conclude that either these conditions were not enforced, or there is part of the paper trail that we have not seen that removes these requirements.
"(xi) no refuse, sewage, chemical or industrial waste or petroleum products shall be disposed of on the site during or following the excavations hereby permitted."	

4.3.4 We can conclude that there is significant uncertainty about what has happened at this site, and hence the environmental risk, and the ability of the applicants to comply with planning conditions placed upon them.

5 Conclusions

The site investigation work leads us to the recommendations set out in Section 2 and requires the following actions:

5.1 Remediate the contamination:

5.1.1 The threat to human health and the ecology of the site and the River Bourne needs to be removed. This needs to happen whether or not planning permission is granted for this application.

5.2 Determine the source and history of the 'Made Ground':

5.2.1 It was not possible to get hold of any waste management licence information for the site in the time available. The Environment Agency website does not show the site as having been a landfill site.

5.2.2 Chalk fragments and flint gravel were found across the site. Neither would come from the Lower Greensand nor the Gault Clay of the immediate area. The Flint gravel may be naturally occurring in that area due to erosion and outwash from the North Downs scarp slope that may have contributed to the formation of the Alluvium. However, chalk is much less likely to have been transported naturally as it generally lost from the Downs through dissolution, not mechanical erosion and transport typical of less soluble rocks like flints and silica-dominated sandstones. Therefore, the presence of chalk suggests that the material was transported to the site with the man-made material. This is supported by the logs from Trial Pit 11 and Borehole 9(Natural Ground), which contained flint gravel but no chalk. Hence, the infill material is most likely to have come from an area on, or north of, the North Downs. Thamesport, on the Isle of Grain, has been suggested.

5.2.3 There is an assumption that the hydrocarbons entered the site with this fill, but as the EDSR report highlights, there are other possible sources. If they are not dealt with, then the contamination could recur even after the site has been cleaned up.

5.2.4 If this material had been tipped without the owner's consent, then they were obliged to have removed the material within 24 hours.

5.3 Determine why this site does not appear to have been appropriately managed, monitored and regulated in the past.

5.3.1 Paragraph 2.7 of Appendix 5, the EDSR report, suggests that the pit was licensed to be backfilled with "*inert, non-toxic, non-putrescible material*". This commenced in the late 1980s and was completed in 2001. The presence of significant hydrocarbons across the site shows that this was not kept to nor enforced.

6 Appendices & Figures

6.1 Definitions

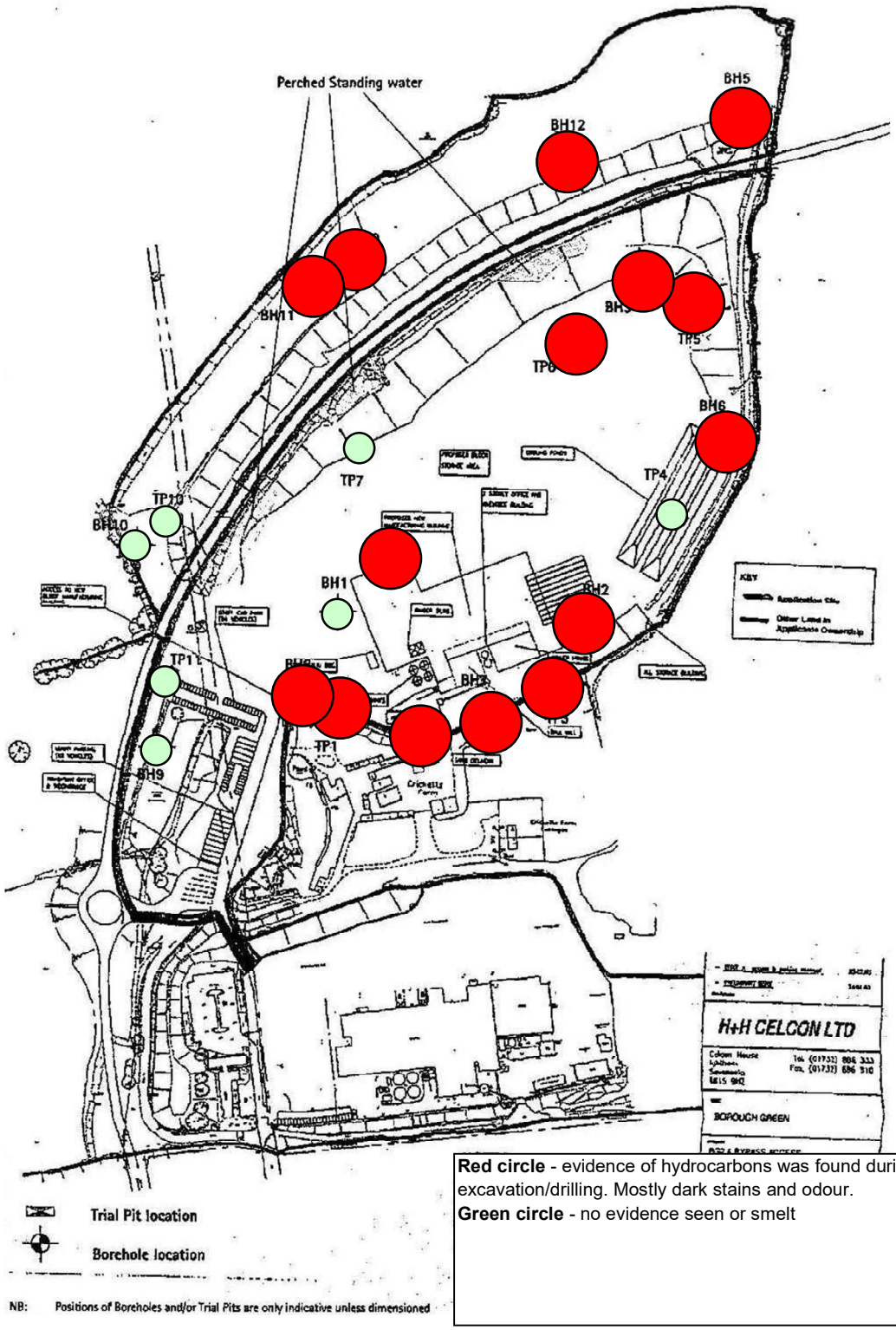
Petroeum Hydrocarbons		Petroleum fuels and oils are complex mixtures of hydrocarbons that vary, not only among the fuel types, but also within each fuel type depending upon manufacturer, geographic location, and seasonal use. The compositions of these products are made up of several hundred hydrocarbon compounds. Of these hundreds of compounds, toxicological information is available on only a very few. This makes determining the health risk posed by petroleum hydrocarbons difficult.
Extractable Petroleum Hydrocarbons	EPH	These aliphatic and aromatic hydrocarbon ranges correspond to a boiling point range between approximately 150 °C and 500 °C and have 12 to 35 carbon atoms per molecule. These include most diesels, lubricating oils, greases, waxes, and hydraulic oils.
Polycyclic Aromatic Hydrocarbons	PAH	Polycyclic aromatic hydrocarbons is a group name for several substances present in petroleum-based products such as coal tar. The standard is 0.1 µg/l for the sum of all the substances. Some PAHs are known carcinogens. The molecular structure is based on multiple benzene rings (rings of 6 carbon atoms). Benzo(a)pyrene is one of several PAHs. Their source in drinking water is as a result of deterioration of coal tar, which many years ago was used to line water pipes. Due to extensive water mains refurbishment and renewal, it is now rare to detect this substance in drinking water. The standard is 0.01 µg/l.
Volatile Hydrocarbons	VH	Hydrocarbons that vaporise readily into the atmosphere. They are typically defined as having 5 to 12 carbon atoms per molecule.
Total Petroleum Hydrocarbons	TPH	This is the total amount of hydrocarbons that was found in a given sample; this includes EPHs, PAHs and volatile hydrocarbons.

Table 2 - Summary of man-made materials found in trial pits and boreholes (adapted from Southern Testing test hole logs)

Location	Brick	Concrete/ aircrete	Hydrocarbons/ black staining	Flint	Chalk	Metal	Coal/ Clinker	Plastic	Wood	Tiles	Black top	Ceramic
TP1	✓	✓	✓	✓	✓					✓	✓	✓
TP2	✓	✓	✓		✓	✓						
TP3	✓	✓	✓	✓		✓		✓				
TP4	✓	✓		✓	✓			✓			✓	
TP5	✓	✓	✓			✓		✓				
TP6	✓	✓	✓	✓	✓							
TP7	✓	✓		✓	✓	✓			✓	✓		
TP8	✓	✓	✓	✓		✓	✓					
TP9	✓	✓	✓	✓	✓			✓				
TP10	✓	✓										
TP11				✓								
BH1	✓				✓		✓					
BH2	✓	✓	✓			✓	✓		✓			
BH3	✓	✓	✓	✓	✓				✓			
BH4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BH5	✓	✓	✓	✓								
BH6	✓	✓	✓		✓		✓	✓				
BH7	✓	✓	✓		✓	✓						
BH8	✓	✓	✓				✓					
BH9				✓								
BH10	✓	✓		✓			✓					
BH11	✓	✓	✓	✓			✓					
BH12	✓	✓	✓			✓		✓	✓			
Total (/23)	**20**	**19**	**15**	**13**	**10**	**8**	**7**	**6**	**4**	**2**	**2**	**1**

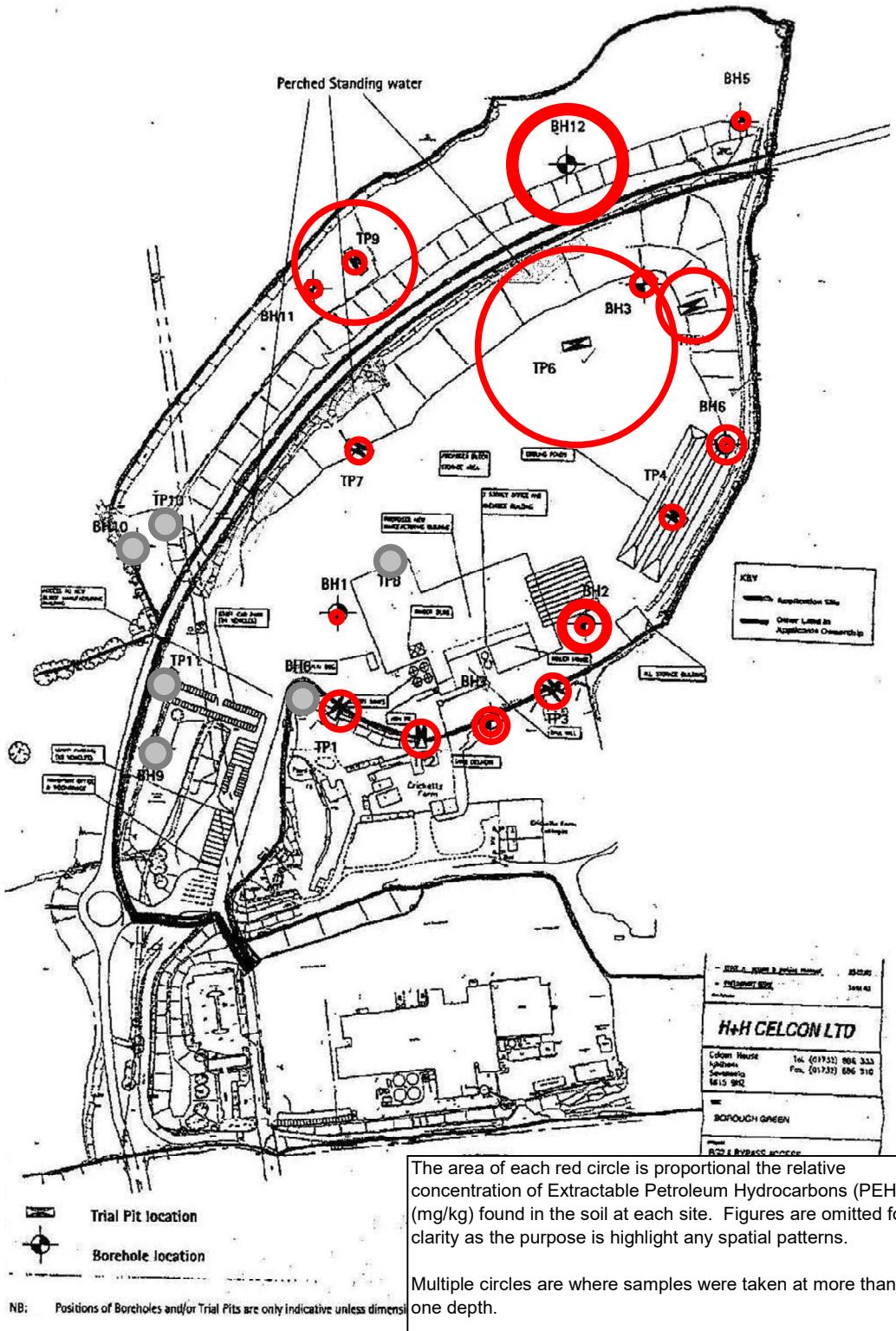
ND – No Data

Figure 3 - Evidence of hydrocarbons in excavation/drilling logs



Red circle - evidence of hydrocarbons was found during excavation/drilling. Mostly dark stains and odour.
Green circle - no evidence seen or smelt

Figure 4 – Extractable Petroleum Hydrocarbons (EPH) concentration measures in soil samples

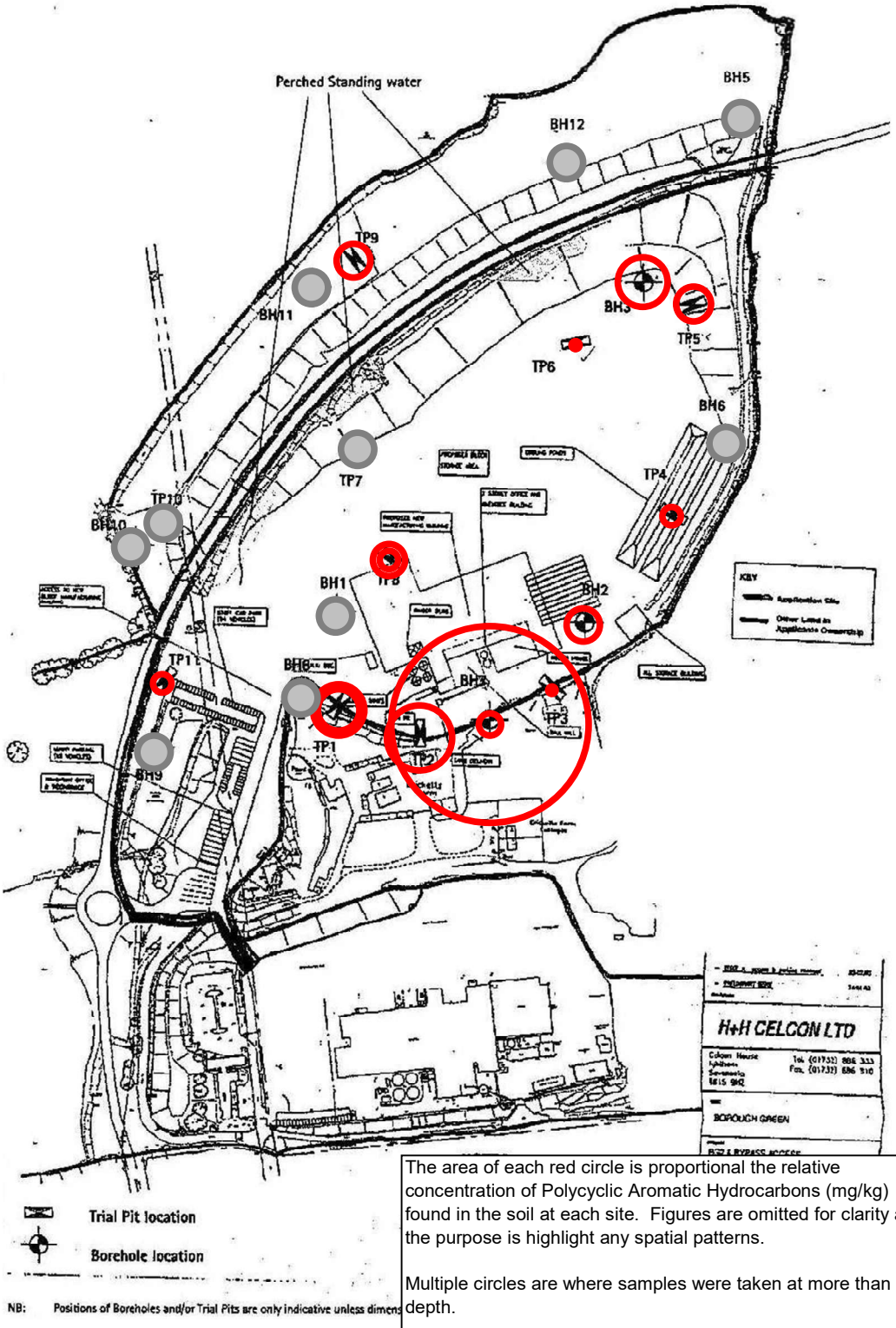


The area of each red circle is proportional the relative concentration of Extractable Petroleum Hydrocarbons (PEH) (mg/kg) found in the soil at each site. Figures are omitted for clarity as the purpose is highlight any spatial patterns.

Multiple circles are where samples were taken at more than one depth.

Grey circles are those with no data

Figure 5 - Distribution of Polcyclic Aromatic Hydrocarbons (PAHs) in soil samples

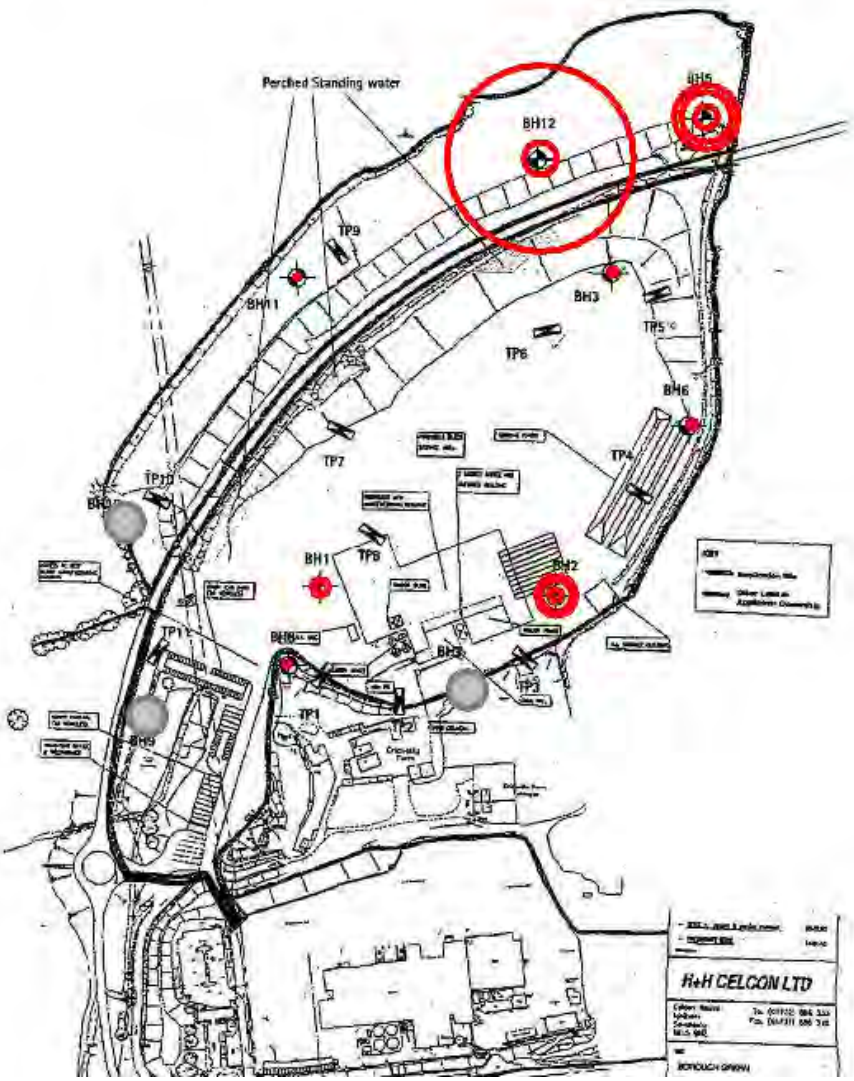


The area of each red circle is proportional the relative concentration of Polycyclic Aromatic Hydrocarbons (mg/kg) found in the soil at each site. Figures are omitted for clarity as the purpose is highlight any spatial patterns.

Multiple circles are where samples were taken at more than one depth.

Grey circles are those with no data

Figure 6 - Hydrocarbon distribution in groundwater samples



The area of each **Red Circle** is proportional to the relative concentrations found in groundwater at each site.

Figures are omitted for clarity, as the purpose is to highlight special patterns.

Multiple circles indicate samples taken at more than one depth.

Grey Circle – no data