Response to Mr Mike Taylor's Document entitled *Isles Quarry Contamination Concerns* submitted to Jennifer Wilson of the Environment Agency by email on 23.08.2014, prepared by *Geo-Environmental Investigations Ltd*

The queries, points and allegations raised by Mr Taylor in his recent submission to the EA will be addressed in their order of appearance in that document.

Page 1

First paragraph: it is stated that no sampling took place in Area 1 once the stockpiles had been removed to determine the contamination status of the underlying soils, and that "as soon as that material was removed, new sampling should take place".

The contamination status of the soils in Area 1 had been previously established by a number of site investigations.

A Trial Pit Site Investigation Report (Report Ref. 7043/04/SO/04-07/1638) was prepared by *T A Millard London Limited* in April 2007 for Hogarth Tyre Shredders, who at the time wanted to surrender their Waste Management Licence (Ref. P/10/64) covering the tyre shredding activities previously carried out in Area 1 until 2000. This investigation consisted of ten machine-dug trial pits; it identified localised contamination of the shallow Made Ground with TPH and a few local hotspots of PAHs and arsenic, also in the Made Ground.

The *Millard* report was incorporated as an appendix in the Phase 2 Site Investigation Interpretative Report prepared by *BT&P Hyder Consulting* for Hanson Quarry Products Europe Ltd in August 2008. The 2010 site investigation included five new sampling points in Area 1, and also found elevated concentrations of PAHs and TPHs within the top 1.00 m of soil (Made Ground) in Area 1.

In April 2011, *URS Scott Wilson* issued their final Isles Quarry Borough Green Geo-environmental and Geotechnical Ground Conditions Report for Crest Nicholson, which presented the findings of five additional sampling locations in Area 1. *URS Scott Wilson* concluded that Area 1 was characterised by site-wide elevated PAHs and elevated TPH in the top 1.00 m of soil as well as a few arsenic hotspots, and that most of the Made Ground was derived from the Hythe Beds underlying the site. *URS Scott Wilson* advised that the TPH and PAH levels in the top 1.00 m required remediation.

In July 2013, *URS* issued their Additional Ground Investigation Report (Report Ref. 47059987.STG1) for Crest Nicholson, which included geological and geotechnical data from seven new window sampler locations in Area 1, which confirmed the site-derived nature of most of the Made Ground (only traces of macadam and clinker were found in the shallow soils of two locations, no olfactory or visual evidence of any hydrocarbon contamination was presented in the logs. No elevated levels of any contaminants were identified in the one sample of Made Ground tested from Area 1.

On the basis of all previous environmental work carried out on this site, *URS* issued their Remediation Strategy (Ref. 47059303.STG1, and noted that in all parts of Area 1, the ground level would have to be reduced by 2.00 – 5.00 m as part of the proposed regrading prior to construction. In addition to the placement of a clean certified capping layer above the regarded surface, the *URS* Remediation Strategy specified controlled infrastructure removal and hotspot validation works (where required) in Area 1. The *URS* Remediation Strategy was submitted to both Tonbridge and Malling Borough Council and the Environment Agency, and approved by both regulators (see letter from the Environment Agency to Tonbridge and

Malling Borough Council Development Control on 16.09.2013, Ref. KT/2013/116967/01-L01).
In view of the abundant data available on the contamination status of Area 1, and the fact that the remediation strategy had been approved by both regulators, it was not considered necessary by *Crest Nicholson*, *AD Bly Construction Ltd*, or *Geo-Environmental Investigations Ltd* to reinvent the wheel by carrying out yet more additional sampling of Area 1 prior to regrading the area. The approved remediation strategy put procedures in place to be followed if any additional unknown contamination hotspot were found during these works.

Second paragraph and photo below: "... I have a picture taken 14 Nov showing final clearance of the steel".
The photo referred to is not dated, and therefore meaningless in any discussion concerning dates.

Third paragraph: " …samples BG2, 3, 4, 5 taken 27 Nov from Area 2 & 3 ..".
This is factually incorrect: Sample BG2 was taken from Area 1; samples BG3, BG4 and BG5 were stockpile samples taken from stockpiles of surcharge material located in Area 3 (see *AD Bly* Drawing 002).

Fourth paragraph: " …A sample taken after excavation at low level could easily be mistaken for a sample taken at high level before excavation, and a wrong conclusion reached that as the sample is clean, there was no contamination".
We take exception to this sentence, – this statement fundamentally questions the competence of <u>all</u> professionals involved in the remediation and validation works on this site (not just *Geo-Environmental Investigations Ltd)* by alleging that we are all incapable of taking appropriate samples in the right places and keeping accurate sampling records. If Mr Taylor wishes to question the competence of the professionals involved, he is venturing on very thin ice indeed, in the absence of a shred of evidence. This statement is NOT a valid argument in support of any of the other claims made by Mr Taylor, but could be considered libellous, especially as it was made in a document submitted to the Environment Agency, without prior notice to the accused. *Geo-Environmental Investigations Ltd* has a track record of many years' successful collaboration with the Environment Agency, whose representatives have never questioned the competence of its personnel. We therefore suggest that Mr Taylor withdraws this statement from his document, and does not repeat it in public.

Last paragraph: "Drg 002 notes a pink area as >Contaminated Land<, but there are **no samples** taken in this area …".
This is factually incorrect on two counts. Firstly, the area shaded pink in *AD Bly* Drawing 002 does not indicate any proven ground contamination, but shows the area where contamination was suspected on the basis of available data, even if that is not clear from the legend. Secondly, after reprofiling this area, plus other locations in Area 1 nearby, **was** sampled to check the contamination status of the regraded soils. The samples taken within the pink area were BG6, BG7, BG8, BG15 and BG19. Samples BG14, BG16, BG17 and BG18 were taken near the area suspected of contamination, mostly in future private gardens. Contamination was confirmed in samples BG6, BG7 and BG8 within the area shaded pink after regrading, and samples BG14 and BG17 also did not comply with the remediation targets specified in Table 5.1 of the *URS* Remediation Strategy.

Page 2

Caption of top photo: "Pictures taken by Crest Nicholson on 5th December show a large area of dark material spread in Area 2 & 3".

This photo was actually taken by *Geo-Environmental Investigations Ltd* on one of their monitoring visits to the site. Mr Taylor needs to appreciate that soil colour varies on account of several factors including moisture content, and that a dark colour does not automatically equate with contamination. Furthermore, this photo was taken on a December morning at 9.11 am in poor light conditions, which would have influenced the hue and brightness of the colours in the photograph. This photo does not prove that any "contaminated" soil was spread across parts of Areas 2 and 3 on 05.12.2013.

We assume that Mr Taylor is alleging that contaminated material from Area 1 was spread in this photo. By 05.12.2013, the bunded area for the temporary storage of contaminated material had been constructed on the hard standing in the south-eastern corner of Area 5, and any contaminated soil would have been taken there.

Caption of bottom photo: "Other pictures taken an hour later at 10.27 show clean material cover of the same area".

This is factually incorrect. The photo in question, also taken by *Geo-Environmental Investigations Ltd*, does not show the same area as the photo above, but another part of Phase 2, looking generally in the same direction. Therefore Mr Taylor is not comparing like with like. This photo was taken more than an hour after the photo above, in better light. It does indeed show clean-looking soil, but there is no evidence that this material covers any contaminated soil. In fact, there is no evidence that the ground level shown in the second photo is any higher than that in the first photo: in both photos, the protective concrete sleeves protecting the monitoring boreholes are two concrete pipe rings high.

Page 3:

Photo caption: "This clean covering is also very evident in our aerial picture of 8th December, which also shows that Area 1 is now excavated to construction level".

Yet again, Mr Taylor's photograph is undated, and can therefore not be used as evidence for anything at any time. Secondly, contrary to his insinuation, it does not provide any evidence for his allegation that contaminated material from Area 1 has been "buried" below clean soils in Area 3. Whether or not Area 1 had really been regraded by that date does not in itself constitute evidence for the burial of contaminated material in Area 3 either. However, *Geo-Environmental Investigations Ltd* has photographic evidence showing that the regrading of Area 1 had not been completed by 05.12.2013. In fact, at least parts of the concrete retaining walls were still in situ on that date (see photos presented on the page below).

Photos taken by *Geo-Environmental Investigations Ltd* on 17.12.2013, showing that the regrading of Area 1 had not been completed by this date.

Below the photograph on page 3, first sentence: "It is suggested that the known contaminated material was excavated from Area 1 and moved to the "quarantine bund", and Crest insist that this happened on the 28th November".

As the regrading of Area 1 had not been completed by 28th November, the removal of all contaminated material from Area 1 to the bunded contaminated stockpile in Area 5 would clearly have been a physical impossibility, and Crest Nicholson made no claim to this effect. It appears that Mr Taylor confuses matters here: *Geo-Environmental Investigations Ltd* can confirm that the construction of the bunded area built for the temporary storage of contaminated material in Area 5 was completed by 28.11.2013.

Second sentence: "However, Crest's own picture of the compound on 5th December shows an excavator being repaired on the spot that the bund will be built, and I can see no evidence of the bund behind it".

The photo in question, shown on page 4 of Mr Taylor's document, was in fact taken by *Geo-Environmental Investigations Ltd*, and it does not in actually show the part of Area 5 where the contaminated holding bund had been constructed by 28.11.2013. It shows the northern part of Area 5, and the bund could not have been seen from the position from which this photo was taken. Therefore this photo does not prove that the bund had not been completed by 05.12.2013.

Page 4:

Text between the photos: "Our aerial picture on 8th December shows the bund under construction. Crest reasoned that our aerial picture showed the bund in use, but with one end left open to allow material to be delivered".

Yet again, Mr Taylor's aerial photo is not dated, and therefore does not stand up to scrutiny in arguments about what was done when. But more to the point, Mr Taylor has misinterpreted his own aerial photograph: what he assumes to be the bund under construction is not the bund at all. The contaminated storage bund, with the top left corner left open, is actually shown in the bottom right corner of Mr Taylor's image, near the trees (see enlarged extract below).

The same excavator shown in the *Geo-Environmental Investigations Ltd* photo on page 4 of Mr Taylor's document is also shown in the extract of the aerial photograph reproduced above, in the top right hand corner. Despite the poor resolution of the aerial photo, this view actually demonstrates why the bund could not have been visible in the *Geo-Environmental Investigations Ltd* photo taken on 05.12.2013 used by Mr Taylor.

Text below aerial photograph, first two sentences: "However, the bund is supposed to have a plastic liner, and ass our picture below of the bund on 28 March shows that liner is black, and overlaps the bund walls to create a >pond<, and this is clearly not in position on 8th December. The black liner should be clearly visible around the perimeter above if it was installed, and across the entire base, even if we accept the premise that the bund wall will not be completed whilst the bulk is being filled".
We agree that the black plastic liner cannot be identified on Mr Taylor's aerial photograph, but that is due to the poor resolution of the photograph, and in particular the poor contrast in the bottom right hand corner. It does not prove that this liner was not in place at the time the photo was taken, as Mr Taylor alleges: a lot of other detail is not visible. Furthermore, by the date on which Mr Taylor claims to have taken this aerial photo, the bund would not have been empty; therefore it is unlikely that much of the plastic sheeting lining the base would have been visible from any vantage point.

Text below aerial photograph, final sentence: "Albert Prince swears he has dated pictures of the bund in earlier times, but 3 weeks later these still have not been forthcoming, and as they were allegedly taken on 28 November, why have they not been produced in the many months that I have been expressing my doubts?"
We would like to suggest that the tone adopted by Mr Taylor is not appropriate. Furthermore, Mr Prince has never "sworn" anything, but did advise Mr Taylor that he would check his records for any relevant photographs. The insinuation that documentary evidence might be deliberately withheld by *Geo-Environmental Investigations Ltd* is totally unfounded and could be considered borderline libellous. We would also remind Mr Taylor that the proof of evidence rests with him, as he is making serious allegations.

Page 5:

First paragraph under the undated photo of the holding area for contaminated material in Area 5: Mr Taylor returns to the point he made in the first paragraph on page 1 of his document, insisting that despite the data already available from previous reports and the official acceptance of a remediation strategy by both local authority and Environment Agency, more sampling and testing should have been carried out in Area 1 prior to regrading. In our opinion, this point has already been adequately addressed on pages 1 and 2 of this response.

Second paragraph: "Based on the evidence to hand, both my own, and that supplied by T&M/Crest, leads me to suspect that the heavy oil contamination from Area 1 was removed unsampled, and buried in Area 2/3 under the clean(ish) material from the Hanson stockpiles".
Firstly, there was no "heavy oil contamination" in Area 1. Although localised hydrocarbon contamination has been identified in the many investigations carried out in Area 1 over the years, none of the logs of the excavations, photographs or laboratory test data presented in any of the reports reviewed support the claim that "heavy oil contamination" was present anywhere: this is a baseless and irresponsible exaggeration without any basis in fact.

Secondly, there is no evidence whatsoever for Mr Taylor's claim that contaminated material from Area 1 was buried in Areas 2 or 3, or anywhere else on site. None of the information Crest Nicholson or any of the other professionals involved in the remediation and rehabilitation of the site provided to Mr Taylor support this claim, and he has not presented any tangible evidence of his own to substantiate it either. In order to prove his point, Mr Taylor would have to demonstrate that contaminated material was actually moved from Area 1 to Areas 2 and/or 3. Merely repeating this allegation does not prove it. This is a baseless allegation.

Could Mr Taylor have mistaken the movement of stockpiled soils originally located in Areas 1 and 2 into Area 3 to be used as temporary surcharge for the transfer of "contaminated" material?

It clearly has not occurred to Mr Taylor that the burial of contaminated material in Area 3 before the emplacement of the surcharge piles makes no sense whatsoever in the long run for the developer: once the surcharge piles are removed to facilitate the construction phase in Area 3, validation sampling of the regraded level will be required in accordance with the approved remediation strategy. Any "buried contaminated material" located in this area would come to light at that stage, and further remediation (excavation and disposal) would then be required, slowing down the works unnecessarily. Is Mr Taylor seriously suggesting that this site is being managed contrary to the interests of the developer?

In view of Mr Taylor's belief that contaminated material from Area 1 had been "buried" in Area 3, we are surprised that he did not elect to have his trial pits excavated in the area where he alleges the "contaminated" material had been buried, to obtain hard evidence for his conviction- instead, he chose the area very close to the northern boundary of Area 3, near the old quarry face, for his trial pits.

Fourth paragraph: "It would have been extremely useful if samples had been taken from the pink area before excavation, and compared to the disposal tests BG32, 33, 34 and 39 when that material left site, that would have provided evidence that the known contamination material had been removed from site".

For the third time, Mr Taylor insists that more testing should have been carried out in Area 1 before regrading, despite the data already available from previous reports and the official acceptance of a remediation strategy based on that data by both local authority and Environment Agency. In our opinion, this point has already been adequately addressed on pages 1 and 2 of this response.

Proof for the off-site disposal of contaminated soil will be presented in the form of haulage tickets included as an appendix in the remediation validation report required under the terms of the approved *URS* Remediation Strategy.

Fifth paragraph: "During the year Crest, T&M and the EA have all expressed opinions that the material in the bund was only lightly contaminated, and that a few weeks in the sun would clean it enough for re-use. Whey then did Crest suddenly decide to move 52 loads of it to landfill? And why were the delivery tickets marked >inert<?"

Crest Nicholson, Tonbridge and Malling Borough Council and the Environment Agency based their professional assessment of the contamination levels of the bund material on the laboratory data for Area 1 presented in the reports listed on page 1 of this document, in addition to field observations and the recent testing carried out by *Geo-Environmental Investigations Ltd.* As stated on page 7 above, the "heavy oil contamination" alleged in Area

1 by Mr Taylor without a shred of evidence had not been present. However, the modest localised contamination that was identified was significant enough to pose a potential risk to human health and controlled waters – hence the need for a remediation strategy. The contamination identified consisted mostly of hydrocarbons. The lighter hydrocarbon fractions tend to degrade by evaporation if the impacted material is exposed to air and windrowed; this is a soil treatment approved by the Environment Agency. However, on-site soil remediation was never planned on this site and was therefore not included as an option in the approved *URS* Remediation Strategy; the reported comment was merely made to indicate that the level of contamination of the soils in the bund was modest enough to theoretically permit this treatment.

Crest Nicholson actually removed 54 loads of this material to landfill for two reasons: to comply with the terms of the approved *URS* Remediation Strategy, and because there would have been no room or reason to keep this material on site, as it was unsuitable for re-use in its condition at that time, and on-site treatment was not an option.

Mr Taylor is clearly unaware of the complexities of materials classification. A waste soil categorised as contaminated in terms of human health or risk to controlled waters may still classify as "inert" for disposal purposes, where material is classified for transport and handling and for disposal at the tip, using different criteria. Therefore the "inert" classification for disposal purposes does not necessarily contradict the classification of the same material as contaminated in the context of a residential housing site with gardens.

Sixth paragraph: "I need further convincing that the bund material was the Area 1 contamination. The evidence I have seen to date leads me to suspect the Area 1 contamination was buried in Area 2 & 3 on the 5th December and the bund filled with material from elsewhere at some later date".

None of the available data support's Mr Taylor's unfounded belief that contaminated material from Area 1 has been "buried" in Areas 2 or 3. There is no evidence for this allegation whatsoever. What Mr Taylor calls "evidence" is in fact a mixture of phantasy, groundless suspicion and a misinterpretation of the facts at every turn. None of Mr Taylor's so-called "evidence" would pass muster in an inquiry. It is utterly irrational to allege that the material temporarily stockpiled in the Area 5 bund had not originated in Area 1. There is no point in trucking soil off-site unless it is absolutely necessary: this is not cheap, even at the most advantageous (inert) rate. If Mr Taylor was correct in his assumption that contaminated material from Area 1 had been buried in Areas 2 or 3, this would come to light once the surcharge piles have been removed from those parts of the site, since validation sampling of the regraded level will be required in accordance with the approved remediation strategy. In practical terms, Mr Taylor's scenario would double the disposal costs, since any material buried in Area 3 would have to be excavated and removed before that part of the site could be developed, as explained on page 7 above. Does Mr Taylor seriously expect the developer to act in such a counterproductive way?

And since even the contaminated material was rated as "inert" for disposal as explained above, what motive could there be for substituting material from elsewhere from it? Can Mr Taylor tell us where this material came from, if not from Area 1?

Anybody comparing the results of the material sampled from the contaminated holding area with the data presented in the earlier site investigation reports would have no problem accepting that this material came from Area 1.

Mr Taylor should bear in mind that for the realisation of his scenario would require a conspiracy between the developer, the ground worker, the various specialist professionals retained to oversee, police and validate the implementation of the agreed *URS* Remediation Strategy, aided and abetted by the Environment Agency and Tonbridge and Malling Borough

Council. Is he really prepared to make allegations of this magnitude without offering up any hard evidence?

Last paragraph: "Finally, I have long noted concerns about the material used by Hanson to fill the lagoon in the 80s, the same material used for the base of the BG Bypass and Celcon 2 factory. I have supplied Crest with a copy of part of the Celcon EIS, showing that contamination, and they have undertaken to check when excavating the drainage".
This relates to the emails and documents sent by Mr Taylor to Albert Prince of *Geo-Environmental Investigations Ltd* on 20.08.2014. Mr Taylor forwarded two documents. Both relate to withdrawn planning application TM/03/02563 for a partial redevelopment of Ightam Sandpit in Borough Green, to the north of Isles Quarry. In 2003, H & H Celcon Ltd submitted a planning application for a new (2nd) aerate concrete factory at Ightam Sandpit in Borough Green. They had been operating one such plant on an adjacent part of the site since 1988. Their manufacturing process uses PFA, lime, cement and aluminium powder. This controversial application was opposed, turned down and called in but was eventually withdrawn.
One of the report extracts Mr Taylor forwarded is an extract from a Site Investigation & Risk Assessment Report for that site prepared by *Southern Testing*, issued on 24.11.2006 (Report Ref. 9015). One wonders why Mr Taylor did not send the text of the report, or the location plan of excavations. Unfortunately this report is not available in the electronic planning file for the Ightam Sandpit site.
Southern Testing identified TPH contamination, some PAHs, and volatile & semi-volatile compounds in some of the Made Ground. Laboratory results and logs are included in the report extract, but nothing else. We do know from the available data that there is/was some contamination present within the Made Ground on that site. One of the other documents available on the planning file also refers to Ightam Sandpit as a closed gassing landfill site, which suggests that the backfill of this quarry may not have been completely inert.
The second extract Taylor provided is part of an Addendum to an Environment Statement, and the visual appearance of the document makes it clear that it was part of the same document as the above-mentioned *Southern Testing* report. It is clear that the report had been reproduced as an appendix to the Addendum ES. Yet again, an incomplete document was presented.

The presence of contaminated material at Ightam Sandpit does not constitute evidence in support of Mr Taylor's claim that some contaminated material from that site allegedly ended up in the lagoons at Isles Quarry. To prove that, he would have to produce documentary evidence for such material from Ightam Sandpit having been physically moved and dumped in the Isles Quarry lagoons.

Furthermore, Mr Taylor would have to prove that contaminated material had been removed from Ightam Sandpit at the time when the Isles Quarry lagoons were backfilled. The historical map extracts included in one of the archaeological desktop reports prepared for the Isles Quarry site indicate that the lagoons were infilled at some time between 1974 and 1983 – that is 5 years before H & H Celcon Ltd opened their first factory on part of the old Ightam Sandpit site, and more than 20 years before anybody started to discuss contamination/remediation of Ightam Sandpit in connection with planning application TM/03/02563. We are at a loss to explain why anybody at that time would have considered digging up contaminated material from one quarry to dump it in another quarry just down the road.

According to the EA database the Ightham Sandpit Landfill site accepted waste from 1976 until the end of 1991. However, the extract of the Addendum ES states that the backfilling of Ightham Sandpit continued until 2001 after extension of the original licence. Is Mr Taylor really expecting us to believe that an active landfill site would excavate contaminated material to dump in the lagoon of another nearby quarry, at a time when remediation was not on the agenda for the former? Furthermore, the terms of the landfill license held by Ightham Sandpit between 1976 and the end 1991 at least would not have permitted the excavation of dumped waste or any other contaminated material from a licensed site to be deposited in a lagoon on an unlicensed site nearby.

Finally, the boreholes drilled in Area 3 by *Soil Mechanics* in 2008 and 2010 as part of the above-mentioned site investigations carried out indicate that the Made Ground in Area 3 largely consists of reworked quarry-derived materials.

Page 6:

Page 6 of Mr Taylor's document reproduces part of see *AD Bly* Drawing 002, and shows the location of some of the samples taken by *Geo-Environmental Investigations Ltd.* However, it is factually incorrect and misleading to describe all these as "disposal samples": BG3, BG4 and BG5 were samples taken from site-derived surcharge stockpiles; all the other samples marked on the plan by Mr Taylor were taken from the locations of future plots to determine whether contamination was present in those locations. Only where contamination was identified the impacted material was excavated for disposal.

Page 7:

Many details on the table presented on the last page of Mr Taylor's document without any explanatory comments are unclear, but he is obviously trying to create the impression that soil samples heavily contaminated with tar had been taken at this site. Unfortunately he does not provide sample numbers or dates for the group of 3 samples "black with tar" allegedly taken from somewhere at or near the entrance and haul road. However, the sampling records of *Geo-Environmental Investigations Ltd* show that samples BG41, BG42, BG43, BG58 and BG59 all consisted of asphalt. This material was sampled specifically to address Mr Taylor's concerns.

Prepared by Birgit Schoer BA BSc MSc FGS
Environmental Scientist
Geo-Environmental Investigations Ltd
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