

ANNEX TO BURGESS SALMON LETTER DATED 11 SEPTEMBER 2020

The Treatment Hub Ltd's detailed response to NRW's letter of 27 August 2020

NRW – Natural Resources Wales

TTH – The Treatment Hub Limited

ETL – Envirotreat Technologies Ltd

Extracts from NRW Letter 27 August 2020	TTH's response
<u>Background</u>	
1 TTH hold a permit (ZP3393NJ) to operate a waste recovery installation for the treatment and processing of granular hazardous and non-hazardous wastes, primarily filter cakes and contaminated soils. It is based on a CL:AIRE Code of Practice hub and cluster model which is focused around a batch style process treating consignments of contaminated soils in individual separated stockpiles. The permit contains a range of conditions that TTH are required to comply with to protect the environment, minimise and reduce the risk of pollution and achieve the objectives of UK and European Legislation. It was issued following an assessment of the submitted application, accompanying procedures and risk assessments, and only authorises the company to undertake the activity applied for in the manner set out in their procedures. If TTH wish to change or amend any activities or processes they must first apply to vary the permit to enable the relevant and appropriate assessments to be undertaken. Only once the variation has been approved is the Company authorised to undertake the activity. To undertake activities not within the permit (even when a variation application has been submitted) is an offence.	It is common ground that TTH's current operations are not in accordance with the current conditions of permit ZP3393NJ. This was the subject of discussion between NRW and TTH in December 2019 during which the agreed course of action was for TTH to apply for a permit variation. It did so in February 2020. The permit variation provides a full account of the current operations. Further, it is TTH's case that NRW officers have been aware of the nature of the operations since 2014. It is therefore a source of considerable alarm that NRW's letter of 27 August 2020 displays a complete lack of understanding of the current operations. Given that the nature of the operations is fundamental to the resolution of this matter, the follow text provides a summary of current operations and an explanation of the differences with the permit. TTH applied for its environmental permit in the belief that its business would be the treatment of filter cakes, specifically, filter cake generated from the Tata Trostre works in Llanelli. However, in practice, this waste stream did not materialise. Instead, an opportunity arose for the processing of soils from the Hitachi Electrification Facility at Maliphant

Sidings in Swansea. Since then, the focus of TTH's business has been soil management and processing.

It has therefore always been the case that there are two waste management processes occurring at the facility. The main activity is soil management from remediation projects across the region.

It is accepted that the permit application was made on a different premise, envisaging a greater degree of hazardous waste treatment, and specifically, a physico-chemical processes that stabilised contaminants in the Trostre filter cake using the proprietary formula 'E-Clay'. It is not, however, unusual for operations to change depending on market conditions. In this case, the current operations have been carried out since the start of operations in 2014 in the full knowledge of NRW officers.

The soil management process has not in recent years utilised E-Clay or indeed any other physico-chemical process. Instead, the process employed has been one that would be recognised across construction sites and soil processing sites across England and Wales, as follows:

Waste soils are delivered to TTH from waste producers who have classified the waste as EWC 17 05 03* "soil and stones containing hazardous substances". The source is demolition and construction sites where soils will be deposited into large stockpiles often based on a conservative approach to the potential hazard classification of the soils.

On arrival, TTH has a pre-acceptance process that segregates and quarantines wastes on delivery pending the results of analysis. The analysis carried out by TTH is in full compliance with WM3.

Note that TTH has significant experience of waste classification under WM3. Since start of operations, TTH was worked closely with its parent company ETL, utilising the expertise gained by ETL over 20 years in the contaminated land remediation market (ETL runs on-site remediation projects and has carried out several such projects in Wales with the full support of NRW). Simon Farr is an employee of both TTH and ETL and

has accumulated significant experience and expertise in the management and understanding of contaminated soils, both for on-site remediation and for processing / effective management of soils within TTH.

In the vast majority of cases, the pre-acceptance analysis demonstrates that the soil is not hazardous waste and it is classified as EWC 17 05 04.

This should be wholly unsurprising to those who have experience of the sector. The email from Rebecca Bomers to Liane Bacon-Weekes dated 31 July 2020 explains some of the common factors.

This appears to be the main issue between NRW and TTH. It is TTH's case that it is TTH's duty, as the waste holder at that time, to ensure that the waste classification is correct. That is indeed the purpose of acceptance criteria and pre-acceptance analysis. If the waste is misclassified (that is, it is something different to what is suggested in the consignment note) such that TTH cannot process the waste stream, it would be rejected (and this has happened in the past). However, that is not the case with soil and stones waste-streams. Soil and stones have a mirror waste code: EWC 17 05 04 if the WM3 process concludes the soil and stones are not hazardous and EWC 17 05 03* if the WM3 concludes the soil and stones are hazardous. TTH can accept both and will deal with each accordingly.

It appears that NRW takes issue with this approach. It appears to be NRW's case that testing the soil and stones using the WM3 process and dealing with the soil and stones accordingly – either as hazardous or non-hazardous – is not permitted, and that the only option open to TTH if the soil and stones are non-hazardous is to send them back to the producer. If that is indeed NRW's case, then it is in error. It appears that NRW compounds this error by concluding that soil and stones classified as non-hazardous under the WM3 process pose a risk at receiving sites on the grounds that these soils and stones remain hazardous. Again, this is in error.

2	Condition 2.3.1 (a) of the permit stipulates that the activities on site must, unless otherwise agreed, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1. This includes the document 'Application supporting document SOL0113ESP01' which was received and assessed as part of the permit application. The procedures and mitigation measures stipulated within the document are fundamental in the assessment of risk and the decision to issue the permit.	See TTH response to item 1 above.
3	In addition to the Operating Techniques, TTH is also required to manage and operate the activities in accordance with a written Environmental Management System ("EMS") (Permit condition 1.1.1.). The EMS stipulates and highlights the procedures the company will implement to minimise the risk of the activity and it makes a commitment to review these measures if there are changes to activities. To comply with condition 1.1.2, records must be kept that demonstrate compliance with the EMS and the procedures within it.	Following NRW's visits in October and December 2019, the EMS was updated in January 2020 to reflect current activities.
4	When an operator fails to comply with the conditions of their Environmental Permit or fails to operate their facility in manner as authorised by those conditions, it presents a risk of that operation negatively impacting the environment through the absence of appropriate controls. Failure to comply with permit conditions and the supporting operating techniques and management systems is an offence under the Environmental [sic]	TTH notes Burges Salmon's comments on this point in its 2 September letter. TTH accepts that operations are not in compliance with the current conditions of the permit but denies that the non-compliance with the permit presents a risk of negative impact to the environment. There is no evidence to support an allegation of increased risk.
5	TTH recognise and acknowledge this in Section 3.3.7 of document SOL0113ESP01 where it states: <i>All aspects of the operation will be managed in accordance within a formal Environmental Management and Quality Plan. The plan will define all activities throughout the lifecycle of the treatment process (i.e. pre-acceptance, acceptance, treatment, validation and final off-site transfer). The Environmental and Quality Management system will be designed to meet the requirements of the Environmental Permitting Regulations and associated pollution prevention guidance. The EMS has been designed to ensure:</i>	See TTH response to item 3 above.

- *The identification of all foreseeable environmental impacts and risks that The Treatment Hub activities pose to the environment.*
- *Prevention or minimisation of any identified risks to practical minimum.*
- *Legal Compliance assurance.*
- *Activities at the site will be managed in accordance with the management system, which will be subject to continuous review, audit and improvement. Specific detailed management system reviews will take place if there is a significant change to the activities, following an accident or if a non-compliance is found.*
- *Furthermore, the whole management system will be subject to annual external audit by competent third parties.*
- *The key aspects of the EMS for the site will include: Preventative maintenance; Operator requirements; Training and competence; Emergency response and incident management; and Monitoring, measurement and reporting.*

The environmental and quality management system and procedures will be written to ensure that the environmental risks and impact of the normal running of the site activities are documented and minimised

Responses to your Letter of 14 August 2020

- (a) **describe in detail the “risk of pollution” which you claim is sufficient to justify the suspension of our client’s environmental permit and provide evidence, including all documentation (risk assessments, technical reports etc.), by which you have analysed and quantified this risk;**

6 During an inspection on the 29th October 2019 several significant permit breaches were identified and listed procedures were not being adhered to. The operation and treatment process were far different to the activity authorised by the permit. A copy

See TTH response to item 1 above.

	of the Compliance Assessment Report (CAR) is attached (Report ID: CAR_NRW0036053). (Annex A)	
Volume of wastes on site		
7	Section 4.8.3 of the document SOL0113ESPOL states that no more than 5,250 tonnes of material will be stored internally at any one time. During the inspection it was evident that volumes of waste were stored in excess of the permitted limit. Much of building had been filled with treated and non-treated wastes which ran down the length of the building. The bottom section of the building and the lower doors could not be accessed. It was noted by the Company Director Mr. Simon Farr that in recent months there had been an increase in business that resulted in the site accepting more waste than it could treat and remove. It was estimated there was in excess of 12,000 tonnes of waste on site, but Mr. Farr could not provide an accurate total quantity of waste stored. (See Photos in Annex B)	NRW have misrepresented comments by Mr Farr, who actually stated that the space constraints would mean that the handling the soils would be more difficult and could entail double handling of the same soils (possible double relocation of soil stockpiles). The operation was still fully manageable and under effective control. Furthermore, NRW's assertion that TTH had accepted more waste than it could treat and remove is denied. In fact, TTH had taken steps to manage volumes of waste by turning away soil enquiries from customers and / or encouraging the treatment of soils on site (by ETL). TTH emphasises that it was not <u>treating</u> the bulk of the soils received at TTH: the process was one of soil management. See TTH response in item 1 above. TTH notes that, in this respect, a new permit application was originally promulgated in July 2019 with the intention of moving operations to a larger building on the same industrial estate. This permit application is currently still only at the 'duly made' stage.
8	The issue of storing waste in quantities greater than 5,250 tonnes has been raised and the site breached in two previous Compliance Assessment Reports (CAR) (Report ID: CAR_NRW0023790 and CAR_NRW00325158). (Annex C) During our inspection on the 2nd July 2020 it was evident and acknowledged by TTH the volume of waste on site remained in excess of permitted limits. In an email on the 23rd June 2020, Mr. Farr estimated there to be approximately 9,000 to 9,500 tonnes of waste stored and NRW calculations concurred with this estimation. Compliance Assessment Report (Report ID: CAR_NRW0036771). (Annex D)	TTH notes that the two previous CAR reports provided in Annex C refer solely to alleged breaches stemming from the volume of waste stored in site and not, more broadly, to the nature of operations at the site. As mentioned in respect of item 1 above, TTH has operated in the same manner for over 5 years with the full knowledge of a number of NRW officers, none of whom have expressed concern that the operation posed a risk of pollution With regard to the inspection on 2 July 2020, the quantity of waste on site represents a reduction of approximately 25% from October/December

2019, notwithstanding that significant adverse weather conditions combined with the complications of the COVID-19 lock-down from March 2020 meant that TTH's receptor site was not in a position to receive material for much of this period.

The December 2019 CAR Report required TTH to "reduce the quantity of waste on site". TTH complied with this requirement despite these circumstances beyond its control.

In respect of the 2 July visit, TTH notes that, prior to this visit in July, one of NRW's officers (Liane Bacon-Weekes) had previously made it clear to both Mr Farr and Philip Rees (TTH's Technically Competent Manager) that their attendance was not required on the day of the visit.

As it happens, Mr Farr and Mr Rees happened to be on site in any event. However, they were not asked to accompany the NRW officers whilst they undertook their assessment and the officers made no attempt to discuss the stockpiles on site or their relevance / status with Mr Farr or Mr Rees.

TTH understands that Mr Farr attempted to enter dialogue with NRW's officers regarding operational requirements, but that the officers were reluctant to engage in this respect (even stating that they were not prepared to discuss these matters). TTH also understands that Mr Farr showed Ms Bacon-Weekes photographs taken one week prior to the visit which showed considerably less materials at TTH. However, she did not appear to acknowledge this or have any regard to it.

During any appeal TTH will seek an explanation from NRW for why such dialogue was actively discouraged and avoided by NRW officers in circumstances where discussion could have addressed the concerns of those officers. It is TTH's position that this is poor practice.

The Environment Agency states the following in its guidance on assessing and scoring environmental permit compliance in respect of waste operations and installations:

		<i>“Explaining the Outcome of a Compliance Assessment:</i> <i>If they are available, we do a site visit for a compliance assessment when the site manager is present – or in the case of a waste operation, the technically competent manager. This is so we can make them aware of any non- compliances.</i> <i>We discuss with them the actions needed to remedy the non – compliance and the timeframe required for undertaking them. We summarise the discussion on the CAR Form”.</i> TTH would expect NRW to follow the same procedures as a matter of regulatory good practice.
9	Despite the quantity of waste being estimated as less than the October visit, the area used to accept and treat waste had been reduced further with stockpiled waste. (See photos in Annex E.)	See the TTH response at item 1 above. This is not surprising given that the majority of the soil and stones on site were not hazardous and did not require treatment. The areas for waste acceptance and waste treatment were perfectly adequate for the activities occurring on site at that time.
10	As a result of the large volume of waste stored on site, the area within the building available to treat waste has been considerably restricted. It was confirmed by Mr. Farr and evident that it was no longer possible to treat wastes in the manner authorised by the permit	On the issue of the area for treatment, see the TTH response to items 1 and 9 above. The statement about Mr Farr wholly misrepresents Mr Farr’s comments. TTH understands that Mr Farr was simply making the same point made in items 1 and 9 above, that the operations at TTH differed in practice from the permit and, as such, it was not surprising that the space for treatment was reduced.
Treatment of waste		
11	As stipulated in the procedures, incoming wastes are required to be stored in clearly separated stockpiles within the ‘untreated area’ of the building until it is scheduled for treatment. Each stockpile is to be fully characterised and evaluated by means of client analysis, TTH analysis and treatability trials. Each waste stream, or	See TTH’s response to item 1. This statement is evidence that NRW does not understand the current operations at TTH notwithstanding the fact that it has been explained to

contaminated soil waste stream, should be individually assessed, and the prescribed treatment recorded on either a 'Waste Stream Evaluation Form (Form TH-002) or 'Contaminated soils Evaluation Form (Form TH-001) whichever is appropriate. Details should include instruction on how to prepare the batch of E-Clay slurry, the volume of Contaminated Soil / Waste and the quantity of E-Clay slurry to be used and how to mix the Contaminated Soil / Waste with the E-Clay slurry and cement. A unique identity reference is assigned to each stockpile, that is to be retained throughout the treatment lifecycle and provide a clear audit trail of the waste assessment, acceptance, treatment, testing, validation and shipping. Following treatment, the quantities of reagent used together with respective batch numbers should be recorded on the relevant forms. It is noted that "actual usage will be cross checked against expected usage (based on E-Clay formulation and batch size)... Failure requires the material to be placed in Quarantine pending further investigation. The Waste Tracking System will require updating to reflect the status of the batch".	previous officers and is set out in clear terms in the permit variation of February 2020.
12 Under the TH1.2 Waste and Material Storage procedure it states that the status of each batch will be maintained on the waste tracking system (TH-DB002) and will be routinely tested as indicated on the waste stream evaluation form or contaminated soil evaluation forms. Once treated, batches will be stockpiled within the "Treated Materials" area and clearly labelled showing the Client, Date, Batch Number, Validation Status (Traffic Light label where GREEN = passed validation, RED =awaiting analysis). Material will remain within this area until scheduled for shipment or quarantined. The status of the batch will be maintained on the Waste Tracking System. Mr. Farr confirmed during site visits that as a result of the large volume of waste stored on site, TTH is unable to treat waste within prescribed individual separated batches or maintain the identity of waste streams within the main stockpile. He also confirmed that wastes are mixed pre and post treatment. Without this batch system TTH is unable to follow the protective control measures listed in their procedures. They are unable to monitor and test the effectiveness of the treatment or determine if it requires quarantining and further investigation.	TTH denies that Mr Farr gave the confirmations alleged. Mr Farr has again been misrepresented or misunderstood. TTH understands that Mr Farr told NRW officers that, following the WM3 classification of soils, those with sufficiently similar properties are bulked. This is permitted under HWR06 which states: <i>"Bulking of hazardous wastes is the mixing of hazardous waste with wastes of the same EWC code, same hazardous properties and similar constituents. It is not considered pre-mixing."</i> It must of course follow that bulking of non-hazardous wastes with wastes or the same EWC code, same properties and similar constituents must also be permissible.

13 The main stockpile of waste within the building is a combination and mixture of treated and untreated wastes incorporating contaminated soils and other wastes both hazardous and non-hazardous. During the visit on the 2nd July 2020 Officers witnessed a delivery of sludge waste that was deposited on a stockpile marked as “treated”. (See photos at Annex F)	This allegation is denied. Nothing in this stockpile is classified as hazardous waste. The large stockpile comprises soil waste streams which are compatible and were bulked accordingly. The majority of these soils are from one source only (Valero Cardiff). The implication is that TTH has mixed waste without regard for its provenance or characteristics. In fact, and consistent with our other responses, TTH has followed the common (and lawful) procedure of bulking similar wastes. In relation to the point made on the witnessing of the delivery and deposition of sludge waste, TTH notes that the officers on site who witnessed the delivery did not raise any concerns to Mr Farr (or, to our knowledge, any other TTH employee), ask any questions, or otherwise make any attempt to discuss the delivery or to understand the nature of the waste received. Ms Bacon-Weekes requested copies of the Duty of Care paperwork and analysis for previous deliveries of the same waste. Mr Farr forwarded all the paperwork requested via email on 3 July 2020. Ms Bacon-Weekes acknowledged receipt, but still did not raise any concerns or ask any questions on the matter.
14 Mr. Farr confirmed that the authorised E-Clay treatment process was no longer used to treat all waste streams. TPH contaminated soils, for example, merely undergo bio-remediation (via weathering). This treatment process is not authorised by the permit and therefore the risk assessments and control measures around this process have not been assessed or approved.	Mr Farr’s comments have again been misinterpreted. It is correct that the E-Clay treatment is not used for all waste streams: most waste streams do not require E-Clay treatment for the reasons explained above. We understand that Mr Farr explained that soils contaminated with biodegradable hydrocarbons do not need treating: it is sufficient to segregate such soils and allow the reduction in hydrocarbons to occur

		naturally over time. TTH does not employ active bioremediation processes.
15	It is generally understood that low weight hydrocarbons can be removed from material by evaporation or natural degradation processes, but these do not work for higher molecular weight hydrocarbons. TTH has made no distinction with regards to this and due to the lack available space within the building, it is evident that this separation is not occurring.	This comment is denied and is without foundation. TTH and ETL have between them extensive experience in contaminated land remediation technologies and has a comprehensive understanding of bioremediation processes (natural or active). TTH only deploys processes that will be effective: the process of segregation and storage over time is only deployed in specific, appropriate cases and always subject to testing. TTH uses this process only under proper conditions, including adequate spacing and segregation. NRW has adduced no evidence to the contrary.
Hazardous Wastes		
16	TTH accepts both hazardous and non-hazardous soils and other hazardous and non-hazardous wastes. The type and quantities of waste received can be evidenced through, submitted hazardous waste returns, quarterly waste returns and copies of the duty of care paperwork (March 2018 – March 2020) that were received as the result of EPR Reg 61 Notice served on 13th March 2020. It is clear from the hazardous waste returns submitted to NRW that hazardous wastes, both permitted and non-permitted have been accepted on site. Wastes include: (see attached report at Annex G) 11 01 09* sludges and filter cakes containing hazardous substances (MH) 19 01 13* fly ash containing hazardous substances (MH) 19 01 11* bottom ash and slag containing hazardous substances (MH) 17 05 03* Soil and stones containing hazardous substances (MH)	A significant majority of the waste received by TTH is soils. With regard to other waste streams, TTH only takes in materials that have beneficial use in its operations. None of the waste received by TTH in the course of normal operations is classified absolute hazardous (AH). TTH accepts that on occasion, wastes have been received that should not have been accepted. However these are isolated incidents as explained below. <u>EWC 12 01 16:</u> This related to one load (11.6 tonnes) of sand with elevated metals received on 24 January 2019 - the waste was received under EWC 12 01 06. This was not noted at acceptance. The material was assessed on receipt and found to have significantly less contamination than indicated, and that this, in fact, consisted of elevated

19 02 05* Sludges from physio/chemical treatment containing hazardous substances (MH) 19 02 07* Oil and concentrates from separation – non permitted (MH) 12 01 16* waste blasting material containing hazardous substances – Non permitted (AH) In addition to this, a review of the duty of care paperwork also identified the acceptance of: 17 03 01* bituminous mixtures containing coal tar – non permitted (MH) 17 06 03* other insulation materials consisting of or containing hazardous substances – non permitted (MH) 19 02 07* oil and concentrates from separation – non permitted (AH)	hydrocarbons rather than elevated metals. Waste was properly processed with soils exhibiting a similar profile. The processed material was eventually sent to Tir John landfill for the purpose of landfill cover. Other enquiries for similar EWC wastes have been rejected. <u>EWC 19 02 07:</u> An enquiry was received from BKP for two waste streams, namely interceptor and centrifuge wastes. Submitted analysis suggested 7,900mg/kg and 2,590mg/kg TPH respectively. Initial discussions indicated that both these wastes would be received under EWC 17 05 03. The centrifuge waste was transferred under 19 02 07, this was not picked up on acceptance. Acceptance of these two consignments (under EWC 19 02 07) was recorded on both the hazardous waste returns and quarterly waste returns relating to this period. Two consignments of centrifuge waste (24.5 tonnes and 26.6 tonnes respectively) were received in November 2018 from BKP. Receipt of further consignments of centrifuge waste was stopped directly afterwards. The centrifuge waste in these two consignments was quarantined pending further assessment. Following testing and assessment this waste was eventually processed. The processed materials were eventually sent to Tir John landfill with other non-hazardous materials for the purpose of landfill cover. <u>EWC 17 03 01</u> The material was initially referred to as ‘coal tar’ at the enquiry stage. The analysis did not support this conclusion and it was agreed that the material would be received under EWC 17 05 03 as it consisted of soils, stone, some concrete and tarmac plainings.
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		One load (17.08 tonnes) was received on 25 May 2019 under EWC 17 03 01. This was indicated to the client and the material accepted subject to further testing. A sample of the tarmac content was submitted for testing, which indicated that the tarmac was not coal tar. It was agreed with the waste producer that the material could be coded EWC 17 05 03. The waste was screened and following appropriate processing the resultant oversize and fines were sent to Tir John for the purpose of landfill cover. <u>EWC 17 06 03</u> We have no data / records relating to waste being accepted under this code. We cannot comment further without seeing this information. We do not have the necessary paperwork in our possession as this was sent to Ms Bacon-Weekes in April and May under a Section 61 Notice.
17	The inability to maintain segregated stockpiles has resulted in contaminated soil wastes (hazardous and non-hazardous) and other wastes (hazardous and non-hazardous) being mixed. Mixing hazardous wastes is not authorised by the permit. TTH received a CCS2 score for breach of permit condition 2.3.6. and this was not refuted or appealed.	See TTH responses in items 1, 12 and 13 above.
18	During a site visit on the 16th December 2019, Mr. Farr informed NRW of the acceptance of a consignment of waste from Valero oil refinery in Pembrokeshire. Mr. Farr indicated that this waste was "somewhere" in the main stockpile. This is confirmed and highlighted in Figure 7 – Schematic of Stockpile location/ status within the Treatment Hub. HUB EP 001 - EPRZP3933NJ Variation support document SSF PLR January 2020 (20-01-20) - 1 (002). In figure 7 the consignment is shown as stockpile SP2A (Valero - Sanderson Environmental) and noted as "material wet (bunded to enable drying prior to processing)". From the diagram it is evident that it is located within the main stockpile. The volume of waste on site has restricted the site's ability to quarantine waste. On the 2nd July 2020, NRW officers gained access to the lower part of the building. It appeared that waste had been removed from this	It is TTH's understanding that NRW has again misunderstood Mr Farr in December 2019. It is surprising that NRW's officers did not seek clarification on this matter at the time of their visit in July 2020 (see item 13 above). Had they done so, Mr Farr would have confirmed that the main stockpile comprises compatible soils, including soils from Valero Cardiff - <u>not</u> Pembrokeshire, which is a completely different consignment. Waste from Valero Pembrokeshire <u>is</u> held on site, located to the rear of this stockpile as shown in Figure 8 in the variation support document recently submitted to NRW (Figure 7 in the previous variation submission

	area and no bunded was present. We are yet to question the company on this but will do so formally as part of our investigation. (Photograph at Annex H)	support document). This is contained within a cell and does not impact the main stockpile. The main stockpile will continue to be subject to thorough testing and assessment. The cell will be assessed independently.
19	As described in the guidance document HWR06 Classifying and coding wastes from physico-chemical treatment facilities: <i>Pre-mixing and bulking are forms of mixing. A chemical reaction should not usually take place during pre-mixing or bulking.</i> <i>Pre-mixing If a hazardous waste is mixed with:</i> <i>a hazardous waste with a different EWC code;</i> <i>a hazardous waste with the same EWC but different hazardous properties or chemical composition;</i> <i>a non-hazardous waste; or</i> <i>a non-waste</i> <i>and a reaction does not take place, then this is considered pre-mixing. This waste is coded 19 02 04* premixed wastes composed of at least one hazardous waste.</i> <i>This is an absolute hazardous waste; threshold criteria do not apply to absolute hazardous wastes.</i>	See answers above.
20	The dilution of hazardous substances to below thresholds is strictly prohibited under the Waste Framework Directive and this is further supported by the Landfill Directive which prohibits dilution alone as a means of reclassify waste from hazardous to non-hazardous/inert or non-hazardous to inert.	This statement is agreed. Any allegation that TTH dilutes wastes (hazardous to non-hazardous / inert or non-hazardous to inert) is strongly denied.

21 As TTH have not maintained segregated treatment stockpiles, nor are able to evidence appropriate treatment, it is the view of NRW that the main stockpile of waste must be considered and exported as hazardous waste. Hazardous wastes cannot be deposited without the appropriate controls and authorising permit. The waste must be assessed for pollution potential alongside the environment in which it is intended to be deposited. If not properly assessed a risk of pollution from leaching of hazardous substances must be assumed under the precautionary principle.	This analysis of TTH's processes and storage is incorrect. See TTH's responses in items 1, 9, 12, 13, 14, and 15. TTH concurs with the statement made in assessing the pollution potential alongside the environment in which it is intended to be deposited. This is always factored into TTH's rationale for wastes / recovered material leaving TTH (using its expertise and experience in this field). The requisite testing of material is carried out to demonstrate suitability for the designated receptor, with the intention of ensuring that the wastes / recovered materials are deemed suitable for the intended purpose.
22 The acceptance of hazardous waste without the correct permit and control measures has significant environmental and legal implications at the receiving sites.	See TTH response to item 21 above. This statement is agreed. Any allegation that TTH has sent hazardous wastes to receiving sites is strongly denied.
23 In correspondence from Mr. Mcleod on the 27th July 2020 it was noted: "Soils sent to the hub as hazardous are tested by ourselves on arrival and are, in most cases, found to be non-hazardous under WM3 classification. This is as a natural consequence of mixing during excavation, stockpiling if required and transporting. It is a judgement call therefore from ourselves whether there is a requirement for treatment and it is a COMPLETELY FALSE PREMISE for NRW to assume that all (or even the majority) of wastes will require treatment as seems to be the case judging by the comments made". The Waste Duty of Care Code of Practice outlines practical guidelines for the safe management of waste to protect human health and the environment. It is issued under section 34(7) of the Environmental Protection Act 1990. Section 3.5 of the Waste Duty of Care outlines the requirements for each waste holder to give an accurate description of the waste and contains all information that	NRW has misunderstood Mr McLeod's comments. The email does not state that it is a 'judgement call' as to whether the waste is hazardous and must be treated as such', as NRW has suggested. The words of the email are: "it is a judgment call therefore from ourselves whether there is a requirement for treatment". This is wholly different. The classification is a prescribed process under WM3. The waste is either hazardous or it is not. If the material is non-hazardous following the WM3 assessment then there would be no requirement for treatment unless specifically required for a particular application. Please can NRW clarify its comments on rejection of waste in the context of Mr McLeod's email: specifically, is it NRW's position that TTH (or any other operator) should reject waste if it is found to (in fact) be non-hazardous following WM3 assessment in the course of pre-acceptance

required for the lawful and safe handling of the material. The receiver (TTH) can only accept waste if it conforms to the description in the documentation supplied by the producer and holder. If the producer of waste has assessed and exported the waste as hazardous, it is not a “judgement call”, the waste is hazardous and must be treated as such. If the operator believes the waste does not meet the description supplied by the producer, the waste should be rejected and reclassified by the producer. This is further supported by condition 2.3.3 of the permit.	procedures? If so, please can NRW explain the regulatory justification for this in the context of waste hierarchy and zero waste objectives See our comments above.
24 In his email Mr. Mcleod refers to contaminated soils with no reference to the other hazardous wastes accepted at the facility. Once a soil is mixed with other wastes, it can no longer be regraded or classified as soil.	Soils are typically combined (bulked) where compatible and in accordance with the stated requirements in HWR06. Other waste streams are addressed in our permit variation.
Waste Validation	
25 Prior to waste being removed from site TTH is required to appropriately test and validate the waste in accordance to Procedure TH 1.6 Validation Process. It states: <i>Following treatment, the treated material will be stored within the “Treated Materials” area. Where upon a number of representative samples will be taken for Validation purposes. The number of samples and type of Validation testing required will differ depending on the waste stream and intended end use. These requirements will be specified on the Contaminated Soils Evaluation Form or Waste Stream Evaluation Form (whichever is applicable).</i> <i>All samples for chemical testing shall be submitted to an independent UKAS accredited laboratory. Test results will be compared to the Validation Criteria for compliance, in the event that the treated material does not meet the specified Validation Criteria for compliance then the treated material will be quarantined.</i> <i>All test certificates will be stored together with other controlled documentation relating to that batch. Stockpiled materials held within the “Treated Materials” area will indicate their Validation status RED = Validation pending, GREEN = Validation</i>	The majority of soils have not required treatment for the reasons stated. The appropriate validation is carried out in all cases. See TTH’s response to item 1.

approved. The Waste Tracking System will require updating to reflect the status of the batch. <i>On shipment a Certificate of Conformity may be required by the end user, the nature of this certificate will depend of end user requirements. In the event that a Certificate of Conformity is raised, then a copy will be stored together with other controlled documentation relating to that batch. Shipment dockets relating to the transfer offsite will be stored together with other controlled documentation relating to that batch.</i> As TTH do not maintain segregated stockpiles because of the quantity of waste on site they are unable to determine the number of respective samples required for appropriate validation as this is determined by waste stream and intended use. They are also unable to determine if a waste stream has failed a treatment process and needs to be quarantined for additional treatability trials or disposal. Test certificates can no longer be assigned to waste streams and the waste tracking system cannot be up-dated. This is caused by the excessive amounts of waste on site and the lack of segregation.	
26 Section 3.3.5 of document SOL0113ESPOL states: <i>... environmental/chemical criteria will also be determined. Each batch treated will be evaluated on a project by project basis against these environmental criteria for suitability: Total Petroleum Hydrocarbon content; Leachable Petroleum Hydrocarbon content; Leachable Polyaromatic Hydrocarbon content; BTEX; Total Petroleum Hydrocarbons (TPH); Inorganics (Cyanides, Ammonia etc) Arsenic; Cadmium; Chromium; Copper; Nickel; Zinc; Lead; Mercury; and Selenium.</i> <i>The specification / validation criteria will be based on specific customer requirements and the desired end use of the material...</i> The testing and sampling paperwork submitted by the TTH in response to an EPR Reg 61 Notice served on 10th June 2020 does not demonstrate or evidence that adequate testing is being completed on waste exported from site. It is evident from the paperwork that some of the hazardous substances listed have not been tested for. Whilst NRW did not request the specific forms required for validation, in the spirit of complying with the Notice and demonstrating compliance with validation	The analysis was carried out as required for the designated receptor site.

procedures, NRW would have expected this information to have been supplied. The paperwork supplied provides little confidence that the exported waste will not have detrimental effect at the receiver site.	
27 A review of Duty of Care paperwork, the findings of which will be communicated separately, has shown that approximately 35,000 tonnes of waste has been exported from TTH between April 2018 – March 2020. Waste has been exported as: • 'NON WASTE' code. • 17 01 01 – concrete (MN) • 17 05 04 – Soil and stones (MN) • 19 12 09 – Minerals (AN) • 19 13 02 – solid wastes from remediation (MN) • 20 02 01 – biodegradable waste (AN) • Approx. 45% had no waste code listed. The extent and severity of the permit breaches at TTH is a serious issue. The quantity of waste on site has reduced the capacity to store and treat waste appropriately. The mixed and blended waste is an absolute hazardous waste (regardless of thresholds) and a result of the unauthorised treatment process being undertaken. TTH are unable to demonstrate that hazardous substances within accepted wastes streams, no longer pose a risk of leaching into the receiving environment. Hazardous wastes can only be deposited at receiver sites that have the correct permit and control measures in place to prevent pollution. Waste leaving TTH has routinely been miscoded which has environmental and legal implications for the receiving sites.	See TTH responses to items 21 and 22. The allegation of routine miscoding and that hazardous wastes have been sent to receiving sites is strongly denied for all the reasons set out above. Wastes have been sent out in accordance with receptor requirements.

28 NRW served Notice on The Treatment Hub as it considers that the operational failures at the facility are significant enough to pose a risk of pollution at receiver sites. Suspension notices are used to stop offending or to bring an activity or operation under regulatory control and used where necessary to prevent the risk of pollution.	As noted in correspondence from ourselves and our legal representatives, Burges Salmon, TTH does not accept the basis on which the suspension notice was served. In particular TTH does not accept that there is any risk of pollution from its processes and operations at its installation so as to justify service of this notice as a preventative or protective measure.
(b) give specific details of the nature of the pollution that you claim to be involved and provide relevant evidence of such pollution or the risk of such pollution;	
29 "Pollution" is defined in the Regulations as any emission as a result of human activity which may • be harmful to human health or the quality of the environment, • cause offence to a human sense • result in damage to material property, or • impair or interfere with amenities and other legitimate uses of the environment. It is evident from the hazardous waste returns and the duty of care paperwork that TTH have accepted hazardous wastes containing various hazardous substances. Within the duty of care paper work the reasons given for hazardous waste contamination ranged from • Soils with elevated petrol, diesel, oil and polycyclic aromatic hydrocarbons.	The vast majority of soils received at TTH have been demonstrated to be non-hazardous following WM3 assessment and do not exhibit these waste HP codes (by virtue of the analysis carried out upon receipt of the waste at TTH).

	• Soils with high pH values, soils with elevated alkaline compounds including calcium hydroxide/calcium oxide/sodium hydroxide. • Soils with elevated metal contamination including zinc/nickel/copper/magnesium/manganese/chromium/lead/zinc chromate. As such, the most commonly used hazard codes in the consignment notes for waste entering TTH are: HP5 (Harmful), HP7 (Carcinogenic), HP8 (corrosive), HP10 (Toxic for reproduction), HP11 (Mutagenic) and HP14 (Ecotoxic).	
30	For a hazardous waste to be considered non-hazardous (low risk) the hazardous substances must either be removed (not diluted) to below threshold levels or transformed into non-hazardous substances.	See TTH response at item 1.
31	The quantity of waste on site has reduced TTH's capacity to appropriately treat the waste. The current process being undertaken on site does not remove or transform hazardous substances within the waste and therefore there is a risk of these entering the environment at the receiver sites.	See TTH's responses to item 1 and items 7 to 10.
32	From the duty of care paperwork, it is evident that waste has been removed and accepted at receiver sites that are not permitted or have the appropriate controls in place to accept it. This is due to the inability of the site to manage the waste on site appropriately due to the excess waste.	This is strongly denied.
(c) confirm that the source-pathway-receptor model formed part of your analysis and provide details of how it was applied (the explanation in the email dated 4 August 2020 from Liane Bacon-Weekes is wholly inadequate but if this is the only analysis upon which the decision was based then please say so in clear terms);		
33	The overview provided in a) details how the TTH failure to comply with permit conditions and management procedure poses a risk of hazardous wastes leaving the facility and introducing hazardous substances into the environment at receiver sites.	TTH believes that NRW's analysis and application of this model continues to be fundamentally flawed. The pollution linkage model (source-pathway-receptor) is a well-understood model which is applied on a site-specific basis. The source

As a summary and to emphasise the source pathway receptor model: Source – TTH accept hazardous wastes and due to the large volume of waste stockpiled, they are unable to store and treat waste in accordance to approved procedures. This creates a risk of hazardous substances leaving site without the appropriate controls. Pathway – TTH have failed to accurately classify and validate waste removed from site. This is evident through a review of the duty of care paperwork and quarterly waste returns. Receptor – risk of Waste from the TTH has been deposited in two known locations that are not permitted to accept hazardous waste. The purpose of Notice is to provide a protective response and prevent the risk of pollution occurring.	is the contaminant substance in the material deployed to site, the receptor could be (for example) groundwater or humans, and the pathway is the plausible route between the two which depends very much on the specific characteristics of the receiving site. It is on this basis that a pollution risk must be assessed. NRW has not done this for any receiving site. See also TTH's response in item 4.
(d) particularise the specific “hazardous wastes” that led to the decision to serve the Notice (and provide related evidence) and give detail as to how these “hazardous wastes” were factored into your risk assessment and analysis (including using the source-pathway-receptor model);	
34 No particular hazardous wastes led to the decision to serve the Notice. The Notice was served as a result of the quantity of waste on site which restricts TTH ability to treat waste in accordance with permit conditions. To comply with the Notice TTH is required to reduce the quantity of waste to 5,250 tonnes which will provide the space for individual waste streams to be treated separately.	TTH notes that no particular hazardous wastes have been identified by NRW.
(e) confirm that the officers involved in the decision-making process had relevant and specific technical expertise in relation to the specialist waste management operations carried out at our client's installation and provide details of this expertise;	
35 The officers involved in regulating TTH are experienced officers with expertise in regulating a range of complex waste management facilities. Whilst it is helpful for an officer to have specialist knowledge on a specific treatment process, it is not essential when assessing permit compliance.	TTH's concerns are rooted in the apparent misunderstanding by NRW of large parts of TTH's operations. Ms Bacon-Weekes stated during the visit in October 2019 that she lacked the necessary experience and understanding and would have to discuss

	The decision to serve a Notice is not down to one officer but a process of reviews and checks through several tiers of management and the NRW legal team.	with an experienced officer. She indicated that she would arrange a follow-up visit with a more experienced officer who was more familiar with the type of operation carried out at TTH. It is imperative, given the nature of operations at the site, that relevant regulatory personnel have adequate technical expertise. TTH requests disclosure of the paperwork for the 'reviews and checks' carried out so that it can understand the technical expertise of those involved and the degree of scrutiny and challenge that this decision was subjected to.
(f) advise if third-party consultants were instructed on this matter, or if not, whether this was considered and why it was rejected; and		
36	NRW did not consider it necessary to seek the advice of third-party consultants. The Notice was served as a result of permit non-compliance and therefore, as the Regulator, we do not require advice from a third party.	See TTH's response to item 35.
37	With regards to an assessment of the quantity of waste, in an email on 23rd June 2020 Mr. Farr estimated there to be 9,000 to 9,500 tonnes of waste stockpiled within the building. Officers attended and completed a basic volumetric assessment and were content with the estimation provided by Mr. Farr. Had the officer's calculations indicated a large discrepancy with the tonnage, NRW may have considered instructing a quantity surveyor at that time.	This volume of waste is not in dispute.
(g) confirm that legal advice was taken prior to service of the Notice, and in accordance with paragraph 3.53 of Natural Resource Wales' Regulatory Guidance Note 11 ("RGN 11"), or, if not, why not.		
38	Yes, legal advice was taken prior to serving the Notice in accordance to RGN 11. Due to the extent and severity of the permit breaches at TTH, NRW deemed that a protective response was necessary, proportionate and justified. Whilst there are other regulatory tools to return an operation into compliance, it was considered counterproductive to allow the operator to continue to accept waste when the quantity	TTH does not accept the justification for service of a suspension notice in respect of any alleged breaches of permit conditions, in particular that this was required as a protective or preventative measure.

	of waste is a fundamental factor in creating the issue. TTH is required to reduce the quantity of waste on site to permitted limits and must ensure that the waste is accurately classified and exported to suitably authorised facilities. The Notice is a partial suspension and therefore restricts the acceptance of waste only; it does not restrict other aspects of the permit allowing TTH to treat waste in the manner authorised by the permit. NRW appreciates that TTH has applied to vary the permit to increase tonnage limits and change treatment processes and the delay in assessing the application has been far from ideal. However, permit variations cannot be pre-determined and TTH is required, and has been reminded, that they must comply with the existing permit conditions until the permit variation has been issued. It is the Operator's responsibility to understand the limitations of their permit and to make changes to the permit prior to them being implemented on site.	
39	TTH has been aware for many years that a permit variation is required. As previously indicated the issue around storing excess volumes has been raised with TTH on previous occasions and the company themselves have acknowledged the need to update the permit and operating procedures to reflect activities on site. - On the 19th July 2016 (Report ID: CAR_NRW0023790) TTH breach of permit for storing 8,800 tonnes of waste on site. - On the 4th December 2017 (Report ID: CAR_NRW0032158) TTH breached for storing 5,600 tonnes of waste on site. It was agreed that the Section 4.8.3 of SOL0113ESP01 would be updated to reflect a tonnage of waste that better reflects the operations and capacity on site. This was to ensure that TTH remained compliant with condition 2.3.1 of the permit. TTH was to confirm a date for when Section 4.8.3 of SOL0113ESP01 will be updated by 6 October 2017.	See TTH's response in item 8. It was a specific and stated requirement of NRW within the December 2019 CAR report for TTH to submit a permit variation to reflect current operations at TTH and to up-date the permit accordingly: In accordance with this stipulated requirement, TTH submitted the variation in mid-February 2020. TTH had every reason to believe that the intention was to review and issue the variation expeditiously. We are now in early September 2020 and this variation application has yet to be duly made (over 6 months on from when the permit variation was submitted as a stipulated requirement of NRW).
40	In relation to your query regarding RGN 11. RGN 11 is an out of date Guidance Note and is currently being reviewed by NRW. As previously indicated, RGN 11 is based on the Environmental Permitting (England and Wales) Regulations 2010 (EPR 2010).	TTH notes the response provided by Burges Salmon in its letter dated 2 September 2020 in respect of this point.

EPR 2010 did not have the ability to serve a Regulation 37(1) and (5) Suspension Notice based on breach of permit conditions and risk of pollution.

EPR 2016 states;

(5) If the regulator considers that the manner of operating a regulated facility contravenes an environmental permit condition, and that such contravention involves a risk of pollution or, in the case of a flood risk activity, a risk specified in paragraph (6), it may serve a suspension notice on the operator.

(6) The following are risks specified for the purposes of paragraph (5)--

(a) risk of flooding;

(b) risk of detrimental impact on drainage;

(c) risk of harm to the environment.

As the “judgement” at Paragraph 3.45 of RGN 11 is based on EPR 2010 we cannot agree that it applies in full to Regulation 37(5) of EPR 2016. Paragraph 3.3.5 of RGN 11 states “suspension notice can be used where something has already happened to cause a risk of serious pollution or where we consider something is likely to happen that will cause a risk of serious pollution”. Therefore, when RGN 11 applied, it would not always have been possible to apply the judgement in paragraph 3.45; when dealing with something that is “likely to happen”, it would not be possible to show the “effects on the environment or health”. For Reg 37(5), NRW has to show that there is a breach of permit condition that involves a “risk of pollution”. The “risk” of pollution does not require NRW to demonstrate an actual pollution.

The “judgement” confers that NRW should “demonstrate that there is some reasonable likelihood that these risks could have a long-term negative impact or a significant immediate detrimental effect”. NRW would submit that “long term negative impact or a significant immediate detrimental effect” is in relation to “serious pollution” and does not apply in this instance. For Reg 37(5) NRW is only required to demonstrate that there is a “risk” of pollution caused by the condition breach.

41 The “risk” of pollution, as described in detail above, is a consequence of the volumes of waste stored on site. TTH are unable to segregate or treat wastes in accordance to approved and authorised procedures. As a result, they are unable to demonstrate that hazardous substances, within accepted wastes streams, no longer pose a risk to the environment. Hazardous wastes can only be deposited at receiver sites that have the correct permit, control measures and infrastructure to prevent pollution. Without such controls, there will always be a “risk” of these wastes impacting the environment and causing a pollution.	See TTH’s response to items 21 and 22.
42 NRW does not take the issuing of suspension Notices lightly but considered it necessary to restrict further waste being accepted and removed from site without the appropriate assessments and controls. It does not consider it appropriate to withdraw the Notice and urges TTH to focus on complying with the steps listed in the Notice schedules. It is positive to hear that the operator wishes to engage in dialogue to address our concerns. NRW is still in the process of investigating parts of the operation and appreciate the Company’s co-operation. To further this we will be inviting the Director Mr. Simon Farr in for formal interview under PACE and this will be communicated separately.	TTH is a stand-alone business with no other form of income and has been severely impacted by this suspension notice both in terms of financial impact / business continuity and reputation. TTH is particularly concerned that NRW has taken action on the basis of what appears to be a fundamental misunderstanding of operations and processes at TTH’s installation. There are several instances of comments attributed to Mr Farr which have clearly been misrepresented.