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Natural Resources Wales

Notice of request for more information

Environmental Permitting (England and Wales) Regulations 2016

Notice requiring further information

To:
Mr. Simon Stone
Crownhill Topsoil and Aggregates
Unit 1009
Ministry of Defence
Caerwent Training Area
Dinham Road
Caerwent
Caldicot
NP26 5XL

Application number: **PAN-006581**

Natural Resources Wales, in exercise of its powers under paragraph 4 of Part 1 of Schedule 5 of the above Regulations, requires you to provide the information detailed in the attached schedule. The information is required in order to determine your application for a permit, dated 04/10/19.

The information requested should be sent to the following address by **09:00AM 11 May 2020.**

Information should be sent to louise.bailey@naturalresourceswales.gov.uk

Name	**Date**
Louise Bailey	**09/04/2020**

Authorised on behalf of Natural Resources Wales

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Schedule

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Schedule 5 response document

Section on Historical contamination

1. You have states that the Wormtech waste does not "*sit within Crownhill's site boundary*". Please show on a plan where it is located. If it is sited within your permitted boundary it must be taken into account in this application – Please see revised Drawing No EV160904/104 Rev1

2. "*EcoVigour has not yet seen the June 2015 or April 2017 LQA2 Addendum reports but these have been requested from DIO and they have stated that they will supply these as they are in the public domain*." Please supply these reports – We have been unable to resource these documents from MoD, DIO or Jacobs so have removed references to them from the Groundwater Risk Assessment. These documents are superseded by the 2019 study / report and hence this has no impact on the assessment.

Section on Site infrastructure

3. "*Soils which are granular in composition will be stored in the open, in the area east of building 5, with overflow materials stored between Buildings 2, 3 and 4*". The site layout plan (CHD02) only shows soil stored between buildings 1 and 2, and inert waste processing and storage between 3 and 4. These two documents appear to contradict each other. Please amend the documents to confirm all storage locations and remove contradictory information – The information within the Site Layout Plan takes precedence.

Section on Drainage- collection

4. The photos of the drainage collection and kerbs show them to be in poor condition, with the silt and material filling them and the kerbs being buried under material that is spilling off the stockpile areas. If open drains are to be used, then the drains have to work and be kept open to allow water to move into the settlement and attenuation ponds. Improvements to the kerbs should be undertaken and spilling material from the stockpiles kept under control. Please provide information on how the kerbs and drains will be monitored and maintained, especially during rainfall events – Due to the potential for them to be damaged by vehicle movements. Kerbs have been replaced in favour of concrete channels. These are robust enough to withstand being over run by HGVs and easy to maintain within an inert waste facility environment.

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Section on Discharge

5. "*if required, they would culvert the remainder of the ditch to tie into this culvert and would undertake a camera survey of this culvert to assess the integrity of the culvert. This would mean that surface runoff from the site would discharge directly to surface water*." We are unsure what ditch, culvert and surface water you are referring to in this section. Please clarify this. Please note culverting the ditch is not required at this stage – Noted. Thank you.

Section on Compliance

6. "*The MoD have agreed to replace / repair the five damaged boreholes and we will request geological and construction logs for these*." What is the timeframe for the replacement and repair of the damaged boreholes? If these boreholes that need replacing or repairing are required for the sampling, monitoring and reporting under the permit, this may delay or prevent NRW from issuing a permit. Do you have a maintenance plan for the boreholes to ensure they are suitable for ongoing use? – The Defence Infrastructure Organisation have agreed to undertake the repair of BH07 and the replacement of BH102. They have said, works will be completed ahead of the groundwater monitoring to be undertaken by Jacobs in August 2020. In the short term we have added BH104 as a monitoring location, as this is offsite down gradient of the site.

7. We do need to know the geology, depth and construction of the boreholes to make sure that the correct geology and groundwater is being monitored. Please provide this information. If the boreholes are not "fit for purpose" then new boreholes will need to be installed – We have not been able to source this information to date. Due to the age of this information it is only available in hard copy. Due to the current COVID 19 situation personnel with access to this are working remotely and have not been able to copy and dispatch this. We will

forward this information and information on the replacement boreholes as soon as it become available. Jacobs have been assessed the boreholes as being fit for purpose and indicative of groundwater flows beneath the site and have used these boreholes for several consecutive groundwater assessments.

8. "*Crownhill establish surface water compliance points on the drainage ditch at the SW corner of the site (CHSW001) and at the discharge point into the Castrogi Brook (CHSW002*)."

a. The locations of the surface water compliance points CHSW001 and CHSW002 are not shown on any map – A map has been added to the EMS.

b. CHSW001 and CHSW002 have not been referenced in the Jacobs reports. Please confirm which surface water monitoring points in the Jacobs reports these match up with. We have assumed either SW101 or SW102 for CHSW001 and SW104 for CHSW002 – We have amended the surface water monitoring points to match the Jacobs references and have added an upstream point on the Castrogi.

c. CHSW001 at "SW corner of the site"; by site do you mean the proposed permitted area? Or the MoD site? – Unit 1009. This has been modified within the EMS.

d. We have assumed that CHSW001 is dry for the majority of the year and CHSW002 is flowing for the majority of the year (if not always). Please confirm. – That is correct. The Castrogi does however dry up for significant portions of the summer.

e. Have assumed CHSW002 is downstream of the discharge point into the Castrogi Brook. Will also require one upstream of this point as well for comparison. – Upstream monitoring point added to EMS.

CH001- Document Reference list

Please correct the references as below and supply an updated document list and any additional documents where relevant:

9. CH05 Fire Prevention Strategy and CHD006 Fire Prevention Plan re listed, but these are not required in this application, nor have they been provided – Amended. Thank you.

10. The drainage strategy has been given reference CH004 on the list, but on the document itself is CH005 - Amended. Thank you.

11. The site condition report (and appendices) have been given the reference CH004 but is missing from the list - Amended. Thank you.

12. The list references a "current drainage plan" (ref CHD003) and a "proposed drainage plan" (CHD004), but only a "drainage plan" with the title "CHD003" has been provided and it is not clear on the document if this is the current or

proposed plan. No plan with reference CHD004 has been provided – Thanks. This is a carry over from the original permit application. The current drainage plan is no longer relevant as the current drainage plan is the proposed drainage plan. Will amend Doc Reference list to reflect this.

CH002- Non-technical summary

Section 4.1 ecology

13. "*There is a known lesser horseshoe bat roost within the base but this is not directly impacted by the proposal*." How have you come to this conclusion? If this information is provided elsewhere in the application, please state where in your Non-technical summary. Otherwise please provide this information – The Ecological Mitigation Plan has been amended to consider potential impacts on this roost in greater depth and to propose mitigation for these impacts. The Non-technical summary has been amended to reflect this *'There is a known lesser horseshoe bat roost within the former base commanders house approximately 550m SW of Unit 1009. Due to the distance from Unit 1009 this will not be directly impacted by the inclusion of an Inert Waste facility within Unit 1009, however, there is potential for this roost and the flight lines / foraging routes leading too/ from it, to be impacted through indirect impacts i.e. noise, dust, light pollution provided appropriate mitigation is not implemented. Mitigation for these impacts is set out within the Ecological Mitigation Plan, the Dust Management Plan, the noise and Vibration Management Plan and the Environmental Management System. These controls include restrictions to site operating hours, dust suppression and monitoring requirements, Restrictions on the use of artificial light within the site and mitigation for noise impacts.'*

14. "*There is historical evidence of the presence of Great crested newts within the bounds of the MOD base. These studies did not identify the species presence within Unit 1009. Newts are unlikely to use the bare earth or road surface which dominates the site. Use of the two settlement ponds and small duck pond adjacent the site entrance is unlikely due to limited vegetation growth along their edges and frequent disturbance*." How have you come to this conclusion? If this information is provided elsewhere in the application, please state where in your Non-technical summary. Otherwise please provide this information - – The Ecological Mitigation Plan has been amended to consider potential impacts of the proposed Waste Recovery Facility on GCN in greater depth and to propose mitigation for these impacts. This has included undertaking further surveys during the 2020 season and revised mitigation proposals drawing on knowledge gained from these surveys. The Non-technical summary has been amended to reflect this.

Section 5.1 process

15. "*If the materials have been tipped and contamination is subsequently identified, the material is removed to the quarantine building, where it is placed on polythene sheeting and where the*

drainage can be contained into a sealed system." Please provide information on this sealed system – The sealed drainage system has been described in the Non-technical summary 'The sealed drainage system takes the form of a concrete slab which drains into two 11000l tanks. Valves have been installed to prevent rainwater entering these tanks during periods when the quarantine facility is not being used. Following a quarantine period, water within these tanks would be tested and it would be disposed by tanker, as required by the results of the testing.

Section 6.2 waste management plan

16. This section refers to a waste management plan written in accordance with EPR6.14 How to comply with your environmental permit. This guidance is for mining waste operations only, which is not the type of operation you have applied for. Please remove this section – Removed. Thank you.

CH003- Environment Management System

17. Within the whole EMS document you have referred to the "Severn Trent Abstraction Area" – this should be corrected to "Severn Tunnel" or "Great Spring" as written within the Preliminary Groundwater and Surface Water Risk Assessment document (page 15). Please amend this – Amended. Thank you.

18. Sections 2.1 and 9.6 of the 'Environmental Management System' document make reference to an 'Ecological Management Plan' (CH006). However, document number CH006 provided is the 'Preliminary Ecological Appraisal' report. Please clarify if this is an error, or if an Ecological Management Plan has also been prepared please provide this document – CH006 has been amended to the Ecological Management Plan. For simplicity, this document has been amended to include greater detail in the assessment and mitigation of potential ecological impacts from the proposed Waste Recovery Facility.

Section 4 site details

19. This section refers to the Wormtech waste being on site, but

a. the schedule 5 response states it is not within the permitted area.

b. The groundwater risk assessment states "*CTL has no plans for its disposal or movement*".

c. the noise management plan states "*compost stockpiles along the sites northern boundary*".

As point 1 of this notice, please show on a plan where it is located. If it is sited within your permitted boundary it must be taken into account in this application – Wormtech legacy material is not located within the permitted boundary and is not included within this application. The alignment of the site boundary has been clarified to make this

clear.

Section 5.1 ecological sensitivity

20. In this section you have stated bats and newts are unlikely (using the same wording as in your non-technical summery). As per points 13 and 14 of this notice- How have you come to this conclusion? If this information is provided elsewhere in the application, please state where in your Non-technical summary. Otherwise please provide this information – The Ecological Mitigation Plan has been amended to consider potential impacts on this roost in greater depth and to propose mitigation for these impacts. The Non-technical summary has been amended to reflect this *'There is a known lesser horseshoe bat roost within the former base commanders house approximately 550m SW of Unit 1009. Due to the distance from Unit 1009 this will not be directly impacted by the inclusion of an Inert Waste facility within Unit 1009, however, there is potential for this roost and the flight lines / foraging routes leading too/ from it, to be impacted through indirect impacts i.e. noise, dust, light pollution provided appropriate mitigation is not implemented. Mitigation for these impacts is set out within the Ecological Mitigation Plan, the Dust Management Plan, the noise and Vibration Management Plan and the Environmental Management System. These controls include restrictions to site operating hours, dust suppression and monitoring requirements, Restrictions on the use of artificial light within the site and mitigation for noise impacts.'*

Section 5.2 hydrology and hydrogeology

21. This section states the Castrogi Brook runs down the eastern of the MOD site. This is incorrect. It runs down the western side of the site. Please amend your EMS to correct this – Amended. Thank you.

Section 7.1.1 Consents

22. This section lists "*The production of Hazardous Waste*" as a consent will be required for the operation of the facility. The application makes no reference to the acceptance, storage or treatment of hazardous waste. Please provide information on why this has been included – This refers to the production of hazardous waste during the operation of the facility i.e. oily rags, oil filters, grease cartridges from the servicing of plant and vehicles. Hazardous waste will not be accepted at the site.

Section 8 legal register

23. This section lists the "*Environmental Legislation applicable to the works undertaken at the facility and the areas of operations controlled by this legislation*". As above, this list contains legislation relating to wastes that you do not intend to accept, store or treat such as asbestos and waste batteries. Please provide information on why these has been included. Is this a generic list of legislation that may apply to any waste activity? Or have these been left in the list in error? – Please see above.

Section 9.1.1 Waste Acceptance

"*As the wastes are within a building, rain water will not be able to percolate through them and*

drainage from the building can be isolated." How can the drainage be isolated? - – The sealed drainage system has been described in the Non-technical summary 'The sealed drainage system takes the form of a concrete slab which drains into two 11000l tanks. Valves have been installed to prevent rainwater entering these tanks during periods when the quarantine facility is not being used. Following a quarantine period, water within these tanks would be tested and it would be disposed by tanker, as required by the results of the testing'. 'It will be ensured that the valves on the isolated drainage tanks for the quarantine building forecourt and opened so that rainfall / runoff onto the forecourt slab is diverted into the two 11000l isolation tanks.'

Section 9.1.3 Runoff from Spilled Hydrocarbons

24. The final paragraph states a bypass hydrocarbon separator will be used, where as in other parts of this application reference are made to a full retention separator. Please clarify this – This is a typo and should read Full Retention Separator.

Section 9.1.4 Silt Contaminated Runoff

25. "*Clean water from non-operational areas will be diverted away from operational areas to prevent it becoming contaminated*." How is this water diverted and where is it diverted to? This is not shown on the drainage plan – Water from building roofs has been diverted into tanks for use in damping down. Once these tanks are full, the overflow from them will be diverted to the rear of the concrete slabs on which the buildings sit. The EMS has been amended to reflect this.

Section 9.1.6 Surface and Groundwater Monitoring

26. "Surface water compliance points have been established on the drainage ditch at the SW corner of the site (CHSW001) and at the discharge point into the Castrogi Brook (CHSW002)". Please see the question under point 8 of this notice – This has been amended to mirror the Jacobs surface water monitoring point references. The EMS has been amended to include detail on this.

27. "*Crownhill will establish surface water compliance points on the drainage ditch at the SW corner of the site (CHSW001) and at the discharge point into the Castrogi Brook (CHSW002). Monitoring will be undertaken monthly at these compliance points (except for periods when there is not flow*)". Please provide more information on this:

a. When is it anticipated there to be no flow (for example, times of year, no rain for "x" week etc)? – During periods of drought the Castrogi dries up. It is dry at the moment (June 12th 2020) It is unpredictable when this will happen but the EMS notes that this is sometimes the case.

b. What about flow from discharge points 1 and 2? – These have been combined into 1 discharge from the hydrocarbon separator.

c. Where is the nearest point in the surface water network where there is year-round flow? This would be a preferable as a sampling point for surface water – There is no point where there is year round flow. All watercourses are of a size that they will dry up during drought.

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28. "*There are no potable water sources in the vicinity of the site*". Please quantify what you mean by "vicinity"? – This is from the Groundsure Environmental Quality Report. For simplicity this statement has been removed from the EMS.

29. Please provide a methodology for the obtaining and assessment of samples from the sites point source emissions, surface water samples, and groundwater samples – A sampling methodology has been added to the EMS.

Section 9.2.1 Dust and Particulates

30. "*All material will be stored within manufacturer's containers, in a secure dry location*." What material are you referring to? If this means waste this contradicts other parts of the application? – This statement referred to powder materials such as bagged cement, which is sold at the site. To avoid confusion, this statement has been removed from the EMS.

Section 9.4 site generated waste

31. Section contains a list of "*hazardous waste likely to be encountered*". Please provide information on how these wastes could make their way onto site given your waste acceptance procedures. In the paragraph above you state they could be found within a mixed waste skip, however no mixed wastes have been proposed to be accepted other than17 01 07 (mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06) – This refers to wastes which are produced during the course of the operation of the site i.e. vehicle and plant servicing, packaging materials, office waste, etc.

Section 9.5 contaminated materials

32. "As the wastes are within a building, rain water will not be able to percolate through them and drainage from the building can be isolated." How can the drainage be isolated - The sealed drainage system has been described in the Non-technical summary 'The sealed drainage system takes the form of a concrete slab which drains into two 11000l tanks. Valves have been installed to prevent rainwater entering these tanks during periods when the quarantine facility is not being used. Following a quarantine period, water within these tanks would be tested and it would be disposed by tanker, as required by the results of the testing'. 'It will be ensured that the valves on the isolated drainage tanks for the quarantine building forecourt and opened so that rainfall / runoff onto the forecourt slab is diverted into the two 11000l isolation tanks.'

Section 10.3 specific pollution incidents.

33. The phone number given for NRW is no longer in use. The "report it" phone number is 0300 065 3000. Please amend your EMS accordingly – Corrected. Thank you.

Section 12.2 site drainage

34. "*If the buildup of silt is notable, it shall be cleared as soon as possible, taking care not to damage the HDPE liner. Silt shall be placed within a lined lagoon*" Where on the site will the dredged silt be stored? This location has not been shown on

any of the plans. How often and when do you anticipate the ponds needing to be dredged? The Ecological appraisal states only in winter months? – A process has been added to Section 13.2 of the EMS for the dredging of attenuation ponds.

35. You have stated that drainage channels and surfaces will be checked annually. How have you reached this decision? You need to ensure that the frequency is appropriate to maintaining site operations and environmental protection. Please review and amend your EMS accordingly – Good point - We have amended this to daily, as the drainage is now in the form of open channels, which can be easily inspected. Section 13.2 of the EMS amended to reflect this.

36. "*During periods of intense rainfall intermittent inspection will be made*". What do you deem as intense? And how frequent is intermittent? – A process has been added to Section 13.2 of the EMS on the inspection and maintenance of site drainage.

Section 12.6 inspection overview

37. The information within this table does not match with other sections of the EMS, and other parts of the application such as the drainage strategy i.e. section 12.2 states drainage channels and surfaces will be checked annually, but the table states they will be checked monthly. Please check and amend the document as necessary. – Amended. Thank you.

38. In the weekly section it states, "*Inspect bypass separator for hydrocarbon content".* This should be full retention hydrocarbon separator. And the separator itself should be inspected to ensure it is functional, not just its contents. Amended. Thank you

39. In addition to details of *when* the inspections will be carried out, please also provide information on *how* the inspection will be carried out, and how these items (surfaces, pounds, interceptor etc.) will be maintained.- Amended. Thank you.

CH004- Drainage Strategy

Section on Site sensitivity (page 3)

40. This section states the Castrogi Brook runs down the eastern side of the MOD site. This is incorrect. It runs down the western side of the site. Please amend the document to correct this – Amended. Thank you.

Section on Process (page 7)

41. "*the integrity of these concrete slabs cannot be assured, with cracks and possible joint defects noted during surveys and should hence be considered to be semi-permeable*". Where concrete slabs are located outside, we would require the integrity to be assured, as being able to channel surface water to the attenuation ponds and separators is a major method of preventing suspended solids and hydrocarbons from causing pollution – A process of inspection and repair has been undertaken of the concrete slabs at the site. Where damaged sections have been identified, they have been cut back to a construction joint and a patch constructed.

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42. "*No more than 75,000 tonnes of materials will be stored or processed per annum*." In a bespoke permit the limit is for the total amount of waste that can be accepted on site rather than an amount of waste that can be stored or processed. Please amend this statement – Amended. Thank you.

Section on Drainage Requirements for Processes and Site Areas (page 7)

43. Again, reference has been made to the ditch running along the east of the MoD site, where it drains to the west of the site. Please amend the document to correct this. Amended. Thank you.

44. This section confirms that only the eastern attenuations ponds benefit from the full retention separator (it is unclear in the rest of the application on the number and locations of the separator, and what discharges they attach to). Why have the western attenuations ponds not been provided the same when waste is stored on both the western and eastern sides of the site and both sides are attended to by machinery which could be a source of hydrocarbons – Both sides of the site now discharge via a full retention hydrocarbon separator.

Section on Attenuations pond design (page 8)

45. "*For the design of the ponds we have assumed that all rainfall onto the site, becomes surface water runoff i.e. all runoff from building roofs will flow onto site*." Outline building assessment states roof water is directed away from the site. Please clarify – Not all of the runoff from the building roofs is captured and some of it runs back onto the concrete slabs. Because we cannot quantify these volumes, we have assumed all runoff will enter the site drainage system. The plan has been amended to reflect this.

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46. Down pipes from roofs that collect rain water off the roof can be allowed to soakaway in to the ground provided that the down pipes are sealed at ground level to prevent ingress of surface water as per Position Statement G12 (Discharge of clean roof water to ground) from Approach to Groundwater Protection (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/692989/Envirnment-Agency-approach-to-groundwater-protection.pdf). Please explain how this will be implemented on site – Some of the downpipes have been diverted into tanks which collect runoff for dust suppression. It is intended to roll this out across the site but currently some of the runoff flows back onto the slab and into the drainage system.

Section on Interceptor design (page 10)

47. This section suggests that there will both a single and multiple interceptor "**A** Class 1Full Retention Hydrocarbon Interceptor is to be installed at the discharge **points** from the **ponds**"

a. is there one interceptor or two? – One covering both discharges.

b. if a single interceptor; do both discharges flow through it or just one? (see point 45 of this notice) this does not appear to be the situation based on the drainage plan CHD003 – CHD003 and the Drainage Strategy have been amended to reflect this.

Please confirm the number of interceptors and their locations.

48. This section states "The interceptors will be emptied and serviced annually." This contradicts the inspection schedule given in the EMS (see points 38/39/40 of this notice) – Inspection and servicing schedule has been aligned to the EMS. Servicing will be annually unless a fault is identified by the weekly inspection. Emptying will be annually or sooner if dictated by the level alarm.

Grid references

49. Please provide national grid references for Discharge points 1 and 2, and surface water monitoring points CHSW001 and CHSW002 – Provided.

CH006- Preliminary Ecological Appraisal

Section 1.1 Survey Area Description

50. This section describes two ponds on the site. Are these the two ponds the two sets of attenuation ponds for the eastern and western parts from the site? You have provided a plan in this section, but it does not show the ponds you are referring to – This refers to the attenuation ponds. A plan has been added to the Ecological Mitigation Strategy.

Section 2.2 Walkover Survey

51. This section states the survey was conducted by *"experiences ecological surveyors*" and then gives the name Julian Gregory and Bradley Stokes. We

have assumed these individuals are the surveyors. Please confirm the experience/qualifications these individuals hold? A review of the EcoVigour Ltd website? did not provide this information – Three surveys have been undertaken of the site, in 2016, 2019 and 2020. Details of surveyors has been added to the Ecological Mitigation Plan.

52. When was the walkover completed e.g. time of year? Only information about the weather has been provided – This detail has been added to the Ecological Mitigation Plan.

53. Was the site operational when the walkover occurred? – The site was operational during the surveys.

Section 3.2.7 Great Crested Newts

54. "*Great crested newts have been previously identified within ponds at the army base*". Is this on the base as a whole? Or just on the Crownhill Topsoil area? – This is on the base as a whole. Additional detail has been added to the EMP to clarify this.

55. Is pond 7 referred to in the section the eastern attenuation ponds, the western attenuation ponds or the concrete waterfowl pond? – This is the concrete waterfowl pond. Additional detail has been added to the EMP to clarify this.

56. "*With time, the western attenuation ponds may offer suitability for use by GCN but the surrounding ground offers little cover*." Is this desirable or not? If not, how will this be prevented? Why is this statement made about the western attenuation ponds but not the eastern ponds or the concrete waterfowl pond? – This is desirable as it will offer additional habitat for GCN within the Army Base. Surrounding habitats are unlikely to develop within the current grazing regime but may do over time. Maintenance for ponds has been scheduled for the winter months to minimise impacts on GCN.

Section 4.3 Great Crested Newts

57. *"If materials are to be stockpiled adjacent to the site boundary, reptile exclusion fencing will be erected to exclude them from the stockpile"*. The site layout and site drainage plans (CHD002 and CHD003) show the intention for waste to be stored between buildings 1 and 2 and between buildings 3 and 4 along the northern boundary. Amphibian Exclusion Fencing should be erected along this boundary as a matter of standard practice – Amphibian exclusion fencing has been added.

Appendix 2 Amphibian Exclusion Fencing Layout

58. Please explain the reasoning for placing the amphibian fence around only half of the northern boundary and western boundary of the site, with no fencing around the southern, eastern or other half of the northern boundaries – The alignment of the amphibian fencing has been amended to encapsulate the working area.

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General- Great Crested Newts

59. While this document outlines some limited mitigation measures comprising partial fencing of stockpiles in the east side of the site, we consider that the information provided is not sufficient to demonstrate the potential use of the site by GCN or that the measures proposed will ensure that the risk of impacting GCN is avoided during site operations. We therefore require a great crested newt mitigation strategy, which should include the following:

a. Answers to the above GGN queries

b. Clarification of the distribution of each of the habitats and features detailed in Section 3.2.1 on and immediately surrounding the site, also to be shown on a supporting drawing.

c. Assessment of potential impacts on GCN. This should consider the nature, value and distribution of habitats present for GCN and the nature, timing and frequency of operations. It may be necessary to undertake GCN surveys of the waterbodies on site to inform the impact assessment and the preparation of suitable mitigation measures.

d. Measures to avoid killing and injuring any GCN currently present on site. This should include a suitable method statement to detail how any GCN present within the works area will be removed from site, informed by an assessment of the nature, value and distribution of habitats present for use by GCN.

e. Once cleared, measures to prevent GCN from accessing the site or the relevant operational areas of the site. It is not apparent from the information provided that the current proposals to only install amphibian fencing along the east boundary and part of the north boundary will be sufficient to ensure no GCN are present within operational areas of the site. Note that we would not consider the roads on site to be a barrier to GCN movement. It may be necessary to consider fencing that encloses all stockpiles at risk of being used by GCN or the entirety of the operational areas of the site.

f. Inclusion of measures to monitor and maintain the amphibian fence. This should include the frequency of monitoring and a clear description of the condition the fence should be maintained in, to ensure it acts as an effective barrier to GCN. This should address the structural integrity of the fence and vegetation management either side of it.

g. Ponds in the west section of the site. Section 3.2.2 identifies that the recently created ponds in the west section of the site will provide suitable aquatic habitat for GCN when established. We advise that the strategy include clarification of the intentions for these waterbodies and that their likely use by GCN is considered in the preparation of the above mitigation measures.

h. A schedule of when measures will be delivered.

A GCN Mitigation Strategy has been included within the Ecological Mitigation Plan. This includes information from previous surveys and surveys undertaken in 2020, including eDNA of ponds within 500m of Unit 1009.

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CH007- Preliminary Ground and Surface water Risk Assessment

Section on Legacy wastes from the Wormtech Facility (page 30)

60. "these wastes lie outside of the boundary of the site". As per point 1 Please show on a plan where it is located. If it is sited within your permitted boundary it must be taken into account in this application – The Site Layout Plan has been amended to illustrate the locations of the former Wormtech Materials, outside the permitted boundary.

Section on Hydrocarbons from Vehicle and Plant Movements (page 36)

61. You have stated that the western side of the site will not benefit from the separator because only the buildings will be used for soil storage only, however both sides of the site are attended to by machinery which could be a source of hydrocarbons – A larger full retention hydrocarbon separator has now been specified, which will receive the outfalls from both sets of attenuation ponds.

62. *"Some areas of the site are surfaced with compacted stone. This has limited permeability which could result in hydrocarbons being able to enter the underlying groundwater. A robust spill response procedure will be put in place. If hydrocarbons are spilt to concrete surfaced areas, they will be contained using absorbent booms / pads / granules. Contaminated soils and aggregates will be excavated and placed into plastic lined skips within the quarantine building, awaiting disposal."* What does the robust spill response procedure consist of? Please provide this – The spill response is included within Section 11 of the EMS.

CH008 Site Specific risk assessment

Heading section and row 36

63. Coombe Valley SSSI is given as being "approximately 600 meters away". At the closest point to the site boundary it is 400 meters away. Please amend your document to reflect this – Amended. Thank you.

Line 36 Coombe Valley Woods SSSI

64. The justification for magnitude in response to indirect impacts through dust is "*The SSSI is approximately 600m from the site boundary and hence risk of dust deposition is low. Due to the distance from the site, larger particulates would drop out of air streams quickly with only very fine fractions being carried that distance."*

a. The distance given is incorrect – Corrected.

b. Very fine fractions can still cause considerable harm

c. Dinham Meadows SSSI is directly next to the CTL site, and in this statement the larger particulates would be "dropping out" over this SSSI which is also sensitive to dust as well as the adjacent woodlands and local wildlife sites.

d. Expected dust sizes have not been provided. How did you come to this conclusion?

Please amend your risk assessment to adequately address the risk of dust to the SSSI given the above comments – The Site Risk Assessment and the Dust Management Plan have been amended to further assess the risks from dust. The Dinham Meadows SSSI has been identified as a key risk receptor in terms of dust. Mitigation measures have been reviewed to ensure they are robust.

CH009- Dust Management Plan

Section 1.2 Sources of dust during site operations

65. Table in this section: while you have stated earlier in the table that "haul routes will be dampened down in dry weather conditions", on the row on dampening down at the bottom of page 4/top of page 5 you have not stated what will be dampened down other than "the surfaces". Do you mean surfaces of the waste? Or the road surfaces? Where mitigation measures include the use of damping down, the DMP should specify the frequency of damping down operations or the specific circumstances which trigger these operations, and the specific materials which may be included (raw materials, stockpiles etc.) in addition to road surfaces – The DMP has been reviewed and substantially revised in line with NRW Technical Guidance Notes, to include further risk assessment and definition of circumstances where damping down is required. It is not proposed to damp down stockpiles unless they are being excavated to be processed, as the surface of stockpiles will be sealed. Haul routes and yards will be damped down, processing equipment i.e. crusher and screener are fitted with proprietary dust suppression systems, stockpiles will be dust supressed as they are being excavated.

Section 3 Dust monitoring

66. "*The simplest form of dust monitoring is visual inspection performed by the Site Manager*."

a. The submitted DMP does not specify how visual inspections will be carried out or whether they will be carried out at multiple locations. Specific activities or site conditions likely to result in an increased risk of excessive dust which might trigger additional inspections should be identified in the submitted DMP along with details of how the visual inspections will be carried out and inspection locations clearly marked on a suitable site plan – A section has been added to the DMP on this.

b. It is unclear from the submitted DMP whether visual inspections are limited to once per day or carried out on a more regular basis. Should inspections be carried out once per day, it is unlikely that this would be sufficient to identify all potential instances where site activities may result in excessive dust or how temporal variations in site activity, wind speed and/or direction might increase the risks at specific receptors – Information has been added on minimum requirements for visual inspections and situations which would trigger the requirement for a visual inspection.

c. The DMP should clearly specify the frequency of any inspections, how results of visual inspections will be logged and, where necessary, reported to the site regulator. The DMP should also include a facility for any site staff to report concerns regarding operations generating excessive dust – This detail has been included within the DMP.

d. The submitted DMP does not specify what specific criteria will be used for comparison of these subjective measurements for identification of excessive dust conditions or how inspection results are linked to implementing standard or additional mitigation measures including "damping down" of vehicle routes and/or materials should they be identified as the cause of excessive dust events. The submitted DMP should clearly identify how results from visual inspections will be used to trigger mitigation measures.

A table has been added to the DMP which assigns a risk status for site activities in terms of dust production. This allows activities which have a greater risk of generating dust to be identified. A documented process has been added for the monitoring of dust, which includes the addition of a weather station at the site to allow independent assessment / prediction of current and future weather conditions on a local basis. This will inform dust monitoring and mitigation. Assessments of the potential for dust to be generated will be made by the Site Manager based on weather conditions (including wind speed / direction) and operations on site. Visual dust monitoring will be undertaken by the Site Manager, who will use the outcome of this to direct damping down or other mitigation such as wet brushing of haul roads and speed restrictions.

67. "*If as a result of this, or following concerns by the MoD, regulators or from members of the public, further monitoring is required then DustDisc Dust Deposition Gauges will be utilised to monitor dust generated by the site*".

We would recommend that an initial study is undertaken prior to commencement of proposed activities to establish a baseline. This will allow the ongoing effectiveness of mitigation measures to be empirically determined by undertaking additional dust deposition gauge measurements following commencement of the proposed operations and validate the efficacy of visual inspections. Sample locations should be detailed on a suitable site plan – A DustScan DS100 dust monitor has been installed on the Unit 1009 western boundary. Details are provided within the DMP. Results from the initial round of monitoring are awaited.

General

68. Your dust management plan does not provide information on:

a. <u>the type and sizes of dust particles that could be generated on site.</u>

Small particles including PM10 and PM2.5 affect human health but are invisible to the naked eye. While it is therefore likely that visible dust will include an element of PM10 and PM2.5, the absence of visible dust does not mean that these harmful fractions are not present and may be present at high levels.

The submitted DMP does not indicate whether site plant & processes have been

specifically assessed for the risk of PM10 and PM2.5 emissions during operation beyond stating that "…*where possible vehicles used will comply with Euro IV and V standards*". This does not address potential emissions of PM10 and PM2.5 from non-mobile site plant.

It is your responsibility to identify and where necessary monitor the fraction of PM10 and PM2.5 produced by site plant & activities for comparison against an agreed suitable action level to minimise the risk at human receptors.

Please amend your DMP to consider the risk from PM10 and PM2.5 – An assessment of the likely breakdown of dust particulate size has been included within the DMP. All plant and vehicles on site with the exception of 1 loading shovel which is due to be replaced in 2020 is now Euro V and EuroVI. This represents BAT.

b. <u>The prevailing wind direction on site and the typical wind speeds.</u>

On site measurement of wind speed and direction will help the identification of risks to receptors arising from excessive dust production by specific activities and processes allowing implementation of suitable targeted mitigation measures. It is your responsibility to determine local wind conditions and ensure mitigation measures accommodate these conditions.

Please amend your DMP to reflect this – The prevailing wind conditions have been assessed and a weather station has been installed on the Site Office building for ongoing monitoring of wind speed and direction.

c. <u>local sources of dust</u>

There is no indication of any additional local sources of dust not associated with site activities included in the DMP. In their absence, it is assumed that there are no other potential sources which could impact on the identified receptors.

Please confirm this in your amended DMP – Information on other local sources of dust have been added to the DMP. These are related to agricultural activities and MoD activities within the Army Training Base. These will be extremely variable with agricultural activities being seasonal and MoD activities dependent on exercises being operated. Unit 1009 is also currently operated as an aggregate retail facility. These activities will be captured within the baseline monitoring for the site.

d. <u>focus on specific processes/activities</u>

The DMP does not state whether specific processes/activities have been identified as being more or less likely to result in excessive generation of dust and should therefore be monitored more closely than other processes/activities.

Please amend your DMP to identify the level of risk from each process/activity - A table has been added to the DMP which assigns a risk status for site activities in terms of dust production.

e. <u>site layout</u>

The DMP does not specify whether the source-pathway-receptor model has been considered when designing the site layout to minimise operations likely to generate dust e.g. site traffic routes, movement and handling of materials,

material storage areas etc. or utilise natural barriers (if present).

Please amend your DMP to reflect this – Site layout including the use of buildings for screening has been considered within the DMP. The layout of the site has been designed so that vehicles collecting products do not need to drive far onto the site. Crownhill operates a traffic light system to bring vehicles onto site and direct them to loading points.

f. Vehicle emissions

Vehicle emissions have also been identified as potential dust sources and the DMP specifies that where possible, the emissions ratings of site vehicles will comply with Euro IV and V standards. However, a breakdown of site vehicles with associated emissions ratings has not been included in the DMP.

Please amend your DMP to provide this information - This information has now been included within the DMP.

g. site traffic

While details of controls included in the DMP state that site traffic will be confined to hard surfaced roads, it is unclear whether this refers to concrete, tarmac or compact surfaces. It is therefore difficult to assess the potential risk resulting from site traffic movements or the ease with which dust may be minimised on road surfaces – Hard surfaced roads refer to the concrete roadways within the site.

The number and frequency of vehicle movements on site and those required for raw material deliveries and removal of processed materials from site has not been included in the DMP – Numbers and frequency of vehicle movements has been included within the DMP.

Please amend your DMP to include the above information.

h. Dust suppression

Where mitigation measures specify the use of dust suppression through integrated suppression equipment fitted to vehicles and plant, specific details should be provided. This might include information from the manufacturer regarding reduction/filtration efficiencies etc.

Please amend your DMP to include this information – Crownhill have just leased a new crusher and hence details of the suppression system fitted to this and the existing crusher have been added to the DMP.

i. Plant exhausts

Where the DMP mitigation measures state that "*In some circumstances …plant exhausts can agitate loose materials from the surface of haul roads*." and exhaust

pipes from affected plant will be modified to prevent this, there is no indication of the measures taken to assess and identify affected plant.

Please amend your DMP to include this information – This has been removed from the DMP as the item of plant this relates to is no longer on site.

j. Training

While no specific staff training is detailed in the DMP, it does specify that "toolbox" talks will be held to ensure site operatives are aware of the mitigation measures detailed in the DMP with associated records of attendance. However, there are no details of the chain of responsibility for implementation and maintenance of the DMP, frequency of toolbox talks and DMP reviews.

In the absence of any information to the contrary, it is assumed that toolbox talk records will represent the sole audit trail for the DMP. The DMP should therefore clearly state whether toolbox talks include reviews of the effectiveness of mitigation measures set out in the DMP and the frequency/circumstances leading to review of the DMP mitigation measures.

Please amend your DMP to include the above information – Additional information has been added to the DMP on the training which will be provided and how this will be recorded.

k. Excessive dust

The DMP states that where "…*excessive dust is being generated from the works or if complaints are received, contact will be made with Monmouthshire Council Environmental Health*". Typically, we would expect that in the event of a failure of the DMP mitigation measures, site operations would be halted, and NRW notified until an investigation of the specific cause(s) have been identified and revised mitigation measures agreed.

Please amend your DMP to reflect this – This information has been added to the DMP.

The appropriate guidance for dust is:

- https://cdn.naturalresources.wales/media/2110/how-to-comply-with-your-environmental-permit.pdf?mode=pad&rnd=13146760454000000
- https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/301206/TGN_M17_-_Monitoring_of_particulate_matter_in_ambient_air_around_waste_facilities.pdf
- *You can get a copy the template by emailing air.quality@environment-agency.gov.uk. (see web page https://www.gov.uk/guidance/control-and-monitor-emissions-for-your-environmental-permit#dust-mud-and-litter).*

Cyfoeth Naturiol Cymru
Natural Resources Wales

Please note: the EA's template does not necessarily form a definitive dust and emission management plan and additional controls over and above what is included in the EA's template may be required depending on site specific issues.

CH010- Noise and Vibration Management Plan

69. Sound source levels from Defra's "Update of noise database for prediction of noise on construction and open sites" and the associated 2006 "Phase 3: Noise measurement data for construction plant used on quarries" are based on measurements completed in 2004 and 2006 respectively. The management plan states that these represent a worst case scenario as the site will be using modern plant (i.e. Euro 5 or 6) which will have lower sound emissions. As we do not have the site plant specifications we cannot confirm if that this will be the case. Please provide the site plant specifications in your amended Noise Management Plan – Plant specifications have been provided within the plan. We have not been able to gain sound power data for the plant from the manufacturers so have retained the data from the Defra guidance.

70. We have been unable to identify the source term used for the 13t excavator in Defra's Update of Noise Database for Prediction of Noise on Construction and Open Sites. Please provide the source you have used – Apologies, this should be 14t excavator from Ground Excavation / Earthworks, Ref 25 Tracked Excavator 14t. We have amended the plan to reflect this.

71. Predicted impacts were calculated based on attenuation due to geometric divergence with corrections for percentage "on-time" and façade reflection at receptors. No attenuation due to other effects e.g. meteorological conditions, ground absorption, topography including barriers etc. was considered. Please explain why these effects have not been accounted for or amend the Noise Management Plan to include corrections for these effects – Plant and equipment is likely to be transient and operated year-round. It is undeniable that the buildings and stockpiles within / outside the site and the rising landform to the north will provide significant barrier attenuation, however, the location of plant and equipment will move throughout the year and throughout the working shift, making this variable. We have re-worked the predicted noise calculations based on level differences between sources and receptors and also taking into account the barrier effect of the buildings and stockpiles for receptors to the north. There are no residential or commercial properties within 600m of Unit 1009 and hence the principal receptor will be wildlife within Llanmelin Woods and visitors to the Llanmelin Hill Fort.

72. There is no indication in the management plan that existing background sound levels at receptors were measured in accordance with the requirements of BS 4142:2014+A1:20196 for comparison against predicted levels and no rationale has been provided for this omission. Please confirm whether measurements for background sound levels at receptors were carried out in accordance with BS 4142:2014 – Measurements for background sound levels have b=now been undertaken at the following locations: Llanmelin Woods, Llanmelin Woods Hill

Fort, Within Unit 1009 adjacent to the eastern access, Llanvair Road (near the access to the Army Base). This data has been included within the Noise and Vibration Management Plan.

73. It is unclear what evidence is available to justify the assertion that predicted sound levels at receptors are "…*at or below anticipated background levels"* as stated in Section 3.4 of the management plan, particularly as the management plan fails to include the anticipated values for comparison against predicted levels. Please provide evidence to justify this statement – Baseline monitoring has been undertaken and an impact assessment undertaken using data against predicted noise levels. This can be found within Section 3.4 of the Noise and Vibration Management Plan.

74. Please clarify why background measurements at receptors were not taken and how existing background levels have subsequently been estimated, including details of their values and the sound "character" to determine the likelihood of sounds produced by site activities being perceived as incongruous at human receptors. Details should be included in the management plan – Baseline monitoring has been undertaken and an impact assessment undertaken using data against predicted noise levels. This can be found within Section 3.4 of the Noise and Vibration Management Plan.

75. Section 3.5 of the management plan states there is no data on vibration levels likely to disturb wildlife. Please provide clarification on this statement. Does this mean there is no information available on how wildlife is affected or that you have no data (i.e. vibration measurements) on which to make an assessment? – There is little information on how wildlife is impacted by vibration. Operations will predominantly be undertaken on concrete slabs, no operations which are likely to produce high levels of groundborne vibration are to be undertaken such as piling, dynamic compaction. There are no receptors directly adjacent to the site. We feel that the risk of nuisance to human receptors and disturbance to wildlife is negligible.

76. Noise control measures set out in Section 4.1 of the management plan appear sensible and in proportion to the scale of the operation. Please provide information on the implementation of these methods. These should include a system of auditable records to ensure the management plan remains effective, e.g. staff training records, complaints logs, noise/vibration monitoring logs, site activity logs, records of actions taken to mitigate specific noise events (e.g. moving plant, erection of temporary screens etc.) – This detail has been included within Sections 4, 5 and 6 of the Noise and Vibration Management Plan

77. Section 6 of the management plan indicates that ongoing assessment of sound levels as a result of site activities will be undertaken using "professional judgement" in the first instance. Formal instrumental monitoring shall only be undertaken in the event that limits specified in Section 6 of the submitted noise and vibration management plan are deemed to have been exceeded. Please clarify how "professional judgement" will be used to quantitatively assess site generated

sound levels against specified limits along with the rationale for the selected sound limits at each location. Details should be included in the management plan – Monitoring practices have been clarified and additional limits have been set.

78. While the management plan specifies two monitoring locations for ongoing noise assessments, i.e. Llan-melin Wood and the Llan-melin Woods Hill Fort Scheduled Monument, the exact coordinates of these locations has not been specified. It is therefore not possible to calculate resulting sound levels at residential receptors in the event that site generated sound levels are equal to the proposed limits. Please provide the specific coordinates of the monitoring locations. These should be included in the management plan – Coordinates have been included in the plan.

79. Section 6 of the management plan does not make clear which column from the table of proposed sound limits refers to which monitoring location. No details of proposed monitoring frequency or specific operational conditions which might trigger monitoring have been included in the management plan. Please clarify this and include this in the management plan – These have been clarified with noise limits added for each of the identified receptors and additional information of monitoring practices and frequencies.

80. Section 6 of the management plan indicates that ongoing monitoring for vibration as a result of site activities will also be undertaken at the site boundary adjacent to Llan-melin Woods with results compared against “Acceptable Limits” of 3 mm/s Peak Particle Velocity (PPV). No details of proposed monitoring frequency or specific operational conditions which might trigger monitoring have been included in the management plan. Please clarify this and include this in the management plan – The proposal for vibration monitoring has been removed. Having reviewed the risks posed by vibration we do not consider that monitoring has value.

81. Section 6 (acceptable limits table)- It is unclear if this limit represents a typographical error as Table B.1 in BS 5228-2:2009 indicates that vibration levels of 1 mm/s PPV are likely to result in complaint at residential properties while vibration at 0.3 mm/s may just be perceptible in residential environments. Please provide clarification as section 3.5 states this is 1 mm/s PPV. We have not been able to identify any vulnerable receptors to vibration within the zone of influence for site activities, therefore vibration trigger levels have been removed from the plan. We originally included them as we believed they would be required by NRW but we do not want to place unnecessary monitoring requirements on the operation of the site.

82. Assuming that the acceptable limit of 3 mm/s PPV included in the management plan is not the result of a typographical error, please provide any assumptions regarding propagation and resulting levels at receptors should this level be exceeded at the site boundary. Details should be included in the management plan – Please see above.

Cyfoeth Naturiol Cymru
Natural Resources Wales

Outline building assessment

Section 2.1 Building 1

83. How can the drainage in building 1 be isolated?

Section 2.8 Buildings 6 and 7

84. Section 2.8 building 6 and 7 state these buildings are not used by CTL. As these are within the permitted boundary, any pollution here will be attributed to the permit holder. Please consider if these buildings need to be included in the permitted area – The boundary of the permitted area was set in 2016 as part of a previous application. Even though the proposal for Unit 1009 has developed, the boundary was never altered. This has now been altered to include only the sections of Unit 1009 which will be used by Crownhill as part of the activities to be permitted.

CHD001- Site location plan

85. The green site boundary in this document does not match the boundary on any other plan provided in this application. Please provide a site plan (for use in the permit) that shows:

a. The correct Site boundary in green – This has been added although the scale is quite large. This is better illustrated on the site layout plan.

b. The point surface would leave the site via the ditch (if in flow) – This is illustrated on the Site Layout Plan as the scale is more suitable.

c. The point source emissions- i.e. discharge point 1 and 2 – The discharge point has been reduced to a single point, which is illustrated on the Site Layout Plan.

d. All boreholes and surface water monitoring points required in the permit- due to scale limitations this may be provided on a separate plan – This detail is illustrated on the Site Layout Plan.

CHD002- site layout plan

86. There are two boreholes labelled as BH7. Please clarify – These have been miss labelled and this error has been corrected.

CHD003- drainage plan

87. There are two boreholes labelled as BH7. Please clarify - – These have been miss labelled and this error has been corrected.

88. Borehole BH102 is shown on CHD002, but not CHD003. Please clarify – This has been amended. Thank you.

89. The drainage plan only shows one interceptor at Discharge 1. Discharge 2 is labelled as having an interceptor, but its location is not shown on the drainage plan. Other references in the schedule 5 response and application have not made it clear on the on the correct number and locations of the separator(s). Please clarify – Both discharges have been combined into a single interceptor to reduce infrastructure and maintenance costs. The interceptor specified has been sized to accommodate this.

Application form part B4

90. In response to question 2 Emissions to air, water and land you have provided information on point source emissions to water (other than sewers) with maximum amounts of suspended solids and total petroleum hydrocarbons as 60 mg/l and 0.09 mg/l respectively. Please confirm where these limits have come from and why they have been chosen – The limit for suspended solids was chosen as we have previously agreed this with NRW for discharges from previous sites. 0.09mg/l for hydrocarbons is the performance limit the manufacturers of the hydrocarbon separator supplied.