

MEMORANDUM



From: Angela Guy
Contaminated Land Officer

To: Sharon Holman
Planning Officer

Our Ref: P/2023/0793

Your Ref: P/2023/0793

Date: 04 January 2024

**No. of
Pages:** 3

TOWN AND COUNTRY PLANNING ACT 1990

P/2023/0793 Site Of Wynnstay Technology Park, Llangollen Road, Ruabon, Wrexham, LL14 6EN

DISCHARGE OF CONDITIONS 3 (MATERIALS), 4 AND 6 (DRAINAGE), 7 (CONTAMINATION), 9 (DUST MANAGEMENT) AND 10 (NOISE SURVEY) OF PLANNING PERMISSION P/2019/0805

The following report has been submitted with the planning application:

- Wynnstay Technology Park, New Housing Development, Geo-Environmental Report, Gratton Oakes Ltd, by GroundSolve, Job Number: 2387, October 2020

I have reviewed the report and have the following comments to make, it should be noted that geotechnical and drainage matters are not within the remit of the contaminated land team therefore no comments on these has been provided.

1. Paragraph 2.1 refers to fly tipping on several areas of the site but provides no further detail on what the tipping comprises of and whether it is a potential land contamination concern.
2. The planning permission boundary includes the embankments on the north and west areas of the site however these have not been assessed.
3. The plan showing the investigation locations covers a larger area than the planning application, the area furthest south is not included, i.e. the commercial units which are referred to in section 4.0 of the report. Consequently trial pits 8, 9 and 10 and window samples WS01 and WS02 do not appear to be within the area of the proposed housing development. Consideration therefore needs to be given about the

appropriateness or otherwise of using the lab results from those samples in evaluating risk for the proposed development.

4. 4 of the 12 samples were glacial till TP01 2m, TP02 2.1m, WS02 3.5m and WS04 2m – of these one is not within the development area. The remaining 8 samples were from the made ground - based on visual interpretation of the trial pit photos and the description provided in paragraph 6.2 it appears that the made ground is quite variable in nature, although it is noted that it is consistently described as colliery spoil. As samples from TP08 and TP10 were outside the development area this means 6 samples from made ground have been collected, all but one were at a depth of 0.5m, the other being 1.0m. No explanation has been provided of the sampling methodology, frequency, positioning of sample locations etc...

For the scale of the development, the variable nature of the ground identified, along with the sensitive nature of the proposed end use, it is not considered that the scope and detail of the investigation into potential land contamination is sufficient.

5. Paragraph 8.5 states that the desk study failed to reveal any past contaminated land uses, however the former use of the site for deposition of colliery spoil is a potentially contaminative activity and as a result land contamination could be present.

The risk assessment concludes that there was no evidence of contamination based on the test results and visual and olfactory assessment, with the exception of one slightly elevated value of arsenic at 57mg/kg, this has been considered with the other samples in terms of a mean value which was found to be lower than the assessment criteria. However the use of all samples within the area of concern and the appropriateness of using samples deeper than 0.6m for site end users in the human health risk assessment should be given further consideration.

Furthermore the assessment undertaken considers that because the remainder of the results for arsenic were between 2.8 and 20mg/kg the elevated value was an outlier and therefore does not represent any contamination of concern. However this is not the correct manner to assess the significance of a value as an outlier or otherwise. And if it were an outlier it is also not correct to conclude that it is of no concern, rather it would require further assessment and delineation as a potential hot spot.

In addition it is mentioned that burnt shale in that area may explain the elevated value, but whilst the nature of the ground is of relevance in understanding the characteristics of the site, it would be unlikely to be relevant in changing the risk evaluation, particularly without further explanation of why that would be.

6. It shouldn't just be assumed that the underlying bedrock aquifer will be contaminated with acidic mine water. Nevertheless, for the other reasons referred to in paragraph 8.6, I concur with the conclusion that risks to controlled waters are low and consequently not of concern.

7. Section 8.8 considers gas risks and concludes there are no significant sources of ground gases and therefore negligible risk, however there is limited evaluation of whether the made ground may generate ground gas (section 9.8) and it is noted that black till was encountered immediately below the made ground and it is stated that probably includes an amount of organic material as it was the previous ground surface before the made ground was placed.

In addition it is noted that mine gas is considered and concluded to be a very low risk based on the grouted and capped coal shaft (also discussed in 9.8 too), but it is not

clear if the air shaft remains a risk (it is noted that there is some reference to the air shaft in terms of geotechnical risks in section 9.1 however this is not sufficient in terms of consideration of gas risks). Further gas risk assessment is therefore required which could include consideration of upgrading the radon protection measures to protect against landfill gases (e.g. not all radon membrane specifications are sufficient for landfill gases).

8. Section 8.9 considers the risks to building materials and it is stated that the test results should be supplied to statutory suppliers, whilst advice can be sought from the water supplier in regard to potential impacts on the supply pipe it is not clear who would advise on building materials, normally risks from sulphate attack for instance would be evaluated within the land contamination risk assessment report, it is noted this is done in section 9.7. Further clarification on what is discussed in section 8.9 should be provided.
9. Section 9.5 identifies that due to the lack of topsoil on site topsoil will need to be imported. The report is not recommending this as a remedial measure although this may become relevant if further assessment indicates it will be necessary. Nevertheless as is stated, prior to importing soil it should be validated by appropriate testing.
Following further risk assessment, if remediation works are found to be required and the importation of soil becomes a remedial solution as part of a cover system, then further more detailed validation measures will be needed, such as proving the depth placed.
10. Also in section 9.5 it is stated that the colliery spoil on site is suitable for re-use on site as a structural fill and rather than take the colliery spoil off site to tip, it may be possible to lose it on the existing embankments surrounding the site. If this work is to be undertaken consideration should be given to using the CL:AIRE Definition of Waste Code of Practice (DOW CoP) for re-use of soils on site.

As a result of the above comments I do not recommend the discharge of condition 7 at this time. Should you have any queries regarding the above then please contact me on Ext. 8771.



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Angela Guy
Contaminated Land Officer