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| <br><b>Knowsley Council</b> | <p align="center"><b>Planning Consultation Response</b></p> <p align="center"><b>Environmental Health and<br/>Consumer Protection Service</b></p> |
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| To:               | Planning Services (Mark Quinn)                               |                 |
| From:             | Environmental Health & Consumer Protection (Helen Bradshawe) |                 |
| Planning App. No: | 23/02782/FUL                                                 | 24/03856/PLANNI |
| Date:             | 5 September 2024                                             |                 |
| Location:         | The Sovereign Distillery, Wilson Road, Huyton, Knowsley      |                 |
| Proposal:         | contaminated land and air quality assessment                 |                 |

**We await further consultation on Air Quality and Noise prior to confirming planning conditions required if the planning permission is granted.**

#### **Further Information Required – Contaminated Land**

Merseyside EAS have been consulted on behalf of Environmental Health on the report submitted in respect of this application. Please find below comments and observations following a review of the following documents:

- Fairhurst (October 2023) Preliminary Risk Assessment Ref: 156463 R1.2
- Arc Environmental Ltd (undated) Preliminary Data Summary Sheets
- Arc Environmental Ltd (February 2024) Ground Investigation Report Ref: 23-795
- JWH Ross (October 2023) Coal Mining Risk Assessment Ref: 156463/GL/J/R1
- Letter from Arc Environmental Ltd to Adept Consulting Engineers, dated 26<sup>th</sup> July 2024, titled Re: Intrusive Coal Mining Risk Assessment – Sovereign Business Park, Liverpool and referenced 24-387.01L

**MEAS advise that there are several queries regarding the intrusive works undertaken on site. As such, should planning permission be granted, Knowsley's full standard condition should be attached.**

#### **Comments and Observations**

1. The Preliminary Risk Assessment includes a review of the historical mapping records and environmental information associated with the site. A Preliminary Conceptual Mode was produced identifying all potential sources, pathways and receptors as well as assigning a risk to the identified pollutant linkages. However, this document has not been referenced or referred to in the Ground Investigation Report. It is not therefore clear if the information contained within this document was used in the design of the site investigation.

*Adept: The phase 1 was undertaken by a separate company to the Phase 2 due to availability. The Phase 2 intrusive investigation was however specific to the new*

development area and expected coal seams. We therefore believe there is adequate information within the Phase 2 report to confirm the ground conditions, gas levels, coal and contamination levels.

We have reviewed the current guidance on ground gases (i.e. CIRIA 665 & BS 8576:2013) and can comment as follows regarding the gas monitoring.

## 6.0 Insitu Testing (Cont'd)

### 6.3 Insitu Gas & Water Monitoring (Cont'd):-

Table 6.5

\* Note – Atmospheric trend taken from [www.weatheronline.co.uk](http://www.weatheronline.co.uk) for Hutton

| Position   | Date     | Atmospheric Pressure (mbar) | Water (m bgl) | CH <sub>4</sub> (%v/v) | LEL (%v/v) | CO (%v/v) | CO <sub>2</sub> (%v/v) | O <sub>2</sub> (%v/v) | Flow Rate (l/hr) |
|------------|----------|-----------------------------|---------------|------------------------|------------|-----------|------------------------|-----------------------|------------------|
| Background |          | ~                           | ~             | 0                      | 0          | 0         | 0                      | 21.0                  | <0.1             |
| WS01       | 01/11/23 | 977<br>(rising)             | 1.59          | 0.0                    | 0.0        | 0.0       | 0.5                    | 18.4                  | <0.1             |
| WS02       |          |                             | 1.25          | 0.0                    | 0.0        | 0.0       | 0.4                    | 19.3                  | <0.1             |
| WS13       |          |                             | 1.12          | 0.0                    | 0.0        | 0.0       | 2.4                    | 17.1                  | <0.1             |
| WS01       | 15/11/23 | 1008<br>(falling)           | 1.67          | 0.0                    | 0.0        | 0.0       | 0.6                    | 19.4                  | <0.1             |
| WS02       |          |                             | 1.19          | 0.0                    | 0.0        | 0.0       | 0.5                    | 19.4                  | <0.1             |
| WS13       |          |                             | 1.20          | 0.0                    | 0.0        | 0.0       | 0.5                    | 20.0                  | <0.1             |
| WS01       | 29/11/23 | 1000<br>(falling)           | 1.90          | 0.0                    | 0.0        | 0.0       | 0.3                    | 19.7                  | <0.1             |
| WS02       |          |                             | 1.90          | 0.0                    | 0.0        | 0.0       | 0.3                    | 19.8                  | <0.1             |
| WS13       |          |                             | 1.20          | 0.0                    | 0.0        | 0.0       | 0.6                    | 19.6                  | <0.1             |
| WS01       | 12/12/24 | 1000<br>(falling)           | 1.70          | 0.0                    | 0.0        | 0.0       | 0.2                    | 20.2                  | <0.1             |
| WS02       |          |                             | 1.10          | 0.0                    | 0.0        | 0.0       | 1.9                    | 19.3                  | <0.1             |
| WS13       |          |                             | 1.10          | 0.0                    | 0.0        | 0.0       | 0.6                    | 20.2                  | <0.1             |

The date of the last gas visit in the report was incorrect and should have stated 12/12/2023. When the phase 2 report was completed with regards to the risk of hazardous ground gases, we assessed the site based on no deleterious / biodegradable materials within the made ground along with low TOC (Total Organic Carbon) values i.e. between 0.5 – 2.3%. Therefore, in accordance with BS8576 (Figure 6 Decision Matrix for Initial Monitoring), the site could be classified as very low risk, resulting in gas monitoring potentially over a period of up to two months. We attach a copy of BS8576. In addition, in accordance with the current CIRIA 665 guidance, based on the environmental setting and results of the intrusive investigation works, the proposed development would be classified as a Low sensitivity with a very low generation of potential source resulting in 4 visits over a minimum 1 month being required. I attach a copy of Table 5.5a & Table 5.5b from the CIRIA Guidance.

The above assessment is further backed up as being of very low risk from the rotary boreholes carried out where only intact coal was noted with no evidence of shallow coal workings recorded. The Coal Consultants Report procured as part of the coal mining risk assessment did not record any underground workings below or within proximity of the site which further confirms the classification of very low risk. Therefore, it is in our opinion that sufficient ground gas monitoring has been carried out to assess the risks and no further monitoring should be required.

As part of the Phase 2 a generic risk assessment with regards to ground contamination was undertaken and is within the report..

The risk of shallow coal workings has been addressed through the boreholes completed and the coal mining risk assessment carried out by others confirms that all shafts present on site have been treated and capped which removes any associated risks.

### **Recommendation 1**

A site-specific ground investigation should be undertaken to allow for the refinement of the CSM, and to aid in detailed design. Given the elevated risk of ground gas / mine gas generation underlying the site due to the presence of the Made Ground, potentially infilled

land and potential shallow mine workings, ground gas monitoring consisting of 12 No. monitoring rounds undertaken over 6 No. months would be required to be in accordance with BS 8576:2013. The potential vapour risk should also be investigated by PID monitoring. The site ground investigation should also include, soft landscaping samples, BRE Suites to determine concrete design, and groundwater monitoring and testing.

Three boreholes were used for gas monitoring (WS1, WS2 and WS13) were used for monitoring over four months.

2. The Ground Investigation is cited as being primarily for geotechnical purposes. Previously identified sources of contamination do not appear to have been considered or targeted. MEAS advise that full justification should be provided for the scope of the intrusive works with reference to the potential risk to human health, including from ground gas. It should also identify any data gaps which need to be addressed.

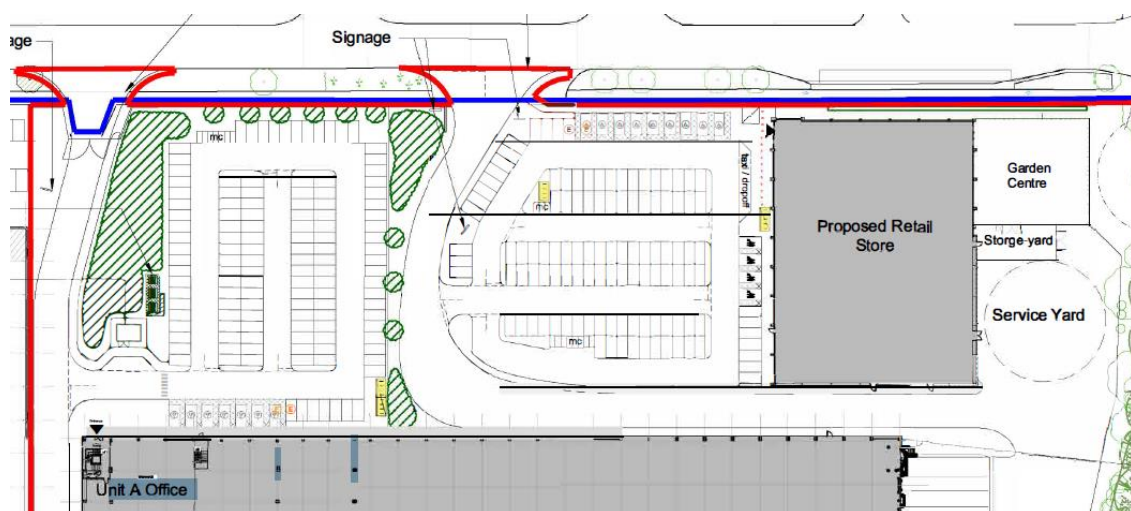
#### Adept

The report was for both geotechnical and ground contamination. The scope of the intrusive ground investigation works was to primarily to target the proposed building / service yard with the remaining works across the site targeted to facilitate the refurbishment of the existing buildings with no significant construction works envisaged (i.e. provide information on ground conditions to existing foundations for geotechnical design purposes). Therefore, the contamination screening and ground gas monitoring carried out was targeted around the area of proposed new building with regards to risks to human health.

3. The Ground Investigation report states that the proposed development will be 100% hardcover. However, the Proposed Site Plan (13579-AEW-XX-XX-DR-A-0503 Rev P12) shows significant areas of landscaping. This will need to be taken into account in terms of the scope of the intrusive works (see point 2).

#### Adept

There is a new small area of soft landscaping proposed (see below).



The remaining green areas are existing soft landscaping / grassed areas. As noted in point 3, this wasn't noted in the intrusive report, but we consider the soft landscape area to be relatively small. Five samples were taken from this area of the development and

*screened. We therefore believe, there is a sufficient dataset to make a reasonable conclusion for the purposes of re-using material for soft landscaping.*

4. None of the 5 samples of made ground sampled recorded any elevated concentrations of contaminants, with reference to the relevant generic assessment criteria. However, the site area is reported to be 6.41ha, which only equates to less than one sample per hectare. This is considered an insufficient dataset on which to draw any reasonable conclusions.

**Adept**

*We disagree that there is an insufficient dataset to draw any reasonable conclusions. Although the total site area is c.6.41ha, much of the site will not be developed other than refurbishment of existing buildings. The only area of redevelopment is the proposed new building / service yard, the five samples screened were taken for, this area therefore, there is a sufficient dataset to make a reasonable conclusion.*

5. Whilst the 3 ground gas wells did not record any methane and only low levels of carbon dioxide further explanation is required on the spacing and location of the wells with reference to sources of gas including the underlying coal measures (see point 2).

**Adept**

*The location of the ground gas wells was targeted around the proposed new building and where coal outcrops were recorded. Therefore, we feel that the spacing is adequate to target the potential sources of ground gas including the underlying coal measures. In addition, no evidence of shallow coal workings was noted within the rotary boreholes recently carried out with intact coal recorded, this will further negate any potential risk from shallow coal workings.*

6. The information provided is considered insufficient to conclude that there is a low risk to human health.
7. MEAS note that the Coal Authority is reviewing the Coal Mining Risk Assessment.