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20.1054/RS/CB/v1  
25 July 2022

Mark Costello  
Concert

## **UNION PARK, HAYES – REMEDIATION STATUS**

Dear Mark

### **Introduction**

Planning Permission reference 75111/APP/2020/1955, under which the ground works are being carried out has six Planning Conditions (31 to 36) relating to contaminated land that requires groundworks associated with the development to be executed in accordance with the approved Remediation Strategy (Reference: 20.0023/CK/DCN. Dated: 11 November 2021). On completion of the works a Verification Report is to be submitted to the LPA to discharge the conditions. As the project is still part way through construction, the Verification Report has yet to be compiled, however this letter has been prepared by Paragon as an update to confirm the status of the ongoing remedial requirements at the site.

### **Remediation Strategy Requirements**

The remediation strategy sets out requirements for the following key items:

1. Site clearance and demolition including the removal of the generator / above ground tank in the Vodafone plot (completed in spring / summer 2020);
2. Personal Protective Equipment and health and safety controls;
3. Watching brief and discovery strategy in the event that previously unidentified contamination is encountered;
4. Ongoing monitoring of groundwater;
5. Capping layers in soft landscaped areas;
6. Gas (methane and carbon dioxide) and vapour resistant membranes within future enclosed structures;
7. Asbestos control measures and materials management;
8. Barrier pipework for new drinking water supply pipework;
9. Decommissioning of boreholes;
10. Piling Works Risk Assessment; and
11. Remediation and Verification reporting.



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## Remediation Status Update

In summary, Paragon are completing ongoing visits of the development site and records of each remediation item are being collated. Depending on the purpose of the visit, photographs, soil or water samples were collected. In addition, several visits were for general update purposes, in which no sampling was required. A list of the verification visits is included below:

**Table 1. Verification Visits**

Number	Date	Description
1	21 September 2020	General Inspection
2	5 November 2020	General Inspection
3	19 November 2020	General Inspection
4	22 January 2021	General Inspection
5	17 February 2021	General Inspection
6	7 June 2021	Soil Testing Hayes
7	8 June 2021	Soil Testing Hayes
8	22 June 2021	MMP Soil Supervision
9	29 June 2021	MMP Soil Supervision
10	30 June 2021	MMP Soil Supervision
11	1 July 2021	MMP Soil Supervision
12	5 August 2021	Borehole Drilling (Groundwater Monitoring set up)
13	2 September 2021	Set up of vibration equipment
14	10 March 2022	Site Meeting
15	23 March 2022	Site Inspection
16	31 March 2022	Groundwater Sampling (Paragon Inspection)
17	24 June 2022	Japanese Knotweed Inspection

The status of each item from the remediation strategy is set out below:

1. *Site clearance and demolition including the removal of the generator / above ground tank in the Vodafone plot (completed in spring / summer 2020).*

The site clearance and demolition works were completed in spring/summer 2020. No further works are required in relation to item 1.

2. *Personal Protective Equipment and health and safety controls.*

Paragon are working with the principal contractor who is responsible for all PPE and health and safety onsite. No incidents have been reported to Paragon.



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*3. Watching brief and discovery strategy in the event that previously unidentified contamination is encountered.*

Paragon are completing inspections of the site and working closely with the principal contractor in relation to previously unexpected contamination. No areas of previously unexpected contamination have been reported in the latest phase of groundworks. Areas of suspected contamination identified in earlier phases of work have been successfully remediated. In the event that unexpected contamination is identified during future groundworks, the principal contractor is to inform Paragon to provide recommendations for next steps.

Details of any previously unidentified contamination and confirmation of the remediation methods used are to be presented within the verification report.

Paragon has been taking verification soil samples throughout the inspections as required. However, it should be noted that there has been no need to regularly collect soil samples and undertake chemical analysis as no contamination has been identified by the Principal Contractor in relation to Block 1. Nevertheless, a selection of soil test certificates are presented within the appendix. These are from samples collected from a stockpile of arisings from piles / excavations that were to be reused within the scheme. The results show the soils are free from contamination and suitable for reuse.

*4. Ongoing monitoring of groundwater.*

Prior to construction activities commencing onsite, the risks to Controlled Waters were noted to be low based on the results of our Detailed Quantitative Risk Assessment (DQRA). However, we recommended that ongoing monitoring was completed to ensure the impacts of the construction activities were being monitored. The long term groundwater monitoring is currently ongoing, and whilst we have identified contaminants are present within the water, these are at the same concentrations as before the construction work began. As such, we consider the risks to still be minimal and the groundwater has not been impacted by site activities.

Paragon has provided a separate update on the groundwater monitoring, dated July 2022. This report is presented in the Appendix.

Paragon has presented the dates of the groundwater monitoring below.

**Table 2. Monitoring Visits Completed**

Monitoring Round		Borehole Reference		
		BH101	BH102	BH103
<b>Baseline</b>				
05/08/21	Initial Baseline Visit	✓	✓	✓
<b>During Piling</b>				
19/08/21	Round 1	✓	✓	✓
31/08/21	Round 2	✓	✓	✓
14/09/21	Round 3	✓	✓	✓
30/09/21	Round 4	✓	✓	✓
13/10/21	Round 5	✓	✓	✓
28/10/21	Round 6	✓	✓	✓
10/11/21	Round 7	✓	✓	✓
23/11/21	Round 8	✓	✓	✓
07/12/21	Round 9	✓	✓	✓
20/12/21	Round 10	✓	✓	x*
05/01/22	Round 11	✓	✓	✓
19/01/22	Round 12	✓	✓	✓
31/01/22	Round 13	✓	✓	✓
17/02/22	Round 14	✓	✓	✓
<b>Post Piling</b>				
31/03/22	Round 15	✓	✓	✓
26/05/22	Round 16	✓	✓	✓
29/06/22	Round 17	✓	✓	✓

Note To Table:

\*BH103 ran dry during monitoring on round 10 so no sample was taken during this visit.

#### 5. Capping layers in soft landscaped areas.

The areas of soft landscaping have not been formed yet and this is anticipated to be much later in the development. The contractor is aware of their obligations to assess the soil prior to use onsite to ensure it meets acceptable standards. Paragon are to oversee this process and undertake separate validation testing of the soils. The results are to be presented within the Verification Report.

#### 6. Gas (methane and carbon dioxide) and vapour resistant membranes within future enclosed structures.

At this stage it is too early for the gas and vapour resistant membranes to be installed. Confirmation of the membranes to be used is required by Paragon for the Verification Report. The principal contractor is responsible for providing the information to Paragon and installing the membranes onsite.



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*7. Asbestos control measures and materials management.*

Paragon are completing ongoing visits to the site to discuss the materials movement with the principal contractor as part of the site's Materials Management Plan. The principal contractor is maintaining a tracker using software called SmartWaste. This is an ongoing process and will be summarised in the Verification Report.

At this stage, no hotspots of asbestos have been reported to Paragon.

*8. Barrier pipework for new drinking water supply pipework.*

The contractor is responsible for ensuring suitable pipework is installed within the development. Confirmation of the pipework used is required for the verification report. The confirmation is to be provided by the principal contractor.

*9. Decommissioning of boreholes.*

The groundwater monitoring is ongoing and as such the boreholes are to remain in-situ until the monitoring is complete. The boreholes in the centre of the main plot have been decommissioned by the principal contractor.

*10. Piling Works Risk Assessment.*

The Piling Works Risk Assessment (PWRA) has been completed and has previously been submitted to the Local Authority (Reference: 21.0198/CB/NW. Dated: 22 February 2021). The risk assessment concluded that there is a low environmental risk from the potential for piling to create a preferential pathway for any contaminants to migrate downwards to the underlying sensitive aquifers, and a low risk for gases to migrate upwards. No further actions are required in relation to the PWRA.

*11. Remediation and Verification reporting.*

The development is continuing to be monitored and the Remediation Verification Report will be prepared at the end of the project. The Verification Report will need to be submitted to the Local Authority.

## **Summary and Further Works**

This letter sets out the status of the ongoing requirements at Union Park in relation to the remediation strategy. The above items are to continue to be monitored by Paragon and at the end of the project, the Verification Report is to be submitted to the Local Authority to support the discharge of the planning conditions for contaminated land.



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Whilst we hope that this report has addressed your needs, please do not hesitate to get in touch if you have any further questions.

Yours sincerely

A handwritten signature in black ink, appearing to read "Charlie Bruinvels".

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Appendix 1 – Decision Notice  
Appendix 2 – Soil Data  
Appendix 3 – Groundwater Letter Report



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**Appendix 1 –  
Decision Notice**



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**Appendix 2 –  
Soil Data**





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**Appendix 3 –  
Groundwater Letter  
Report**