



Remedial Strategy & Implementation Plan

Pfizer

32 New Lane
Havant
PO9 2NG

Prepared for:

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PFIZER, NEW LANE, HAVANT

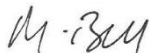
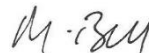
NON-TECHNICAL CLIENT SUMMARY

This report provides a Remedial Strategy & Implementation Plan for the Pfizer Site, New Lane, Havant. Its purpose is to provide stakeholders in the site redevelopment with information necessary to understand the proposed approach to the management of identified and potential soil contaminant conditions at the site. This document can ultimately form the basis of a report to the local planning authority (LPA) as part of the discharge of pre-commencement planning conditions regarding contaminated land. The following points regarding the site are pertinent to this document:

- The site was previously a pharmaceutical manufacturing facility. On this basis, risks were initially identified associated with human interaction with shallow soils, intrusion of soil gases into buildings and risks to controlled waters from site-derived contamination.
- Previous Phase I Desk Study and Phase 2 Site Investigations have identified localised soil contamination, and some low-level impacts to shallow groundwater from chlorinated solvents.
- The intrusive investigations found that the shallow and deeper soils from across the site do not generally pose a significant risk to future site users in a commercial setting. Moreover, laboratory testing of groundwater has not identified concentrations considered to pose a risk to the groundwater body, whilst soil vapour analysis has not identified a risk associated with intrusion of organic vapours into future buildings (or neighbouring properties). An initial programme of ground gas monitoring has found the site to fall into Characteristic Situation 1, for which no ground gas protection measures would be required.
- No further site investigation is planned. This Remedial Strategy was initially submitted to the Council in 'Outline' form, and has been updated to take account of feedback from the Council as well as recent supplementary site investigation data.
- From current findings, gross contamination of soils is not anticipated once groundworks begin as evidence of such would be expected to have been identified in the shallow groundwater, which it has not. However, localised soil contamination can be expected and has been evidenced in soil vapour analysis which indicates potential localised hot spots of volatile hydrocarbons and chlorinated solvents. In light of this, a remediation plan is required to address these hotspots along with a formalised 'discovery strategy' to apply during groundworks to identify the procedure to ensure any soil contamination is looked for, identified and managed appropriately. Throughout the groundworks, verification that the soils left on site are suitable for the new use is required and this verification and its evidence is required to be presented in report form. The plan to collect the necessary evidence for such reporting is included in this document, which will also support the Materials Management Plan.

By their very nature, the above bullet points represent a simplified summary of our work and must not be relied upon to form the basis for key decisions. A full picture is provided in the following report, or alternatively give us a call and we'll talk you through it.

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Main revisions Since Issue 5 (13th October 2021)	Section 2.2.3 added to reflect October correspondence with J Driver (HBC).	
	Section 3 & Appendix D updated to reflect revised re-use criteria for Phthalates and statement of when to apply these values in favour of GACs.	
	Section 3 & Appendix D updated to reflect EPS' presence full-time on site to oversee Discovery Strategy.	
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The report has been written, reviewed and authorised by the persons listed above. It has also undergone EPS' quality management inspection. Should you require any further assistance regarding the information provided within the report, please do not hesitate to contact us.

The National Planning Policy Framework 2019 requires a competent person to prepare site investigation information, which is defined as a person with a recognised relevant qualification, sufficient experience in dealing with the type(s) of pollution or land instability, and membership of a relevant professional organisation. EPS considers that it fulfils these criteria and would welcome any request for staff CVs or case studies to demonstrate it.

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1 INTRODUCTION

This report provides a Remedial Strategy & Implementation Plan for the Pfizer Site, 32 New Lane, Havant. Its purpose is to provide stakeholders in the site redevelopment with information necessary to understand the proposed approach to the management of identified and potential soil contaminant conditions at the site. This document can ultimately form the basis of a report to the local planning authority (LPA) as part of the discharge of pre-commencement planning conditions regarding contaminated land.

A plan showing the site location is provided as Figure 1 and a proposed development plan is included as Appendix A.

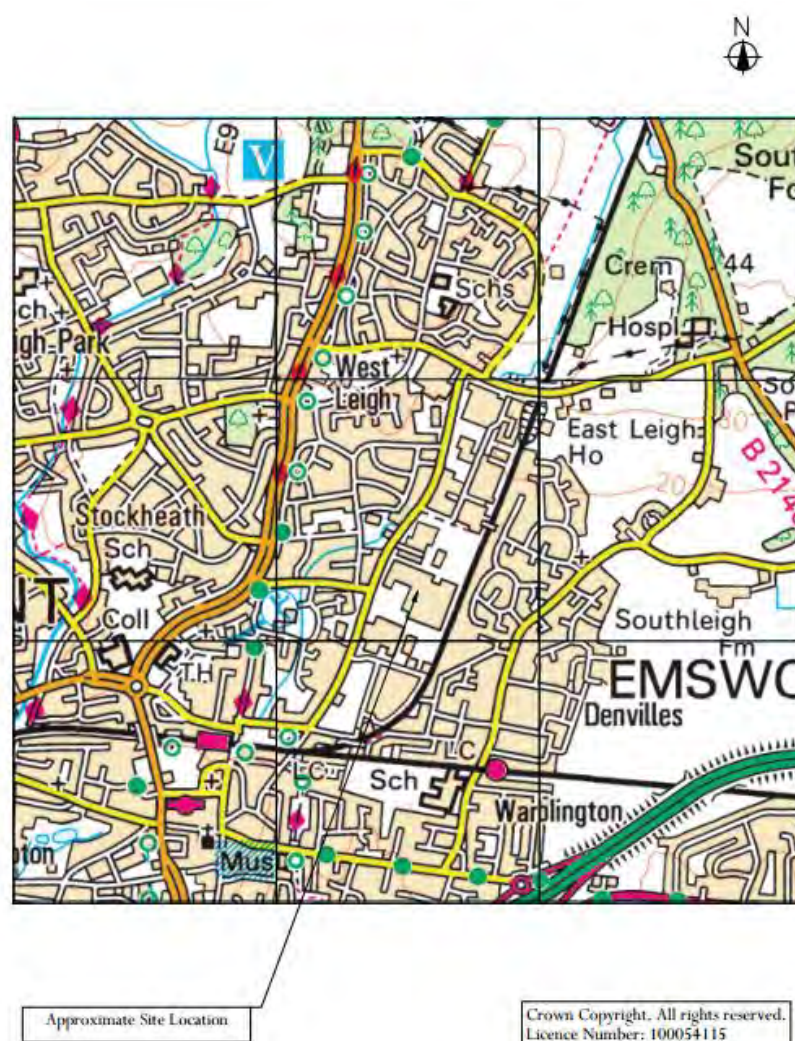


Figure 1 - Site Location

1.1 Objective

The objective of this Remedial Strategy & Implementation Plan is as follows:

- To outline the appropriate form(s) of remediation necessary to remove potentially unacceptable risks to receptors to ensure safe development.

1.2 Scope of Work

To prepare a Remedial Strategy & Implementation Plan in accordance with the principles and requirements of the Environment Agency's *Land Contamination: Risk Management* ('LC:RM', 2020), the *National Planning Policy Framework* and DEFRA's '*Contaminated Land Statutory Guidance*', the following tasks were undertaken:

1.2.1 Remedial Strategy:

- Review of remedial objectives
- Development of a Remedial Strategy

1.2.2 Implementation of the Remedial Strategy (Implementation Plan):

- Define the process of remediation
- Present a Discovery Strategy to ensure that soil contamination is looked for, correctly identified and managed appropriately during site groundworks.
- Present a Verification Plan to determine how remediation has performed in relation to strategy.

1.3 Limitations and Constraints

The purpose of this report is to present a Remedial Strategy & Implementation Plan for the site in terms of risks from contaminated land. When examining the data collected from the investigations made during the assessment, Environmental Protection Strategies Ltd (EPS) makes the following statements:

A Remedial Strategy has been presented based on the findings of an investigation carried out by EPS as well as information provided by third parties, the validity of any data others may have supplied, and which are included in the report, have been assessed as far as possible by EPS, however, EPS cannot guarantee the validity of these data.

This Remedial Strategy is based on a former intrusive investigations by EPS. No investigation method is capable of completely identifying all ground conditions that might be present in the soil or groundwater under a site. The locations of these excavations and sampling points are considered to be representative of the condition of the whole site subsurface however, ground conditions are naturally variable and it may be possible that the conditions encountered may differ to those found during the investigation.

This report does not include specific survey for the presence of either Potential Asbestos Containing Material or Japanese Knotweed at the subject site.

2 BACKGROUND & PREVIOUS REPORTS

This section provides a background and context to the site, as well as a review of the previous work undertaken.

2.1 Previous Reports

The site has been subject to previous Phase I and Phase II Geo-Environmental Assessments by EPS, it is recommended the reader reviews the following reports:

- *UK20.5052 Phase I Environmental Assessment: Pfizer, 32 New Lane, Havant, PO9 2NG* (January 2021)
- *UK20.5052C Phase II Geo-Environmental Assessment: Pfizer, 32 New Lane, Havant, PO9 2NG* (March 2021)
- *Supplementary Soil Gas and Vapour Monitoring Letter – Pfizer, Havant – June 2021* (Reference: UK20.5052e)
- *UK20.5052F Supplementary Phase II Geo-Environmental Assessment: Pfizer, 32 New Lane, Havant, PO9 2NG* (October 2021)

The previous Phase I Desk Study identified the site to comprise a pharmaceutical distribution centre, formerly used for manufacturing. On this basis, risks were identified associated with human interaction with shallow soils, intrusion of soil gases into buildings and risks to controlled waters from site-derived contamination.

2.2 Regulatory Feedback

2.2.1 27th April 2021

Following the first issue of this report, Havant Borough Council's Environmental Health Officer (EHO) Mr Jonathan Driver provided a consultation response to planning application APP/21/00200 regarding the Phase I Environmental Assessment. The response, dated 27th April 2021, is included in Appendix F.

In summary, the Council confirmed that the contamination assessment was accepted (i.e., the Phase I report). Other pertinent points included in the EHO response are summarised below along with detail on how EPS has taken account of them when undertaking the proposed remedial strategy:

The EHO highlighted a need to amend the suite of conditions proposed by the Environment Agency in order to bring risks to human health into scope, and to ensure that the applicant is not unduly constrained by a strict interpretation of the provisions of the Grampian condition (EA's first proposed condition). This relates to the wording of the condition in relation to commencement, where the Council support a flexible approach as this is often an issue when undertaking contamination investigations on site's requiring clearance. EPS and the applicant welcome the Council's pragmatism in this regard.

The broad conclusions of the Phase I report were accepted. However, the Council highlighted that off-site migration of contaminants to ‘contamination sensitive’ human receptors that are external to the development red-line area may also represent a significant risk driver. This is a similar point to that raised in the original pre-application response (4th August 2020, included as Appendix B of the Phase I report) and EPS therefore included these receptors in the Conceptual Site Model presented in the Phase II report.

The EHO response (April 2021) highlighted the Section in Paragraph 7.3 of the Phase I report which suggested that sufficient information is available to ‘outline’ a ‘remediation strategy’. The response stated they ‘would challenge the ‘face value’ interpretation of this statement, at least in the absence of a comprehensive synopsis of available results to present a comprehensive conceptual site model which accounts for the result of investigations which had not to date been reported to the Council’. EPS consider this a reasonable point, and that statement was made largely to help inform the client. This Remedial Strategy takes into account the existing Phase II report and makes allowance for the findings of the recent additional investigation presented in the Supplementary Phase II Geo-Environmental Assessment. This dataset allowed for the refined CSM to be presented in Section 6.5 of the supplementary report.

The final two bullet points in the EHO response highlight the relevant gaps in the data (at that time). The response also highlights the possible application of statistical assessment and identification of discrete contamination sources / contamination-impacted areas. The Phase II reports, and this Remedial Strategy, identify specific areas of concern and contaminant sources which is considered a robust and defensible approach. However, as stated in the Phase II report (Section 3.1) *Due to the absence of a formal sampling pattern, the use of a three-dimensional dataset (i.e. samples at varying depths) and targeted nature of the investigation taking into account the PAOCs, it is unlikely that any statistical analysis can be applied to the soil dataset in accordance with CL:AIRE’s 2020 guidance.* To generate two-tier confidence intervals representative of a dataset in accordance with this guidance, it would not have been possible to target the sampling or vary the depths at which the samples were taken. EPS have followed best practice guidance as set-out in the EAs overarching *Land Contamination: Risk Management* guidance for scenarios such as this, where there is considerable data already provided from previous surveys and those recently undertaken.

EPS have aligned the supplementary investigation to the current statistical guidance wherever possible though (in terms of approach to sampling locations, using sampling patterns, consistent depths and sample quantities) although strict application of the guidance is still not possible.

2.2.2 27th July 2021

Subsequent to submission of the Outline Remedial Strategy (Issue 1) to the local authority, further comment was made following review of this document by Mr Jonathan Driver of the Environmental Health team of Havant Borough Council. His comments from a memo dated 21st July 2021 (also included in Appendix F) are outlined below:

Details relating to the Phase II report have been accounted for in the Supplementary report, with only those relating the remedial strategy discussed below.

“The Outline Remedial Strategy & Implementation plan takes this recommendation forward by outlining the additional data collection required to support a comprehensive risk assessment, and development of

remedial or risk mitigation options when a more refined CSM is available. In this sense, the works outlined do not amount to remediation, rather they represent proposals for further investigation.

The rationale and content of the report is broadly agreed, however I highlight concern with the reference within the remedial strategy table presented at section 3 to the application of GAC as 're-use criteria'. I would expect the 'no soils containing free-phase product' to take precedence over the hydrocarbon GAC, and I would expect DoWCOP procedures to apply to soils clearly contaminated with high concentrations of low-toxicity substances.

EPS – The presence of soils containing free-phase product, i.e. above saturation limits was already discussed in the Outline Remedial Strategy (Section 3), where it was confirmed they cannot be re-used. To further elaborate on the proposed re-use criteria, EPS would add the following.

The re-use criteria are based on nationally recognised assessment criteria, endorsed by government. There would be no risk-based justification for requiring the re-use criteria at this site to achieve concentrations of contaminants below these levels (as they are already within suitability for use/Category 4 under the statutory guidance for Part 2A of the Environmental Protection Act 1990). EPS take the point regarding free-phase product though and this was highlighted in the Outline Remedial Strategy. A degree of pragmatism needs to be applied when interpreting saturation limits and free-phase petroleum hydrocarbons, as the commercial assessment criteria will be far in excess in some instances, but equally the (theoretical) saturation limits for some TPH fractions are extremely low. This is not an issue unique to the Pfizer site, it's simply because the assessment criteria (and the exposure model outputs used to derive) should not be used in isolation, but with a degree of professional judgment as well. The CLEA model does have limitations, and the exposure modelling associated with free-phase contamination is one of them.

To provide further confidence, EPS would propose an additional re-use criteria for Total Petroleum Hydrocarbons (C5-35) of 2,000mg/kg, in addition to no breaches of any individual fractions included in Appendix D. This criteria has been added to the criteria in Appendix D.

Where potential soil-wastes are to be re-used, they will be covered under a Materials Management Plan declared by a Qualified Person under CL:AIRE's DoWCoP protocol, which the Council's Environmental Health team will be consulted on in October 2021.

I would also highlight that verification of the proposed source reduction works in the vicinity of BH03 is to demonstrate 'effective removal' of phthalates, but no standard appears to be proposed to define 'effective removal' at this stage, whether in terms of total Phthalates, total VOC, or a substance-specific value for Benzylbutyl Phthalate. The additional works proposed should define a standard for 'adequate remediation' for this purpose. It may be that the Golder reports proposed such a value/concentration/standard.

EPS - Benzylbutyl Phthalate (BBP) was identified in BH03 (at 53.568mg/kg), located in the north-eastern part of the site where contamination has been historically identified and smaller concentrations of other phthalates were sporadically recorded elsewhere. However, a groundwater sample from the same borehole did not identify concentrations of this compound above method detection limit, suggestive that vertical migration has been limited. Moreover, during this supplementary investigation trial pits TP24 and TP25 were excavated in close proximity to this borehole (in areas previously inaccessible) and soil concentrations were not identified close to this level. A sample taken from TP24 did not identify a concentration of this

(or any other) phthalate above method detection limit (MDL) of 0.1mg/kg, whilst the sample from TP25 contained a concentration of 0.153mg/kg. (see Supplementary Phase II report).

A generic screening value is included in the EIC/AGS/CL:AIRE (2010) assessment criteria guidance (described in Supplementary Phase II report) for BBP of 940,000mg/kg, although reference to the saturation limit of 26.3mg/kg may be more appropriate given the uncertainty around the source of the contaminant as well as the additive effect of other similar plasticisers (this value has since been revised following further dialogues as described in Section 2.2.3).

A localised excavation around BH03 has therefore been proposed in the remedial strategy, its extent taking into account the absence of the contaminant in the nearby trial pits. The proposed re-use/remedial target is the saturation limit described above, which has been added to Appendix D along with other relevant criteria for phthalates (1% SOM), including Bis (2-ethylhexyl) phthalate.

In light of the above, there is no need to substantially alter the approach previously proposed – it remains appropriate to secure the proposed additional investigation / assessment by condition, and to respond appropriately to the results of that assessment. This does however require a minor revision to the previously proposed condition, and again I would reiterate that demolition should not be considered to constitute ‘commencement’ for the purposes of this condition.”

EPS – Noted.

2.2.3 19th October 2021

Further comments were received from Mr Driver following dialogue primarily over the intended Materials Management exercise. These comments are included in Appendix F. The key changes made to this Remedial Strategy as a result of these comments are as follows:

- Revised re-use criteria for phthalates Benzylbutyl Phthalate (BBP) and Bis(2-ethylhexyl) (B(2e)P) from the original values based on saturation limits of 26.3mg/kg and 8.68mg/kg, respectively to 25% of those limits to take account for uncertainty over risks to controlled waters. Revised re-use criteria of 6.6mg/kg for BBP and 2.2mg/kg for B(2e)P have been included in Appendix D.
- Additional clarification in Section 3 and Appendix D has been added to state where re-use criteria based on saturation limits should apply, in favour of GACs.
- The previous Appendix E (Method Statement for Unexpected Contamination) has been removed as the Discovery Strategy (Appendix B) and Remedial Oversight (Section 4.2.3) supersede that method statement for this site, which EPS will oversee full-time on site.

2.3 Identified Potential Contaminant Conditions

The main EPS Phase II intrusive investigation comprised the drilling of 22 boreholes and 12 trial pits across the site in January and February 2021, with ground conditions found to comprise a moderate thickness of made ground overlying successive layers of cohesive and granular River Terrace Deposits. Below this lay London Clay, which comprised of a soft initial

layer of silt overlying stiff, grey clay. The supplementary Phase II intrusive investigation comprised the drilling of 12 boreholes and 12 trial pits across the site in July and September 2021, with ground conditions found to be broadly similar to the previous investigation.

Laboratory analysis of shallow and deeper soils from across the site has not currently identified contamination capable of posing a significant risk to future site users in a commercial setting. Moreover, laboratory testing of groundwater has not identified concentrations considered to pose a risk to the groundwater body, whilst soil vapour analysis has not identified a risk associated with intrusion of organic vapours into future buildings (or neighbouring properties).

An initial programme of ground gas monitoring has found the site to fall into Characteristic Situation 1, for which no ground gas protection measures would be required.

A plan of the site with building names is shown in Figure 2.

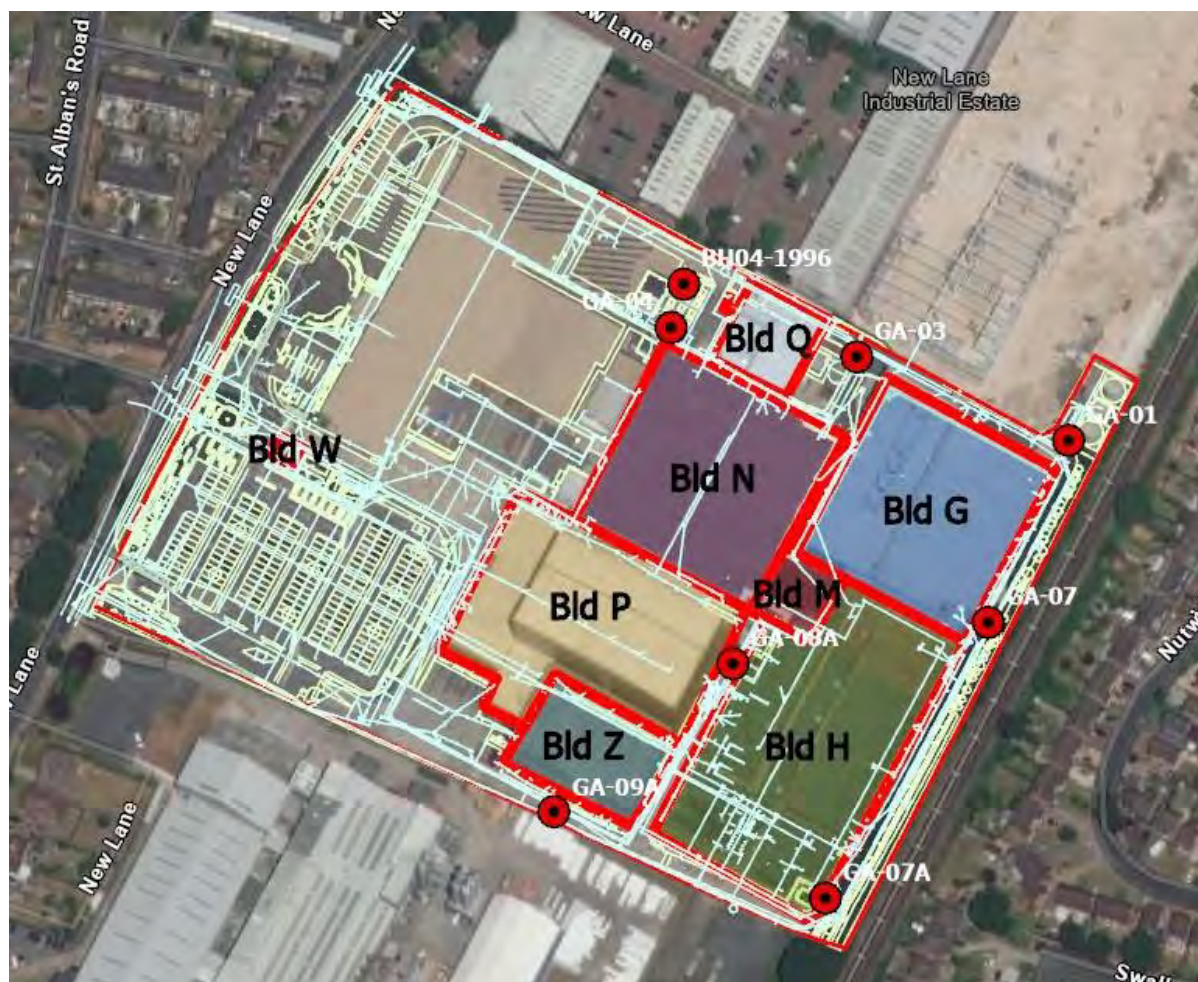


Figure 2 - A plan of the site with building names

The Areas Of Potential Concern (AOPC) for targeting this Remedial Strategy have been based on two lines of evidence:

- The locations occupied by potentially contaminating activities as shown in Figure 3 below.

- The plots of soil gas vapour for VOCs including the potential contaminants toluene and PCE shown in Figure 4 a-d.

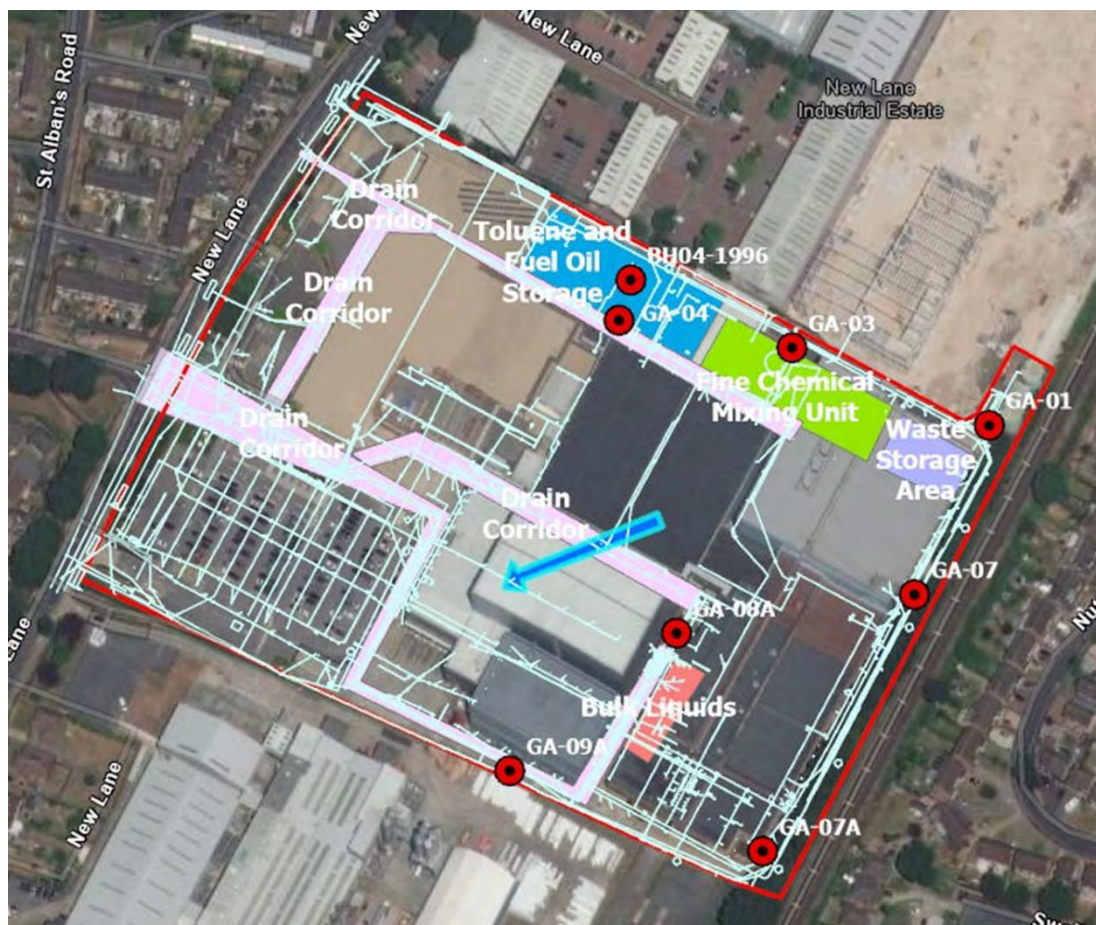


Figure 3 - Site Plan showing the location of potentially contaminating land uses (blue arrow signifies interpreted groundwater flow direction)

These land uses are such that we consider the areas they occupied as AOPCs. They are as follows:

- Toluene and Fuel Storage Area
- Fine Chemical Mixing Unit
- Waste Storage Area
- Bulk Liquids Storage

The second data set used to identify AOPCs are the soil vapour results reported in the EPS Phase II report (UK20.5052C, included in Appendix F) and the Supplementary Phase 2 report (UK20.5052f). The nature of soil vapour is such that it can indicate a presence of volatile contaminants either in soil or shallow groundwater in the vicinity. Such indications are useful as a single sample point can give a qualitative assessment of a larger area than a single soil sampling point. However, such interpretation needs to be done with caution, because an absence of soil vapour detections does not necessarily mean absence of contamination in the vicinity as soil vapour dispersion in the subsurface is highly dependent on many site-specific factors including soil types, stratigraphy, ground surface coverings among others. The following three Figures show interpreted soil vapour concentrations:

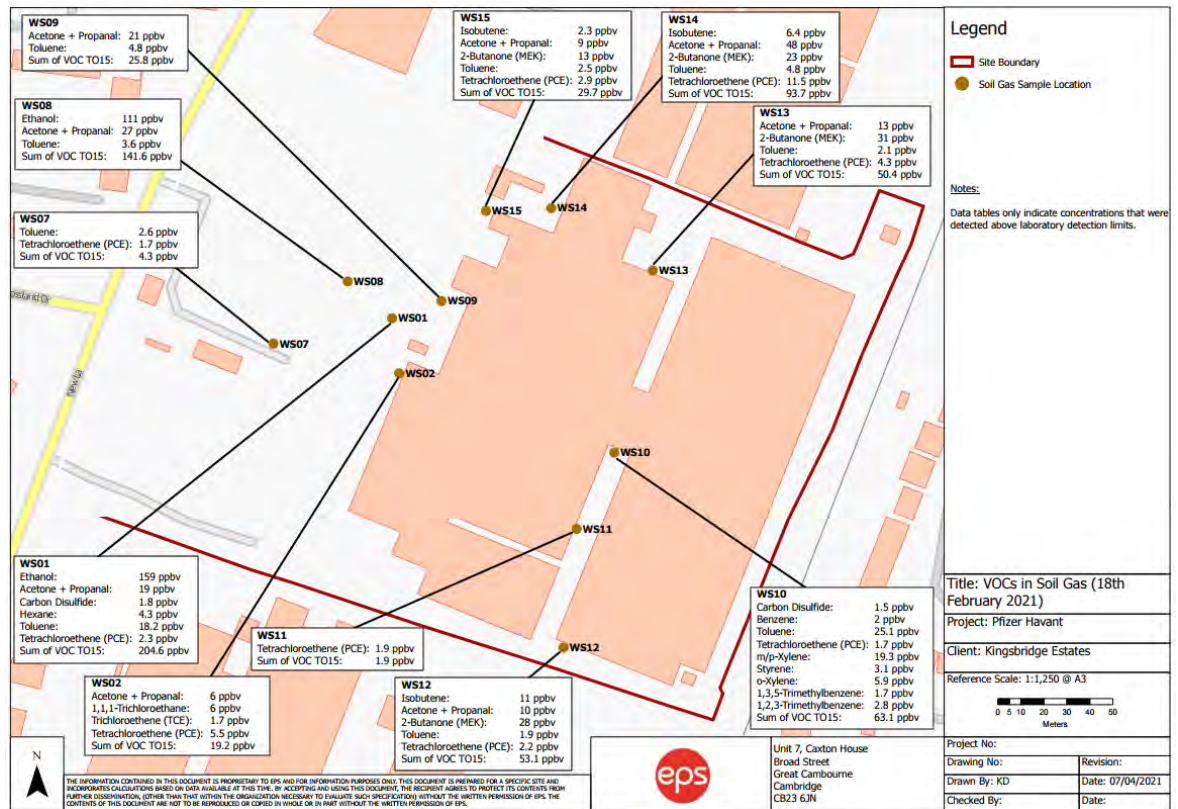


Figure 4a – Soil Gas VOC Analytical Results (main Phase II investigation)



Figure 4b – Soil Gas VOC Analytical Results (Supplementary Vapour Monitoring - May 2021)

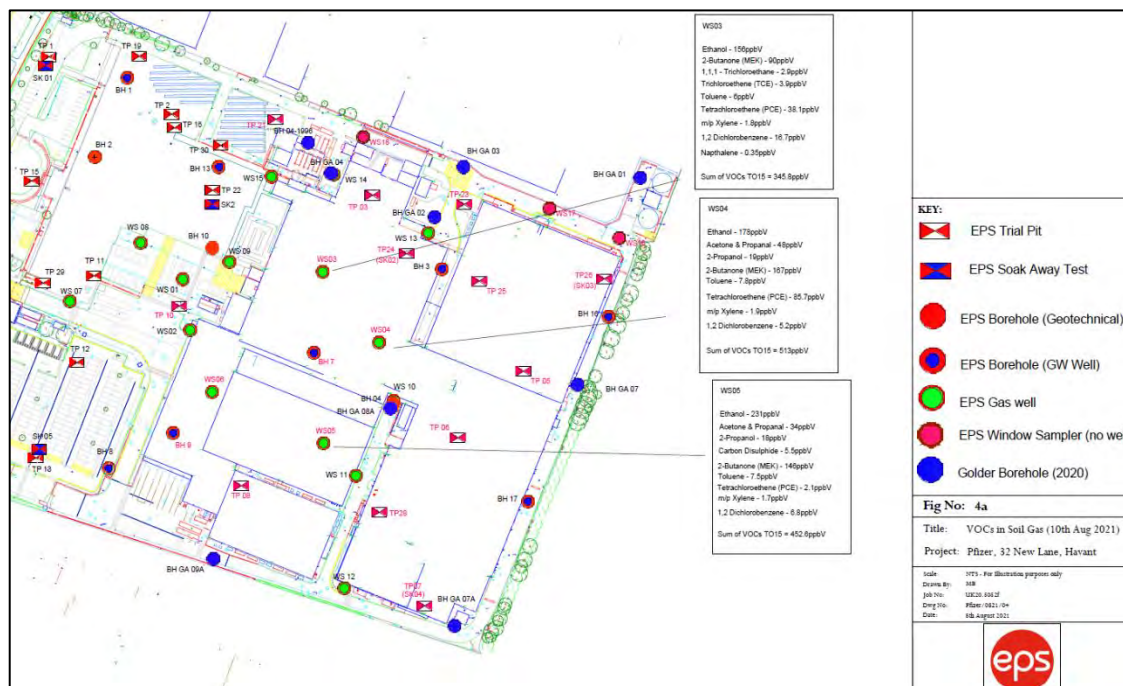


Figure 4c – Soil Gas VOC Analytical Results (Supplementary Phase II investigation - July 2021)

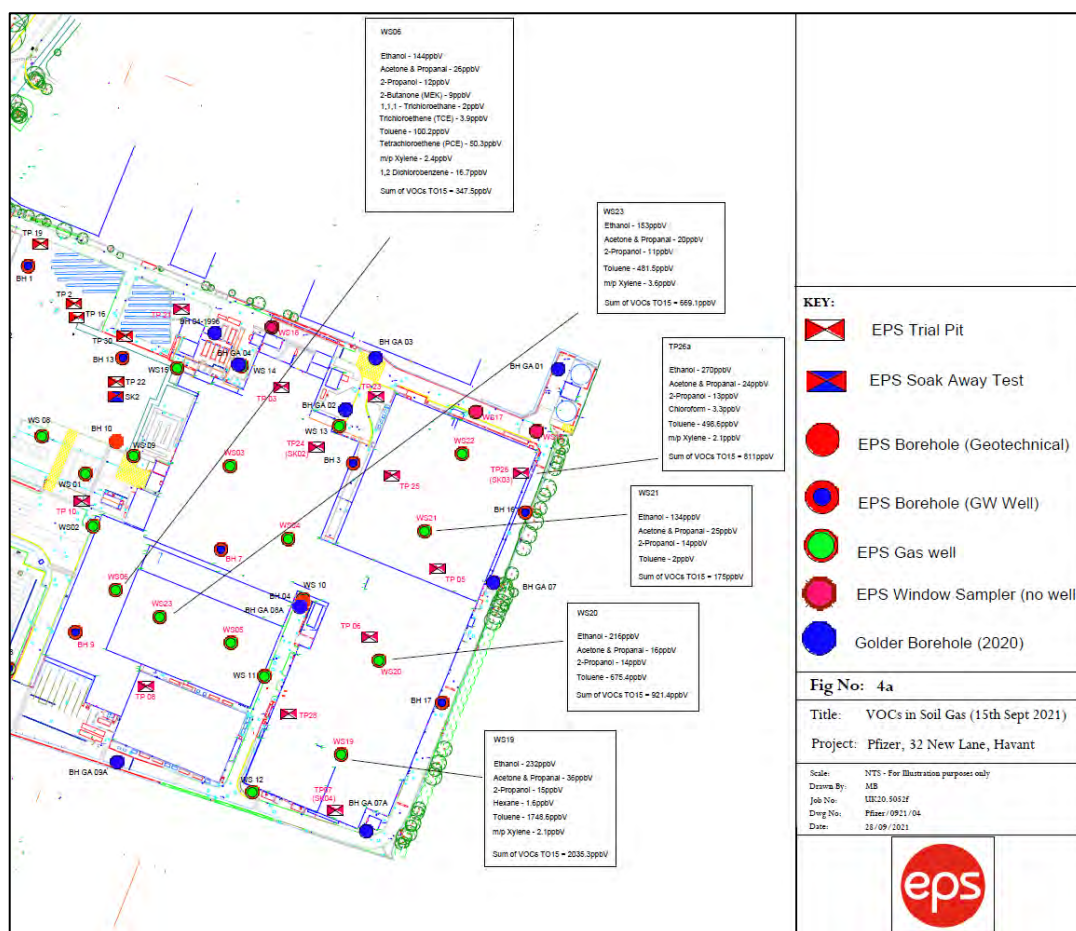


Figure 4d – Soil Gas VOC Analytical Results (Supplementary Phase II investigation - Sept 2021)

The AOPCs from the soil gas review are as follows:

- Toluene and Fuel Storage Area
- Fine Chemical Mixing Unit
- Bulk Liquids Storage
- Parts of Building N and P footprints

The footprints of the combined AOPCs are shown in Figure 5 below.

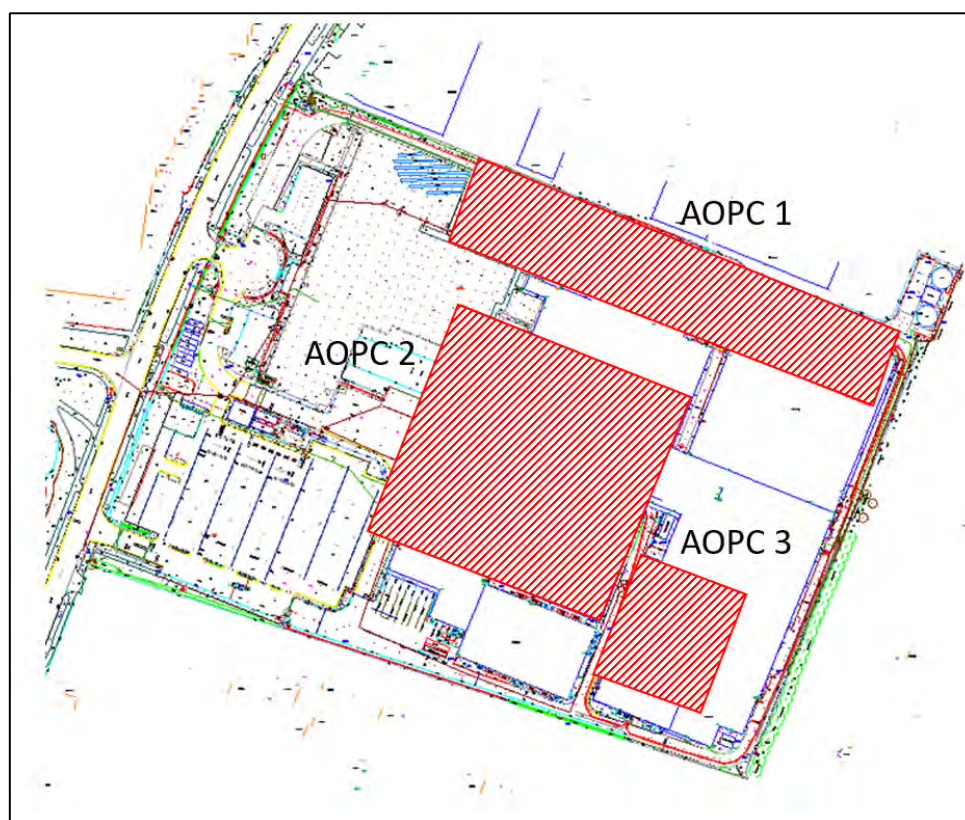


Figure 5 - Location of AOPCs

2.4 Materials Management

If any excavated soils are to be re-incorporated into the site during the groundworks through cut and fill operations, or where unsuitable soils are treated on site and then re-used after treatment and verification to fill voids, then a Materials Management plan (MMP) will be required. A MMP provides a route to re-use soils on site and avoids the initially excavated soils being classified as waste. The protocol for materials management planning falls under the Environment Agency's Definition of Waste: Code of Practice (DoW:CoP) administered by CL:AIRE. A MMP must be produced and approved by a Qualified Person prior to groundworks commencing.

3 REMEDIAL STRATEGY

In accordance with the Environment Agency's *Land Contamination: Risk Management*, there are three stages to managing contaminated land (Risk Assessment/Remedial Options Appraisal (Inc. Remedial Strategy)/Remediation and Verification).

The currently plausible identified contaminant linkages are limited in both the risks posed and extent, so a formal Remedial Options Appraisal has not been carried out.

EPS considers the following objectives to be appropriate for the remedial work at this site. All of these measures can be refined if further site data becomes available. This section represents the Remedial Strategy for the site.

Contaminant Linkage	Mitigation Measures
Exposure to Contaminated Shallow Soils	EPS has undertaken a generic quantitative risk assessment for commercial enduse of the site. The generic screening values can be applied to the site as re-use criteria, with certain exceptions relating to saturation limits, to address the potential linkages of soil that could come into contact with site users. This includes future workers excavating for utility or drainage. These screening values are included in Appendix D. Where applicable (i.e. when using LQM's S4ULs 'Suitable For Use Levels for Human Health Risk Assessment'), criteria derived using standard sandy loam soil with 1% SOM have been adopted. If significant areas of soil contamination are identified (which is not expected) it may be appropriate to carry out a targeted quantitative risk assessment and generate Site Specific Target Levels (SSTLs). No soils containing free-phase product (i.e. Non-Aqueous Phase Liquid) will be permitted for re-use on-site, and some of the commercial generic screening values referred to in the Phase 2 report are in excess of saturation limits. To address this aspect following feedback from the local authority, additional re-use criteria for total TPH (CWG) of 2,000 mg/kg as well as the Phthalates BBP and B(2e)P have been included in Appendix D, these values supersede the GACs. Although significant concentrations or fragments of asbestos have not been encountered across the site, to ensure there is a criteria for the Materials Management Plan the non-hazardous waste limit of <0.1% by mass and no visual fragments has been adopted for all forms. For the phthalates sporadically identified in soils, primarily BBP, 25% of the saturation limit have been adopted as presented in <i>Soil Generic Assessment Criteria for Human Health Risk Assessment</i> - EIC/AGS/CL: AIRE (2010). This equates to revised re-use criteria of 6.6mg/kg for BBP and 2.2mg/kg for B(2e)P.
Exposure to contaminated soil around BH03	The intrusive investigation undertaken at the site identified a localised area of Phthalates (BH03) above the adopted re-use/remedial target. It is recommended that this material is defined once surface coverings have been removed to assess if it is part of a wider area of contamination with other contaminants associated with the former manufacturing area, although that seems unlikely based on the findings of the Supplementary report. The risk can be reviewed with the development of SSTL if necessary.
Inhalation of Asbestos	No asbestos has been detected in any soil sample from the recent investigations. Continued watching by applying the Discovery Strategy is required to confirm

Contaminant Linkage	Mitigation Measures
	this absence during groundworks. If discovered, all Asbestos Containing Materials (ACMs) should be disposed of in accordance with the Control of Asbestos Regulations 2012.
Ingress / Diffusion through Permeable Potable Water Supply Pipes	Currently there does not appear to be a site-wide need for barrier pipes, but some localised areas of petroleum hydrocarbons have been identified through the previous investigations. Through discussions with the water supplier and the findings of the discovery strategy it may be possible to restrict the usage of barrier pipework to certain areas and not install it site-wide although the latter should form the assumed approach at this stage. If required, aluminium barrier pipework meeting Water Industry Standard 4-32-19 and associated fittings should be used subject to agreement with the local water company. If other pipework is preferable, more detailed testing may be required in accordance with UK Water Industry Research Report 10/WM/03/21 - <i>"Guidance For The Selection Of Water Supply Pipes To Be Used In Brownfield Sites"</i> (2010).
Migration of Organic Vapour to Indoor Air	The results of investigation did not indicate that a vapour resistant membrane is required as a remedial measure. Based on the information collected to date there is no identified risk from carbon dioxide, methane or from the volatile soil or groundwater contaminant values detected. Further, the process of implementing this remedial strategy should further decrease current concentrations of volatile contamination through the disturbance of the ground during the discovery strategy. As an additional precaution at the discretion of the client, a gas membrane could be included in the building design. Any geomembrane (resistance to both ground gases and organic vapours) must be installed in accordance with manufacturer's instructions by suitably qualified and experienced personnel and the installation must be verified by a third-party with integrity testing, in accordance with CIRIA 735 <i>'Good practice on the testing and verification of protection systems for buildings against hazardous ground gases'</i>.
Soil Ingestion/ Inhalation (construction workers)	All construction workers operating at the site should be advised of the potential for contact with made ground in the subsurface at the site. Appropriate health and safety precautions should also be adopted during any excavation works to avoid exposure to contaminated soils. Reference should be made to relevant health & safety guidance including the following CIRIA document: <i>R132 Guide to Safe Working on Contaminated Sites</i> .

4 STAGE 3: REMEDIATION & VERIFICATION

4.1 Implementation of Remedial Strategy (Verification Plan)

To document the measures outlined in Section 3 the following details must be presented within a Verification Report for submission to Havant Borough Council on completion of the works to fully discharge likely planning condition(s) regarding contaminated land.

Specifically, the final document must contain the following details:

4.1.1 Discovery Strategy

The Discovery Strategy shall apply during all excavations of soil at the site as well as any buried structures or drainage. Its purpose is to identify potential soil contamination as it is exposed such that it can be contained, exposure of people or the environment prevented, and correct characterisation undertaken so that it can then be managed appropriately, either as suitable material for re-use on site or for correct disposal or treatment. The Discovery Strategy is summarised in the flow chart presented in Appendix B. The Discovery Strategy requires the advice of an expert oversight of soil excavations at the site, which EPS will undertake full time throughout the whole process.

4.1.2 Delineation of Known and Potential Contamination around BH03 and AOPC 1

- Shallow made ground material (up to 2m) around BH03 should be delineated with trial pits, and also extending across AOPC 1. Sufficient soil sampling is to be undertaken to delineate possible contaminant hot spots. Anticipated sampling would comprise samples analysed for Metals, TPH, SVOC (Inc. PAHs), total and free cyanide and BTEX analysis from the excavation(s). The density and sampling pattern of the trial pitting should be steered by the on-site environmental consultant to ensure sufficient coverage.
- Once delineated, soils above Soil Re-use Levels are to be excavated and disposed of (or treated).
- Photographic evidence showing the removal of soils around BH03 and AOPC 1 should be taken.
- Validation sampling confirming effective removal of phthalate contamination from around BH03 and AOPC 1 should be completed. Soils will need to be quarantined pending analysis, as there is no clear method of identifying this contamination in the field.

4.1.3 Delineation of soils in AOPC 2 and AOPC 3 together with Discovery Strategy

- Any clearly visually impacted soils, (displaying dark staining and odour) present within the excavations should be removed and sent to a quarantine area pending characterisation through laboratory analysis. Visually impacted soils should be excavated until un-impacted material is encountered with on-site field screening procedures. These will include visual and olfactory screening as well as discrete soil sample testing using a photo-ionisation detector (PID) calibrated to a standard gas, which will be subsequently verified through soil sampling of the sides and bases of each excavation (EPS method statements will be made available upon request for

PID testing). Anticipated sampling would comprise samples for Metals, TPH, PAHs and BTEX analysis from the excavation(s).

- As with AOPC 1, shallow soils in AOPC 2 & 3 primarily made ground material (up to 2m) should be inspected through trial pitting. This is particularly relevant if these areas fall within 'fill' sections for the planned re-profiling, where the soils could otherwise remain undisturbed. The density and sampling pattern of the trial pitting should be steered by the on-site environmental consultant to ensure sufficient coverage of the AOPCs.
- Any impacted excavated soils that have been moved to the quarantine area, that prove to exceed the re-use criteria, should be removed off-site for disposal at a suitably licensed facility or treated such that the contaminant levels are reduced sufficiently.
- If excavated soil volumes associated with the approach outlined above are likely to reach levels where the remedial approach could become unsustainable, then further assessment will be made and an appropriate way forward developed through consultation with the project team and relevant regulators. Reference will be made to sustainable remediation guidance prepared by the Sustainable Remediation Forum UK. (SURF UK).

4.1.4 Contaminant Permeation through Drinking Water Supply

If deemed necessary, the following evidence would be incorporated in the Verification Report relating to barrier pipes.

- Delivery notes, confirming supply of aluminium pipework for drinking water supply in the western part of the site.
- Photographic evidence showing their installation.

4.1.5 Soil Gas Protection

There is no requirement identified for soil gas protection measures, however if such measures were to be incorporated as a precaution, the following information would be required in the Verification Report.

- Details of soil gas membrane installation, including third party Verification Report documenting the installation, with product specification sheets and independent integrity testing of the membrane conducted in accordance with CIRIA C735. The geomembrane must be resistant to both ground gases and VOCs. EPS would suggest a Juta geomembrane such as the GP Titanflex.

4.1.6 Waste Management

The following waste records and management procedures must be recorded within the Verification Report.

- Waste transfer documentation, including for soils and ACMs must be retained by the applicant (or waste producer). All ACMs must be handled and disposed of in accordance with the Control of Asbestos Regulations 2012. If this process is mis-managed it may result in the deposition of loose ACM fragments across the site, which will render soils unsuitable for retention on site and potentially cause significantly higher waste disposal costs.

4.1.7 Materials Management Planning

EPS are preparing the MMP for this site in parallel to the Remedial Strategy as a substantial re-profiling of the site is planned. There is significant overlap and relevant considerations of the materials management planning and the Remedial Strategy which have been taken into account in this document. Some relevant factors are stated below:

- Where dedicated remedial excavations are proposed (see Remedial Strategy below), they will need to pre-empt re-profiling (cut & fill). The use of quarantine areas will be needed for excavated soils pending analysis/disposal (bearing in mind phthalates are largely invisible in the field).
- In most areas the discovery strategy will benefit from the reprofiling, in that in many areas will be reduced in general levels rather than discrete excavations, thereby exposing any underlying contaminative features which warrant remedial action. However if areas of 'fill' are proposed then the underlying soil may not necessarily have been disturbed and the discovery strategy of limited benefit. This is of particular relevance in the identified AOPCs. As such, measures have been included in those areas to ensure sufficient investigation of shallow soils (as detailed in Section 4.1.3 above).
- On completion, the evidence of compliance with the DoW:CoP requirements must be included within the site Verification Report. As the re-profiling and Remedial Strategy will have significant overlap, the verification process of both will be undertaken by EPS who will maintain a daily presence and oversight throughout the earthworks.

4.2 Additional Requirements

4.2.1 Imported topsoil

It is expected that some soils are likely to be imported onto the site to form a growing medium. These soils won't comprise a formal remedial measure as no significant contamination requiring remediation was found. However, in order to ensure that the soils brought onto the site are suitable for use it is recommended that they are obtained from a known and reliable source and supplied with appropriate and relevant quality certification. To manage the suitability of the material it is recommended that EPS' top soil checklist is used as a method of verification. The top soil checklist is included within Appendix C.

4.2.2 Groundwater Monitoring

To date groundwater beneath the site has been largely found free of significant contamination. However, it is considered good practice to complete a groundwater monitoring round of selected wells during and after the groundworks at the site to confirm the works have not had a detrimental effect on groundwater conditions and to thus close out any future concerns of groundwater contamination from the site.

Suitable wells can be selected in light of the findings of the recent supplementary investigation across the identified AOPCs. It is anticipated that this groundwater monitoring and sampling programme would include 4 wells, one of which would be BH03.

It is recommended that the groundwater monitoring programme will include monitoring and sampling visits at approximately 4 weekly intervals, aimed to cover the period of ground works, and then finally at 12 weeks after the groundworks are completed.

4.2.3 Discovery Strategy Implementation & Overwatch

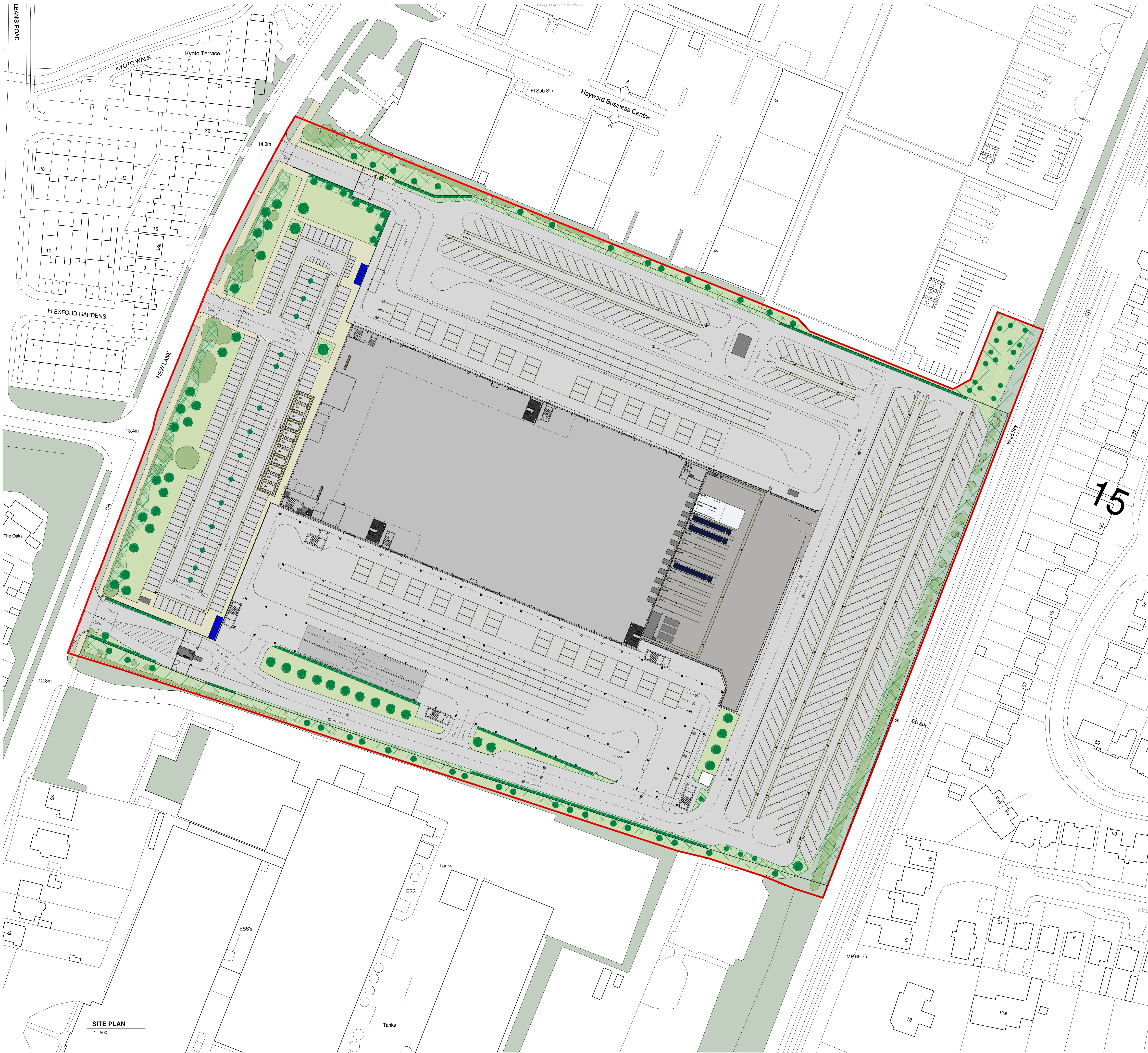
EPS will oversee the Discovery Strategy (see Appendix B) during the site groundworks as outlined above, to provide expert overwatch and to ensure that appropriate actions are taken. If the contamination relates to asbestos, reference should also be made to a Working Method which the environmental consultant must provide to support site-specific health & safety risk assessments and method statements.

EPS will undertake the remedial oversight role, with full-time presence on site throughout the earthworks.

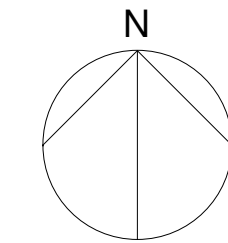
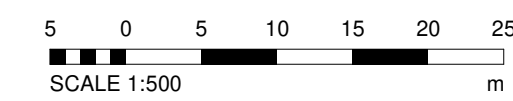
APPENDICES

APPENDIX A

Proposed Development Plan



Do not scale this drawing.
Architects are to be notified of any discrepancies.
Contractors must check all dimensions on site.
This drawing is subject to copyright law and is to be used on this project only.
This drawing is to be used solely for the information as stated only.
For other information refer to the latest revision of any other referenced drawings.
To be read in conjunction with relevant design standards/protocols.



SITE AREA	
APPLICATION SITE	14.0m
BOUNDARY	13.4m

OPERATIONAL VEHICLES	SPACES
VAN LOADING SPACES	72
VAN STORAGE SPACES	866

CAR PARKING	SPACES
CAR PARKING SPACES	197
ACCESSIBLE SPACES	11
TOTAL PARKING SPACES	208

MOTORCYCLE SPACES	11
BICYCLE SPACES	50

GROUND FLOOR GIA	11,488 m ²
FIRST FLOOR GIA	2,529 m ²
PLANT FLOOR GIA	1,226 m ²
TOTAL GIA	14,017 m ²

ANCILLARY BUILDINGS AREA SCHEDULE	
GUARD CABIN	30m ²
SECURITY GUARD HUT	2m ²

SITE MATERIALS KEY	
TARMAC	
CONCRETE	
ASPHALT FOOTPATHS	
EXISTING SOFT LANDSCAPING	
PROPOSED SOFT LANDSCAPING	
EXISTING TREES AND HEDGES	
PROPOSED TREES & HEDGEROWS	

P3	APPLICATION SITE BOUNDARY	08.02.21	GK	SR
P2	AMENDED	05.02.21	SL	GK
P1	UPDATED LANDSCAPING AND HIGHWAY AMENITIES CAPTURED	02.01.21	GK	FW
Rev	First Issue	Date	Rev	Rev

Status

PLANNING

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Project

HAVANT, NEW LANE

Client

HAVANT PROPERTY INVESTMENT LLP

Drawing Title

PROPOSED SITE PLAN GRADE LEVEL

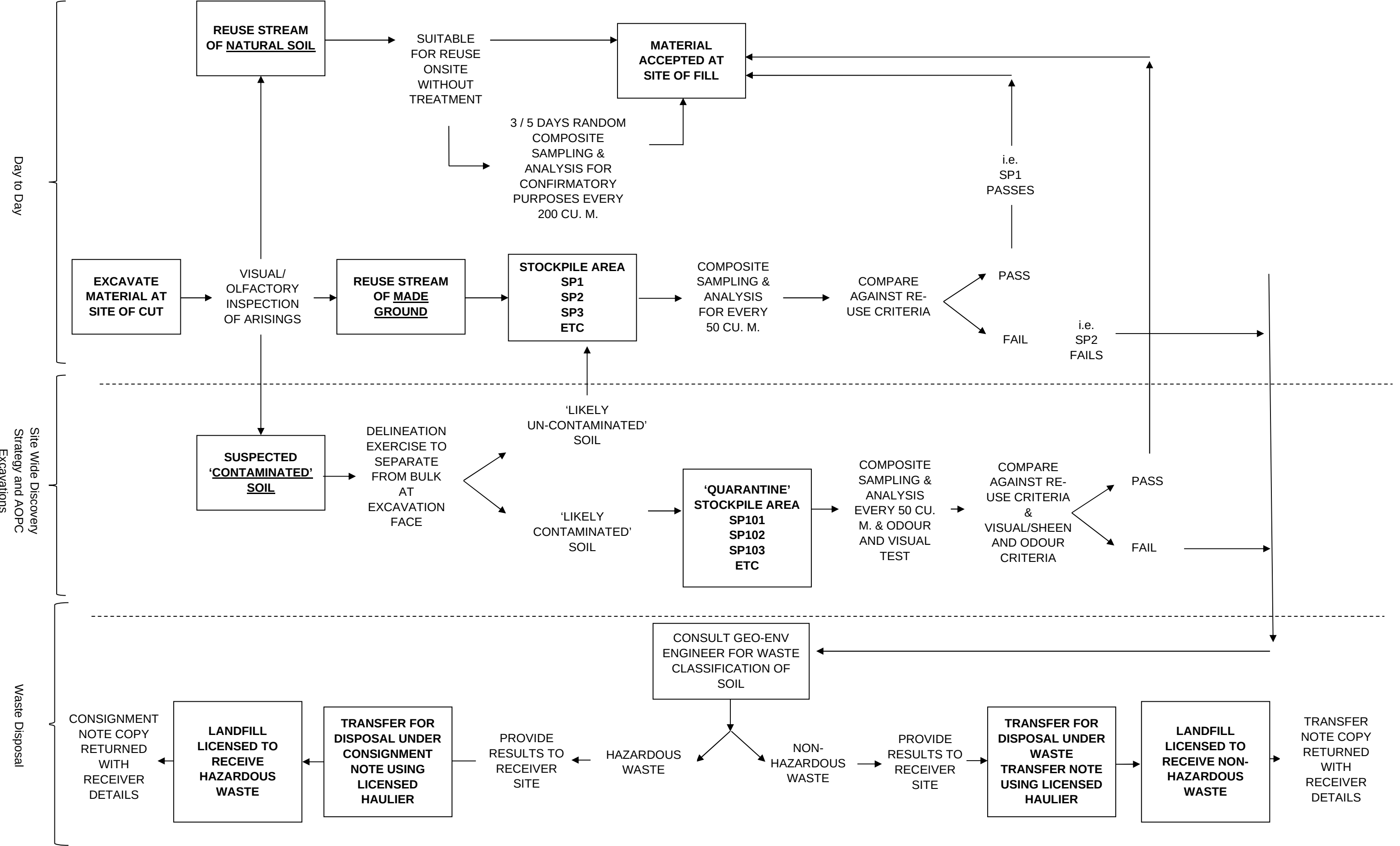
Proj Ref	Origin	Zone	Level	Type	Rev	Rev
7379 - SMR - 00 - Z2 - DR - A - 2003A - S4 - P3						
SMR Job Ref	Sheet	A0	Scale	1 : 500	Drawn	GK

APPENDIX B

Discovery Strategy Flow Chart

Discovery Strategy Schematic Flowchart Demonstrating Material Management (V2)
Process for Managing Soil Chemical Contamination – Pfizer Site, 32 New Lane, Havant

MATERIALS MANAGEMENT APPROACH



APPENDIX C

Imported Soils Checklist



Pre-Verification Cover System Checklist		Yes?
Soil Source	The soil must not be a waste. Please confirm that the soil is not a waste and has never been deemed as such in the past.	
	Has the source of the soil been provided?	
	Have all the delivery notes confirming the source, volume and type of soil been provided for all that is to be used?	
Soil Quality	The soils are free of invasive plant species such as Japanese Knotweed, and have not been sourced from an affected area?	
	Do the soils look clean and of a high quality? I.e. the soil must not have an odour or contain any visual evidence of contamination, including oils, asbestos, glass, plastic, rubble, metal, ash, tarmac/bitumen?	
	Testing to 'BS 3882:2015 <i>Specification for topsoil and requirements for use</i> ' is preferable but generally not essential for public health regulation, provided you can confirm the soils comply with the above points, are suitable for their intended purpose and will provide an adequate growing medium?	
	Has the soil been chemically tested prior to it arriving at site? Any soil test results presented to EPS by a third party must be current and clearly relate to the soil used, i.e. the testing must generally be dated within 6 weeks of delivery. The quantity of testing will be dependent on how much confidence is generated in the quality of the material, as well any specific local regulatory requirements. If the soil is clean soil from an established source such as British Sugar, the testing they provide at source may be sufficient alone. For other soils, EPS can advise on the likely testing frequencies but as a rule of thumb, anticipate at least one sample per plot. The testing would usually comprise the following: Heavy Metals, Poly Aromatic Hydrocarbons, Asbestos and Total Petroleum Hydrocarbons at an accredited lab. If adequate testing has not been completed, then EPS will need to test it from stockpiles prior to installation.	
Cover Thickness	Are all excavations ready which will allow the necessary thickness of cover soils to be installed?	
	If yes, can you provide waste transfer documentation for any excavated soils?	

APPENDIX D

Proposed Soil Suitable for Use Levels (Re-Use Criteria)



EPS Generic Quantitative Risk Assessment

Generic Screening Criteria (C4SLs) - All Land Uses

	Soil Targets					
Contaminant	Residential		Allotments	Commercial	Public Open Spaces	
	With Home Grown Produce	Without Home Grown Produce			Residential	Parks
Unit	mg/kg					
Arsenic	37	40	49	640	79	168
Benzene	0.87	3.3	0.18	98	140	230
Benzo(a)pyrene	5	5.3	5.7	76	10	21
Cadmium	26	149	4.9	410	220	880
Chromium (VI)	21	21	170	49	23	250
Lead	200	310	80	2330	630	1300
Chloroethene (Vinyl Chloride)	0.017	0.029	0.0058	2.2	7.8	19
Trichloroethene (TCE)	0.043	0.045	0.16	3.4	79	69
Tetrachloroethene (PCE)	1.6	1.6	11	130	3400	2500

Notes:

Targets for Human Health have been taken from the publicly available Category 4 Screening Levels (C4SLs) for assessment of land affected by contamination issued by DEFRA/CL:AIRE in December 2013 and May 2021.

Within the modelling for C4SLs, a Soil Organic Matter content of 6% has been used. Reference to site-specific data should be made where possible.

The contaminant benzene is the current C4SL most susceptible to changes in SOM along with the three chlorinated solvents.

EPS Generic Quantitative Risk Assessment - Commercial Landuse

Contaminant	Soil Targets			Groundwater Targets	
	Human Health	Controlled Waters		Controlled Waters	
		LGWRP	HGWRP	LGWRP	HGWRP
Unit	mg/kg			ug/l	
Arsenic	See C4SL	n/c	n/c	50	10
Cadmium	See C4SL	n/c	n/c	5	5
Chromium III	8600	n/c	n/c	250	50
Chromium VI	See C4SL	n/c	n/c	n/c	n/c
Copper	68000	n/c	n/c	28	28
Mercury (elemental)	58	n/c	n/c	1	1
Nickel	980	n/c	n/c	200	50
Lead	See C4SL	n/c	n/c	250	10
Selenium	12000	n/c	n/c	10	10
Zinc	730000	n/c	n/c	500	500
Benzene	See C4SL	0.252	0.008	30	1
Toluene	56000* (869)	1.17	1.17	50	50
Ethylbenzene	5700* (518)	15.0	10.0	300	200
Xylene (Para)	5900** (576)	0.885	0.885	30	30
MTBE#	7900	0.138	0.0276	75	15
Benzo(a)Pyrene	see C4SL	10	1.44	0.7	0.1
Naphthalene	190** (76.4)	0.934	0.02	10	0.1
Dibenz(ah)anthracene	3.5	n/c	n/c	n/c	n/c
Aliphatic C5-C6	3200** (304)	5.27	1.05	50	10
Aliphatic C6-C8	7800** (144)	23.2	4.64	50	10
Aliphatic C8-C10	2000** (78)	175	35.1	50	10
Aliphatic C10-C12	9700** (48)	1380	276	50	10
Aliphatic C12-C16	59000** (24)	27500	5490	50	10
Aliphatic C16-C35	1600000	3.46E+06	6.91E+05	50	10
Aromatic C8-C10	3500* (613)	8.74	1.75	50	10
Aromatic C10-C12	16000** (364)	13.8	2.76	50	10
Aromatic C12-C16	36000** (169)	27.5	5.5	50	10
Aromatic C16-C21	28000	86.9	17.4	50	10
Aromatic C21-C35	28000	690	138	50	10

Additional Re-Use Criteria Proposed for Pfizer site

HGWRP - High Groundwater Resource Potential

** = S4UL exceeds solubility saturation limit (in brackets)

Asbestos (all forms) - <0.1% by mass/no visual fragments

FOR PFIZER SITE: PLEASE NOTE THAT RE-USE CRITERIA FOR TOTAL

Total TPH (C5-35) - 2,000mg/kg

TPH AND PHTHALATES SUPERSEDE GACs. THE TPH FRACTIONS

Benzylbutyl Phthalate (BBP) - 6.6mg/kg

STATED ABOVE DO NOT APPLY WHERE THE TOTAL TPH EXCEEDS

Bis(2-ethylhexyl)phthalate - 2.2mg/kg

2,000mg/kg.

Notes:

LGWRP - Low Groundwater Resource Potential

* = S4UL exceeds vapour saturation limit (in brackets)

Assessment criteria for Human Health have been taken from S4ULs 'Suitable For Use Levels for Human Health Risk Assessment' – LQM and CIEH (2014) derived using standard sandy loam soil with 1% SOM, except (#) = EIC/AGS/CL:AIRE GAC 'Soil Generic Assessment Criteria' (2010). For sites where ground conditions differ significantly from sandy loam or site-specific SOM and pH are available, the generic human health targets may be revised.

Targets for Controlled waters have been derived using EA Remedial Targets Worksheet (v3.1) - using standard Sandy Loam ground conditions as described in Science Report SC050021/SR3, assuming no degradation for a 10m compliance distance with criteria of EQS or UKDWS for LGWRP and HGWRP respectively (see notes for GW targets).

Groundwater Targets

For LGWRP, targets have been taken as Freshwater EQS where available. For Ethylbenzene and BaP the WHO Health limit has been used and for MTBE and individual TPH fractions a 5 times multiplier of taste threshold and UKDWS has been taken respectively.

For HGWRP, targets have been taken as UKDWS where available, with the exception of Copper and Zinc where the EQS is lower than the DWS and therefore the EQS has been used as the groundwater target. For Ethylbenzene the upper WHO ATO limit has been used. For Toluene and Xylene, the WHO ATO limit is higher than the EQS and so the lower value has been taken. For MTBE the taste threshold has been taken.

Work carried out to calculate screening criteria for contamination in groundwater with respect of risks to Human Health has generally found that criteria far exceed (by at least 2 orders of magnitude) those listed for the protection of either LGWRP and HGWRP receptors. On this basis, the above groundwater criteria are also considered protective of human health and further evaluation of these risks should be considered alongside any detailed quantitative risk assessments carried out for groundwater on a site specific basis.

APPENDIX E

Havant Borough Council Environmental Health Responses (27th April, 28th July & 19th October 2021)

HAVANT BOROUGH COUNCIL

Town & Country Planning Act 1990

Consultation on Planning Application

MEMORANDUM

From:	Environmental Health	To:	Development Control
Our Ref:	CONS/21/01300	Your Ref:	APP/21/00200
EH Case Officer Extn:	44 6677	Date:	27 April 2021
DC Case Officer:	Daphney Haywood (CC David Eaves)		
DC Case Officer Extn:	44 6513		
Application Number:	APP/21/00200		
Site Address:	32 New Lane, Havant, PO9 2NG		
Proposed Development:	Demolition of existing buildings and redevelopment of site comprising erection of distribution warehouse (class B8) with ancillary offices and related facilities, vehicle storage deck, new access, landscaping and associated infrastructure. [Progress Chase]		

Observations / Comments:

Comments here relate to physical pollution, air quality (and air-quality-relevant aspects of development), and ground contamination. Comments are provided in respect of construction management, but these are limited in respect of loss of amenity due to noise impacts.

I will leave it to my nuisance / amenity focussed colleagues to comment on the noise impact assessment, and lighting strategy.

Summary

- The Construction Management Plan is considered adequate to manage dust emissions and development-phase air pollution impacts. It is recommended to list the plan as an approved document. No condition is proposed.
- I would raise a holding-objection on the basis that the development transport demand (trip generation potential) has not been sufficiently robustly defined, undermining the conclusions of the submitted air quality assessment
- Highways Agency concerns about the assessment of the impact of development traffic are supported.
- Concerns raised by the New Lane Community group about development traffic routing via New Lane / Beechworth Road are supported. Assessment of this routing option could require consideration of the air quality impact of development.
- The proposals are considered to have made a reasonable and proportionate response to emerging Air Quality policy E23 a. (development-emissions offsetting). No objections on this basis.
- Further assessment to address the holding objection referred to above may justify additional air quality mitigation under the principles of policy E23 c. (air quality impact mitigation)
- The draft surface water drainage strategy (SuDS) represents best practice for pollution prevention, and is supported.

- The contamination assessment is accepted. Amendments are required to the suite of conditions proposed by the Environment Agency in order to bring risks to human health into scope, and to ensure that the applicant is not unduly constrained by a strict interpretation of the provisions of the Grampian condition (EA proposed Condition 1)

Air Quality – Impact Assessment, Construction Phase (Construction Management Plan)

Comments relate to the Delta Simons Air Quality Assessment Report Ref: 20-1275.01 iss.2 (April 2021) & the TSL Construction Management Plan dated 12/01/21 issue 1.

The Air Quality report concluded that unmitigated construction activities would represent up to high risk of dust soiling impacts and medium risk of increases in particulate matter concentrations, but that through the implementation of suitable mitigation measures, the effect of dust and PM10 releases would be significantly reduced (to a low/negligible risk). Suggested measures are outlined within section 6.1, and these measures are agreed to represent good practice.

The measures given in section 6.1 of the air quality report are broadly represented in the TSL management plan. I would recommend that the TSL management plan be listed as an approved supporting document comprising an integral part of the scheme, so as to make it's contents (in principle) 'enforceable'. I don't believe that a specific compliance condition is strictly necessary.

If the Development Management service considers it necessary to include a specific condition requiring that the CMP be observed, please let me know and I will draft some condition wording which refers to compliance the submitted framework document & establishes a requirement for LPA approval to be obtained for revisions in respect of certain sections (e.g. working hours, dust suppression etc.).

Air Quality – Impact Assessment, Operational Phase

Comments relate to the Delta Simons Air Quality Assessment Report Ref: 20-1275.01 iss.2 (April 2021).

The report refers to the EPUK & IAQM industry guidance 'planning for air quality' v1.2 2017 in determining significance of any changes to local air quality. The report does reference both National & Local Policy, but does not recognise that the industry guidance pre-dates both the NPPF & LP2036 Policies, nor that there is a compelling argument to make that the significance scales given within the industry guidance is no longer compatible with prevailing policy. Relevant illustrative text from the NPPF is quoted within the report.

In addition, emerging policy from the LP2036 deliberately aims to better the degree of protection offered by the industry guidance, and the extant policy (DM10) includes wording which is compatible with the latest version of the NPPF (i.e. including 'health' focus in addition to a 'standards focus'. I refer to this policy context in light of uncertainty in the reliability of the outputs of the assessment, and of the conclusions that are based upon these outputs.

I note that the baseline traffic figures used for the assessment are crude; there is poor resolution in traffic flow estimates between road links and the figures quoted do not appear to correspond to the values given by the referenced source; differing substantially in the estimate of proportion of traffic representing HGV's, for example. Some values attributed to key road links differ significantly from estimates used in assessments undertaken for other developments – differing by up to a -1/3rd (Park Road North / Park Road South in particular). This will reduce the accuracy of the model. Where the verification points are close to the affected road links (e.g. DT22), this will serve to increase the magnitude of the adjustment factor that needs to be applied. Where verification points are not on affected road links (e.g. if adjacent to an accurately characterised link, effects will not be fully accounted for within the verification process.

It should also be noted that the quantitative assessment of development impact is based upon overall operational trip generation figures and 'net change in trip generation' estimates which are both disputed by the Highways Authority. This raises doubts as to the validity (or 'representativeness') of the estimate of development impact (both in highway, and air quality terms).

Contradictory (development operational-phase traffic) trip distributions are also given in the transport assessment, understood to be a result of a typographical error. Allocation of the development trips to the local road network is not stated clearly in the report, and is only possible to derive by calculation. It appears the air quality assessment may have been based upon a distribution broadly corresponding to Table 5.8 of the traffic assessment (though full calculations have not been undertaken). Table 5.8 is expected to represent the 'correct' figures. Given that 57% of development traffic being expected to access the strategic road network ('SRN', A27) at the Havant Junction (approaching from the local road network, 'LRN'), and Park Road (North / South) is a road link where kerbside exceedances of national air quality standards are known to be likely to occur at junctions; I am unclear as to why no receptors have been considered on this route.

The residents of Cardinal House (on the corner of Park Road South & Elm Lane) are considered to represent the worst-case receptor, and the omission of this receptor undermines confidence in the conclusions of the assessment.

In terms of the actual volume of traffic accounted for, it would appear the air quality assessment has considered a net growth in traffic demand as +599 as 'total vehicles, AADT'. The vehicle type distribution assumed is unclear, and I note that both the net-change in flows and the development traffic routing choices assumed (considered as a binary choice from site access) both differ from the net figures given in the transport assessment (from -90 to +466 depending on scenario & 70/30 direction split, given in the transport assessment, compared with +566 & 60/40 split in the air quality assessment). This is illustrative of the 'fluidity' of estimates of transport demand, which I will return to in the sections below.

I would conclude that the air quality assessment has-;

- been based upon baseline figures of poor resolution which differ from the quoted source in both overall volume estimates and in vehicle fleet composition. Additional justification is required for these figures.
- accounted for an AADT net change in 'total traffic' which has not been agreed with the Highways Authority to be either reasonable or robust, and which may differ substantially from the 'true' net change associated with this development
- omitted a receptor which is arguably the most sensitive to changes in air quality, and;
- has referred to industry guidance which is not fully compatible with either local policy

It would seem to me to be irrational to accept the conclusions of an air quality assessment which is based upon a baseline scenario which is poorly justified, and a development impact scenario which has not been agreed to be reasonable. I would recommend that the assessment be considered to have been 'rejected' until these aspects have been resolved.

In the event that the justification for the baseline scenario cannot be agreed, or that the Highways Authority will only agree a development impact scenario which differs significantly from that accounted for within the air quality report, it may be necessary to update the air quality assessment. Otherwise, following receipt of those assurances it may be possible to accept the report.

Development Transport Demand - General (Air Quality)

Comments here refer to the general scheme particulars, the Vectos Transport Statement dated

February 2021, the Delta Simons Air Quality Assessment Report Ref: 20-1275.01 iss.2 (April 2021), and relevant representations made by consultees and local community groups.

I note that paragraph 4.4 of the Transport Statement suggests that *‘the vehicle movements associated with the proposed development are already on the local road network as the proposed end user currently operates within the Havant area.’* I would challenge this statement on the basis that Table 5.6, which forms the basis of the ‘trip distribution gravity model’ indicates that 5% of freight delivery trips will be accounted for within the Havant Area. Given that the trip distribution model is based upon population density, it may be assumed that the employee commuting trips broadly correspond to the delivery demand distribution. Given that the operator doesn’t currently operate *from* the borough, it may be assumed that the majority of HGV trips have both an origin & destination external to the borough, even though they may pass through the borough on the national strategic road network (A27 / A3(M)).

I would concede that the statement quoted above is probably true in relation to the ‘regional road network’, but it is unlikely to apply to the local road network within the Havant district, and it is the impact to the local road network that is most important when considering both the highway impact and the environmental impact of the development transport demand. This is relevant to the concept of ‘net’ development impact, and I would caution against accepting an offsetting of development trips from its net impact on the basis that a significant number of these trips are already on the local road network – this is very unlikely to apply to any more than 10% of trips, and may even be <5%.

It should be noted that whilst the HA considers gravity distribution model to be robust, the net generation figures have not been agreed. The Highways Authority requires additional junction modelling to be undertaken once a credible net figure has been agreed – as is suggested in the section above, it may be appropriate to update the air quality assessment model to reflect the agreed figures.

The Highways Agency objections relate to the degree of ‘netting’, meaning the degree to which the transport demand of the operational Pfizer site (whether theoretical, based upon consented floor area by landuse type, or whether based upon actual demand at a given date -) may be offset against the estimated transport demand of the proposed development. What is not called in to question per se is the transport demand estimate for the proposed development under the intended occupant’s target operational model.

As regards the transport demand estimate for the proposed development, section 5.4 states *“The methodology of calculating traffic movements is based on the experience from [operating the sites listed in Appdx.G] and is applied to each proposed site on the basis of the number of parcels the site can process in a day, the number of vans operating from a site and the modal split journey to work for the area. This methodology is how the traffic data from the proposed development has been calculated.”*

The methodology referred to at 5.4 remains opaque; it is not presented, nor explained in any greater anecdotal detail than described in the quote above. With reference to the data provided in Appendix F of the Transport Statement, I note that it omits the modal split which is apparently available with reference to table 5.1. It appears that there is additional detail available that has not been included within the Transport statement.

I note that some well organised community representation has been made which calls into question the likely trip demand of the development (and so the highway and air quality impact). With reference to certain statements given in the Transport Assessment, the scheme particulars, and to the transport demand estimates given; it would appear that closer scrutiny of the origin of the transport demand figures may be justified.

In particular, it would appear that the operational provision sought under the proposed scheme is substantially elevated relative to the identified need. This applies to both the employee parking space provision as it does to the capacity of the van storage deck, despite statements given at Section 4.25 which argues that the capacity sought is essential for operational efficiency and the viability of the site.

By my calculation, anticipated car trips account for 86% of the parking quantum, ignoring the capacity of the van storage deck for the parking of driver's vehicles. Van storage deck utilisation accounted for is approximately 58%, implying that a 30% reduction in quantum would not harm the viability of the site.

The contrary conclusion is that this apparently redundant capacity is required for anticipated expansion of the operation at the site, which would mean that the transport demand figures given in the Transport Assessment, upon which both the air quality & highway impact assessments are based, may not fully reflect the intended transport demand of the development (i.e. the transport demand that is within scope of the consent under consideration).

It may be worth considering the point in time that the methodology referred to at 5.4 estimates the operational transport demand – it could be that it aims to estimate trip generation at the year of opening, or at a specific point in time (year 3, year 5 etc.). *It appears unlikely that the estimates represent target capacity, or maximum capacity.*

This may be relevant to the consideration of a number of relevant policy matters – including whether the over-provision of parking spaces relative to SPD requirements is sufficiently supportive of sustainable transport policy, for example.

I am mindful of shifting trends in retail which no doubt underpins the business justification for this development, and would of course anticipate that a range of operational scenario's may arise in practice. I would anticipate that for consideration of highway or air quality impact, consideration of a worst case scenario might be helpful (e.g. max. operational capacity) or a 'bracketing' approach may be appropriate (e.g. middle estimate, compared with a target operational capacity or maximum feasible capacity).

It is expected that these matters will comprise material matters for the scheme currently under consideration.

Development Transport Demand – Distribution, "Rat-Running" (Air Quality)

I have reviewed the representation of the 'New Lane Neighbourhood' ('NLN') group (response to the Highways Authority comments). The response provides an arguably rather unrealistic worst case as a counter to the rather opaque 'middle estimate' accounted for within the application documents. I have addressed the issue of the overall development transport demand in the sections above.

The bulk of the NLN representation concerns the LGV routing likely to arise in practice. I have considered the routes suggested, and would dismiss a number of them as not making sensible routing choices for day-to-day operational traffic. Some represent routes that could be helpful when problems exist on principle routes, but other routes highlighted fail to bypass strategic junctions on principle routes, and so don't make good alternatives even under abnormal (congested) traffic conditions.

The exception to this is the Southbound routing option to A27 Warblington via New Lane, Beechworth Road, East Street & Emsworth Road. This route is more than 2km shorter than the anticipated route to this junction, and both routes are hampered by a controlled rail crossing that is

not permanently available. This route would be preferable for all Westbound trips during peak periods or when abnormal conditions have caused congestion on the B2149 which hampers access to the A27 at Havant. It may be justified to consider the attractiveness of this route, and to assess the likely development impact along its route.

I am mindful that the planning process has limited power to control the routing of road-legal vehicles on the adopted highway network – for this reason I would consider this to be a matter of properly assessing the likely highway impact (and securing any necessary mitigation), rather than being an argument for seeking to control the routing of development traffic.

Air Quality – Emissions Offsetting and Sustainability

I would acknowledge the applicant's positive response to comments about the loss of existing PV generation capacity, and the commitment to provide a PV provision within the development, as well as making a commitment to meet emerging policy requirements for sustainable construction.

The Electric vehicle charging provision of 20% van storage deck spaces, with the remaining 80% serviced with passive infrastructure to support future expansion is considered to be a proportionate response which represents good practice.

Other suggestions made at the pre-planning consultation have not been incorporated into the scheme design, but I do note that the scheme brought forward does have an enhanced landscaping scheme which will result in a net gain of 'air pollution interception & absorption' services within the development red-line area.

Whilst neither the Air Quality assessment, the Design & Access Statement, nor the Planning Statement make a specific response to the requirements of emerging policy E23 a., I would acknowledge that the above factors substantially contribute to the policy aims embodied by E23 a.. As such, I would raise no objections to the development on this basis.

SuDS – Surface Water Drainage (Pollution Prevention)

I note that 5no. proprietary petrol interceptors are included on the drainage network, and that a final stage of treatment via an Aco Quadraceptor* unit is proposed. All high-risk areas of the site are appropriately directed via the proprietary treatment units.

Coupled with the permeable surfacing to parking areas, the outline surface water drainage scheme exceeds the SuDS manual Ch.26 requirements for pollution control, representing best practice. The drainage proposals are supported on this basis.

Contaminated Land Assessment

Comments here refer to the EPS Ltd. Phase I Environmental Assessment Report Ref: UK20.5052 iss.4 (25/01/2021). Representations made by relevant consultees have been reviewed.

The assessment refers to a number of prior intrusive investigation reports which identified the presence of contamination in various areas of the site. Some remediation is referred to, alongside report conclusions which characterise the contamination as 'not requiring remediation'.

Some of the reports referenced have been previously reviewed by Environmental Health, others have not been submitted to the Council previously to the best of my knowledge.

I would highlight that both the conclusions of reports, and the standards of remediation that have been accepted in the past are applicable to the context of the site at the time of the assessment

(or acceptance by Havant Borough Council). It should be noted that this context may differ under a scenario of 'comprehensive redevelopment' of the site.

The broad conclusions of the EPS Ltd. Phase I report are accepted. However, I do have some limited comments to make;

- Paragraph 7.3 envisages the primary risk drivers to be secondary aquifer & local surface water's (e.g. the Lavant) alongside the health of future employees of the site. The identified receptors / risk drivers are not disputed, however I would highlight that off-site migration of contaminants to 'contamination sensitive' human receptors that are external to the development red-line area may also represent a significant risk driver. This has been the case for other investigations / remediations in the vicinity of this site.
- Paragraph 7.3 also suggests that sufficient information is available to 'outline' a 'remediation strategy'. I would challenge the 'face value' interpretation of this statement, at least in the absence of a comprehensive synopsis of available results to present a comprehensive site conceptual model which accounts for the result of investigations which have not to date been reported to the Council.
- It is worth noting that the 'remediation strategy' is envisaged within the report to have broad scope, including both an 'assessment of data gaps', and 'additional phases of investigation'. I might disagree the overlapping distinction between the terms 'remediation' and 'assessment' given in the report, these conclusions are accepted.
- A 'high level' data-gap assessment has identified that for further Site investigation, understood to be underway. The assessment targets are broadly agreed, although I would like to see some additional stratified-random trial holes across the site in order to bolster knowledge of the general context of the site (to support statistical assessments & identification of discrete contamination sources / contamination-impacted areas) .

The report acknowledges that additional work is required, and that the Local Planning Authority is likely to seek to secure this work by means of a Grampian-style planning condition. I note that the Environment Agency has requested a suite of conditions to this effect, and also that Portsmouth Water has made a pragmatic assessment in respect of the risks to the principle (abstracted) aquifer (with which I would concur).

The planning agent has also made representation directly to Environmental Health in respect to the contamination assessment, and the imposition of related conditions. I have reviewed the proposed wording of the Environment Agency conditions, and would note that it omits wording commonly used by Environmental Health to support a flexible approach to commencement & condition discharge, which the planning agent would prefer to be used in the event that conditions are sought. I would suggest that it would be helpful to apply consistent 'reason' for each 'contamination-related' condition, and to amend the reasons proposed by the Environment Agency to consistently include human health within the scope of the conditions.

Suggested revisions are presented below:

Condition 1

Prior to the commencement of any specific phase of development approved by this planning permission (other than demolition, site clearance, or any other date or stage in development as may be agreed in writing with the Local Planning Authority), an assessment of the nature and extent of contamination at the site shall be submitted to and approved in writing by the Local Planning Authority.

The assessment may comprise separate reports as appropriate, but shall be undertaken by competent persons and unless specifically excluded in writing by the Local Planning Authority, shall include;

- 1) *An intrusive site investigation based on the previous assessments summarised within the EPS Ltd. Phase I Environmental Assessment Report Ref: UK20.5052 iss.4 (25/01/2021); to provide sufficient data and information to adequately identify &*

characterise any physical contamination on or affecting the site, and to inform an appropriate assessment of the risks to all identified receptors.

- 2) The results of an appropriate risk assessment based upon (1), and where unacceptable risks are identified, a Remediation Strategy that includes;
 - appropriately considered remedial objectives,
 - an appraisal of remedial &/or risk mitigation options, having due regard to sustainability, and;
 - clearly defined proposals for mitigation of the identified risks.
- 3) A verification plan providing details of the data that will be collected in order to demonstrate that the works set out in the Remediation Strategy in (2) are complete and identifying any requirements for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action.

All elements shall be adhered to unless agreed in writing by the Local Planning Authority

Reason: Potentially contaminating activities have been identified on this site. In particular, various pharmaceutical and other industrial activities have been highlighted. The site is above the secondary superficial aquifer which would be considered a moderately sensitive controlled water receptor. The chalk principal aquifer and associated SPZ1c occurs at depth beneath the site under a layer of London clay. The chalk would be considered a highly sensitive controlled water receptor. Alongside the health of future occupants of the development land, and the health of occupiers of adjacent land, these receptors could potentially be impacted by contamination present on this site. To ensure that the development does not contribute to, and is not put at unacceptable risk from- or adversely affected by-, unacceptable levels of contamination, in line with policy DM10 of the Havant Borough Local Plan (Core Strategy) 2011, DM17 of the Havant Borough Local Plan (Allocations) [2014], and paragraphs 178-180 of the National Planning Policy Framework."

Condition 2

[As Environment Agency wording, with 'reason' substituted with that given below]

Reason: To ensure that the development does not contribute to, and is not put at unacceptable risk from- or adversely affected by-, unacceptable levels of contamination, in line with policy DM10 of the Havant Borough Local Plan (Core Strategy) 2011, DM17 of the Havant Borough Local Plan (Allocations) [2014], and paragraphs 178-180 of the National Planning Policy Framework."

Condition 3

[As Environment Agency wording, with 'reason' substituted with that given below]

Reason: To ensure that the site does not pose any further risk to human health or the water environment by demonstrating that the requirements of the approved verification plan have been met and that remediation of the site is complete. This is in line with policy DM10 of the Havant Borough Local Plan (Core Strategy) 2011, DM17 of the Havant Borough Local Plan (Allocations) [2014], and paragraphs 178-180 of the National Planning Policy Framework."

Condition 4

[As Environment Agency wording, with 'reason' substituted with that given below]

Reason: To ensure that the proposed Piling or other deep foundation does not harm groundwater resources, in line with policy DM10 of the Havant Borough Local Plan (Core Strategy) 2011, DM17 of the Havant Borough Local Plan (Allocations) [2014], and paragraphs 178-180 of the National Planning Policy Framework."

Mr. Jonathan Driver
Environmental Control Officer

HAVANT BOROUGH COUNCIL

Town & Country Planning Act 1990

Consultation on Planning Application

MEMORANDUM

From:	Environmental Health	To:	Development Control
Our Ref:	CONS/21/02526	Your Ref:	APP/21/00200
EH Case Officer Extn:	44 6677	Date:	28 July 2021
DC Case Officer:	David Eaves		
DC Case Officer Extn:	44 6549		
Application Number:	APP/21/00200		
Site Address:	32 New Lane, Havant, PO9 2NG		
Proposed Development:	Demolition of existing buildings and redevelopment of site comprising erection of distribution warehouse (class B8) with ancillary offices and related facilities, vehicle storage deck, new access, landscaping and associated infrastructure. RECONSULTATION REQUEST for revised plans and/or documents received		

Observations / Comments:

Further to the comments provided 27/04/2021, I have now had opportunity to review;

- Supplementary Transport Assessment (July 2021),
- Delta Simons Response to HBC EH comments on Air Quality (20-1275.03 24/05/2021),
- Drainage Strategy Report (27/05/2021)
- EPS Ltd. Outline Remedial Strategy & Implementation Plan (UK20.5052D Iss.2.1, 24/05/2021)
- EPS Ltd. Phase II Geo-Environmental Assessment (UK20.5052b Iss.1, 24/03/2021)

In addition to the above, I have reviewed the comments of relevant consultees, inclusive of the Highways Authority comments which follow review of the Supplementary Transport Assessment referenced above.

Air Quality – Impact of Development Transport Demand (Delta Simons Response, Supplementary Transport Assessment)

The key concluding comments following review of the Delta Simons Air Quality Assessment Report Ref: 20-1275.01 iss.2 (April 2021) are reproduced below;

“It would seem to me to be irrational to accept the conclusions of an air quality assessment which is based upon a baseline scenario which is poorly justified, and a development impact scenario which has not been agreed to be reasonable...In the event that the justification for the baseline scenario cannot be agreed, or that the Highways Authority will only agree a development impact scenario which differs significantly from that accounted for within the air quality report, it may be necessary to update the air quality assessment. Otherwise, following receipt of those assurances it may be possible to accept the report.”

Delta Simons Response to [EH] ‘Comment 3’ addresses the baseline scenario, and ‘Comment 4’ the development impact scenario.

The response to Comment 3 confirms the source of traffic flow figures to be a WYG Air Quality Assessment undertaken for another development (APP/18/00244). Figures appear to have been taken from this source in preference to available DfT figures, and in general, the figures used are conservative relative to the DfT values (available for Petersfield Rd, New Road, New Lane)

The authors refer to both conservative traffic flows & conservative emissions assumptions, and point out that the verification correlation was close to real-world monitoring values. I am not sure I understand the latter comment; my understanding was that the ratio referred to followed the application of a correction factor that was required to adjust for under-prediction occurring despite the conservative values adopted.

I would stand by the comments regarding the 'crudeness' of baseline figures. By 'crude', I am referring to identical AADT flow values being used for multiple road links (e.g. New Lane/Eastern Road/ Leigh Road/Elmleigh Road/Crossland Drive; or Park Road North/Petersfield Road), which is unlikely to reflect real-world conditions. This is not necessarily a reason to reject the report in & of itself, however it is notable that two of the roads affected by the uncertainty in traffic flow figures are adjacent to the verification points used, and that the greatest degree of under-prediction of road contribution NO_x is at the monitoring position adjacent to the sensitive receptor I identified in my prior comments that was not considered in the report (see 'response to Comment 5, below).

The response to Comment 4 serves to demonstrate the 'fluidity' of estimates of transport demand which I have previously referred to, highlighting that the most recent demand estimates (presented in the supplementary Transport Assessment) amount to a net increase in transport demand from the site of reduced magnitude to that included within the Delta Simons Air Quality report. At the time of writing, the Highways Authority was understood to remain unsatisfied with the estimates of net change relative to the extant site (in it's wound-down state, i.e. the real world impact), and I had for this reason intended to reiterate comments made previously. However, the applicant has today forwarded further comments from the Highway Authority, which I have now reviewed. This response is amended to reflect those comments.

It is understood that the Highways Agency has now agreed a degree of 'netting' of traffic for the purpose of junction capacity modelling. Whilst it is implicit from the Highways Agency response that it has agreed figures for 'traffic net-change', the net change in AADT transport demand associated with the site is not specified within the consultation response, and is not specified in either the Supplementary- or Addendum- Transport Assessment.

The purpose of the air quality assessment is to estimate the net change in air quality as a result of the development – the 'net change in transport demand associated with the development land' must be known / agreed to be reasonable. It appears that the gross demand of ~/<2500 AADT is agreed, however I remain unclear as to whether the final agreed net change estimate is significantly greater than the value assumed within the Delta Simons Air Quality Report (or not).

The Delta Simons response to EH Comment 4 is noted (rather than disputed), and is considered to form the context within which the 'transport net change' values ultimately agreed with the Highway Authority will be considered in terms of the associated transport emissions.

The Air Quality Response document also addresses Environmental Health's comment that it considers the residents of Cardinal House to be the most sensitive human receptors in air quality terms – as 57% of development traffic will be carried by the Park Road North>Park Road South link.

Delta Simons seeks to dismiss this concern by asserting that the greatest proportional change (in air quality, associated with development traffic emissions-) will be in the immediate vicinity of the site where the impact of it's transport demand will be most concentrated. I would however highlight that 'significance' of a material change in Air Quality *at the receptor* is proportional to both the existing ambient concentration and to the distance between the receptor and the

carriageway kerbside (pollutant source). Cardinal house is in a location with high baseline ambient concentrations, especially at the junction with Elm Lane, and the receptor is within 5m of the kerbside. In this sense, it is more sensitive to the same degree of change than would be a receptor with a lower extant ambient air quality, and where the receptor is set back from the carriageway (as is the case in the vicinity of the development). For these reasons, I still consider the residents of Cardinal House to be the most sensitive receptors to net change in local levels of traffic derived air pollution.

In light of the above, I do not feel able at this stage to recommend approval of the air quality report – this remains to a significant extent depend upon the outcome of discussions with the Highway Authority in respect of the view of net change that balances the need to acknowledge a theoretical consented transport demand, and the real-world change relative to the actual existing site use. In the first instance, clarity on the transport net change scenario agreed to be representative of the site (as AADT values) should be sought in order to frame consideration of the Air Quality assessment.

Supplementary Transport Assessment

Table 6.5 provides an assessment of the net impact of the development. It is not immediately obvious whether this is based upon a TRICS estimate derived from extant floorspace, or whether these figures refer to existing actual usage (in wound-down state). It is similarly unclear whether these represent figures agreed by the Highways Authority given that it undertook independent modelling of the B2149/Crossland drive junction, as a direct result of the conceptual contradiction between development traffic volumes at the Eastern & Western Ends of Crossland drive – not explicitly explained by a significant change in traffic routing via Old Copse Road.

In terms of traffic flows – I note that that section 9.5 refers to the inclusion at Appendix G of Manual Classified (turning) Counts at both ends of Crossland Drive. The data presented appear to be from two no. 7-day Automatic Traffic Count points positioned both north & south of Crossland Drive on New Lane. Given this, it strikes me as odd that the air quality report is reliant upon a third party air quality assessment for traffic figures where both bespoke survey data & DfT values are available for comparison/to support both the road network & air quality impact assessments. It is not clear why the ATC's have not been referred to, or whether the omission of the manual counts is likely to be material – it is understood that the relevant figures have been made available to the Highway Authority and have informed it's response.

I note that Table 6.2 provides corrected values, and has maintained the 1% allocation of development traffic to New Lane South. Paragraph 10.5 refers to an 'operational management plan' (OMP) that will include a 'traffic distribution' section that will state that all traffic will use Crossland Drive with the exception of employees living locally and parcels being delivered to local Havant Residents. 10.7 envisages this plan, alongside it's implementation-, being secured by condition, and indeed the Highways Authority proposes such a condition, and it's conclusion substantially relies upon it's effect.

Concerns have been raised by other's in respect of the possibility of 'rat running' via local roads, and these sections of the report aim to address those concerns.

I have previously considered the concerns raised, and find that routing eastbound via the National Trunk Road Network would derive distance & journey time benefits by using local roads. This applies most strongly via the Fairfield Road route (which the OMP aims to prohibit), but also to a lesser extent, via the Old Copse Road / Lavant Drive which may fall outside the scope of the proposed restrictions. Benefits are also likely to apply during periods of peak congestion in Havant Town Centre (by avoiding the Petersfield Road / New Road roundabout for Eastbound or Westbound trips via the A27. The OMP seeks to prohibit such journeys despite the likely economic benefit of utilising these local routes, and despite the ultimate legality of using road-legal vehicles on the local adopted highway network.

My understanding is that enforcement of this aspect of the OMP would be difficult, if not infeasible in practice as a planning matter. Certainly, the condition wording proposed by the Highways Agency would not achieve the objectives upon which the Agency would ultimately wish to rely upon, notably [where the occupier wishes to operate in a manner which differs from that assessed at planning stage, the OMP-] *'will need to be varied and will therefore require a re-assessment which the Highway Authority must agree...'* and that the OMP *'would need to be formally varied to allow a different occupier to use the site'*.

Notwithstanding that the planning condition may prove to be unenforceable, there is no provision in the proposed condition wording to require that the required OMP be adhered to in perpetuity, or that any operational change requires reassessment or re-approval.

In principle, other instruments available to the Council could be applied which use the OMP as a benchmark of 'reasonableness' in order to enforce a prescribed routing prohibition, however enforcement could still be high risk (given the inherent legality of activity referred to above) and would depend upon the will of the Council to enforce such conditions & defend that enforcement in the event of issues arising.

My preference would be to consider the appropriateness of the proposed development at the proposed site as a planning matter – i.e. to determine whether it's likely net impacts are acceptable (or not). In principle, around 15% of routine trips (approx. 375 gross development demand) would be expected to have an origin or destination accessed via the A27 East, and so which may be expected to utilise a materially shorter 'rat run'.

These impacts are likely to be of greater concern with respect to local amenity, and to highway capacity of these narrow local roads than they would be in respect of air quality – however it should be noted that residents already have air pollution concerns related to both the controlled rail crossing and to traffic congestion associated with the Fairfield Infants School. Perceived routing concerns may be particularly relevant for this development given the likelihood of a large fleet of branded delivery vehicles, and so the visibility of road use to local residents.

Rather than seeking to restrict use of certain routes / local roads via instruments of arguably questionable efficacy, it may be more robust to seek to characterise a 'permitted route' scenario using the agreed transport demand model, and to consider the acceptability (or otherwise) of it's impacts. Consideration could be limited to 'conceptual' only, or could be quantitative in terms of highway &/or air quality impact. Similarly, it could be something that HBC is equipped to consider in making it's decision, or it may be something that it requires be undertaken by the applicant. Avoidance of congestion scenario's are expected to be non-routine, and probably need not be considered.

I would not go so far as to object in the absence of such an assessment on air quality grounds – rather, I would consider this to be a planning matter which cuts across a number of development impact related issues, of which air pollution (and perceived air pollution impact – irrespective of actual impact) is just one. Highlighted for information only, being aware of the scale of local opposition to this development, that rat-running forms a key element of those objections, and that the Highways Agency is relying upon a condition that is unlikely to be capable of delivering the intended effect.

The package of highway improvement schemes referred to within the transport assessment are supported – in particular the provision of a formalised crossing point on Crossland Drive to facilitate access to local schools, to sports & play facilities, and local food retail outlets via sustainable modes of travel (and so assisting to divert trips from private motor car, and so improve & sustain local air quality).

Drainage Strategy Report

I have briefly reviewed the revised documents, and have not identified any changes that would

be material to the advice given previously – the scheme represents best practice pollution control, and can be supported.

Ground Contamination Assessment & Remediation (UK20.5052D Iss.2.1 & UK20.5052b Iss.1)

The additional phase 2 site investigation (UK20.5052b Iss.1) did not find any soil contamination considered to be significant against a human health commercial landuse scenario. The investigation was however unable to target areas of the site known to be ‘of potential concern’ (“AOPC”), and vapour monitoring identified light-fraction hydrocarbons quite widely across the site, indicating that there is a source of relatively ‘fresh’ (non-degraded) contaminants within soils at the site that has not been captured by the soil sampling undertaken to date.

Section 6.3 includes a vapour phase risk assessment which concludes a low-negligible risk to a sensitive commercial receptor (female employee), claiming on the strength of this assessment that the off-site migration risk is also low-negligible. Whilst it is accepted that it is possible that this interpretation may ultimately prove to be reasonable; in the absence of clarity on whether a separate CLEA assessment has been undertaken to determine an appropriate benchmark for a residential receptor, this conclusion is not considered to be well supported by the data at this stage.

Section 6.2 includes a groundwater risk assessment, concluding that screening criteria (GAC) are not exceeded in groundwater samples. However, I note that there is no GAC given for Chromium within Appendix J, and the GAC selected for Nickel is substantially greater than the EA’s ‘priority hazardous substances’ environmental quality standard (EQS). Contrary to the conclusions of the report, exceedances are noted of CrVI EQS-AA (total Chromium results are not speciated) and Ni EQS-AA (max. recorded dissolved phase Ni results approximate to the EQS maximum allowable concentration, EQS-MAC). Similarly, one Ali C5-C6 result is approx.. 400% of the Appendix J GAC.

I am cautious to agree that the site is unlikely to pose a significant risk to groundwater given that results indicate the likely presence of a low-solubility denser-than-water (DNAPL) hydrocarbon, which may be present within the topographic low-points of gravel lenses of the river terrace deposits (noted to be present at the site). This is a similar conceptual model to that which applied at a nearby site where similar materials were identified to have migrated in free-phase over distances of several hundred meters.

Section 2.2. refers to previous investigations and quantitative risk assessments undertaken by Golder associates – notably including a quantitative detailed groundwater risk assessment. The Council has not had opportunity to review this document, and it’s content may be material to the current application. The Golder reports (or the key sections of them) should be made available for context if the Council is to be able to account for their reported content.

The overall conclusion of the report is presented in the summary of findings, and the recommendations given at section 6. (broadly agreed). No refined conceptual site model (CSM) is presented at section 6.5, as “[the] *contaminant linkages presented in the Conceptual Site Model all require the dataset for the whole site prior to re-evaluation. As this is not yet available, a refined CSM cannot yet be presented*”. The recommendations at 6.7 seek to obtain the data which section 6.5 concludes to be necessary to support a re-evaluation of the CSM.

The Outline Remedial Strategy & Implementation plan takes this recommendation forward by outlining the additional data collection required to support a comprehensive risk assessment, and development of remedial or risk mitigation options when a more refined CSM is available. In this sense, the works outlined do not amount to remediation, rather they represent proposals for further investigation.

The rationale and content of the report is broadly agreed, however I highlight concern with the reference within the remedial strategy table presented at section 3 to the application of GAC as 're-use criteria'. I would expect the 'no soils containing free-phase product' to take precedence over the hydrocarbon GAC, and I would expect DoWCOP procedures to apply to soils clearly contaminated with high concentrations of low-toxicity substances.

I would also highlight that verification of the proposed source reduction works in the vicinity of BH03 is to demonstrate 'effective removal' of phthalates, but no standard appears to be proposed to define 'effective removal' at this stage, whether in terms of total Phthalates, total VOC, or a substance-specific value for Benzylbutyl Phthalate. The additional works proposed should define a standard for 'adequate remediation' for this purpose. It may be that the Golder reports proposed such a value/concentration/standard.

In light of the above, there is no need to substantially alter the approach previously proposed – it remains appropriate to secure the proposed additional investigation / assessment by condition, and to respond appropriately to the results of that assessment. This does however require a minor revision to the previously proposed condition, and again I would reiterate that demolition should not be considered to constitute 'commencement' for the purposes of this condition.

Condition 1

Prior to the commencement of any specific phase of development approved by this planning permission (other than demolition, site clearance, or any other date or stage in development as may be agreed in writing with the Local Planning Authority), an assessment of the nature and extent of contamination at the site shall be submitted to and approved in writing by the Local Planning Authority.

The assessment may comprise separate reports as appropriate, but shall be undertaken by competent persons and unless specifically excluded in writing by the Local Planning Authority, shall include;

- 1) Further intrusive site investigation & monitoring based on the proposals given within the EPS Ltd. Phase II Environmental Assessment Report Ref: UK20.5052D iss.2.1 (24/05/2021); to provide sufficient data and information to adequately identify & characterise any physical contamination on or affecting the site, and to inform an appropriate assessment of the risks to all identified receptors.*
- 2) The results of an appropriate risk assessment based upon (1), and where unacceptable risks are identified, a Remediation Strategy that includes;*
 - appropriately considered remedial objectives,*
 - an appraisal of remedial &/or risk mitigation options, having due regard to sustainability, and;*
 - clearly defined proposals for mitigation of the identified risks.*
- 3) A verification plan providing details of the data that will be collected in order to demonstrate that the works set out in the Remediation Strategy in (2) are complete and identifying any requirements for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action.*

All elements shall be adhered to unless agreed in writing by the Local Planning Authority

Reason: *Prior assessment has indicated the likely presence of contaminants within areas of the development land that have not previously been investigated. The site is above the secondary superficial aquifer which would be considered a moderately sensitive controlled water receptor. The chalk principal aquifer and associated SPZ1c occurs at depth beneath the site under a layer of London clay. The chalk would be considered a highly sensitive controlled water receptor. Alongside the health of future occupants of the development land, and the health of occupiers of adjacent land, these receptors could potentially be impacted by contamination present on this site. To ensure that the development does not contribute to-, and is not put at unacceptable risk from- or adversely affected by-, unacceptable levels of contamination, in line with policy DM10 of the Havant Borough Local Plan (Core Strategy) 2011, DM17 of the Havant Borough Local Plan (Allocations) [2014], and paragraphs 178-180 of the National Planning Policy Framework."*

There is no need to amend the other conditions previously proposed by the Environment Agency, save for the amended 'reason' previously recommended. Reproduced below for Convenience.

Condition 2

[As Environment Agency wording, with 'reason' substituted with that given below]

Reason: *To ensure that the development does not contribute to, and is not put at unacceptable risk from- or adversely affected by-, unacceptable levels of contamination, in line with policy DM10 of the Havant Borough Local Plan (Core Strategy) 2011, DM17 of the Havant Borough Local Plan (Allocations) [2014], and paragraphs 178-180 of the National Planning Policy Framework."*

Condition 3

[As Environment Agency wording, with 'reason' substituted with that given below]

Reason: *To ensure that the site does not pose any further risk to human health or the water environment by demonstrating that the requirements of the approved verification plan have been met and that remediation of the site is complete. This is in line with policy DM10 of the Havant Borough Local Plan (Core Strategy) 2011, DM17 of the Havant Borough Local Plan (Allocations) [2014], and paragraphs 178-180 of the National Planning Policy Framework."*

Condition 4

[As Environment Agency wording, with 'reason' substituted with that given below]

Reason: *To ensure that the proposed Piling or other deep foundation does not harm groundwater resources, in line with policy DM10 of the Havant Borough Local Plan (Core Strategy) 2011, DM17 of the Havant Borough Local Plan (Allocations) [2014], and paragraphs 178-180 of the National Planning Policy Framework."*

Recommendations

Seek clarification of a definitive estimate of net-change in transport demand associated with the development. The value should be acceptable to- / supported by- the Highway Authority and be expressed as AADT. This is necessary to inform the acceptability or otherwise of the existing Air Quality assessment, and to provide context to the substance of objections of other consultees around transport-related impacts (amenity, highway capacity & air quality).

Apply ground contamination conditions 1-4 on any consent that Development Management is minded to recommend / grant.

Mr. Jonathan Driver
Environmental Control Officer

Marcus Bell

From: Driver, Jonathan <Jonathan.Driver@havant.gov.uk>
Sent: 19 October 2021 20:37
To: Marcus Bell
Subject: RE: APP/21/00200 Pfizer, 32 New Lane - Re-use Criteria for Materials Management Plan

Good Evening Marcus,

Following our conversation yesterday, I have now completed a review of the relevant sections of the RMS&IP (UK20.5052D.iss5). As discussed, this email is just for the purpose of highlighting general comments – I will put a brief response out on headed paper for the purposes of the DoWCoP ‘approval in principle’ once I’ve had your comments back on soils concentrations of Phthalates for a controlled waters risk driver. I’ll be as brief as I can, and will keep it to the key points;

- Section 2.2 comments on the lack of a risk-based justification for the planning authority requiring re-use criteria that fall below GAC’s which equate to human health C4SL’s. I would not dispute this in terms of risks to human health, and I would acknowledge both that provisions have been made to address targets which are non-sensical to ‘suitability for use’ (not a risk-based justification). The report itself presents overriding risk based justification where alternative risk drivers require more stringent GAC – e.g. the controlled waters GAC which are provided for most determinands. Where justification for lower values may still exist (however) is where controlled waters are the risk-driver *and* no explicit standard is included within Appendix D – e.g. Phthalates (see comments below)
- I note the amended proposed BBP GAC at 26.3 mg/kg B(2e)P at 8.68 mg/kg, set at a theoretical saturation limits (TSL) in the interests of meeting the provision at within the Remedial Strategy (3) that *‘No soils containing free-phase product (i.e. Non-Aqueous Phase Liquid) will be permitted for re-use’*. Whilst I appreciate that these levels are substantially below the risk-based human health GAC, it doesn’t necessarily follow that there is no risk of exceeding the respective controlled waters EQS at a reasonable compliance point where soils concentrations are at or below TSL. No narrative has been presented to argue that such a conclusion is reasonable/should be accepted. I have taken a quick look at the Golder reports, and I have not found any commentary on screening levels for soil concentrations of Phthalate(s) which represent an acceptable risk to controlled waters under a LGWRP scenario. As discussed, this is a ‘gap’ in the proposed re-use criteria and at this stage it would appear that we don’t have sufficient information to accept this value. I think that an amendment to the RMS&IP is needed to address this uncertainty. I am open to taking flexible approach to resolving this – either via quantitative risk assessment (as undertaken for chlorinated solvents), or by securing confirmation that the EA (as the appropriate authority for water pollution-) is content that the risks to local aquifers are negligible where soils concentrations are at or below TSL, or by adopting a nominal/arbitrary precautionary value (e.g. 25% TSL).
- Section 3 is clear that no soils containing free product will be permitted to be re-used on site, but also states the generic screening values (represented by Appendix D) *‘can be applied...as reuse criteria’*. This latter statement isn’t strictly accurate as the former introduces additional criteria that are not represented in the GAC. Appendix D notes where HH GAC exceed TSL’s but doesn’t make any statement on where saturation limits should take precedence over GAC’s. If the GAC are viewed in isolation, conflict with the aggregate provisions of the MMP/RMS could arise (see comments on oversight).
- Proposed overarching TPH GAC of 2000mg/kg is agreed to be a pragmatic provision. It is recognised that this will permit soils with certain hydrocarbon bands >TSL, as do some of the LGWRP GAC. It is accepted that, for these bands, the overarching GAC (or the respective LGWRP GAC’s that also exceed TSL’s-) will override a strict interpretation on what constitutes ‘free product’ for the purposes of the MMP restriction.

- The Appendix D notes on HH vapour-inhalation pathway screening values exceeding LGWRP GAC are noted. I also note the groundwater surface levelling data presented in the Golder report (not previously reviewed) which indicate a weak hydraulic gradient which places the closest off-site human receptors up-hydraulic-gradient of the AOPC's. The omission of any specific consideration of this pathway is accepted on these bases.
- 4.2.3 (oversight/overwatch) refers to EPS fulfilling with the remedial oversight role with full-time presence on site throughout the earthworks. This text is contradicted by Appendix E procedures, which suggest a 'retained services' model where EPS will be called upon if needed; implying that construction site management may have primary responsibility for visual & olfactory screening of arisings. Given this inconsistency, it is unclear whether construction site management might also take on a role in managing routine stockpile samples / making decisions based upon returned lab results, or whether this will be undertaken exclusively by EPS, with full knowledge of the caveats that apply. I'd recommend that the text is aligned for clarity on which strategy is proposed.
- Appendix E provisions are otherwise agreed
- Appendix B provisions are agreed.
- It is assumed that at this stage, the planning recommendation would be to approve with a comprehensive and relatively generic suite of contamination conditions (as previously recommended), and to account for the Suite of Golder Reports, and EPS reports (inclusive of the supplementary ph.2 report, RMS & IP) in a condition discharge application to be submitted shortly following the award of consent.

Please be aware that I am on leave next week, and am under some pressure to tie up a number of priority tasks this week. I will endeavour to get an in-principle acceptance letter out to you this week if I receive your comments back by close of play Thursday (assuming that you will make recommendations as discussed). Otherwise, I will prioritise this work on my return.

Best Regards,

Jon

Jonathan Driver
Environmental Control Officer

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From: Marcus Bell <MBell@epstrategies.co.uk>
Sent: 15 October 2021 13:14
To: Driver, Jonathan <Jonathan.Driver@havant.gov.uk>
Cc: Natalie Fellows <natalie@fellowsplanning.co.uk>; jeremysharland@kingsbridgeestates.co.uk
Subject: APP/21/00200 Pfizer, 32 New Lane - Re-use Criteria for Materials Management Plan

CAUTION: This email came from outside of the council - only open links and attachments that you're expecting.

Afternoon Jonathan,

I did just leave a message on your phone so please call back if you get a chance regarding this. As per your email correspondence with Natalie below, you suggested that a discussion regarding general principles with the geo-environmental consultants may be of use.

Essentially the contaminated land and remediation reports need to go through the planning consultation process in the normal fashion. The only aspect that I'd request early engagement on is the principles around the re-use criteria for soils that are cut and filled on the site which will need to be covered by a Materials Management Plan (DoWCoP).

These criteria are included in the Remedial Strategy and the relevant brief appendix is attached, along with the covering letter for the reports which should present the necessary background. The re-use criteria are all generic published values (S4ULs, C4SLs etc), and we included lower limits in relation to petroleum hydrocarbons and phthalates due to your previous comment regarding saturation limits.

I know you are pressed for time so please call my mobile (below) if any queries. We only need confirmation that these criteria are agreeable to be able to progress the Materials Management Plan. If you could have a look and let me know at your earliest convenience I would greatly appreciate it.

Marcus

Marcus Bell
Associate Director



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