



Solutions To Your Contaminated Land Issues

Site: 0009TSM - 86-88 Tontine Street, Folkestone CT20 1JP

15th April 2025

Updated review of Risks

As discussed, the risk assessment included in the CET infrastructure phase 1 desktop study has a number of issues. I have therefore provided a brief commentary below detailing my view of the risk and the appropriate assessment measures that I perceive should be carried out as part of the phase 2 investigation.

Sources

The gasworks is not considered to be a plausible contaminant source due to distance. Even if some material had been transported south by the river, this is unlikely to have impacted the site in a meaningful way. Further to this, they have also indicated that a 'shelter' shown on mapping may be a contamination source. Given the location of this feature adjacent to the road, this is likely to be a bus shelter or similar and we cannot see how this could be considered a contaminant source. Plots to the north of the site and 100m north west (i.e. uphill) may be potential sources of petroleum hydrocarbon compounds (TPH). These have the potential to migrate although this will depend on species and in the case of vehicle servicing garages, releases in our experience tend to be longer chain length compounds resulting from spillage/leakage of lubricating oils from within the engine as opposed to shorter chain length species and BTEX arising from fuel oils. The latter cannot be completely ruled out although if present we would expect this to be a relatively minor component. A plastics factory is noted 25m to the south of the site. This may be a source of volatile organic carbon (VOC) and semi volatile organic carbon compounds (SVOC). However, given that the topographical gradient in this location is to the south, direct migration from this source is not considered plausible. However, migration of vapour phase cannot be entirely ruled out. Similarly a timber yard some 200m to the south east is discussed as a potential contaminant source.

The author also appears to be confused with what is shown on mapping. They claim that residue or remains of WWII infrastructure may also be source of contamination in areas marked ruins. It can clearly be seen that these are residential or possibly commercial buildings as opposed to 'WWII Infrastructure' and these are located approximately 75m to the south. Whilst it is possible that detonations and fires (in the case of incendiaries) may have added to aerial flux of PAH compounds, these are clearly not military facilities and the potential for contamination by for example TNT, RDX, PETN is not a likely scenario on the study site especially considering the presence of buildings.

Thus the main sources of contamination on the study site appear to be made ground and both ash material and asbestos is mentioned. Consequently, we would consider that there is potential for metals, PAH compounds and asbestos to be present. There is also some potential for TPH to be present as a consequence of off site garages although shorter chain length compounds have a lower potential to be present. In the case of VOC/SVOC we would consider there to be a low likelihood of these being present due to the location of the plastics factory. However, some migration of vapour phase may occur.

Receptors

Site users (residents) are potential receptors and in addition, there is potential for short term risks to those working with excavations.

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The site is underlain by a principal aquifer. The Pent Stream is also present to the west of the site and if contaminants migrate this has potential to be impacted.

Pathways

The majority of the site has building footprint present with a soft landscaping restricted to a central courtyard utility area (Figure 1). We would therefore consider consumption of produce to be an unlikely scenario. However, there are potential risks to site users from ingestion and inhalation of soils as dust and dermal contact. Where vapour phase contaminants are present, then intrusion into buildings should be considered. However, the development has an undercroft car park planned (figure 2) under the majority of the site. This will need to have adequate ventilation to prevent the build up of vehicle fumes and by extension will prevent build up of vapour phase contaminants and prevent the presence of a pressure gradient allowing VOCs to enter the building.

With regard to controlled waters, metals, PAH will demonstrate low aqueous mobility and in the case of asbestos, no solubility. This will be further attenuated by the presence of building footprint and hardstanding on the majority of the site reducing infiltration. Where TPH compounds are present then these may be mobile in the case of shorter chain length species and have potential to migrate vertically thus impacting the Principal Aquifer and laterally impacting the surface water to the west. As previously stated however, we would consider that if TPH compounds are present then they will comprise largely long chain length species with limited solubility.

Ground Gas

The CET report again seems to be convinced that the shelter may be a source of a 'significant' depth of made ground and that this may be a source of ground gas. Generally, made ground comprises low concentrations of putrescible components and is not considered to be a major source of ground gases such as methane and carbon dioxide. Furthermore, the presence of the undercroft car park providing a vented void beneath the building means that ingress of ground gas is unlikely.

Investigative Measures

A geotechnical investigation is proposed to allow determination of soils strength parameters. This will involve advancing a number of boreholes using cable percussion techniques. As part of this investigation we would sample shallow soils in the area where soft landscaping is proposed with these submitted for analysis of metals, PAH compounds and asbestos. Deeper soils will be examined for staining and olfactory evidence of hydrocarbons and we would screen these using a photo-ionisation detector. Where elevated volatiles are detected and/or visual or olfactory evidence of contamination is present, then we would submit samples for laboratory analysis. We would also submit a small batch of non-detects for analysis (where no evidence of VOC) to confirm that the instrument is in spec.

Please feel free to contact me if you have any comments.

Dr. Richard Wesson

Wesson Environmental.

Figures

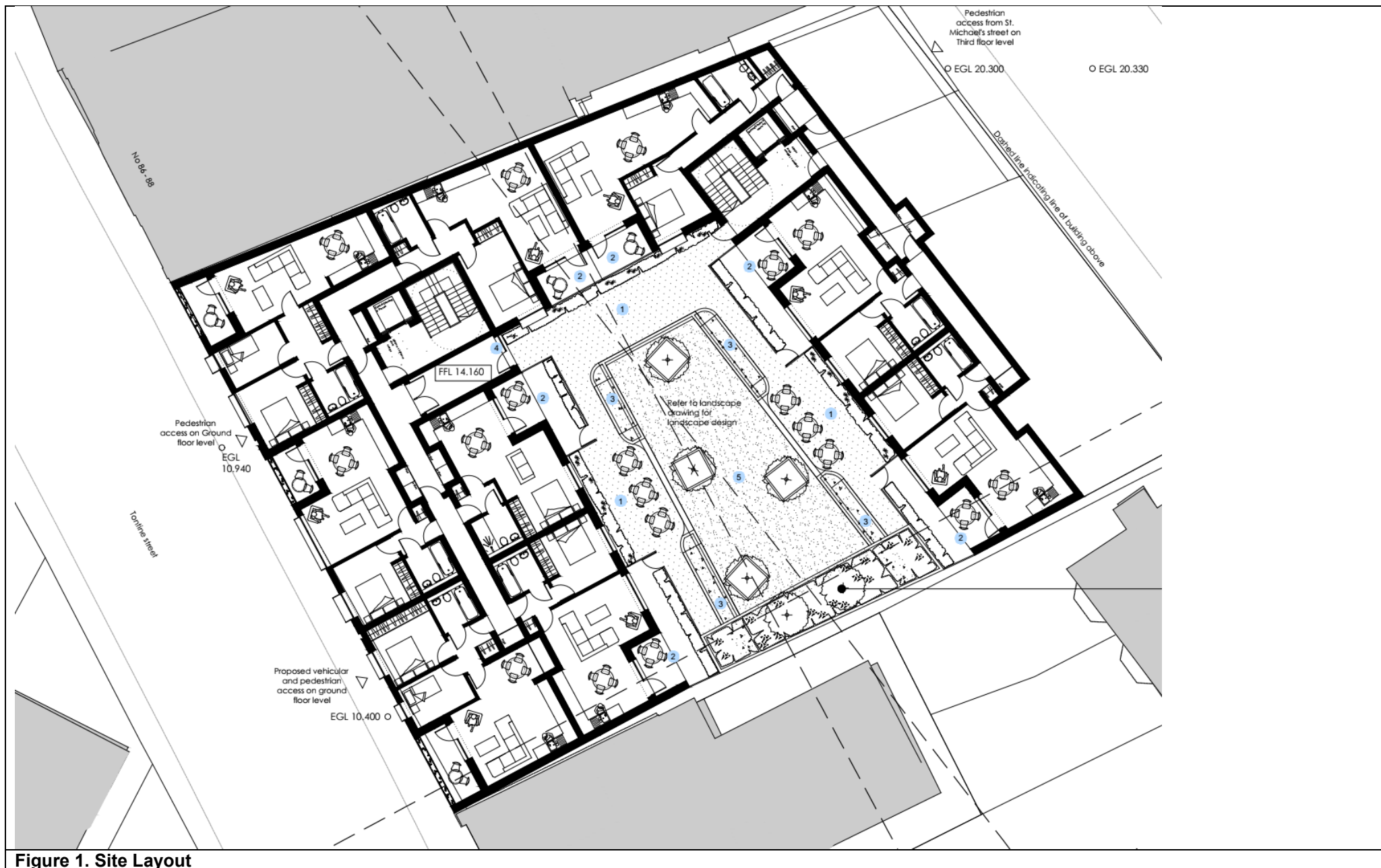


Figure 1. Site Layout

