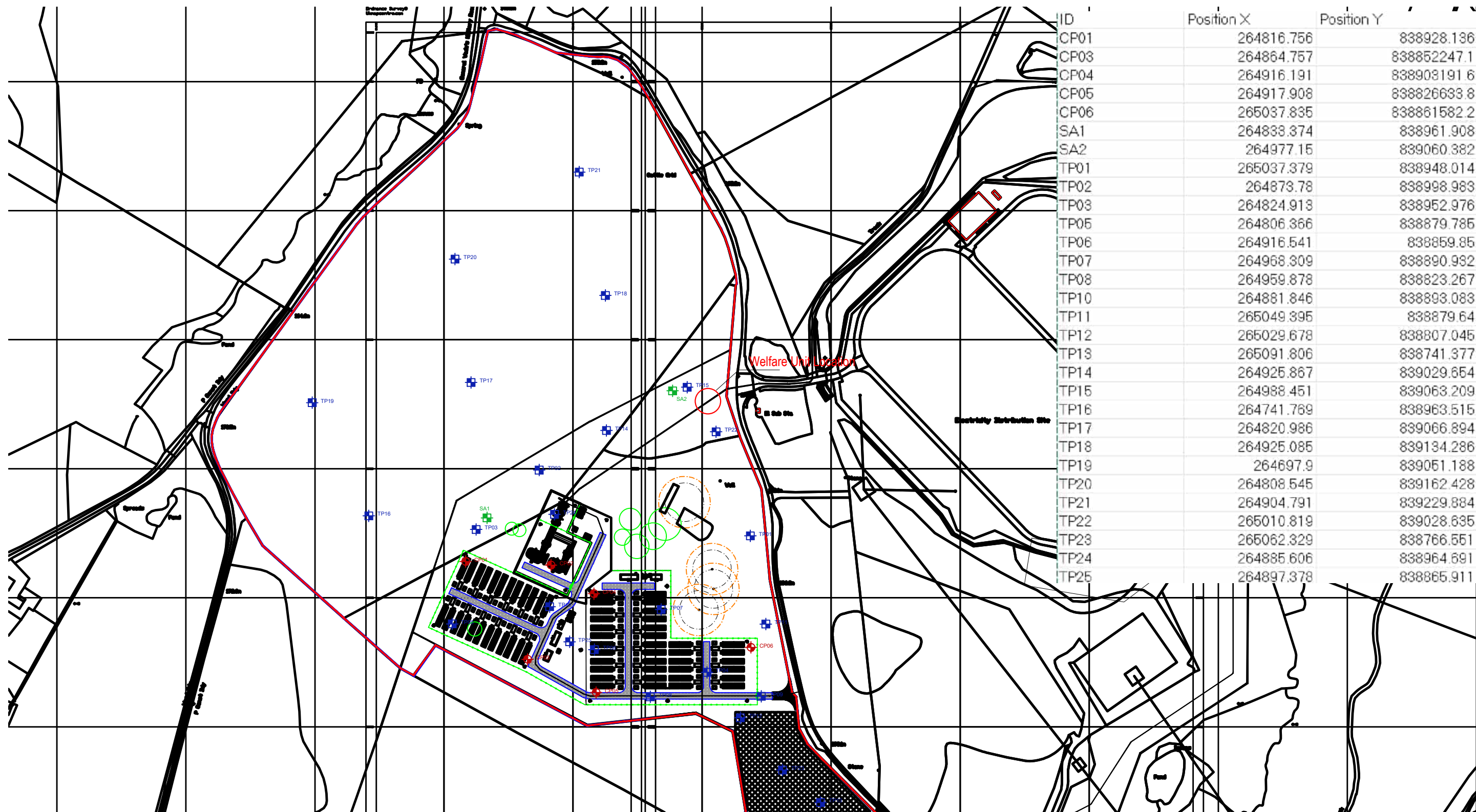


8.2 Appendix B - Drawings



ID	Position X	Position Y
CP01	264816.756	838928.136
CP03	264864.757	838852247.1
CP04	264916.191	838903191.6
CP05	264917.908	838826633.8
CP06	265037.835	838861582.2
SA1	264833.374	838961.908
SA2	264977.15	839060.382
TP01	265037.379	838948.014
TP02	264873.78	838998.983
TP03	264824.913	838952.976
TP05	264806.366	838879.785
TP06	264916.541	838859.85
TP07	264968.309	838890.982
TP08	264959.878	838823.267
TP10	264881.846	838893.083
TP11	265049.395	838879.64
TP12	265029.678	838807.045
TP13	265091.806	838741.377
TP14	264925.867	839029.654
TP15	264988.451	839063.209
TP16	264741.769	838963.515
TP17	264820.986	839066.894
TP18	264925.085	839134.286
TP19	264697.9	839051.188
TP20	264808.545	839162.428
TP21	264904.791	839229.884
TP22	265010.819	839028.635
TP23	265062.329	838766.551
TP24	264885.606	838964.691
TP25	264897.378	838865.911

- Key
- Cable Percussive Boreholes CP
  - Machine Excavated Trial Pits TP
  - Soakaway Tests SA

REV	ISSUED	23/04/24	MTL	CD
Rev:	Description:	Date:	By:	Chkd:



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Project:	KNOCKNAGAEI		Status:	FINAL		
Drg Title:	PROPOSED GROUND INVESTIGATION LOCATIONS		Drawn By	MTL	Checked By	CD
			Designed By	MTL	Date	22/03/23
			Scales @ A3	NTS		
Project No - Originator - Function - Spatial - Form - Discipline - Number					Revision	
085444 - CUR - XX - XX - D - GE - 00001					P01	

### 8.3 Appendix C - Qualitative Risk Assessment Rationale

The site-specific risk assessment, presented in this report, follows the principle of establishing whether there is a viable linkage between a contaminant source to a potential receptor, via an exposure pathway.

The risk assessment corresponds with the total site area and incorporates both descriptive (qualitative) and, where available, numerical (quantitative) lines of evidence.

Risk assessment is the process of collating known information on a hazard or set of hazards to estimate actual or potential risk to receptors. The receptor may be humans, a water resource, a sensitive local ecosystem or future construction materials. Receptors can be connected to the source by one or several exposure pathways such as direct contact for example. Risks are generally managed by isolating the receptor or intercepting the exposure pathway or by isolating or removing the hazard.

Without the three essential components of a source, pathway and receptor there can be no risk. Therefore, the presence of contaminant source on a site does not necessarily mean there is a risk.

The risk assessment considers the likelihood of an event taking place (accounting for the presence of the source and receptor and the viability of the exposure pathway) in conjunction with the severity of the potential consequence (accounting for the potential severity of the hazard and the sensitivity of the receptor).

In the risk assessment, the consequence of the hazard has been classified as severe or medium or mild or minor and the probability (likelihood) of the circumstances occurring classified as high likelihood or likely or low likelihood or unlikely.

The consequences and probabilities are subsequently cross-correlated to give a qualitative estimation of the risk using Department of the Environment risk classifications as detailed in the table below and as referenced in CIRIA C552.

		Consequence			
		Severe	Medium	Mild	Minor
Probability (Likelihood)	High Likelihood	Very High Risk	High Risk	Moderate Risk	Moderate/Low Risk
	Likely	High Risk	Moderate Risk	Moderate/Low Risk	Low Risk
	Low Likelihood	Moderate Risk	Moderate/Low Risk	Low Risk	Very Low Risk
	Unlikely	Moderate/Low Risk	Low Risk	Very Low Risk	Very Low Risk

In accordance with DoE guidance, the following categorisation of consequence has been developed:

Classification	Definition	Examples
Severe	Short-term (acute) risk to human health likely to result in “significant harm” as defined by the Environment Protection Act 1990, Part IIA. Short-term risk of pollution of sensitive water resource. Catastrophic damage to buildings/property. A short-term risk to an ecosystem or organisation forming part of such ecosystem.	<p>High concentrations of cyanide on the surface of an informal recreation area.</p> <p>Major spillage of contaminants from site into the water environment.</p> <p>Explosion, causing building collapse (can also equate to a short-term human health risk if buildings are occupied).</p>
Medium	Chronic damage to Human Health. Pollution of sensitive water resources. A significant change in an ecosystem or organism forming part of such ecosystem.	<p>Concentration of a contaminant from site exceeds the generic or site-specific assessment criteria.</p> <p>Leaching of contaminants from a site to a Principal or Secondary A aquifer.</p> <p>Death of a species within a designated nature reserve.</p> <p>Lesser toxic and asphyxiate effects</p>
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services. Damage to sensitive buildings/structures/services or the environment.	<p>Pollution of non-classified groundwater (inc. Secondary B aquifers).</p> <p>Damage to building rendering it unsafe to occupy (e.g. foundation damage resulting in instability).</p>
Minor	Harm, although not necessarily significant harm, which may result in a financial loss or expenditure to resolve. Non-permanent health effects to human health (easily prevented by means such as personal protective clothing, etc). Easily repairable effects of damage to buildings, structures and services.	<p>The presence of contaminants at such concentrations that protective equipment is required during site works.</p> <p>The loss of plants in a landscaping scheme.</p> <p>Discoloration of concrete.</p>

In accordance with DoE guidance, the following categorisation of probability has been developed:

Classification	Definition
High Likelihood	There is a pollution linkage and an event that either appears very likely in the short term and almost inevitable over the long term or there is evidence at the receptor of harm or pollution.
Likely	There is a pollution linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low Likelihood	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place and is less likely in the shorter term.
Unlikely	There is a pollution linkage, but circumstances are such that it is improbable that an event would occur even in the very long term.

In accordance with DoE guidance, the following categorisation of risk has been developed:

Classification	Definition
Very High Risk	There is a <i>high probability</i> that <i>severe harm</i> could arise to a designated receptor from an identified hazard at the site without appropriate further action.
High Risk	<i>Harm is likely to arise</i> to a designated receptor from an identified hazard at the site without appropriate further action.
Moderate Risk	<i>It is possible</i> that without appropriate further action <i>harm could arise</i> to a designated receptor. It is relatively <i>unlikely</i> that any such harm would be <i>severe</i> , and if any harm were to occur it is <i>more likely</i> that such harm would be <i>relatively mild</i> .
Low Risk	<i>It is possible</i> that <i>harm could arise</i> to a designated receptor from an identified hazard. It is <i>likely</i> that, at worst, if any harm was realised any effects would be <i>mild</i> .
Very Low Risk	The presence of an identified hazard does not give rise to the potential to cause harm to a designated receptor.

The term 'risk' in this instance refers to the risk that the source, pathway, receptor linkage for a given source of contamination is complete. It does not refer to immediate risk to individuals or features present on the site from potential contaminants and is intended to be used as a tool to assess the necessity of further investigation.