



# Northumberland County Council

## Contaminated Land and Mine Gas Protection Validation Checklist and Assessment Procedures

<b>Contents</b>			
<b>Section</b>	<b>Sub Section</b>		<b>Page</b>
1		<b>Planning Validation Process</b>	2
2		<b>Planning consultation process</b>	2
3		<b>Stages of Contaminated Land Assessment Process</b>	2
	3.1	Review of Planning Documentation	2
	3.2	Review of GIS Data	3
	3.3	Review of Local knowledge and Public Representations	3
	3.4	Review of Development sensitivity	3
	3.5	Review of Desktop Report	3
4		<b>Determination of Contaminated land Risk</b>	4
	4.1	Sensitivity of end use	4
	4.2	Current and historical evidence of contamination	4
	4.3	Phase 1 - Preliminary Risk Assessment	5
	4.4	Phase 2 – Intrusive Site investigation	5
	4.5	Remediation Strategy	5
	4.6	Proposed Mitigation	5
5		<b>Recommendation to Development Management</b>	6
6		<b>Updating and Document Management</b>	6
	Appendix 1	Potentially Contaminated Land & Validation	7
	Appendix 2	Mine Gas Protection	10

## **Contaminated Land Planning Procedure**

Under the Revised National Planning Policy Framework 2021 (NPPF paragraphs 174(e), 183 - 184) the presence of contaminated land is a material planning consideration.

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1005759/NPPF\\_July\\_2021.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf)

Planning Practice Guidance supports the Policy and Land affected by Contamination guidance is also relevant.

<https://www.gov.uk/guidance/land-affected-by-contamination>

### **1. Planning Validation Process**

The planning validation process is the first stage in assessing any planning application for potential impacts of contaminated land and mine gas.

There are two procedures for validation of all applications for both contaminated land and mine gas. These have been included in this document as Appendix 1 and 2

Appendix 1 deals with contaminated land using the Historic Land Use Development Layer (HLUD) & validation

Appendix 2 deals with mine gas & validation

These procedures use two GIS layers. The HULD layer is an anonymous in-house dataset which cannot be made public. It will be used as a screening tool during the planning validation process to see whether an application site is likely to have contamination present. Applicants may wish to submit a pre-application request to the planning department or an Environmental Information Request (EIR) to the EP team prior to submitting an application, to check whether the development site is affected. Both of these are chargeable services.

The Development Management officer undertaking the planning validation process will need to check the application against both appendix 1 and 2 before accepting the application as valid.

### **2. Planning Consultations Process**

Within Northumberland County Council, competency with regard to the full assessment of Contaminated Land under the Environmental Protection Act, 1990, Part IIA lies with the Environmental Protection Team (EP). The EP Team are part of the Public Protection Service.

The EP team are not 'Statutory Consultees' but provide internal expert advice to Development Management colleagues and externally to Northumberland National Park Authority.

A consultation process exists between the EP Team and Development Management, whereby EP officers will respond to planning consultations which have been successfully validated within 21 days (full) or 14 days (re consultations). Whilst no formal procedure is in place with National Park planning colleagues, officers seek to respond within the same periods.

Upon receipt of a planning consultation involving contaminated land, EP officers will follow the steps within this procedure.

### **3. Stages of Contaminated Land Assessment Process**

### **3.1 Review of Planning Documentation**

On receipt of any consultation, the published planning information should be reviewed to ensure that only current up to date information is assessed. All documentation relating to a Northumberland County Council planning application can be found on the Northumberland Public Access System. Available at: <http://publicaccess.northumberland.gov.uk/online-applications/>

All documentation relating to a National Park planning application can be found on the planning application register available <http://nnpa.planning-register.co.uk/PlaPlanningAppResults.aspx?mode=outstanding>.

### **3.2 Review of GIS Data**

The EP team maintain a GIS system which contains details of potentially contaminated sites within Northumberland County. It is based upon current and historic information. The details are accessed and viewed either through ArcGIS . They also keep records of areas of unrecorded mine workings for the former Castle Morpeth area. The absence of records does not necessarily mean the absence of historical mining or contamination.

Each application site must be assessed against this contaminated land data set.

Where the data layers show that historical contamination may be present, a Phase 1 preliminary risk assessment (as a minimum) will be required.

At this stage, EP officers may recommend refusal of the application due to lack of information, if the application has either been validated without a Phase 1 preliminary risk assessment or such an assessment is not received within the consultation response timetable, where contamination may be present.

### **3.3 Review of Local Knowledge and Public Representations**

Local knowledge held by council employees, neighbours and elected members is a valuable resource and can often identify additional areas of concern locally. Where possible, a site visit should be undertaken and any local knowledge considered. Representations & objections made by members of the public, local & parish councils and pressure groups may alert officers to areas of concern e.g. historic animal burial sites have been identified in this way.

### **3.4 Review of Development Sensitivity**

If the application is for a sensitive end use i.e. dwellings with or without gardens, allotments, schools, nurseries, public open space, then a Phase 1 preliminary risk assessment will be required.

For small development e.g. one house in a garden, this assessment can take the form of the YALPAG screening assessment.

### **3.5 Review of Phase 1 Report**

Where the site has is located in an area where historical contamination may be present and the development has a sensitive end use, a Phase 1 Preliminary Risk Assessment must accompany the planning consultation.

Where more than one property is proposed, the Phase 1 Preliminary Risk Assessment must comply with the requirements of BS10175:2010+A1:2013 - Investigation of Potentially Contaminated Sites Code of Practice.

The NPPF requires that any formal Phase 1 Preliminary Risk Assessment must be undertaken by an appropriate qualified and experienced contaminated land consultant.

EP officers may recommend refusal of the application due to lack of information, when a contaminated land consultant has either not satisfactorily verified their appropriate qualifications and competency *or* when required, either a Phase 1 Preliminary Risk Assessment or a YALPAG screening assessment has not been submitted.

#### **4. Determination of Contaminated Land Risk**

In 2010, in the case of [Technoprint Plc & Anor, R \(on the application of\) v Leeds City Council & Anor](#), the High Court determined that it was unreasonable to grant planning permission where issues relating to potential land contamination were unresolved. This judgement set a legal precedent requiring thereafter, that any Local Authority must consider all significant aspects of contaminated land prior to determining a planning application.

It is therefore necessary in every case, to determine the level of risk a development poses, in order to assess the amount of information required to accompany any planning application.

The determination of risk must take into account the following factors :

##### **4.1 Sensitivity of proposed end use**

There are 3 main high risk categories of end use to consider :-

- Residential with garden (potential growing of foodstuffs),
- Residential with no gardens (apartments)
- Public open spaces / allotments

Using available evidence, EP officers will determine if there is past contaminative use *on, in, under or near* the proposed development site. The significance of the proximity of the past contaminative use will depend on the nature of the activities previously undertaken, underlying geology and mobility of contaminants. Consideration should also be given to other factors and relevant information such as any Phase 1 Preliminary Risk Assessment Report, presence of gardens (actual or proposed) and historical coal mining (see Appendix 2).

##### **Low Risk Residential and Industrial / Commercial**

For residential and Industrial / Commercial developments, where there is no past or potential contaminative use either *on, in, under or near* to the site has been identified the initial risk rating for the site will be *low*. For low risk sites, it is appropriate to control developments through the use of an unexpected contamination condition.

##### **4.2 Current and historical evidence of contamination**

For sensitive residential developments, where a past contaminative use of concern is identified on, in, under or near the site, the initial risk rating will be *high*. For high risk sites, an unexpected contamination conditions cannot be used to control the development.

For residential (with no garden) the only significant risk will be from ground gas. (Refer to Appendix 2 procedure)

For commercial / industrial, where a significant past contaminative use is identified on or near the site, the initial risk rating will be *medium*.

For *medium* risk sites, it **is** appropriate to control developments through the use of conditions.

### 4.3 Phase 1 Preliminary Risk Assessment

Where the risk rating within the Phase 1 Preliminary Risk Assessment differs from the initial risk rating proposed in this procedure and if EP officers are in agreement with it, this may allow for the risk rating to change and a conditional recommendation made.

Where officers are either not in agreement with the conclusion of the report, information is missing, information is of poor quality, or the report has not been compiled in line with NPPF requirements, then the initial risk rating must be maintained or increased.

Where officers have determined that the risk to the proposed development is *high*, the principles of [Technoprint Plc & Anor, R \(on the application of\) v Leeds City Council & Anor](#) must be followed and a Phase 2 intrusive investigation provided.

In these circumstances, if a Phase 2 intrusive investigation and Generic Quantitative Risk Assessment has not been submitted then the EP officers will recommend refusal of the application.

### 4.4 Phase 2 Intrusive Site investigation

If a Phase 2 intrusive site investigation has been submitted, it shall be reviewed to determine if it has been undertaken in accordance with the NPPF which states that 'All investigations of land potentially affected by contamination should be carried out in accordance with established procedures (such as BS10175).

If the Phase 2 intrusive site investigation **is not** sufficient to fully identify the risks to the site, then the application should be refused due to a lack of information.

If the Phase 2 intrusive site investigation **is** sufficient to identify the risks from contaminated land and confirms the risk rating, then a review of the Remediation Strategy should be carried out.

### 4.5 Remediation Strategy

For sites where a Remediation Strategy is required this must accompany the consultation. The proposed remediation must be compliant with current guidance. Where EP officers **are not** in agreement with the conclusion of the Strategy, or information is missing or of poor quality, then a recommendation to refuse the application due to a lack of information should be made.

If the Remediation Strategy **is** sufficient the proposed remediation should be conditioned.

### 4.6 Verification

If the required remediation has been carried out then a Validation Report is required. When this report is received, it shall be sent to the EP Team for verification and final discharge of the Planning condition.

## **5. Recommendation to Development Management**

After the assessment process detailed within this procedure has been followed, one of the following recommendations shall be made in writing to Development Management.

*Unconditional Approval* – Where EP officers are entirely in agreement with the consultation, EP Full Planning memo, appropriately amended will be sent to planning. No Planning conditions are deemed necessary.

*Conditional Approval*- Where the risk rating allows the recommendation of conditions, these will either be sent to Development Management using EP Full Planning memo, appropriately amended Or Development Management will apply the unexpected contamination condition if EP Team do not need to be consulted. Where consulted EP will use appropriate conditions from EP Standard Planning Conditions (June 2022) document or a bespoke condition written.

In order to ensure that they comply with NPPF requirements, all conditional recommendations made by EP will contain the following caveat : ***All recommended conditions should be subject to confirmation by Development Services Legal Team, to ensure they are enforceable.***



*Refusal*- Where the risk rating justifies a recommendation to refuse the application, EP Full Planning memo, appropriately amended will be used.

All planning responses provided by EP officers will be checked and countersigned where either a level of complexity is involved, or a bespoke condition has been applied.

## **6. Updating and Document Management**

This procedure will remain under the ownership of the Principal Environmental Protection Officer who may delegate responsibility for its upkeep on an annual basis to a member of the Environmental Protection Team.

The Principal Environmental Protection Officer shall also ensure that an updated version of the HLUUD GIS layer is provided to Planning when significant amendments are made or upon request.

	Name	Signature	Date
Reviewed by	Wendy Stephenson		27/10/2022
Checked by	Peter Simpson		31/10/2022

## **Appendix 1 - Potentially Contaminated Land**

### **Introduction**

This document and the GIS layer can be used as a screening tool for use in the validation process. EP Team will provide a GIS layer for use in the process that identifies sites that have had a historical use which may have resulted in contaminated land. It **is not** intended as an informative layer for the provision of advice to consultants **nor** is it provided for release to the general public.

All development including 'green field sites' should be screened for their proposed end use against the Historic Land Use Development(HLUD)GIS layer.

The GIS information is not available publicly however applicants may wish to submit a pre-application to the planning department or an Environmental Information Request to the EP team prior to submitting an application to check whether the development site is affected by this layer. Both of these are chargeable services.

For sites which may be affected by an historic contaminative use according to the GIS layer, further information must be provided before the application is accepted or validated.

EP Team consider the following to be sensitive end use:

- Residential properties
- Conversion to residential properties
- Development of schools, nurseries & creches, childrens play areas, playing fields, allotments

### **Validation Advice**

**1 – Is the proposed development impacted by potential contamination i.e. Does the proposed development appear within the HLU layer?**

**Yes** – The application has the potential to be impacted by contamination, continue to Point 5

**No** – continue to Point 2

**2 – Does the development have a sensitive end use, ie. Residential ?**

**Yes** – continue to Point 3

**No** – The app is for industrial / commercial and can be validated and the unexpected contamination condition applied.

**3. Is the development for a single residential property or property within a garden ?**

**Yes** – continue to Point 4

No – The application is for more than one residential property. Application can be validated if Phase 1 Preliminary Risk Assessment has been submitted. If not, Application should not be validated.

**4. - Has a YALPAG screening assessment form should be submitted ?**

**Yes** – Validate the application and consult EP Team.

**No** – The application should not be validated until a YALPAG Screening assessment has been submitted.

**5. Does the development have a sensitive end use ie. Residential ?**

**Yes** – Continue to Point 8

**No** – Continue to Point 6

**6. Is the development Commercial / Industrial ?**

**Yes** – Continue to Point 7

**No** – Continue to Point 8

**7. Has the developer submitted a Phase 1 Preliminary risk assessment or other sufficient information concerning land contamination?**

**Yes** - The application can be validated and EP Team consulted

**No** - The application should not be validated until a Phase 1 preliminary Risk Assessment or other sufficient land contamination information has been received

**8. Is the site a conversion of an existing building or new build development ?**

**Conversion** – continue to Point 9

**New Build** - Continue to Point 10

**9. Has the developer submitted a Phase 1 preliminary risk assessment ?**

**Yes** – The application should be validated and EP Team consulted. If the development is within the coal field area (High or Low risk), Refer to Appendix 2.

**No** - The application should not be validated until a minimum Phase 1 preliminary Risk Assessment or other sufficient land contamination information has been received.

**10. Has the developer submitted both a Phase 1 preliminary risk assessment and a Phase 2 Intrusive Site Investigation ?**

**Yes** - The application should be validated and EP Team consulted. If the development is within the coal field area (High or Low risk), **Refer to Appendix 2.**

**No** – The application should not be validated until both of these documents have been received.



Upon receipt of a Remediation Strategy or Validation Report, the EP Team should be consulted **in every case**.

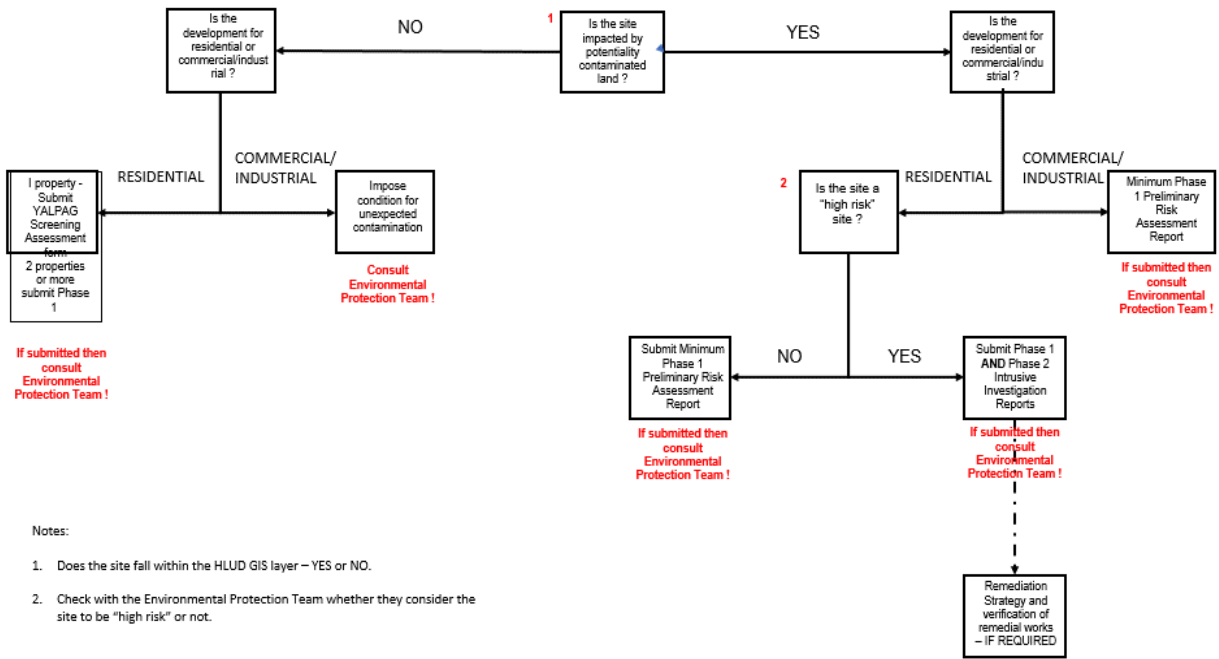
### **Unexpected Contamination Condition**

If during development contamination not previously considered is identified, then an additional written remediation strategy regarding this material (prepared by a competent person) shall be submitted to and approved in writing by the Local Planning Authority.

No building shall be occupied until a remediation strategy has been submitted to and approved in writing by the Local Planning Authority, and measures proposed to deal with the contamination have been carried out. **[Should no contamination be found during development then the applicant shall submit a signed statement indicating this to discharge this condition].**

\* "Competent Person" has the same definition as defined within the National Planning Policy Framework (NPPF).

**Reason:** To ensure that risks from land contamination are minimised.



**Appendix 2 - Mine Gas Protection** If the proposed development site is located in a Coal Authority Mining Reporting Area then mine gas is a material planning consideration.

Environmental Protection would consider that the impact of mine gas falls under the contaminated land assessment for a site. This is specified in section 174(e) of the NPPF and was confirmed locally in the planning inspectorate decision ref: APP/P2935/W/15/3131744 (Arriva Garage, Ashington). As such, the potential impacts from mine gas must be assessed through this process.

## Background

As a result of the extensive historical coal extraction which took place throughout Northumberland, there are a large number of mine shafts, drifts and adits, which have never been formally identified or located. These have the potential to generate mine gases.

An additional feature which increases the environmental risk is the presence of workable seams located at very shallow depths, having very little rock cover between the old workings and ground level. Rising groundwater levels within the Northumberland Coalfield area, are also known to be associated with the increased risk of mine gas migration.

The most common form of Mine gas in Northumberland is Blackdamp or Stythe (local name). Stythe is the name given to the gas where the Oxygen contained naturally in the atmosphere has been adsorbed by the workings, leaving the air deficient of Oxygen. There have been a number of mine gas incidents locally over the years, including one in 1995 in south east Northumberland, which resulted in a fatality.

In 2016, within neighbouring North Tyneside Council, 35 new build properties were subject to significant subsidence issues. It was found that there had been inadequate site investigation into coal mining legacy issues, which failed to identify unrecorded mining activities beneath the site. 18 of these properties required demolition<sup>1</sup>.

In Gorebridge, Midlothian (2013), 22 residents were affected by inhalation of Carbon Dioxide (CO<sub>2</sub>) released from historical underlying coal mining activities<sup>2</sup>. The properties had been built without any protection from mine gas and had been classified as Low Risk. In this case, residents were evacuated and the properties eventually demolished.

Within the report of the Gorebridge Incident Management Team (IMT) (Nov 2017), it was stated that the current procedure for mine gas risk assessment, which gives primary responsibility for assessing the risk (and determining remediation), to the site developers, is *unsatisfactory, unsafe and not consistent with a precautionary approach* designed to protect public health.

The IMT recommended that mine gas mitigation measures should be made mandatory in **all** new residential and similar developments, designated by the Coal Authority as former mining areas, *irrespective* of their current designation as either Low or High risk.

## Mine Gas Protection

Specific guidance is available governing general ground gas protection in the British Standard 8485:2015+A1:2019 - Code of Practice for the Design of Protective Measures for Methane and Carbon Dioxide Ground Gases for New Buildings. EP currently views this as the appropriate document for designing mine gas protection.

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<sup>1</sup> <https://www.chroniclive.co.uk/news/north-east-news/west-allotment-subsidence-site-18-14765026>

<sup>2</sup> <https://www.nhslothian.scot.nhs.uk/MediaCentre/PressReleases/2017/Documents/Gorebridge%20Report.pdf>

This document categorises each building use into a specific class, based on its construction, layout and end use. The document then uses a classification system based on ground gas monitoring results to determine the specific level of protection required, this is known as the CS score. The higher the CS score the greater the amount of ground gas protection required. It should be noted that certain class of buildings cannot be constructed in areas where the CS scores exceed a certain level. As such, ground gas is a material planning consideration in any planning application as the development location may not be suitable for the end use.

Research and local experience has shown that there can be problems with the installation of ground gas protection systems, resulting in defective and poorly performing mitigation. This can result in the ingress of ground gas into properties which could pose a serious or fatal risk to the occupants. This was specifically addressed in the CIRIA document "Good practice on the testing and verification of protection systems for buildings against hazardous ground gases" (C735). Documents C735 and C795 (retrofitting of gas protection) are critically important when validating the installation of a ground gas protection system. They should be read with BS8485.

EP have therefore adopted these documents as the minimum standards for the design, installation and verification of ground gas protection systems. Any protection scheme must be fully compliant with these requirements.

These documents are not available free of charge and must be purchased from the respective organisation. However, a summary of these documents has been published by the Yorkshire and Lincolnshire Pollution Advisory Group (YALPAG) which is available on the NCC website

<https://www.northumberland.gov.uk/Protection/Pollution/Contaminated.aspx>

## **Competency**

It is essential that the design and independent validation of a ground gas protection system is undertaken by a suitable competent and qualified consultant. Reports where consultants do not meet the definition of a 'Competent person' as defined by the NPPF will not be accepted.

## **Coal Authority Layers**

EP will use the Coal Authority Interactive viewer to screen planning applications. These layers are available on the Coal Authority website: <https://mapapps2.bgs.ac.uk/coalauthority/home.html>

## **Development in the Coal Mining Reporting Areas**

The majority of development within the coal mining area will require ground gas protection to be installed to a CS2 standard as a minimum. The exception to this will be for construction of an adjoined structure where the original building does not have ground gas protection installed.

Officers will consider any application fully and may still ask for an intrusive ground gas investigation.

## **Development in the High Risk Coal Mining Area**

The majority of developments in the high risk area will all require an intrusive ground gas investigation. However, for residential properties this ground gas investigation must be submitted

with the initial application. Failure to supply this investigation will make the application invalid. The potential impact on residential properties must be considered at the initial application stage as residential properties are only permitted to be constructed in areas where the gas risk is CS3 or below.

Intrusive ground gas investigations will be required for other developments, however, as the risk is less they can be conditioned. However, regardless of the outcome of the ground gas assessment protection will still need to be installed to a CS2 standard as a minimum. The purpose of this further investigation is to determine if enhanced protection is required.

### **Intrusive Ground Gas Investigation**

Intrusive ground gas investigation must be undertaken by a suitably qualified and competent consultant. Documents BS8485 and Ciria C665 must be referenced. Due to the advancement of technology, accuracy of data and cost efficiencies and potentially shorter monitoring timescales for the applicants, Real time continuous monitors can be used and provided they capture a minimum of 3 or 4 instances of a critical pressure drop as detailed in Claire TB17 and Claire TB18, EP Team will accept this monitoring. In certain circumstances Spot monitoring will not be appropriate or acceptable on larger sites where the gas risk is high. **Extensions and Directly Connected Buildings**

It is widely accepted that ground gas protection should only be installed into extensions where the original building is itself protected by a form of ground gas protection. The same can also be said when considering a change of use application such as a property in a terrace street. In these instances we need to check whether ground gas protection was included in the original or connected building and make recommendations accordingly.

### **Mine Gas Validation Process Advice**

#### **1 - Is the development located in the Coal Mining Report Area ?**

**No** – No mine gas protection is not required and the application can be validated. Do Not consult EP team.

**Yes** – Continue to Point 2

#### **2. Is the development for Residential / sensitive end use ?**

Yes – Continue to point 3

No – Continue to Point 6

#### **3. Is the application for an extension or connected directly to an existing building where no previous gas protection has been fitted e.g. terrace house, sunroom, conservatory etc?**

**Yes** – The application can be validated, do not consult EP on ground gas issues.

**No** - Continue to point 4

#### **4. Is the development for a conversion of an existing building or new build development ?**

**Conversion** – Validate and Consult EP Team. Conditions to minimum CS2 will be recommended, if feasible

**New Build** - Continue to Point 5

**5. Has the applicant submitted details on how ground gas protection will be installed in the development including gas monitoring information ?**

**Yes** –The application can be validated and EP Team should be consulted.

**No** – The application should not be Validated until the ground gas protection and gas monitoring information have been received.

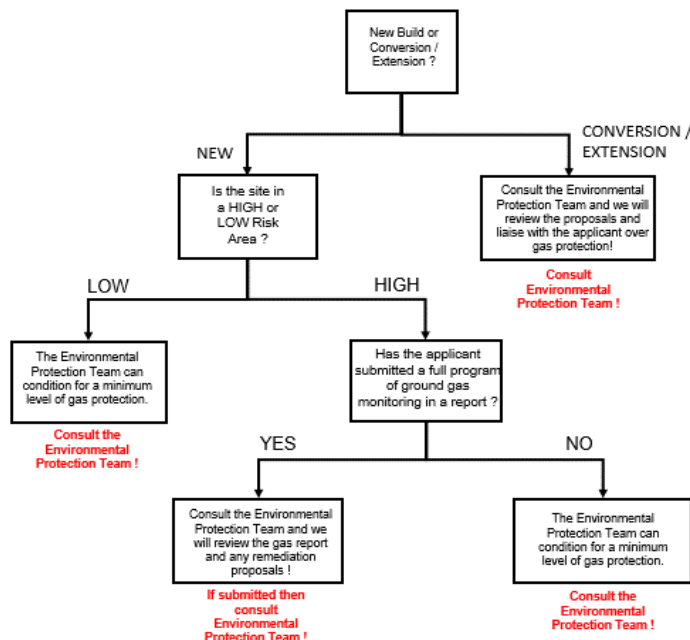
**6. Is the development for Industrial / Commercial end use?**

**Yes** – The application can be validated and EP Team consulted.

If the development is for a similar purpose and there is a Low or No Risk from ground gas, EP Team will recommend approval or conditional approval with their justification.

If the Development is High Risk, EP Team will make specific recommendations.

Upon receipt of *any* Ground Gas monitoring report, the EP Team should be consulted.



This document is a guide and it is acknowledged that from time to time there will be applications that fall outside of the above process. In these instances the validating officer should contact the Senior EHO in the EP team, who is authorised to exercise discretion as to the approach to be followed in that case. Justification will be provided.