# Mineral Resource Assessments

# **Guidance Note**

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#### 1. Introduction

- 1.1. The adopted Worcestershire Minerals Local Plan (2018-2036) includes Policy MLP 41 to ensure the safeguarding of locally and nationally important mineral resources. This policy states that, where non-exempt development¹ is proposed within or partially within Mineral Consultation Areas (MCAs), "A level of technical assessment appropriate to the proposed development and its potential impact on sterilising mineral resources, both within and beyond the boundary of the proposed development, will be required". The MCAs can be seen on the Minerals Local Plan Interactive Minerals Mapping Tool².
- 1.2. The assessment required under policy MLP 41 is commonly known as a 'Mineral Resource Assessment' or 'MRA'3. The MRA must be sufficient to establish the economic value of the resource in terms of its type, depth, quality, and extent, and its potential for use in relation to standard specifications. It must consider the resource both within the proposed non-mineral development boundary and to a distance of 250m beyond the red-line boundary, to assess the extent of sterilisation which would result from the proposed development both within and beyond the site boundary if the development were to go ahead with no measures to avoid or minimise sterilisation.
- 1.3. Having identified how much of the mineral resource the proposed development would sterilise, and identified the potential economic value of the mineral resource, the MRA must set out how the proposal will avoid sterilisation or, where some degree of sterilisation cannot be avoided, how sterilisation will be minimised.

<sup>&</sup>lt;sup>1</sup> Table 7.1 and Table 7.2 in the Minerals Local Plan set out where applications are, or may be, exempt development.

<sup>&</sup>lt;sup>2</sup> The MCAs can be seen at <a href="https://gis.worcestershire.gov.uk/Website/MineralsLocalPlan/">https://gis.worcestershire.gov.uk/Website/MineralsLocalPlan/</a>, by selecting 'Adopted Policies Map', then 'Safeguarding Mineral Resources', then 'Mineral Consultation Areas'.

<sup>&</sup>lt;sup>3</sup> For brevity, the term MRA is used throughout this document.

- 1.4. This guidance document should be read alongside policy MLP 41 and its supporting Reasoned Justification. It sets out more detail on what an MRA should include, and highlights some content commonly provided in MRAs that Worcestershire County Council (WCC) does not require to be included. We strongly recommend that this guidance is followed when producing an MRA to accompany development proposals in Worcestershire.
- 1.5. Providing the information described in this document (and collated in the checklist at Appendix 1) should ensure that all required evidence is available to allow WCC (as the Mineral Planning Authority) to advise the Local Planning Authority on whether policy MLP 41 has been sufficiently addressed. It will allow WCC to advise on whether the extraction and/or mitigation measures proposed are sufficient to avoid or minimise the sterilisation of safeguarded mineral resources.
- 1.6. Following this guidance will help to ensure that WCC does not find the MRA inadequate. Where WCC considers an MRA to be inadequate, this can lead to time-consuming exchanges and revisions to the MRA, during which time WCC is likely to need to maintain an objection to the proposed development.
- 1.7. Mineral safeguarding should be considered at an early stage, and before a proposed scheme design is finalised, because the presence of safeguarded minerals could affect whether a proposal is acceptable and how it should be designed. WCC would welcome pre-application discussion with applicants or their agents on the need for, and content of, an MRA for their proposed development.
- 1.8. Where the proposed development could potentially sterilise more than one type of safeguarded mineral resource, the information set out in Section 2 below must be provided for each type of safeguarded mineral that could be sterilised.

1.9. Any evidence that the potentially affected resource should <u>not</u> be safeguarded should be provided. WCC considers this to be a high threshold, and the following matters will not be sufficient justification for failing to safeguard the resource:

# a) Viability or planning merits of a quarry being developed on or around the proposed development site.

This will not be relevant unless there is clear and compelling evidence that minerals extraction would be wholly impossible now or in the future. In many cases, the mineral resource within/around the application site will be part of a wider resource that extends beyond the areas affected by the proposed development. As such, the MRA should not make assumptions on the viability of a mineral site for the extraction of only those resources that could be affected by the proposed application. Depending on the circumstances, the boundaries of any future mineral site could be wholly or partly outside the red line of the proposed development. Similarly, the necessary features of a mineral site (batters, processing plant, access roads, weighbridges, welfare facilities, etc.) could be wholly or partly outside the red line boundary.

#### b) The scale of the wider resource

The extent of the wider safeguarded resource does not negate the need to safeguard the resource. To seek to justify not safeguarding the resources affected by an individual planning application purely because of the overall volume of such resources elsewhere would be contrary to national safeguarding policy, and such an approach would risk piecemeal degradation of the wider resource over time. However, it may be appropriate to highlight the scale of the wider resource where it is considered that the resource is either extremely common (locally or nationally) or relatively scarce.

## c) The planning merits of the proposed development

The MRA does not need to give a view on the importance of the proposed non-mineral development and how this should be weighed in the overall planning balance. The planning balance is a matter for the LPA (or an inspector, in the case of an appeal). The MRA is a purely technical exercise to provide objective evidence of the impact on safeguarded mineral resources, to inform the LPA's judgement.

- Information that must be included in the MRA
- 2.1. How much of the mineral resource the proposed development would sterilise (in the absence of any measures to avoid or minimise sterilisation)
  - 2.1.1. The MRA must provide a tonnage figure of the amount of resource that would be sterilised by the proposed development. This should be based on a simple 'area multiplied by depth' calculation.
  - 2.1.2. The area must include both the mineral within the <u>directly affected</u> area within the red-line boundary and any mineral within the <u>indirectly affected</u> area up to 250m beyond the red-line boundary. The dotted line in Figure 1 below illustrates how indirect sterilisation can occur by introducing sensitive receptors that are not directly on top of the resource, but are proximate to it.

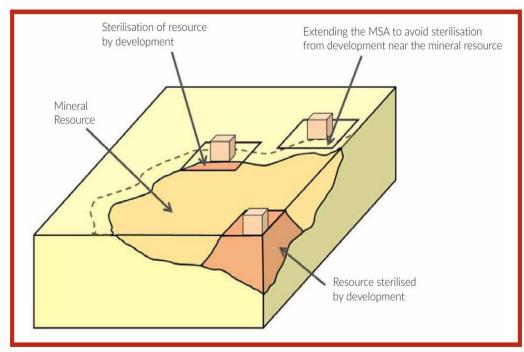


Figure 1 Direct and indirect sterilisation of mineral resources

Adapted from British Geological Survey and The Coal Authority (2011) Mineral safeguarding in England: good practice advice, Figure 2.

- 2.1.3. A blue line should also be provided, to indicate the extent of wider land within the applicant's ownership.
- 2.1.4. If it is demonstrably clear that existing sensitive receptors would constrain all the safeguarded mineral resource within the application site and within 250m of the site, this should be stated. The presence of built development/infrastructure or sensitive receptors at any arbitrary distance does not necessarily mean that mineral development could never go ahead; this will depend on how much of the resource is already sterilised and the location of the sterilising features.
- 2.1.5. The figure used for the depth of the mineral resource should be evidence-based and informed by Worcestershire County Council's 'Analysis of Mineral Resources in Worcestershire' document and the supporting appendices that cover each area of the county in more detail. The MRA should identify the area within which the proposed development is located by consulting Figure 9 in the Analysis document. The relevant appendix can then be used to identify the specific "resource area(s)". The resource area(s) should be stated in the MRA. Additional local or site-specific geological data is welcomed and should be accompanied by analysis of how this has informed the figure used for the depth of the mineral resource in the particular location of the proposed development.
- 2.1.6. In all cases, the full depth of the resource should be used, to provide an 'unconstrained' figure. Whilst WCC acknowledges that the solid sands within the Wildmoor Sandstone Formation and Kidderminster Formation may be particularly deep, the practicalities of extracting the full resource at

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<sup>&</sup>lt;sup>4</sup> Analysis of Mineral Resources in Worcestershire (April 2021) and supporting appendices, available at <a href="https://www.worcestershire.gov.uk/council-services/planning-and-developments/planning-policy-and-strategy/minerals-planning-policy/analysis-minerals-resources">https://www.worcestershire.gov.uk/council-services/planning-and-developments/planning-policy-and-strategy/minerals-planning-policy/analysis-minerals-resources</a>

these depths can be taken into account later in the process (see section 2.3).

- 2.1.7. Unless geological evidence is provided which clearly indicates a shallower depth of resource in certain areas affected by the proposal, the MRA should assume the depth figure applies across the entire potentially sterilised area.
- 2.1.8. Any other factors that could affect the tonnage (such as overburden) must be clearly set out and supported by evidence.
- 2.1.9. Based on the matters discussed in paragraphs 2.1.1 to 2.1.8 above, the MRA must include the following information to allow WCC to understand the amount of mineral resource that could be sterilised:
  - a) A map showing the red-line boundary of the proposed development and a further line 250 beyond the red-line boundary, and showing the location of safeguarded mineral resources.
  - b) The surface area (in square metres) of affected minerals within the red-line boundary.
  - c) The surface area (in square metres) of affected minerals within 250m of the red-line boundary.
  - d) The surface area (in square metres) of any existing sterilisation within the red-line boundary and within 250m of the red-line boundary.
  - e) A blue-line boundary showing the extent of land in the applicant's ownership within 250m of the red-line boundary.

- f) The areas above should be shown on an OS-base map/plan with the scale clearly marked.
- g) Specify the depth (in metres) of the affected resource, and state the source of this figure.
- h) State any other factors that would affect the calculation of the amount of sterilised resource, such as reductions due to overburden.
- i) Provide an overall tonnage based on (a) to (h) above. State the conversion factor used to convert from a volume to a tonnage and state the source of this factor.

### 2.2. The potential economic value of the mineral resource

2.2.1. The MRA should establish the potential economic value of the resource in terms of its type, depth, quality and extent and its potential for use in relation to standard specifications. Because depth and extent have already been considered in section 2.1 above, section 2.2 considers type, quality, and potential for use in standard specifications.

### Type

- 2.2.2. The Mineral Safeguarding Areas (MSAs) and associated MCAs have been defined based on best-available evidence of the likely location of "mineral resources of local and national importance". These minerals are defined in both the National Planning Policy Framework and the Minerals Local Plan as "Minerals which are necessary to meet society's needs, including aggregates, brickclay (especially Etruria Marl and fireclay), silica sand (including high grade silica sands), coal derived fly ash in single use deposits, cement raw materials, gypsum, salt, fluorspar, shallow and deepmined coal, oil and gas (including conventional and unconventional hydrocarbons), tungsten, kaolin, ball clay, potash, polyhalite and local minerals of importance to heritage assets and local distinctiveness." Not all of these minerals occur in Worcestershire.
- 2.2.3. The Minerals Local Plan identifies the specific minerals of local and national importance within Worcestershire as:
  - terrace and glacial sand and gravel resources,
  - solid sand resources,
  - crushed rock resources,
  - silica sand resources,

- an area of Mercia Mudstone Group brick clay close to the Hartlebury and Waresley brickworks, and
- former building stone quarries.
- 2.2.4. The information underpinning the MSAs and MCAs is set out in the 'Analysis of Mineral Resources in Worcestershire'<sup>5</sup> and its supporting appendices, as discussed in paragraph 2.1.5 above. But this analysis is not based on site-specific physical surveys to confirm the minerals' presence or extent.
- 2.2.5. The MRA should set out, for the avoidance of doubt, the type of mineral resource(s) that are at risk of sterilisation. The MRA should state whether the details given in the relevant appendix to the 'Analysis of Mineral resources in Worcestershire' are considered accurate. If the applicant has evidence that the mineral within the resource area differs from that stated in the appendix, this evidence should be provided.

### Quality and potential for use in relation to standard specifications

2.2.6. The MSAs (and MCAs) are defined on the assumption that the mineral resources are likely to be of sufficient quality to enable them to be used for standard applications. The MRA should identify any information on quality that could be relevant to the mineral's potential economic value. The MLP notes that information on quality may be available through geological memoirs, technical reports or mining plans, and information on local mining and quarrying history.

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<sup>&</sup>lt;sup>5</sup> Analysis of Mineral Resources in Worcestershire (April 2021) and supporting appendices, available at <a href="https://www.worcestershire.gov.uk/council-services/planning-and-developments/planning-policy-and-strategy/minerals-planning-policy/analysis-minerals-resources">https://www.worcestershire.gov.uk/council-services/planning-and-developments/planning-policy-and-strategy/minerals-planning-policy/analysis-minerals-resources</a>

- 2.2.7. Where published data is not available, or there are uncertainties over the quality of the resource, it is likely to be necessary to obtain site-specific borehole data to enable the MRA to reach robust conclusions on the quality of the resource and whether it would be suitable to meet standard specifications. Any characteristics that would affect the resource's ability to be used in standard specifications should be explained.
- 2.2.8. It may be helpful to consult with the minerals industry to verify the conclusion of the assessment, but a lack of <u>current</u> interest from mineral operators to work the mineral resource will not be considered sufficient evidence that the resource is not of economic value for the future. This is because safeguarded resources are finite, and policy MLP 41 provides for "the conservation and safeguarding of non-renewable resources for future <u>generations</u>" (emphasis added). Because there is no time limit on when safeguarded resources might be required, the likelihood of the identified resources being extracted within any particular timeframe is not relevant to the MRA.

### Conclusion on potential economic value

- 2.2.9. Having considered the points above, the MRA should reach a view on the potential economic value of the mineral resource.
- 2.2.10. If the evidence demonstrates that the resource has a current or future economic value, the remaining stages of the MRA will need to be completed to identify how its sterilisation would be avoided or minimised.
- 2.2.11. If it is considered that the mineral has no/negligible current or likely future economic value, this conclusion should be discussed with WCC. If WCC agrees with this conclusion, there will be no need for the MRA to continue

to the next stages. If WCC disagrees, the remaining steps of the MRA will need to be completed.

- 2.2.12. If the evidence on current or future economic value is inconclusive, this should also be discussed with WCC. WCC will then determine whether a full MRA is required.
- 2.2.13. Based on the matters discussed in paragraphs 2.2.1 to 2.2.12 above, the MRA must include the following information to allow WCC to understand the potential economic value of the mineral resource:
  - j) Confirm the type(s) of mineral resource(s) that are at risk of sterilisation, with reference to the relevant appendix to the 'Analysis of Mineral Resources in Worcestershire'. Any evidence that the type of mineral differs from what is listed in the appendix should be provided.
  - k) If there are any evidence-based characteristics that would prevent or limit the resource's use in standard specifications, these should be explained. This may include the results of site-specific surveys.
  - State whether, in terms of type, quality and potential for use in relation to standard specifications, the mineral resource has a current or future potential economic value.
  - m) If consultation with the minerals industry has been carried out to verify the conclusion of the assessment of the mineral's potential value, the results of this consultation should be provided.

#### 2.3. How sterilisation would be avoided or minimised

- 2.3.1. If sterilisation of some, or all, of an economically valuable mineral resource could occur, the applicant will be required to demonstrate how opportunities for extraction of the resource will be optimised either in advance of development taking place, or in phases alongside the development, applying the sequential approach in part (c) of policy MLP 41:
  - (i) extracting all of the resource within the proposed development site and in the area which would potentially be sterilised by the development either in advance of development taking place or in phases alongside the development; or
  - (ii) where extracting all of the resource is not possible or would prevent a suitable landform for subsequent development, extracting a proportion of the resource which would potentially be sterilised by the development either in advance of development taking place or in phases alongside the development; or
  - (iii) as a last resort, if neither i or ii above is possible, undertaking incidental recovery to utilise a portion of the mineral resource as an integral part of the groundworks for the non-mineral development and putting in place sufficient mitigation measures to minimise the sterilisation of resources beyond the site boundary.
- 2.3.2. The MRA needs to consider how to avoid or minimise the sterilisation of mineral resources. This should take into account practical considerations such as slope stability and access arrangements in considering whether full extraction of the potentially sterilised mineral is possible.
- 2.3.3. If the MRA concludes that it would be possible to extract all of the resource, consideration will need to be given to the potential impacts from this extraction. Any mitigation measures beyond those otherwise required

during development of the non-mineral site will need to be identified. Depending on the scale and nature of the prior extraction required, it may be appropriate to consider whether a minerals planning application will also be required, with clear links between the two proposals.

- 2.3.4. If it is not possible to achieve full extraction, either because it is not possible following the considerations above, or because it would prevent a suitable landform for subsequent development, the applicant should provide sufficient evidence to explain why this is the case, and should then go on to consider whether it is possible to extract a proportion of the resource which would potentially be sterilised by the development.
- 2.3.5. The extraction of minerals will necessarily result in a temporary or permanent lowering of land in that location. This is not, in itself, justification for failing to adequately safeguard finite minerals of local and national importance. The presence of safeguarded minerals should have informed the design of the proposed development from the outset. The fact that it may not be possible to extract <u>all</u> of the safeguarded resource will not be sufficient justification for extracting none of the safeguarded resource.
- 2.3.6. Where extracting all of the resource is not possible, evidence must be provided on the likely amount of extraction that could take place whilst still enabling a suitable landform to allow non-mineral development to proceed.
- 2.3.7. Consideration during the development of the design and phasing of the development could result in opportunities to deliver high-quality design through appropriate landscaping and the integration of physical features and green infrastructure into site design. Where there are particular differences in the localised distribution of minerals within the site, this could also inform the design of the proposal. As an example, if mineral resources were deeper and/or better quality in one specific part of the site, this could

inform the location of any deeper areas of excavation necessary for the proposal, such as for sustainable drainage features.

- 2.3.8. Whilst it may not be appropriate to import inert materials to raise levels back to pre-extraction levels across the entire site, some consideration should be given to whether more selective use of infilling could enable the best balance between maximising the extraction of mineral resources and establishing an appropriate landform for subsequent development.
- 2.3.9. WCC, as the mineral planning authority, will consider the evidence on how the minerals extraction has been balanced against the need for a suitable landform. WCC will then advise the LPA as to whether the proposals are considered sufficient, and the LPA will consider this in the planning balance.
- 2.3.10. If it is not possible to achieve partial extraction under part (c)(ii) of policy MLP 41, the applicant should provide sufficient evidence to explain why this is the case, and should then go on to consider undertaking incidental recovery to utilise a portion of the mineral resource as an integral part of the groundworks for the non-mineral development, as well as putting in place sufficient mitigation measures to minimise the sterilisation of resources beyond the site boundary.
- 2.3.11. The applicant should explain how a portion of the mineral resource will be recovered and used in the proposed development. This can reduce the need to import material and can prevent the safeguarded resource being wholly sterilised. It is likely that the proposed development will involve groundworks, such as the creation of footings or sustainable drainage schemes, or the introduction of landscaping. These activities could provide opportunities to both recover and use on-site mineral resources.

- 2.3.12. The identification of Mineral Safeguarding Areas does not create a presumption that the resources defined will be worked<sup>6</sup>, but long-term safeguarding means that the potential for the resources to be worked in the future needs to be considered. Any future mineral development in the vicinity of the proposal would need to comply with all relevant development plan policies, including policies to protect people, places and the environment from potential negative impacts. However, this does not negate the need for non-mineral development within 250m of safeguarded mineral resources to minimise the potential for sterilisation of resources beyond the site boundary. Where the development would introduce or increase the number (or sensitivity) of sensitive receptors within 250m of a safeguarded mineral resource, details should be provided to explain how the proposed development has been designed to minimise this risk of conflict between land uses, should mineral development be proposed in the vicinity in the future.
- 2.3.13. Mitigation measures should seek to protect the amenity of the receptors being introduced by the proposed development from potential adverse effects of any future mineral development. This might include locating the most sensitive receptors or land uses furthest away from the mineral resource; ensuring the orientation of buildings and positioning of windows in elevations minimises the risk of any future potential amenity impacts from mineral development; or the introduction of natural or engineered barriers to reduce any future potential noise and visual impacts. The location and design of any mitigation measures should be considered in the context of the policies of the wider development plan.
- 2.3.14. Based on the matters discussed in paragraphs 2.3.1 to 2.3.13 above, the MRA must include the following information to allow WCC to

<sup>&</sup>lt;sup>6</sup> Department for Levelling Up, Housing and Communities (December 2023) National Planning Policy Framework, paragraph 216(c).

understand how the sterilisation of mineral resources has been avoided or minimised:

- n) Information on how the development would extract all of the resource within the proposed development site and in the area which would potentially be sterilised by the development either in advance of development taking place or in phases alongside the development. If extracting all of the resource is not possible, the reasons for this should be given.
- o) Where extracting all of the resource is not possible or would prevent a suitable landform for subsequent development, provide information on how a proportion of the resource which would potentially be sterilised by the development would be extracted either in advance of development taking place or in phases alongside the development. If extracting a proportion of the resource is not possible, the reasons for this should be given.
- p) As a last resort, if neither (n) nor (o) above is possible, provide information on how incidental recovery would be undertaken to utilise a portion of the mineral resource as an integral part of the groundworks for the non-mineral development. Information must also be provided on how sufficient mitigation measures would be put in place to minimise the sterilisation of resources beyond the site boundary.

# 3. Next steps

# 3.1. Worcestershire County Council's review of the MRA

- 3.1.1. Whilst the applicant/agent may have engaged with WCC in pre-application discussions on the content of an MRA, the final MRA should not be submitted solely to WCC. The completed MRA should be submitted to the LPA alongside all other documents required as part of the planning application.
- 3.1.2. WCC will review the submitted MRA and check that it includes all the necessary information. Where any information is missing and no satisfactory explanation is provided, WCC will request that the MRA is revised accordingly, but may need to submit a holding objection to the LPA until such time as the necessary information is provided.
- 3.1.3. Where all the necessary information is provided, but there are issues in the MRA that require discussion between WCC and the applicant/agent, WCC will raise these issues as early as possible. WCC will aim to work proactively with the applicant/agent to resolve any issues within the relevant planning application decision-making period, but may need to submit a holding objection to the LPA until such time as the issues are resolved.
- 3.1.4. Any outstanding information provided post-submission may result in the LPA having to re-consult on the application. Whether or not re-consultation is required, the late submission of necessary information could result in a delay to WCC being able to provide a final response to the planning application.
- 3.1.5. Once a sufficiently detailed Mineral Resource Assessment is provided, and proposals for any prior extraction of the resource are outlined, WCC (as

the Mineral Planning Authority) will advise the Local Planning Authority on whether it considers the proposals for prior extraction to be acceptable. Where WCC considers the proposals are not acceptable, it will advise the Local Planning Authority that the importance of the resource means that it should be retained in-situ, and the non-mineral development refused, to ensure the future extraction of the mineral resource(s) of local and/or national importance is not prevented. The LPA will be expected to take this advice into account when determining the application.<sup>7</sup>

<sup>7</sup> National Planning Policy Framework (2023) Paragraph 218, and Planning Practice Guidance on "Minerals", Paragraph: 005 Reference ID: 27-005-20140306, Revision date: 06 03 2014.

# Appendix 1: Checklist of MRA requirements

The checklist below brings together in one place all of the requirements set out above. It can be used to help ensure that the submitted MRA is fit for purpose. If any of the requirements have not been met, please explain why this is the case.

#### **Quantity of resource**

- a) A map showing the red-line boundary of the proposed development and a further line 250 beyond the red-line boundary, and showing the location of safeguarded mineral resources.
- b) The surface area (in square metres) of affected minerals within the redline boundary.
- c) The surface area (in square metres) of affected minerals within 250m of the red-line boundary.
- d) The surface area (in square metres) of any existing sterilisation within the red-line boundary and within 250m of the red-line boundary.
- e) A blue-line boundary showing the extent of land in the applicant's ownership within 250m of the red-line boundary.
- f) The areas above should be shown on an OS-base map/plan with the scale clearly marked.
- g) Specify the depth (in metres) of the affected resource, and state the source of this figure.
- h) State any other factors that would affect the calculation of the amount of sterilised resource, such as reductions due to overburden.
- i) Provide an overall tonnage based on (a) to (h) above. State the conversion factor used to convert from a volume to a tonnage and state the source of this factor.

#### Potential economic value of resource

- j) Confirm the type(s) of mineral resource(s) that are at risk of sterilisation, with reference to the relevant appendix to the 'Analysis of Mineral Resources in Worcestershire'. Any evidence that the type of mineral differs from what is listed in the appendix should be provided.
- k) If there are any evidence-based characteristics that would prevent or limit the resource's use in standard specifications, these should be explained.
  This may include the results of site-specific surveys.
- I) State whether, in terms of type, quality and potential for use in relation to standard specifications, the mineral resource has a current or future potential economic value.
- m) If consultation with the minerals industry has been carried out to verify the conclusion of the assessment of the mineral's potential value, the results of this consultation should be provided.

#### **Avoiding or minimising sterilisation**

- n) Information on how the development would extract all of the resource within the proposed development site and in the area which would potentially be sterilised by the development either in advance of development taking place or in phases alongside the development. If extracting all of the resource is not possible, the reasons for this should be given.
- o) Where extracting all of the resource is not possible or would prevent a suitable landform for subsequent development, provide information on how a proportion of the resource which would potentially be sterilised by the development would be extracted either in advance of development taking place or in phases alongside the development. If extracting a proportion of the resource is not possible, the reasons for this should be given.

p) As a last resort, if neither (n) nor (o) above is possible, provide information on how incidental recovery would be undertaken to utilise a portion of the mineral resource as an integral part of the groundworks for the non-mineral development. Information must also be provided on how sufficient mitigation measures would be put in place to minimise the sterilisation of resources beyond the site boundary.