

Outcomes Report for Identifying and Protecting Mineral Resources in Greater Manchester

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Introduction

1 Introduction

1 Introduction

Introduction

1.1 A Minerals Plan is to be prepared by the Joint Minerals Planning Team, Greater Manchester Geological Unit (GMGU), on behalf of the Greater Manchester Authorities of Bolton Metropolitan Borough Council, Bury Metropolitan Borough Council, Manchester City Council, Oldham Metropolitan Borough Council, Rochdale Metropolitan Borough Council, Salford City Council, Stockport Metropolitan Borough Council, Tameside Metropolitan Borough Council, Trafford Metropolitan Borough Council and Wigan Metropolitan Borough Council.

1.2 The Minerals Plan will be a document which will cover land-use planning matters in relation to minerals developments for the Joint Plan area and will include detailed criteria based, site specific policies and allocations.

1.3 National minerals planning policy requires Mineral Planning Authorities to protect and safeguard mineral resources and identify areas for future minerals working. The Report 'Identifying and Protecting Mineral Resources in Greater Manchester' outlines:

- What information is available on mineral resources in Greater Manchester and how it is proposed to use this information in developing Mineral Safeguarding Areas; and
- How it is proposed to identify areas for future minerals working.

Background

1.4 The Report 'Investigating and Protecting Mineral Resources in Greater Manchester' was issued for consultation with relevant statutory stakeholders and other interested organisations and individuals between 27th November 2009 and 8th January 2010.

1.5 This 'Outcomes Report' provides a summary of responses received along with recommendations for acting on the responses received as a result of the consultation exercise.

1.6 A total of 11 responses were received. The organisations which responded are as follows:

- Natural England
- Environment Agency
- Confederation of Coal Producers (Coalpro)
- The Coal Authority
- Horwich Town Council
- Mineral Planning Group (MPG)
- Network Rail

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- 4NW
- Cheshire West and Chester Council
- Carter Jonas
- Peel Environmental

Introduction

Responses to Issues

2 Responses to Issues

2 Responses to Issues

2.1 The following section sets out the Questions made available for stakeholder comment, a summary of the responses received and recommendations for acting on them.

Question 1

Are you aware of any other sources of information that would assist in identifying Mineral Safeguarding Areas?

Table 1 Responses to Question 1

Response received	Number of responses	Respondents
Additional information put forward	2	The Mineral Planning Group, The Coal Authority
Other	2	Peel Environmental, Environment Agency

2.2 The comments relating to the identification of Mineral Safeguarding Areas are set out in the table below.

Table 2 Detailed Responses to Question 1

Respondent	Representation	Commentary
The Mineral Planning Group	Mineral Planning Group suggest the borehole data adjacent to Pilkington Quarry in Horwich. MPG explain that this data identifies a significant dimension stone resource that is currently in an Area of Search in the Bolton Unitary Development Plan.	We will be contacting The Mineral Planning Group regarding this information.
The Coal Authority	The Surface Coal Resource Plan has been developed jointly with British Geological Society and surface mining operators specifically for	The Surface Coal Resource Plan will be used to inform the development of the evidence base for the definition of the Mineral Safeguarding Area for coal

Responses to Issues

Respondent	Representation	Commentary
	<p>use within the planning process. As such, the Coal Authority considers that it represents the best available geological and mineral resource information for the area, as required by paragraph 32 of the Mineral Policy Statement¹ Practice Guide, and should therefore be utilised as the main evidence base for the definition of the Mineral Safeguarding Area for coal.</p>	<p>as this contains the most up-to-date information.</p>
<p>Peel Environmental</p>	<p>Peel is not aware of any other sources of information that could be used as a starting point to delineate any Mineral Safeguarding Area, however, Peel would encourage that any boundaries and policies affecting the Mineral Safeguarding Area not only take account of existing developed areas, but also take account of the location and layout of other forms of development that are proposed, or likely to be proposed in the near future.</p>	<p>Any boundaries and policies affecting the Mineral Safeguarding Area will not only take account of existing developed areas, but also the location and layout of other forms of development.</p>
<p>Environment Agency</p>	<p>It is suggested that coalbed methane potential and underground coal working potential will only be likely to exist within the footprint of the Coal</p>	<p>Noted. In line with Mineral Policy Statement 1, we will identify areas of the coalfield at depths below the surface of between 200-1500m and of areas licensed for coalbed methane by the Coal</p>

2 Responses to Issues

Respondent	Representation	Commentary
	<p>bearing strata, either where the coal seams are present below bedrock level and, in the case of coalbed methane, more likely where coal bearing strata extend to greater depth beneath younger Permo-Triassic Age strata.</p> <p>Where strata of greater age than the coal bearing strata are present at rockhead there will be little or no coalbed methane potential.</p> <p>For consistency's sake, this information on coal and coalbed methane could be simply expressed as an additional map in appendix 3.</p>	<p>Authority. Once the methodology is agreed, a map showing this will be prepared for inclusion in the Minerals Plan.</p>

Response

2.3 The data which Mineral Planning Group hold will be requested and assessed. Any boundaries and policies affecting the Mineral Safeguarding Area will not only take account of existing developed areas, but also the location and layout of other forms of development. As The Coal Authority have suggested, the Surface Coal Resource Plan will be used as the main evidence base for the definition of Mineral Safeguarding Areas for coal.

2.4 We also welcome information on potential resources from other landowners, operators or representatives as we develop the plan.

Question 2

2.5 Do you hold any additional mineral resources information that may assist in the process of identifying Mineral Safeguarding Areas and that you would be willing to share?

Responses to Issues

Table 3 Responses to Question 2

Response received	Number of responses	Respondents
Additional mineral resources information	2	The Minerals Planning Group and Peel Environmental

2.6 The comments relating to additional mineral resources information are set out in the table below.

Table 4 Detailed Responses to Question 2

Respondent	Representation	Commentary
The Mineral Planning Group	MPG suggest the borehole data adjacent to Pilkington Quarry in Horwich. Mineral Planning Group explain that this data identifies a significant dimension stone resource that is currently in an Area of Search in the Bolton Unitary Development Plan.	We will be contacting The Mineral Planning Group regarding this information.
Peel Environmental	Peel holds mineral resource information on the remaining peat depths at the various peat extractions sites that are operated by its tenants at Little Woolden Moss, Astley Moss, and Chat Moss.	We will be contacting Peel Environmental regarding this information.

Response

2.7 The data which the Mineral Planning Group and Peel Environmental hold will be requested and assessed. We also welcome information on potential resources from other landowners, operators or representatives as we develop the plan.

Question 3

2.8 Do you know of any information on the mineral resources in Table 1 that may assist in assessing the potential future economic or conservation value of the resource?

2 Responses to Issues

Table 5 Responses to Question 3

Response Received	Number of responses	Respondents
Additional information put forward	3	The Coal Authority, Peel Environmental and the Environment Agency

2.9 The outcomes relating to information on mineral resources from Table 1 are set out in the table below.

Table 6 Detailed Responses to Question 3

Respondent	Representation	Commentary
The Coal Authority	The Coal Authority would like to draw our attention to The Energy White Paper 2007 and The UK Low Carbon Transition Plan White Paper 2009 which they say highlight the importance of protecting fossil fuels which remain an essential input to our electricity supplies for many years to come. The Coal Authority believes that the shallow coal resource within the urban area should be included within the Mineral Safeguarding Area.	Safeguarding of shallow coal resources within the urban area will be considered when producing the next stage of the Minerals Plan. The Energy White Paper will be reviewed, The UK Low Carbon Transition Plan White Paper has already been reviewed within the Scoping Report for Sustainability Appraisal. We will acknowledge that coal will make up part of the future 'energy mix' and that there is a need to safeguard this resource from other development where appropriate.
Peel Environmental	Peel explain that the sand and gravel deposits at Astley Moss Quarry have not been included in Table 1. In relation to the comment regarding peat Peel disagrees that there "is limited potential for further extraction as area extensively worked", and that there are "sufficient [reserves] to meet expected demand". They explain that Chat Moss has 20 years of reserves past 2010 (to	Peel's comments will be taken into account, Astley Moss will be included amongst the sand and gravel deposits. Chat Moss' reserves will be considered. Regarding peat, the current drive is towards carbon sequestration and harvesting is not encouraged. In addition, it was acknowledged by the Growing Media Association at the

Responses to Issues

Respondent	Representation	Commentary
	reach a remaining minimum depth of 2m of peat), and the demand for peat continues to remain strong for horticultural purposes, and this site is an important site nationally for UK peat supplies.	Examination in Public for the Regional Spatial Strategy that current planning permissions in Greater Manchester are sufficient for the needs of industry at this time.
Environment Agency	In the light of modern concerns about Climate Change due to unnecessary release of greenhouse gases, consideration should be given to the possible need to inhibit destruction of peat resources where suitable alternative materials are available. Peat is a very important and significant trap for organic carbon which is likely to be released to the atmosphere as carbon dioxide if the peat is worked.	Noted. The Environment Agency's concerns about the harvesting of peat will be reflected within future stages of the Minerals Plan
Environment Agency	The British Geological Society Mineral Resource Maps are a very crude tool based only on maps of surface or bedrock geology, and if used in isolation they can be misleading. For example, these maps do not show those economically workable mineral deposits that may occur beneath an overburden layer.	The limitations of the British Geological Society mineral resource maps are accepted. However, this is the best data available and should we receive additional data, for example, from industry, this will be reviewed and used where appropriate.

Response

2.10 As suggested by The Coal Authority, safeguarding shallow coal within the urban area will be considered when producing the next stage of the Minerals Plan. The Coal Authority also highlight two white papers, one of which we have already considered within Appendix 5 of the Minerals Plan Scoping Report for Sustainability Appraisal and Strategic Environmental Assessment, the other will be reviewed during the production of the Minerals Plan. We will also acknowledge that coal will make up part of the future 'energy mix' and there is a need to safeguard this resource from other development. Astley Moss will be included amongst the sand and gravel deposits and Chat Moss' reserves will be considered.

Question 4

2 Responses to Issues

2.11 Do you have any information that could be used to refine the British Geological Society mineral resource boundaries?

Table 7 Responses to Question 4

Response Received	Number of responses	Respondents
Information put forward	2	The Confederation of UK Coal Producers (CoalPro), The Coal Authority

2.12 The outcomes relating to British Geological Society mineral resource boundaries are set out in the table below.

Table 8 Detailed Responses to Question 4

Respondent	Representation	Commentary
The Confederation of UK Coal Producers (CoalPro)	CoalPro believe that higher value minerals, such as surface coal resources, may be capable of being exploited economically in small quantities in small sites. CoalPro believe there may be opportunity to do so when large scale redevelopment takes place within the urban area, indeed, it may be sensible and appropriate to do so for stability reasons if the resources have been affected by old workings. CoalPro believes, therefore, that the whole of the shallow coal resource should be safeguarded, including that within the urban area.	Safeguarding of shallow coal resources within the urban area will be considered when producing the next stage (Issues and Options) of the Minerals Plan. Stability issues will also be considered when doing this.
The Coal Authority	The Coal Authority does not agree with the statement that there is unlikely to be any value in safeguarding mineral resources within the urban area (as is suggested in paragraph 3.4.2 of the discussion paper). The Coal Authority is of the firm view that there is a sound evidence base and justification for incorporating urban areas within the Mineral Safeguarding Area for coal.	Safeguarding of shallow coal resources within the urban area will be considered when producing the next stage (Issues and Options) of the Minerals Plan.

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Response

2.13 Safeguarding of shallow coal resources within the urban area will be considered when producing the next stage (Issues and Options) of the Minerals Plan. Stability issues will also be considered when doing this.

Question 5

2.14 Are you aware of any potentially suitable sites that you wish to nominate for consideration for minerals extraction or minerals related development?

Table 9 Responses to Question 5

Response Received	Number of responses	Respondents
Additional Site/s suggested	3	The Mineral Planning Group, Carter Jonas and Peel Environmental

2.15 The outcomes relating to the nomination of potentially suitable sites are set out in the table below.

Table 10 Detailed Responses to Question 5

Respondent	Representation	Commentary
The Mineral Planning Group	Mineral Planning Group would like to nominate the Pilkington Quarry extension area and possible land between Montcliffe and Pilkington Quarries as specific sites for consideration. A site plan has been submitted.	Any information submitted regarding Pilkington Quarry Extension and possible land between Montcliffe and Pilkington Quarries will be assessed through the Minerals Plan.
Carter Jonas	Land to the south of Pilsworth Quarry is known to contain a reserve of sand and gravel. A site plan has been submitted	Any information submitted regarding Land to the south of Pilsworth Quarry will be assessed through the Minerals Plan.
Peel Environmental	Fletcher Bank Quarry: There are further resources of gritstone/sandstone beyond the existing permitted reserves. These resources are suitable for future extraction and would be available during the Plan period.	Any information submitted regarding Fletcher Bank Quarry will be assessed through the Minerals Plan.

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Respondent	Representation	Commentary
Peel Environmental	Chat Moss Peat Works: The current planning permission for this site expires at the end of 2010, and there are enough reserves for continued extraction for approximately 20 years. The minimum depth of peat that would be left following this extended period of extraction would be more than enough to permit the site to be restored to lowland raised bog (2m), or similar habitat, which is an after use not currently required by the existing consent.	Any information submitted regarding Chat Moss Peat Works will be assessed through the Minerals Plan.
Peel Environmental	Coalbed methane: Peel has been working with the relevant Petroleum Exploration and Development Licence (PEDL) holder(s) to develop a network of coal bed methane production sites. The areas which are most suitable for coalbed methane are situated in deep coal seams to the west of the city centre predominately in Trafford, Salford and Wigan. Peel would be pleased to share with the Joint Authorities the information that it has in relation to these facilities.	We would welcome information on coalbed methane in order to improve the evidence base. We will contact Peel Environmental to request further information on coalbed methane.
Peel Environmental	Virtual Quarries, Manchester Ship Canal: The Manchester Ship Canal has the potential to be used for the transportation of minerals and the importation of raw materials to produce a range of construction products to serve the Greater Manchester market, and other sub-regional markets. Peel believes that by locating a dedicated facility on the Manchester Ship Canal, able to produce a range of products from minerals, the effect of Manchester being a net importer of minerals, (i.e. Heavy Goods Vehicle traffic movements) would be reduced.	We will liaise with Peel Environmental in future regarding Virtual Quarries and the use of the Manchester Ship Canal to transport mineral (and moving them off the road). If Peel Environmental are aware of a potential site for consideration for use as a Virtual Quarry, this should be put forward for assessment through the Minerals Plan at the earliest opportunity.

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Respondent	Representation	Commentary
Peel Environmental	Peel is seeking to increase the amount of freight moved on the Canal, and as such is investing in new infrastructure projects, such as Port Salford, Port Warrington, Irlam Wharf and Ince Resource Recovery Park. Therefore the concept of moving minerals on the Manchester Ship Canal is something that within Peel's long term strategy for the Manchester Ship Canal.	We will liaise with Peel Environmental regarding the potential use of the Manchester Ship Canal for the transportation of minerals.

Response

2.16 Any information on nominated sites will be assessed as part of future work on the Minerals Plan. We also welcome information on potential resources from other landowners, operators or representatives as we develop the plan.

Question 6

2.17 Do you hold any information that could be used to refine the amended 1989 Minerals Local Plan/ Unitary Development Plan areas of search? For example, areas within which planning permission might be possible and avoiding unrealistic locations.

Table 11 Responses to Question 6

Response Received	Number of responses	Respondents
No responses to question 6	1	Environment Agency

2.18 The outcomes relating to information that could be used to refine the amended 1989 Minerals Local Plan/ Unitary Development Plan areas of search are set out in the table below.

Table 12 Detailed Responses to Question 6

Respondent	Representation	Commentary
Environment Agency	In consideration of potential Mineral Safeguarding Areas, significant conflict between the interests of mineral and groundwater resources should be avoided.	Groundwater (including Source Protection Zones and major aquifer) shall be considered when identifying sites/areas of search. We will be doing further work on areas of search for coal

2 Responses to Issues

Respondent	Representation	Commentary
	<p>Areas of the most strategically important interest in groundwater resources are identified by the Environment Agency as Principle Aquifers, and by designated Groundwater Source Protection Zones around the most important abstractions as set out in the Environment Agency Groundwater Protection Policy.</p> <p>Significant conflict of these strategic interests with mineral working will be very likely where the proposed mineral working intends to dewater strata below the water table in a Principle Aquifer, or in a designated Groundwater Source Protection Zone or where restoration of the void may involve the importation of waste materials in those same locations.</p> <p>Given the current location of designated Groundwater Source protection Zones compared with the Amended 1989 plans of 'Areas of Search' in Appendix 4 the most obvious potential area of conflict between strategic Groundwater and Mineral Resources is that relating to the search area for Opencast Coal near Edge Green. (See COMMENT on Appendix 4: Map 8 Surface Working of Coal' below) This 'Area of Search' appears to encroach on both principle Aquifer and a designated Groundwater</p>	<p>(adopting different approach to that used for 1989 minerals plan) however ground water will be taken into consideration when looking at this. We will liaise with the Environment Agency and industry regarding whether we will exclude Source Protection Zone/major aquifer when identifying Mineral Safeguarding Areas - this designation is to protect the mineral resource and does not mean it would be worked. However, if it would be harmful to work the mineral in the major aquifer there would be no need to identify as Mineral Safeguarding Area.</p>

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Respondent	Representation	Commentary
	Source Protection Zone for public water supply, although it is far from clear whether working in this area would incorporate dewatering of Principle Aquifer strata or not.	

Response

2.19 The importance of groundwater and controlled water is recognised and they will be taken into account during preparation of the Minerals Plan.

Question 7

2.20 Do the amended 1989 Minerals Local Plan/ Unitary Development Plan areas of search exclude areas which you believe contain viable mineral deposits? Please provide justification.

Table 13 Response to Question 7

Response Received	Outcome	Respondents
Additional areas not included within 1989 Minerals Local Plan/ Unitary Development Plan areas of search	1	The Coal Authority

2.21 The outcomes relating to areas excluded from the amended 1989 Minerals Local Plan/ UDP areas of search are set out in the table below.

Table 14 Detailed Responses to Question 7

Respondent	Representation	Commentary
The Coal Authority	It is noted that the amended 1989 Minerals Local Plan/Unitary Development Plan Areas of Search exclude substantial areas of the coal resource identified by our Surface Coal Resource Plan (particularly to the east of Manchester). Our information therefore represents more up-to-date evidence.	Use the Surface Coal Resource Plan as the main evidence base for the definition of the Mineral Safeguarding Area for coal as this contains the most up-to-date information.

Response

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2.22 The Coal Authority considers that the approach taken within the 1989 Greater Manchester Minerals Local Plan (whereby Areas of Search were identified and there was a general presumption against mineral development outside such areas) conflicts with the more recent guidance in paragraph 43 of the Mineral Policy Statement 1 Practice Guide. We will be using the Surface Coal Resource Plan as the main evidence base for the definition of the Mineral Safeguarding Area for coal as this contains the most up-to-date information.

Question 8

2.23 Should the Minerals Plan look at any other types of mineral?

Table 15 Response to Question 8

Response Received	Outcome	Respondents
Suggested additional mineral	2	Minerals Planning Group, Environment Agency

2.24 The outcomes relating to other types of mineral are set out in the table below.

Table 16 Detailed Responses to Question 8

Respondent	Representation	Commentary
The Mineral Planning Group	Mineral Planning Group suggest silica sand as another type of mineral	Silica sand in Greater Manchester is in Shirdley Hill Sand Formation. This outcrops Wigan, Trafford and Manchester but is only identified as a mineral resource by British Geological Society in Wigan. The deposits are synonymous with deposits worked for glass making in the St Helens area however, we are unaware of silica sand ever being worked for this purpose within the Greater Manchester Area.
Environment Agency	Coal Bed Methane and deep coal mining may achieve greater importance if national and international energy prices continue to rise in the coming years. As such, it may be appropriate to determine where these resources might be found	We will consider identifying areas where there is coal between 200-1500m depth below surface and also liaising with the Coal Authority regarding license areas for coalbed methane. This will be

Responses to Issues

Respondent	Representation	Commentary
	<p>and to determine policies to cover their potential investigation, development and exploitation before the need arises.</p> <p>In the case of both coal and coal bed methane, some flexibility in location of surface works is available, but nevertheless some surface infrastructure is essential, and there are limits on just how far from the exploited reserve these can be.</p>	<p>taken further at Issues and Options.</p>
Environment Agency	<p>Morley's Hall Quarry at Astley Green works Triassic Age Sherwood Sandstone for sand and gravel production.</p>	<p>The relevant table will be updated to reflect this at Issues and Options.</p>

Response

2.25 Although we are unaware of any past or present sites for the extraction of silica sand within Greater Manchester, we will be considering safeguarding the resource. We will consult with St. Helens Glass to determine whether there is any interest in exploiting this resource in future.

General Comments

2.26 **Horwich Town Council** noted the report with interest but no queries were raised, or comments noted.

Response

No actions required

2.27 **The Mineral Planning Group** asked regarding point 2.5 of the report 'What is the landbank for sand & gravel and crushed rock at 2007? Mineral Planning Group also made the following remarks:

- Regarding point 3.3.6 'Areas identified as a resource but which, following drilling and testing, are presently considered to be uneconomic may become economic due to changing circumstances.'
- Regarding Geological Data 3.4.3 'Care needed here as overburden to mineral resource ratio can vary dramatically over time and new developments in plant and machinery can also alter viable workable ratios.'

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Response

2.28 The landbank for sand and gravel and crushed rock at 2007 can be found within the North West Regional Aggregates Working Party Annual Report 2008 which can be downloaded at:

<http://www.communities.gov.uk/publications/planningandbuilding/nwannual2008>.

2.29 The latest landbank will be included within the Minerals Plan.

2.30 We believe we have covered Mineral Planning Group's comments made regarding points 3.3.6 and 3.4.3 as we plan to include Mineral Safeguarding Areas which protect areas where mineral extraction may become economically viable in the foreseeable future.

2.31 The Coal Authority 'wishes to continue to be consulted both informally if required and formally on future stages, where we will be able to respond on matters of energy strategy, definition of Mineral Safeguarding Areas, provide further information on licensed areas for surface coal mining, coalbed methane and other energy technologies related to coal. We would also be seeking a policy context for site allocations and site extensions, together with high standards for restoration and after care to avoid and future land stability problems arising from mining legacy.'

Response

2.32 We will be contacting the Coal Authority to seek additional information on coal and coalbed methane and will maintain communication during the plan production.

2.33 Network Rail would welcome the opportunity to comment on:

- the potential development of the Barton Strategic Employment site to create a multi-modal port and rail facility,
- the safeguarding of existing railheads,
- sustainable transport modes, including the transportation of minerals by rail.

Response

2.34 We will be considering safeguarding and identifying future wharfs, depots and other minerals-related infrastructure at Issues and Options.

2.35 Cheshire West and Chester Council made the following representation: 'This is a technical document to help in assessing the best available information about minerals in Greater Manchester. It outlines what information is available on mineral resources in Greater Manchester and how this will be used to develop Minerals Safeguarding Areas; and how it is proposed to identify areas for future minerals working. No comments to make on the documentation.'

Response

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2.36 No actions required

2.37 **4NW** explained that the Regional Strategy will in time be replacing the Regional Spatial Strategy and Regional Economic Strategy and to keep updated on Regional Strategy progress one can visit the website <http://www.nwregionalstrategy.com/> and register to receive the regular email newsletters.

2.38 **4NW** refer to policies EM7 to EM9 in Regional Spatial Strategy which set out the regional minerals policy approach and explain they have no additional information to submit in terms of identifying minerals resources and sites/areas of search (questions 1 to 7). Finally 4NW note that work is underway between 4NW and mineral planning authorities on sub-regional apportionment of aggregates based on the national figures released by CLG last year.

Response

2.39 The Minerals Plan will conform to regional planning policy. The minerals plan will use the most up-to-date sub-regional figures. The new regional apportionments for 2005-2020 are being considered by the Regional Aggregate Working Party at present, when they have been agreed, the new sub-regional apportionment will be used in the Minerals Plan.

2.40 **Peel Environmental** made the following comments 'Peel Environmental Ltd own, manage and develop all waste and minerals assets owned by the Peel Group, and these include the following sites/activities within (or in close proximity to) Greater Manchester:

- Ownership and development of hard rock quarries at Fletcher Bank Quarry and Scout Moor Quarry;
- Ownership of Astley Moss Quarry;
- Ownership of three peat harvesting sites within Salford and Wigan;
- Ownership and continued development of various waste assets, including those producing secondary aggregate, such as at Woolston, Warrington and Fletcher Bank Quarry;
- Development of a network of Coal Bed Methane producing sites within the North West and throughout Peel's UK landholding.

2.41 Peel wish to be involved with the formulation of the Greater Manchester Minerals Development Plan Document, and therefore look forward to being included and invited to comment at each consultation stage of the Plan development.'

Response

2.42 No actions required.

2 Responses to Issues

Comments on Appendix 3: Maps

2.43 The Environment Agency made the following comments about Map 1: Sand and Gravel: 'This map does not show economically viable deposits of sand and gravel that may be obtained from excavation of highly weathered or crushed deposits of friable sandstone, for example, some areas of the Triassic age sandstone such as those worked at Morley's Hall Quarry at Astley.'

Response

2.44 Triassic age sandstone will be considered in future stages of the Minerals Plan.

2.45 The Environment Agency made the following comments about Map 2: Peat: '...because of the nature of peat this map is more satisfactory, although it includes areas that may have already been permanently sterilised under activities such as landfill and it omits deposits of hill peat, although these are usually unlikely to be an economically viable or suitable quality resource.'

Response

2.46 No actions required.

2.47 The Environment Agency made the following comments about Map 3: Sandstone: 'Although this map includes most areas of known Carboniferous Age sandstone outcrop, it does not identify those within the National Park area and it does not include other substantial sandstone resources of Permo-Triassic age.'

Response

2.48 Sandstone resource within the National Park have been deliberately excluded as this is outwith the Minerals Plan boundary. Further work required to establish why Permo-Triassic age sandstone is excluded by the British Geological Society as a mineral resource.

2.49 The Environment Agency made the following comments about Map 4: Brick clay: 'This map assumes that all of the outcrop area of Carboniferous age coal measures strata is suitable as brick clay and that other strata are not. This is misleading because the (included) Carboniferous age sandstones are not likely to be suitable as brick clay, and other mudstones or shales and the glacial clay till, which in particular has previously been used as the source for many of the regions brickworks, are omitted.'

Response

2.50 Consider at future stages whether to eliminate areas of sandstone mineral resource which are Carboniferous in age. Consider whether other resources which have been worked for clay should be included.

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2.51 The Environment Agency made the following comments about Map 5: Surface Mining Coal: Resource 'Although this map shows the known bedrock surface associated with potentially coal bearing strata it takes no account of the sometimes prohibitively thick overburden that may be encountered before a viable coal seam might be reached.'

Response

2.52 We intend to liaise with the Coal Authority regarding the identification of a Mineral Safeguarding Area for coal.

2.53 The Environment Agency made the following comments 'In consequence, all these British Geological Society sourced maps should perhaps each be printed with appropriate caveats unless they can be significantly refined. If surface mineral resources are not shown within the National Park Area on the grounds that some policy would prevent these from being worked anyway, the same approach should be adopted for the resources beneath sites designated as Special Areas of Conservation'

Response

2.54 Approach to exclude Special Protection Areas/Special Areas of Conservation from Mineral Safeguarding Area to go forward to issues and options.

2.55 The Environment Agency made the following comments about Map 8: Opencast Coal: 'Amended areas of search. This map shows significant areas of search for opencast coal in the central-southern part of Wigan Borough that coincide with the outcrop of Permo-Triassic strata rather than Coal Measures strata as shown on Appendix 3 British Geological Society Opencast Coal Resource map 5, for example, the area of search at Edge Green. It therefore seems likely that overburden in at least part of this designated search area may be prohibitively thick, or that the high permeability of the principle aquifer strata may require considerable dewatering that would potentially impinge upon the protected rights of nearby groundwater abstractions such as those of the water company.'

Response

2.56 Comments from the Coal Authority and the Coal Producers suggest that the 1989 areas of search are inadequate. Suggest different approach to coal in the Issues and Options. Recognise groundwater as important issue when working minerals and work closely with the Environment Agency in future to ensure this is taken into account.

2 Responses to Issues

Next Steps

3 Next Steps

3 Next Steps

3.1 The recommendations made within this Outcomes Report will inform future stages of the Minerals Plan. The Minerals Plan will provide a sound, sub-regional, planning policy framework that provides a clear guide to minerals operators and the public about:

- the locations where mineral extraction may take place;
- the safeguarding of sensitive environmental features and of mineral resources with potential for future extraction; and
- and all aspects of environmental and resource protection including the sustainable transportation of minerals.

3.2 Production of the Minerals Plan will take place over three years. There are a number of stages that must be undertaken before the final document is adopted by each local authority. These are set out below:

Table 17 Production Timetable

Stage	Dates
Commencement of Production	November 2009
Preparation and consultation of Issues and Options and Preparation and Consultation of Preferred Options	November 2009 – November 2010
Preparation and Consultation on Publication draft Development Plan Document	December 2010 – October 2011
Preparation of submission documents	September 2011 – October 2011
Submission of DPD to the Secretary of State	December 2011
Pre-examination meeting	February 2012
Independent examination	April 2012
Receipt of Inspector's report	August 2012
Adoption	October 2012