Above Derwent Parish Council
Response
Criterion a. We are not completely confident about the integrity of the BGS screening survey, even within the very limited scope set for it. It is difficult to understand why the survey has not screened out the areas of north Allerdale where explorations for oil have been taking place. Although commercially exploitable reserves have not yet been proven, it cannot be inferred that they will never be. Even if they never are, there is no sound reason to suppose that future generations would not repeat the "mistake" and thereby run the risk of inadvertent penetration. Given the extremely long periods of time ("hundreds of thousands of years" according to the MRWS White Paper P. 27) for which some of the contents of the repository would remain hazardous, we can have no idea of the way that society might change during that period. There can be no guarantee that civilisation will be as advanced in several thousand years (let alone several hundred thousand years) as it is now: civilisations have risen and fallen many times in history. There can be no guarantee that records of the location of the repository will still exist in thousands of years or, if they do, that they will be comprehensible to people living at that time. The geological signs that have led current geologists to consider it worthwhile to look for oil in Cumbria may tempt future geologists to repeat the explorations. The "natural resources" exclusion criterion was intended to exclude areas that "might be the focus of exploration and/or exploitation in the distant future". It has been incorrectly interpreted as "proven oil field" in this case.
Criterion b. As stated above, we believe that more of West Cumbria should have been excluded by the BGS survey than has been. We have the following further reservations about what has not been screened out: 1. The Chapman et al (1986) paper on geological settings suitable for a repository shows that there are areas in England where promising geology exists, but none of it is in West Cumbria. It is irrational to focus the search for a site exclusively on an area of apparently suboptimal geology while ignoring areas of apparently more suitable geology.

an area of apparently 2. Specifically, the geology of West Cumbria is faulted, folded, unpredictable and characterised by a hydrogeological gradient that is unsuitable for siting a repository. The probability of encountering insurmountable problems, or of escalating development costs, in such an area is higher than in areas of geology that are consistent with Chapman et al's criteria. 3. About 75% of the area not screened out by the BGS lies within the Lake District National Park. We are not confident that damage to the tourism and agriculture industries in the affected part of the Park can be avoided and we believe that the area of Allerdale and Copeland available for siting should be further reduced by excluding the National Park from consideration either for surface or underground facilities. 4. The criteria given to the BGS for their screening exercise were too narrow. They did not include, for example, the possibility of geothermal energy. Hence, though the Eskdale granites are a promising area for geothermal energy, they have not been screened out. There can again be no guarantee that future generations will not be tempted to explore this possibility. The attractiveness of such sources of energy is likely to increase as fossil fuels are exhausted during the next few hundred years.

Question

1 - Geology

2 - Safety, security,

Agree

Regulatory Regime

Nο

No

environment and planning

The documents attached to Chapter 5 reveal a number of regulatory bodies and sub-divisions with a complex structure and some areas where responsibilities are not easily discernible. For example Document 47 reveals that in relation to road transport of dangerous goods the DfT looks at the safety of the vehicles used and of the packaging of what is being transported. NDA is not responsible for providing roads, but is responsible for considering issues relating to roads and bridges when preparing a safety case. The responsibility otherwise for the infrastructure "lies elsewhere". Roads are referred to also as a Planning issue, but whilst planners can regulate they cannot initiate provision. Cumbria County Council states that it prefers transporting waste by rail; there is no analysis of regulation relating to rail transport.

Document 47 relates that some members of the Partnership expressed their increasing concern about the complexities and ambiguity regarding the issues that had been discussed including the lack of clarity about how all of the aspects of regulation which apply to aspects of MRWS will fit together with other areas, most importantly planning and the potential use of the Infrastructure Planning Commission. The Office of Nuclear Regulation has been set up to provide some co-ordination between and oversight of these bodies.

It seems that the Partnership has not fully mastered the current situation, and therefore has not been able to produce a clear summary of the existing set-up. A clear understanding of this is essential before any meaningful evaluation of its efficacy can be attained and therefore it is not possible for us to share the Partnership's confidence that the necessary regulatory system exists.

The uncertainty we perceive in relation to the current situation is of course increased when turning to a consideration of future changes to be made to the present system.

We note the statement that "The regulators agreed that they regulate against set standards so they cannot refuse a permit if a developer can demonstrate it meets the regulators' standards." On the other hand there is a statement that "Responses to the consultation are taken into account in the Environment Agency's decision on whether to grant an environmental permit". We have not been able to reconcile these two statements.

We note that the Partnership thought it important to put a formal request to the regulators to give written reassurance on their commitment to engaging positively with a potential Community Siting Partnership. We cannot find confirmation that this was obtained.

The Partnership was concerned about communication between regulators and the public. An account was received from the Environment Agency as to ways in which it did this, but we cannot find any verification that this actually happens.

Planning

Given that the majority of the area of investigation not excluded by the BGS survey falls within the National Park we are surprised not to see more analysis of the planning regime of a National Park. First it should be acknowledged that the National Park has particular statutory duties contained in the National Parks Act 1949 and the Environment Act 1995. These are to conserve and enhance the natural beauty, wildlife and cultural heritage and promote opportunities for the public to

understand and enjoy the special qualities of the Park. In a case of conflict of interests (such as economic development) priority has to be given to conservation and enhancement of natural beauty etc as above. These are overriding statutory duties, but additionally the Park has its own strategic plans and frameworks, with priorities carefully defined, including references to limited amounts of economic development. Further since the Park is supported by tax-payers money and is for the benefit of the nation, there is surprisingly little evidence of attempts to obtain the views of the world outside West Cumbria.

There should be a clear statement, not a passing reference, to the fact that a surface facility would not be placed in the National Park. Digging boreholes to test for underground geology would also be too intrusive an activity – the Park is very compact and every square metre is precious to the 15 million visitors who come each year. To imagine the effect of digging a group of boreholes in one valley, or on one fellside is to understand what outrage there would be on the part of the national public, and what a disaster this would be for the tourist industry.

Little attention appears to have been paid to the principle of Localism, which will have profound effects on planning decisions in the countryside.

For these reasons we cannot share your confidence that all is satisfactory.

Safety and Security

1. Extracts from the document- Developing a Prospective Site Licence Company, to Implement Geological Disposal, highlights the immaturity of the RWMD current capability. The document provides key findings after a two day inspection visit on 1-2 March 2011 by the Environment Agency, Health and Safety Executive and Department for Transport who are the principal regulators for the implementation of geological disposal. Until the Partnership offers documentary evidence that the following findings have been addressed, we provide these and further example below, as evidence the RWMD has not got suitable capability or sufficient mature processes in place to protect residents, workforce and the environment, as believed by the Partnership Governance

'We (the regulators) believe that the ability of RWMD to establish and demonstrate appropriate governance arrangements is vital to the future success of the organisation. Considerable effort has been put into establishing the management arrangements to support this, but the Board needs to work effectively to demonstrate a clear high-level commitment to nuclear safety and the environment. To ensure the appropriate culture is developed, the Board should take this forward by establishing proper challenge to the organisational performance with respect to nuclear safety and the environment.'

Management of Safety and Environment

'We (the regulators) found that staff, at Board and other levels in the organisation do not fully recognise the work being done now for nuclear safety and environment, and that RWMD currently lacks assurance arrangements that provide proper understanding and control of this. As mentioned previously, safety and environment management arrangements within RWMD other than for the LoC process focus on the conventional aspects of safety and environment. The organisation needs to develop its management arrangements into a nuclear safety and environment management system, that recognises and controls the impacts of its work on nuclear safety and environment performance (albeit the effect itself may only be realised

		some years in the future). A culture that recognises the key importance of nuclear safety and environment needs to be developed across the organisation. Provision should be made for suitable review and scrutiny of arrangements to assure RWMD that nuclear safety and environment performance is being appropriately managed and optimised where possible. ' 2. Additional evidence is shown in Document 161, Peer Review of RWMD's DSSC, Summary Report on the Peer Review of NDA RWMD's Generic Disposal System Safety Case which state: 'The peer review panel considers, however, that further work would be needed to resolve several issues concerning the approach taken to the PCSA (post closure safety assessment) calculations, the inclusion and exclusion of certain processes in the PCSA models, the representation of the barriers in the disposal system, and the traceability of the data used. Given this, RWMD should not place too much emphasis on the current PCSA results when assessing waste packaging proposals.' 3. Document 1, NWAA Issues Register. We believe it would be more effective in raising public perception that safety issues are being 'worked on' if the full issues register was 'live' and published on a regular basis. As it stands, no issues appear to have been worked on since the register was first issued and published.
		have been worked on since the register was first issued and published. 4. Document NDA/RWMD/038, Geological Disposal Criticality safety status report, Dec 2010, page v states 'for the waste material: We have detailed knowledge of the inventory of radioactive wastes and materials'. We challenge this statement based on the following regulators finding and recommendation relating to the geological disposal of higher active radioactive waste, Regulatory review of the generic disposal system safety case, issue 1 Dec 2011. One of the regulator's findings and recommendations states 'a wider exploration of waste inventory uncertainty might be desirable in the future.' Within multiple documents there are reference to a variety of inventories, with or without uranium & plutonium & spent fuel, with or without new build, with or without submarine or sludge waste. To ensure proper waste inventory control is in place allowing all relevant issues to be considered, we would expect either the regulators to mandate, or the auditors to raise a major non-compliance on the reestablishment of a radioactive waste management inventory and change control process.
		5. In the same document the NDA/RWMD's statement regarding 'modelling of the consequences' does not seem to include the risk of a terrorist attack which is still a major concern to Government. Cumbria CC, Allerdale and Copeland BC, appear not to be concerned they are potentially subjecting its communities to risks of the highest possible magnitude, by accommodating both nuclear reactors and a nuclear repository within the same county.
3 – Impacts	No	1. The following extract is taken from the Public Consultation document, Page 64 – 6.2 Criterion a) 'confident that appropriate possibilities exist to assess and manage environmental, social and economic impacts appropriately if they occur'. This is a primary example of the casual and unprofessional manner in which the Partnership has produced the public consultation document. The programme is a 'green field' project of the highest risk with regards to the longer term consequences, ever undertaken in the UK. The use of such words offered on page 3 as 'for information' provides no confidence that the Partnership understands the scope and scale of managing the environmental, social and economic impacts which will occur.
		2. The following extract is taken from the Public Consultation document, page 55 and supporting document 27, references 'generic impacts'. A recent paper 'Scoping for SEA in The Netherlands: generic or tailor made' provides clarity in ensuring the adoption of the 'generic approach' is reasonable and appropriate. From the experience in the Netherlands it is clear that for screening and scoping, generic guidelines 'whilst being a good starting point, will typically not be sufficient'.

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The Community Benefits Package is entirely in the gift of the government. The Government's response is therefore crucial. This is contained in the attachment to the letter of 7 September 2011 updating its earlier responses, and also referring to the White Paper (s6). We have examined these closely and have no confidence that they evidence any form of clear commitment on the part of the government. We do not therefore share your confidence (if you are confident) that there are good grounds for believing the Principles can be used to secure a suitable CB package, or that in particular your requirement that there should be a justified expectation of long term additional benefits will be fulfilled.

The following passages from the Government's papers lead us to believe that very little can be relied on from these, and that there is plenty of room for this or a future government to escape from the commitments you are seeking, without your being able to hold them to what they have said as what they have said is so indefinite:

White Paper

- 6.54 and 6.55 lay emphasis on the spin-off benefits which will come to the community. "The community will be keen to know what these are" this is a statement not a commitment.
- 6.57 "In addition there may be other benefits which may be commensurate with developing the social and economic wellbeing of a community."
- 6.58 "Without wishing to prejudge, the following could be some of the overarching objectives for the investment that a community might benefit from as a result of hosting a facility (training, business, infrastructure, transport, health care, environmental improvement).
- 6.59 "This list is illustrative: Government does not believe it is sensible to specify what specific mechanisms could be used, or define the nature or level of the benefits. Packages should be developed as discussions progress, taking into account local needs, affordability, and value for money considerations ".

Government's Response to Principles

In the covering letter the Secretary of State says: "I agree the principles form a basis for negotiations" {NB not a basis for agreement} – "the detail underlying these will need to be explored. We will need to reach an agreement which is mutually satisfactory".

- 2 (Government) "agree the need for any agreed community benefits ..should therefore be a consideration in future discussion."
- 3. "We expect the net benefits to be an important part of discussions".
- 4. (Additionality) "communities will want reassurance that benefits would be additional. We agree the package should relate to benefits in additionof course co-ordinated with wider social and economic programmes,"
- 8 "any benefits packages should be developed taking into account local needs, affordability and value for money considerations"

Questions 3 and 4 – definition of an acceptable process

You refer to this in 7.3: "we want to see an acceptable process" You do not refer to it in 7.4 – your Initial Opinions. We did not

		find any definition of such a process, and consequently no evidence it is likely to come into being.
		Summary
		Having considered the material provided we do not "feel confident that an appropriate community benefits package can be developed". Furthermore we are not sure whether the Partnership is confident. You do not say whether you feel confident or not confident. If you were to say you feel confident, then we would not agree with this Opinion. If you were to say you do not feel confident then we would agree.
		If you feel confident that the Principles have been agreed by the Government, then we would not agree with this – the Principles are not agreed, but are a basis for negotiation – negotiation could take you anywhere.
		We would endorse your expressions of doubt about the uncertainty of the future, and the caution that future negotiations need to be carefully watched.
		Our conclusion therefore is that the issues raised in this Chapter do not form a suitable foundation for going further in this process and that we should not move into Stage 4.
5 – Design and engineering	No	1. Document no. 29: The generic Design Concepts – How they will evolve (2009) has to be read in conjunction with the NDA Report NDA/RWMD/054 Geological Disposal Summary of generic designs, (December 2010). This later document is more current and written with the public in mind. However this document was not offered as reference to the public in helping to answer the Partnership question within the Public consultation document, Chapter 8 Design and engineering.
		2. The following extract is taken from the Public Consultation document "The detailed layout and design of the facilities, both above and below-ground would depend on the location and would be tailored to the geographical and specific geological structure at the site in question." We disagree as the quoted statement from Page 76 is incomplete. The detailed design will be strongly influenced both by the inventory and by the geography/geology.
		3. The Partnership has chosen retrievability as a criterion although no reason was given for the choice. We disagree that sufficient reassurance has been given that retrievability is an option. Most documents refer to the costs of such an undertaking. This infers that only partial retrievability may be built-in if funds are in place to do so. The Partnership could have learned from the 1999 incident in Bure where work was suspended after a fatal accident. An Act was submitted to Parliament which repeated the requirement that any facility should incorporate 'reversibility' (rather than retrievability) at every stage. We suggest the Partnership should read IAEA Nuclear Energy Series Geological Disposal of Radioactive Waste: Technological implications for retrievability. NW-T-1.19
		4. The Partnership has not attempted to provide an opinion on engineering and seems to have no opinion on the associated cost. The Partnership requested a review of only 4 of the 101 known critical issues, as provided by the NWAA in presentation. We disagree with the Partnership's initial opinion on engineering, as none has been provided. How can the public feel anything other than confused knowing there are multiple gaps in the Partnership's knowledge. The Partnership continues to give the impression that 'the issue is bound to be solved but at a later stage'.

6 - Inventory	No	1. On the question of overseas waste, the Government's statement (Consultation Report, P. 80) falls far short of a commitment.
		2. Despite CoRWM's several statements that their recommendations do not apply to new-build wastes (as noted in Document 94), the Partnership is offering no challenge to the Government's obvious intention to place new-build waste in the repository.
		3. It is clear from DECC's response to Inventory Principle 1 that there could still be important uncertainties about inventory at the end of Stage 5. We believe that the Right of Withdrawal would, by this stage, be very difficult to exercise (see response to Question 7.2), so that a community could become locked in to having the repository without having a firm agreement on inventory.
		4. Inventory Principle 2 does not clarify whether the "veto" was envisaged as a way of giving the community control over inventory during Stage 6, but such control should be an essential requirement. DECC's response neatly side-steps the notion of "veto" and instead points to the Right of Withdrawal. This has expired by Stage 6 and does not, therefore, constitute a way for the community to influence inventory decisions during the operational life of the repository. Instead of a veto, DECC says that "These principles may includethe circumstances under which decision making bodies may feel the impacts of any change to the inventory to be unacceptable" (emphasis added). So the Government is not committing itself to include such principles; nor is there any commitment that the feelings of the decision making bodies will actually carry any weight in decisions about changes in inventory. This is significantly weaker than a veto. Hence, Inventory Principle 2 provides no credible protection against significant changes in inventory during the operational life of the repository – including a change in the "presumption" about overseas waste. Nor has the Partnership produced any other principle that could provide such protection.
		5. Inventory Principle 3 requests information about significant changes "at the earliest opportunity". DECC's response replaces this with "in a timely way". If DECC's phrase is not intended as a dilution, why have they not used the Partnership's original phrase?
		6. DECC's response to Inventory Principle 6 is extremely weak and commits Government to no action whatsoever.
		Our overall view is that a community would find it very difficult to withdraw once Stage 5 had begun, yet would still be faced with significant uncertainties about inventory. There appears to be no credible mechanism for a community to have any influence on changes in inventory after the start of construction of the repository.
7 – Siting process	No	We consider that the Partnership is proposing a weak and unsatisfactory interpretation of "voluntarism" that has not been forced upon it by any constraints in the MRWS White Paper. The Partnership's 8-page summary leaflet states that "The Government says a repository will only be put somewhere where there is a community that has volunteered to have it" (P. 7). We believe that, should "West Cumbria" enter the siting process, there is a serious danger that a host community, for example, a town or village, would have part or all of the repository forced upon them against their will. Our reasons are:
		1. A potential Host Community cannot exercise the Right of Withdrawal: only the 3 Councils can. A councillor representing an

unwilling potential Host Community is easily outnumbered by those representing "wider local interests". Worse, the County council and Allerdale Borough Council have decided that only a small subset of councillors will make the formal decision about entering the siting process. Therefore, there will be potential Host Communities whose councillors do not have a vote in this decision. The Consultation Report gives no reason to believe that this unsatisfactory approach would change in Stages 4 and 5.

- 2. The decision of the County Council and of Allerdale Borough Council that a subset of councillors will make a formal decision on entering the siting process is neither required by, nor in the spirit of, the MRWS White Paper, where it says (P. 51) that the decision will be made "probably through a full meeting of the council/s".
- 3. It is made clear on Pages 93 and 94 of the Consultation Report that a community wishing to withdraw would have to provide "reasoned justification" to the Community Siting Partnership. As the process became increasingly detailed and technical during Stages 4 and 5, this would become increasingly difficult for unresourced potential Host Communities to do. What kind of "volunteering" is it when 'reasoned justification' needs to be given for not volunteering?
- 4. Pages 93 and 94 of the Consultation Report also make clear that, even if reasoned justification were given, the Community Siting Partnership could still recommend that the RoW be not exercised. A potential Host Community in this position is not volunteering: it is being forced to proceed.
- 5. Page 56 of the MRWS White Paper shows that, once the expense of surface-based investigations had been incurred, a potential Host Community minded to withdraw could be coerced to continue "volunteering". We have no confidence that a government would permit a Decision Making Body to exercise the RoW once Stage 5 was under way. The Partnership acknowledges this hazard when it states that "the siting process can be sufficiently robust and flexible, at least during Stage 4" (Consultation Report, P. 98). Yet 'reasoned justification' is required to avoid proceeding from Stage 4 to Stage 5.
- 6. The MRWS White Paper (P. 47) makes it clear that the Government reserves the right to abandon voluntarism if it looks as though the approach will not yield a site. A potential Host Community that had acquiesced to Stage 4 investigations but then decides that it wishes to withdraw as the implications of hosting the repository become clearer is therefore open to being "volunteered" by a government that decides to abandon voluntarism.
- 7. In any assessment of public opinion or "credible local support", whether by poll or referendum, a potential Host Community is easily outnumbered by the "wider local interests" and can, therefore, be forced to accept a repository. In "West Cumbria", the coastal urban community, who know that they will not have the waste buried under their homes and businesses because they are located on land screened out by the BGS survey, vastly outnumber those living in rural communities and can force a rural community to host all or part of the repository. This is of particular concern in light of the potential for separation of the surface and underground parts of the repository.

In summary, we find that the notion that a potential Host Community can control whether or not the repository is built in or under its town or village is illusory. This is particularly unfortunate since it is the principle of "voluntarism" that has led to the untenable position where only "West Cumbria", with its apparently suboptimal geology, is being considered while areas of England with apparently better geology are being ignored. Had geology been put first, we believe that "West Cumbria" would

	not be a serious candidate at all.
8 – Overall views on participation	We believe that West Cumbria should now withdraw from the MRWS Process. The aim of this decision would be to persuade the Government to reconsider its "voluntarism" approach which, we believe, has led to an untenable position in which the search will be focussed entirely in an area of suboptimal geology. While we are prepared to accept CoRWM's original conclusion that a GDF represents the "least bad" option for the disposal of the UK's committed higher-activity waste, we consider that geological suitability is more important than "voluntarism". Restricting the search to an area where the geology is suboptimal presents the following dangers.
	 A higher probability of encountering insurmountable technical problems after substantial time and money has been invested in the search An increase in the costs of surface-based investigations required to characterise unpredictable and highly three-dimensional geology
	 Decreasing the probability of finding a sufficiently large body of rock to enable a single repository to accommodate the inventory Increasing the complexity of the safety case and the number of assumptions underlying it, which would increase the cost and
	decrease transparency • Increasing the cost of engineering "workarounds" for deficiencies in the geology • Increasing the probability that a decision would be made to "make do" with a poor site, especially in light of the Minister's aspiration to accelerate the opening of the repository to 2029.
	• Increasing the uncertainty regarding the extent and location of eventual leaks of radioactivity from the repository, which are described as "inevitable" in the White Paper (P. 27)
	The first consideration should be to identify the areas of the UK with the most promising geology. The work of Chapman et al (1986) has already indicated where they are. None of them is in Allerdale or Copeland. It is irresponsible on the part of the Government to preside over a process where West Cumbria is investigated in isolation and areas where the geology promises a higher probability of a high-quality, value-for-money solution are ignored.
	It might be objected that giving geology precedence over voluntarism could lead to the eventual Host Community having a repository forced upon it. However, this could easily happen within the current MRWS framework for the following reasons.
	 A potential Host Community (as defined in the White Paper) cannot exercise the Right of Withdrawal. Its only route for withdrawal is to persuade the Community siting Partnership to recommend that the Decision Making Bodies allow it to withdraw
	 Pages 93 and 94 of the Consultation Report show that a potential Host Community must provide 'reasoned justification' for not volunteering. Once Stage 4 is nearing completion, the technical complexity of the case that would need to be presented a 'reasoned justification' is likely to be beyond the resources of an unwilling potential Host Community Even if a 'reasoned justification' for not volunteering could be presented, Pages 93 and 94 of the Consultation Report show
	that the potential Host Community's wish not to volunteer can be vetoed by what would doubtless be a well-resourced Community Siting Partnership.

	We conclude that "voluntarism" as set out in the MRWS White Paper is largely illusory and that a more honest and rational approach is to start with the most promising geology.
9 - Additional comments	A number of our parishioners expressed frustration about the fact that they were being asked to make an important decision at a time when little concrete information is available about the consequences of moving into Stage 4. While the Consultation Report frequently uses phrases such as "at this early stage" and states or implies that we will have more information if we agree to move to a later stage, the view has been frequently expressed by our parishioners that, if "West Cumbria" does make a Decision to Participate, the process will quickly gather momentum and become unstoppable as increasing quantities of money are spent on it. Few appear to have confidence that even the Decision Making Bodies will have any real chance of exercising the RoW by the time that the consequences of hosting the repository have become sufficiently clear.
	• We have been surprised by the persistence of the public perception that "West Cumbria" means "the west coast of Cumbria" or even just "Sellafield". It would have been more informative for the Decision Making Bodies (and more in keeping with what most members of the public would probably understand when they hear that the Government wishes to site a repository only where "there is a community that has volunteered to have it" if Question 8 of the current consultation had been "What are your views on whether the area covered by your parish or town council should take part in the search for somewhere to put a repository?".
	• Some parishioners have said that they cannot understand how we have arrived at a position where part of the Lake District National Park is potentially being offered for investigation as a potential site, at least for the underground facilities (but Page 42 of the Consultation Report fails firmly to rule out even siting the surface facilities in the Park). References to "Lake District brand" and "brand protection" suggest that the National Park is construed by the Partnership mainly as an economic resource. Yet the Sandford Principle, which is a cornerstone of the history of national parks in this country, states that conservation must take precedence over economic development whenever the two conflict.
	• We understand the aspiration of communities on the western coastal plain of Cumbria to have a prosperous and vibrant economy. However, the MRWS White Paper states that some of the waste that would be emplaced in a repository would remain hazardous for hundreds of thousands of years (tens of thousands of generations). In this context, an average of 550 repository jobs (and perhaps 1,000 "spin-off" jobs) for the next six or so generations is insignificant and does not justify the risks of failure that must surely exist in an area of suboptimal geology, especially when geologists have identified better candidates elsewhere in England. "West Cumbria" has become the leading candidate for socio-political reasons, and not for rational scientific ones.