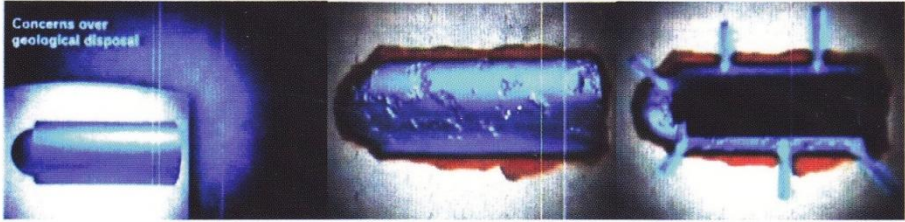


User ID	Question	Agree	Response
1201	Letter		<p>Re Waste Repository</p> <p>The above is basically a container under ground.</p> <p>I believe it should be half the suggested size if given the go ahead.</p> <p>The reason for this is 1 To prove and test the structure over a number of years 2 To allow future generations in a second phase of the development.</p> <p>The repository should be built with an earth quake in mind using the technology used in reactor foundations supported on hydraulics it also should be fitted with a cooling and drainage system that might deal with problems within reactors.</p> <p>I am happy with minimum depth it helps more with environment and gives ease of access to deal with problems.</p> <p>Also with health and safety in mind in 2006 the government detrunk the A595 A5092 to the south of Calder Bridge this means hardly any capital is invested in this evacuation route in comparison to what as happened to the north of the village this route needs a year on year funding package to bring it on par with what as been done in the north.</p>
1217	Letter and postcard		<p>[Letter]</p> <p>I am deeply concerned about the prospect of a considerable increase in nuclear activity particularly here in Cumbria. This may include new power stations which leading environmentalists say are not necessary and the figures used to justify them have been doctored thus giving an unbalanced picture of the real nuclear situation. Linked to this are the increased risks of nuclear pollution from the waste materials and perhaps worse still nuclear weapons proliferation at a particularly critical time in world history.</p> <p>I am sure the geology in the Sellafield Gosforth area for a nuclear repository for British, and foreign nuclear waste is not right and I strongly feel the plans for the repository should be abandoned. I hope you may do what you can to check these considerable dangers here in Cumbria which could easily spread to other parts of the world if we are not very careful.</p>

[Additional postcard]

Side one

WE KNOW ENOUGH ABOUT CUMBRIA'S GEOLOGY TO SAY NO TO GEOLOGICAL DISPOSAL



Concerns over geological disposal

The graphic above is taken directly from a UK government sponsored video*. It illustrates what would happen to the geological disposal of nuclear wastes in...

...AREAS OF "HIGH RAINFALL, PERMEABLE ROCKS AND HILLS AND MOUNTAINS TO DRIVE THE WATER FLOW"

*Following the failure of Nirex's (British Government) push for geological disposal of nuclear wastes in Cumbria, the British Government sponsored a project called Pungwa, Aimed at 'disposing' of nuclear wastes in Australia. The graphics above are from the Pungwa video of 1999. Australians said No Thanks! Cue Cumbria 2012.

Side two [name and address removed]

			<p>To Cumbria County Council, Allerdale and Copeland Borough Councils,</p> <p>You are running a consultation to see if Cumbria should proceed along 'steps towards geological disposal of nuclear wastes.'</p> <p>Enough is known about Cumbria's geology to know that this area of "high rainfall and hills and mountains to drive the water flow" is NOT SUITABLE FOR FURTHER INVESTIGATION.</p> <p>I do not support any further "steps" and ask that "no decision to participate" is taken by the 3 councils and decision making bodies.</p> <p>Please ensure that Cumbria has a viable future and STOP the STEPS TOWARDS GEOLOGICAL DISPOSAL</p> <p>yours sincerely,</p> <p>Name:</p> <p>Address:</p> <p>Postcode:</p>	
1218	Letter		<p>As local residents we are writing to oppose a nuclear waste repository in Cumbria. It causes us great concern, as we already have nuclear concerns re submarines and legacy of Sellafield, the high rate of cancers in this area. We fear for our future generation, our children & future Cumbrian children, we do not want to live in a nuclear dumping ground, we live in a very beautiful area, the beaches along the coast are outstanding but do you see many people holidaying on the beach here and swimming in the plutonium polluted sea? I do not believe the area of Cumbria can be safe for a repository, I have felt the last earth tremors here myself, surely geologically it is not advisable. Please do not allow any more damage to our most outstanding countryside, tourists would surely be reluctant to visit Cumbria as a nuclear dumping ground.</p>	

1219	Letter		<p>As local residents we are writing to oppose a nuclear waste repository in Cumbria. It causes us great concern, as we already have nuclear concerns re submarines and legacy of Sellafield, the high rate of cancers in this area. We fear for our future generation, our children & future Cumbrian children, we do not want to live in a nuclear dumping ground, we live in a very beautiful area, the beaches along the coast are outstanding but do you see many people holidaying on the beach here and swimming in the plutonium polluted sea? I do not believe the area of Cumbria can be safe for a repository, I have felt the last earth tremors here myself, surely geologically it is not advisable. Please do not allow any more damage to our most outstanding countryside, tourists would surely be reluctant to visit Cumbria as a nuclear dumping ground.</p>
1220	Letter		<p>After hearing all the arguments for & against a Nuclear Repository I would like to register my opinion of the scheme.</p> <p>We should NOT have the Nuclear Waste Storage anywhere near the National Park & I am firmly AGAINST it.</p> <p>P.S. I hope somebody is listening.</p>
1221	Letter		<p>After listening to both sides of the discussion regarding the above proposal I have come to the conclusion that the geology and hydrogeology in the proposed area is totally unsuitable. No one seems to have taken on the possibility of radioactive gas being emitted via the faults in the surrounding rock.</p> <p>Why is this proposal being pursued with such expense and vigour when after the Nirex Inquiry a minister ruled that the area was too dangerous.</p> <p>To compound the problem if we enter Stage 4 of the process why is the Right to Withdraw made so difficult?</p> <p>It is also suggested that it is possible that in the future central government could impose a dump on a community, it seems more like a totalitarian state.</p> <p>If the powers that be were so concerned with the public being on their side why was no funding given to the opposition, was it fear they may influence people in a way they did not want?</p> <p>Based on the above I request that you vote to reject the proposal for the Nuclear Repository.</p> <p>PS You can alter the criteria, but not the geology.</p>

1222	Letter		<p>Like many other people, I am extremely concerned about any future decision to site nuclear waste material in West Cumbria. This proposal is of great concern to both residents and visitors to West Cumbria and the Lake District National Park. I now give my formal response to the recent consultation on whether Cumbrian local authorities should take part in making such a decision.</p> <p>I understand that detailed examination has highlighted significant problems with the geology and hydrogeology of W. Cumbria, and it has been concluded it is not a suitable region for a nuclear dump. This conclusion was already arrived at after a scientific investigation in the 1990s, and the rocks have not changed since then.</p> <p>The scale of this proposal is staggering. It will create vast amounts of waste 'spoil' from digging out the tunnels and vaults. This excavation would be the equivalent to the Channel Tunnel and debris mounds the size of Egyptian pyramids would be a blot on the landscape ad infinitum.</p> <p>The plans, if carried out, present a significant risk to the environmental and economic well-being of the Lake District National Park and surrounding regions, not to mention major health, safety and security risks.</p> <p>If a dump were to be constructed in West Cumbria, it would ruin the beautiful western landscape of the Lake District National Park and would deter visitors, tourism being the lifeblood of the economy of the Lake District.</p> <p>I support the view that the combined impact of the above and below-ground operations of this dump would have significant negative impacts on the Lake District National Park and could prevent it becoming a World Heritage Site.</p> <p>Nowhere in the world is there an operating repository for the kind of waste proposed in West Cumbria. This project is unique in its intention to bury high-level wastes, spent nuclear fuel and intermediate-level wastes from all past, present and future nuclear activities.</p> <p>I ask the decision making bodies responsible NOT to make a 'decision to participate' to go forward to the stage of siting a nuclear dump in West Cumbria.</p>
1223	9Email		<p>I am against waste being buried in West Cumbria and am totally against the use of nuclear power.</p> <p>The geology and hydrogeology of West Cumbria is not suitable for a dump.</p>

			<p>The findings of the Nirex Inquiry in the 1990's have not changed.</p> <p>The burial of nuclear waste in West Cumbria would be a blight on one of the most beautiful landscapes of the UK which is used by people from all parts of the UK and the world for holidays and recreational use and perceived as an environmentally clean area.</p>
1224	Letter		<p>Objection to proposed Nuclear Waste Repository in West Cumbria.</p> <p>I wish to object most strongly to the above.</p> <p>It has already been established after extensive research in the 1990s that this area is geologically unsuitable.</p> <p>We already have the only nuclear dump in the UK in this village, which is due to be extended! Why cannot the producer of the "waste" be made to contain it locally.</p> <p>In the budget today the chancellor stated that the planning laws are to be revised in order that we "protect our most precious environment".</p> <p>The thought that one of the most beautiful areas of the UK could be desecrated - will we never learn.</p>
1225	Email		<p>[Email sent to Tony Cunningham MP]</p> <p>I am most concerned that Allerdale and Copeland borough councils have volunteered an area of West Cumberland to house a long term deep down nuclear dump. The geological survey carried out 1993-1995 and subsequent inquiry found it totally unsuitable for the Nirex project. The extreme topographic relief of the area makes the problem of water seepage and escape of nuclear gases a major hazard and nowhere on shore in West Cumbria can ever conform to international standard models for placing a repository.</p> <p>Why is the public only being given one side of the story and the two above councils are allowed to ignore the scientific evidence.</p> <p>I cannot believe that this project will be exempt from planning permission.</p>

			Please could you represent my concerns and objections to this project.
1230	1 – Geology	No	<p>The Nirex Inquiry and David Smythe's report indicate that the geology of most if not all of West Cumbria is unsuitable for safe underground storage of nuclear waste.</p> <p>It seems a very strange coincidence that the area around Sellafield is deemed to be geologically suitable.</p>
1230	2 – Safety, security, environment and planning	No	<p>What are the initial opinions on the environment.</p> <p>Opinions are only opinions. Presumably the Japanese were of the opinion that Fukushima was safe.</p> <p>If the decision is made by the IPC or MIPU then local considerations and opinions are presumably ignored if convenient.</p>
1230	3 – Impacts	No	<p>The further development of a nuclear industry in West Cumbria would blight the whole of the county. It cannot be justifiable to risk the tourist economy of Cumbria through the continued development of nuclear power in the county. No amount of 'brand protection' will convince the public otherwise.</p> <p>The construction and operation of a repository would lead to unacceptable traffic impacts; the location of the area, on the far side of mountains, makes it remote from the rest of the UK. Road improvements would be highly damaging, and I really cannot see the railway line being upgraded sufficiently to take the strain. If road improvements take place they would be to the detriment of the environment and landscape reduce the value of the area for tourism even before there is any safety issues considered.</p> <p>A repository is just too hazardous to the environment and all of those who derive no direct benefit through employment to be worth considering further.</p>
1230	4 – Community benefits	No	<p>Isn't bribery normally spelt 'BRIBERY' not 'community benefits package' because that is all that it is?</p> <p>Is the community benefits package going to benefit all those whose lives would be affected by any problem with the development? This would include the whole of Cumbria and probably the Isle of Man and southern Scotland.</p>
1230	5 – Design and engineering	Not Sure/ Partly	It is essential to be able to retrieve the material if necessary.

1230	6 – Inventory	No	<p>It is good that only UK waste is being considered.</p> <p>I fundamentally disagree with the concept of burying nuclear waste (on the 'out of sight, out of mind' principle).</p> <p>It is hard to believe that the proposal is safe when the Government doesn't appear to know what it wants to bury or where it will come from.</p>
1230	7 – Siting process	Not Sure/ Partly	<p>Looks reasonable, but I cannot believe that the withdrawal would really be possible once money had been spent on investigations in the area. Like so many consultations, I suspect that the Government's desired outcome would come about whatever the results of public consultation along the way.</p> <p>There should be a referendum at each withdrawal point, not just an opinion poll. This is far too serious an issue to be decided in any other way. A referendum should be across the whole of Cumbria as it affects far more than just the local community.</p>
1230	8 – Overall views on participation		<p>I strongly believe that the areas covered by Allerdale and/or Copeland Borough Councils should NOT take part in a search for somewhere to put a repository.</p> <p>The risk to the tourist economy of the rest of Cumbria is too great and it would continue to tie west Cumbria into the nuclear industry, to the detriment of the county.</p> <p>It is not worth sacrificing the whole of Cumbria's economy through 'nuclear blight' for the sake of a relatively small number of jobs in west Cumbria.</p> <p>West Cumbria is too remote from the rest of the UK to be suitable for a repository as the transport issues would be highly damaging.</p> <p>The geology of the area has been found to be unsuitable following previous investigations.</p> <p>The construction and use of a repository would have an unacceptable environmental impact.</p> <p>A small fraction of the cost of the proposed investigation could secure worthwhile jobs in west Cumbria which would remove the tendency for support for nuclear power in the area in the absence of any other employment.</p> <p>The recent Fukushima disaster should have made it clear that we should be moving away from nuclear power towards a real push for reduced use of power and less wastage and the use of renewables such as wind, hydro</p>

			and solar power. If a fraction of the money put into nuclear, including work of a repository, were to be put into research and development of renewable energy and into incentives for using less power then we could be heading for a truly sustainable future.
1230	9 – Additional comments		<p>Do not blight Cumbria through further development of nuclear power; work towards the end of nuclear power in Cumbria.</p> <p>One hint of a radiation leak and Cumbria's tourism industry has gone. Cumbria and the Lake District have special qualities which support the tourist industry. Cumbria's industrial west coast needs good jobs but these do not need to be nuclear.</p> <p>Do not bury nuclear waste, 'out of sight, out of mind'.</p> <p>If burial is so safe, put it somewhere central in the country, or perhaps near to London. To suggest that only west Cumbria is suitable, near to an existing nuclear facility, beggars belief.</p> <p>The cost of work on a repository should be put into the development of safe renewable energy (eg. wind, wave, hydro and solar) and into the reduction of use of power. Cumbria's west coast could be at the forefront of these technologies with no risk to the other aspects of Cumbria's economy.</p>
1231	1 – Geology	No	No comments made
1231	2 – Safety, security, environment and planning	No	No comments made.
1231	3 – Impacts	No	No comments made.
1231	4 – Community benefits	No	No comments made.
1231	5 – Design and engineering	No	No comments made.
1231	6 – Inventory	No	No comments made.
1231	7 – Siting process	No	No comments made.

1231	8 – Overall views on participation		They should not take part in the search.
1231	9 – Additional comments		The risks of storage in a geologically unsuitable area are excessive. It is a gamble with the well-being of future generations of Cumbrians.
1232	1 – Geology	No	No comments made.
1232	2 – Safety, security, environment and planning	No	No comments made.
1232	3 – Impacts	No	No comments made.
1232	4 – Community benefits	No	No comments made.
1232	5 – Design and engineering	No	No comments made.
1232	6 – Inventory	No	No comments made.
1232	7 – Siting process	No	No comments made.
1232	8 – Overall views on participation		They should not take part in the search.
1232	9 – Additional comments		For some uncertain short term gain, the risks of storage are excessive. There is no technology available for decontaminating West Cumbria if there is a leak. It is irresponsible to disregard risks for future generations.
1234	1 – Geology	No	<ul style="list-style-type: none"> • Why is the data obtained by the Nirex study not in the public domain and being consulted and used? • Concerns regarding that a 'make do' attitude will be adopted to enable a solution to be found and help bring forward the siting programme to 2029 • Conflicting external information with regard to the geological suitability of the area by specialists like Professor Smythe • What has changed since the Nirex consultation and public enquiry to now make the area geology suitable, nothing that I am aware of so why waste public money carrying out a desk top survey. The only areas that

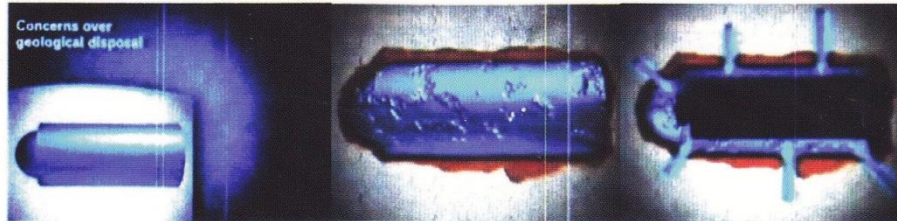
			might be suitable would be in the lake district area of Cumbria and the chances of gaining public acceptance are nil, so again why waste public money , especially in these cash strapped times.
1234	2 – Safety, security, environment and planning	No	<ul style="list-style-type: none"> • A lot of uncertainty in relation to the above areas
1234	3 – Impacts	Not Sure/ Partly	<ul style="list-style-type: none"> • A very comprehensive list has been drawn up and acknowledges the areas requiring more attention. • The chapter lacks depth around the disruption that will be caused during the construction of the facility and the huge environmental impacts of the rock removal process; the creation of spoil heaps, infrastructure issues, extra traffic involved, land needed and general scale of the operation.
1234	4 – Community benefits	No	<ul style="list-style-type: none"> • Any community package needs to be sustainable, transformational and offer long-term inward investment to help mitigate the perceived environmental decline of the area. • The ‘host community’ should be consulted and gain the maximum benefit package with a ripple effect of benefit packages for others areas. • The identified ‘host communities’ needs to have the right of withdrawal at any point in the process • The community needs to be engaged and details of the proposed benefits package outlined at the earliest opportunity in the process.
1234	5 – Design and engineering	No	<ul style="list-style-type: none"> • Too early in the process to comment on the design and engineering of the facility. It could, at least, have discussed the anticipated arrangements for dealing with water flows, gases, explosive hazard, criticality, etc. • There is no mention of the extent of monitoring that is foreseen for the facility, nor the period during which waste could be retrieved.
1234	6 – Inventory	No	<ul style="list-style-type: none"> • Too wide an inventory from sludge’s to uranium/plutonium which is not necessarily currently well defined.
1234	7 – Siting process	No	<p>Problems arise from the way that the ‘way forward’ might be interpreted:</p> <ul style="list-style-type: none"> • The areas highlighted in red on the map on page 27 encompassing the industrial areas of Carlisle, Workington, Whitehaven, Egremont and Maryport which have already been excluded due to the BGS screening study, therefore it is only right that representatives from these towns should now have much less of an influence in the process going forward. • Also, it is a current perception that it is very unlikely that the repository will be sited within the Lake District National Park, therefore like the above; representatives from it should have less of a say. • Once any area is identified as a suitable site that community should be consulted to see if they are agreeable to the benefit package on offer. • Throughout the process the identified host community should have the option to withdraw and ‘Voluntarism’ should be core principle, not just for the County Council and Borough Councils but for those individuals

			communities directly affected by the siting process. A 'free' right of withdrawal should be available at any stage to all concerned as the project progresses.
1234	8 – Overall views on participation		<ul style="list-style-type: none"> • This is too big a decision with very long-term implications, not just for this generation but also for generations to come for any council to make. All the electorate in Alleradale and Copeland should have the opportunity to have their say via a referendum to see if we should go forward to a desk-top study. • Ultimately if an area is identified as being suitable any community affected in that area should have the final say as to whether they are willing to proceed to the construction phase, not the Councils who could be in it for their own gain.
1234	9 – Additional comments		<ul style="list-style-type: none"> • The majority of the current Public Relations activities are not seen to be very engaging for the majority of the community in the consultation area. • The language in the consultation document is very ambiguous, to the extent that it could be interpreted that the repository is good or bad for the area. • The process is at a very early stage, so a lot of information is unavailable to make an informed submission to the consultation process currently. • There is no thought given in the document to how an independent Scotland's waste might be dealt with, particularly in-light of the NDA's move to relocate waste from the Dounreay site in Scotland to Sellafield over the coming decade. • What kind of geology would automatically eliminate an area from the process? • There is no mention that individual compensation packages will be offered to businesses and individual households affected by the siting of the repository.
1236	Email		I was horrified to hear that you intended to pollute such a valuable and beautiful area as the Lake District by proposing a nuclear dump to be buried in Cumbria. Cumbria is already suffering from the siting of Sellafield. This latest proposal is an outrage. Why do you think that such an area of outstanding natural beauty is simply a convenient large space for toxic rubbish? Please bury it in your own garden if you think its harmless. Do not let this plan come to fruition. Please reconsider this insane proposal.
1237	Email		Please lodge my objection to any plans for nuclear waste in Cumbria, this has been rejected by every other council in the country. Please sit back and consider why everyone else is running away from this and reflect on the damage you are doing to our county. I sincerely hope you all come to your senses and walk away from this quickly.

1238	Letter and postcard	<p>[Letter]</p> <p>After reading your Consultation Document and attending several of your Drop-in events and listening to the lectures I write to oppose all proposals to enter the siting process for the following reasons:-</p> <ul style="list-style-type: none"> • In 1999 the Government declared in their Pangea Report that areas like those now being considered were unsuitable for a repository. The reason being that in areas of high rainfall, high hills and mountains the downward pressure would force water upwards into water courses and water catchment areas. It is acknowledged by all that a repository would leak contaminated water therefore to forward in this type of location would mean a pre-emptive strike on future generations. <p>From the work already done, the conclusion has been reached that the adjacent areas have proved to be too leaky for a repository, so to propose an area next to them would be far too risky.</p> <p>In Sweden and Finland suitable geological areas were indicated by the Government before they asked for volunteer communities from those areas. The MRWS Consultation Document omits that very important piece of information and there is no mention of the Pangea Report which would have excluded the areas which have now volunteered. Is this because of lack of knowledge on the Partnerships part or because the vast majority are pro-nuclear?</p> <ul style="list-style-type: none"> • I am also worried about the problems of gas/steam build-Up due to heat from radioactive decay, bacterial contamination and chemical reaction. We already have experience of a 4 ton concrete plug, authorised by the regulators; being blown off the top of the Dounreay waste disposal shaft. <p>We do not and can not have the knowledge to understand how our chemicals and materials used in construction and storage of the waste will re-act with the extreme heat of decaying radioactive waste over long periods of time. I believe there is too much risk of fire and explosions or steam build-Up to go ahead with a repository in the proposed areas.</p> <ul style="list-style-type: none"> • At your Drop-Ins you have emphasized the number of Regulators who would check on safety and security. These checks are not infallible though, because the Nuclear Industry had to advertise for previous employees to contact them - if they could remember what had been put into the Low Level Waste Dump at Drigg. Obviously the Regulators had not insisted that records were being kept, or, if they had, did not follow up to see they were in order. <ul style="list-style-type: none"> • I was amazed that the Consultation Document suggested that the Surface Facilities could include a Visitor

		<p>Centre. This would attract unvetted visitors, some of whom could be terrorists or their informers. The Sellafield Visitor Centre, approved by Regulators and Planners, was closed, and whatever the official reason given, I believe it was shortly after Tim Farron MP asked a question about the security risk because it was adjacent to the site, separated by only a wire fence and the visitors were given bus tours round the site.</p> <ul style="list-style-type: none">• I think the negative impacts of a repository have not been fully assessed, especially on landscape, noise and light pollution. <p>I found no mention of the high razor topped fencing which would enclose the Surface Facility, for security reasons, nor the copious floodlights to illuminate it during the night, nor the noise and pollution from heavy machinery and lorries, which could be operating 24 hours a day, nor the disadvantages of so much movement in previously fairly quiet areas.</p> <ul style="list-style-type: none">• Regulations, scientific and engineering ideas change as knowledge increases and I believe we should wait 50 to 100 years before considering a repository, and that the waste should be kept in above ground storage or near surface storage facilities until-then. <p>In conclusion, I am totally against a repository in the areas proposed and feel that first and foremost, areas with high rainfall and unsuitable geology should have been excluded from the Government's volunteer programme. It seems the Government have taken CORWM's volunteer suggestion too literally.</p> <p>[Postcard]</p> <p>Side one</p>
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WE KNOW ENOUGH ABOUT CUMBRIA'S GEOLOGY TO SAY NO TO GEOLOGICAL DISPOSAL



The graphic above is taken directly from a UK government sponsored video*. It illustrates what would happen to the geological disposal of nuclear wastes in...

...AREAS OF "HIGH RAINFALL, PERMEABLE ROCKS AND HILLS AND MOUNTAINS TO DRIVE THE WATER FLOW"

**Following the failure of Nirex's (British Government) push for geological disposal of nuclear wastes in Cumbria, the British Government sponsored a project called Pungsu, aimed at 'disposing' of nuclear wastes in Australia. The graphics above are from the Pungsu video of 1999. Australians said No Thanks! Cue Cumbria 2012.*

Side two [name and address removed]

			<p>To Cumbria County Council, Allerdale and Copeland Borough Councils,</p> <p>You are running a consultation to see if Cumbria should proceed along 'steps towards geological disposal of nuclear wastes.'</p> <p>Enough is known about Cumbria's geology to know that this area of "high rainfall and hills and mountains to drive the water flow" is NOT SUITABLE FOR FURTHER INVESTIGATION.</p> <p>I do not support any further "steps" and ask that "no decision to participate" is taken by the 3 councils and decision making bodies.</p> <p>Please ensure that Cumbria has a viable future and STOP the STEPS TOWARDS GEOLOGICAL DISPOSAL</p> <p>yours sincerely,</p> <p>Name:</p> <p>Address:</p> <p>Postcode:</p>	
1241	Email		<p>NUCLEAR WASTE DISPOSAL - NO PROBLEM</p> <p>In a previous article by the author (NEI Oct. 2009), the disposal of IL W in the UK was addressed. The present note adds suggestions for disposing High Level Waste (HLW). The remarks below apply to both vitrified waste after reprocessing and Spent Fuel.</p> <p>In 1981, a comprehensive comparison of options for burial of UK vitrified HLW was published by UKAEA Northern Division (Burton and Griffin ND-R-S14 (R)). The study was carried out by a highly experienced team of engineers and technologists. Three main classes, all of which involved surface storage for 100 years or so to reduce the heat load on rock after burial, are outlined below.</p>	

		<ul style="list-style-type: none"> • Deep burial of the waste in relatively thin steel packages lowered them down vertical boreholes in the floors of access tunnels, followed by a relatively thin bentonite backfill. • Deep burial of HLW containers overpacked in thick (300cm) steel or cast iron in a horizontal mode in tunnels surrounded by a thick backfill of bentonite. • Horizontal tunnel emplacement as in B but above sea level, where host rock could be drained, bypassing the backfilled region, into the original access tunnels. <p>In A, the barrier to activity migration is mainly geological. Being below the water table, activity could eventually be leached by groundwater, whose movement would be slow; absorbers in the rock would further delay activity transport. There are several difficulties with this system.</p> <ul style="list-style-type: none"> • (1) The surface store for the highly-active-packages would-need high active operations during periodic refurbishing in the 100 years of storage. • (2) Manipulation of packages from vertical to horizontal and the reverse would be necessary and tunnel heights increased to do this at critical load points. • (3) The high active operations in (2) and (3) would have to be done by future generations. • (4) Obtaining the data to predict water movement round the waste would require extensive drilling in the host rock - itself a possible source of increasing water flow. Using the complex data in a large computer programme will only mask uncertainties. • (5) Any accidents such as jamming of packages in boreholes could be difficult and dangerous to put right. <p>In system B, previously referred to as TSD, the thick overpack would allow conventional engineering in storage (open air with a light security fence) and in manipulating the twenty-ton packages horizontally into the tunnels, followed by backfilling with bentonite. All operations would be hands-on. The thick shield and bentonite would inhibit corrosion and hence access of water to the waste for a very long time. The hazard from the disposed waste would then be reduced to a tiny level, probably below that of dumped LLW or non-active toxic waste. The first few tens of metres into the access could eventually be sealed to prevent unauthorised tampering; though inconvenient, backfill could be removed to take packages away. Finding of sites should then be akin to that for LLW or toxic waste with an overhead erosion cover. They should be acceptable to the public and convenient for surface operations e.g. the short transfer from Sellafield to Black Combe. The UKAEA report concluded, moreover, that system B would be cheaper than system A, and, having extra and thicker engineered barriers, be much safer. This remains true, REGARDLESS OF SITE.</p> <p>The concept of B can be further enhanced as in option C by having the emplacement zone above or just below the water table as in a hillside. The original access tunnels could slope up towards it and after backfill round the waste, the water in the host rock would by-pass the load zone to flow into the access tunnels (where it could be</p>
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			<p>channelled through actinide absorber beds to a sump from which seepage into non-potable water zones through a geological barrier could be arranged as recommended in toxic waste disposal). A set of slightly down sloping tunnels and boreholes just above the emplacement zone and draining outwards would reduce water flow near the waste to a slow rate. The main drainage tunnels are wide and will not block; the tunnelling merely removes resistance and improves natural drainage. If it did block, the hazard would merely revert to that of Concept B. This concept C, described in earlier publications as Drained Disposal, would be cheaper in construction than B and have more migration barriers. (Emplacement is just below the water table to give a positive compression on the bentonite, as in conventional backfilling).</p> <p>Overall, Band C require little verification and in a rational world there would be no concern over HLW disposal - in fact with the systems of the earlier article for ILW, there are no serious disposal problems with nuclear waste at all. Unfortunately, NIREX/NDA have persistently chosen to ignore the UKAEA work. Recent NDA reviews of global approaches in this field have only mentioned other countries - the UKAEA recommendations of tunnel disposal are decades in front of those abroad.</p> <p>The author has contacted NIREX/NDA on numerous occasions. No sensible technical objections to Thick Shield/Drained (TSD) systems have been raised. (With the successive redundancies of top NDA executives, it seems likely that correspondence has gone adrift). In spite of setting up public consultancy meetings (MRWS) TSD or Drained Disposal ideas have never appeared on the agenda. Complaints to CoRWM and DECC have revealed that neither have control over NDA, in spite of the latter spending vast sums of taxpayers money. (Since NIREX/NDA have spent 30 years investigating System A, it is unlikely that they will be successful in the next 30 years! Meanwhile, the UK will pour billions into an inferior concept).</p> <p>Hopefully, the basics of this article may be discussed at an MRWS meeting; they are easy to understand and the public can then decide here and now the general direction of new investigations. Huge savings could be made which should be welcomed by the UK Government and public in the present straitened finances of the nation.</p>
1243	1 – Geology	No	It has been proven that the geology of this whole area is totally unsuitable for an underground repository. The region was rejected in the 1990's because of its unsuitability for waste burial. This investigation cost around £400 million. Why are you spending more money on this now?
1243	2 – Safety, security, environment and planning	No	If the repository were to be constructed it would have a huge impact on the environment. How could a hole 1000m deep and up to 9.5 sq miles in area have anything but? Where would all the rock and earth removed be put? However deep the hole safety and security still can't be guaranteed. It is predicted that radioactive gas could return to the surface in a relatively short time.

1243	3 – Impacts	No	The negative parts of the impacts greatly outweigh the positive
1243	4 – Community benefits	No	This sounds to me like bribery and corruption. If you agree to have a repository then we will reward you. The fine principles you set out sound good on paper but would they really be put into practice?
1243	5 – Design and engineering	No	Again the ‘generic’ design looks good on paper but you’re talking about something huge – 9.5 sq mls in area + 1000 m deep. How can you get any idea of what that looks like in reality?
1243	6 – Inventory	No	This is entirely speculative
1243	7 – Siting process	No	Many geologists would disagree strongly that the ‘initial geological screening’ indicated potential suitability. They would say quite definitely that the area is unsuitable and therefore we should go no further with this ridiculously expensive exercise.
1243	8 – Overall views on participation		I am absolutely against Allerdale and Copeland B Councils taking part in the search for somewhere to site a repository. Vast sums of money have already been spent on this exercise and it should stop now. Do they not find it odd that they are the only 2 councils in the country to show interest + volunteer? The rest of the country’s councils obviously have more sense.
1243	9 – Additional comments		This questionnaire was most difficult and frustrating to complete. The hefty consultation document to which reference had to be made in order to complete this was most offputting and beyond the wit of most ordinary folk. Just how much money has been spent so far and where has it come from?
1244	1 – Geology	No	Has already been demonstrated that all of W Cumbria is geologically unsuitable. Early (and expensive) research by Nirex has been deliberately ignored. BGS advice of the 1980’s has been ignored – they showed E Anglia + other sites in E England had the ‘best’ geology. In this consultation you didn’t ask BGS this question again – why? Because you didn’t want their answer. How is Dr Dearlove an independent geologist when you are still employing him?
1244	2 – Safety, security, environment and planning	No	Cannot say how safe a site is until it has been located more accurately. R + D. You have ignored ‘peer reviewers’ on the geology – cannot have confidence on the process in future. Political process in W Cumbria is not transparent – process is being ‘managed’ to get the decision you want.

1244	3 – Impacts	No	Tourist authorities are not directly involved in the final decision – the decision is going to be made by sectors of 2 councils and Cumbria CC. You say it is 'broad compatible' – hence you have evidence of some incompatibility! Effects on the Lake District brand not known – but the interest of the 'Lake District' are not involved in final decision.
1244	4 – Community benefits	No	Benefits unknown – far too many uncertainties here. Benefits appear to be a 'bribe' to get the local community on board. It appears as 'jam tomorrow' – few are going to say no to this.
1244	5 – Design and engineering	No	There are no design concepts in this document. Will they fit with the community expectations not with yours. Agree material should be retrievable. You are asking for a view on the unknown.
1244	6 – Inventory	No	Far too vague. Too many unknowns.
1244	7 – Siting process	No	Voluntarism is not the correct process. The site should be identified on sound scientific research, not this kind of procedure. No other country has adopted this stance.
1244	8 – Overall views on participation		No the area should not take part in this at this or at any stage. All of W Cumbria has already been shown to be geologically unsuitable. The hydrological gradient is high over all of W Cumbria – there is already more than evidence for that without further investigations. Other UK areas with simple geology have been ignored. The whole process has not taken into account international guidelines and practices.
1247	1 – Geology	Not answered	I agree so far with the initial assessment
1247	2 – Safety, security, environment and planning	Not answered	I agree but only if retrieval is build into the design
1247	4 – Community benefits	Not answered	I would like to see what amount of spending would be spent in West Cumbria, (hospital, roads, trains, schools)
1247	5 – Design and engineering	Not answered	I agree if retrieval is built into the design
1247	6 – Inventory	Not	While we can still reprocess spent nuclear fuel. I don't want to see dry storage

		answered	
1247	7 – Siting process	Not answered	Yes
1248	1 – Geology	No	I believe that the whole process is flawed – even given that the best option for nuclear waste is deep disposal – there are many areas of the UK with much more promising geological conditions – it seems that the powers that be are looking for a short cut in the consultation process by 1st identifying a compliant population whereas a better scientific approach would have been to draw up a shortlist of viable geological locations – West Cumbria would not have featured on such a shortlist unless it had been very long indeed. Many millions of pounds were spent on NIREX which is being ignored. Geological safety is paramount – there should be no place for disagreement between geologists, YOU CANNOT BEND THE GEOLOGY TO FIT.
1248	2 – Safety, security, environment and planning	No	This is irrelevant as West Cumbria does not have suitable geology – or at best there is major disagreement as to its geological suitability. Such issues as security/planning etc are only relevant where a viable site has been identified.
1248	3 – Impacts	No	IRRELEVANT Particularly economic benefits – these should not be raised at an early stage as they are a clear and blatant attempt to sway opinion. FIND A VIABLE GEOLOGICAL SITE – THEN discuss + and – impacts!
1248	4 – Community benefits	No	IRRELEVANT see previous answer [question 3.2] A CLEAR ATTEMPT TO BRIBE COMMUNITY
1248	5 – Design and engineering	Not Sure/ Partly	Not qualified to comment even though I do believe deep disposal in the correct location is the only reasonable option. Even in Finland where a facility is being built they are not sure about longevity. I do believe however that there should be NO potential for retrievability
1248	6 – Inventory	No	Confused position Either bury it all or store it on surface. If there is potential to use waste as fuel then keep it until technology exists – why waste £trillions on a repository?
1248	7 – Siting process	No	No point in West Cumbria as there can be no agreement on geology. The process would be logical if stages

			1,2 and 3 were applied to the whole country not just West Cumbria.
1248	8 – Overall views on participation		I do not believe that local councillors were either qualified or delegated to make such decisions on behalf of the community. Unless VOTES are taken by area then there is a danger that views in Copeland with its preponderance of nuclear workers will sway the process. COUNCILLORS HAVE BEEN BLINDED BY POTENTIAL ECONOMIC BENEFITS. ANY COUNCILLORS WITH DIRECT/INDIRECT RELATIONSHIPS TO NUCLEAR INDUSTRY SHOULD BE EXCLUDED – eg John Kane, Tim Knowles.
1248	9 – Additional comments		Procedure should have been 1. Identify short list of geological sites in UK 2. Research geology further to reduce the short list 3. Identify the best and safest site in the UK 4. Convince local population 5. Build it This process would NOT result in a West Cumbria site
1249	1 – Geology	No	NO There does not appear to be any evidence of suitable rock formation in Cumbria according to geological experts. 20 years ago Cumbria was deemed unsuitable by Nirex – it still is. Cumbria has extremely high rainfall – and experts predict it to become wetter with ground water moving fast through it. Cumbria is volcanic – with fault lines. There was an earthquake in 2010. Other countries which are building them are doing so far away from mountainous areas – because they know it is not safe around mountains. Not worth the risk. Please do not bribe us with your money.
1249	2 – Safety, security, environment and planning	No	NO. Safety - the area is not safe geologically. Nirex have already deemed the coastal plains unsafe. Security – Huge problem. Waste arriving being transported – No Environment – This would be a disaster for the area – water pollution through the fault lines. The perception of Cumbria would become ruined. It would lose it's 'World Heritage Site' Planning local planning rules will not count against a government driven scheme.
1249	3 – Impacts	No	No It will not just be 'West' Cumbria – it will impact Cumbria as a whole. Farming and food production will be ruined. Look at Foot + Mouth in 2001 – visitors stayed away + went elsewhere. Food produced in Cumbria will be rejected. Land and property prices will fall. The landscape will be spoiled for future generations.
1249	4 – Community benefits	No	No. The partnership has not yet said who will benefit. Insufficient information. There is no trust in going

			forward. Appears to be a bribe for the people of West Cumbria – there is more emphasis on money than there is on environmental impact and safety.
1249	5 – Design and engineering	No	Removal if needed – this should underpin the design no it can be removed if problems arise. I do not feel that the design addresses the amount of rainfall we get in Cumbria. Experts forecast a 20% increase in rainfall. Developments should have made it possible for nuclear waste to be re-used or recycled properly. Why should Cumbria collect everyone elses. You do not even say in the pack it will definately only be Englands.
1249	6 – Inventory	No	No. The partnership does try to reassure us but future changes to government could happen + policy. It is irresponsible to continue to produce something that you can't deal with.
1249	7 – Siting process	No	no. A suitable place in England should have been found first – not West Cumbria asking to host it without a suitable site. It was addressed the wrong way round. There are far more suitable places in England with stable geology. This should not have gone beyond stage 2 without a suitable site found + tested. The country is nuclear compliant – the councils were bribed with your money to agree to hosting – they are small areas – the whole of Cumbria would be affected. There is not a good safety record here. It is a poor record for something so dangerous + poorly understood.
1249	8 – Overall views on participation		No they should not. It is not safe. So this question should not arise.
1249	9 – Additional comments		Please put the Geology, safety and the preservation of the lake district first. Who would want to buy lamb which was raised on top of a leaking radioactive dump – perceived or not – NOT ME.
1250	1 – Geology	No	Not siting the repository underground, we have had earth tremors in this area, could find tunnels and access restricted if any cracks occurred. Also from map could have to go under peoples homes, not a satisfactory situation. Geological study performed years ago and abandoned area not suitable due to its geological nature.
1250	2 – Safety, security, environment and planning	Not Sure/ Partly	Sellafield workforce are experienced in handling waste. Should therefore be stored on or under that area as if there is an incident it would need to be handled immediately, therefore above ground much more sensible. Road system is no use for large scale construction, road not in good condition and far too narrow for large loads. Will require to be security staffed for hundreds if not thousands of years,
1250	3 – Impacts	Yes	Far too many impacts for it to be a viable proposal – ground water, genetic effects on future generations, house prices easy to say scheme for governments to recompense home owners but who can predict if any

			government when it is required will still honour the property protection plan. Seems like an easy option to site it in Copeland but do visitors want to come to an area with large underground repository. Need to be looked at in far more detail. A proper hospital is required it Whitehaven not a cut down version.
1250	4 – Community benefits	No	The benefit package need to be known and agreed legally and in place long before put Copeland forward to repository. Easy to say there will be a benefit package but not necessarily able to deliver.
1250	5 – Design and engineering	No	Retrievability – a big issue what if a container starts to leak! This requires sorting out at the beginning of the design stage not as an after thought when a problem occurs. Require to take alsorts into design and engineering stage – really working with the unknown.
1250	6 – Inventory	No	Only waste from British reactors to be stored not a dumping ground for worlds nuclear waste, what happens if it becomes full? Who will own and be responsible for decisions as to what is stored. Government may not have a say as site now owned by USA companies. UK is a small highly populated country why don't all countries discuss options, under some of large deserts would be more appropriate.
1250	7 – Siting process	No	Something so important to the area should have voted on by all the people of the area – eg a referendum or voting forms to the electorate. Already been through geological surveys in past not suitable.
1250	8 – Overall views on participation		Think that although say can withdraw at any stage – it won't happen as so much money will have been spent and no where else wants a repository. I do not think that the councils should take part in the search. Why not store waste above ground at all the decommissioned nuclear sites around the country where it could be secure on the surface.
1250	9 – Additional comments		A number of references to other documents not in this document. This decision will also affect future generations. Also says no jobs held for local people, no real economic benefit and may actually be detrimental to area because visitors may not come especially if new reactors as well as repository.
1251	1 – Geology	No	We have had earth tremors therefore underground not suitable, should be on surface. Also should not go under properties. Geological survey done years ago, not suitable.
1251	2 – Safety, security, environment and planning	Not Sure/ Partly	Workforce experienced. The whole of Cumbria secure as poor road and rail links therefore terrorists could be caught. However makes it unsuitable for transportation of nuclear waste, safety issue, roads twisty and narrow not suitable for large or wide loads.

1251	3 – Impacts	Yes	Staff at local hospital should receive specialist training in case of contamination ie nuclear incidents. Road structure need massive improvements. More monitoring in case of leakages and effect on environment and people and livestock should be taken into account and planning for events already set in place. Visitors to area will stay away – reducing economy.
1251	4 – Community benefits	No	Seems like sprite to catch mackerel. How do you agree to question when do not know what will happen and who decides what people in area want, or think is appropriate with benefit package. Would all people be asked and allowed to vote, especially those in immediate area who would be affected by disruption on roads, noise level etc
1251	5 – Design and engineering	No	Retrieveably should be built into design, and all possible scenarios that could affect repository, environmental, terrorists, human error. Not changing design + engineering part way through project, keeping same people.
1251	6 – Inventory	No	Only British waste should be stored there, not import waste from other countries. Sell expertise of design and engineering to other countries instead. Should know level of radioactive, what is to be stored and how much before hand, so people can make a more intelligent decision. Government may not have say on site as owned by USA. If house prices fall will owners be compensated, and will this be written in law so future governments cannot refuse to pay.
1251	7 – Siting process	No	The people in the boroughs should have been balloted before the councils expressed interest. Copeland area already had geological screening in past not suitable. For something so important not up to councils as they do not represent all people in area (ie not 100% of voters).
1251	8 – Overall views on participation		Repository should be on surface on Sellafield site, why dirty other areas. All nuclear waste should be in one area not spread around boroughs. Should only be British waste. Money spent could be wasted and put to other use. No-one else wants repository in there area so by default go to an area already committed to Nuclear Installations.
1251	9 – Additional comments		Document difficult to follow, as keep referring to other documents not included. Jargon and shortening of words to letters ie DWP used a lot. Not well publised had to do this last day. Copeland Matters only arrived last night, needed magnifying glasses to read phone number.
1252	1 – Geology	Yes	Further investigation in the geological suitability of suitable areas in West Cumbria will be required
1252	2 – Safety, security,	Yes	I think that all the necessary regulatory bodies are in place to fully monitor the initial stages of the repository

	environment and planning		investigation works.
1252	3 – Impacts	Yes	The main disruption in the area during the investigation and construction would be the construction of engineering works and road modifications. In the longer term landscaping and tree planting would reduce the impact of any repository surface buildings. There will also new jobs available for local people in the construction and operational periods. However it is important that there are opportunities to train or retrain in the new skills that would be required. Tourists will still want to visit the Lake District areas because of the natural beauty. The Sellafield site has not stopped them from coming.
1252	4 – Community benefits	Yes	Any benefits packages would have to be worked out so that the general residents of the area can see that they have gained something. Long term benefits would be improved road access so that companies would want to set up in West Cumbria with the bonus of increased employment opportunities.
1252	5 – Design and engineering	Yes	The final design and engineering details will depend on the site identified for the repository.
1252	6 – Inventory	Yes	The decision on what type of material that will go into the repository is still uncertain at this stage, and will have to be made in a later stage of the project.
1252	7 – Siting process	Yes	I agree that from the consultation document that many aspects regarding the process for siting of a repository have been identified and covered. There may of course be other issues identified during the various stages which will have to be addressed.
1252	8 – Overall views on participation		I think that the local councils should be involved in a search for a suitable location for a potential repository site
1254	1 – Geology	Not Sure/ Partly	Concerned about the Radon gas releases from granite. The waste will be hazardous for a long period of time and we have had minor quakes here, more may happen
1254	2 – Safety, security, environment and planning	No	The fact that this area is the only one that volunteered is a 'no brainer.' Why did nobody else volunteer? The effect on our tourist trade would be disastrous if there was a problem with this.
1254	3 – Impacts	No	Although you may try to say jobs can be created the economy survives on tourism and having a repository here is not a selling point for an internationally recognised tourist destination. The vast majority of real jobs for West Cumbrians are in the hotels and so on. Jobs created by this will be for the specialists brought in to oversee it and a few temporary jobs for construction. Transport a real issue. Damage to environment with

			spoil.
1254	4 – Community benefits	No	Quite sure you'll want to throw lots of money in our direction to compensate for the effect on our lives and communities. If this was a good deal we'd be paying you to come!
1254	5 – Design and engineering	No	Since you can't give specific details this question is inappropriate. Other countries look at site first not community so that seems a better option. I think it essential waste can be retrieved if necessary.
1254	6 – Inventory	No	If this goes ahead I anticipate an argument some time in the future that it will make a profit if we get overseas waste and that will happen. We will be led blind into this.
1254	7 – Siting process	No	The geology is too complex the area too precious and other countries are not looking at similar sites as preferable. This is being considered by greedy councils. Not by logical arguments about suitability of the geology.
1254	8 – Overall views on participation		No – it is a waste of money to investigate without a commitment on behalf of the local population
1255	1 – Geology	No	Previous geological study proves the area is unsuitable for disposal of radioactive waste.
1255	2 – Safety, security, environment and planning	No	Many people are unaware of present public consultation. Repository processes should have been developed before consultation stage, present system and information given is ad hock and not appropriate.
1255	3 – Impacts	No	Health effects should always be considered first on the population in Cumbria and elsewhere and should not be paired with economic impact. It is certain that tourism (a major part of local employment) will be affected in the construction and after construction of the facility. Benefits to the area from a working repository will be marginal against terrorism!
1255	4 – Community benefits	No	A community benefits package should not be relevant to this consultation, governments should not bribe communities. Because of the past nuclear issues this area ie Copeland and Allerdale have been overlooked and neglected by government investment.
1255	5 – Design and engineering	No	There is no working design available that is compatible with the area geology. A new site must be found elsewhere in the UK, these sites do exist.

1255	6 – Inventory	No	How can the community be expected to accept a repository if we are not sure what changes will be made to the amounts and levels of future waste and kinds of waste.
1255	7 – Siting process	No	The process should be halted now as the area has been proved unsuitable for a repository, why spend more finance on a failed project. The area is geologically unsuitable and the location for transporting waste would be difficult and expensive
1255	8 – Overall views on participation		What is the point in the search when geology of the area by competent geologists have proved it unsuitable? As a Cumbrian I care about the area and what we leave behind for future generations.
1255	9 – Additional comments		This form has been carefully designed so as to be as difficult as possible to understand by the average lay person. Better information to a wider general public should have been possible in this consultation.
1256	1 – Geology	No	Safety must be the priority. The safest geology should be found within the UK rather than this back to frontwards consideration of geology within the boundaries of the 3 councils who, for whatever reasons, have expressed interest. It is known that Cumbria's geology is complex and likely to be less than satisfactory. Stop now and please ask the government to insist on finding the safest geological site.
1256	2 – Safety, security, environment and planning	No	The repository must be sited in the safest site in the UK. The implications are huge and when THE BEST site is found the whole country, Europe and the world will benefit. This parochial approach is irresponsible.
1256	3 – Impacts	No	Siting the repository in West Cumbria will have enormous impacts which will last for tens of generations. We must not saddle future generations with potential threats and problems because we are not brave enough to look for the SAFEST UK sites and are relying on short term gains in local communities to solve this national and international dilemma.
1256	4 – Community benefits	No	Utterly irrelevant at this time
1256	5 – Design and engineering	No	Find the SAFEST geology first. It is highly unlikely to be in West Cumbria so please start again.
1256	6 – Inventory	No	No comment was made
1256	7 – Siting process	No	The whole process is flawed by going for the easy option. Tempting communities and ignoring known geological problems is not the way forward. Central government must insist on SAFETY rather than desperation of people living in economically deprived areas being compliant

1256	8 – Overall views on participation		<ul style="list-style-type: none"> • I believe councils should withdraw from the process now. • The longer this process continues the more difficult it will be for withdrawal. • The waste must be stored safely and securely and it is for central government to find the SAFEST sites and proceed from there.
1257	1 – Geology	No	<p>I really don't understand why you are not referring to the NIREX investigations. £40M of research dismissed as "absence of clear detailed evidence." Having attended Mr Smythe's presentation in Cockermouth I am persuaded to his view (from NIREX investigations) the geology is unsuitable.</p> <p>This whole process, if indeed it is actually meant to find safe secure repository with the most suitable geology within whole of UK, should have used NIREX to reidentify that suitable geology and then approach local communities in these areas to receive such a repository if indeed that is found to be the best method of dealing with the waste and that is less than compelling.</p>
1257	2 – Safety, security, environment and planning	No	<p>I find no consideration of "security" whatsoever whereas the Finnish programme (obviously much further advanced) poses challenges on security that must be considered now. Your confidence in the current regulatory bodies I do not share given past experience of accident cover-ups and misinformation. Your approach is "trust us." No I don't and there is a lot of ground to make up. Safety issues again seem to rely on trust of the NDA and R+D organisations with? The Nuclear Industry. Again I have no trust and recent statements to declare Nuclear Power "Renewable"!!! Just beggar believe. No I don't trust those who have taken us to the position we are now in with the Nuclear Waste to deliver this in safety</p>
1257	3 – Impacts	No	<p>Direct impacts: How can you investigate negative impacts on exposure to radiation when NIREX is said to show faulted and broken rock strata that ground water will inevitably bring radiation to the surface.</p> <p>Long term direction: Accepting that W Cumbrians need long term development of jobs (as it has since 1520!) does not mean a repository is the way to deliver those. Tourism and Farming provide opportunities for employment that could be stopped dead by a repository. "Protecting the Brand" needs more than weasel words – "Trust us it will be alright." No I don't</p>
1257	4 – Community benefits	No	<p>Ah yes - the bribery. I wrote that are no guarantees and we must trust to the generosity (or not) of some future government and it will heed management of expectations. This carrot to sign up and hope for some unspecified benefit for future generations flies in the face of experience actual government support for, for example former mining communities.</p>

			<p>Promises, promises and as was well aired at the Hunday Manor CALC ½ day seminar most “benefits” you can think of eg infrastructure improvements and training of local workers to fill all jobs arising in both construction and management of a repository must be part of the requirements for such a major project and not “community benefit.”</p> <p>Support for local sports and upgrading village halls is not going to be enough. Sorry.</p>
1257	5 – Design and engineering	No	<p>Design concepts: again “trust us” or trust the NDA/DECC. Do generic designs consider disposal of materials excavated from the tunnels? This has to be considered along with the infrastructure requirements that are not part of “benefits.” Would this provide construction materials for a Solway Barrage - true renewable energy.</p> <p>Retrievability – Hurray! It’s an option</p> <p>Overall: geology raises its head again is there a design concept for the “Norfolk option” which was said by Mr. Smythe be in clay not rock and being east coast liable to flooding in the next 100,000 years. I thought NIREX had started excavation - is their design forming part of the “concept” or again is this work totally disregarded?</p>
1257	6 – Inventory	No	<p>Partnership Principles are too weak. ie</p> <ol style="list-style-type: none"> 1) Govt should make clear 2) DMB’s should have a veto <p>These should be SMALL so there can be certainty and commitment. We can’t trust the government not to add anything radioactive that say researchers want disposed off to the “inventory.” This would be a drip-feed process avoiding the need for principle 6 “negotiations on significant changes.”</p> <p>I can’t understand why the range of volumes from “2010 Baseline” to “upper estimated” is so extreme. Surely info was prepared for NIREX? Have these figures not been reviewed and kept up to date.</p> <p>If the Industry seriously does not know reasonably accurate figures for this most basic element of “managing radioactive waste” safely what hope is there for accepting anything else the Industry may tell us??</p>
1257	7 – Siting process	No	<p>The essential features of this process are questionable. “Voluntarism” – where the community expresses its view yet principle six of community involvement looks to an “equitable collective outcome” between the host community - local people, DMB’s and wider local interests whoever they may be. The views of the “community” if against and even if based on “reasoned justification” result in the community being excluded from further process. Some voluntarism - some “Right of Withdrawal!!”</p>

			<p>DMBs will be presented with Partnership report also including a “representative opinions poll” not from Parish/Town but District only and I note that to sway things further other community groups not Parish Councils will be resourced to go beyond P? to “engage people” .</p> <p>Lets have some other Community Group to go beyond the District Councils to get the answer they want. It looks like more and more outside the Local Community will be brought in to deliver a result the Partnership want to achieve, also “other stakeholders” = Nuclear Industry. “Withdrawal” locally means Parish/ Town Councils are excluded but meaningful withdrawal from a repository needs both District and County councils to decide not to in the face of what I expect to be heavy lobbying from “stakeholders” and other (unrepresentative groups)</p>
1257	9 – Additional comments		<p>It seems to me that the “local community view” will be well outnumbered by the views of</p> <ul style="list-style-type: none"> • local interests and “stakeholders” • Resourced other community groups set up to promote the repository • Any others you care to conjure up <p>And this can expect to lead to “broad support” with concerns raised being dismissed as without reasoned justification and with a targetted survey showing “Net support” all reported to DMB’s as giving the only supported option to go ahead.</p> <p>Call me an old cynic but I can only hope in vain for a honest outcome given the predisposition of so many towards the Nuclear Industry so in conclusion I don’t want this repository in West Cumbria thank you.</p>
1258	1 – Geology	Not Sure/ Partly	<ol style="list-style-type: none"> 1. The illustration of the multi barrier concept is very simplistic and is unlikely to be realistic for all forms of waste, such as the larger containers shown in other NDA illustrations (e.g ILW, Whitehaven News 19th. Jan.). Many forms of waste already exist and are contained in a great variety and size of containers. 2. Will these wastes be re-packaged into a standard container (an enormous task in itself) or will they be transferred into the GDF in their existing containers ? 3. Are all waste containers, whatever their dimensions, to be surrounded totally by a “buffer” material to act as a barrier to prevent leakage of active species and / or ingress of water? If so how is this compatible with the possibility that the waste should be retrievable? 4. From the schematic diagram shown on p.25 it looks as though retrieval of a waste package would require considerable excavation to free it from its location in the rock if it is tightly encased in “buffer” material. This aspect needs either more detailed explanation of how the multi-barrier concept might be generally applied to different waste packages and how this waste could still be retrievable or it needs a decision on whether retrievability remains an option. On p.11 it has already been stated that :-

		<p>“geological disposal involves placing the waste deep underground ... leaving the waste there forever once the facility is closed” i.e implying not retrievable?</p> <p>There may be arguments in favour of retrieving some wastes but for them to remain accessible for retrieval probably requires a larger store, which in a given rock volume means less total waste stored, and also has consequences for increasing surface facilities required for dealing with retrieved waste.</p> <p>5. I cannot comment in any detail on the geological aspects but having read the comments of the two independent reviewers of the original BGS report it seems that the original version did not treat all factors as thoroughly as might be expected. This only serves to emphasise the importance of continuing independent peer reviewing of all such reports and that government funding for this should be available throughout the progress until a final decision on the GDF is reached.</p> <p>6. Section 4 deals exclusively with geology and there is no evidence that some of the geographical implications of the map in Figure 9, p.27 have been examined. From this map it appears that most of the area still considered for further investigation lies within the National Park. There is only a very narrow corridor between the park boundary and the (pink) area already ruled out, perhaps little more than 5 km wide in the north-east and disappearing to nothing around Ravenglass. On this basis further investigations must raise the possibility that the most suitable site for the GDF would be within the park. Of course since it is an underground repository there should be no evidence of it on the surface so it should not spoil the scenery although I suspect that a lot of people will not agree with that opinion. But the underground GDF has to surface somewhere and I assume that this would be outside the park boundary, otherwise there would be even louder objections to having the surface facilities also within the park. But the surface facilities are very extensive in themselves, they require road and rail access but can be anything up to 10 km (or maybe more or maybe 20 km depending on which poster I read) from the repository itself. So if the distances quoted are realistic this limits the underground GDF to a fairly wide border inside the park boundary and cuts out a considerable area towards the eastern boundary of Allerdale and Copeland.</p> <p>7. I could be entirely wrong in this guesswork but the important point it does raise is that the functions of the surface facilities and the distance it can be from the GDF seem to change in different sources of information. Some of the functions such as surface stores (presumably interim) and waste treatment plants could surely be placed just as easily at Sellafield. Any operations involving treatment of active waste at the surface facility will ultimately lead to a decommissioning problem. And really if you can construct a space nine times the size of the Albert Hall underground you should really be able to add another Albert Hall to put most of the surface facility underground as well. Basically little thought seems to have been given to this by the NDA and they have assumed that they can construct what they want where they want it. If the councils do not want another Sellafield in the landscape on the national park boundary then they need to require more details of the surface facilities and to ensure that only essential functions that definitely need to be close to the GDF are placed there.</p>
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1258	2 – Safety, security, environment and planning	Not Sure/ Partly	<p>1. I accept that the regulatory bodies already have or are developing proposals for evaluating the operations of a repository but at present it is not possible to say if these proposals will prove to be satisfactory in all respects. Their suitability will only be tested when they are applied to any proposals that the NDA make and only then will it become apparent if the regulatory bodies have covered all aspects in a thorough manner.</p> <p>2. The Environment Agency has defined its role for interacting with a potential host community but there does not appear to be any equivalent statement about the nuclear regulator. Does this mean that the ONR is not expected to be involved in direct discussions with a potential host community to explain the possible consequences of the repository ?</p> <p>The regulators appear to have given assurances that they operate independently of government. I think this might be true for formal relationships but I think it is virtually impossible to be certain that the conclusions reached by a regulator cannot be influenced by government and NDA. The degree to which they are independent might only become apparent if their conclusions are not clearly supported by the available evidence. This is further emphasis for the need for the communities and councils involved to have access to information and to expert reviewers who have the knowledge to evaluate it. The councils in particular should note the efforts currently being made by the Sedgemoor District council in Somerset to obtain the same thing with reference to the construction of a reactor by EDF (The Independent 20th. Feb 2012)</p> <p>3. I agree that it is not possible to go beyond an understanding of how the current planning system would be followed. But even the scheme as laid down seems designed to minimise the influence a potential host community could have on a decision of whether to proceed to the next stage, to the point where the communities views can be overridden. The views of a community should continue to have a significant influence at all stages, otherwise decisions are being taken by people who have no direct concern for the community with perhaps only one or two council members as direct representatives. In Allerdale I believe that decisions will be taken by the Executive which is even less likely than a full council to put the needs of the community first. Furthermore while decisions at present appear to rest with councils it seems more probable that in future that the decisions will be made by for a project of this nature by an Infrastructure Planning Commission, as already seems to be the case for the reactor installation in Somerset mentioned above, which is deemed to be of national significance. At that stage I do not believe that there would be any regard for local community concerns. Councillor T. Knowles has defended the proposed planning procedure (letter to Whitehaven News 1st. March 2012) as “just like the traditional planning system” but that system deals with structures that will always have a finite life but a repository is for ever.</p> <p>I note that in Figure 11, p.41 a final “possible planning decision” is identified after construction has started. Up to this stage is construction concerned with some form of rock laboratory as in the NIREX proposal ?</p> <p>4. The NDA certainly should have the capability to develop a safety case but again this will only be tested when a case is being prepared, when the need for independent review on behalf of the community / councils should again be emphasised, additional to anything carried out by the regulators. Peer reviews of the safety case, conducted independently of the regulators, would give considerable additional confidence in the whole process especially if no glaring inconsistencies are revealed.</p>
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1258	3 – Impacts	Not Sure/ Partly	<p>1. There does not appear to be any influence of the host community or the local council in judging if an impact is significant or determining if any mitigation is adequate. Box 16, p.58 says that assessments of impacts from other sources is not applicable so is there complete reliance on the NDA and regulators without any recourse to independent review ? For Human Health and Well Being the comment column states that "identified effects will be assessed by regulators at the planning and authorisation stages" but this could be too late and / or cause delays if some factors are then found to require detailed medical / social data to be gathered. It is also claimed that it is "Confident that (concerns) can be answered later" but there is no indication of when this would be or by who. I would have thought after the "Body Parts Inquiry" there would be reluctance to rely solely on the nuclear industry or its regulators for an assessment of the health in West Cumbria.</p> <p>2. It is stated (p.60) that "an acceptable process can be put in place to assess and mitigate negative impacts". Even if the process is acceptable what if the negative impacts remain and who decides whether the type or scale of any remaining negative impact is acceptable ? As an example there is the problem of spoil (p.59) which it is said will be kept on site as a 12 metre high embankment for use as backfill. This implies that the repository will not continue to be retrievable and that the pile will be there for a hundred years or more. Since there is comparison with the Channel Tunnel as an excavation of comparable scale, is Dover now surrounded by a great wall of excavated chalk or is it that dumping the waste on site is an easy option which will be tolerated in West Cumbria but not in Dover ? Is that what is accepted as reasonable mitigation ? The spoil should be removed as it is extracted. Why not use it to construct road embankments from Millom and Askam connected by a bridge, in order to improve road connections as part of "community benefits". I am sure that when a repository is closed there will be plenty of other spoil from other projects to use for backfill. It is</p>

		<p>interesting in relation to this that Document 234 includes the NDA statement that the repository will continue to be excavated throughout most of its operational life at the same time that waste is being placed in it. This was not clear to me from reading any other documents nor from presentations given; I assumed, possibly like some others, that the whole repository volume would be excavated before waste emplacement started. Is excavation carried out in parallel with storage the intended method of operation for repositories in other countries ? If this is accepted as the NDA plan a local area will be blighted for a century or more by continuous excavation.</p> <p>3. The economic aspirations of West Cumbria, at least in view of the local councils, is quite rightly summarised as “nuclear dependence” (Box 18, p.62). The quotation from the Energy Coast Masterplan is nothing more than wishful thinking, particularly if believes that it will have a “strong diversified economy” by 2027. Everything to date says just the opposite. Only recently the area has failed to attract government funds for economic regeneration because of its poor infrastructure and the same government has excluded nuclear power from the scheme that gives financial advantage to areas from green energy schemes. The development of a repository is only compatible with the economic aspirations if it is used to obtain considerable improvements in facilities and infrastructure which might attract non-nuclear industries. There have been numerous committees considering the economic future of West Cumbria and between them they must know why non-nuclear businesses do not choose to re-locate here and what factors need to be in place to change their minds. But no government has been prepared to provide this support because it is an advantage to have a region where parts of the nuclear industry which are unacceptable in other parts of the country, can be located. Location of a repository in West Cumbria could have major economic benefits for the long term but only if the councils know what is needed to attract other companies, cost the necessary improvements and make these costs the basis for obtaining adequate compensation from the government before a repository becomes acceptable. I agree with the paragraph (p.63) “Future Economic Development” but I do not think it reflects the attitude of the local councils at present.</p> <p>4. There is much emphasis on job creation as a result of the repository. An initial hope was stated (p.60) for “sufficient prospect of ... other job creating investments complementary to a repository that will provide sustainable employment in the long term”. The only claim that this will be achieved seems to come from the NDA at present. What is needed is an independent assessment of what has been the experience so far with the construction of other repositories and their operation although the latter is probably negligible, put into context of the job prospects that already existed in the host areas. (Since first writing this the Whitehaven News (23rd.Feb.) has published an encouraging account of the WIPP facility in the USA but as Martin Forwood of CORE pointed out the following week this was not exactly a critical assessment (and I don’t agree with CORE views on a regular basis)). Comparison could also be made with the number of jobs that currently exist in operating the present surface stores at Sellafield. But what is also needed are jobs that are not just complementary to a repository but those that can have a long term future independent of the nuclear industry.</p> <p>5. The repeated claim that a repository it will retain jobs in the area is not necessarily consistent with improving the area in general. Clearly many jobs have continued to be provided at Sellafield over the past few decades (and I was glad to have one myself) but at the same time infrastructure and facilities in the area have continued</p>
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			<p>to decline. Sellafield provides a good standard of living for a lot of people but the money paid in wages does not cascade very effectively to maintain or improve facilities in the wider community. Should a repository be built just to keep jobs ? If jobs are lost people have to move to find work elsewhere. This has been the case with other West Cumbrian industries that have disappeared and it is also the case that many people working at Sellafield have not always lived locally; some like myself had to move here because they needed a job, others travel considerable distances, often daily, to get these jobs. There is no guarantee that anybody should be provided with a good job on their doorstep and unfortunately at present there are a lot of people who know this from bitter experience. Building a repository should not be regarded just as a job creation scheme. If all the other factors are favourable then there is a case for a repository and that will bring the benefit of jobs but accepting a repository just to keep jobs in West Cumbria is wrong; it is placing a very long term (essentially indefinite) burden on the wider community in the area for relatively short term gains by a small section of that community who won't be around to deal with any consequences,</p> <p>A report in the Whitehaven News (26th. May 2012) claims that there will be £3 billion benefits to West Cumbria, which at first sight seems quite good. But comparing it with other recent costs noted it is not brilliant; after all MOX cost more than £0.5 billion and produced very little and for the same price you have an Olympic stadium which nobody seems sure what to do with after the Olympics are finished or a tunnel under the Chilterns as part of HS 2, the whole of which will have an estimated cost of about £35 billion. And none of these will survive for anywhere near as long as a repository, so it is time for the councils to start thinking in terms of real sums like these for major projects to revive West Cumbria. But even the £3 billion mentioned is not that sort of investment. It is spread over 140 years and corresponds to the much smaller sum of £22 million a year, the sort of sum that always seem to impress councillors but does not really equate to any major improvements, especially when put in the context of the annual salaries paid to senior managers at Sellafield (total £10 million last year ?). And the £22 million is the total annual wage bill based on various assumptions which might be optimistic; deductions from those wages could cut it by at least a third, so that is £15 million and how much of that actually gets directed back into the wider West Cumbrian economy if many of the jobs are taken by non-local contractors, especially if, as noted elsewhere and in Document 30, construction continues throughout most of the repository operations. There will not be much left for investing in the region.</p>
1258	4 – Community benefits	Not Sure/ Partly	<p>1. In general I agree with the principles set out in Box 21, p.69 except for Principle 5. Principle 5, Impact Mitigation, should not be traded as a benefit; it should be an integral part of the repository planning and construction. The NDA should be required as part of the planning approval to ensure that all possible steps are taken to avoid unnecessary impact on the host area; in part they should not be allowed to just dump their rubbish in giant piles around the site until they decide what to do with it.</p> <p>2. Principle 7 (Defining Scale) is absolutely correct; it should be sufficient to transform West Cumbria in proportion to the value a repository has in relation to the whole of the UK. Proper waste storage, with a repository as the preferred government option, is essential for long term storage of existing wastes and</p>

		<p>decommissioning of old nuclear plant arising from electricity generation for the whole country over the past 50 years or more and will no doubt become a further requirement for dealing with spent fuel and wastes which will arise from the new generation of reactors, although that was not accepted by the CoMRW. It is a national facility and the only area that has even thought about hosting it is West Cumbria. If they reject it there is no suggested alternative at present, nor is their likely to be. So compare the financial scale with the cost of all reactors past and proposed and the value of the electricity generated by them. That should generate a useful sum.</p> <p>3. I agree that the details of a benefits package cannot be decided at present but the councils should be able to identify their needs now; they have had enough experience over the past few decades of degrading infrastructure and loss of services as well as disappearing jobs from anything other than the nuclear sector. I am not impressed with the examples given in Box 20 (p.68), £130 million (Sweden) I consider to be totally inadequate when set against the scales outlined above. The proposal for Spain and Portugal for benefits linked to the amount of waste stored is better but it depends how good the linkage is and also assumes that as time goes by the repository operators will be honest about what waste is being stored. Continued payments could be generated even after the repository is full by relating them to the total remnant activity stored; that should keep the money coming in for a few thousand years. Of course it would be claimed that that is too complicated but that is equivalent to saying that they do not really know what is being stored anyway.</p> <p>4. I am not concerned about the morality of early payments being seen as a bribe; if an adequate initial sum is offered at an early stage then it should be used to proceed on the most urgent and necessary projects previously identified, as long as it does not jeopardise the right to final withdrawal. Delaying any payment until construction starts run a serious risk that the amount offered will decline as the likelihood of a functioning repository approaches. As for ethics, I do not believe either the government or the NDA has any in these circumstances; they just want the repository in West Cumbria, as soon as possible, at the cheapest price. It is the job of the council negotiators to make sure that they do not get it. Although the principles set out are fine the bland response of the DECC means there remains a lot of bargaining to do before things are agreed.</p> <p>5. Clearly the host community should be the first priority to receive benefits since they are going to have to live with an ongoing construction phase (maybe approaching the full repository life, see Document 178 ?) as well as its continued presence for ever. But the host community cannot absorb the whole of the financial packages that should be offered and wider areas should also benefit. Improvements to facilities and infrastructure over other parts of Cumbria will also benefit the host community anyway. Elaine Woodburn (News & Star 10th. Feb. 2012) wants benefits for 200 to 300 years (which she would get and more based on remnant activity) but she does not want a "short term shopping list of roads and schools". In that case she ought to say what she and the council do want because that sounds a reasonable start to me.</p> <p>6. There should definitely be financial support for skills development and training and not just aimed at the nuclear industry. There will also be a long continuing need for more general education for young people of school age upwards to maintain awareness of what the repository really involves. This should be starting if the council decide to forward to the next stage, someone born today will be a voting adult before the repository is</p>
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			<p>operational. Education needs to continue once the repository is operating so that people understand what they have got on their doorstep, if nothing else this should prevent scare stories from lack of information. Maybe there should be support for further education to train young people as economic planners or similar skills so that some of them might stay and continue to monitor the impact. Examples of expensive projects which could be compared with the repository, but none of them comparable in longevity, were given in Section 6. One general aspect would be to finance major projects that reduce the remoteness of West Cumbria, by reducing access times. If this is the argument for HS 2, London to Birmingham, cost about £35 billion, why can't it apply to West Cumbria. The answer is of course that a repository in a remote corner of the country is ideal from the London based governments point of view but deters inward investment by non-nuclear businesses. Ed Balls recently said I think as a sort of excuse for the Carlisle academy problems that "Carlisle is a long way from London" and Carlisle is also still a long way from West Cumbria. The local councils need to follow the example set by the Somerset council (as earlier and The Times, 5th. Jan. 2012) for extracting financial benefits from EDF, although I do not think their particular example of wanting the share of the profits from a new nuclear station would necessarily work for a repository – do users have to pay for storage of their waste ? Perhaps another avenue to be explored ?</p>
1258	5 – Design and engineering	Not Sure/ Partly	<p>1. Design and engineering might be site specific in terms of location within a host rock volume and access from the waste transfer infrastructure but not necessarily in other respects. Are the storage methods used at Sellafield and other sites, in terms of container type, spacing and stacking acceptable for use in a repository or do these need to be re-evaluated for the much longer storage periods in a repository ? Is it expected that some forms of waste would have to re-packaged before being sent to a repository and if so where would this be carried out ? Different documents mention surface facilities including waste stores, waste packaging and encapsulation plants. I think that all such operations should continue to be confined to the Sellafield site and that any waste sent for storage should be prepared in an acceptable condition by the site of origin and not need further treatment before it is put in the repository. Other wise the surface facilities will continue to expand and eventually leave behind their own legacy of active waste from decommissioning active plant. A repository is just that and should not be a back door route for building yet another waste treatment site, we already have Sellafield, Drigg and Lillyhall as well as some low active waste intended for commercial landfill.</p> <p>2. Obviously there must be some surface facilities for the transfer of waste packages below ground into the repository and there is probably also a need for access of remote handling vehicles. But the surface facilities mentioned in various documents extend to much wider functions and as previously noted whether this is acceptable, particularly on the boundary of the national park, is debateable. It is quite possible that eventually encroachment on the boundary could lead to an exclusion corridor penetrating the park boundary similar to that in the Peak District towards Buxton, although the latter presumably had historical precedent which could not be revoked at the time that national park was established. Even so it is quite possible to believe that there would be arguments to accept a similar incursion into the Lake District on the grounds of national priority for waste storage. There should be continued awareness by the relevant bodies that surface facilities around the</p>

		<p>repository entrance should be confined to what is directly required for access and not be allowed to steadily expand, just as the Sellafield boundary has moved outwards over the years, in order to include other functions which could be located elsewhere. Even at this early stage there could be more clarity about what is really intended but that is probably not what the NDA wants.</p> <p>3. The question of whether storage using a multi-barrier concept is compatible with retrievability has been commented on previously in Section 4. The need for retrievability would have a significant effect on any design and a decision about it cannot be postponed indefinitely. Wherever a repository is located it should be possible even at this stage to define what additional access requirements would be needed and which types of waste might need retrieving. It may be that some waste types are only intended to be stacked in containers (as shown in NDA images) without being enclosed in a compact buffer layer and in such cases removal from the storage location might not present much of a problem. That might not be the case however where the waste is sealed in with a buffer layer as shown on p.25. If waste is retrieved from its storage location I assume that it would then be removed from the repository. But where does it go then ? Does retrievability imply the need for additional surface facilities for handling / inspecting / re-packaging / disassembling waste packages ? These questions need to be raised now so that possible arguments to justify expanded active surface facilities are recognised and the possibility of transferring any waste packages directly back to Sellafield is promoted as a preferred alternative.</p> <p>4. From p.76 "We are aware that the waste must be monitored while it is in the facility". But what exactly will be monitored ? The waste itself, the waste containers or the environment surrounding the containers, within the storage chambers ? The act of monitoring implies that it is possible to measure something that will change in value if the thing being monitored undergoes some change. It generally implies that a significant change is associated with some sort of fault or deterioration and is a warning that remedial action might need to be taken, although that need not always be the case. But the next stage is, what is the response to a change and how closely can you locate the origin of the monitoring change ? And is it then possible to access the faulty area and carry out corrective action or remove the faulty item ? And if you can remove the faulty item what do you do with it then ? I don't know but I think here monitoring is being proposed because, much like safety and retrievability, it is seen as a "good thing" which will help reduce concerns about what might happen in the longer term. The research is said to be still in its early stages but even so it should be possible to answer some of the questions asked above. If the NDA cannot provide some further information then the promise of monitoring lacks credibility. How long will monitoring be continued; for the operational life of the repository (100 to 150 years ?) or longer ? Whichever, it places an extreme reliance on the reliable operation of monitoring equipment for periods of time which are far longer than present experience extends, in what could prove to be a hostile environment. I think that monitoring sounds a nice thing to have in theory but will prove very difficult to carry out in practice to produce any useful benefits. Apart from monitoring within the repository, which is the only aspect mentioned on p.76, I would have expected monitoring of environmental factors in the wider area above and around the repository. This is at least easier to carry out, without any access problems and probably also has the public relations benefit of showing that the containment of the repository remains secure. In the</p>
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			<p>unthinkable case of some activity being detected in the external environment however it leads back to the same question, , how can you locate the source of the problem and what remedial action is it possible to take ?</p> <p>5. The apparent intention to emplace some waste and then continue excavating other parts of the repository seems rather risky to me. The fully excavated repository is said to have a volume of nine Albert Halls (waste volumes used to be measured by how many double-decker buses it would fill, how many dd buses = one AH ? At least give the volumes in real units as well when these comparisons are made, however useful they might be). The only outline dimensions for the Albert Hall I can find are 200 feet x 160 feet x 140 feet high which gives an enclosure volume of 4,500,000 cubic feet and so nine Albert Halls is about 40 million cubic feet. This seems quite a lot but only corresponds to the volume of a cube with edges 340 feet long (or about 105 metres or the length of a football pitch, another well known unit of measurement). So in one corner of this cube you are putting active waste and just over 100 metres away you are drilling, blasting, excavating ! Or is it intended to have nine separate Albert Hall volumes widely separated with a single volume of host rock or maybe even different volumes of rock. The coexistence of storage and excavation operations must also need more extensive surface facilities. Presumably the motive for this dual operation is for the NDA or some politician to get credit at the earliest possible date for inaugurating the UK waste repository; I cannot see any other justification if waste is already safely stored on the surface, which it should be.</p>
1258	6 – Inventory	Not Sure/ Partly	<p>1. The Inventory Critique by Peter Roche (Document 94) is an excellent examination of the main factors and should be required reading for the councils who will make the decision whether to proceed. It is interesting that it quotes a recommendation made by CoRWM that the repository currently under discussion is intended only for the storage of existing and committed waste arisings and this needs to be re-emphasised. I assume that this includes waste from the existing AGR programme and the PWR at Sizewell but not from the proposed new programme of reactors. Waste from the latter should not be allowed to confuse the current discussion of repository inventory issues further, especially as any waste from these reactors will not start to arise for many decades and there are no decisions made about whether their fuel will ever be reprocessed.</p> <p>2. The nature and quantities of the wastes that are already stored and those that are likely to arise from current decommissioning programmes are known although the information provided is confusing in some cases. There is an early comment (p.4) that the repository will be for the storage of “higher active waste” but the diagrams on p.15 and p.74 include both low and intermediate level waste as well as high level waste (and spent fuel on p.15) and then on p.83 you find that “higher activity waste” includes both high level and intermediate level wastes with maybe plutonium and uranium also added as separate categories. I also doubt if the latter are properly described as metals; more probably the oxides which it is perhaps still hoped to use for MOX. If it is oxide then there is said to be around 100 tonnes of plutonium oxide stored at present (Documents 94 and 241) and the “plutonium” waste volume is 7,800 cubic metres. So since 100 tonnes is 100,000 kg the density of what might be oxide waste is only about 13 kg per cubic metre which can't be right. So what does this number actually refer to; does it include other inactive materials which have some plutonium mixed with them ? And is it the same for “uranium” ? I don't know but I would guess that storage requirements would be different</p>

			<p>depending on whether you are storing plutonium, its oxide or some other mixed waste containing them. It would be nice to have more clarity about what is really being stored and since there is only concern with existing waste, how is it stored now, could it be stored in the same way in a repository and if not how would storage requirements differ ?</p> <p>3. The inventory principles set out in Box 25 (p.81) are fine but are largely concerned with changes in the inventory which I would have thought should be quite well established if, as the CoWRM seem to think, the inventory is limited to existing and committed waste. If 70% is already at Sellafield in stores and presumably the rest is in stores at other sites then what major changes are anticipated before a repository is operating. I accept the need to deal with change if it becomes necessary, with two cases having appeared only recently, the navy running out of space to store submarine waste and the intention of the NDA to move waste from Dounreay to Sellafield. The latter is particularly interesting since Document 241 says that the Scottish government has its own policies which involve near surface waste storage, so have they changed their policy to save themselves some money, is not waste from “foreign” governments excluded anyway and does West Cumbria get any benefit from taking their waste ? I do not know whether these would have a major impact on the total waste inventory but the first priority hopefully is to deal with existing waste, identifying problems and improving understanding along the way and then start to deal with new arisings as a separate issue. These cases also highlight the need for the local council to have increased influence over what waste is imported into West Cumbria, just because the NDA thinks that moving it from other sites around the country will improve their balance sheet.</p> <p>4. I would have expected some more detailed information on the priorities for placing waste in the repository, based around the size and integrity of existing waste packages and security of their storage at present, the possibility that it might be desirable to retrieve some types of waste and the expected decline in activity. There must be an outline plan to show which waste should be stored first as repository space becomes available.</p> <p>5. Knowing what waste exists at present and the way it would have to be packaged for repository storage I would have thought that modern computer modelling should be able to work out optimum storage patterns for different shapes and volumes of host rock. This could give guidance to further exploration and help to define which boundaries of host rock could be most productively exploited. There is no evidence in the images shown in various documents that relates how the different galleries or cells are related to the different types of waste or suggest how waste distribution might be optimised; possibly they have just been borrowed from reports of projects in other countries.</p>
1258	7 – Siting process	Not Sure/ Partly	<p>1. Figure 13, p.87, shows the last opportunity for withdrawal at the end of Stage 5 but an earlier version, Figure 11, p.41, also shows a later stage after Phase 1 of underground operations, where there is a possible planning decision. What does that planning decision refer to and more interestingly what happens if the planning application is turned down. (I suppose it really means that the decision would be appealed and the government inspector would find in favour of the application, as seems to happen with nuclear matters in West Cumbria).</p> <p>2. The government proposals for Stage 4 seem reasonable; it is difficult to be more specific before the actual</p>

		<p>process starts. Once started however there needs to be continued involvement of communities in potential sites who should have access to all information and be able to contribute their interpretation before a conclusion is reached; that is it should not just be an NDA driven process. Box 29, p.89 includes the statement that “The government considers that voluntarism is based on community support” but elsewhere it has already been stated that there are circumstance where community support could be ignored if other parties, not in the host community, wish to proceed. This is an unacceptable situation where what could be a majority who think they will benefit from a repository but will not suffer from its presence will override the views of those who would have to tolerate possibly decades of upheaval for very little benefit. If the NDA view prevails, that construction could continue for most of the operating life in parallel with the storage function then that could mean a century of continuing excavation. In that sense a continuing repository construction programme is unlike other large engineering projects where construction is completed before use begins and although the construction phase might last for a decade or more it is not, in terms of a human lifespan, endless.</p> <p>3. Box 29, top of p.90 raises a small matter of terminology – it refers to a “relatively high level geological assessment” which in that particular context implies an assessment that is restricted in scope by the limited data available. But when “high level” is used elsewhere it implies the opposite. I would assume that a high level assessment would be one that is in sufficient detail to cover all relevant views and sources of information and is carried out by an acknowledged expert, with the draft report being submitted to independent peer review. I think the NDA uses this phrase extensively to promote this sort of view but it has not clearly stated what it does mean.</p> <p>4. The principles for community involvement in Box 30, p.90, are good but as in earlier cases it is how they are interpreted in practice that matters and that will only be found out when the process starts.</p> <p>5. Similarly for Box 31, with continuing emphasis on the involvement of potential host communities, making sure that their views are not swamped by non-locals with different agendas, such as local / county councils with shorter term objectives for some relatively short term jobs and funding.</p> <p>6. Box 31, Step 3(a) [similarly Step 4(d)] says “The NDA would lead on technical aspects, with officers from local authorities” Do the latter have the technical competence / authority to critically assess and if necessary reject the NDA views when necessary. Proper evaluation of NDA views will only be possible in many cases by a peer review process although it can only be used judiciously since it could otherwise cause delays.</p> <p>7. Box 31, Step 3c says that “securing active involvement may(sic) require providing resources for parish councils ..” I think may should be will, a point that was raised by Professor Haszeldine earlier, otherwise these groups are essentially disenfranchised by their inability to assess the technical aspects.</p> <p>8. Box 31, Step 3(e) raises the question of whether a community has any form of appeal if it is included in further assessment of the area against its wishes. The decision to proceed further to a desk based assessment is remote from a potential host community and it is not clear what weight their views carry compared to those of other non-host partners.</p> <p>9. Box 32, p.96 on the future organisation of a partnership are acceptable since it is difficult to define needs more closely because of the long timescales. The final point in Box 32, that “All participants should be properly</p>
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		<p>resourced to play a full and active role” becomes more important for a potential host community as the programme proceeds. The amount of information to be evaluated will grow rapidly and much of it will need technical advice to determine its importance. Pressure to interpret information in favour of a repository will grow from government and quite probably there could be encouragement to suppress unwelcome results which might have the potential to delay or even stop further progress; in some cases such attempts might remain undetected but in others a trained specialist mind might recognise inconsistencies which raise suspicions.</p> <p>10. On p.97 it is said that “Pause Points” are not needed but on p.88 it said they were. I think that they could be useful to allow proper assessment of data presented as favourable for continuing, especially if the argument is used that assessment will only incur further delay and it is necessary to proceed because a delay in the programme cannot be tolerated. It can only be decided if they are necessary as work progresses, depending on the amount of data and urgency to review escalates but it should be able to build them into a programme and ignore them later if they are not needed. You won’t get the chance to add them later. Just because they have not been found necessary so far does not mean that it will not be useful to have them in the future and they might become invaluable as the pressure to maintain progress increases.</p> <p>11.Box 33, p.97 refers the origin of the “Right of Withdrawal” to a MRSW White Paper of 2008 and states that “Given that this is in the White Paper and therefore government policy, there would have to be a government decision to change it” I believe that any government will change it if it seems likely to stop a repository being built. It must have originated with the last Labour government in 2008 so the current coalition will be quite happy to abandon it and blame the misguided promises of Labour if that becomes necessary. And it is only policy, it is not law is it ? Is there any legal requirement that enshrines a “Right of Withdrawal” and if the current or any future government rejects this right in the next 20 years or so as the programme progresses, do the councils or other parties involved have any legal case to retain it ? I don’t know. I think you need some proper advice on how binding this statement is, made by a previous administration in a White Paper. You might be satisfied by assurances from the DECC but I wouldn’t be.</p>
1258	8 – Overall views on participation	<p>Cooperation between councils will be essential to reach an acceptable conclusion (p.21); that is one arrived at by evaluating all the technical evidence on a very contentious issue rigorously and interpreting it in the context of the potential benefits to both local and wider communities. Unfortunately I can only see difficulties here since the councils involved seem to be unable to cooperate with each other even in much simpler projects (traffic wardens and transport interchanges are recent examples). I agree that this is an essential requirement but I have serious doubts about the abilities of these councils to cooperate to the required level over an unusually long period, in order to reach an acceptable conclusion about a highly technical issue. I am afraid that past experience suggests that the inability to cooperate effectively could lead to the conclusion that West Cumbria should withdraw from the process even at this early stage.</p> <p>However, despite my reservations, the waste exists and a long term solution to storage is required so I would support proceeding to the next stage, despite my misgivings about the integrity of the NDA and the ability of the councils to control the process effectively for the long term benefit of West Cumbria.</p>

1258	9 – Additional comments		<p>1. There is a lack of local influence even if councils remain as final decision making bodies. Influence will virtually disappear if, as seems likely, the decision will be eventually be considered by an IPC or MIPU which, being government bodies can be expected to be in favour of a repository regardless of the views within Cumbria.</p> <p>2. There is a suggestions by a conservative minister to shorten timescales to 2029 (p.13) instead of 2040 currently proposed. I think the Copeland MP has effectively endorsed this by suggesting 2028. In neither case is their reasoning for given how a shorter timescale might be achieved but it must require significant short cuts in the various assessments and short cuts imply not looking at all factors in the required detail, presumably ignoring particular areas that might threaten further progress. It will be interesting to see if the NDA produces a conclusion that supports these political wishes. If they do report in favour of a shorter timescale, do the local councils and other bodies have the opportunity to reject it ?. It should be recognised that the only reason there is an increasing urgency to search for a repository site now is that other politicians from both parties have consistently failed to address the problem over the past 50 years. Even now it is not being addressed fully since the proposed repository should only be for existing and contracted waste (CoWRM view) although the last Labour government used it to justify a new build programme whose waste was not intended by CoWRM to be included, a view that has been inherited by the current coalition. The sudden rush to have a repository in West Cumbria is the consequence of political dithering and West Cumbria should not have to accept an accelerated programme to compensate for past political indecision. The present programme should allow for timescales to be shortened if favourable results continue to be produced from the various assessment stages but it should also allow for the possibility that unfavourable results at some stage might require a longer timescale to accumulate further evidence. Without starting the evaluation process it is not possible to know which of these possibilities might arise nor is it possible to know now where short cuts can be made.</p> <p>3. The long timescales of both the consultation process and the indefinitely long timescales of repository operation are a barrier to proper appreciation of what is proposed but I do not know how this can be overcome although continuing publicity and exposure through educational channels might help in some respects.</p> <p>4. There are various comments both in the MRWS document and other places that underground storage is seen as the universally acceptable solution for the disposal of nuclear waste, including a favourable report in the Whitehaven News (22nd. February) about the multiple benefits arising from the WIPP store in the USA (was its recent publication just a coincidence ?) Well the geology is totally different for a start and the WIPP is only for storage of limited sorts of waste I think, while construction of the main repository at Yucca mountain has now been stopped. I would not reject underground storage but a single operational example of limited scope and the fact that no repository has yet operated for a period of time that is anywhere near the total required operational life is not a guarantee that an underground repository is necessarily the answer.</p>

1260	1 – Geology	No	What may appear to be stable now, who can be sure it will remain this way? and the Scottish government Policies of near surface storage and located close to where produced would be a better option and not the danger of all being stored in the same place.
1260	2 – Safety, security, environment and planning	No	I think the Greenpeace ROCK SOLID report ie the heat at depth and heat generated by what is deposited remains an unanswered problem. How can anyone be sure of this. Also the Scottish government policy idea of near surface and located close to where produced is a better option, and not the danger which could result of all waste stored in the same place.
1260	3 – Impacts	Not Sure/ Partly	To build the Repository in West Cumbria would be encouraged by short term employment in the area. Bribed by financial incentives. Also as Scotland and Wales become a seperate countrys* within the United Kingdom it gives the impression the idea is get the repository as far north in England as possible, and not where future waste may be produced by New Energy Plants built in the south. *With their own government and decisions
1260	4 – Community benefits	No	If a community benefits package was an incentive, why are other area's Councils not joining in during these hard times, or at least showing an interest.
1260	5 – Design and engineering	No	Whilst the best thoughts, engineering and designs may be being considered, Possibly not enough time and experiments are being encouraged to seek other means of defusing this storage situation and coming up with new technology making Britain a leader in this field rather than just Bury Trouble for the future.
1260	6 – Inventory	No	Today's problems should not be buried and left for future generations to deal with, above ground these items would give access if problems arose in the future.
1260	7 – Siting process	No	No comment was made
1260	8 – Overall views on participation		As these are the only councils interested it gives the impression that we are the area to get this repository whether or not the local people like the idea or not!
1260	9 – Additional comments		Initially when the nuclear energy programme was started, the electricity generated was going to be 1/2d a unit or even too cheap to meter. Now look at the unknown cost of the waste generated by this process. It was not stated then about future hidden astronomical costs involved. the people involved then only gave the good points, which never came about. so how can we have confidence that what may be thrust upon us now will work out or will it be for future generations to carry the Burden.

1261	1 – Geology	Yes	From the information provided in the consultation pack there are opposing expert opinions about the basic geology being suitable. However I think the MRWs partnerships opinion to continue the investigation process is reasonable and I agree with it.
1261	2 – Safety, security, environment and planning	Yes	I think you have been diligent in getting an understanding of this inter linked and very complicated areas. I am surprised that it is not envisaged that a planning application is expected to be made in about 15 years (after drilling etc in 5 or 6 years).
1261	3 – Impacts	Yes	I think the supply of nuclear generated power has always produced strong views for and against. I think you have raised a balanced set of questions.
1261	4 – Community benefits	Yes	Investigating steps that other countries more advanced than us in building a repository is very relevant. The effect on future generations is important. I think the views of those who live in West Cumbria should be given greater weight than those outside the area.
1261	5 – Design and engineering	Yes	Your general approach seems to be thorough and balanced. The part that somewhat surprised me was the large effort put into considering retrieving waste from the vaults. I would have thought that the main point of a repository is a safe place to put potentially dangerous substances so they do not have to be moved again.
1261	6 – Inventory	Yes	Because it is difficult to forecast long-term (the repository is a long-term enterprise) the inventory may change: more low risk/ high risk etc. I think the principles you have adopted makes sense.
1261	7 – Siting process	Yes	A small personal observation: my wife grew up in the Whitehaven area and well remembers what it was like in the post war period, not a prosperous place. When the queen herself went to open Windscale there was great excitement and the hope of a new era. As part of the school party she was there with a flag to wave. It was wet but people were optimistic. From this has come Sellafield with its ups and downs but for certain good jobs and greater prosperity. We believe that using the carefully thought out consultation process that you have adopted it should be possible to find an acceptable site for a repository in West Cumbria.
1261	8 – Overall views on participation		As stated in the answer to question 7.2 the answer is yes.
1262	1 – Geology	No	Because this? Is a whitewash. The rock formation however deep underground, is unknown, and your initial opinions are geared to acceptance, at this stage, and that “everything will be all right.” Oh dear!! This really isn’t

			good enough.
1262	2 – Safety, security, environment and planning	No	This whole document is flawed. These are core issues. Inadequately dealt with at some stages. See box 4 about “ruling out the whole of West Cumbria” onwards. The desire for further investigations is not proven - yet it is put by the committee. Why? Are they relating it to now? And, consequently shelving the future generations?
1262	3 – Impacts	No	Horrorific. Dreadful economy and terrorism risks for future generations. No attempt to think big, or humanely. Just dumb acceptance, and the failure to absorb the realities.
1262	4 – Community benefits	No	There is the employment now factor which is significant. This however does not out-weigh the dreadful risk to future generations of harbouring the world’s nuclear dustbin, and the security and environmental folly of allowing such a Radioactive sleeping waste dump under the Cumbrian fells.
1262	5 – Design and engineering	No	I neither agreed nor disagree. I want no part of such a plant, so its design and engineering is of no consequence unless the decision is to keep pushing for this nuclear dump.
1262	6 – Inventory	No	No comment was made
1262	7 – Siting process	No	Allerdale Boro’ Council Copeland Boro’ Council Should not be taking decisions relating to this project. They both have strong vested interests in upholding a nuclear dumping ground here. ie employment. Whilst this is understandable, it is a quite wrong intervention, and smacks of failure to recognise a possible long-term destruction of Cumbria as a tourism destination, leading to the destruction of employment in Cumbria long-term.
1262	8 – Overall views on participation		This is a cover-the-back of Allerdale and Copeland Borough Councils. A cynical? Devoted to let them off the hook in their rather limited decision taking. Of course they want the Repository. Theirs will be a resounding YES. Oh dear!! Such short sightedness.
1262	9 – Additional comments		I trust the comments of 1. Cumbria Tourism 2. Lake District Nat. Park Authority will be available for public consideration. It really is time, in 2012 they stood up to be counted, and shameful that they haven’t yet done so to their electorates.
1263	1 – Geology	No	A 1995/96 planning enquiry categorically ruled out West Cumbria - indicating complex geology, limestone,

			<p>fault lines. (NIREX enquiry). Why has the current enquiry not given attention to this £400 million planning enquiry?</p> <p>The geology of the west Cumbrian area is very different to any of the other sites being considered in Europe and the world. These other sites are not close to mountains and have much less complex geology. Mountains are no more than 125m high cf 1000m. There are concerns regarding the large head of water which could rush past the repository so that when leakage (radioactive) appears this will be spread far and wide. Also radioactive gas will reach the surface. This could happen in hundreds of years, not thousands of years. There has been extensive exploration of the geology – the unsuitability of the area should already be immediately obvious. Eminent geologists have given a closely argued case regarding the unsuitability of West Cumbria.</p>
1263	2 – Safety, security, environment and planning	No	<p>The geological structure makes this area unsafe. The long-term ability of the repository to continue to be safe and containing radioactive materials cannot be proved, despite the efforts by regulators. It is significant that no other Council/Local authority has voluntarily indicated any willingness to be considered for a repository. I am very concerned that no other site(s) are being considered, especially as other areas (eg East Anglia) may have geologically more suitable areas. Other areas (Essex) appear to already assume that a repository will be built here. (see minutes of Southend Borough council and Essex county council)</p>
1263	3 – Impacts	No	<p>A repository in this area would affect the public perception of the Lake District National Park. The tourism industry is worth £2 billion pounds per year and provides 32,000 jobs in Cumbria. It has been said that a repository would provide 500 jobs.</p> <p>The long-term impact of a repository would be very negative both to this generation and future generations.</p> <p>When problems arise who would want to live near a repository or visit the immediate area of Cumbria?</p> <p>The method of containing radioactive waste is not proved. How can it be when the repository has to be safe for thousands of years?</p>
1263	4 – Community benefits	No	<p>The negative impact of a repository completely outweighs any community benefits package. The package is only short term, the effects of a repository (negative) lasts for thousands of years. I am very concerned that no funding has been made available to publicise the negative effects of the repository whereas it appears that there is a massive amount of information ‘selling’ a repository.</p> <p>I also think the public should look not at any short term gain but at the long-term future negative impact.</p>
1263	5 – Design and engineering	No	<p>I do not believe that the design engineering of a repository in this area can offer sufficient safety in view of</p>

			geological factors and unknowns regarding construction materials underground for thousands of years.
1263	6 – Inventory	No	I am concerned about different radioactive wastes coming from all over the world to one site. The waste would have a different chemical make up and could react differently to storage and with strange containers. Radioactive gas could then be released and in a matter of tens/ hundreds of years find its way to the surface.
1263	7 – Siting process	No	I think that is concerning that the possible sighting for a repository has been done in this way. Scientific analysis of several sites should have been done (as in other countries) and then the local populations should have been consulted. Unsuitable sites would have already been ruled out. I am very concerned that once stage 3 is reached it would be extremely difficult to withdraw from the process. The 2008 MRWS White Paper leaves little doubt that once boreholes have been drilled it would be very difficult to withdraw. The White Paper says that the government reserves the right to abandon voluntarism if its approach looks as though it would not deliver a site.
1263	8 – Overall views on participation		I think they should not take part. As indicated the way forward was for several possible sites to be investigated and then the population to be fully consulted. It is wrong that such a decision to participate can be taken by a small committee/group of people you would not be fully informed (because of the complexity of the issue).
1263	9 – Additional comments		I think that the whole population of Cumbria should be allowed to indicate their response via a referendum. I think that there has been a PR exercise to 'sell' the site of a repository in West Cumbria. There has been so much material available - but basic questions remain. MPs have put emphasis on jobs created (500?). But this is a very short term view. The 32000 jobs linked with the £2billion tourist industry could be negatively affected.
1264	1 – Geology	Not Sure/ Partly	Survey is very limited in extent.
1264	2 – Safety, security, environment and planning	No	I find it very complicated know how the various agencies will interact and what aspects they will have responsibility for. With regard to planning – the Lake District National Park was set up to protect the landscape of that area. Drilling of boreholes in that area or choosing that area for the surface facility should be ruled out. However the search for a site should be geologically driven - a) find sites in the UK where their geology is suitable and b) engage with the local authorities where those sites are.
1264	3 – Impacts	No	I feel unhappy about the assessment of impacts as this has been done at such a general level they are inconclusive.

1264	4 – Community benefits	No	I have doubts that the community benefits package is reliable.
1264	5 – Design and engineering	No	Design is totally dependent on the repository site – this is totally dependent on geology and safety issues. The geology should drive the design.
1264	6 – Inventory	No	I feel this is the “cart before the horse.” Whilst it may be helpful for views on this to be sought – it would appear that decisions about content of the repository could be changed at any time – and the local community would not be involved in these. Strongly feel that this question is deflecting attention away from the main issue which is that this siting for the repository should be driven by safety and hence geology.
1264	7 – Siting process	No	<p>Process for siting a repository should not be driven by voluntarism. This is a UK government national level decision.</p> <p>I have concerns at how voluntary the process may be at stage 4 and beyond. It appears that the rights of “potential host communities” become severely restricted.</p>
1264	8 – Overall views on participation		<p>I do not wish Allerdale and Copeland councils to proceed to stage 4 or continue in the search for a repository site.</p> <p>The search should be driven by safety considerations – which are dependent on geology. Other countries who have looked for repository sites have found suitable sites first from geological aspects.</p> <p>This is a national UK government decision.</p> <p>I am concerned that the right to withdraw is very limited and would become increasingly so.</p>
1264	9 – Additional comments		<p>The geology of Cumbria is not best suited for an underground repository site. There was a survey in 1986 – this put forward suitable sites – and these did not include Cumbria.</p> <p>I am concerned that the way in which the consultation dwells on detailed aspects of “ inventory”, “design and engineering”, “community benefits package” is deflecting attention away from the crunch issue as in question 8 above.</p>
1265	1 – Geology	Yes	As an initial assessment only

1265	2 – Safety, security, environment and planning	Yes	As far as its gone
1265	3 – Impacts	Yes	No comment was made
1265	4 – Community benefits	Not Sure/ Partly	These need to be expanded and explained better
1265	5 – Design and engineering	Not Sure/ Partly	Not my area
1266	1 – Geology	Yes	Since there are continuing uncertainties about the geology of West Cumbria and consequently finding a suitable site for a repository, it makes sense to continue further geological investigations.
1266	2 – Safety, security, environment and planning	Yes	From a security and environmental point of view, high level nuclear waste is much safer stored in a single underground repository rather than stored on the surface in 36 separate sites around the country. It would be easier to maintain safety and security on a single site.
1266	3 – Impacts	Not Sure/ Partly	I agree that a repository would create job opportunities, house prices could improve and the economy of West Cumbria would be stimulated during the construction phase. Road and rail links could be negatively affected especially during the construction phase. Has any survey work been carried out on the impacts on the road/ rail networks during the construction of phase and the possible effects it might have on the area?
1266	4 – Community benefits	Yes	I agree with the general principle of a community benefits package but would hope for tangible benefits, for example new schools, hospital/medical centres or major road or rail links or other infrastructures. The investment should be continued over the lifetime of the repository.
1266	5 – Design and engineering	Yes	More information will be needed on a detailed design when a site/sites have been identified.
1266	6 – Inventory	Yes	The repository should be over engineered to have the ability to accept the highest level of radioactive waste

			known at the moment and be flexible enough so as not to be inadequate years down the line.
1266	7 – Siting process	Yes	Further detailed geological surveys should be undertaken to identify or negate a possible repository site in West Cumbria. Since there is a right of withdrawal at any time and no commitment to have a repository at this stage, these surveys should be done as soon as possible.
1266	8 – Overall views on participation		<ul style="list-style-type: none"> • West Cumbria needs long term work and investment to sustain the economy as there is little else to offer. • Sellafield has contributed to the nuclear waste inventory over the past 50 years so West Cumbria is morally obliged to participate positively in the geological disposal initiative. • West Cumbria has a pool of nuclear expertise. It would be a pity to waste it. • There is a nuclear related infrastructure already built up and in place within the area.
1266	9 – Additional comments		Cumbria and The Lake District has attracted many millions of visitors over the last decades in spite of the presence of Sellafield, the nuclear power station and Drigg and no doubt will continue to do so.
1268	1 – Geology	Yes	Verified by more than one independent expert. Further investigation is needed.
1268	2 – Safety, security, environment and planning	Yes	No comment was made
1268	3 – Impacts	Not Sure/ Partly	Don't know whether job creation opportunities are positive enough in the long term and also whether these would be ring fenced for local work force rather than out of country contractors.
1268	4 – Community benefits	Not Sure/ Partly	<p>Disagree, how benefits cannot realistically be seen as a bribe.</p> <p>Agree negotiations would need a careful management. It is difficult to “buy in” to siting of the repository in the area without more details on the package.</p> <p>Although health and safety may be more important, community benefits including some element of individual benefit eg lower taxes, are key.</p>
1268	5 – Design and engineering	Yes	No comment was made
1268	6 – Inventory	Not Sure/ Partly	Cannot comment, although MRWS may be clear about baseline and upper inventories, the public isn't.

1268	7 – Siting process	Yes	No comment was made
1268	9 – Additional comments		Any commitment by communities should be assessed by public referendum, not through allowing decision to be made by a small group of local decision makers ie district councillors who may not reflect accurately public opinion.
1269	2 – Safety, security, environment and planning	Yes	I agree with all the opinions
1269	3 – Impacts	Yes	Even though it would be good to be not so reliant on the nuclear sector for jobs, it makes sense for the repository to be located in West Cumbria. Most of the waste is located at Sellafield, so it would be safer and more practical (+ less costly) to locate it locally (if there's a suitable site).
1269	4 – Community benefits	Yes	Community benefits is essential. I think it could be seen to be a bribe – but that doesn't concern me. It's essential that future generations are considered when thinking about the benefits, -as it's also them who will be dealing with the waste and repository.
1269	5 – Design and engineering	Yes	Obviously you can't do a final design until a site is chosen. Retrievability has to be an option as who knows what will happen in the future.
1269	7 – Siting process	Not Sure/ Partly	My only concern is that if the consensus is no, that data will be manipulated.
1269	8 – Overall views on participation		I think the areas should take part because at the moment they can still pull out.
1271	1 – Geology	Yes	I agree that the BGS screening process has excluded areas which hold resources which should not be 'spoiled' for future generations – this process is sound. I agree that the remaining areas in West Cumbria may hold suitable geology to host a repository. It should be the subject of further study.

1271	2 – Safety, security, environment and planning	Yes	I am satisfied the regulatory and planning process either existant or being developed will be suitable to protect all stakeholders. The current planning arrangements are both mature and robust. I am confident the NDA/RWMD has the professionalism and integrity to develop a robust safety/ security case for any potential repository. I am confident in government agency bodies (EA, HSE etc) to effectively police this.
1271	3 – Impacts	Yes	I believe creating a repository in West Cumbria will have broadly beneficial direct impacts and any negative impacts can be easily mitigated. I also believe a repository would be compatible with the areas long-term direction and economic sustainability.- Britain's energy coast, Britain's nuclear hub. Scandinavian communities that host repositories have seen good socio/ economic benefits. I do not think it will put tourists off – the waste is already in West Cumbria.
1271	4 – Community benefits	Yes	I agree with the partnerships initial opinions because I believe any government would honour the moral obligation to give benefits to any host community. Scandinavian host communities get good benefits – increase regional spending and/ or decreased taxes. I am confident appropriate benefits could be negotiated.
1271	5 – Design and engineering	Yes	I agree because <ul style="list-style-type: none"> • I understand the basic principles in the design concept – multi barrier approach • I realise specific design will be driven by site/geological specifics. <p>NB I am in favour of retrievability as today's waste may be useful to future generations – as nuclear fuel for fussion generation for example. It also enables future generations to further treat the waste.</p>
1271	6 – Inventory	Yes	I agree because the government has provided a detailed provisional inventory with an envelope of volume and type of inventory that may be accepted. As the siting process becomes closer to decision then more detailed inventory details can be demanded.
1271	7 – Siting process	Yes	I agree because the siting process is bound by volunteer-ism and the right to withdrawal. The criteria and processes looked at so far give me confidence the siting of any repository will be made on sound objective grounds.
1271	8 – Overall views on participation		I believe Allerdale/Copeland should see if they have a suitable site for a repository because it is a national imperative that a permanent solution to nuclear waste is found. I believe any area with potentially suitable geology should explore its potential suitability as a host.
1271	9 – Additional comments		West Cumbria – if it has suitable geology etc – lends itself to host a repository. It is a nuclear community and the waste is already largely here. Let's make it safer and put it underground if suitable conditions can be found.

			PS I am West Cumbrian born and bred – and proud!
1272	1 – Geology	No	<p>It seems to me that the geology of West Cumbria is not suitable.</p> <p>This is, in the first part, due to the prevalence of faulting and of potential water courses within the Carboniferous strata which overlie most of the area. Boreholes seem to give a very inconsistent picture of the situation at depth.</p> <p>The repository would have to be (and this is presumably accepted) well below these strata., However most of what is suggested indicates that the plans are not for a very deep repository. It seems to me that, compared to the deep repositories being constructed in Finland and Sweden (in hard granite rock) the proposals for this one amount to “doing it on the cheap” and are proposals for a very inferior job.</p> <p>There is, of course, some granite (or granophyte) in West Cumbria. I am not certain of how extensive the batholith is at depth but I think that using this would probably mean that the repository should be in the Eskdale or Ennerdale fells, something that does not appear to have been considered. It is probably still unsuitable.</p>
1272	2 – Safety, security, environment and planning	Yes	No comment was made
1272	3 – Impacts	Not Sure/ Partly	<p>To a large extent these issues are peripheral. Inevitably there would be impacts. These would depend on exactly how it is done.</p> <p>The provision of employment is the aspect usually played upon. Comparison tends to be made to the building of a new supermarket. The impact of this, especially in terms of jobs, would actually be much more positive and longer term, though not indefinitely so. Other impacts, including on the physical environment, are largely impossible to predict.</p>
1272	4 – Community benefits	No	I am not into bribery.
1272	5 – Design and engineering	Not Sure/ Partly	I am not qualified to pass opinions on this.
1272	6 – Inventory	Not Sure/ Partly	It seems uncertain how the repository is intended to be used, ie whether it is for permanent disposal of higher activity waste or whether it may turn out to be temporary storage with the option that at least some material

			<p>could be taken out for (possibly a new process of) re-processing.</p> <p>I do not think that it should be assumed that this is only for permanent disposal.</p>
1272	7 – Siting process	Yes	No comment was made
1272	9 – Additional comments		<p>I cannot see that, scientifically speaking, this matter is being treated seriously enough. I am also worried about the government's motivation. My suspicions are:</p> <ol style="list-style-type: none"> 1. That this is financially motivated-a means of diverting more public money to their business friends. 2. That a completed (even if inferior) repository will be a good excuse for extending the nuclear industry-especially in West Cumbria-even if a wiser policy would be not to do so. <p>The whole question of the desirability of having this has also been sidelined.</p> <p>"Terrorism" is always an excuse for Western governments both to divert money and to do worse. This repository would not make things significantly safer than storage at ground level. There is also a worry about passing on the obligation to look after radioactive waste to future generations. I cannot see that this obligation would be diminished by building the repository.</p>
1273	1 – Geology	No	The partnership seem to be ignoring the Nirex findings and the detailed work of doctor David Smythe. Both of which clearly show Cumbria to be unsuitable.
1273	2 – Safety, security, environment and planning	No	I am sure the people in Japan, Chernobyl and Windscale thought their sites were safe and secure and would have no effect on the environment! The after effects of problems last for years. The effects on the local environment for just the building of this repository would be enormous.
1273	3 – Impacts	No	<p>The negative effects far outweigh any positive effects.</p> <p>The only positive would be a small, short term, increase in employment. Surely there are other ways to improve employment especially by making use of the enormous amount of money invested in this so far!</p>
1273	4 – Community benefits	No	<ol style="list-style-type: none"> 1. Any benefits would be a bribe and would influence any decisions taken in the next stages of this process. 2. There is no clarity as to what these benefits would be. 3. The potential benefits may help the present population but what about the future residents. This thing would

			<p>last hundreds of years and affect future generations.</p> <p>4. Governments change and governments change their minds!! Financial changes can affect the plans of the most honest government, either local or National.</p>
1273	5 – Design and engineering	No	Have you got any real concept of the size and depth of this thing? Or the effect during and after the construction?
1273	6 – Inventory	No	<p>It is still not clear what would be disposed of, only what could be.</p> <p>If transporting nuclear waste is very dangerous and unwanted, why would waste from new nuclear power stations or other countries be brought to the proposed site?</p>
1273	7 – Siting process	No	Surely, if there is any doubt about the geology, the impact on people in Cumbria, the impact on the natural environment or landscape and the feelings of people in Cumbria, the councils should not need to go any further in this process.
1273	8 – Overall views on participation		<p>I do not think the councils should take any further part in the search for a repository site, nor should they agree to have one in the areas they cover. The arguments against and the misgivings of the public should be more than enough to stop them at this stage.</p> <p>The fact that no other councils have come forward must also be a convincing argument!</p>
1273	9 – Additional comments		<p>The consultation process has obviously cost an enormous amount of money but I have seen no information as to where this money has come from, nor how much.</p> <p>A repository may have a limited positive, in that a small number of jobs for a limited period would be created, but it would have a long term devastating effect on the wider area – which depend on tourism and food production, both of which would no longer be attractive. Jobs, livelihoods and reputations would be lost and residents health and safety put at risk.</p>
1274	1 – Geology	No	<p>a) BGS report The BGS screening is of doubtful validity because areas already found to be unsuitable (in the NIREX inquiry) have been omitted.</p> <p>b) Remaining areas.</p>

			Given that the BGS report is open to suspicion, the MRWSP conclusions are not supportable. See also Q8 and 9
1274	2 – Safety, security, environment and planning	No	Criteria for decision-making should be given well in advance and independent of any given area. I have no confidence at all in the impartiality of RWMSWP or the planning process. See Q8&9
1274	3 – Impacts	No	See Q 8&9. I suspect that the Burgomaster of Belsen cried “jobs!” also.
1274	4 – Community benefits	No	See Q8&9
1274	5 – Design and engineering	No	Criteria for monitoring, retrievability etc. should at least be stated now, before site selection (experience says that inconvenient limits are often afterwards found to be unnecessary).
1274	6 – Inventory	No	Since no forecasts can be made on future inventories, so no criteria can be laid down in advance for safety, size, retrievability etc. This being so, no further participation should be entertained.
1274	7 – Siting process	No	See Q 8&9
1274	8 – Overall views on participation		What is meant by a “community”? West Cumbria is made up of large tracts of land of relatively low density population and relatively unspoilt by heavy duty industry, combined with a small area relatively heavily populated by people with an entirely different set of interests to those of the former people. Previous experience says that local councils will ensure that the former get most of the disturbance with little compensatory benefit whilst the latter get most of the benefits with little disturbance. Those living in or representing areas already excluded (PINK on the map p27) should have no part in decision making, and the area’s themselves should receive no direct compensatory benefits.
1274	9 – Additional comments		MRSWP membership itself seems grossly slanted to represent the more populated but already eliminated areas (5 each from Allerdale and Copeland Borough Councils). Why are churches represented (-but not an equivalent secular organisation)? Why Unions (and if so, why only three?)? Why not be honest and designate them as representing the Sellafield workforce.

			The MRWSP is too slanted to have the impartial representation which it claims.
1276	1 – Geology	No	No comment was made
1276	2 – Safety, security, environment and planning	No	No comment was made
1276	3 – Impacts	No	No comment was made
1276	4 – Community benefits	No	No comment was made
1276	5 – Design and engineering	No	No comment was made
1276	6 – Inventory	No	No comment was made
1276	7 – Siting process	No	No comment was made
1276	8 – Overall views on participation		<p>I do not think it is a sensible use of time or money. We have already had the NIREX planning inquiry in Copeland on the suitability of a 'rock laboratory' for a repository at Longlands Farm.</p> <p>The evidence submitted at this lengthy inquiry cannot be ignored as irrelevant.</p> <p>Also the original scientific and geological surveys over the whole of England, to find the best scientifically suitable sites, for a site for a repository for highly active nuclear waste did not include anywhere in Cumbria. Just prior to the Nirex inquiry BNFL offered sites at Windscale Worles + Pelham House which were investigated and found unsuitable. BNFL then extended its land holdings to include Longlands Farm. The planning application for the Longlands site was called in by the minister and the NIREX inquiry ruled against granting planning permission.</p>
1276	9 – Additional comments		<p>The geology of the Lake District is well known. It was formed by volcanic pressures which formed a dome. The softer rocks on the upper parts of the upsurge of volcanic rock have been eroded and the landscape formed as we know it today. Faults are numerous. The Lake District is a unique and beautiful area in England visited for its beauty and recreational value and will be damaged by the any construction of a repository on its boundaries.</p> <p>It is very easy for people not immediately effected to find they regret not speaking up against an irrevocable</p>

			decision. The opinions of those most likely to be affected should have prior consideration especially those who will be affected adversely. Offering benefits to people can be described as bribery and the consequences turn out to be a disaster.
1277	1 – Geology	Not Sure/ Partly	Desk top survey is just that: areas that have been mined, I note, are not deemed suitable, so there appears to be much guesswork as to the nature of underground rock structure
1277	2 – Safety, security, environment and planning	No	Although it appears that there are safeguards I would be concerned that in the future, there might come an overwhelming need to deal with radio-active waste, that central government over-rides local concerns in the nations interests, especially when money has already been invested and to restart in another area involves more cost and puts the solution back in time.
1277	3 – Impacts	No	I do not think there has been enough research into the potential negative impact of a repository or the main income for Cumbria ie tourism. West Cumbria itself has not been exploited for its tourist potential. If the money being spent on looking at the suitability of West Cumbria for a repository was spent instead on development of tourist attractions, there would be better long term benefits for jobs. Not enough is known about the economic benefits to the area after the construction work is completed.
1277	4 – Community benefits	Yes	I agree that government promises of a community benefits package is not worth the paper it is written on. Cumbria should not enter the next stage without scientific agreements.
1277	5 – Design and engineering	No	It is difficult to have an opinion when no concrete work has been done; it appears engineering solutions are concepts, but I accept that designs can only be developed with more knowledge of what is required.
1277	6 – Inventory	No	There appears to be too much uncertainty about how much waste is likely to be deposited in the repository – current waste or all of the waste from nuclear power stations.
1277	7 – Siting process	No	I feel the way forward should have been a desk-top survey of Britain to identify those areas likely to be most suitable for a repository in terms of geology: rather than a community that would accept the concept and then hope the geology is OK and an engineering solution found to overcome geological problems.
1277	8 – Overall views on participation		I fear that once the Borough Councils agree to take part, pressure from the government will stop the councils from withdrawing from the process. The whole process is a government compromise for finding a political solution to the problem of nuclear waste. I do believe that should have looked at areas with the appropriate geology first. Locally the balance is between jobs/economic activity against possible harm to the tourist

			industry.
1278	1 – Geology	No	You are Very Wrong with opinions on geology of Cumbria Many professional bodies/ groups have, surveyed the area which has been found to be dangerously unsuitable for underground storage of nuclear waste.
1278	2 – Safety, security, environment and planning	No	A repository would destroy any natural environment within the area.
1278	3 – Impacts	No	The impact of a repository would destroy the beautiful area. Would require a new road system. Would ruin the large tourist industry which West Cumbria now has.
1278	4 – Community benefits	No	Any benefits would be insignificant.
1278	5 – Design and engineering	No	The design and engineering appears similar to that in Finland, which is not guaranteed to be safe, so many decades in the future.
1278	6 – Inventory	No	No comment was made
1278	7 – Siting process	No	The obvious thing to have done would be to find somewhere where the geology would be stable/ safe. “ if anywhere” and then consider a repository. And not just consider Cumbria which is totally unsuitable.
1278	8 – Overall views on participation		Residents should have been notified and asked their thoughts before now. Before Allerdale and Copeland agreed to even take part in the search.
1280	1 – Geology	No	Other areas on the map on page 27 should have been in the ‘Excluded Area’-particularly the Sellafield area – shown to be unsuitable by NIREX. NB the site should have been chosen first before any of this consultation.
1280	2 – Safety, security, environment and planning	No	The dump will come to west Cumbria – reasons for suitability, etc will be “found” to be suitable.
1280	3 – Impacts	Not Sure/ Partly	‘Brand Cumbria’ and particularly ‘Brand West Cumbria’ will suffer. Before any further progress is made we need the M595 to bring other jobs into West Cumbria (see my letter in the Whitehaven News in January)

1280	4 – Community benefits	No	We have seen how little (and late) things happened to us as a result of Thorp. I don't believe this will be any different.
1280	5 – Design and engineering	Not Sure/ Partly	The design concept at this stage may be OK but will probably be different at the time of construction due to ground considerations and new technology. The site should have been chosen first (and nationally not just Cumbria).
1280	6 – Inventory	No	I have seen how BNFL operated inventory systems so have no faith in the dump being any better.
1280	7 – Siting process	No	The site should have been chosen first from the whole of the UK. There are better sites geologically than West Cumbria. This exercise is a whitewash.
1280	8 – Overall views on participation		There needs to be a referendum for the whole of Allerdale and Copeland to decide if the dump goes ahead. Not just leave it to the Council Members.
1281	1 – Geology	No	I find arguments about the regional unsuitability of West Cumbria's hydrogeology very compelling.
1281	2 – Safety, security, environment and planning	No	I am not convinced that the Partnership itself is totally convinced that planning and regulatory procedures will be adequate in future. Phrases like "as far as is possible at this stage," convey much uncertainty, indeed anxiety. I am also concerned at the lack of any specific attempts to detail why the 1995/96 application for a rock characterisation facility was turned down by the planning process and how the situation is so radically different today.
1281	3 – Impacts	Not Sure/ Partly	I find the specific content of this section difficult to unravel. For example, the proposed facility is bound to have some environmental, social and economic impacts. These might be positive or negative but surely not neutral as is implied in the phrase 'if they occur' in Criterion a).
1281	4 – Community benefits	Not Sure/ Partly	Given the very difficult situation with regard to national finances at the moment and, apparently for a long time into the future I feel that any 'community benefits package' is bound to be limited and a hostage to fortune. More importantly, this should not be a factor which figures in the decision-making process. It implies a need for some form of compensation. Against what?
1281	5 – Design and engineering	No	Given the uncertainty about the specifics of any site it is premature to express opinions on design and engineering.

1281	6 – Inventory	No	There are too many uncertainties to be able to agree.
1281	7 – Siting process	No	I would have liked more historical content in the Partnerships thinking. And if this is to be a community-based decision I think a commitment to a referendum ought to be declared.
1282	Emailed letter		<p>On receiving a leaflet informing me of the MRWS proposals, I began to study the options for nuclear waste disposal and the nuclear industry as a whole.</p> <ol style="list-style-type: none"> 1. Are there alternatives to geological disposal? If so, what are they? 2. Is burying our radio-toxic material for millennia the right thing to do, given that some of the material may come back into the biosphere and affect future generations? 3. The proposals as shown would be extremely costly. Are there other options? Does the stated geological burial option as shown in the consultation give the best cost/benefit over all other options? 4. Would a delay in developing a disposal facility act as a road block for nuclear power? If it does, would that affect the environment in a positive or negative way? 5. For the lives of the current generation, would a facility improve lives and improve safety of the area in general? <p>1. Are there alternatives to geological disposal? If so, what are they?</p> <p>To answer this, we need to analyse what materials are planned for geological disposal. Consider their nature, and plan what else we might do with them.</p> <p>A relatively small proportion of material planned for geological disposal are the ashes of fission – i.e. the materials created from the fissioning of the fuel – the process that creates the heat from which we make electricity. Most of the material would be depleted uranium (very low radioactivity – virtually safe), plutonium – moderately radioactive, poisonous, and a threat for nuclear weapon proliferation. Something we would want to put well out of reach. Other fissionable uranium which is fairly radioactive, but would be difficult to separate from the bulk of depleted uranium.</p>

		<p>Plutonium is useful as a fuel in nuclear reactors, and is relatively easy to chemically separate from the waste stream. This could be made into a fuel for a fairly standard reactor design.</p> <p>The uranium and more active isotope mixture could be used in a fast breeder reactor. By repeatedly processing, using, and re-processing the fuel, we would end up with most of the material ending up as non-radioactive ordinary matter, with a small proportion of mixed isotopes, most with a relatively short half-life. This could potentially reduce the radioactive inventory by a factor of 20, whilst generating electricity. Most of the material classed as waste in the consultation is potentially very useful for peaceful civilian purposes. This route would still need some form of disposal for the radioactive ashes. Perhaps cheaper, deeper boreholes could provide an answer.</p> <p>So the answer is yes- we would still need some form of geological disposal, but the problem could be made much smaller by re-using the fuel amongst the material currently classed as waste.</p> <p>2. Is burying our radio-toxic material for millennia the right thing to do, given that some of the material may come back into the biosphere and affect future generations?</p> <p>Before we can answer such a question, we need to quantify the potential for harm, and put it in context with other things we do. I found a very useful resource to understand the issues in Professor Cohen's book "The Nuclear Energy Option": http://www.phyast.pitt.edu/~blc/book/</p> <p>We extract oil and coal from the ground. We deplete resources which may otherwise be available to future generations. When we burn oil and coal, we emit materials which will remain in the biosphere for tens of thousands of years, and over that time cause real and potential harm. Our actions today are far from benign from the perspective of future generations. We need to compare the future potential problems of disposing of radioactive waste in rocks, as compared to our release of material into the environment from traditional forms of energy production. According to a case study by Professor Cohen, a situation where an accidental release from tanks in the ground near the surface led to a public anxiety led clean-up operation, which was unnecessary as the radioactivity was unlikely to find it's way far through the ground.</p> <p>Therefore, if we want to consider inter-generational equity, we need to consider everything that we do in that context, not just consider issues of radioactive waste by virtue of the fact components of the waste have long half lives. If we were to take that approach, I believe a deeply buried storage facility would be benign in the context of our other industrial effects on the environment. Our rivers do contain natural Uranium, our houses have natural Radon. These are radioactive.</p> <p>3) The proposals as shown would be extremely costly. Are there other options? Does the stated geological</p>
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		<p>burial option as shown in the consultation give the best cost/benefit over all other options?</p> <p>In many instances, when dealing with nuclear and radioactivity, public fear has led to what Prof. Cohen and many other nuclear physicists consider “regulatory ratcheting”. Professor Cohen explains that the nuclear industry was able to generate electricity very competitively compared to coal. Progressive introduction of regulations increased the cost of projects 10-fold, resulting in nearly completed projects being abandoned, and new projects were cancelled. I understand that Prof.Cohen's view is that the improvements in safety as a result of regulations was small compared to the cost. Those implementing the regulations were not those bearing the cost. Arguably, due to our reliance on fossil fuels which may not otherwise be the case, we may all be poorer for it.</p> <p>I do not personally understand the cost/benefit of successive regulatory regimes applied to the nuclear industry, but perhaps with our need for carbon-free fuel, we are reaching a good time to re-examine the cost/benefit of the various regulations, to ensure a safe and competitive nuclear industry, with a successful research and development outcome.</p> <p>Burial is not necessarily the only option, but may be the only option should we require an immediate solution to enable the nuclear energy industry to move forward. If not burying blocks progress, then we should bury. If we can invest in molten salt thorium breeder technology, there is a possibility that much of the waste stockpile could be burned in such reactors, resulting in a massively reduced waste stream.</p> <p>Whether or not we decide to bury, the nuclear industry needs to move forward, and to learn the right lessons from the past.</p> <p>4) Would a delay in developing a disposal facility act as a road block for nuclear power? If it does, would that affect the environment in a positive or negative way?</p> <p>In other countries, a waste strategy has to be agreed to progress with nuclear power. I would imagine that ultimately, the same is true here. If this were the case, then we need to consider what will be our options should we chose not to bury.</p> <p>We could live with increasing energy prices. To the degree that heating our houses becomes too expensive. We have our houses as cold as we can tolerate; we get rid of all draughts, insulate as much as we can. Plant windmills over the countryside. Have an energy supply which is intermittent – we consume energy when available rather than when we want to use it. Reduce our car use to a few very important journeys. Higher energy prices equal higher cost of manufactured goods, so we consume less. We eat less meat and rely on pulses and grains for the majority of our diet. As we deindustrialise, and have less</p>
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		<p>energy available to farm, food will become more scarce. Ultimately, Earth will be back to supporting 1 Billion people, not the 8 Billion today. People will starve and die.</p> <p>The alternative is to accept that if we want an industrial world standard of living, we must produce energy in adequate quantity to support that way of life and to produce food and support the population we have today. If we can't burn coal or oil due to CO2 emissions and/or dwindling supplies, then we must find another reliable source which provides ample energy when we need, both for domestic and industrial use. Nuclear releases far less radiation into the environment than coal. It releases no significant CO2. It is the only form of energy we can rely on that does not release greenhouse gases, and can provide every watt an industrialised society needs. Without nuclear, we would have to accept a much lower standard of living, and plant windmills everywhere.</p> <p>We can't store windmill energy cost-effectively, so we will be at the mercy of the wind. Solar is not practical at our latitude.</p> <p>5 For the lives of the current generation, would a facility improve lives and improve safety of the area in general?</p> <p>Improve lives: Possibly. Improve safety: Yes. Storing high level waste above ground has substantial risks which are removed when it is stored deep under ground. There are many imaginable scenarios which could lead to above ground stores to get into the environment, or into terrorist hands. There is a strong argument to get rid of the above ground stores.</p> <p>The inward investment for a subterranean storage facility may improve local income levels. At the same time, the blunt instrument of government grants as a sweetener, can lead to a false, unproductive economy over-reliant on grants and potentially unsustainable government support.</p> <p>Perhaps we could have a vibrant and productive economy helped by the government through the area having a special low tax designation, thereby attracting private capital. Much like the model used in Dublin, which attracted high-tech industries into Ireland. This arguably led to better education in Ireland, and the Irish youth feeling they had a role to play, injecting vibrancy and enthusiasm into the young workforce.</p> <p>Conclusion</p> <p>If the right geology was found, the likelihood of anyone being negatively affected by a nuclear storage facility a long way into the future is small. If having a storage facility enables progress for the nuclear industry, then the whole world would likely benefit now and in the future as we can</p>
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			<p>sensibly reduce our carbon dioxide emissions.</p> <p>If we consider the facts that our rivers do now, and have always carried radioactivity, and understand that radioactivity is normal and natural at low levels, we can start to consider scenarios regarding the nuclear waste options with a cooler, clearer head. If we further consider that as we burn Coal, we condense a lot of radioactivity from the massive volume of coal, in the fly ash and in the chimney effluent (apart from mercury and other undesirable atmospheric pollutants), we can see that geological disposal of nuclear waste is a relatively clean thing to do.</p> <p>Whether or not an underground repository should be in West Cumbria, and whether or not Copeland and Allerdale should proceed is a much harder issue to resolve. On one hand, I feel the government should have started by looking for the most suitable geological sites. Basing the choice on geology, not politics. On the other hand, I understand that people here in West Cumbria are more accepting of nuclear energy, which would make political sighting of a repository easier, which would make progressing with nuclear power politically easier.</p> <p>I am not convinced that we can't find a site here in West Cumbria which would be suitable. I am not convinced that a full tunnelled repository is necessarily the best idea. Deep borehole burial using oil industry drilling techniques may provide a means to put the waste far deeper, with even less chance of it ever coming back, whilst being cheaper. On this basis, I think Allerdale and Copeland should progress cautiously, whilst opening the choice for deep borehole disposal.</p>
1283	1 – Geology	No	<ul style="list-style-type: none"> • The integrity of the BGS study is compromised by its limited criteria. It did not consider the devastating environmental effect of nuclear in fissured rocks close to lakes and sea. • The criterion of 'square meters' is fatuous. Criteria should be type of land and surrounding area plus people! • The suitability of the geology of West Cumbria has been called into question and there is much doubt and concern over it. Further investigation would be costly and environmentally damaging. This is the wrong way round to choose a site-a site should be chosen for its geological suitability, rather than dispise it. It rather seems as if the CoRWM is grasping at straws.
1283	2 – Safety, security, environment and planning	No	<ul style="list-style-type: none"> • There are far too many doubts about the safety of geological disposal to be sure of anything. If we cannot be sure, we should not proceed. We are affecting the lives of future generations, as well as the planet. Greenpeace's 'Rock Solid' details the scenarios that could cause disaster. We should not court disaster.
1283	3 – Impacts	No	<ul style="list-style-type: none"> • Of greatest concern are the health impacts of a repository. These are potentially far-reaching, irreversible and, as yet, unknown. How, then, can the partnership be 'confident these questions can be answered later'? By

			<p>then it may be too late for future generations.</p> <ul style="list-style-type: none"> • Cumbria's greatest asset is its natural beauty and this project must affect the tourist industry. • Any job creation from the depository, as you have stated, 'cannot be set aside just for local people'. Therefore it is wrong to sell this to locals with the lure of jobs.
1283	4 – Community benefits	Not Sure/ Partly	<ul style="list-style-type: none"> • So far the community benefits are utterly vague. How exactly will the community benefit? What assurances to do we have? • This package seems to be a bribe. This confirms the reason to not have a depository. If it was such a good idea, why would we need bribing? • The partnership's initial opinions seem to be as uncertain as mine! I think the partnership feels uncomfortable about accepting a package and does not know itself what the package will be or whether it is assured. It does not state they are 'confident' 'that a package can be developed.' So the partnership has not met its own criterion. Therefore it is hard to agree or disagree on this.
1283	5 – Design and engineering	No	<ul style="list-style-type: none"> • There are too many uncertainties, by the partnership's own admission, to be 'satisfied' -Detailed design: 'not possible to say exactly...' -Distance between: 'another uncertainty is...' -How many: 'no detailed discussions...' -Timescale: 'it is not clear exactly...' -Monitoring: 'research is still in its early stages...' <p>How can the partnership be satisfied with any of that? It is all too vague</p>
1283	6 – Inventory	No	<ul style="list-style-type: none"> • Again, how can the partnership be 'satisfied' with this level of uncertainty? As stated, we do not know 'what actually would go into a repository.' • The government has a 'presumption' that only UK radio-active waste will be sent here. What about an assurance?! We do not want Cumbria to be the world's tip. • As 'it is not possible to estimate a maximum inventory,' we do not even know how much will be dumped here.
1283	7 – Siting process	No	<ul style="list-style-type: none"> • I do not believe that withdrawal will be easy now or possible at a later stage. • I am sceptical that the community will have any influence over the siting
1283	8 – Overall views on participation		<p>I do not think that Allerdale/ Copeland should take part in the search for a repository site. The farther we go with this, the harder it will be to back out. My answers to questions 1-7 say why I do not believe it is right to build a repository here. If we take part in the search, it will be a 'done deal'</p>

1283	9 – Additional comments		<ul style="list-style-type: none"> • Please do not turn our beautiful county into a toxic dumping ground, for the sake of a few jobs. • This consultation response form would be difficult for many people to use. The questions are worded in a convoluted way and, I believe, made inaccessible to all but the most literate and dedicated of us. Further consultation should be made more user friendly.
1285	1 – Geology	No	Having been to various meetings and discussions I am not convinced that a deep underground radio-active waste repository in West Cumbria is the answer to storing radioactive waste, yes an underground repository as opposed to surface storage but West Cumbria is not the place. It has the most complicated geology riddled with fault lines not to mention being subject to copious amounts of rain water, and given all the information from the current BGS, professional geologists and the £400m Nirex inquiry in the 1990s there is no clear indication of a suitable site anywhere to facilitate such a repository, so why when there are other sites with more suitable geology and less water in this country are we moving to the next stage of drilling boreholes.
1285	2 – Safety, security, environment and planning	No	This is a step too far and we must withdraw from this process now. We should not be planning for a radioactive waste repository in W Cumbria. The safety, security, etc are irrelevant if there is no suitable site, if you start with unstable building blocks ie the geology, no amount of engineering will provide a safe environment for a repository.
1285	3 – Impacts	No	Whilst building a radioactive waste repository does have the potential for providing employment for locals, I do not think that we should put at risk the only other industry W Cumbria has, 'tourism' which brings millions into the government's coffers. It would be wrong to jeopardize the livelihood of thousands of people involved in tourism and farming in W Cumbria and to ruin one of the most beautiful parts of the country people come to rest and play in.
1285	4 – Community benefits	Not answered	This is unspecified as yet but will need a referendum in its own right to establish the needs and expectations of generations to come.
1285	5 – Design and engineering	Not Sure/ Partly	There are too many unknowns to make any comments on this apart from my concerns on the timescale and monitoring of the repository.
1285	7 – Siting process	No	<p>Allerdale and Copland Borough Councils should not have committed W Cumbria to siting a repository of radioactive waste on data that cannot provide a suitable site, only possible?? when there are other more appropriate sites with better geology in other parts of the country.</p> <p>The whole procedure is preposterous, if the country needs deep underground facilities for storing radioactive</p>

			waste then it is a problem for the Nation as a whole not just W Cumbria, and as it's a problem that will remain with us for thousands of years we have as a nation to find the most geologically sound and most secure place and procedure for managing it. Surely we must find the most suitable places first and then proceed with public consultations etc not put it up for grabs (ha, ha, nobody wants it in their back yard) first, leaving only Allerdale and Copeland in the running, what if their possible sites prove to be unsuitable, shall we still be landed with it, because nobody else has volunteered, that's dangerous and goes beyond belief. Wake up Cumbria.
1286	1 – Geology	No	<p>I disagree because I feel that Professor Smythe has put forward sufficient scientific and geological arguments to rule out the suitability of the whole of West Cumbria. He has shown that the geological nature of the land, being mountainous, is unsuitable.</p> <p>It seems pointless to waste money on micro-exploration when the macro-scale survey shows that it is unsuitable</p>
1286	2 – Safety, security, environment and planning	No	The Partnership seems to be relying on hoping that R&D will produce acceptable solutions by the time that the repository is built. There does not seem to be any real evidence that this will be so.
1286	3 – Impacts	No	<p>West Cumbria is encouraging Tourism as source of employment, probably offering more jobs than the repository.</p> <p>I do not think that Tourism will be encouraged by the repository - rather the opposite.</p> <p>I am very concerned about the volume of extracted material “equivalent to the Channel Tunnel” - the implications in terms of either spoil heaps, 12m high embankments or rail/ lorry loads of material being moved across the country, are horrendous.</p>
1286	4 – Community benefits	No	I do not think that a community benefits package should influence where a repository is sited. A repository needs to be sited in the most suitable geological position
1286	5 – Design and engineering	Yes	<p>I do think that retrievability is very important and am pleased to see that it is being considered.</p> <p>Technological advances mean that safer ways of storing waste may be developed in the future. We should not deny ourselves the opportunity of using these by burying the waste irretrievably</p>
1286	6 – Inventory	Not Sure/	Is this repository to take all the designated waste from all the nuclear operations in Great Britain at the time of

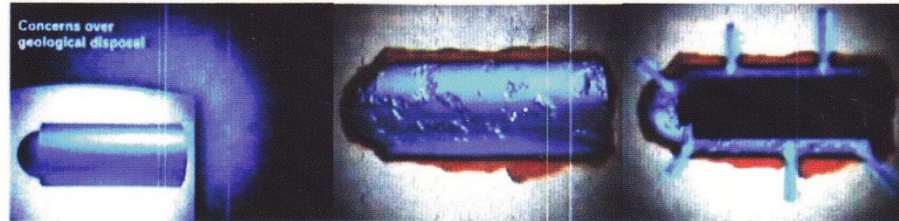
		Partly	its building and filling? Might it be expected to take waste from elsewhere?
1286	7 – Siting process	Yes	Written assurances from the Government about the right to withdraw up until building begins seems reassuring, if we proceed to stage 4.
1286	8 – Overall views on participation		I do not think that Allerdale should continue to take part in this search. I think that there is sufficient geological evidence already to rule us out.
1286	9 – Additional comments		The waste exists – we have used the energy. The waste must be stored safely until a repository is built somewhere, in perhaps 30 – 50 years time. The threat of terrorism is high at present, so the waste must be stored safely above ground. Is it not possible to re-consider safe above ground storage with substantial safety aspects? Are present nuclear reactors considered terrorist proof? If so, why not use these as they are coming to the end of their active lives?
1288	1 – Geology	Not Sure/ Partly	Until more detailed surveys eg test drills etc it all seems a bit up in the air. To think that as far as experts know at the moment all safety measures would be in place. What happens in the future is unknown.
1288	2 – Safety, security, environment and planning	Yes	As previously with the knowledge we have at present it seems OK. What happens in the future is an unknown factor.
1288	3 – Impacts	Yes	No comment was made
1288	4 – Community benefits	Yes	Providing the benefits continue into the future to safeguard future generations.
1288	5 – Design and engineering	Yes	No comment was made
1288	6 – Inventory	Yes	No comment was made
1288	7 – Siting process	Yes	No comment was made
1288	8 – Overall views on participation		I agree that they should take part, but have the option to not accept a repository if it's not suitable.
1289	1 – Geology	Not Sure/	A repository in West Cumbria should only be planned if further studies find a suitable site. This is the most

		Partly	important criteria in determining this matter. "Suitable" must be agreed by a number of independent geologists, including the ones that have expressed doubts, not just by a few employed by the partnership.
1289	6 – Inventory	Not Sure/ Partly	<p>I would accept the idea of a repository sited near Sellafield, especially the above ground part, because the local population and workforce are familiar with the nuclear industry. This is only if an area with safe geology for the underground repository is found (see 5).</p> <p>The underground part should not be under the National Park because of the impact of test boreholes and any possible future access. Nor would a site close to the National Park boundary be acceptable for the above-ground part</p>
1289	8 – Overall views on participation		The councils should take part in the search for suitable areas within industrial West Cumbria (or on the edge of already built-up parts) because of the economic benefits to communities already familiar with the nuclear industry.
1290	1 – Geology	No	The Partnership's approach to the geology of West Cumbria is forced upon them by the fact that the government has ignored the International Atomic Energy Agency's recommendation that before any community is asked to have a nuclear repository the whole country should be surveyed and communities in the most suitable areas geologically asked if they will host a repository. Countries which have done this eg Sweden and Finland have sited their repositories in flat areas, not hilly ones. Why even start thinking about the geology of West Cumbria before the whole country has been surveyed. Although the Nirex inquiry in the 1990s did not cover the whole of West Cumbria it did show the unsuitability of part of the area because of the complex in geology - a point which applies to the rest of the country too. This complex to geology and the high mountains nearby lead to fast and unpredictable water flow. (As seen in Nov 2009)
1290	2 – Safety, security, environment and planning	No	The Partnership seems more concerned with "meeting regulatory requirements" than the actual safety of people who will be affected. Also it limits the people who will be affected to "residents and the workforce" (presumably the workforce at the repository. What about the safety of other people who are not residents in West Cumbria but work there? What about the safety of tourists? (or is it just assumed that there won't be any if there is a repository. This may well be a correct assumption but it will have a devastating affect on the country's economy). What about the safety of people who eat food produced in the area? (Again it may be assumed that no one will want to buy any food (or livestock) from an area which may be contaminated by nuclear waste - so the farmers' livelihood will be destroyed). What about the safety of people on the Isle of Man and Ireland who may be affected by any seepage of nuclear waste into the Irish Sea?

1290	3 – Impacts	Not Sure/ Partly	<p>The Partnership has noted the possible (but more likely probable) impact of the depository on tourism and food-based industries including farming but has not made any attempt to compare the number of jobs which may be lost because of the impact on tourism and food-based industries with the number of jobs which may be created by a repository. Also the loss of jobs in the established ‘industries’ of tourism and food based industries (this should include fishing as well as farming will be jobs lost to Cumbrians or those who are already living in Cumbria. The new jobs to be created (both in construction and in working at the repository when it is completed) may well be taken by those from outside the county. Flood risk is noted in box 15 but ignored in section 6.5.</p> <p>In fact, of the impacts listed in box 15, apart from jobs the “Initial opinions” merely say “an acceptable process can be put in place - to assess and mitigate any negative impacts.” Nothing yet to agree or disagree with!!</p>
1290	4 – Community benefits	No	<p>The Partnership seems to have completely ignored the fact that the main risk of a repository is to health and safety because of the danger of possible radiation leaks (and dust caused by the construction in the atmosphere). Therefore the community benefits should be to mitigate the problems caused by this. Of course nothing can compensate for sickness, specially cancer, caused by possible radiation leaks but the following would mitigate the problems for a start. A dedicated ward for cancer patients at West Cumberland Hospital, (and the Cumberland Infirmary if there isn’t one there).</p> <p>Proper facilities for blind and deaf patients at West Cumberland Hospital and the Cumberland Infirmary (including training for staff on the needs of those patients and Sign Language provision).</p> <p>Free transport for patients to all medical appointments in comfort. (taxis, not a shared ambulance). Free care at home for all patients. ‘Carers’ to be trained in basic medical needs of patients.</p>
1290	5 – Design and engineering	Not Sure/ Partly	<p>The Partnership’s initial opinions seem to be “it’s all uncertain.” On this I agree with them, but they seem content to leave it at that. I am not happy with making a decision to take part in the search for somewhere to put a repository until there is more clarity about these issues.</p>
1290	6 – Inventory	No	<p>Until it is clear whether waste from new nuclear power stations would go into a repository any discussion of the inventory is meaningless.</p>
1290	7 – Siting process	No	<p>There is an assumption that the Partnership is talking about siting in West Cumbria which is not wanted. The partnership seemed happy with a situation where “there would have to be a government decision to change the Right of Withdrawal.” The Government itself may change and even if it doesn’t it would still be capable of changing the Right of Withdrawal. The Partnership seems to be very naive on this point.</p>

			In the section on gauging credible local support it is stated that “In the event of the partnership concluding that the omission of a potential host community would create insurmountable problems for the siting process then it could recommend the inclusion of the community concerned...” This is contrary to principle 7 in Box 30 “Only move to site-specific investigations if there is credible local support” - when it clearly there isn't.
1290	8 – Overall views on participation		They should not take part in the search. There is no point in taking part in the search unless there might be a nuclear depository built in the area. If this happened it would ruin the health and economy of Cumbria, especially West Cumbria. It would also ruin the views from the National Park. The consultation document does not mention the waste spoil heaps and their impact or the eventual impact of above ground facilities.
1290	9 – Additional comments		<p>Cumbria, Allerdale and Copeland Councils should note that no other councils in the country have expressed an interest, with good reason!</p> <p>The decision appears to be being made only by the Cumbria, Allerdale and Copeland councils in spite of the fact that smaller and local councils such as Cockermouth, Seaton and Above Derwent Councils have voted to withdraw from the MRWS. As this will affect everyone in Allerdale and Copeland if it goes ahead a referendum should be held on the issue.</p> <p>An opinion survey is not good enough for an issue of this importance. The claimed negative features of the referendums also apply to an opinion survey. A telephone opinion survey is notoriously bad form of survey as apart from people who only have mobile phones there are people who don't have phones at all because of poverty. They will be the same people who will be unable to move to get away from the repository.</p> <p>[Additional postcard]</p> <p>Side one</p>

WE KNOW ENOUGH ABOUT CUMBRIA'S GEOLOGY TO SAY NO TO GEOLOGICAL DISPOSAL



The graphic above is taken directly from a UK government sponsored video*. It illustrates what would happen to the geological disposal of nuclear wastes in...

...AREAS OF "HIGH RAINFALL, PERMEABLE ROCKS AND HILLS AND MOUNTAINS TO DRIVE THE WATER FLOW"

**Following the failure of Nirex's (British Government) push for geological disposal of nuclear wastes in Cumbria, the British Government sponsored a project called Pungsu, aimed at 'disposing' of nuclear wastes in Australia. The graphics above are from the Pungsu video of 1999. Australians said No Thanks! Cue Cumbria 2012.*

Side two [name and address removed]

			<p>To Cumbria County Council, Allerdale and Copeland Borough Councils,</p> <p>You are running a consultation to see if Cumbria should proceed along 'steps towards geological disposal of nuclear wastes.'</p> <p>Enough is known about Cumbria's geology to know that this area of "high rainfall and hills and mountains to drive the water flow" is NOT SUITABLE FOR FURTHER INVESTIGATION.</p> <p>I do not support any further "steps" and ask that "no decision to participate" is taken by the 3 councils and decision making bodies.</p> <p>Please ensure that Cumbria has a viable future and STOP the STEPS TOWARDS GEOLOGICAL DISPOSAL</p> <p>yours sincerely,</p> <p>Name:</p> <p>Address:</p> <p>Postcode:</p>	
1291	8 – Overall views on participation		The fundamental question is:- the safety aspect, and until this is addressed by a high level International Scientific Review, as to the suitability of the area, there is no point in going any further. We do not have the experience in this country and the issues being bandied about at the moment need challenged by the most experienced knowledge in the world. If and only then should we look in Cumbria. A suitable site should be located rather than a suitable community, so maybe the Government should start a gain on such an important long lasting project.	
1291	9 – Additional comments		The main income in Cumbria is tourism which would be devastated by becoming the Nuclear Waste Depository in the UK.	

1292	1 – Geology	No	<p>BGS - desk based study - probably took all of ten minutes, longer to write it up and make it look good. Their brief would be to exclude areas of population and with a neat little line under Egremont all the area south and east of Sellafield to work on - though enough is known to rule out the area - think of Nirex.</p> <p>What really lets the cat out of the bag is the supposed necessity to have two experts to check if the BGS study was accurate!! Smoke and mirrors! As is the rest of the document. Whitehall mandarins written all over it.</p>
1292	2 – Safety, security, environment and planning	No	No comment was made
1292	3 – Impacts	No	No comment was made
1292	4 – Community benefits	No	No comment was made
1292	5 – Design and engineering	No	No comment was made
1292	7 – Siting process	No	No comment was made
1293	1 – Geology	Not Sure/ Partly	<p>I am concerned that much of the “non-excluded” area is within the Lake District National Park. What is the area of “non-excluded” land available if the National Park is not included?</p> <p>Much of this “non-excluded” land will lie within areas with a geology which was considered as unsuitable following the Nirex investigations. More clarification is needed</p>
1293	2 – Safety, security, environment and planning	Not Sure/ Partly	<p>1. Regulatory and planning processes A these seem satisfactory B I have some concerns about the future role and effectiveness of the EA C the future of the planning system is at present in question, particularly in connection with major infrastructure developments of national significance.</p> <p>2. Safety I am reasonably confident that appropriate processes and procedures will be established. I am concerned about the extent to which they will be observed. Human error has been a central cause of most accidents and failures in the nuclear industry- eg Chernobyl, MOX falsification</p>

1293	3 – Impacts	Yes	I broadly support the general argument put forward in this chapter of the document. Much more work needs to be carried out on defining the positive and negative impacts. Mitigating “negative” effects will be costly.
1293	4 – Community benefits	Yes	Please know that my view that mitigating possible impacts is a very important part of the benefits package. Any work done to mitigate impacts should take place wherever necessary before construction begins. (relief roads for THORP construction were completed AFTER work had finished!)
1293	5 – Design and engineering	Not Sure/ Partly	In my view retrievability should be explicitly included within generic designs, as proposed. I cannot comment with any authority on design, other than to argue that the surface facilities should be as inconspicuous as possible and well screened and landscaped. Please learn as much as possible from the experience being gained in other countries.
1293	6 – Inventory	Not Sure/ Partly	There are too many uncertainties at this stage to give a definitive YES or NO. I think there is a case for keeping high level waste and plutonium/uranium in surface stores for possible re-use. All intermediate level waste should go into the repository. The repository should be designed to accept lower and intermediate waste from a new generation of nuclear power stations, should they be built, it would be unrealistic to repeat this lengthy site selection exercise.
1293	7 – Siting process	Not Sure/ Partly	I am concerned that the development might proceed without the agreement of some smaller communities. The process does not adequately safeguard the interests of such smaller communities. This matter needs further consideration.
1293	8 – Overall views on participation		I believe that Copeland Borough Council should take part in the search for a site, at this stage without final commitment to have it.
1293	9 – Additional comments		On balance I think the consultation document identifies the major issues and problems quite thoroughly. My overall concern is that future aspects of energy policy, changes of government, alterations of planning procedures and policies etc may make this complex process irrelevant.
1294	1 – Geology	No	It seems that there has been no equivalent examination of all other parts of the UK. The south east is geologically a much more stable region. It feels as though Cumbria has been chosen because it has nuclear ‘form’ (Sellafield and before it, Winscale). Is this the reason so much pressure is now being put on Cumbria? A little honesty and a full explanation would be welcome.

1294	2 – Safety, security, environment and planning	No	We are dealing here with waste that has a long half-life. Inevitably, it will be necessary to retrieve and repackage the waste. We should be thinking in terms of 10,000 years +. This is a huge legacy for those who will live in Cumbria in the future.
1294	3 – Impacts	No	Underestimated in many respects. Short term: waste/ spoil/ effect on tourism. Where will it all be put? Long-term: inadequate assessment of impact on local population and jobs.
1294	4 – Community benefits	No	Heavily biased towards an optimistic view.
1294	5 – Design and engineering	Not Sure/ Partly	This is in a way the least important issue. Situation is more important.
1294	6 – Inventory	Not Sure/ Partly	No comment was made
1294	7 – Siting process	No	See my comments under question 1.1
1294	8 – Overall views on participation		Please see my comments made under question 1.1. Why has Cumbria been selected, in preference to, for example, East Anglia (geologically a much more stable region of the UK)?
1295	Letter		<p>West Cumbria should NOT take part in a search for an underground site, and the MRWS Partnership should not go on talking about this or even considering it.</p> <p>Cumbria has the most complex geology in England. It also has the highest rainfall and acidic soil. The Partnership is persistently dismissing the advice of the most eminent geologists that our area is unsuitable. It still talks of boreholes and testing when the matter should be dropped here and now.</p> <p>Cumbria consists largely of the Lake District National Park and the coastal nature reserves and SSSIs. It is the most beautiful part of England. The nuclear industry – and especially dumping nuclear waste – here is utterly inappropriate in the rural scene. We don't know what to do with our own rubbish, let alone that of the rest of the country and the world.</p> <p>The traditional activity, farming, is threatened. Who would want to buy Cumbrian fish, meat and vegetables? I wouldn't! We know that Cumbrian soil already contains nuclear fallout from Sellafield; Chernobyl was just an</p>

			<p>“added extra”! Moreover the great volume of traffic speeding to the west coast across our fell roads is quite out of keeping with a pastoral existence on common grazing in the National Park. I myself have lost 4 cows and have had as many injured. The latest cow hit was put down on humane grounds just last autumn. I have not had any compensation yet. As for sheep, not chance! Our livestock are regularly killed by the traffic. Our application for world heritage site status is based on traditional farming landscapes.</p> <p>Tourism also depends on these landscapes, and clean, quiet, peaceful enjoyment of the countryside away from the world of work and modern technology. The urban population of this overcrowded island needs this valuable resource for refreshment.</p> <p>We should not consider a “package of additional community benefits”. It is a bribe. No other county in the land is foolish enough to consider it. Some of us are intelligent enough to recognise this. We have all we need here in the natural environment. As for jobs, it is good for young folks to travel; they need to see other places and gain new experiences, then they can decide whether or not to come back home.</p> <p>Keep Cumbria unique; stop spoiling it; say no to a nuclear waste repository.</p>
1296	1 – Geology	No	West Cumberland is full of water and totaly unsuitable.
1296	2 – Safety, security, environment and planning	No	How is it to be kept cool in a hole.
1296	3 – Impacts	No	It will drive more jobs away that it creats. As with Studsvik
1296	4 – Community benefits	No	It is a bribe accepted by Copland as they are desperate for jobs.
1296	5 – Design and engineering	No	Retrievability is a top priority and should be decided now.
1296	6 – Inventory	No	No definite statements.
1296	7 – Siting process	Yes	I am concerned there is no opportunity for a referendum. It is only the members of the three councils who can exercise the right to withdraw. Not the electors who were not consulted when they volunteered us.
1296	8 – Overall views on participation		They should not continue. It should be kept above ground where it can constantly monitored. The scientists do not care what happens as long as they get rid of it. For decades they pumped radioactivity into the Solway

			blighting the Irish Sea. This plan will blight the whole of Cumbria.
1297	Letter answering consultation questions		<p>[Introductory comments]</p> <p>Having read the report and the associated Government White Paper on the Management of Radioactive Waste Safely, I wish to make the following comments:</p> <ol style="list-style-type: none"> 1. I have no pre-conceived view on whether or not a Repository should be sited in West Cumbria. It is my opinion that a decision on whether or not a Repository is sited in West Cumbria is one that should be taken by the people of West Cumbria. I am indifferent to whether the whole of Cumbria should be consulted. 2. However a decision on where a Repository is sited must be one for that local community (the Host Community as defined by Government in the White Paper) within which a suitably safe site has been identified, and any attempt by higher authorities to use measures of support from a wider population as justification for over-ruling the wishes of the Host Community are unacceptable, and will give an entirely new meaning to the term 'voluntarism'. 3. Any decision to site such a repository must be made on a safety case which must provide confidence and reassurance to the general public, and the Host Communities in particular, that the contents will present no significant risk, not only for the present time but for countless generations to come. 4. The current arrangements for the storage of HLW and ILW presently in place at Sellafield are unacceptable and require urgent action to reduce the attendant public health and safety risks. 5. In response to the questions posed I do not agree with any of the opinions expressed other than those on generic design concepts in Q5.
1297	1 – Geology	No	<p>1.2 The area of land available for further investigation is far less than the 1890 Km² claimed.</p> <p>The geology of West Cumbria is characterised by complex folding and faulting, with strong hydraulic gradients, and is unlikely to prove 'suitable' for a GDF. The picture portrayed by the report is far too optimistic and ignores well-established knowledge and past research, as well as several independently expressed opinions by prominent professional geologists.</p>
1297	2 – Safety, security, environment and planning	No	All these matters are site specific and until a site exists there seems to be little point in trying to present opinions which may well have to be changed in the future.

			<p>Safety, Security and Environmental matters are for the main part the responsibility of the various regulatory bodies. It is up to the regulators to provide the necessary public confidence in the integrity of any proposed facility. The Partnership appears to be taking on powers that it does not have. Does it really believe that because Partnership members think that say, an adequate Safety Case had been made, that members of the public would accept it – probably just the opposite.</p> <p>Specifically on the matter of a Safety Case this is an extremely complex issue to deal with, it being unlikely that anything of this nature has ever been attempted before. The presenters of the Safety Case (presumably NDA) will have to convince not only the regulators, but also the public, that the highly dangerous contents of the proposed repository will remain contained and will not by some inadvertent process, find an environmental pathway back to the surface (eg through gaseous percolation or in solution via a water transport mechanism) which could have consequential health effects for humankind at some time in the future - some tens of thousands of years). That is a big task. Computer modelling has made big strides in recent times but I have yet to be convinced that it is applicable over the geological timescales required in this situation.</p> <p>I was under the impression that large construction projects, particularly national ones, would be dealt with by the Independent Planning Commission (or whatever it has been renamed). It is hoped that the process will not result in a politically expedient decision rather than one based on safety. Once again the Partnership is involving itself with issues unnecessarily, as I imagine that the Principal Authorities will have the opportunity to present any case they may have to the said body. It is notable from the report that the same rights for any Host Community are no on the Partnership's horizons.</p>
1297	3 – Impacts	No	<p>Undoubtedly the presence of the nuclear industry in West Cumbria since the late 1940's has brought substantial benefits to the area in terms of jobs and money fed into the local economy, and of more recent times, technical and academic institutions. However, traditional industries and non-nuclear businesses have declined to a dramatically low level in Copeland, although Allerdale has been affected far less by being more successful in attracting a diverse range of business. If the future of West Cumbria, and in particular Copeland, continues to be tied solely to the nuclear industry, the future is bleak for the next generations. As things are the nuclear industry is in decline; reprocessing is virtually at an end (unless there is a substantial change of heart by the powers that be), decommissioning is the only show in town – by definition a one-way process – leading to further decline in the numbers employed. The construction of a repository and/or a new-build reactor will not produce an employment bonanza for local people and the long term numbers employed by such projects, while welcome, will have little effect on the overall situation. There appear to be no suggestions in the report as to how the additional blight effects of a repository will be mitigated against or managed.</p> <p>The amount of spoil which will have to excavated, handled, and stored, is enormous. The physical impact on</p>

			any Host Community would overwhelm it. The proposal by the NDA to store spoil in 12m high mounds is ridiculous, short-sighted, lacks imagination, ignore the potential value of a usable resource, and would have a drastic effect on the local environment. It would be acceptable to most rural communities.
1297	4 – Community benefits	No	As presented the report lacks ambition. The scale of this project is enormous and the benefits should match. It is interesting that the Government’s response to the Partnership’s principles as outlined in Box 21 was to accept without reservation ‘as a basis for negotiation’/ Government obviously felt that it was getting away lightly particularly as there is no mention of binding legal agreements to preserve any benefits long term, or if a change in Government should try and renege on any previous agreement. Unless legally binding agreements are in place, which not only apply to the Decision Making Bodies but also at local level to Host Communities, no Decision to Participate should be taken.
1297	5 – Design and engineering	Not answered	<p>Generic design concepts are acceptable – there are numerous artists’ impressions to give a reasonable feeling of what a repository would comprise and look like, although the size of the above ground headworks as described to date is far too large (unnecessarily so) to be situated in a small rural community area.</p> <p>Detailed design matters are site specific, which although stated in the report, is effectively ignored. Since there is no site identified I find the conclusion that the ‘design concepts are appropriate’ difficult to understand.</p> <p>Retrievability is included within the design concept for a repository. Since retrievability can only be associated with storage and not with disposal this is both wrong on the understanding and misleading for the public. By introducing this term the Partnership have inadvertently or otherwise undermined one of the Government’s key requirements that safe disposal of the waste will remove the burden to future generations of ongoing care and maintenance.</p>
1297	6 – Inventory	No	<p>There is a presumption in the report that only UK waste will be incorporated in a repository. This is wrong, misleading to the public, and should be corrected, as it is impossible to separate out waste from foreign fuel reprocessing (past or present). While it is true that a system of waste return to some consignors of spent fuel is enacted from Sellafield, this is in terms of radioactivity equivalency; it is not the actual waste separated out or the attendant waste generated, and the volumes returned are substantially less.</p> <p>The inventory of today will almost certainly change over a period of time. The statement that the Partnership has a realistic understanding of the what the inventory would be is at best wishful thinking, at worst gravely misleading. Decisions have yet to be made on whether Plutonium and Uranium are wastes or a valuable resource, and spent fuel from new-build reactors may or may not be a factor in future as there is so much uncertainty about the nation’s future energy mix.</p>
1297	7 – Siting process	No	I find this area of the report impossible to accept. The report ignores totally the Government requirements of

		<p>the White Paper in terms of Voluntarism and Partnership Working. As far as I can see there is only 1 reference to a Community Siting Partnership (in Chapter 9) but the process as mapped out by the Partnership (in Chapter 10) does not include one, and instead puts in place a process driven by and controlled by some 'partnership' in which the Principal Authorities reign supreme.</p> <p>Host Communities don't come into existence until some time later – not what the Government envisaged – and voluntarism is restricted to the same Principal Authorities. In fact, within the report there are so many inconsistent and contradictory statements about when Host Communities will appear and be involved (and in what?) that one is left wondering whether the Partnership thinks that potential Host Communities will engage with any such 'partnership' under the process outlined. I think it will be very much mistaken, and will find as previously happened when NIREX tried to develop a Rock Characterisation Facility, that many who were generally supportive of, or ambivalent towards the project, joined together with the anti-faction in opposing the whole process. The Partnership has obviously not learned lessons from the past. Unless Host Communities are given the proper recognition that the White Paper outlined, have effective power and authority to properly represent their communities, and decide for themselves whether or not they will participate further, and under what conditions, the process as outlined is dead in the water.</p>
1297	8 – Overall views on participation	<p>In my opinion there should be no Decision to Participate made for further engagement for the following broad reasons:</p> <p>The suitability of the geology of West Cumbria for the siting of a Repository is at best seriously challenged and probably unsuitable.</p> <p>Presentation of a convincing Safety Case for a Repository will be difficult if not impossible, bearing in mind the timescales required.</p> <p>The impacts of a project of this magnitude have been seriously underestimated, and in relation to any Host Community virtually ignored.</p> <p>The lack of recognition of the rights of Host Communities to determine their own future and negotiate independently on Community Benefits and other matters which may directly affect them, is a constant failure of the process to date. That has to be corrected and the principle of voluntarism properly installed.</p>
1297	9 – Additional comments	<p>It is my opinion that the Partnership has done a fairly reasonable job in making some preliminary information available for the public, albeit at a very basic level. It is not entirely the fault of the Partnership that so relatively few individuals and organisations have shown unwillingness to make their voices heard. But by presenting an image which has promoted the ambitions and authority of the Principal Authorities, mainly at the expense of the</p>

			<p>smaller communities who, should this project come to fruition, will be the actual hosts of a Repository, it has succeeded in alienating a large part of the general community of West Cumbria, particularly in rural areas. The initial Expression of Interest by Copeland BC was precipitate, unnecessary, gave away any political advantage it could have had in dealing with Government, and has left itself open to legal challenge. When the Partnership first set itself up it invited many organisations to join which had no connection with West Cumbria whatsoever, and it was some time before smaller council representation was accepted, in the form of CALC. It has not gone unnoticed that throughout the intervening 2 years or so that many of the proposals put forward by CALC, in particular to give proper prominence and influence to potential Host Communities, have received short shrift. The production of the report was delayed due to CALC refusing to sign up without some crucial additions. These are quite noticeable and identifiable within the report. One is left wondering whether the Principal Authorities actually believe in them and more importantly, would adhere to them if the process continues.</p> <p>I think it is now up to Government to take the initiative and reassess the situation. It should ask itself whether the Partnership's efforts to date (at an alleged cost of ~£1M) have been worthwhile in terms of what has been achieved. What do we know now which we did not know before the Partnership's existence; certainly nothing in relation to the geology and hydrogeology which is the key factor in determining a safe repository for the waste. The BGS survey, the outcome of which many naively thought would reveal far more detailed and comprehensive factual data than it did, was severely hamstrung by imposed criteria for exclusion, and has in effect proved useless in terms of identifying areas for consideration of potential sites. Information from Scandinavian countries illustrate that acceptably safe sites can be found, and the principle of voluntarism applied, if the process for selecting a site is conducted properly and with public support. It is perfectly clear that areas of the UK which have far more benign geological challenges than West Cumbria have no inclination to get involved at all with radioactive waste disposal in their own area, many being violently opposed. However that should not mean that an inferior solution should be accepted, but it does mean that the Government will have to adopt a different approach than that which has existed to date.</p>
1298	1 – Geology	No	<p>I am a retired physicist and have studied geology as a subsidiary subject. The several professional geologists whose opinions I have read or heard have universally said that, although it is true that with the present geological knowledge it is not possible to definitely ruled out West Cumbria as a suitable site for a deep repository, it is not high on the list of possible sites one could attempt to prove.</p> <p>If we continue along the current path we will spend many tens of millions of pounds trying to prove a site in West Cumbria with very little hope of success. It is my information that there is a significant number of locations country wide which stand a much greater chance of proving to be viable hosts to deep repositories than is West Cumbria.</p>

			I read and I hear that it is the view of MRWS that the geology is equally as important as public opinion and yet among the partnership's members there is a long list of bodies supposedly representing public opinion and only a single geologist. And that geologist is engaged in such a way that his opinion cannot be seen to be unbiased.
1298	2 – Safety, security, environment and planning	No	Public safety depends crucially on the geology being suitable. That is unproven and is not off to a good start. With the pressure to approve West Cumbria it does not seem that we are heading for a safe system.
1298	3 – Impacts	No	The impact is huge. It will be like having a channel tunnel built here. The transport links are totally inadequate
1298	4 – Community benefits	Yes	This is “jam tomorrow”
1298	5 – Design and engineering	No	The partnership is in no position to understand any engineering considerations. We do know that a well engineered and well run nuclear facility in Japan got into some trouble recently.
1298	6 – Inventory	No	I cannot imagine what is meant by “we have received what we are looking for.”
1298	7 – Siting process	No	Voluntarism is a system of asking people who know nothing about the consequences of having this repository apart from whether they have jobs and what about their house prices. These are short term issues. This depository has consequences many hundreds of years into the future.
1298	8 – Overall views on participation		They should not take any action until geological and other scientific investigations are complete.
1299	1 – Geology	Yes	In forming the initial opinion on geology it is reassuring that the use of expert bodies such as the BGS have been responsible for preparing the report. The issue of geology is the most relevant factor in the process.
1299	2 – Safety, security, environment and planning	Yes	The issue of safety and security in this area that interests members of the public most and is the issue over which there will be many future discussions. There must be genuine agreement between all stakeholders with regard to issues of safety. Only when a fully developed safety case is produced will there be an opportunity to question its robustness.
1299	3 – Impacts	Yes	I understand that there will be significant benefits to the local economy if the repository goes ahead. It could possibly be the best opportunity to improve the local infrastructure - roads etc. There will be a certain amount of disruption caused during the construction. But this will be offset by the benefits.

1299	4 – Community benefits	Yes	Any community benefits package must contain what the local community identifies as their priorities whether that is investment in roads, schools, hospitals etc.
1299	5 – Design and engineering	Yes	The design will be the biggest influence on safety and must be capable of ensuring the very long term safe storage of the material.
1299	6 – Inventory	Yes	I believe that both spent fuel and Plutonium should not be placed in a repository, but can play an important role in the future development of new nuclear power stations.
1299	7 – Siting process	Yes	The siting of any proposed repository is completely dependent on a community being willing to host such a facility. The proposed process of identifying such a community does appear to contain all the necessary safeguards that may be required.
1299	8 – Overall views on participation		I believe that it is in the best interests of the local area to be involved in the search of for a permanent site for a repository.
1300	Letter		<p>RECIPE FOR INDIGESTION? or DISASTER!</p> <p>INGREDIENTS</p> <p>Take:-</p> <p>One area of complex geology</p> <p>Find the highest rainfall possible</p> <p>Quantities of radioactive material</p> <p>You will require a very large hold in the ground for a mix of materials</p> <p>Infinite supplies of fiscal assistance</p> <p>METHOD</p> <p>First look for a dubious area, drilling bore holes at random intervals.</p>

		<p>Next, convince yourself that it isn't so bad after all to proceed with the plan. At this point it is advisable to play the employment card.</p> <p>Dig the hole. Be sure to make it large enough to accommodate large ongoing quantities of local and imported waste materials.</p> <p>Start filling the hole with the embarrassing stockpile of waste material stored above ground, solving the immediate problem of "what to do with it" a question which should have been answered in the 1950s.</p> <p>Steadily add more waste, allowing it to simmer for a number of years. Keep adding more imported material and mix well with copious amounts of ground water to heat up the mixture. As the temperature begins to rise, test for radioactive gasses permeating through the fractured rock. Keep adding water. (Play it "cool" whilst looking for some means of disposing of this increasingly contaminated water). Reassure the populace that you really o know what you are doing. Put in the hours or research to find any means of disposing of this unfortunate and totally unforeseen problem.</p> <p>Start the first restrictions on the movements of people. Tell the Irish not to work, why should they complain. Who wants to visit the Lake District anyway? People didn't complain when Foot and Mouth disease restricted access to the countryside. We can always blame the extraction of gas and possibly oil later on for disrupting the geology when it becomes necessary to evacuate the whole area.</p> <p>I am well aware that we are talking about future generations, but what a legacy to leave them. Who but Politicians could come up with such an ill conceived scheme?</p> <p>We are told that an area must "volunteer" before it can be considered for an underground repository and there is a lack of "Volunteers".</p> <p>If a more suitable area has been identified in East Anglia which happens to be an MOD site then could not the Government "Volunteer" itself as a more appropriate solution, a saving on "defence cut backs".</p> <p>If the improvement plans for Workington Docks go ahead, then transporting waste to or from Sellafield should pose no greater or lesser risk, unless the existing stored waste has become unacceptably unstable.</p> <p>We are against the plans for an underground repository in West Cumbria.</p>

