

**CUMBRIA COUNTY COUNCIL**

**APPEAL**

by

**UNITED KINGDOM NIREX LIMITED**

**Inspector: C S McDonald MA DMA LMRTPI Solicitor**  
**Asst. Inspector: C Jarvis LLB Solicitor**  
**Assessor: C V Knipe BSc CEng CGeol MIMinE MIMM FGS**  
**Dates of Inquiry: 5 September 1995 to 1 February 1996**  
**File: APP/H0900/A/94/247019**

## CONTENTS

<b><u>Section</u></b>	<b><u>Chapter</u></b>	<b><u>Page</u></b>
<b>1 Introduction</b>	Abbreviations & Acronyms Technical Glossary Preamble to Report	1
<b>2 Background</b>	A. Legal, Political & Regulatory Framework B. Site & Proposals C. Development Plan	6 10 15
<b>3 Legal Interpretations</b>	A. Nature of Project & Relevance of Repository B. Alternatives & Availability of Information C. Marine Discharges	25 31 42
<b>4 Conformity with Development Plan</b>	A. Statutory Development Plan B. Retained & Emerging Policies	47 59
<b>5 Environmental Effects</b>	A. Visual Impact B. Socio-Economic Impact C. Traffic Impact D. Noise & Vibration Effects E. Other Effects	65 84 106 116 123
<b>6 Scientific &amp; Technical Benefits</b>	A. Basic Repository Locational Criteria B. Site Selection Process C. Science & Technical Programmes D. Model Development E. Radiological Protection & Safety Assessment F. Role of RCF & Promise of PRZ	130 147 170 212 229 246
<b>7 Conditions</b>	A. Mitigation of Environmental Effects B. Ensuring Scientific & Technical Benefits	259 262
<b>8 Final Conclusions</b>		265
<b>9 Recommendation</b>		278
<b>Appendices</b>	1. Assessor's Report 2. Appearances 3. Documents	

## ABBREVIATIONS AND ACRONYMS

### **Parties** *[and see the document codes at the start of the Documents List]*

Construction Workers	=	Cumbria Construction Workers
Copeland	=	Copeland Borough Council, the district planning authority
CORE	=	Cumbrians Opposed to a Radioactive Environment
Cumbria	=	Cumbria County Council, the respondent planning authority
FOE	=	Friends of the Earth Ltd
FOE Cumbria	=	Cumbrian Groups of Friends of the Earth
FOLD	=	Friends of the Lake District, the local branch of the Council for the Protection of Rural England
GAG	=	Gosforth Action Group
Gosforth	=	Gosforth Parish Council, the parish council
Greenpeace	=	Greenpeace Ltd
HMIP	=	Her Majesty's Inspectorate of Pollution
Nirex	=	United Kingdom Nirex Ltd, the appellant company
NSCNFLA	=	National Steering Committee of Nuclear Free Local Authorities
Shop Stewards	=	Windscale & Calder Joint Shop Stewards Committee
SCC	=	South Cumbria Citizens, a coalition of interested persons

### **Other Acronyms & Technical Terms** *[and see the Glossaries]*

(NB Orders of magnitude are generally expressed according to the normal scientific convention, eg:-  $10^8$  = a hundred million &  $10^{-6}$  = a millionth or one in a million)

ACSNI	=	Advisory Committee on Safety of Nuclear Installations
ALARA	=	as low as reasonably achievable
aOD	=	above Ordnance Datum

BGS	=	British Geological Survey
BH	=	borehole
BNFL	=	British Nuclear Fuels plc
bOD	=	below Ordnance Datum
BPEO	=	best practicable environmental option
Bq	=	becquerel(s)
BUSC	=	basement (rock) under sedimentary cover
BVG	=	Borrowdale Volcanic Group (of rocks)
CDF	=	Cumulative Density (Distribution) Function
cm	=	centimetre(s)
COMARE	=	Committee on Medical Aspects of Radiation in Environment
cu	=	cubic
DSA	=	Detailed Safety Assessment
DWR	=	deep waste repository
ECJ	=	European Court of Justice
ES	=	Environmental Statement
FHFZ	=	Fleming Hall Fault Zone
F<no.>	=	Fault <number>
Green Book	=	Disposal Facilities on Land for Low & Intermediate-Level Radioactive Wastes: Principles for the Protection of the Human Environment 1984 [Doc.GOV/302]
g	=	gram(s)
ha	=	hectare(s)
HLW	=	high-level, or heat-generating, (radioactive) wastes
IAEA	=	International Atomic Energy Agency

ICRP	=	International Commission on Radiological Protection
ILW	=	intermediate-level (radioactive) wastes
k	=	kilo
LDBFZ	=	Lake District Boundary Fault Zone
LLW	=	low-level (radioactive) wastes
LP	=	Copeland Local Plan, deposit version as recommended to be modified
M	=	million(s)
m	=	metre(s), or as first letter in compound abbreviations = milli-
MADA	=	multi-attribute decision analysis
MASCOT	=	program of suite of sub-models to quantify radionuclide flow from repository to biosphere
NAMMU	=	groundwater modelling program of the continuum porous medium type
NAPSAC	=	groundwater modelling program of the fracture network type
NEA	=	Nuclear Energy Agency (of the OECD)
NII	=	Nuclear Installations Inspectorate
NRPB	=	National Radiological Protection Board
NRVB	=	Nirex Reference Vault Backfill
NSARP	=	Nirex Safety Assessment Research Programme
OECD	=	Organisation for Economic Co-operation & Development
pa	=	per annum [ <i>and see /y below</i> ]
PCPA	=	Post Closure Performance Assessment
PCRA	=	Post Closure Risk Assessment
PCSA	=	Post Closure Safety Assessment

PCSR	=	Pre-Construction Safety Report
PDF	=	Probability Density or Distribution Function
PERA	=	Preliminary Environmental & Radiological Assessment [Doc.COR/501 - Nirex Report No.71]
PRZ	=	potential repository zone, the main part of the appeal site
PSA	=	Probabilistic Safety or Systems Assessment
RADWASS	=	(IAEA's) Radioactive Waste Safety Standards Programme
RCF	=	rock characterisation facility
RCM	=	rock characterisation monitoring (boreholes)
REV	=	representative elemental or elementary volume (of rock)
RSA	=	Repository Safety Assessment
RWMAC	=	Radioactive Waste Management Committee
SFZ	=	Seascale Fault Zone
SP	=	Cumbria & Lake District Joint Structure Plan 1991-2006, adopted July 1995
SSG	=	Sherwood Sandstone Group
STZ	=	Saline Transition Zone
Sv	=	sievert(s)
t	=	tonne(s)
TBq	=	Tera-becquerel (a million million - $10^{12}$ - becquerels)
THORP	=	Thermal Oxide Re-processing Plant
TOR	=	Tolerability of Risk
URL	=	Underground Rock or Research Laboratory
VEM	=	Visual Envelope Map
/y	=	per year
ZLEC	=	zone of locally enhanced conductivity

## TECHNICAL GLOSSARY

*This gives the meanings of some technical terms used frequently in these reports. For a more detailed glossary, see Document COR/519.*

- Actinide** = An element following Actinium in the Periodic Table. Many of the actinides are long-lived alpha-emitters; examples are uranium and plutonium.
- As low as reasonably achievable (ALARA)** = Radiological doses or risks from a source of exposure are as low as reasonably achievable when they are consistent with the relevant dose or risk standard and have been reduced to a level that represents a balance between radiological and other factors, including social and economic factors; the level of protection may then be said to be optimised.
- Authorisation** = Permission given by a regulator to dispose of radioactive waste subject to conditions which must be met.
- Backfilling** = The refilling of the excavated portions of a disposal facility after emplacement of the waste.
- Barrier** = A feature that delays or prevents migration of material to or from the disposal facility.
- Becquerel** = The standard international unit of radioactivity equal to one radioactive transformation per second.
- Best Practicable Environmental Option (BPEO)** = A concept developed by the Royal Commission on Environmental Pollution so that decisions on waste management could be based on an assessment of alternative options evaluated on the basis of factors such as the occupational and environmental risks, the environmental impacts, the costs and the social implications.
- Best Practical Means (BPM)** = Within a particular waste management option, the BPM is that level of management and engineering control that minimises, as far as practicable, the radiological impact of the option

whilst taking account of a wider range of factors, including cost-effectiveness, technological status, operational safety, and social and environmental factors. In determining whether a particular aspect of the proposal represents the BPM, the regulators will not require the applicant to incur expenditure, whether in money, time or trouble, which is disproportionate to the benefits likely to be derived.

- Biosphere** = Those parts of the environment to which humans normally have access, plus the deep oceans. This will normally include soils, freshwater bodies, the atmosphere and the marine environment, and also the plant and animal life present in those parts of the environment.
- Boreal** = [Climate] - of a sub-arctic climate zone having long cold winters and very short summers [but with at least one month having an average temperature of at least 10°C], and typified by coniferous forest vegetation.
- Caldera** = A basin-shaped volcanic depression usually many times greater than the size of the included vents.
- Closure** = The backfilling and sealing of all points of access to a disposal facility so as to enhance the containment of the waste.
- Collective dose** = The dose received by a defined population from a particular source obtained by summing the dose received by each individual in the population and expressed in units of man-sieverts (man-Sv).
- Colloid** = A mixture of finely dispersed particles of one component suspended in a continuous phase of another component, with properties between those of a solution and a fine suspension. The term is often applied to the solid suspended phase in such a mixture, taken by Nirex to have particle diameters typically smaller than 10  $\mu\text{m}$  ( $10^{-5}\text{m}$ ) [COR/529, Box 19] (though more usually between  $10^{-7}$  and  $10^{-9}\text{m}$ ).

<b>Conductivity</b>	=	[hydraulic, of rock] - The volume of fresh water at standard temperature and pressure that will move through a porous medium in unit time under unit hydraulic gradient through a unit area measured at right angles to the direction of flow. Unit = metres per second (ms <sup>-1</sup> ).
<b>Containment</b>	=	The confinement of radioactive material so as to prevent or limit its dispersal, or the device used to effect the confinement.
<b>Criticality incident</b>	=	The accidental occurrence of a self-sustaining fission chain reaction in fissile material.
<b>Deterministic radiation effect</b>	=	A radiation-induced health effect for which the severity of the effect is related to the magnitude of the exposure, with an exposure threshold below which no effect occurs.
<b>Diapirism</b>	=	The phenomenon by which rock salt under the influence of sustained overburden pressure, or igneous rock in molten condition, may flow and form an intrusive dome in the overlying strata.
<b>Disposal</b>	=	The disposal of solid waste is the emplacement of the waste in a specialised land disposal facility without intent to retrieve it at a later time: retrieval may be possible but, if intended, the term regarded as appropriate by the Government and regulators is "storage".
<b>Disposal facility</b>	=	An engineered facility for the disposal of radioactive wastes.
<b>Disposal system</b>	=	All those aspects of the waste, the disposal facility and its surroundings that affect the radiological impact.
<b>Dose</b>	=	A measure of the radiation received, in Sieverts or Grays.
<b>Dose constraint</b>	=	A restriction on annual dose to an individual in order to ensure that when aggregated with doses from all sources, excluding natural background and medical procedures, the dose limit is not exceeded; the dose constraint places an upper bound on the outcome of any optimisation study and will therefore limit any inequity which might result from the economic and social

judgements inherent in the optimisation process. The Government has set a maximum dose constraint value of 0.3 mSv/y when determining applications for discharge authorisations from a single new source, and a dose constraint value of 0.5 mSv/y for a complete site (which may include several sources).

- Dose limit** = For the purposes of discharge authorisations, the UK has (since 1986) applied a limit of 1 mSv/y to members of the public from all man-made sources of radioactivity (other than from medical applications). This compares with an average radiation dose to members of the UK population of 2.2 mSv/y from natural background radiation and an average of 0.3 mS/y from medical applications. The Government accepts that assessments of dose against the limit should include effects from past discharges.
- Dyke** = A wall-like mass of igneous rock intruded into joints or faults in older rocks [See also 'sill'].
- Effective dose** = The summation of the equivalent doses to the individual tissues of the body, weighted by the appropriate tissue weighting factor, see ICRP Publication 60 [GOV/506].
- Eh** = (the redox potential) A measure of the electrochemical potential of a solution, determined by the concentration and oxidation states of the electroactive species dissolved in the solution. Unit = volts.
- Emplacement** = The placement of a waste package in a designated location for disposal.
- Environmental head** = The groundwater head as directly measured in a borehole and taking density variations into account; it represents the head of a column of water having the same average density from the measuring point to the water surface. Environmental heads can be compared, and used to show the potential for flow, in a vertical direction only (cf 'freshwater head').

- Environmental pathways** = The routes by which radioactivity can be transferred through the accessible environment, including the food chain, and result in the exposure of humans to radiation.
- Evaporite** = A sedimentary rock resulting from the evaporation of saline water, either a body of sea water or an inland lake; includes rock salt (halite, sodium chloride) and anhydrite (calcium sulphate).
- Exposure pathways** = The routes by which radioactivity can be transferred from the disposal facility so as to result in the exposure of humans to radiation.
- Facies** = In relation to a sedimentary rock, the environment in which it formed, as shown by rock type, mineral content, particle sizes and sedimentary structures, fossil content, etc.
- Freshwater head** = The groundwater head as measured in a borehole but then corrected for density variations to derive the equivalent head (above a common datum) of a column of fresh water. Freshwater heads can be compared, and used to show the potential for flow, only between points in the same horizontal plane (cf 'environmental head').
- Geosphere** = Those parts of the environment below the ground or seabed and beyond the normal range of human access. This may include sub-soils as well as rocks, and does include the near field.
- High level waste (HLW)** = Wastes in which the temperature may rise significantly as a result of their radioactivity, so that this factor has to be taken into account in designing storage or disposal facilities.
- Host rock** = The geological medium in which a disposal facility is located.
- Ignimbrite** = Volcanic rock deposited from a high temperature cloud of gas with ash or lava droplets or crystals; the fragments when deposited are so hot that they tend to weld together or even coalesce and flow (in which case they are commonly called welded tuff).

- Intermediate level waste (ILW)** = Wastes with radioactivity levels exceeding the upper boundaries for low level wastes, but which do not require heating to be taken into account in the design of storage or disposal facilities.
- Inventory of Radioactive Waste Arisings in UK** = A report produced periodically which gives details of stocks and projected arisings of radioactive wastes in the UK. Wastes produced from power reactors, commercial reprocessing and fuel manufacture, medical and industrial sources, research and development and Ministry of Defence activities are considered.
- Isostasy** = The tendency of the Earth's crust to maintain a state of equilibrium, as for example depression under the load of an ice-cap and recovery following its melting, or periodic uplift of mountains in response to erosion.
- Karstic** = Describing the characteristic weathering of limestones or the preferential dissolution of the rock by percolating groundwater along joints, bedding planes or other discontinuities, often leading to cave formation.
- Lithology** = The general characteristics of a rock or sedimentary formation.
- Low level waste (LLW)** = Wastes containing radioactive materials other than those acceptable for disposal with ordinary refuse, but not exceeding 4 GBq/t alpha or 12 GBq/t beta/gamma activity.
- Near field** = The part of the geosphere immediately surrounding the waste packages in a disposal facility, usually defined as the region disturbed by the excavation of the cavity, and including any material used to backfill the cavity and the waste packages themselves.
- Neotectonics** = Large scale, deeper structural geological effects of ice loading (such as faulting and folding of strata associated with the Pleistocene glaciations).

<b>Palaeohydrogeology</b>	=	The study of the evolution of rock-groundwater systems through long periods in the past. This normally involves measurements of the hydrochemistry and isotopic differences of groundwater bodies, as well as data on rock mineralogy.
<b>Palaeozoic</b>	=	Relating to the era of geological time between the start of the Cambrian period to the end of the Permian. The Cambrian, Ordovician and Silurian periods are classified as Lower Palaeozoic, the Devonian, Carboniferous and Permian as Upper Palaeozoic.
<b>Periglacial</b>	=	[Climate] - Close to an ice-sheet margin, with long cold winters and very short cool summers [with the average temperature of the warmest month between 0° and 10°C], and typified by tundra vegetation.
<b>Permeability</b>	=	The ability of the rock to transmit fluid; often expressed in milliDarcies, equivalent to $1 \times 10^{-15} \text{ m}^2$ .
<b>pH</b>	=	The hydrogen ion concentration of a solution (as the logarithm of the reciprocal of the concentration in moles per cubic decimetre); systems with a pH above 7 are alkaline, below 7 are acidic.
<b>Porosity</b>	=	The ratio of the volume of voids within it to the total volume of rock (usually expressed as a percentage). Primary porosity (matrix porosity) relates to processes occurring during the rock's formation; secondary porosity, through the subsequent development of fractures and dissolution features. Effective porosity is a measure of the connected voids.
<b>Post-closure performance safety assessment</b>	=	Analysis to predict the performance of the radioactive waste disposal site to establish its long-term safety.
<b>Probabilistic risk assessment</b>	=	In the context of performance assessment of a waste disposal facility, probabilistic risk assessment is the assessment of radiological risk, taking account of quantifiable uncertainty.

<b>Quaternary</b>	=	The most recent period of geological time, from about 1.6-2.0 million years ago to the present, and comprising the Pleistocene and Holocene (Recent) epochs.
<b>Radiological risk</b>	=	The probability that an individual will suffer a serious radiation induced health effect.
<b>Radiological safety assessment</b>	=	An analysis to predict the performance of a system or subsystem, where the performance measure is radiological impact or some other global measure of impact on safety.
<b>Risk target</b>	=	A level of risk to a member of the critical group from a single disposal facility which provides a numerical standard for assessing the long-term performance of the facility (NB No definition of the critical group is given because that is in issue in this case).
<b>Safety case</b>	=	The safety case is the compilation of documents for the regulators by the developer of a disposal facility demonstrating that the public are sufficiently protected from hazards which may arise as a result of the disposal of radioactive wastes to the facility.
<b>Sievert</b>	=	The standard international unit of radiation dose.
<b>Sill</b>	=	A flat, originally generally horizontal mass of igneous rock intruded between 2 layers of older rocks. [See also 'dyke'].
<b>Source</b>	=	A facility, or group of facilities, which can be optimised as an integral whole in terms of radioactive waste disposals.
<b>Stochastic radiation effect</b>	=	A radiation-induced health effect for which the probability but not the severity of the effect is related to the magnitude of the exposure.
<b>Storage</b>	=	Placement of waste in any facility with the intent to retrieve it at a later time.
<b>Stratigraphy</b>	=	The study of stratified rocks, their nature, their occurrence, their relationship to each other and their classification.

<b>Tomogram</b>	=	Graphical representation of physical conditions in a selected plane section through a solid body determined by a technique of measuring waves or radiation passing through it, so a seismic tomogram is a contoured representation of shock-wave velocities in the strata between boreholes.
<b>Transmissivity</b>	=	The hydraulic conductivity of the rock unit multiplied by its thickness; unit = metres squared per second ( $m^2s^{-1}$ ).
<b>Tritiated waste</b>	=	Low and intermediate waste containing the radionuclide tritium. Tritium has a 12 year half life and is of low radiotoxicity.
<b>Tuff</b>	=	Consolidated, lithified volcanic ash or other small fragments ejected from a volcano.
<b>Very low level waste</b>	=	Wastes which can be safely disposed of with ordinary refuse (dust-bin disposal), each $0.1 m^3$ of material containing less than 400 kBq beta/gamma activity or single items containing less than 40 kBq beta/gamma activity.
<b>Waste form</b>	=	The physical and chemical form in which the waste will be disposed of, including any conditioning media but excluding the container.
<b>Waste package</b>	=	The waste form and its container, as prepared for disposal.

Tollgate House  
Houlton Street  
BRISTOL  
BS2 9SZ

21 November 1996

To the Right Honourable John Gummer MP  
Secretary of State for the Environment

1.1 I have the honour to report that on 66 days between 5 September 1995 and 1 February 1996 I held an inquiry at The Civic Hall, Cleator Moor, Cumbria into an appeal by United Kingdom Nirex Limited under Section 78 of the Town & Country Planning Act 1990 against the refusal of Cumbria County Council to grant planning permission for a rock characterisation facility on land at & adjoining Longlands Farm, Gosforth, Cumbria. The site and its surroundings were inspected several times before & during the inquiry, with the accompanied inspection taking place on 23 October 1995.

1.2 "Rock characterisation facility" (RCF) is the title of the development. The description of the development has been amended by agreement since the appeal was made, and is now:-

Construction of 2 shafts (5m diameter, not exceeding 1020m depth), galleries (none exceeding 5m height & width and 975m length), exploratory drilling from underground; construction of engineered platform and associated buildings and works for the purpose of carrying out searches and tests of the Borrowdale Volcanic Group (BVG) and overlying geological strata, including use for carrying out scientific investigations, measurements & experiments in and from the said shafts & galleries; storage of topsoil & subsoil, deposit of underground spoil, internal access road, services, landscaping & restoration.

1.3 The application was refused for the Reasons that:-

1. The proposed development lies within an area of undeveloped open countryside where development would normally only be permitted if required for local infrastructure needs which cannot be located elsewhere. In addition, the proposed development is not well related to existing developed areas of the countryside in terms of siting, scale and design. The proposed development is therefore contrary to Policy 13 of the Structure Plan.
2. The application site is located close to the Lake District National Park and it is considered that it would be detrimental to the present characteristics and qualities of the National Park. The proposed development is therefore contrary to Policies 2 & 11 of the Structure Plan.
3. It is considered that the proposed development does not enhance the quality of the existing environment and is not well integrated into the existing pattern of

surrounding land uses. It is therefore contrary to Policy 25 of the Structure Plan.

4. The proposed development is considered to be a major development more national than local in character. The County Council is not satisfied that the sum of national, regional & local benefits clearly outweighs the adverse environmental impact of the proposed development. Convincing reasons have not been demonstrated as to why such a development should be permitted while national policy uncertainties remain. It is therefore contrary to Policy 54 of the Structure Plan. (NB The County Council now withdraws the claim that national policy uncertainties remain, but still pursues the view that the sum of benefits has not been shown to clearly outweigh any harm or risks.)
5. The County Council is not satisfied that a rational basis for focusing detailed investigation solely on Sellafield has been demonstrated. In particular, the Council considers that the RCF represents a significant pre-commitment to eventual repository development in economic terms. The RCF need not, therefore, be looked at in isolation. The expenditure involved and local damage introduced represent a "halfway" commitment to development of a repository at Sellafield. The issue of why the site was "selected" and became the focus of detailed investigation is, therefore, in planning terms, a clear material consideration, and the steps leading to the RCF are manifestly a matter for consideration at this stage. In the absence of such justification, the proposed RCF development is contrary to Policies 2, 11, 13, 25 & 54 of the Structure Plan.
6. The County Council is not satisfied, on the basis of the currently available geological, hydrogeological & safety assessment information, that the potential repository zone holds sufficient promise to justify the proposed RCF development contrary to Policies 2, 11, 13, 25 & 54 of the Structure Plan.

1.4 The Reason for directing that the appeal should be determined by you instead of an appointed person was that the appeal relates to proposals which give rise to significant public controversy.

1.5 On the information available by February 1995, the matters about which you particularly wished to be informed for the purposes of your consideration of the appeal were:-

1. The relationship of the RCF proposal to the policies and proposals in the existing development plan for the area.
2. The relationship of the RCF proposal to the policies and proposals in the emerging development plans for the area. (*In February 1995 the Cumbria & Lake District Joint Structure Plan 1991-2006 was still an emerging plan.*)
3. In determining the appeal, the weight that should be attached to emerging plans, having regard to the advice set out in PPG 1.

4. The environmental impact of the RCF proposal.
5. The impact of the RCF proposal on the local highway network and the works, if any, required directly to accommodate additional traffic arising.
6. The results available so far from studies & surveys of the geology & hydrogeology of the area; the additional information that might become available only from the RCF, if developed; and the benefits to be gained from obtaining that additional information, if any, weighed against the possible impact the RCF might have on the site and the surrounding area.
7. The question of whether any planning permission which may be granted should be subject to any conditions and, if so, the form they should take.
8. Any other issues which the Inspector considers relevant to the determination of the appeal.

1.6 Pre-inquiry meetings were held on 15 May & 4 July 1995, and a 3rd procedural meeting on 29 September 1995. Notes of the meetings were circulated [Docs.INQ/4].

1.7 The Assessor & Assistant Inspector sat with me for most of the inquiry. I am greatly indebted to them for their assistance & support before, during and after the inquiry. The Assessor's comprehensive advice is in a written report which is appended to this report. I accept all his conclusions, and I have also benefited from the Assistant Inspector's views, but the conclusions of my report are my sole responsibility. I am very grateful to the Programme Officers, A & A Scott, for their very thorough & dedicated administration of the inquiry.

1.8 An environmental statement made under the Town & Country Planning (Assessment of Environmental Effects) Regulations 1988 (SI 1988:1199) was produced [Doc.COR/101], as were comments from statutory consultees [Doc.COR/107] and representations duly made [Doc.COR/108], together with further information supplied without prejudice [Doc.COR/101A] in response to a formal request by the County Council under Regulation 21 [Doc.COR/118, letter of 3 October 1994]. This environmental information has been taken into account by me, but legal submissions about the adequacy of the environmental statement are summarised in Section 3 of this report.

1.9 Several other legal & procedural submissions were made about various aspects of the appeal and the inquiry. Again some of those are summarised in Section 3. However, particularly in the light of the provisions of Section 286(1) of the Act of 1990, Copeland Borough Council chose not to pursue its claim that it is the relevant local planning authority for the appeal development.

1.10 The appellant objected to the Acting Chief Inspector of HMIP giving evidence at my invitation at the start of that part of the inquiry which dealt with radioactive waste management policy & scientific matters. The grounds of objection [Doc. COR/101E] were briefly that most of the questions to be put by other parties and myself to the Chief Inspector were either irrelevant, or might prejudice the Environment Agency's consideration of a subsequent application for an authorisation under the Radioactive Substances Act 1993, or

were not within the competence of the Chief Inspector. It was also submitted that the order in which the evidence would be heard was unfair to the appellant and would never be followed for evidence being given to a planning inquiry by a Government Department or Agency. I did not uphold the objection, since all the questions were arguably relevant, particularly to item 6 set out in para.1.5 above: also the Chief Inspector was at liberty to decline to answer questions as he saw fit (which indeed he did): and HMIP was a division of a Government Department, with its evidence being given at the conventional place in the order for a Department, as had previously been agreed at the procedural meeting.

1.11 It was unfortunately necessary for me to withhold permission from a number of persons to appear at the inquiry, under Rules 12(2) & 14(4) of the Inquiries Procedure Rules. The Statements of Case of 18 of the 24 persons to be called by the coalition of South Cumbria Citizens showed that their evidence would be unduly repetitious. The case of Mr P Metsers [Doc.WR/M/179] would also have been defamatory. The Statement of Case of Dr W R Burton showed that his concept of a "geostore" [Doc.WR/B/57] would be in unsaturated rock, with direct drainage to the sea: this could not be a deep repository as required by Government policy, and hence would be irrelevant.

1.12 Several parties requested a public transcript of the inquiry's proceedings, to enable participants and the public to be aware of the evidence given at the times when they were unable to attend. The Department declined to provide a transcript because it considered that my report would be an adequate record of the proceedings; and the Planning Inspectorate did not have funds available for the purpose. The appellant commissioned its own transcript of the proceedings; whilst in the end the National Anti-Dump Network & the County Council combined to make copies of a second transcript available for public use free of charge.

1.13 Before dealing with legal interpretations in Section 3, this report refers in Section 2 to the background in terms of the legal, political & regulatory framework; the site description & the detailed proposals; and the development plan. Then Section 3 reports sequentially the gist of submissions on 3 basic legal issues. Chapter 3A is concerned with the inter-related questions of the extent of the project in which the RCF is included, and of the relationship between the RCF & the potential deep waste repository (DWR). Chapter 3B examines whether it is necessary to look at alternatives to the proposals, especially alternative sites; and also whether the environmental information supplied so far to the planning authorities is adequate. In Chapter 3C, the significance of any eventual radioactive discharge from the DWR into the Irish Sea is considered. The submissions & preliminary conclusions on these legal issues not only lead on from one to another but also relate to some of the representations made on the planning merits.

1.14 The gist of the latter representations is set out on a topic basis, starting with conformity with the development plan in Section 4, which briefly explores how the relevant statutory & emerging policies should be applied in this case. Other topics are then broadly categorised into environmental effects in Section 5, and scientific & technical benefits in Section 6. Section 5 in effect deals with the extent to which the proposals would lead to harm to interests of acknowledged importance, whilst Section 6 is concerned with the advantages of the proposals. The latter ranges over various aspects of the programme for the provision of a DWR which have been raised in issues between the parties concerning the

extent of the benefits to be gained from the RCF. Much of the Section is directly concerned with the suitability of the site & of the proposed development, but some parts cover the relationship between the nature & timing of the RCF and the overall DWR programme.

1.15 The layout of the report is usually for agreed basic facts to be stated at the start of each chapter. Although the weightiest points made by the various participants are ascribed to them individually, the identities of particular parties are not always given: and points made merely in emphasis or repetition are not separately reported. Every chapter ends with my preliminary conclusions on its topic, including my views on the strength of the connection with the appeal proposals. All the preliminary conclusions are eventually summarised and drawn together in my final conclusions & recommendation.

1.16 Lists of appearances & documents are appended after the Assessor's report. References in square brackets in the report are to inquiry documents. References in the left-hand margins of conclusions are to other paragraphs of the report, or, occasionally, to documents. Where there are no such marginal references for specific, factual conclusions, this is because they have been adopted directly from the relevant chapter in the Assessor's report.

1.17 The report does not take into account the Regional Planning Guidance for the North West (RPG 13) issued in April 1996, or Circular 12/96 on the Environment Act 1995, Part III - National Parks published on 11 September 1996. Also the version of Doc.COR/301 referred to in this report, including the head-note to Chapter 2C, is that dated 19 October 1995. After the close of the inquiry, I referred this back to the principal parties for the correction of a minor error in the wording of Policies ENV 1-4 of the emerging Local Plan. However, due to a misunderstanding, a revised version incorporating modifications formally proposed by Copeland after the close of the inquiry was returned. The latter has not been utilised in the preparation of the report.

1.18 Finally, I would draw attention to the representations of the National Trust [WR/NTR/2], which request the Secretary of State to re-consider the establishment of a Planning Inquiry Commission into this appeal on receipt of my report [idem, para.25].

## **2A. LEGAL, POLITICAL & REGULATORY FRAMEWORK**

### **Law**

**2A.1** Nirex is following a contingent programme to confirm the suitability of the PRZ for a deep underground repository for ILW and high  $\alpha$  emitting LLW, and the construction & operation of the RCF would be critical stages in this programme. The ES for the RCF assumed that the RCF was a separate project and so was submitted under Article 4(2) of Directive 85/337/EEC and Regulation 2(1) & Schedule 2 of SI 1988:1199, whereas an ES for the repository would be required under Article 4(1) & Annex 1 and Schedule 1 respectively. A Common Position has been agreed by Council Environment Ministers on Amendments to the Directive [GOV/139]. Environmental impact assessment in a transboundary context is also subject to the 1991 Espoo Convention [FLD/2/3], to which the EC is a signatory.

**2A.2** In the EU, atomic energy is basically governed by the Euratom Treaty. Radiation safety standards to protect the health of workers and the general public are set by the Euratom Basic Safety Standards Directive 80/836/Euratom as amended by 84/467/Euratom. Amongst other things, the Directive requires any practice involving exposure to radiation to be justified before adoption. The Directive is also currently being revised [GOV/505] to reflect changes in protection criteria recommended in ICRP 60 [GOV/506]. Documents published as part of the IAEA's RADWASS Programme [eg GOV/501-10] are advisory, but the IAEA Convention on Nuclear Safety 1994 is open for signature, and a Convention on the Safety of Radioactive Waste Management is being negotiated.

**2A.3** The PRZ is close to the Irish Sea and it is predicted by Nirex that, under most circumstances, groundwater which has passed through a repository in the PRZ would eventually reach the Sea. The pollution of seas is covered by the 1958 Geneva Convention on the High Seas and the 1982 Convention on the Law of the Sea. The dumping of radioactive waste at sea is also subject to the 1972 London Dumping Convention as amended and the 1974 Paris Convention on the Prevention of Pollution from Land-Based Sources. This is to be replaced by the 1992 OSPAR Convention, which although not yet formally ratified by the UK is being applied to all UK waters.

**2A.4** Several pertinent matters of international law are now also subject to Agenda 21 as agreed at the 1992 Earth Summit. Such matters include the management of radioactive wastes; the principles of sustainable development, including the precautionary principle; and public access to environmental information. Detailed rules for the latter are already set out in Directive 90/313/EEC and the Environmental Information Regulations SI 1992:3240.

**2A.5** Generally the safety of nuclear installations as such, including the management of radioactive waste on site, is governed in the UK by licensing by the Health & Safety Executive under the Nuclear Installations Act 1965. The regulation of radioactive substances is generally otherwise carried out under the Radioactive Substances Act 1993. In England, authorisations of disposal & accumulation of radioactive waste under that Act are now granted by the Environment Agency.

## National Policy

2A.6 The conclusions of the Government's latest Nuclear Review are contained in the White Paper Cm 2860 of May 1995 [GOV/215]. The final conclusions of the Government's parallel Review of Radioactive Waste Management Policy are in the joint White Paper Cm 2919 of July 1995 [GOV/208], paras.50-52 of which set out the revised aims which are to guide policy. Two related policy documents preceded this White Paper. A consultation document of August 1994 published the Preliminary Conclusions of the Review [GOV/306]: and a Parliamentary Answer coincided with the publication of Cm 2860.

2A.7 Annex F of the consultation document was a description of the role which the planning process plays in relation to radioactive waste management [see para.183]. Nirex and Cumbria agree that this Annex cannot now be a policy document; and that it is not of itself a material consideration to which weight must be given [COR/801]. PPG23 had been issued in the previous month to the consultation document, but does not cover radioactive substances, although its advice on the non-duplication of planning & regulatory functions applies equally well to radioactive waste management [para.1.6].

2A.8 The Parliamentary Answer & para.101 of Cm 2919 set out the Government's conclusions that Nirex should continue with its programme to identify a suitable site for a DWR; and that, once a suitable site has been found, the repository should be constructed as soon as reasonably practicable. After emplacement of the relevant radioactive waste arisings [1991 projection in NRX/15/40] for an operating period of about 50 years, the repository would be closed. Para.100 of Cm 2919 states that the local government-favoured option of retrieval (supported by many written representations on this appeal) would be relatively straightforward during operations, and still available following closure. But the fundamental concept is that the continued safety of future generations must not depend on further monitoring, surveillance & preventative or remedial actions after closure of the facility.

2A.9 The precise timetable for the construction of the repository will depend on the granting of planning consent and compliance with regulatory requirements, including the establishment of a sound safety case. Para.105 of Cm 2919 states that it is not within the RCF appeal inquiry's scope to seek to use it as a focus to reopen general debate of the national policy on the deep disposal of ILW. Para.110 points out that the matters about which you specifically wish to be informed by the RCF inquiry concern the local impact of the facility's construction: and that the Government has already promised to hold a full public inquiry into an application for the repository itself, wherever it may be situated.

2A.10 Paras.108-9 summarise the historical process which has led to this position. In 1987 the Government agreed with Nirex that it was preferable to develop a multi-purpose deep site for LLW & ILW rather than proceed with further investigations for a near-surface facility [GOV/210]. By 1989 Nirex had prepared a short-list of sites, and the Government accepted that the next steps should be to carry out detailed geological studies on land in the vicinity of Sellafield and Dounreay [GOV/211]. In 1991 Nirex announced [NRX/12/1] that initial investigations at the 2 sites suggested that either could potentially support the safety case necessary for a deep disposal site. However, Nirex proposed to concentrate on Sellafield because of the advantages it offered in terms of transport, with the majority of ILW for disposal arising from BNFL's operations at Sellafield.

## Regulation

2A.11 Prior to the 1994-5 review, environmental safety criteria for radioactive waste repositories were set out in the 1984 Green Book [GOV/302]. The policy provisions of this document have now been superseded by Cm 2919, and its regulatory requirements are out of date. The latter are being replaced by regulatory Guidance, of which 2 consultation drafts have been published by HMIP [GOV/307 & HMP/1/1].

2A.12 The basic regulatory approach is now laid down in Cm 2919. Reliance cannot be placed exclusively on estimates of risk to determine whether a disposal facility is safe. Other technical factors, including ones of a more qualitative nature, will also need to be taken into account. However a risk target of  $10^{-6}$ /y of developing either a fatal cancer or a serious hereditary defect should be used as an objective in the design process. Where estimated risks to the public are below this target and the best practicable means have been adopted by the operator to limit risks, the regulators should not seek further reductions in risk. If the estimated risk is above the target, then the regulators will need to be satisfied not only that an appropriate level of safety is assured, but also that any further improvements in safety could be achieved only at disproportionate cost.

2A.13 There should be no prescribed cut-off for the period over which the risk should be assessed. That period will depend on the nature of the site-specific safety case. The regulators' Guidance should include the factors which applicants need to take into account over different time-frames. With regard to the commencement of the period to which the risk target applies, the current draft of the Guidance [HMP/1/1, Ca.6] provides for it to start after closure of the facility, with the different radiological protection standard of dose constraint applying before then. The draft also refines Cm 2919's implicit transition point between the 2 standards, by envisaging that there might be a period of control after closure of up to some hundreds of years before final withdrawal from the facility [idem, para.6.4].

2A.14 In England the environmental safety regulator concerned is the Environment Agency, implementing the Radioactive Substances Act as successor to MAFF & HMIP. It is still envisaged that Nirex, as expected in Cm 2919, would make an early application for a disposal authorisation under the Act, at about the same time as an application for planning permission to develop the repository. This would probably be in the course of a staged application approach, which is to be explained in greater detail in a revised & updated version of "Radioactive Substances Act 1960, a guide to the administration of the Act". Discussions were also taking place at the time of the RCF inquiry on a voluntary agreement between Nirex and the regulator for an early exchange of information & views, and to settle a programme for the progressive supply of information once an authorisation application is submitted.

2A.15 The aim of such procedures would be to give the regulator 2 key decision points. The first would be to submit a provisional view to the full planning inquiry into the DWR planning application on whether there appeared to be any impediment to the eventual authorisation of disposal. The second would be whether, after completion of repository construction and commissioning, to approve the start of disposal operations. However the Environment Agency has no statutory regulatory role prior to the submission of the application for the disposal authorisation: and it will have no regulatory role at any time in

relation to the selection of the site for a repository, which is a matter for the applicant and the planning process.

2A.16 Moreover, **NSCNFLA** submits that, by virtue of the exemption in Section 13(4) of the Act of 1993, Nirex as a waste receiver at the final disposal site would not even require an authorisation for waste which was being disposed of in accordance with an authorisation already granted to the waste producer: this interpretation is reinforced by the provisions of Section 18(3), which expressly contemplate that a local authority receiver might not have its own authorisation for the place of deposit. **Nirex's** counter-submission is that, on the contrary, Nirex would need its own authorisation under Section 13(1), as the user of premises for the purposes of its own undertaking (see Section 47): Section 18(3) is actually concerned with the controlled burial of some LLW, and so is irrelevant. This is a legal matter, but **my opinion** is that, whilst there clearly is a significant exemption in Section 13(4) irrespective of the purpose of section 18(3), it cannot be assumed that all the waste to be disposed of by Nirex, nor the methods of disposal, would be governed by extant authorisations of the waste producers.

2A.17 On the other hand, it is agreed that the other intended regulator, the Nuclear Installations Inspectorate of the HSE, does not so far have any statutory basis. This is because Regulations have yet to be made to specify a DWR as requiring a licence under the Nuclear Installations Act 1965. However, once this is done, the NII already has a staged licensing procedure in place, with modern Safety Assessment Principles for Nuclear Plants [GOV/703] & "Notes for applicants for nuclear site licences" [NRX/12/10]. The intention is that the early application to the Environment Agency and the application to the NII would proceed in parallel, with the requisite Detailed Safety Assessment and Pre-Construction Safety Report being submitted to the respective regulators at broadly the same time. The regulators would be statutory consultees of each other, and in practice would liaise closely.

## 2B. SITE & PROPOSALS

### Summary of Site & Surroundings

2B.1 The appeal site and surroundings are described in detail in COR/112. The site itself [COR/102B/008000B] comprises a large block of land overlying the PRZ plus 2 service corridors, amounting to about 223 ha in all [COR/102D]. Much of the land consists of the holdings of 3 farms, with the farmstead of the largest at Longlands Farm standing about 1 km north-west of the edge of the village of Gosforth [COR/102B/008001B], although the south-eastern tip of the site is only about 400 m from the fringe of the settlement. The perimeter of the Sellafield Works complex is just over 2 km to the west of the Farmstead. Just beyond the Works the West Cumbrian railway (Carlisle-Barrow-Carnforth) runs beside the shore of the Irish Sea.

2B.2 The site lies in the undulating coastal belt between the Sea and the foothills of the Lake District [NRX/2/3/Fig.4.1]. Most of the north-eastern boundary of the site is alongside a length of the A595 Lillyhall-Grizebeck trunk road, on the other side of which is part of the western boundary of the Lake District National Park. This length of the A595(T) runs south-eastwards from the small village of Calder Bridge, through the hamlet of New Mill at the northern point of the site, to pass just to the south-west of Gosforth. There it is joined by the B5344 coming up north-eastwards from the village of Seascale, which also has a road connection (U4465) north-westwards to the Sellafield complex [NRX/9/14/Fig.4.1]. Another road - the C4013 - leads north-eastwards up the Calder valley from the Works to join the A595(T) at traffic lights at the west end of Calder Bridge village. The third, and main, route from the Works is even further to the north-west, along the C4037 to reach the trunk road at the Blackbeck roundabout, a little to the south-east of the Egremont Bypass.

2B.3 The 2 Services Corridors [COR/102B/008008D] lead north-westwards & south-westwards respectively from the southern part of the PRZ, with the northerly Corridor A providing options for electricity supply whilst the southerly Corridor B is for drainage. The Services Corridors also effectively continue within the PRZ, leading to the internal Surface Site [idem, 008007B & 008060] of about 38 ha on which the new surface activities connected with the RCF would take place. At the core of the Surface Site, and just south-west of Longlands Farmstead, is the Platform Site of about 4 ha [idem, 008009B]. This would contain the heads of the 2 shafts which would be the focal points of the RCF, together with related buildings & other structures. The Farmstead itself has the benefit of planning permission for conversion to a visitor reception area & offices, plus car park & viewing platform [idem, 0080032A-37A], subject to the grant of permission for the RCF itself.

2B.4 The surface of the PRZ is mainly undulating farmland, with a general fall down to the south-west from a high point of 110 m aOD next to the A595(T). But to the west of the Farmstead there is a mound flanked by 2 NW-SE clefts; and the deeper, north-easterly cleft becomes a steep-sided valley which turns southwards & widens out to the south-west of the Farmstead. The Platform would be extended across this depression as it turns south [idem, 008014B]. The valley floor is drained by an intermittently flowing rill [NRX1/3], which itself is an arm of the southern tributary of Newmill Beck, the other arm of which rises in the south-eastern part of the appeal site [COR/101/Fig.3.5.2]. The northern tributary of the

Beck is much longer, rising in the foothills north-east of the A595(T), passing through the hamlet of New Mill, and bending around the north-western part of the appeal site, before joining the southern tributary near Corridor B & entering the mouth of the River Calder at Sellafield [COR/101/Fig.3.7.1].

2B.5 One southward stretch of the northern tributary is part of the south-western boundary of the PRZ: and the Beck's valley there & north-west of the Zone contains plantations which extend into parts of the appeal site. Nirex's landscape proposals would add to that framework [NRX/2/3/Fig.5.3]. They would result not only from the RCF development but also from the borehole development which has already taken place on the site. Out of the 13 regional boreholes drilled by Nirex to obtain basic hydrogeological data on the Sellafield area [idem, Fig.4.3, ie excluding No.6], three - Nos.2, 4 & 5 - are in the PRZ [best seen on idem, Fig.5.1]. There are also in the PRZ 2 old minerals exploration boreholes now used for monitoring, called Boonwood & Holmrook 13 [idem, Fig.4.3 again].

2B.6 Another 14 ha of the Surface Site are occupied by further, temporary borehole development which would complement the RCF itself. The total additional boreholes approved are RCF1-4 to help establish the exact positions of the shafts, RCM1-4 to monitor the effects of shaft-sinking, and PRZ1-5 to assist further in the characterisation of the Zone. RCF1 & 2 sites would be retained as part of the Surface Site, whilst the sites for RCF3 and RCM1, 2 & 4 would be incorporated into the Platform.

2B.7 The current works on site are already served by a purpose-built access from the A595(T), constructed with permission in 1993 to DoT standards [COR/102B/0080011A, 12B & 13A]. But also leading westwards through the site, from the A595(T) opposite the entrance to Gosforth village, is a narrow byway called Sides Lane. This is shown on the Cumbria County Definitive Rights of Way Map 1989 only as a bridleway [idem, 0080038B]; and it is metalled from the main road just as far as the sites of regional Boreholes 2 & 4, to which it provided the original access. South-west of these borehole sites and still within the PRZ, an unsurfaced drive leads off Sides Lane, uphill north-westwards into the fringes of the plantations. After about 1 km, the drive bends north-eastwards, and at about 800 m farther on it joins the A595(T) through a gateway overlooked by a dwelling called Newton Manor Lodge.

2B.8 The drive is indeed that of the Newton Manor Estate, and no public right of way over it is indicated on the Definitive Map nor acknowledged by BNFL as the landowner [NRX/11/8]. Newton Manor itself [best seen on NRX/2/3/Fig.5.1], now converted into flats, lies in the wooded valley bottom of Newmill Beck in the north-western part of the PRZ. Just south-east of the Manor is a bungalow called Saddlebank. Going round the drive towards the lodge gate, a detached dwelling called High Lingbank lies south-east of the drive & about 250 m back from the main road. About 250 m south-east down the A595(T) from the Lodge, a Grade II listed dwelling called Sally Hill stands on the other side of the road. Further to the south-east, and clustered around the mouth of Boonwood Lane opposite the former entrance to Longlands Farm, are Boonwood Cottages & Garden Centre and the Red Admiral (formerly Boonwood) Hotel. Back inside the PRZ, and about 500 m along Sides Lane from the A595(T), Sides Bungalow stands on the north-western side of the byway. Another 1 km to the west along the Lane, and just outside the PRZ, are Fleming Hall Farm & The Bungalow.

## Summary of Proposals

2B.9 The RCF development as amended [COR/102A-D] since the original planning application [COR/102 & 103] is described in detail in COR/111, and the latest version of the work programme is COR/102B/008010B. If the construction & science activities were to run their full course, this would take about 13 years from mid-1997, assuming that permission were granted early that year. The Platform would be built at 84.5 aOD by cut & fill and in the form of an extension of the platforms of boreholes RCF3 & 4 across the valley [idem, 008014B]. During site establishment, cut-off & subsoil drainage from the Platform would lead to an oil interceptor & lined settlement pond in the valley [idem, 008015B], whilst the rest of the Surface Site would be drained into existing soakaways. On completion of establishment, surface water from the Platform & access road would go via a perimeter drain to a multi-bay settlement tank [idem, 008016A], and thence be discharged under controlled conditions to Newmill Beck down a 1.2 km drain in Corridor B. Foul water would go to an on-site sewage treatment plant, with a controlled outflow to a 3.5 km effluent pipe along Corridor B to the Calder Interceptor Sewer within Sellafield Works.

2B.10 The 2 shafts would be sunk about 50 m apart [idem, 008009B], with the North Shaft begun up to 3 months after the South. Contractor's construction headgears 25-30 m high [idem, 008061] would be used during sinking, to be replaced after sinking by operational headgears 29.2 m high, each with heapsteads & winder houses [idem, 008018-21C]. Concrete & grout batching plants would also operate during most of the construction periods. In addition there would be a fan duct & house at the South Shaft and a spoil conveyor & bunker at the North Shaft. Service buildings would include a workshop & stores [idem, 008023C]; and an office block for laboratories, training, changing & first aid as well as administration [idem, 008022C]. Smaller structures would include an electrical substation, wheelwash, gatehouse & firewater tank, with stores for explosives & detonators to the north-west of the Platform [idem, 008024-26B].

2B.11 A final decision has yet to be made on electricity supply: it might come underground or overhead along Corridor A from Sellafield, or it might be taken directly from the grid via a transformer. The initial construction period would require high levels of lighting in the working hours of 0700-1900, typically between 100 & 300 lux with lights mounted between 8 & 20 m high. Subsequently, external lighting would be typically between 20 & 50 lux. In response to concerns expressed about the impact of security fencing & lighting, one amendment has been to reduce the illuminated length of fence line by about 30% and confine it to the Platform Site, car park, gatehouse & explosives stores. The lights would be on 6 m high columns at 30 m intervals, with illumination typically in the range 5 to 20 lux [NRX/1/5].

2B.12 The shafts would be of 5 m finished internal diameter; and would most probably be excavated by the drill & blast method, although the possibility of freezing some of the ground to limit unexpected water inflows cannot be entirely discounted. The South Shaft would be the primary access for personnel, whilst the North Shaft would be primarily for equipment, materials & spoil, and also would be the fresh air intake. After the construction of the collars & foreshafts down to about 36 m, the shafts would be hydrostatically lined as they went down through the SSG & Brockram [idem, 008053A]. A connecting gallery would be dug between the shafts at 650 m bOD: but a decision about the preferred repository level would

not finally be made until the development was well under way, so that the option is being retained to construct the shafts down to any level in the BVG between 650 & 900 m bOD plus 30-35 m for sumps.

2B.13 Probe drilling & groundwater monitoring ahead of excavation would attempt to identify & quantify potential water inflows. The most likely form of ground treatment is grouting selected zones in the SSG to restrict volumes to manageable quantities [NRX/16/10/Fig.4.1]. Groundwater would in addition seep through the hydrostatic lining; and water with tracers added would also be introduced for drilling & cleaning purposes. Subject to differentiation as a result of the tracers, water would be pumped out of the shafts; treated by settlement & oil interceptors; and added to the foul water discharge through the effluent pipe.

2B.14 Spoil would be brought mainly up the North Shaft, and taken to a large field, lying north-west of the Platform and inside the bend in the Newton Manor drive [idem, 008030C & NRX/2/3/Fig.5.2], which has been earmarked for the spoil disposal area. In all, about 40,000 cu m of sandstone would be produced, with between 60,000 and 75,000 cu m of Brockram & BVG depending on the depth of the shafts. Allowing for bulking, this would amount to 140,000 to 160,000 cu m of spoil, although about 15,000 t of BVG could be taken off the site for tests of its marketability. In the disposal area, the spoil would be placed on stripped ground in transverse phases; and gradually spread over about 6 years to a maximum height of 4 m, with progressive restoration. There would be screening mounds along the south-western boundary of the field.

2B.15 Phase 1 of the RCF Science Programme would embrace the excavation of the shafts & the first connecting galleries [idem, 008027A]. The purpose of the Phase is to deliver information required to enable Nirex to make a decision whether to propose a repository in the PRZ and so prepare the requisite planning application, plus the PCSR & DSA for the regulators. Mapping & hydraulic measurements would take place as continuous elements of shaft & gallery construction in order to obtain information in particular on the structural characteristics & flow channels of the various rocks; and on the pressure, flow & chemical composition of the groundwater. Fracture infill would be sampled for mineralogical analysis & radiometric dating. Mechanical & hydraulic changes due to disturbance by shaft construction would be measured; and a further excavation disturbance experiment would be carried out around a gallery at the preferred repository horizon in the BVG towards the end of the Phase.

2B.16 A decision to proceed with the repository could be taken at the earliest about halfway through Phase 1. Conversely, such a decision might be deferred until some time during the later Phases. Should the Programme show at any point that the site is unsuitable for a repository, then restoration works would commence. At present the activities planned for Phases 2 & 3 are primarily designed to confirm the final design of the repository and to deliver information to help the regulators decide whether to approve the start of disposal operations after the construction & commissioning of the repository itself; but the Phases are indicative only [idem, 008028 & 29A], and the Programme would be reviewed & might be revised, especially if the decision were deferred. Deferment might result in the balance of science activities being shifted from experiments predominantly on processes in flow channels

within the BVG to tests of extrapolations of distributions of connected fractures within the rock.

2B.17 The galleries would be excavated by drill & blast, like the shafts. The current indications for Phase 2 are of 3 main galleries each about 150 m long, but maybe with varying cross-sections, and in approximately NNW, SSE & WSW directions. Phase 3 is presently envisaged as extending the NNW gallery to up to 375 m, and the SSE one to up to 600 m. Basically the scientific activities in Phase 1 would be continued in the galleries throughout Phases 2 & 3, but there would also be experiments within zones of connected fractures & in single fractures to measure rock matrix diffusion and observe colloid transport. Phase 2 would include too a Site Characterisation & Demonstration Experiment [NRX/16/10/Fig.5.2] and various Seal Experiments [idem, Figs.5.4-7]. In Phase 3 there would be a Ventilation Tunnel Experiment, to measure the hydraulic conductivity of about a 100 m length of BVG [idem, Fig.5.3]; and experiments to measure gas entry pressure into fractures & gas & water flow characteristics. The effects of chemical disturbance by highly alkaline fluids on networks of connected fractures would also be measured. The final location of the repository vaults would be confirmed by drilling from the Phase 3 galleries, possibly above or below the putative alignment of the vaults.

2B.18 The closure & restoration of the RCF [NRX/1/1] would involve underground salvage followed by backfilling of the sealed-off shafts with a clean & inert material such as limestone; the dismantling & demolition of the surface buildings; and the restoration of the landscape [COR/102B/008051B], soil management & re-vegetation. About 4.6 ha of the landscape planting would be retained, linked by a further 2.21 ha of woodland planting plus new hedgerows [idem, 008049B]. Whilst grassland areas would be restored to a condition suitable for agriculture, other parts would be suitable for nature conservation or forestry, due to the re-structuring of the landscape and the provision of wildlife resources, such as a wetland in the valley as well as the scrub & woodland.

## 2C. DEVELOPMENT PLAN

*COR/301 is a useful reference document in that it sets out many of the policies referred to below, and indicates generally whether they were regarded as relevant by Nirex or Cumbria. However, it is not an exhaustive or definitive account of this aspect of their final cases to the inquiry, and it certainly does not commit any of the other parties in any way.*

2C.1 The statutory development plan for the appeal site consists of the Cumbria & Lake District Joint Structure Plan 1991-2006 adopted in July 1995 [COR/303]; and such parts of the Mid Copeland Local Plan adopted in 1990 [COR/305] as are in general conformity with this new Structure Plan [COR/305A].

2C.2 Cumbria has also identified for the purposes of para.5.56 of PPG 12 the detailed policies which appeared in the previously approved structure plan and yet are now more appropriate to local plans [COR/302A]. These development control policies, excluded from the new Plan, will be spent when the relevant local plan is adopted; but according to the PPG they will be given weight in the transitional period depending on the particular circumstances.

2C.3 Objections [COR/307] to the deposit version of the Copeland Local Plan [COR/306] were considered by an Inspector who held a local inquiry in June & July 1995. Copeland has received the Inspector's report [COR/307A]; and the position at the end of the appeal inquiry was that Copeland was to be advised to accept the Inspector's recommended modifications particularly in respect of Policies DEV 4, IMP 1 & ENV 33 [idem, pp.2-3, 11-13 & 67-71]. Of course further steps are likely to have been taken towards the adoption of the Plan between the close of the appeal inquiry and the submission of this report.

2C.4 The Lake District National Park Plan was published in 1978 and reviewed in 1986 [COR/308]. Chapter 9 of the Plan comprises the Conservation Map prepared under Section 3 of the Wildlife & Countryside (Amendment) Act 1985. The Lake District National Park Local Plan was placed on deposit in March 1994 [COR/309]; proposed changes were published in April 1995 [COR/310]; and a local inquiry into objections opened in October 1995, & has now been concluded. The Plan deals with minerals & waste planning inside the Park; whereas a consultation draft of a Minerals & Waste Local Plan for the parts of the County outside the National Parks was published in July 1995 [COR/311].

### **Structure Plan**

2C.5 SP Policies 1-10 form part of the strategic framework for other SP policies, LP policies and other material considerations. Policy 2 is to protect from inappropriate development Cumbria's scenic beauty, natural resources & the quality of its built environment, especially those areas and features of international or national conservation importance where harmful development will not be permitted. Under Policy 5, the same attributes of the National Parks will be firmly protected & enhanced, whilst fostering the quiet enjoyment & understanding of the Parks and the social & economic well-being of their communities in a manner which does not conflict with the conservation objectives.

2C.6 Policy 8 is to address Furness & West Cumbria's economic problems through an enhanced priority to the refurbishment of town centres, environmental improvements, new industrial site development, tourism projects and improvements in road & rail communications. Policy 9 is to improve inter-urban communications by upgrading the road network to meet economic development needs and to bring environmental benefits to bypassed towns and by encouraging the movement of passengers by bus & rail and bulk commodities by rail to reduce the environmental impact of road traffic. New road building, or significant upgrading of existing roads, affecting areas & features of international conservation importance will only be carried out in exceptional circumstances.

2C.7 According to Policy 10, the future development of tourism should normally be based on visitors' enjoyment & understanding of the County's distinctive scenic, cultural & historic character. Development will be encouraged where it will help meet a particular economic need, but will not be allowed to prejudice the County's environmental quality. To protect the intrinsic qualities of the National Parks, the growth of tourism should be restrained and future development should not conflict with their quiet enjoyment.

2C.8 SP Policies 11-29 are concerned with managing the environment. By virtue of Policy 11, development & other land use changes detrimental to the present characteristics & qualities of landscape of the National Parks (& other areas of national importance) will not normally be permitted. Particular regard will be paid to the protection & enhancement of undeveloped open countryside and, amongst other features, the character of land identified on Section 3 Conservation Maps. Development required to meet local infrastructure needs which cannot be located elsewhere will normally be permitted provided it is sited to minimise environmental impacts and meet high standards of design.

2C.9 Policy 13 deals with countryside where the landscape is not of designated national or county importance. Development will normally be permitted which in its use, siting, scale & design is well related to existing developed areas of the countryside and does not harm distinctive features of local landscape significance. In the undeveloped open countryside development will not normally be permitted except when it is required to meet local infrastructure needs, and then is subject to the same qualifications as in Policy 11.

2C.10 Outside the National Parks & AONBS in Cumbria, forests plantations & woodlands will normally be acceptable under Policy 16 where there is no material conflict with agriculture, landscape, historic features, conservation & public access, and should usually provide positive benefits to these interests. Development & other land use changes which are detrimental to important nature conservation interests will not be permitted by Policy 17 unless the harm caused to the value of those interests is clearly outweighed by the need for the development. Where development is permitted, the loss of conservation interest should, where practicable, be minimised.

2C.11 Policy 21 is not to permit development which, through emissions or by noise vibration or risk of accident, exposes workers or the public to undue hazards, nuisance, or has an effect on health, or has a significant adverse effect on the natural environment. Similarly, Policy 22 is not to permit development & other land use changes resulting in the discharge of inadequately treated sewage or effluents which have a damaging impact on water quality. Also, under Policy 24, the erection of buildings or the raising of land will not normally be

permitted where there would be a direct risk from erosion or flooding, or be likely to increase the risk of flooding elsewhere.

2C.12 Policy 25 deals with the quality of development. The siting, appearance & landscaping of all new development and alterations should aim to enhance the quality of the existing environment. It should be in keeping with the local character of the .. landscape, be well integrated with the existing pattern of surrounding land uses and, where appropriate, be in keeping with the local vernacular tradition. Normally development should make provision for access by disabled persons. Furthermore, by virtue of Policy 26, development & other land use changes will not normally be permitted if they ... damage, obscure or remove important archaeological sites or other historic features, or are detrimental to the character or setting of a Listed Building or Ancient Monument.

2C.13 The remaining SP Polices 30-70 are for the purposes of guiding development. Policy 36 provides that development will not normally be permitted where there is insufficient capacity in the service or transport infrastructure. Permission may be granted where satisfactory improvements can be made at the developer's expense.

2C.14 Nine Policies - Nos.54 to 62 - are for controlling major projects. Policy 54 relates to major developments which are more national than local in character and have significant environmental effects, and Nirex accepts that the RCF proposal falls within that description. By virtue of the Policy the RCF will only be permitted if 4 stipulated criteria are met:-

- i. the sum of national, regional & local benefits is shown to clearly outweigh any harm or risks to the wider environment, &
- ii. the proposed scheme will be carried out in such a manner as to cause the least practicable harm, &
- iii. direct & indirect adverse impacts during construction and during operation (including those from the winning & working of construction materials and their transportation) will be minimised, &
- iv. it does not harm areas or features of international or national conservation importance except where it can be demonstrated that the value of the benefits that would arise clearly outweigh the international or national value of the interest affected...

2C.15 If the site were in the National Park, criterion iv. would add a requirement for a case to be made in the national interest, and for all reasonable alternative locations & methods of satisfying the need to have been explored & shown to be unacceptable. If this new development were judged to be "concerned with the reprocessing, storage or final disposal of nuclear waste", then Policy 57 would apply, and the first criterion of that is, in the case of applications which must be accompanied by an ES, for due consideration to be given to alternative locations and for the site to be suitable for the use proposed. Six other criteria would be imposed too, relating to safety, security & environmental consequences; the existence or provision of the requisite infrastructure; the social & economic impact on West Cumbria & the National Park; location in the vicinity of the Sellafield licensed site or within

the Drigg licensed site; minimisation of harm to the visual character & amenity of the area; and the identification of acceptable principles for decommissioning & site restoration.

2C.16 With regard to the general disposal of waste, Policy 60 states that adequate sites should be provided for the disposal of wastes arising within the County. Permission will not be granted where there are adverse effects on local communities or the environment, or where the infill & restoration of existing sites would be seriously prejudiced. Under Policy 62, strict conditions will be imposed on all permissions for mineral extraction and waste disposal to ensure their full restoration to an acceptable use. A progressive scheme to restore land at the earliest opportunity will be required wherever practicable. The creation of diverse & attractive landscapes, including water areas & woodland to enhance nature conservation & recreation interest, will be favourably considered.

2C.17 Policies 63 & 70, amongst others, elaborate on the key transportation Policy 9. Policy 63 states that key routes which provide for long distance inter-urban road transport should be improved by the year 2006. The improvement of each route should be comprehensively planned & rigorously assessed against the environmental & other relevant policies in the Plan. One of the routes to be improved is described as "between the M6 and the West Cumbria and Furness areas (A590, A66, A595/A596/A5092)" [COR/303, p.59]. Whilst the Key Diagram confirms that this includes the whole of the A595(T), none of the specific schemes in the revised Schedule 2 to the Plan include the length past the appeal site. Policy 70 provides that large flows of bulk commodities and all dangerous materials should be transported by rail wherever possible in order to reduce the growth in heavy goods haulage by road and to reduce the possibility of serious damage to the environment. Steps to facilitate this should include the location of new development generating such movements on sites where this traffic can be handled by rail freight services, and the favourable consideration of proposals for interchange facilities between road & rail and for the rail freight servicing of existing industry.

### **Mid Copeland Local Plan**

2C.18 A number of the policies in this adopted Plan which were referred to at the inquiry are not land use policies, but policies which seek to influence other public agencies [COR/305, para.1.2, p.1]. They are Policies 2A, 2C, 4A, 4B, 4E, 4F & 4K. Reference was also made at the appeal inquiry to Policy 6C, which urges the Government & Nirex to identify & develop a site for the disposal of ILW as a matter of urgency, and states that Copeland will continue to resist applications to increase ILW storage capacity (at Sellafield) while there is a lack of clear commitment to such a site. However Policy 6C is now regarded as conflicting with SP Policy 57 since it fails to take forward the relevant tests [COR/305A, p.2]. Moreover the Policy does not specify that the ILW disposal site should be in the Borough.

2C.19 Another policy referred to at the inquiry but now regarded as conflicting with the new Structure Plan is Policy 6N. This is to protect Sites of Special Scientific Interest, other sites of wildlife interest and ancient woodlands from inappropriate development, but it is now stated to conflict with SP Policy 17 since that protects nature conservation interests subject to relevant tests [idem, p.3]. Paras.6.19-20 & the Proposals Map of the adopted Plan define the sites subject to Policy 6N, of which there are 4 dotted around the south-western & north-

western margins of the appeal site but none within it [cf COR/101, Fig.3.5.2 & COR/305, Proposals Map]. This approach of mapping the wildlife sites is being replaced in the emerging Local Plan by listing them in an appendix [COR/306, Appendix 7]. However the last lengths of Newmill Beck before it reaches the River Calder & the sea, about 2 km downstream from main part of the appeal site, pass through a breeding & foraging habitat of natterjack toads, a species protected by Annex IVa to the Habitats Directive 92/43/EEC [COR/101, Fig.3.5.2 again]; and the habitat is proposed to be designated a SSSI [COR/101, paras.3.5.36-45].

2C.20 Amongst land use policies still in conformity with the extant Structure Plan, Policy 6I is that new development in the rural areas will be required to have regard to traditional building design and to the use of local materials. The reasoned justification for this in para.6.15 of the Local Plan [COR/305, p.40] is that it is important that modern "anyplace" estate development or house designs are not allowed to spoil existing vernacular architecture. In addition, Policy 6J provides that the Council will normally not ... grant consent for works which would be detrimental to the character of a listed building.

2C.21 Policy 6Q is that, on land with existing trees or woodland, development will only be permitted in cases where the trees are substantially retained and will not be prejudiced by the proposed development. Under Policy 6R, the Council will protect Ancient Monuments & other important archaeological sites from inappropriate development, and further where such sites are at risk from development proposals ensure that adequate opportunities are given for recording & research.

#### **Transitional Development Control Policies**

2C.22 Policy C5 from the 1988 Joint Structure Plan is that proposals for an alternative use for redundant buildings in the countryside outside the National Parks may be favourably considered where such a use would ensure the preservation of a building of historic or architectural interest or provide premises for business use, and is capable of being provided with public utilities; and would not conflict with adjoining land uses or the character of the landscape.

2C.23 Despite being retained, 1988 Policy C20 is in fact similar to that part of the current SP Policy 26 which relates to the character or setting of listed buildings. 1988 Policy F4 has affinities with the statutory Local Plan Policy 6Q in that it provides for development & other change which involves the clearance of semi-natural or amenity woodland or important trees normally to be resisted unless there is no significant loss to landscape, amenity & nature conservation interests.

2C.24 Retained Policy M1 sets out 10 criteria as the basis on which proposals for the extraction of minerals will be assessed. These relate to landscape impact; local community impact; employment potential; ecological or historic features; impact on the road network; agricultural land or productivity; local, regional or national need; progressive restoration; removal of past dereliction; and the prospect of beneficial after-use. Retained Policy P6 sets out 5 considerations on proposals for the use of land for solid waste disposal, which are similar in some respects to those in Policy M1.

2C.25 Retained Policy T17 normally expects adequate provision for car parking to be included in new development proposals. It anticipates the adoption of car parking guidelines to assist developers, albeit that the application of the guidelines may be specifically withheld in certain areas. Under Policy T21, new development likely to generate substantial traffic movements will not be permitted in locations which would increase flows through mainly residential & other environmentally sensitive areas.

### **Emerging Copeland Local Plan**

2C.26 The appeal site is outside any town or village development limits defined on the Proposals Map. Part of Policy DEV 1, as recommended to be modified, is that development will not normally be permitted beyond these limits unless the proposals are in accordance with other local plan policies. Seven sets of such policies are then listed. The modified 6th set would be development for service infrastructure, energy or in relation to the nuclear industry (including ENV 33) [COR/307, Change No.241 & COR/307A, R.2.8.B, p.8].

2C.27 The reference to emerging Policy ENV 33 in this 6th set is because it is the key policy relating to the RCF proposal. As recommended to be modified, Policy ENV 33 now provides [COR/307A, R.10.20.E, pp.70-1] that the Council will support the proposal for a RCF at Longlands Farm, Gosforth so long as the following criteria are satisfied:-

1. The proposal is framed by reference to a national radioactive waste management strategy and justified in relation to the need to establish the geology & groundwater flows in the vicinity of the proposed repository site, bearing in mind the Council's fundamental requirement that safety is paramount.
2. The proposal demonstrates at this stage that further investigations of the suitability of the Sellafield site for an ultimate repository via the RCF are justified.
3. The application demonstrates how the RCF fits into the overall research programme and contributes to the development of the safety case.
4. The non-nuclear environmental impact is acceptable, including impact in relation to landscape, nature conservation & traffic generation. The proposal should comply with the provisions of Policy DEV 4.
5. The requirements of Policy IMP 1 are met.
6. There is provision for the site of the RCF to be eventually restored to agriculture subject to any safety requirements dictated by the operation of the repository (if approved).

2C.28 The recommended Policy DEV 4 [COR/307, Change No.73 & COR/307A, R.2.1.A, p.2] referred to in ENV 33.4 above is that the Council is committed to the principles of sustainable development outlined in the Development Strategy. In dealing with all proposals for development it will have regard to the long-term effects on the Borough's environmental,

social & economic resources so as not to prejudice their use & enjoyment by future generations. A number of other LP policies are then listed as being particularly important in this regard.

2C.29 The recommended wording of Policy IMP 1 [COR/307A, R.3.1, p.13], referred to in its turn in ENV 33.5 above, is that in considering proposals for development the Council will seek to overcome planning objections by entering into a legal agreement with the applicant, usually under Section 106 of the Town & Country Planning Act 1990, where these objections cannot be overcome by the use of planning conditions. In the case of proposals for major development, where there is shown to be a significant adverse social or economic cost or effect which arises directly from the development concerned, then the Council would expect an agreement to address this cost or effect. Provision secured by such an agreement should be commensurate with the scale & nature of the individual development. In particular where a proposal is shown to discourage investment in the area by prospective employers or to discourage the development of tourism then mitigation of these effects would be sought through a planning obligation to assist in measures which would positively encourage investment.

2C.30 Policy DEV 3, as recommended to be modified [COR/307, Change No.139 & COR/307A, R.2.9, p.10], provides that in determining proposals for new development the Council will normally expect a high quality of building design & layouts which respects the character of the surrounding area and helps contribute to a strong sense of place. The Council will, therefore, require 8 particular principles to be applied to the design & layout of all new developments where relevant. The first of these principles is careful attention to building scale, height, bulk, proportion, roof shape, & external materials. Related design policies are SVC 6, that all services within new development areas should normally be sited underground; and ENV 6, requiring details sympathetic to the particular character of Landscapes of County Importance. The 4th principle of DEV 3 is the incorporation and, wherever possible, enhancement of existing landscape features and sites of geological & wildlife interest within layouts and their protection during construction works. The 6th principle requires compliance with Policies TSP 5-8, amongst others, as regards access, the needs of pedestrians, disabled people and cyclists, and car parking/manoeuvring space.

2C.31 In relation to that group of TSP policies, TSP 5 requires new development proposals to incorporate satisfactory standards of access to existing highways: TSP 6 normally permits such proposals which are likely to generate significant traffic volumes particularly involving the regular movement of HGVs only where the site has direct access to an appropriate standard of road and/or where the applicant undertakes to improve highway conditions along agreed routes: TSP 7 expects proposals to take into account the needs of pedestrians, disabled people & cyclists and emergency vehicles in the design & layout of buildings & facilities on site: and TSP 8 requires compliance with car & lorry parking standards.

2C.32 Another transportation policy referred to at the inquiry is TSP 2, which is to actively seek essential improvements to the A595(T) including a bypass scheme at Calder Bridge (for environmental, safety & economic reasons). But that Policy has been recommended for deletion from the Plan because it is matter of influencing other public agencies [COR/307A, R.6.2, p.38]. The final transportation policy relied on in representations to the inquiry is TSP 13, which as recommended to be modified [COR/307, Change No.157 & COR/307A,

R.6.7, p.40] is to support the transfer of freight traffic to the railway, and that proposals for new development likely to have high rail-dependency will normally be approved subject to other policies in the Plan.

2C.33 Also regarded by some as relevant are Policies EMP 11, the first part of which is that new large scale employment related developments outside established employment areas and those designated by Policies EMP 1 & 2 will not normally be permitted; and EMP 17, which relates to the conversion of buildings to employment use in rural areas, subject to certain criteria [COR/307, Changes Nos.111 & 230 & COR/307A, R.5.8, p.35].

2C.34 Emerging Policy SVC 1, to which there has been no objection, is that all development must incorporate an adequate means of sewage disposal which will not have a detrimental effect on ... the environment. Proposals for development will not normally be permitted where it would be likely to increase the risk of downstream flooding, damage ecological habitats or watercourse stability, prejudice water quality in watercourses, underground strata or along the coast... Where these objections can otherwise be met by suitably designed attenuation or mitigation measures or by other mitigation measures which the developer is willing to undertake or pay for then the Council may be prepared to grant permission in association with an agreement under Section 106 of the Town & Country Planning Act 1990. Similarly Policy SVC 5 as proposed to be changed [COR/307, Change No.253] requires proposals for sites in excess of 0.4 ha to be accompanied by details of all land drainage arrangements, which must be designed so as to ensure that there is no deleterious effect on adjoining occupiers of land, important wildlife habitats or watercourses in the vicinity.

2C.35 A number of LP Environment Policies have been cited in addition to ENV 33. The recommended wording of Policy ENV 1 [COR/301, p.16 & COR/307A, R.10.2, p.58] is now to afford protection to sites of international nature conservation importance in line with the Habitats Directive 92/43/EEC, whereas it is the recommended Policy ENV 2 which relates to sites of national nature conservation importance. The recommended Policy ENV 4 [COR/301, p.17 & COR/307A, R.10.4-5, p.59] will permit development leading to a loss or significant alteration to a locally important nature conservation site, or adversely affecting the continuity & integrity of certain landscape features, only where it can be demonstrated that there are sound reasons for the development which clearly outweigh the need to safeguard the intrinsic nature conservation value. The landscape features in question are heath, woodland, hedgerow, unimproved pasture, marsh, ponds, green lanes, wetland, coastal habitat systems & river corridors. Where development is permitted, the retention of wildlife habitats, their enhancement or creation of new habitats, if feasible, will be secured through planning conditions or agreements. Furthermore, the recommended Policy ENV 5 [COR/301, p.17 & COR/307A, R.10.6, p.60] will not permit development which would have an adverse effect upon the conservation interest of any site supporting species protected by law.

2C.36 The recommended wording of ENV 11 [COR/301, p.17 & COR/307A, R.10.10, p.62] is to support proposals for new tree planting, particularly using native species, subject to the form & extent of any scheme respecting the landform, and subject to the restrictions in ENV 4. Under ENV 13, a landscaping scheme will normally be required as a condition of any approval for new development, and this will be expected to show the retention of existing landscape features.

2C.37 The first part of Policy ENV 14 is to protect existing rights of way from development at the planning stage. According to Policy ENV 15 as recommended to be modified [COR/307, Change No.196 & COR/307A, R.10.12, p.63] development will not be permitted where it is at risk from flooding or is likely to increase the risk of flooding elsewhere. This prohibition includes, amongst other things, extensive culverting. Proposals should not cause interference to or loss of access to a watercourse.

2C.38 Emerging Policy ENV 23 is that, when consulted on proposals for the disposal of inert waste, the Council will support them where there is no adverse impact on landscape or nature conservation interests, and where there is good access from the main road network, and where satisfactory arrangements are made for subsequent landscaping & after-use. Again, under ENV 27, support will be given to the development of facilities necessary either for the implementation of the development policies of the Plan or which are necessary to enable water & sewerage undertakers to meet statutory obligation & environmental standards as established by the Government & the European Commission.

2C.39 The now recommended wording of Policy ENV 26 [COR/307, Change No.206 & COR/307A, R.10.17, p.65] includes seeking to minimise harmful or offensive aerial discharges in dealing with new development. Similarly Policy ENV 29 is not to permit development likely to generate unacceptable levels of noise unless it can be reduced to acceptable levels by soundproofing measures or by controlling hours of operation or methods of working.

2C.40 Emerging Policy ENV 49 is normally only to approve applications for development affecting the setting of a Listed Building when there is no significant adverse impact on the Listed Building. Policy ENV 50 applies similarly to Scheduled Ancient Monuments.

2C.41 Policies ENV 51 & 52 effectively elaborate on the archaeological aspects of SP Policy 26, in line with PPG 16. Under ENV 51, the Council will seek to minimise the effect of proposals for new development on any site of local archaeological or historic importance. Where proposals are likely to affect such sites, 5 sets of requirements may come into play. An initial assessment of the archaeological value will be required as part of the planning application: if further warranted, a full archaeological field evaluation will be required before a decision is made: the statutory protection & permanent in situ preservation of any nationally important remains before development commences will be sought: the permanent in situ preservation of locally important remains by agreement will also be sought: and where such in situ preservation is not appropriate full investigations & recording will be required. Policy ENV 52 makes it clear that an initial site assessment may be required even where chance finds or developing archaeological knowledge merely indicate possible archaeological importance.

#### **Other Plans**

2C.42 The Lake District National Park Plan is not a statutory development plan, and is a management plan prepared under the Local Government Act 1972, but currently contains long standing development control policies. Paragraph 2.12(a) of the Plan states that the individual character of the landscape of the different areas of the Park will be protected. The Conservation Map delineates some "mountain, moor & heath" on the foothills to the north-

east & south east of the appeal site [COR/308, Ca.9 & CCC/3/1, Fig.2], whilst the Ravenglass Estuary to the south is defined as a coastal feature. Most of the Park's western foothills, including this delineated mountain, moor & heath, are defined as part of the Quieter Areas in the deposited Lake District National Park Local Plan [COR/309, Proposals Map & CCC/3/1, Fig.2]. Emerging Policy NE 5 is that development will not normally be permitted where harm to the character & appearance of the Quieter Areas would result by reason of:... (c) visual intrusion, noise or other forms of disturbance [COR/309, p.10].

2C.43 Appendix I to the Consultation Draft of the Cumbria Minerals & Waste Local Plan (excluding the National Parks) [COR/311] constitutes a position statement by Cumbria on radioactive waste. Although it is partly out of date because it was written before the White Papers Cm 2860 & 2919 were published, it makes it clear that County Council policy for the time being on nuclear waste processing & disposal is contained entirely within SP Policy 57 [COR/311, eg p.83]. However, Draft Policy 43 would grant planning permission for mineral exploration provided that there are no significant adverse effects on local communities or the environment [idem, p.56]: and Draft Policy 51 would permit landfill sites for the disposal of inert waste arising from major construction projects provided the site is adjacent to the project and there are net environmental, economic & social benefits compared with disposing of the wastes at existing sites [idem, p.66].

### 3A. NATURE OF PROJECT & RELEVANCE OF REPOSITORY

*The Irish Government's representations to the inquiry are without prejudice to its rights to pursue its case through other channels. That Government, and NSCNFLA & FOLD, have registered formal complaints with the European Commission on this & related matters. It should also be noted that submissions similar to some of those summarised in this Chapter 3A have been made by other parties, but they relate more directly to policy than to law and so are reported in subsequent chapters, especially Chapters 4A & B.*

**3A.1 The Irish Government, Patricia McKenna MEP & Mr J Fitzsimons MEP, NSCNFLA, FOLD, Mr S Balogh & Ms J Sutcliffe and some written representations** submit that the RCF proposal is inseparable from the DWR proposal in practice, and thus in law: the RCF is seen as an integral stage of the DWR project. The RCF is not a generic research facility; and its site has been chosen precisely so as to characterise the preferred location of the DWR, and to help design the repository & obtain detailed regulatory approvals for its operation. Nirex has been working on the concept of a repository at Sellafield since 1991 [COR/206, pp.4 & 5]; and is assuming that the RCF shafts might be used for DWR construction access, and would probably be utilised for DWR ventilation & in emergencies.

3A.2 The estimated costs of the RCF construction & science programme at 1995 prices excluding interest & inflation are £195M [NRX/12/16, following up Table 4.1 of NRX/12/18], and other Sellafield-specific costs on the same basis are forecast at £(543-195=)348M [NRX/12/18, Table 4.2] by the time of the end of the RCF. This would result in a very high level of commitment to the construction of a DWR at this location. If the PRZ were shown to be capable of holding radioactive waste and the pertinent planning criteria were met, it is difficult to conceive of a disposition to seek another site. UK Government policy is that, once a suitable site is found, the DWR should be constructed as soon as reasonably practicable [GOV/208, para.101]. It is significant that no other RCFs are being proposed anywhere else in the UK, and that there have not even been preliminary studies elsewhere of comparable detail to those at Sellafield. Although the process of developing a DWR here would be discontinued if the RCF were to encounter a problem which Nirex does not expect, that cannot detract from the points that the PRZ is the preferred location and the RCF is a confirmative exercise.

3A.3 It is inevitable that, at the stage of applying for permission for the DWR, Nirex would invoke as a material economic consideration the costs of the RCF & related work. There is also the fact of the PRZ's proximity to the UK's largest source of radioactive waste at the Sellafield Works. The continuity of the programme for a DWR at Sellafield is the fundamental substance of the matter; and the formal insistence on dividing the planning procedure into 2 stages by labelling the RCF as merely investigatory cannot legally be allowed to override the reality of this situation. The appeal site is the potential repository zone, not just a hypothetical repository zone. The actual project in this instance is arguably not merely "deep drilling" but an "installation solely designed for the permanent storage or final disposal of radioactive waste" in the terms of Annex I(3) of Directive 85/337/EEC & Schedule 1(1)(3) of UK Regulations SI 1988:1199 respectively (albeit the words "solely" & "designed" are transposed in the latter).

3A.4 For the purposes of the Directive, "project" means the execution of construction works or of other installations or schemes, & other interventions in the natural surroundings and landscape including those involving the extraction of mineral resources [Article 1(1)]. The UK Regulations use as its equivalent the word "development," with the meaning which that expression has under the Town & Country Planning Acts [Regulation 2(1)]. However, there is of course a principle of EU law that domestic legislation which implements EU measures should be interpreted so as to conform with the relevant European legislation.

3A.5 As to the interpretation of "project", the Advocate General's Opinion delivered on 3 May 1994 to the ECJ in Bad Naturshutz in Bayern eV, Richard Stahnsdorf & Others v Freistaat Bayern Case C-396/92 expressed the view that the purpose of the Directive should not be lost ... by a definition that is over-strict or otherwise inappropriate .. of the projects in respect of which application must be made....The important question is..whether ..there is an obligation to take account of the fact that the project forms part of a larger project, which is to be carried out subsequently, and..the extent to which account is to be taken of that fact. Given the purpose of the Directive to take effects on the environment into account at the earliest possible stage in all the technical planning & decision-making processes [Preamble], the Advocate General went on to advise that as far as practically possible account should also be taken in the assessment of any current plans to extend the specific project in hand.

3A.6 In relation to the UK, the European Commission has, in formal correspondence with the CPRE & the UK Government on the Wilton Power Station & its transmission lines and the Channel Tunnel Rail Link & its London terminal respectively, expressed views very similar to the Advocate General's opinion. The argument that the assessment of a smaller development must cover the environmental effects of a future, larger development likely to follow in its wake was accepted obiter by Simon Brown J in R v Swale Borough Council & Medway Ports Authority, ex parte RSPB [1991] JPL 39, at pp.47-8, and by Macpherson J in R v Secretary of State for Transport, ex parte Surrey County Council 24 November 1993 (unreported CO 2929/93). The fundamental importance of taking the environmental effects into account at the earliest possible stage has been agreed by McCullough J in Twyford Parish Council & Others v Secretary of State for the Environment [1992] 1 CMLR 276 & by Potts J in R v Secretary of State for the Environment, ex parte Greenpeace [1994] 4 All ER 352. Lack of certainty that the future development would proceed obviously cannot of itself preclude the obligation, since some degree of uncertainty must always exist.

3A.7 Moreover, the significant environmental effects of the RCF which must be assessed by virtue of Articles 1(1) & 3 of the Directive & Schedule 3(2) of the UK Regulations include "indirect" effects, and also by virtue of Annex III Note (1) & Schedule 3(3) respectively include "secondary", "cumulative" & "long-term" effects. For the RCF these must include the effects associated with the DWR. Nirex concedes that it is material to consider both the rationality of the site selection procedure which led to the investigation of Sellafield as a potential repository site, and the sufficiency of the "promise" of the site for a repository inasmuch as there may be planning objections to the RCF proposal. Whilst Article 5(1) stipulates both that the information be relevant to this stage of the consent procedure & to the specific characteristics of the project and that it be reasonable to require the developer to compile the information, nevertheless some information plainly exists in this instance because Nirex has broadly assessed some of the environmental effects of the

repository in the course of both its site selection process and its Sellafield confirmation exercise to date.

3A.8 In the UK the appropriate consent procedure must be the land use planning process, as the one which entitles the developer to proceed with the project [Article 1(2) of the Directive], rather than the regulatory approvals which are no longer concerned with site selection. If such an existing UK procedure cannot completely fulfil the aims of the Directive, then another procedure must be established to attain such compliance [Article 2(2)]. To delay the production of the relevant information which Nirex has already compiled until the planning application for the DWR is made would be to fail to take the environmental effects into account at the earliest possible stage, contrary to the Directive; and it would conflict with the high priority consistently given by the EEC to the preventive protection of the environment, and the principle of effectiveness. The suggestion is not, however, that there should straightaway be a fully detailed assessment of the environmental impact of the potential DWR at Sellafield. All that is necessary at this juncture to satisfy Article 5 is broadly the level of environmental impact information requisite for the identification or rejection of candidate DWR sites.

3A.9 Cumbria adds that the potential length of the RCF & other Sellafield-specific work from 1989 to 2009 would also make it extremely difficult for Nirex to start again somewhere else. Setting aside the claim that the RCF is part of the DWR project, nevertheless at the end of a very lengthy & costly investigation process the approach of planners towards the issue of the location of the DWR would be necessarily affected by what had gone before. Much of the science is novel; and the overall programme is taking much longer than expected in 1988-1991. Yet Nirex is already asserting that scientific comparisons cannot be made with other sites because so much more is known about this one than any other.

3A.10 It is wholly appropriate, and in accordance with both the advice in PPG23 and the judgement of the Court of Appeal in Gateshead MBC v Secretary of State for the Environment & Northumbrian Water Group plc [1995] JPL 432, for the planning system to seek to control the location of a development which has safety implications. In reality, it would be far too late to examine the relative safety of the location of the repository for the first time at the repository inquiry. It is not something which can be left to the regulators, for site selection is no longer their concern at any stage; and at present there is no formal regulatory regime at all.

3A.11 Nirex responds [including COR/101B] to all the submissions by pointing out that its work on the DWR is following a contingent, staged programme. As part of that programme, the function of the RCF would be to carry out searches & tests of the BVG near Sellafield. This would be similar to oil & gas exploration work, the planning merits of which are considered without regard to any hypothetical future development. A decision has not yet been made whether to proceed with a DWR at Sellafield, and would not be made earlier than about halfway through Phase 1 of the RCF. Although it was originally envisaged that such searches & tests could be carried out after planning permission had been granted for the DWR, it was concluded in 1992 that firmer interpretations of the hydrogeology were needed before a successful application could be made, and so the RCF was clearly separated from the DWR development as a discrete stage in the contingent programme. It now constitutes

preparatory investigation for the DWR project, and not part of that project itself. Neither the scientific necessity to site the RCF at the putative best DWR location nor the prudent avoidance of duplication of shafts & galleries can be regarded as reversing this severance.

3A.12 The estimated RCF costs of £195M excluding interest & inflation are only about 11% of the total development & construction costs on the same basis for a DWR commissioned at Sellafield in 2012 [NRX/12/16 & NRX/12/18, Table 4.1]. Also projected RCF costs represent merely about 13.6% of projected expenditure from 1 April 1995 to first waste emplacement. This relatively low proportion of expenditure cannot constitute any degree of commitment to an eventual repository at Sellafield, since Nirex would not persist with this site if it were shown at any time to have insufficient promise: and other options might have to be pursued in any event because of the emergence of intractable practical problems at Sellafield such as excessive cost or intolerable working conditions. RCFs cannot be proposed elsewhere in the UK for the very reason that insufficient preliminary work has been done to support them. Nirex's reasons for gradually concentrating on Sellafield have been well publicised, and endorsed at each stage by the UK Government. On the other hand, granting permission for the RCF could not conceivably commit the authorities themselves to permitting a subsequent repository development, since the applications would raise quite different issues.

3A.13 The RCF is itself a project within the definition of Article 1(1) of the Directive. It cannot be part of an installation solely designed for the final disposal of radioactive waste, since the description of the development does not entail the emplacement of any radioactive waste at all. The opposing parties have effectively recognised the weakness of their submissions on this point by suggesting without corroboration that the meaning of "project" in the Directive is ambiguous. All the actual cases in respect of which they cite legal opinions concerned the segmentation of overall projects such as roads, and not an investigatory project prior to a possible construction scheme as in this appeal. Moreover they have not referred to any authoritative, binding judgements in support of their arguments.

3A.14 In any event, it is a fundamental error, in Nirex's judgement, to argue that the effects of a repository would be the indirect effects of an RCF. Implementing a permission for an RCF would not enable the development of a DWR to take place, for that would require its own planning permission as well as authorisations from the regulators. It must follow that the effects of a repository are not part of the effects of an RCF, indirect or otherwise.

3A.15 The repository project itself is relevant to the determination of the RCF application only in the course of either considering the rationality of the preliminary site selection or applying a robust test of the sufficiency of the promise of the preferred site. In terms of Article 5(1)(a) of the Directive, information about the environmental effects of a possible DWR is not relevant to this stage of the consent procedure, which is concerned solely with permission to obtain data on the geological & hydrogeological characteristics of the BVG & overlying strata at Longlands Farm. This is not an inquiry into applications for permission & authorisations for a DWR, nor into the environmental effects or safety of a repository at Sellafield, nor into an alternative site for a repository. For example, the post-closure radiological safety information is preliminary & incomplete because of the very lack of information from an RCF. The earliest stage in the consent procedure at which that could be supplied would be on the application for planning permission for a DWR, accompanied by a PCSR & a DSA. Even then, radiological safety would be for the regulators and not the

planning authorities; but that would be the obvious stage at which to consider the environmental effects of the repository, in accordance with SP Policy 57.

3A.16 Similarly it would be unreasonable in terms of Article 5(1)(b) to require Nirex to compile such information at this stage. The planning authorities cannot have the benefit of the expert comments of the regulators on the selection of the PRZ until the latter make their contribution to the repository inquiry. The current conceptual design process at Sellafield is not generating any environmental information. Assessing at this stage the environmental effects of a repository at alternative sites is out of the question. According to the other side's own argument, such effects would be relevant only as the indirect effects of the RCF, and yet there is no alternative proposal for an RCF, either at Sellafield or elsewhere.

3A.2  
3A.12  
3A.17 My opinions on this set of legal issues are preceded by noting that further judicial pronouncements after the close of the inquiry may have a bearing on them. Subject to any such judgements, I consider that the question of the kind of commitment to the DWR which is represented by the RCF must essentially be one of degree. This degree would inevitably vary over time due to various factors, not all of which would be under the developer's control. Therefore consideration of the kind of commitment involved may well be relevant to the planning merits, but will not of itself resolve the legal arguments, in my view.

3A.11  
2B.15  
2B.16  
3A.18 However, the basic fact is that the RCF would constitute a crucial examination of the potential of this location for a DWR. There is obviously an intrinsic physical link between the RCF and the DWR, and this cannot be ignored just because the RCF might be wound up without being followed by a DWR. On the hydrocarbon analogy suggested by Nirex, the RCF would be much more akin to an appraisal well than an exploration well - hence the relevance of the long-term suitability of the site. The RCF's Phase 1 would certainly be confirmative work preparing for a particular DWR as generally agreed, but Phases 2 & 3 could well be part of the design enterprise. They would include applied experiments as well as rock tests. I consider that the High Court would be bound to hold that such links constitute a substantial land use connection, as a simple matter of UK domestic law.

1.2  
2B.6  
3A.19 In the European context, the first question raised by the debate over the transposition of the Directive's concept of "project" into "development" as defined by UK planning law is whether the development described in the current application would comprise a project in its own right. In my opinion it would not be a discrete project, for a reason which seems plain to me although not explicitly put in the submissions. This is that the RCF development could only be utilised in conjunction with the RCF, RCM & PRZ boreholes which have already been permitted. Thus it would be the development plus at least those local boreholes which would constitute the core of the RCF project. This suggests that an assessment of the inter-relationship of developments may need to look back as well as forward.

2B.5  
3A.20 More generally, I respectfully agree with the cited judicial indications, despite their not being binding precedents, that one project can be part of another project. Projects need not be mutually exclusive; and a "contingent programme" could itself be a "project". In this case, at the basic level there is clearly a series of overlapping projects. Looking back in the Sellafield context, there is a functional overlap between the regional boreholes and the cluster of local boreholes which are part of the RCF project. Then looking forward to the desired

progress with the RCF, Phase 1 would be primarily the last part of the confirmative project, whereas Phases 2 & 3 would be primarily parts of the design stage of the DWR project.

2B.3  
2B.1 3A.21 I consider that the overlapping nature of this series of projects constitutes another land use relationship which cannot be ignored as a matter of law. The RCF project may be more striking than previous developments in this series because of its larger scale. But the DWR, of which the RCF is hoped to be the precursor, would be larger still. Therefore the relative size of the RCF would not introduce discontinuity into the series, but instead would tend to confirm the appositeness to this situation of the judicial dicta. Those dicta necessarily imply that the language of the Directive & Regulations can be construed so as to take some of the environmental effects of the larger overall project into account.

3A.22 The phrase most obviously appropriate to such an interpretation is "indirect effects". In terms of meaning, a subsequent development or project could indeed be an intermediary through which the original development might have an indirect environmental effect. Of course any specific effect would have to be identified in every particular instance. But I cannot see that the domestic legal requirement to obtain separate approvals for the subsequent development necessarily precludes that development from being such an intermediary. It was this very type of situation, of a series of consents, that the judicial dicta addressed.

3A.18 3A.23 In my view there would be 2 main indirect relationships. The RCF could confirm the potential location of the DWR, which would have some obvious environmental effects if constructed: and the RCF & DWR might have appreciable combined impacts on particular environmental features. The potential relevance is not further limited, in my judgement, by some rule of UK law on materiality. Given the obvious land use connection between the DWR and the RCF, the law cannot pick & choose some RCF planning issues as the only ones to which the DWR can be material. To do that would be to introduce a legal test of necessity, which the Courts have expressly eschewed in questions of materiality; and so it would blur the distinction between such legal issues of materiality and the planning judgements as to the weight to be given to the various considerations. Whilst there might be a final conclusion on the merits that the only RCF planning issue really affected by the DWR is that of site suitability, there cannot be a legal short cut to that conclusion which arbitrarily ignores the potential DWR in the evaluation of every other RCF planning issue.

3A.19  
2B.16  
3A.15  
3A.19  
3A.7  
3A.1 3A.24 Thus the relationship between the RCF and the DWR is relevant as a matter of UK law to this stage of the consent procedure, namely the planning application for permission to develop the main part of the RCF project. The specific characteristics of this development are not merely the collection of geological & hydrogeological data to prepare a DSR & PCSR for the regulators: they include the subsequent evaluation of that data for DWR design purposes. The fact that some environmental information cannot be compiled yet is not a reason for failing to bring forward that which can be compiled now. The earliest possible stage for taking the RCF's environmental effects into account has already passed, for that was when the application for the borehole part of the RCF project was considered; and there should be no further delay. It is plain from the evidence to the inquiry that work has already been done both on the environmental effects of a DWR and on designing a DWR at this location. Therefore I consider that it would be reasonable to require some broad assessment of prospective effects of the DWR. Whether that should include alternatives is discussed in the next Chapter.

### **3B. ALTERNATIVES & AVAILABILITY OF INFORMATION**

**3B.1 Cumbria, Copeland, the Irish Government, Patricia McKenna MEP & Mr J Fitzsimons MEP, Greenpeace, NSCNFLA, FOLD & Ms J Sutcliffe and some written representations** submit that, on the basis of facts already agreed by Nirex, alternative sites for the DWR must as a matter of law be considered in connection with the RCF application, and that Nirex must supply & summarise more information about these alternatives than it has done so far. Some of them emphasise Nirex's acknowledgement that any proposed DWR must now be preceded by an RCF or similar investigation as a matter of good practice. There is thus a generic link between alternative sites for an RCF and alternative sites for a DWR, as well as the specific intrinsic link between this RCF and the overall DWR project.

**3B.2** Annex III(2) of Directive 85/337/EEC specifies as part of the information to be supplied by the developer, inasmuch as it is relevant and its compilation may reasonably be required, "Where appropriate, an outline of the main alternatives studied by the developer and an indication of the main reasons for his choice, taking into account the environmental effects". Whilst the phrase "where appropriate" introduces an element of discretion, it is essential to understand that there are limits to the exercise of that discretion.

**3B.3** The leading English court judgements on the relevance of alternative sites, such as those referred to in para.3.15 of PPG23, were made before the Directive came into force. Moreover, although a number of propositions were formulated in such judgements, they were expressly stated not to be exhaustive. The basic points must be that the existence of alternative sites is capable of being a material planning consideration: and that, in combination with safety as another consideration, the existence of a safer alternative site for this potentially hazardous development must be a proper ground for refusing planning permission. There is no rule of law that radiological safety in particular is not a material consideration.

**3B.4** The first & last of Oliver LJ's 4 indicative criteria of the appropriateness of site comparability, set out in Greater London Council v Secretary of State for the Environment & LDDC (1985) 52 P&CR 158, at p.172, would be met, in that there is a clear public advantage in the RCF proposals, but there could only ever be a very limited number of permissions for an RCF. A predicted failure by the proposed DWR site to meet the risk target would be an adverse effect as required by the 2nd criterion, whereas an alternative site predicted to meet the target would not have that effect & so meet the 3rd criterion. SP Policy 57 would in any event require due consideration to be given to alternative locations at the repository inquiry, and expediency indicates that such matters should be examined now.

**3B.5** Looking next at the examination of alternatives in the international context, the practice is at the heart of environmental impact assessment in the latter's birthplace, the USA. Also the Rio Declaration & Agenda 21 call for such assessment to extend beyond the project level to policies & programmes (eg Agenda, para.8.5(b)). Taking assessments beyond the project level in this way must involve consideration of the possible alternatives to any specific project within the policy or programme in question. Yet these higher order assessments are seen as integral parts of the strategies towards sustainable development to which both the EU & the UK have formally subscribed.

3B.6 Moreover, Article 7 of Directive 85/337/EEC requires the environmental information to be supplied to a neighbouring Member State when there are likely to be significant transboundary effects: and Appendix II of the Espoo Convention requires an assessment with such effects to include a description, where appropriate, of reasonable alternatives (eg locational or technological) to the proposed activity and also the no-action alternative. The language of the Directive and of the UK Regulations does not expressly confine "alternatives" to alternative sites, and so generally other basic options should indeed be considered too. Given the inextricable link between the choice of location for the RCF and the suitability of a site for a DWR, the relevant alternatives in this case include repository options & alternative disposal processes. Neither the Directive nor the Regulations exempt consideration of alternatives just because they have been discarded as a matter of Government policy. No exceptional exemption of this project in whole or in part from the provisions of the Directive has been made by the UK Government under Article 2(3).

3B.7 In the particular field of radiological protection, the provisions of Articles 6(a) & (b) and 13 of the amended Directive 80/836/Euratom, as reflected in the Court judgements of EC Commission v Belgium [1992] 2 CMLR 22 & the Greenpeace case (already cited 3A.6 above), require both prior justification of an activity involving exposure to ionising radiation and optimisation of protection. Neither of these requirements can be met if alternatives are not expressly considered.

3B.8 With regard to the relevance & reasonableness requirements under Article 5(1) of Directive 85/337/EEC, the UK Government, in for example para.3.16 of PPG 23, regards an outline discussion of main alternatives as normally requisite in an ES. The work programme which has led Nirex to make the application for the RCF has necessarily entailed consideration of alternative processes and sites at earlier stages of the programme. If this consideration had not taken place, the RCF application itself would not have been made. So logically it must be relevant and reasonable to obtain information on those alternatives now. The Directive requires them to be taken into account at the earliest possible stage in all the technical planning & decision-making processes. The supply of the information cannot lawfully be delayed until the time of the full repository inquiry, with the attendant risks of the information becoming either stale, lost or rationalised to fit subsequent events.

3B.9 Due partly to the manner in which the Directive's requirements have been transposed in the Regulations, there appears to be a legal view that the supply of information on alternatives in an ES is entirely within the developer's discretion. Indeed this view seems to be implicit in some UK Government publications. However, the obligations imposed by the Directive are not directly on developers but on Member States, with an overriding obligation under Article 2 to adopt all measures necessary to ensure that projects likely to have significant environmental effects are subjected to an assessment. It follows that any discretion under the Directive is to be exercised by or on behalf of the State, and not the developer. Moreover, it must be exercised in accordance with the spirit of the Directive. The proposed removal of the discretion by Article 1(7) of the Agreed Common Position on Amendments to the Directive [GOV/139, p.6, substitute Article 5(3)] does not imply that at present the discretion can be exercised arbitrarily.

3B.10 A closer reading of the UK Regulations results in a similar interpretation. Although information on the main alternatives is specified in Schedule 3(3)(d) only as further

information which an ES "may" include by way of explanation or amplification, Regulation 21 empowers the relevant authorities to require any further information mentioned in Schedule 3(3) so long as the developer could provide it and it is reasonably required.

3B.11 In this instance Cumbria as the local planning authority required by letter of 3 October 1994 [COR/104, Appendix D, p.93] additional detailed material concerning the reasoning for Nirex's decision to focus attention on Sellafield, in accordance with Regulation 21 (albeit there was an erroneous reference to para.2(d) of Schedule 3, instead of para.3(d)). Passages in the letter made it clear that Cumbria was concerned particularly about other locations nationally which may provide a better prospect of limiting radiological risk, including a comparative investigation of a true BUSC (basement under sedimentary cover) site. As an emanation of the UK State, Cumbria thus exercised the discretion under the Directive to decide that the supply of information on alternatives was appropriate. It is now too late to mount a High Court challenge against the validity of that exercise of discretion.

3B.12 Nirex's reply of 22 November [idem, p.95 & COR/101A] expressly acknowledged that Cumbria's request was made under Regulation 21, even though it did not accept that the requirement was material or proper. The reply was received on 23 November, and was copied to all consultees, being treated as submitted in response to the formal request [COR/104, para.5.3.12], in time for the Extraordinary Council Meeting which determined the application on 20 December. The 5th Reason for Refusal stated that Cumbria was not satisfied that a rational basis for focusing detailed investigation solely on Sellafield had been demonstrated. Para.3.3.2 of Cumbria's Statement of Case gave notice that the authority would continue to argue for full presentation & release of the site selection exercise documentation. Thus it was made clear that the local planning authority maintained the view that the further information supplied on alternatives had been inadequate.

3B.13 If adequate information on alternatives is not supplied, it is not possible to grasp fully the baselines from which environmental impact is being measured or mitigation assessed. Planning permission should not be granted for the RCF until after these deficiencies have been made good. The adjoining Lake District National Park is a very significant environmental feature obviously at risk of adverse impacts from the development of the appeal site. Sufficient information should, for example, be provided about alternative sites to enable comparisons to be made with the significance of the features at risk near those. Also, because of the intrinsic link between them, the impacts to be considered are those of the DWR as well as of the RCF. Moreover, the comparison obviously cannot be confined to non-radiological impacts, since the most fundamental assessment is of the prospects of limiting radiological risk.

3B.14 So far as disclosure is concerned, the balance of the public interest must lie in identifying the main alternative locations which have been studied by Nirex, rather than in declining to name them because of the disquiet this would cause amongst local people. This was the conclusion of the Rossi Committee [GOV/304, paras.235-9] and of the majority of the RWMAC/ACSNI Study Group [GOV/409, Chapter 6]. No limitation under Article 10 of the Directive has been suggested to this inquiry; and no direction has been made under Section 321 of the Town & Country Planning Act 1990. Risks of causing alarm & controversy are not accepted as reasons for withholding information in, for example, publicising alternative routes for trunk road schemes.

3B.15 Before planning permission can be granted for the RCF, information about the alternative sites must be supplied in a form which is comprehensible to the relevant authorities & to the public concerned and which makes Nirex's decision-making processes transparent, so as to comply with Articles 6 & 7 of the Directive & enable the public, the responsible authorities and the neighbouring State to make an informed assessment of the environmental impact. Genuine public participation is also required by Principle 10 of the Rio Declaration & Chapters 8, 10 & 23 of Agenda 21, to which both the EU & the UK are committed, following up Directive 90/313/EEC on Access to Environmental Information. The other locations must be fully identified so that the public & authorities can check, for example, the geology for themselves. Under UK law, consultation documents must not be misleading; and sufficient time & information must be provided for a genuine interchange. On the other hand, legal reliance cannot be placed, as in para.18 of DOE Circular 7/94, on the circulation of additional information in accordance with the Inquiries Procedure Rules, because this would manifestly not be an adequate notification & consultation of the public as required by Article 6(2) & (3) of Directive 85/337/EEC.

3B.16 The preferred site should be chosen as a result of the environmental assessment process, not before its application. In this case, there clearly were numbers of sites which could reasonably be classed as the main alternative sites - either the 12 which were carried forward for the final detailed study [COR/501, Section 6.6] or those 3-5 which Nirex has told this inquiry were subsequently short-listed for consideration by its Board.

3B.17 On no account can it be concluded that there is no alternative RCF site to the present one, because for example even at Sellafield Nirex has shifted its investigation from the site originally chosen by its Board to the current PRZ [NRX/12/11A]. Nirex cannot be allowed to argue that there is no conceivable alternative site when the nature of the programme is such that the choice of site is under Nirex's unique control. Moreover, in a case like this where a main objection is that the site is unsuitable, under UK law as enunciated in Trust House Forte Ltd v Secretary of State for the Environment & another (1986) 53 P&CR 293, the objectors do not have to identify specific alternative sites before the Secretary of State can uphold their objection.

3B.18 The Directive refers to an outline of the main alternatives because the developer will obviously have studied the preferred process & location more closely than the other options. It is therefore a spurious reason for failing to supply information on the alternatives that there is less information about them than the preferred option. In this instance, Nirex may only have borehole information of its own for Sellafield & Dounreay, but the BGS provided it with geological profiles of the other sites which were considered [COR/501, paras.6.5.6 & 6.5.10]. Nirex has carried out too some degree of environmental appraisal of the other sites [idem, para.6.6.4(b) & COR/101A, para.2.2.7], but it has also confirmed to this inquiry that all comparative environmental evaluation has ceased. All such information must now be supplied to Cumbria & the Secretary of State, and it must also be properly summarised in a non-technical manner and generally publicised.

3B.19 NSCNELA & Ms Sutcliffe add that there is other vital information missing from Nirex's ES. The requisite assessment of effects on human beings must include consideration of the overlapping topics of accidents & emergencies and occupational health & safety, and yet this is not addressed at all in the ES [COR/101]. Ms Sutcliffe has also reviewed the

entire ES following 3 suggested approaches - minimum requirements & established best practice [SUT/1/1: Morris & Therivel], quality review [SUT/1/2: Lee & Colley], & key components (CPRE 1990). Broadly these have shown that the ES is good in parts but poor in the examination of the significance of impacts and in proposals for monitoring & mitigation measures.

3B.20 **Nirex** contends that most of these submissions have been based on the fundamental fallacy that the RCF would be part of the proposed DWR; whereas the true position was stated by Cumbria itself in its public consultation leaflet on the RCF application [COR/118, p.1], namely that the RCF is a research facility, and that it is not a repository application which is for determination now. Information on alternatives for the DWR is thus not material to the RCF application, and cannot be properly due under the UK Regulations. Moreover, it is not appropriate even to call for information on alternatives for the RCF, because in effect there are none.

3B.21 It is in the national interest to pursue the investigations at Longlands Farm until a decision can be made whether the site is suitable as a location for a DWR; and it is generally agreed that an RCF is a necessary part of such investigations. Only a favourable decision on the suitability of the site during implementation of the RCF would trigger the preparation of planning & authorisation applications for the DWR. The national interest in persisting with this locational investigation until such a stage has already been agreed by the Secretary of State in endorsing the concentration of detailed geological studies on Dounreay & Sellafield; and upheld, for example, by the Inspector who allowed the appeals for Regional Boreholes 8 & 9 in the National Park [COR/201, p.358, para.9.5]. This public benefit in continuing up to this decisive point means that there is logically no alternative to this RCF.

3B.22 The criteria laid down by Oliver LJ in 1985 [3B.4 above] were still being applied in 1994 by the Court of Appeal in Secretary of State for the Environment v P G Edwards & others (1995) 69 P&CR 607, well after Directive 85/337/EEC came into force. The 3rd criterion refers expressly to "the existence of an alternative site for the same project", as being relevant where there are clear planning objections to the proposed development. The project in this instance is the investigation & characterisation of the BVG & overlying sediments in this particular PRZ: and an RCF anywhere else would not achieve this. There is only a potential site for an RCF where an RCF is needed. But there is no need for an RCF elsewhere because no other PRZ is being investigated, and so the land use effects of a putative RCF at another location are immaterial. There cannot be a potential RCF elsewhere until sufficient borehole investigations & other surveys have been carried out to warrant establishing an alternative PRZ. The due consideration which would be given to a planning application for a repository under SP Policy 57 would be in accordance with the law & policy in force at that time, including of course the question whether Policy 57 itself was still extant. If the Policy & the Regulations were still extant, that would be the time to consider alternative sites for the DWR.

3B.23 Nirex considers that similarly questions of compliance with European or public international law, other than Directive 85/337/EEC, which effectively relate to the DWR should not be anticipated but left to the repository inquiry. In particular the amended Directive 80/836/Euratom cannot apply to the RCF because the RCF would not include any

activity involving exposure to ionising radiation. In the meantime Nirex should not be regarded as accepting that the various Conventions or Directives cited apply either at all or at least without significant qualifications not mentioned in the submissions made by the other side.

3B.24 In Nirex's view, the other parties are misunderstanding the circumstances in which safety considerations could become material to the planning application for the DWR. The advice in PPG23 on non-duplication of planning and regulatory functions applies equally well to radioactive waste management [GOV/107, para.1.5]. Paras.1.34 & 3.19 of the PPG state that planning authorities should not seek to substitute their own judgement on pollution control issues or interpretation of detailed risk assessment of releases into the environment for those of the relevant expert & statutory authority. The judgement of the Court of Appeal in the Gateshead case (already cited 3A.10 above) made it clear, at [1995] JPL, pp.439/440, that the planning authority should follow the regulator and refuse permission on safety grounds only where a refusal would also be the only proper course for the regulator on the authorisation application.

3B.25 Thus radiological safety would be a matter for the regulators, who by the time of the repository inquiry would have considered the DSA & PCSR. The Secretary of State, as planning authority, would very probably not be concerned with the cogency of the safety case unless satisfied that an authorisation would inevitably be refused. The planning safety test surely cannot be more stringent at this RCF stage, when there is no formal advice from the regulators at all [COR/101C], and planning authorities lack the requisite expertise. The planning system should not deprive the developer of the opportunity to put his case to the regulators. The judgement whether on balance to accept a safety case for a site predicted not to meet the risk target is to be made by the regulators: and there is no UK policy to refuse an authorisation for a site predicted to meet the target just because another site might have the potential for a lower risk.

3B.26 Concentrating instead, as Nirex contends should be done, on the RCF's direct planning issues, Nirex considers that it has provided full information on its reasons for choosing to develop the proposed RCF as a further step in its investigation of the Sellafield BVG. This discharges its obligations on the issues of the rationality of its site selection procedure and the sufficiency of the "promise" of the Longlands Farm site - the only 2 material issues on which alternative sites have a bearing. In the context of the first issue, it has led evidence of its assessment in 1988 of the comparative radiological safety for a DWR offered by 12 other sites, and thus supplied all the information needed by Cumbria & the objectors on, for example, the potential for lower levels of post-closure safety risk. But if it succeeds in establishing the promise under the 2nd issue because of the very substantial investigations already carried out at Sellafield, then in its submission a refusal of permission for the RCF on the ground of the potential of other sites would be irrational, because the refusal would be based on much more limited knowledge of those sites than of the PRZ.

3B.27 Other information on alternative sites is not reasonably required to give proper consideration to the likely environmental effects of the RCF in the terms of Regulation 21(1)(b), and so the existence of alternative sites is not generally a material consideration at this stage. The reality is that only 2 of the other parties have referred to the land use planning effects of either an RCF or a DWR at alternative sites. The rest are concerned only

with geology & radiological safety. Whilst the locations of 3 of the other 12 sites studied by way of detailed decision analysis [COR/501, Section 6.6] are now publicly known to be Sellafield Works, Pelham House School & Dounreay, naming any of the other potential sites would raise public alarm in the areas of such sites. This alarm would actually be heightened by naming them before the decision on the location of the DWR had been made. It is clear from the responses [COR/204] to the 1987 consultation exercise [COR/203] that there would inevitably be substantial local objection to a DWR at any such site. It would be irresponsible to raise such alarm.

3B.28 The objectors have nevertheless been seeking to turn this RCF inquiry into a pseudo-repository inquiry. Of course issues of the potential radiological safety of a DWR at alternative sites are likely to be raised at the DWR inquiry proper. But radiological safety issues would then be for the regulators under the authorisation application, and they would not be concerned with the possibility of achieving a lower risk than  $10^{-6}$  at an alternative site. Given that these issues would be matters for the regulators then, they cannot be matters for the planning authority now. Moreover there is the predominant acquiescence by the other parties that the non-radiological effects of a DWR at alternative sites are immaterial to consideration of the RCF application.

3B.29 Accordingly there is no valid reason for the Secretary of State to take the quite exceptional & very serious step of formally requiring further information under Regulation 21 following his receipt of the Inspector's report on this inquiry. Cumbria did not respond to Nirex's reply [COR/104, Appendix D, p.95 & COR/101A] to its original Regulation 21 requirement [COR/104, Appendix D, p.93] in terms which disputed the sufficiency of the supplied information, nor did it request more information. Instead it determined the application rather than suspend its determination under Regulation 21(7). It cannot now complain of the insufficiency of environmental information. The Inspector's preliminary view at the first pre-inquiry meeting was not to ask for any more information on alternative sites [INQ/4, PIM on 15-5-95, p.6]; and he has not expressed a change of view since. Nor has the Secretary of State seen fit to comply with NSCNFLA's pre-inquiry request to require further information under Regulation 21.

3B.30 If the Secretary of State nevertheless concludes that it is appropriate to require further information on the main alternative sites for an RCF, Nirex has not carried out physical investigations at any site other than Sellafield & Dounreay. Therefore the requirement should be confined to information on the non-radiological environmental effects of providing an RCF at Dounreay.

3A.24 3B.31 My opinions on this set of legal issues start by recalling my conclusion that the relationship between the RCF and the DWR is relevant as a matter of law. Then I have to address further arguments some of which are rather circular, in my view. Moreover the leading High Court judgements on the relevance of alternative sites do not distinguish as sharply between the concepts of materiality, reasonableness, policy & determinative weight as, for example, recent judgements on the relevance of planning obligations.

3B.32 Nevertheless it must be prudent to apply Oliver LJ's 4 general criteria to the case in hand as a first step. To avoid initial confusion, the criteria should be applied directly to the

3B.21

3A.12

RCF, and not to the DWR as some submissions suggested. There is a clear public advantage in establishing the RCF as a necessary step in the national programme for the disposal of radioactive waste. The environmental information already supplied [COR/101] shows that there would nevertheless be at the least visual intrusion and an increase in traffic levels. Given the special nature of the DWR programme & the preparation required, it is plain that there will only ever be a very limited number of permissions for this kind of RCF in the UK. Thus the 1st, 2nd & 4th criteria are obviously fulfilled.

3B.33 Nirex claims that the 3rd criterion is not met, in that there are no alternative sites because this development's only purpose is to investigate the very rocks in which it would be constructed. But I consider it plain from the ES that this is not strictly correct. The ES shows that the purpose of the RCF is to gain direct access somewhere to the extensive area of rock that is potentially suitable as a host for the disposal vaults of a deep repository, but which has been chosen partly because it is near Sellafield and is available to Nirex [COR/101, p.10, para.1.36]. Within this large area the precise location of the shafts has been dictated partly by environmental considerations [idem, paras.1.37-8]: and furthermore, flexibility is to be retained in planning the underground layout to access particular features in the rock mass [idem, paras.1.69-71].

3B.34 Consequently it is clear from the environmental information already supplied that choices related to geology, proximity & availability have been made in identifying this PRZ; and that choices relating to geology & environmental impact are being made in the location & design of the RCF within the PRZ. In my view, Nirex's argument about uniqueness would only have been valid if the RCF development were to be strictly confined to observations of a precise area of rock predicted to be pre-eminently suitable for the DWR. Instead, options are obviously being exercised both on the accessibility of various areas of rock and on experiments & design work to be carried out in the facility.

3B.4

3B.35 The real position is that the first, and maybe only, RCF for the national DWR could be designed in a different way at a different potential repository location: and a narrow developer's view of the singularity of a project was not accepted at the UK level in the Trusthouse Forte case, and was criticised at the EU level in the Bad Naturshutz case (already cited 3A.5 above). The obvious fact that preparations have not been made elsewhere does not mean that an RCF could not be established there. Consequently I consider that Oliver LJ's 3rd criterion is also met, and that even on a narrow view of the UK law it would be material to examine comparable sites. Given the basic purpose of the RCF and the delineation of its development site as the entire PRZ, those comparable sites would be other potential repository locations. In other words, alternative sites for the RCF are by their very nature alternative sites for the DWR.

3B.36 I do not see any transposition difficulty relevant to this case in particular & alternative sites in general between Annex III(2) of Directive 85/337/EEC & Schedule 3(3)(d) of SI1988:1199 as amended, albeit that it is intriguing that "outline" is in parenthesis in the Regulations but not in the Directive. I agree that ultimate responsibility for the decision whether it is appropriate to supply this information on alternatives must rest with the State and not with the developer. I also accept that, whether it is put as expedient to do so in terms of the English planning system or as required by the Preamble to the Directive, it is right to examine this information sooner rather than later. Changes since closure of the

inquiry to the Agreed Common Position on Amendments to the Directive do not seem to me to have affected these points. On this view, I do not consider it essential to look at the wider context of international law in relation to alternative sites as such.

3B.37 Nirex has not argued in terms that there is a rule of law making any potential radiological harm resulting from development immaterial to land use planning, in contrast to the materiality of the potential harm from any other form of pollution. Whilst there is indeed a distinction in a different sense, in that there is a separate system of pollution control for radioactive substances, I am not aware that this distinction has any relevance to legal issues of materiality in planning law.

3B.38 Although the language of PPG23 is in parts couched in terms of material considerations, it is of course setting out policy guidance and not giving legal advice. The guidance on the non-duplication of planning and regulatory functions is agreed to apply to radioactive waste management. It includes advice that one of the considerations on which the planning system is likely to focus is location, including the reasons for selecting the chosen site itself (para.1.33): that planning authorities may conclude that the wider impact of potential releases on the development and use of land is unacceptable despite the potential grant of an authorisation or licence (para.1.36): and that a development likely to satisfy pollution control requirements may still be considered to present an unacceptable risk in planning terms, because of social, economic or environmental factors incorporated in that risk (para.3.18). Such advice actually follows the decision in the Gateshead case relied on by Nirex (para.1.3).

3B.39 This means to me that, contrary to Nirex's understanding, it is national policy for a developer's case on social & economic factors to be put to the planning authority as well as to the regulator; and that it is left open to the authority to strike a different balance than the regulator between those factors and the risk. What the policy advises the authority not to do is to substitute its own detailed risk assessment for the regulator's. But the authority can also put environmental factors into the balance; and indeed site selection is a matter for it alone. Therefore, on present law & policy, the comparative radiological safety offered by alternative sites could well be a live planning issue at the repository inquiry. I also feel that there is some force in the argument that, if, as apparently intended, the regulatory regime does not review site selection, then the planning system will have to do so to comply with Euratom justification requirements.

3B.7

3B.40 In any event, Nirex seems to accept that comparable radiological safety is at least material to 2 of the issues on RCF site selection. These issues have been framed by Nirex from some of the wording in the 5th & 6th Reasons for Refusal. But the implicit point which the other parties are making is that, so long as Cumbria's approach was basically reasonable, it would have been open to the authority to have raised other issues on the generally material matter of site selection. It is now open to the Secretary of State in his turn to do so, if thus persuaded by the submissions of other parties: and the latter rely also on the need to comply with basic procedural law. The submissions of Nirex, on the other hand, tend to squeeze any wider consideration of alternative sites out of the planning process altogether. Yet it is plainly wrong under EU & UK law, in my view, to suggest that an authority cannot rely on an alternative site simply because less information is available about it.

1.3

3B.2

3B.17

3B.22  
COR/101  
3B.16  
3A.23  
3B.41 The weight to be attached to adverse environmental effects does not depend on the number of parties who refer to them, but on the nature of the information to be supplied and the cogency of any comments upon it. A stronger point is that Nirex apparently has not started to conceive of an RCF at any other site, and therefore finds it difficult to envisage the effects. But it has assessed the Longlands Farm RCF in great detail, and has analysed the other sites, and so should be capable of broadly contemplating the major effects of a typical RCF at those sites, in a manner similar to that which it has done for a DWR itself. There is also my conclusion that the obvious environmental effects of the DWR would be indirect effects of the RCF. Moreover there is no legal reason for distinguishing, as Nirex does, the effects of ionising radiation from other environmental effects.

3B.42 Comparison of the potential radiological safety offered by the various locations is also relevant to the planning balance, to see for example whether proportionately greater safety would offset the direct & indirect adverse effects of the Longlands Farm RCF, including effects through the DWR as an intermediary. It follows that, again contrary to Nirex's understanding, it is appropriate for the planning authority to look broadly at the relative radiological protection offered by various sites before the regulators look in detail at the protection offered by the chosen site. Indeed that is, in my view, the logical approach which accords with the Preamble to the Directive. In expressing concern about the expertise of a planning authority to do this, Nirex is tending to overlook the policy that the authority should assume that the regulatory regime will operate effectively.

3B.11  
2B.15  
COR/101A  
3B.43 In this case, the planning authority understandably required, albeit with a referencing error, further information on the developer's choice of location having regard to better prospects of limiting radiological risk elsewhere. The prospects of limiting radiological risk relate directly to the RCF, since one of its main functions is to assess the ability of the rocks under investigation to limit such risks. Whilst I am uncomfortable with the use of the word "detailed" in Cumbria's requirement when the Directive expressly refers to an "outline", I consider that the information supplied in response was certainly no more than an outline, compared with the information which we now know Nirex has compiled.

3B.12  
3B.44 For some reason, Nirex believes that Cumbria was satisfied with the response, whereas the formal documents issued by Cumbria showed that it was dissatisfied. Also there had been sufficient time between receipt of the information which Nirex did supply and the date of the determination by Cumbria to amount to a suspension period complying with Regulation 21(7). I can only reconcile their respective positions by surmising that Nirex has been surprised by the way in which Cumbria's attitude towards the application has shifted during the inquiry stages. As I understand Cumbria's final view, this is that Nirex indeed did not supply all the information required, but that the further evidence given by Nirex has in any event convinced the authority that the application should be refused outright on its merits. On the other hand, a number of the other parties who share Cumbria's legal views are nevertheless relying more on the procedural point that insufficient information has been supplied. My opinions have to address this procedural point so as not to prejudice the merits.

3B.45 In fact, my views on the requisite legal requirements have been changed by the various submissions made in the course of the inquiry. On reflection, I accept that it is not possible for the environmental authorities & public concerned to express an informed opinion on the direct & indirect environmental effects and benefits of the RCF unless they are given

3B.27  
6A.21

outline profiles, including locations, of the analysed alternative sites, so that they can make their own judgements of the appropriateness of the developer's choice. This I now believe to be an overriding requirement notwithstanding the inevitable alarm it would raise in the vicinities of the alternative locations. I am reinforced in this belief by the realisation that this case is concerned with the potential safety of sites over millions of years, in comparison with which the period of public alarm should be fleeting.

3B.46 In line with para.44 of Circular 15/88, I do not regard the application as currently invalid because of this omission in the environmental information; but I consider that permission should not be granted for the RCF before the outline profiles have been supplied, summarised, publicised & commented on. If the inquiry is to be re-opened for this purpose, I draw attention to the submission (para.3B.15) that the arrangements described in para.18 of Circular 7/94 do not adequately transpose the notification & consultation requirements of the Directive.

3B.47 On the other hand, I disagree with the other parties that another omission in relation to the Directive & other international obligations is in failing to address other disposal options & processes. In my view, the ES contains adequate information as at the time of its preparation on the choice of the deep disposal option [COR/101, paras.1.8-21].

3B.48 Finally, I make no general comment on the overall critique of the ES, since it does not seem to me to be essentially a matter of law: but I am concerned at the specific major omissions that have been pointed out. Accidents & emergencies can conceivably cause serious environmental effects; and whilst a number of the foreseeable events are covered in respective Chapters of the ES there seems to be no specific treatment of, for example, fires & explosions. Also I consider that the generalised commitments to health & safety [idem, p.44, paras.2.185-190] do not constitute an adequate assessment of the possible impact on human beings on the development site itself. These omissions are of obvious effects from the development; and, whilst most of the possible impacts would be subject to some kind of regulatory regime, the legal scheme of the Regulations as I understand it depends on planning permission being withheld until such basic failures are rectified.

### 3C. MARINE DISCHARGES

**3C.1 The Irish Government, Patricia McKenna MEP & Mr J Fitzsimons MEP** emphasise that the PRZ is close to the Irish Sea and to nuclear installations, the discharges from which have made the Sea exceptionally radioactive. The Irish Government & people have made many representations in the past about this contamination [eg IRL/1/2]; and their transboundary interest in this Nirex application is direct. For instance, under the fishery arrangements agreed between the UK & Irish Governments, Irish vessels exercise the right to fish to within 6 nautical miles of a long stretch of the British coast including Sellafield. Also, along the Irish coast opposite - and in some places as little as 70 nautical miles away - are 50 significant communities, including Dublin [IRL/1/1, Map 1], with a year-round population of about 1.5M people and many holiday visitors.

3C.2 Scientific & public concern is based on past experience. There have been routine & accidental discharges into the Irish Sea from Sellafield since the early 1950s. Many of the radionuclides are deposited on the sea bed in the north-eastern Irish Sea. Others are carried by the currents to be eventually deposited in the western Irish Sea. There is also a potential long-term problem, currently indicated by <sup>137</sup>Cs concentrations, in the muddy sediments between the Isle of Man and Dundalk Bay [idem, Map 2]. All these facts are acknowledged by MAFF's Aquatic Environmental Monitoring Report No.32 of 1992 [pp.8, 15-21, 50-51]. Although there have been reductions in radioactive effluent from Sellafield in recent years, the Irish authorities continue to monitor the health risks to the Irish people: and consider that any further addition to the long-lived radionuclide inventory of the Irish Sea should be avoided. Thus Irish interests are entitled to consideration both according to the precautionary principle in the light of the scientific uncertainties and because of the real public concern & apprehension about the health risks from artificial sources of radiation.

3C.3 The Irish Government points out that part of Nirex's Science Programme to establish the suitability of this site to host the DWR is the development of an assessment of the post-closure safety performance of a repository located there [COR/522, Preface, 1st para.]. An essential part of this is the preliminary analysis of the groundwater pathway for such a DWR. Nirex now cites this analysis as indicating that the site continues to hold good promise of suitability. Yet the steady-state radionuclide transport calculations for the base case of this analysis predict an eventual radionuclide discharge into the biosphere mainly in a region from about 100 m offshore to about a kilometre offshore [idem, Vol.3, p.2.12]. Reliance in this manner on a predicted marine outlet would be a deliberate use of the sea as the recipient of a radioactive discharge.

3C.4 Nirex does not seem to appreciate that this deliberate discharge to sea from a permanent DWR would nowadays be in breach of international law. Whilst the extent of the Irish Sea may well diminish over time, it might also increase. Although Nirex does claim that the amounts of radioactivity involved would be minute [eg NRX/15/34], this is on the basis of very preliminary & narrow assumptions which Nirex concedes could be wrong and which do not so far allow for credible catastrophic events such as earthquakes or glacial melting. Moreover the actual amount of contamination involved is irrelevant in European law.

3C.5 Notwithstanding Nirex's argument that this inquiry is concerned merely with an RCF project, of course its predictions are of contamination from a potential radioactive waste disposal facility. The Irish Government & Patricia McKenna submit that the predictions & other calculations constitute general data relating to a plan for the disposal of radioactive waste which the UK Government should have provided to the European Commission under Article 37 of the Euratom Treaty, so that the Commission could determine whether the implementation of the plan is liable to result in the radioactive contamination of the water (or soil or airspace) of Ireland as a fellow Member State. The ECJ held in Saarland & Others v Minister of Industry, Posts & the Telecommunications & Tourism & Others Case 187/87: [1988] ECR 5013 that the purpose of Article 37 is to forestall any possibility of transboundary contamination. There is an obvious possibility in this case of transport of contamination across the Irish Sea.

3C.6 Moreover the advance justification & optimisation required under Articles 6 & 13 of the Directive 80/836/Euratom (see 3B.7 above) must apply to the protection of all of the population of the EU which is at risk, and not just the population of the Member State where the activity is taking place. As para.62 of Cm 2919 acknowledges, such justification & optimisation should be carried out before major commitments of money & effort have been made. Yet there has not been any examination so far in this case either of the reasons for the plan to cause effects on the marine environment, or of the environmental economic & social effects in Ireland. The grant of planning permission for the RCF cannot be contemplated until these failures have been put right.

3C.7 The position under public international law is even more restrictive, in the Irish Government's submission. The UK is a party to the 1958 Geneva Convention on the High Seas which provides for every State to take measures to prevent pollution of the seas from the dumping of radioactive waste. This is reflected & expanded in Article 194(2) of the 1982 Convention on the Law of the Sea, which is broadly considered to set out customary law, and is expected shortly to be binding on the UK. The dumping of radioactive waste at sea is also banned by Article IV(I)(a) of the 1972 London Dumping Convention, as extended by Conference Resolutions of 1983, 1985 & 1993. Both the UK & Ireland are parties to this Convention.

3C.8 In turn, Article 3(a) of Annex II to the 1992 OSPAR Convention prohibits the dumping of low & intermediate level radioactive substances, including wastes. Although the UK has not yet ratified this Convention, para.15 of Cm 2919 states that its provisions are being applied to all UK waters: and whilst the UK might obtain an exemption from the dumping ban after 25 years, this would only be on production of scientific studies to show lack of hazards or harm. The Preamble to the Convention specifically recognises the inherent worth of the marine environment of the North-East Atlantic, which of course includes the Irish Sea. The Preamble also endorses a sustainable approach to the marine ecosystem, whilst other provisions require application of the precautionary principle (Article 2(2)(a)); the taking of all possible steps to prevent & eliminate pollution from land-based sources (Article 3 & Annex 1); and, to that end, the use of best available techniques & best environmental practice.

3C.9 These provisions will replace similar ones currently in the 1974 Convention on the Prevention of Pollution from Land-Based Sources, to which the UK & Ireland are parties.

Article 5(1) of this specifically refers to the adoption of measures to forestall and, as appropriate, eliminate pollution of the maritime area from land-based sources by radioactive substances, including wastes. By virtue of Recommendation 88/5 of PARCOM, the best available technology is to be applied to minimise and, as appropriate, eliminate any pollution caused by radioactive discharges from all nuclear industries into the marine environment.

3C.10 The Irish Government considers that the stringent restrictions in particular on radioactive pollution of the sea from land-based sources mean that the permanent & irretrievable deep disposal of radioactive waste in a manner which is predicted to result in discharges to the sea cannot comply with international law. If Nirex were to go so far as to argue that such a maritime location is the only possible one, that would actually reinforce the general legal arguments against this method of disposal altogether.

3C.11 This matter is clarified by paragraph 22.5(c) of Agenda 21, which the UK & Ireland have supported without reservation, and to which the Irish Government attaches particular importance in this context. States should not promote or allow, amongst other things, the disposal of ILW & LLW near the marine environment, unless scientific evidence which is consistent with international principles & guidelines shows that the disposal poses no unacceptable risk to people & the marine environment or does not interfere with other legitimate uses of the sea.

3C.12 The paragraph effectively lays down a presumption against a radioactive waste repository near the sea. A proponent such as Nirex has to meet 4 requirements, in the Irish Government's submission. Firstly, there must be some scientific evidence to show the suitability of the site. Secondly, it must be shown that there is not a more suitable site away from the marine environment. Thirdly, there must be proof that there would not be an unacceptable risk to the marine environment. Fourthly, the paragraph expressly calls for appropriate use of the concept of the precautionary principle.

3C.13 The Irish Government considers that insufficient evidence has been produced to meet the first requirement. As to the second & third requirements, Nirex has not really addressed them at all, tending to regard proximity to the sea as an advantage of the current PRZ rather than as a drawback which has to be justified. Finally, it has not appreciated that application of the precautionary principle at this stage of its project means that the RCF must not be near the sea, because the principle essentially implies that potential sites away from the sea must first be fully investigated & rejected before a maritime location can be seriously considered. The precautionary principle must always apply to a DWR project because such a project is manifestly subject to considerable scientific uncertainty, with potentially serious risks. And there is no indication whatsoever that Nirex approached its site selection exercise on the basis of a presumption against maritime locations.

3C.14 **Nirex** naturally makes no response in respect of any policy or political considerations which might arise out of the Irish submissions, since these are matters for the UK Government. It reiterates, however, that it has not made a decision to build a repository at Sellafield; and that the RCF development itself would not result in any exposures to radiation. Erudite though the Irish Government's legal submissions on marine discharges may be, they all fail on the basic preliminary point that the RCF proposal is not part of a DWR

proposal. The submissions should not be considered, and so do not need to be answered, before a repository planning application has been made. This view again cannot be taken as an acceptance that in any event the Conventions & Directives do apply in the manner submitted by the Irish Government.

3C.15 The development of an assessment of the post-closure safety performance is, as the Irish Government acknowledges, a preliminary one. It is part of the acquisition of information required before Nirex could become confident of constructing a DWR in safety and at an acceptable cost. Before deciding to make a repository planning application, it is necessary to know whether a post-closure safety assessment would probably satisfy the regulators that there would be no impediment to eventual licensing & authorisation. All that can be said for the time being is that a satisfactory outcome is possible, but not certain.

3C.16 In any event, the preliminary information shows the Irish concerns to be scientifically unwarranted, in Nirex's view. The total exposure from current Sellafield discharges is about 0.2% of that received by the critical group in Ireland from all radiation sources [NRX/15/34, para.11]. The base case probabilistic analysis indicates the peak risk to an individual human being through a marine discharge as about 3 orders of magnitude below the UK Government's risk target [COR/522, Vol.3, Table 6.18, Fig.6.6 & para.9.1(g)]. That human being would be living on the British mainland, and the risk to persons living on the Irish part of the continental shelf would be even less. For instance, the peak risk to the latter from <sup>129</sup>I would be less than 2 millionths of the radiation dose received from all sources by people living in Ireland today [NRX/15/34, para.12].

3C.17 As to the relative significance of maritime locations, Nirex notes that an inland repository site would eventually lead to discharges to sea. For rivers & the air would eventually carry to the sea some of the long-lived radionuclides which would have originally been discharged terrestrially but are the key determinants of risk.

3C.1 3C.18 In my opinion, the shared use of the Irish Sea and the history of radioactive  
3C.2 discharges into it give the people of Ireland a legitimate interest in a proposal for a  
radioactive waste repository near the coast. The argument that it is premature to inform their  
Government of the Sellafield DWR programme because the decision has not yet been made  
3C.14 to go ahead with the DWR itself is, to my mind, a repeat of the reasoning about relevance  
& alternatives. I consider that it is right to involve them at least to the extent that it is proper  
3B.45 to review now the choice of potential repository locations.

3C.16 3C.19 In contemplating discharges from such locations over 10<sup>8</sup> years, it is not enough to  
3C.4 consider the transport of radionuclides by the very slow movement of groundwater through  
3C.2 rock. For it is evident both that over such a period there would be some risk of a breach of  
containment by natural catastrophic events, and that the sea is a relatively quick transporter  
of radioactivity. There is a palpable possibility of radioactive contamination of the fishing  
& territorial waters of Ireland, and within the EU this should trigger transboundary  
consultation regardless of the currently predicted amounts involved.

3C.20 Accepting the point about the relevance of any consequences of the DWR programme for the neighbouring Member State potentially widens the geographical spread of information

that may have to be considered at this stage. However, I do not consider that it necessarily increases the depth of information that it is reasonable to require, for it cannot be right to insist upon more knowledge about the predicted impact on Ireland than upon the UK. On the other hand, another major contention in the Irish submissions is that the spread should include the potential effect on the intervening marine environment, which has been wrongly overlooked.

2B.12 3C.21 Several of the provisions of public international law cited in the submissions relate to the dumping of waste at sea. But the repository concept now being pursued near Sellafield is to dispose of the waste deep in the land. My attention has not been drawn to any special definition of dumping at sea, and I would not regard the present Sellafield concept as entailing such dumping just because it is foreseen that some of the radioactivity from the waste might end up in the sea as a result of natural processes. But this does not mean that this foresight can be ignored altogether, because there are also provisions of international law which relate to radioactivity entering the sea from land-based sources.

3C.22 On this aspect, it seems to me that the thrusts of the 1974 (as extended by PARCOM) & 1992 Conventions and paragraph 22.5(c) of Agenda 21, to all of which the UK apparently subscribes, are very similar. Whilst Nirex points to the possibility of some radioactivity reaching the sea from any land-based repository, a site near the sea must put the marine environment at significantly greater risk of pollution by radioactivity than an inland site, on the simple basis of proximity. Although I consider some of the submissions of the Irish Government to relate more to the weight of the evidence than to the law, in my judgement the coupling by international law of a special protection of the sea with the precautionary principle has inevitable implications for considering the location of a DWR.

3A.15 3C.23 These implications are that a location near the sea, as in this case, must be specifically justified as such in terms of need & impact; and that particular attention must be paid to the potential effects on the marine environment, including users of the sea, as such and not just as part of a pathway to the intake of radioactivity by inhabitants of the land. These points should at the least be considered when determining the issues of the rationality of the site procedure and the promise of the PRZ, which Nirex accepts as germane to the appeal. They may also have implications for other issues when taken together with my conclusion that there is an obvious link between the RCF and the DWR which domestic law would be bound to acknowledge.

3A.24

#### **4A. CONFORMITY WITH STATUTORY DEVELOPMENT PLAN**

4A.1 **Nirex** points out that sustainability is the underlying objective of not only SP Policy 1 but also the rest of the Structure Plan [COR/303, p.14, para.2.5], and that several of the other parties concede that the RCF would have a sustainable purpose. It is the concept of sustainable development which enables a balance to be struck in the interests of the people of Cumbria as a whole between economic growth and the environment. The benefits of securing a solution to the long term management of ILW stored at Sellafield are obvious to all except those who query Government policy. Much of that waste is also locally generated. It would accord with sustainability to resolve the problems and dispose of the waste in Cumbria if practicable.

4A.2 The accordance with sustainability contributes greatly towards the RCF's conformity with the 10 broad strategic policies in the Structure Plan, in Nirex's view. It is of particular relevance to Policy 2, as are the RCF's siting outside the National Park, thereby avoiding any direct physical effect; the lack of harm to any other feature of national importance or the scenic beauty or natural resources of the locality; and the slightness of the impact on the amenity of local residents & visitors. Also Nirex considers that a development like the RCF which is fully justified by reference to Government policy and the Science Programme cannot be regarded as fundamentally inappropriate in terms of Policy 2. Furthermore, as already pointed out in the legal submissions [para.3A.11] and as accepted by the Secretary of State for Scotland in the case of investigations at Dounreay [NRX/11/3, p.4, para.11], the significant planning issues can only be concerned with the immediate environmental impacts of this particular investigatory phase, with its maximum length of 13 years [2B.9 above].

4A.3 As to the other broad policies in the Structure Plan, Policy 5 was not referred to in the Reasons for Refusal, and the alleged impact on the Lake District National Park can be considered in more detail in the context of Policy 11. Policies 8 & 9 are the other elements of the Structure Plan strategy which are of most direct relevance to the appeal proposal [not referred to in COR/101, Table 3.1.2 or COR/301, but mentioned specifically in evidence].

4A.4 Moving on to the more specific Structure Plan policies, Nirex regards the central question under them as whether the development would comply with SP Policy 54 by satisfying its 4 criteria. Cumbria concedes, and indeed in Nirex's view there is no dispute at all, that the 2nd & 3rd criteria would be met - the proposed scheme would be carried out in such a manner as to cause the least practicable harm; and direct & indirect adverse impacts during construction & operation would be minimised.

4A.5 The features of international or national conservation importance possibly at risk of being harmed in contravention of the 4th criterion are the National Park and other designated areas of particular landscape significance. But the RCF would be sited outside all of these; and Nirex's detailed evidence on the extent & degree of visibility of the proposal from its surroundings, and on the appearance & character of the landscape, shows that the National Park would not be harmed. Hence there would be compliance with the 4th criterion too.

4A.6 The 1st criterion requires more detailed analysis, in Nirex's judgement. Although any harm or risks to the local or wider environment have to be clearly outweighed by the sum of

benefits, the extent of the harm & risks has first to be established definitively. For the less the harm that would be caused then the less the benefits that have to be demonstrated. In this sense the balance which is to be struck is a relative one, as is made clear in the wording of the Secretary of State's Matter 6 (para.1.5 above).

4A.7 Nirex considers that the detailed environmental evidence shows that the adverse environmental effects of the RCF would be temporary or otherwise limited. Hence the benefits required to clearly outweigh them would be not very large, and in the final analysis they are more than ample. Para.4.61 of the SP's Explanatory Memorandum [COR/303, p.52] does require the benefits to include the national or regional reason for the development, and the principal reason of national significance is of course the need to obtain information not otherwise available on the potential to make a post-closure safety case for a DWR here. The factors which are important in determining the suitability of the site in this way are predictions of groundwater flow & dilution; the potential for natural & induced changes to create significant new pathways for groundwater flow; and the local parameters for repository design. Decisions could not be made about these without the information to be gained from the RCF.

4A.8 Although the concentration of investigations on this site does have to be justified, it is only in National Parks & AONBs that Policy 54 requires all reasonable alternative locations to have been explored & shown to be unacceptable. Nirex considers that it does not have to justify at this inquiry the merits either of its choice of about 500 sites to consider initially or of their sequential sieving down to a concentration on Dounreay & Sellafield. Instead its first test under Policy 54 is merely to show the reasonableness or rationality of the procedure which was utilised to do this. There is no policy requirement to demonstrate to the planning authority or the regulators that its preferred site has the best potential to achieve the lowest risk performance. Whilst it did comply in the 1988-9 site selection exercise with the requirement of the Green Book not to ignore a clearly better option for limiting radiological risks [GOV/302, para.5.4], that requirement is now obsolete.

4A.9 As to a second test under Policy 54, the scientific evidence shows that the site continues to hold good promise as a DWR location. Whilst eminent bodies such as RWMAC, Nirex's Review Panel & the Royal Society Study Group have occasionally raised particular points about aspects of the Science Programme, they all agree that the RCF is a necessary part of the Programme, and have commended the high quality of much of the scientific work to date.

4A.10 Thus Nirex is clear & confident on the purpose of, and need for, the RCF, whereas Cumbria has been confused about an appropriate test of the strength of the case for going ahead with the development. Its witnesses have used different phrases varying widely in their import, and by no means always corresponding with the wording of the 6th Reason for Refusal. They have also tended to gloss over the point accepted by the Inspector in the Regional Boreholes 8 & 9 appeal [COR/201, p.358, para.9.5], that it is in the national interest to pursue the geological investigations at this site to the extent that is necessary to either rule it out or to verify that a cogent safety case can be produced. In consequence, the proper test can only be whether it is already apparent that the regulator would be bound to refuse an authorisation for a DWR on this site.

4A.11 To put this test in the one set of Cumbria's own words which is appropriate, it is whether there is overwhelming evidence to date that would appear to rule out the Sellafield area as a repository location [COR/104, p.133]. The application, on the other hand, of any test that puts the onus on the developer to show a reasonable, robust or convincing prospect of making a safety case would wrongly involve the planning authority in pre-judging the decision of the regulator, contrary to the Court of Appeal's judgement in the Gateshead case [para.3B.24 above] and paras.1.34 & 3.19 of PPG23. So would a test whether there were significant doubts that a safety case could achieve the  $10^{-6}$  design target.

4A.12 No party has suggested that there is a material consideration which indicates that this appeal should be determined otherwise than in accordance with SP Policy 54. Therefore Nirex presumes that this second test of continued promise will be regarded as part of the process of reasoning involved in applying the Policy. If for some reason the test were regarded as a separate consideration from SP Policy 54, it would of course still be constrained by the views of the Court of Appeal and by national planning & radioactive waste management policies. Moreover, if so separated, the benefits under Policy 54 would be even more clearcut, for the self-evident national interest would become unfettered by any reference to the present promise of the site. In any event, it must also be borne in mind that this national interest would not be the only benefit, for Nirex's detailed evidence on the socio-economic effects of the development shows that there would be a socio-economic benefit too.

4A.13 One or two parties have contended that SP Policy 57 applies to the RCF application as well as Policy 54. This is not apparently the position of Cumbria, which merely contends that it is relevant to anticipate now the applicability of Policy 57 at the repository application stage. With regard to the basic contention, the RCF is plainly not a "development concerned with the ... disposal of nuclear waste". The word "concerned" no more covers this phase of the investigation of the location's potential than it covers the boreholes. Paras.4.70 & 4.71 of the Explanatory Memorandum make it clear that Cumbria intends the Policy to apply to further major developments associated with Sellafield or radioactive waste disposal after determination of the RCF appeal. The Secretary of State also had a hand in the wording of Policy 57; and if either he or Cumbria had intended Policy 57 to apply to the RCF, they would have said so explicitly.

4A.14 So far as anticipating the applicability of Policy 57 at the DWR application stage is concerned, the present intention is to show that a DWR in this PRZ would achieve in full the regulatory risk target of  $10^{-6}/y$ , and that best practicable means would be adopted. According to para.78 of Cm 2919 [GOV/208], no further reductions in risk should then be sought. Even if the estimated risk were above the target, the detailed assessment of the appropriate level of safety and of the proportionality of the costs of achieving further improvements in safety would be for the regulators to carry out. Therefore there would probably be no role for the planning system in evaluating safety considerations even at that stage. The consideration of alternative locations which would be "due" could only be something similar to that being given now, but with the benefit of more information about the PRZ.

4A.15 Turning back to other specific SP policies, Nirex considers that Policy 11 relates particularly to developments sited within the National Park. In a call-in decision reference PNW/5166/21/73 of 11 March 1992, concerning a proposed wind farm at Kirkby Moor in Furness [NRX/11/5], the Secretary of State concluded that the proposed development, albeit

close to the National Park & in similar countryside, would not directly affect the Park's appearance & character even though it would be readily seen from the Park [idem, para.5]. It was further concluded that, although the development's appearance would be regarded as alien by some, such harm as might be caused by its visual impact was outweighed by the national need for alternative, cleaner sources of energy. Nirex points out that the wind farm, although outside the Park, was nevertheless sited in a designated landscape area, unlike the RCF. The degree of visual impact of the RCF would be much less than that of the wind farm; and so in the light of the decision on the latter, which was not challenged in the High Court, it is not possible to conclude that the RCF would have a significant & detrimental effect on the appearance or character of the National Park.

4A.16 Although Cumbria & the National Park Authority disagree with the reasoning in the Kirkby Moor decision, they do accept that some distinction must be made between developments inside and outside the Park boundary. Cumbria also concedes that in policy terms there is no justification for the concept of some kind of buffer outside the boundary to protect the Park from intrusive development. Given the extent of visibility of the RCF proposal, its likely degree & length of intrusion, and the nature of any contrast between the development & its surroundings, it does not warrant refusal under Policy 11, in Nirex's view.

4A.17 There would be no significant impact on features of the Park especially defined on the Section 3 Conservation Map; and there have been much more intrusive developments near this boundary of the Park, such as opencast coal mining & the expansion of the Sellafield Works. Indeed the RCF/RCM/PRZ Borehole development itself has been described by the former County Planning Officer as having a greater short term visual impact than the RCF.

4A.18 With regard to SP Policies 13 & 25, Nirex relies on the point that the RCF would not be inherently inappropriate development. Whilst the first part of Policy 13 assumes that appropriate development should be steered alongside existing settlements, the very nature of the RCF means that it would not be suitable for a location immediately adjoining a settlement. Although it would not be required to meet local infrastructure needs, it has to be sited in the open countryside as do analogous mining operations. Cumbria concedes that the PRZ is the location at which the investigations should go ahead if they are to continue at all near Sellafield.

4A.19 Despite the site being technically in the open countryside, there are a number of buildings & tall structures nearby; and Cumbria also accepts that everything that could reasonably be done to minimise impacts has been proposed. It is not practicable with a temporary development like a mine fully to achieve the aim of Policy 25, of enhancing the quality of the existing environment; and this is actually acknowledged in the relevant paragraph of the Explanatory Memorandum, which opens with the words "Wherever possible..." [COR/303, p.28, para.3.35].

4A.20 Other Structure Plan policies considered by Nirex to be relevant but agreed by Cumbria not necessarily to lead to a conflict are Policies 16, 17, 21, 22, 24, 26, 36 & 70. Detailed evidence under the Secretary of State's Matters 4 & 5 (para.1.5 above) has been submitted (and summarised in Section 5) which shows conformity with those policies. In particular, and as other parties acknowledge, there is no longer the potential conflict with Policy 17 envisaged by the ES [COR/101, Table 3.1.2 & para.3.5.88].

4A.21 With regard to the policies of the adopted Mid Copeland Local Plan which are still in conformity with the extant Structure Plan, Nirex considers it not altogether proper to seek to apply Policy 6I to a temporary development akin to mining. The relevant reasoned justification refers only to residential development [COR/305, p.40, para.6.15]. In Nirex's view, it is debatable whether Copeland's wish to make the external appearance of the heapsteads look like those of traditional mines would diminish the visibility of the structures. Attention would certainly be drawn to the moving parts, perhaps thereby making observers more aware of the operations rather than less.

4A.22 As for Policy 6J, it is generally agreed that the character & setting of Sally Hill, the nearest listed building [para.2B.8 above], would not be detrimentally affected. The trees & woodland on the site would be substantially retained, and the minority affected would generally be replanted or reinforced [para.2B.18]: and BNFL as landowner has entered into a planning obligation to manage the woodland for 15 years [NRX/11/18], all thereby ensuring compliance with Policy 6Q. Finally, in accordance with Policy 6R, no important archaeological sites would be affected; and ample opportunity has been, & would be, given for archaeological recording & research.

4A.23 **Cumbria** considers that the first main issue which arises under the statutory development plan encompasses SP Policies 2, 5, 11, 13 & 25 and LP Policy 6I and is covered by the first 3 Reasons for Refusal. This issue is also of concern to many of those making **written representations** [eg WR/ACC/1, NTR/2 & SPC/1]. The policies seek to protect the countryside & the National Park from inappropriate development and visual intrusion. The area containing the appeal site is predominantly rural and open, with highly localised man-made features, albeit that the Sellafield Works is visible well beyond the coastal fringe and into parts of the fells. The visual impact of the RCF development would arise from its substantial scale in the landscape; the height, shape & size of its various buildings & structures; the surface & underground excavations; and the impact of lighting & general activity. Although the design & the revised landscaping scheme represent the best that can be achieved, they would do little to reduce the overall visual impact.

4A.24 The flat platform, cuttings & bunds would contrast with the undulating nature of their setting; and the large industrial-type buildings would not be in keeping with the rural landscape. The development would be visible from a number of points at close range & further afield. It would be seen both from lower ground to the south & south-west and from higher ground to the north-east & south-east within the National Park.

4A.25 The RCF would be inappropriate in terms of Policy 2 because it would be visually incompatible with the nearby National Park. The County Council & the National Park Authority have led evidence to show that the adverse visual impact would be significant from inside the Park as well as outside. Parts of the development would be visible from undeveloped open countryside in the Park, including some stretches of land identified on the Section 3 Conservation Map. Consequently the RCF would damage the character, special qualities & setting of the Park, and detract from the public's enjoyment of it, contrary to Policies 2, 5 & 11. The Kirkby Moor wind farm call-in decision [NRX/11/5] can no longer support Nirex's claim to the contrary. The reasoning to justify the disagreement with the Inspector's conclusions in that case was illogical in holding that the wind farm would not

directly affect the Park's appearance & character, as is evident to all now that the development has been carried out: and in any event the up-to-date development plan makes it plain that large scale renewable energy proposals can affect the Park without lying within it [COR/303, pp.53-4].

4A.26 SP Policies 13 & 25 and LP Policy 6I are not cast expressly in terms of inappropriate development. The siting, scale & design of the RCF would plainly not be well related to existing developed areas of countryside. For as Nirex accepts, the RCF would be in undeveloped open countryside, and yet not required to meet local infrastructure needs. Therefore it would be contrary to Policy 13. Similarly it would be an alien development in its rural setting, rising above its peripheral screening, and looking out of keeping by virtue of its size, shape & type of construction materials. Consequently it would conflict with both SP 25 & LP 6I.

4A.27 Thus, in the view of Cumbria & others such as the Ramblers Association & Seascale PC (which nevertheless supports the RCF on scientific grounds) [WR/SPC/1 & RAM/1], the development would cause visual harm to 2 interests of acknowledged importance & protected by the development plan, namely the National Park and the other open countryside. This means that the RCF has to be justified by need, as were the RCF/RCM/PRZ Boreholes; and this consideration takes the assessment directly on to Policy 54, with its first criterion that the sum of the development's benefits be shown to clearly outweigh the harm or any risks to the wider environment. Cumbria considers that in this case the criterion entails Nirex showing to the satisfaction of the Secretary of State that this RCF needs to be provided in the national interest. If Nirex fails because the Secretary of State concludes that Longlands Farm is not a sensible place on which to focus investigations, then Policy 54(i) would indicate upholding the last 3 Reasons for Refusal [para.1.5 above].

4A.28 Policy 57 is also critical to consideration of the appeal, in Cumbria's judgement. The first criterion of that Policy has recently been imposed by the Secretary of State, and so can be taken to represent his current policy. It would require a full repository application to address the issues of alternative locations and the suitability of the site. But due to the nature of Nirex's programme the RCF would represent a substantial commitment to proposing a DWR on this site (for the reasons reported in paras.3A.9-10 above), as is also argued in very many of the written representations. Therefore it would not be sensible planning to leave Policy 57 completely out of account until the DWR application stage. It should be a current issue whether Nirex's site selection process indicates that it has a good chance of meeting criterion 57(i). The insistence that Nirex can continue to focus on Sellafield, regardless of the inevitable environmental impact, until Nirex itself decides to rule Sellafield out actually reinforces Cumbria's commitment argument.

4A.29 There are no particular forms of words for specific tests to meet the first criteria of Policies 54 & 57. But the basic question now must be whether Nirex's decision in 1989 to focus on Sellafield & Dounreay in preference to proceeding with more robust geologies (BUSC sites) can be approved by the planning system. The 1989 endorsements of Nirex's decision by RWMAC & the Secretary of State were certainly not land-use planning judgements. Moreover the decision should be reviewed in the light of subsequent realisation that investigations of the preferred site will be much lengthier & costlier than envisaged in 1989. There is also the matter of the weight which the planning system should allow to be

attached to Nirex's penultimate site discriminator of "local support", as a short-term political consideration and not a long-term planning one.

4A.30 Whilst Cumbria is not trying to set a design target lower than the regulatory one, nor claiming that the PRZ would definitely fail to meet the latter target, the review of site selection for the DWR is now solely a function of the planning authority. As that authority, Cumbria is raising very substantial doubts whether a safety case could be made, and pointing to some fundamentally unsatisfactory features of the site in comparison with what is known about some others. Given the harm that the RCF would cause, and the environmental risks it would create, further investigations should first be carried out at a more promising site in geological & radiological terms, to check whether incurring the harm, risks, time & costs of an RCF at Longlands Farm would probably be worthwhile.

4A.31 Cumbria considers that it would be in both the public and Nirex's interest to draw back from Sellafield in this way for the time being. Even if a PCSA were eventually produced indicating that a DWR at this site should meet the regulatory design target, planning permission for the DWR could still be refused if it were not shown that due consideration had been given to alternative locations.

4A.32 It would be even more difficult for Nirex if the planning inquiry were reviewing the choice of this location after it had transpired that a DWR was predicted not to meet the design target, but the regulators had concluded that nevertheless an appropriate level of safety was assured, with further safety improvements achievable only at disproportionate cost. Any planning authority, considering a case which involved the rejection of more robust geologies merely because of the absence of local support, would be bound to conclude that the site selection process was flawed, and that to approve the application would be contrary to the principles of sustainability.

4A.33 As to other relevant policies in the development plan, whilst the RCF need not conflict with them to an extent which would warrant refusal, this is subject to the acceptability of the requisite planning conditions & obligations or other statutory controls. There are outstanding differences with Nirex over achieving conformity in particular with Policy 17 in respect of the protection of nature conservation interests; Policy 21 in connection with the control of noise; and Policies 22 & 24 in respect of the water environment (considered in Chapters 5D, 5E & 7A of this report).

4A.34 Copeland has assessed the proposal partly against the non-land use policies in the adopted Mid Copeland Local Plan (see para.2C.18 above); but, of the land use policies in the statutory development plan, it considers LP Policy 6I and SP Policies 21, 25, 54 & 57 to be the most relevant.

4A.35 Following Nirex in treating Policy 54 as central to the planning issues, Copeland makes several points about the balance of benefits and harm/risks under criterion (i). It is not national policy that there should only be one RCF at a single site: this is Nirex's decision. Although it is Government policy that there should be a DWR, this does not of itself increase the weight which should be given to the need for candidate DWR sites to be investigated, especially since Nirex prefers to be treated as a corporate developer rather than

a public body. The need for the facility should not, in any event, be assumed to be particularly pressing, for estimates of ILW volumes for disposal have recently been scaled down: and BNFL has a clear strategy for interim storage [CBC/1/2].

4A.36 Copeland has consistently held & expounded the view that, in seeking to dispose of nuclear waste, safety should be paramount. On this basis, permission should not be granted for the RCF unless it can be shown now that all the necessary consents for a DWR at this location are likely to be forthcoming subject only to the RCF providing satisfactory data. However, Copeland considers the currently proposed RCF science programme to be inadequate for this purpose. Also the need to progress towards a DWR has not been shown to justify this specific application for an RCF: investigations should continue on a broader front.

4A.37 Particular exception is taken by Copeland to Nirex's choice of Sellafield as one of 2 locations to concentrate upon as a result of a subjective judgement about a measure of local support for nuclear activities [COR/501, p.51, para.6.7.11]. This judgement seems to have been based mainly on a misreading of local authority responses to a consultation exercise on radioactive waste disposal [NRX/12/2, pp.1-8], not a systematic survey of public opinion. Moreover, Copeland's reply expressly said that local support is secondary to finding the "best" site [idem, p.1], and yet Nirex reversed this priority. Copeland's comment had been made particularly because it was feared that a dependence on civil nuclear activities might heavily influence local judgements about the acceptability of a disposal facility. Nirex's error of judgement is symptomatic of a flawed site selection exercise. Taking Cumbria's point that DWR application would probably be assessed against SP 57 (superseding LP 6C), Nirex has certainly not shown that it has given proper consideration to alternative sites.

4A.38 Furthermore, Copeland does not accept that criteria (ii) & (iii) of SP 54 would be met. This becomes clear when particular aspects of the development are assessed against specific policies of the development plan or agreed material considerations. SP 21 prohibits development which exposes the public to noise nuisance. Yet there is a grave risk of unacceptable levels of noise disturbance, especially at night; and Nirex will not agree to the conditions required to avoid this. There would also be a wide-ranging & significantly adverse impact upon local views & visual amenity, contrary to SP 25. The proposal would not have regard to traditional building design nor to the use of local materials, as required by LP 6I. Thus the scheme would not be carried out in a manner which would cause the least practicable harm, nor would adverse impacts be minimised. Contrary to Nirex's claim, the net socio-economic effects would be particularly adverse.

4A.39 Of the other parties, **Greenpeace** contends that it is plain from the scientific evidence that Nirex is uncertain whether the RCF would be in the best location for a DWR within the PRZ. It has a circular problem in that according to its own programme it cannot be sure that it has optimised the location until it has at least obtained the results of the RCF investigations. Yet those investigations might prejudice the radiological safety potential of the optimum location - a point also made by **FOE** [WR/FOE/2, S.3]. Therefore Nirex is not proposing to carry out the scheme in the manner which would cause the least practicable harm to the host environment, contrary to SP 54(ii) and the principles of sustainability.

4A.40 **FOE Cumbria & Mr Balogh** consider that SP 57 applies directly to the RCF. The plain & ordinary meaning of the words "concerned with" in the Policy is "relating to"; and the RCF would be concerned with investigating the suitability of the site for the final disposal of nuclear waste. Also, although the current intention is not to emplace any waste in the RCF, if the RCF were successful it would become part of the DWR. The RCF proposal conflicts with SP 57(ii), (iii) & (iv), in that, as also pointed out in some of the **written representations**, its safety & environmental consequences have not been fully examined and shown to be acceptable; adequate road infrastructure does not exist, nor is it being provided; and there would be an adverse socio-economic impact on West Cumbria. FOE Cumbria also suggest that SP Policy 63 is material to the infrastructure issue: and that Policies 60 & 62 are also relevant since it is proposed to treat most of the excavation spoil as waste to be disposed of on site.

4A.41 **FOLD** take issue with Nirex on the relationship between the development plan and the protection of the setting of the National Park. It has been nationally recognised since the Hobhouse Report of 1947 that the boundary of a National Park should not be regarded as a sharp barrier between amenity & recreational values within and disregard of such values without. The national indicative criteria in the Annex to Circular 7/94 of whether wind generators would be likely to have significant effects on the environment include locations within or likely to have significant environmental effects on a National Park. The Lake District National Park Authority is proposing to change para.1.11 of its Local Plan to make clear its view that SP Policies 2, 5 & 54 afford protection to the Park from inappropriate development around its periphery [COR/310, p.3].

4A.42 In FOLD's view the RCF would indeed have an unacceptable impact upon the Park due to its wide-ranging visual effects; the lighting, noise & additional traffic; and the damage to the amenity value of the local footpath network, as claimed too by the **Ramblers Association** [WR/RAM/1]. FOLD also consider that the development would have an unacceptable impact on an important area of open countryside by reason of its location, scale & design, contrary to SP Policies 13 & 25. The clear conflict with Policy 13 is enough in itself to require Nirex to show that it has fully considered alternative sites if permission is to be granted. Finally, FOLD's judgement is that the landscaping & screening measures would do little to mitigate the adverse effects, and might emphasise the development's presence, contrary to SP 54 (iii).

4A.43 **My conclusions** on the conformity of the proposals with the principles of sustainability as incorporated in the development plan are that, as the proposals are for a development which is more national than local in character, so they should comply with the overall requirements which have been drawn together in SP Policy 54. The conformity of the basic DWR concept with sustainability principles has of course been settled nationally in Cm 2919.

2C.14

4A.44 The second part of Policy 2 implicitly relates only to development within the relevant area of conservation importance, in this case the Lake District National Park, but the first part is framed to protect, amongst other things, the County's scenic beauty overall. In my view, this must apply to any site in a setting of some scenic beauty, which may or may not include part of the National Park. I consider that inappropriate development means in such

3A.19  
3A.24

a context development that would look out of place: and I am not aware of any provision of national policy which makes an exception to this for an RCF or a DWR. Moreover, I have already concluded that, as a matter of law, the material considerations in this appeal are not confined to the immediate environmental impacts of the development now applied for. The RCF, RCM & PRZ boreholes previously permitted are part of the RCF project: and a broad assessment of prospective effects of the DWR would also be reasonable.

4A.45 Although Policy 5 was not mentioned in the Reasons for Refusal, it was specified in para.2.1.3 of Cumbria's Statement of Case, and Nirex concurs that it is relevant. My view is that as a broad strategic policy its main value to this appeal lies in its indication of the basic elements of the National Park which make the Park an especially important interest to be protected by the planning system.

4A.46 Policies 8 & 9 were introduced into the inquiry by Nirex itself despite a lack of reference to them in either the Reasons for Refusal or the Statements of Case, but I agree that they are relevant. SP 8 provides some strategic background to the socio-economic issues discussed in Chapter 5B, whilst SP 9 does the same for the transport infrastructure issues covered in 5C.

4A.33

4A.47 Turning to Policy 54 as the development plan's basic application of the principles of sustainability to projects such as this, I am surprised by Nirex's ultimate misapprehension of the cases against it on criteria (ii) & (iii). It seems to have been unduly lulled by Cumbria's part acquiescence. For to the extent that there are disagreements with Cumbria over the imposition of controls to alleviate harm or mitigate impacts there is implicitly a claim of potential failure to comply with the criteria. Moreover, there are some other parties which directly allege conflict with the criteria. There are also parties such as Gosforth, Mr Spendlove & Ms Skinner who do not relate their cases to the criteria but in effect suggest contraventions of them.

4A.5

4A.48 Criterion (iv) of Policy 54 includes a specific provision for development within National Parks, but its general provision relates to harm to any areas or features of international or national conservation importance. Nirex accepts that this includes potential transboundary harm to the Lake District National Park from the RCF. I note in passing that areas of national conservation importance are defined by the Structure Plan [COR/303, p.14, Footnote to Policy 2] as including such areas of nature conservation importance as are defined by PPG9. The Site Designation Table in the PPG of course makes all notified SSSIs sites of at least national importance. The Natterjack Toad habitat downstream of the appeal site is a potential SSSI, and therefore a potential area of national conservation importance in terms of Policy 54 (iv).

2C.19

4A.49 It is criterion (i) of Policy 54 which has been the subject of the most detailed submissions about the application of the Policy. Some of the submissions have been over elaborate and too rigid, in my view. The wording of the criterion is very clear, and it obviously encompasses a wide-ranging balancing exercise. On the one side can be national & regional benefits as well as local ones, and on the other there can be harm or risks to the wider environment as well as the local environment. Thus, as a matter of up-to-date development plan policy, as well as of law, consideration of the appeal cannot be confined solely to the local impact of the RCF.

4A.50 I agree entirely with Nirex that the balancing exercise is a relative one: the less the harm and the fewer the risks shown, the smaller the benefits required manifestly to outweigh them. Also it is obvious from the start that there is potentially an appreciable benefit, namely the implementation of a key stage in national radioactive waste management policy. However, relativity applies to both sides of the balance, and the developer cannot arbitrarily set its own thresholds of the type or degree of benefit beyond which it is said the balance is bound to be in the development's favour. I have already concluded that, as matters of law, it would be material to this appeal to examine comparable sites; and the examination should take place sooner rather than later; and the planning authority was right to require further information on the developer's choice of location. It therefore seems to me to be of little consequence that the Policy does not explicitly require such an examination in this case.

4A.51 Moreover, I have also concluded that, as matters of national planning policy, the planning authority can examine the reasons for selecting the chosen site: the authority can also determine that a development likely to satisfy pollution control requirements may nevertheless present an unacceptable risk in planning terms: and consequently a comparison of the potential radiological safety offered by the various locations is also relevant to the planning balance. Whilst it would be going too far in a relative balancing exercise to declare that safety is paramount, it seems to me legitimate for the planning authority to conclude that the social, economic & environmental contexts suggest that greater, or even, the greatest, weight should be attached to safety factors. On the other hand, my view is that a developer can expect its own social or economic reasons for selecting a site also to be regarded as material when issues of need & alternative sites are being considered.

4A.52 In short, I do not consider that there should be set tests or formulae for applying Policy 54. Also, since the basic issue itself is whether the development would accord with the development plan, there is no general presumption on this issue in favour of the development. Whilst there is an initial onus in the debates between the parties on those who put forward the view that the development should not be allowed, the burden of the argument on any particular matter can thereafter swing to & fro. In this case, a final conclusion on conformity with SP 54(i) can be reached only after all the factors properly sought to be put into the balance by the various parties have been examined.

4A.53 Personally I regard the words "concerned with" in Policy 57 as vague & therefore ambiguous when only the first clause of the Policy is read. However, the wider context of the subsequent wording of the Policy's criteria, especially (ii) & (vii), suggests that a narrow meaning, of installations actually containing nuclear waste, is intended: and any lingering doubts about inapplicability to the RCF are resolved by the use of the phrase "future BNFL & Nirex proposals" in the first sentence of para.4.72 of the Explanatory Memorandum [COR/303, p.55]. Cumbria nevertheless claims that it is expedient to look at criterion 57(i) now, but I consider that it is a needless complication to argue that part of an admittedly inapplicable development plan policy is actually relevant. In this instance the law & national planning policy effectively provide already that due consideration should be given to alternative locations.

4A.54 Looking now at particular claims of harm, my experience is that the Hobhouse Report's view about the merely gradating effect of the delineation of National Park boundaries is generally accepted. Having viewed the Kirkby Moor wind farm from various

vantage points inside, & against the background of, the Park, my judgement is that it is an example of the visual harm which can be caused to the fringe of the Park by taking an unorthodox view that development outside the boundary cannot directly affect the appearance & character of the Park. Whilst some significance must of course be attached to the transitional effect of crossing the policy boundary, its line should not be treated like a kind of artificial blindfold.

4A.55 The scenic beauty & recreational value of the Lake District National Park are of course interests of internationally acknowledged importance, which Policy 5 would firmly protect & enhance. Policy 11 is not confined in terms to development inside the Landscapes of National Importance, and opposes change to the present characteristics & qualities of such Landscapes. Even if it were thought that technically the Policy is not directly applicable to development outside the Park, in my judgement the Park's characteristics & qualities should still be taken into account in assessing the basic merits of whether this area of international importance would actually be harmed by nearby development. On the other hand, I do accept that regard should also be had to existing intrusions into the setting of the development.

GB.12 4A.56 In relation to Policy 13, the site is in the undeveloped open countryside as defined by the Explanatory Memorandum [COR/303, p.23, para.3.16]. I do not consider the RCF to be of a type of development that inevitably has to be in the open countryside. The pitheads of traditional deep mines are to be found within & on the edges of developed areas as well as in the countryside. The site would probably have been within the Sellafield Works complex if the BVG there had proved more accessible. The location of the PRZ has been determined solely by the accessibility of an area of rock potentially suitable to host the DWR. Accordingly the justification for the departure from Policy 13 falls back on the degree of benefit to be obtained from a further, intrusive investigation of this rock.

2B.4 4A.57 Even if the essentially transitional nature of some of the development applied for really means that the aim for enhancement in the first part of Policy 25 cannot be met, it cannot be used in my view as an excuse for an unnecessarily poor standard of design. It is still reasonable to require the development to try and comply with the middle part of the Policy, and be in keeping with the local landscape character, well integrated with the existing pattern of farmland & woodland, and in keeping with the local vernacular tradition where appropriate. On the other hand, I do not consider that Local Plan Policy 6I is also applicable, since the reasoned justification is part of a local plan, and para.6.15 makes it clear to me that the Policy relates to residential development.

2B.5 4A.58 Generally, I agree that the other statutory development plan policies mentioned by Nirex and other parties are applicable. But I do not see the need to come to any preliminary conclusions on the proposals' conformity with these others at this stage, save to note that compliance with SP 17 would depend very much on the view taken on the adequacy of the mitigation measures proposed to protect the important nature conservation interests at risk.

## **4B. CONFORMITY WITH RETAINED & EMERGING POLICIES**

**4B.1** **Nirex** makes no particular submission to the inquiry concerning the transitional development control policies which have been retained from the 1988 Structure Plan as now more appropriate to local plans; and turns instead to the emerging local plans themselves. The key policies in the 1988 Plan which were applicable to the RCF so far as Nirex was concerned were C1 & C6, but these have now been replaced by SP 13 & 54.

**4B.2** From the pre-replacement standpoint, the ES assesses retained Policy C5 as in support of the development, whilst 1988 Policies C20, F4 & M1 are assessed as not in conflict [COR/101, p.55, Table 3.1.1, cf table appended to COR/301]. Policies T17 & T21 are not identified as material to the development at all by the ES. Only Policy P6 is both assessed by the ES as potentially in conflict with the development and still identified by Cumbria as a transitional development control policy. The ES does not specify the points of potential conflict, but the implications are that they would be the visual impact of the spoil disposal area [2B.14] and its effect on adjoining land uses, by virtue of factors b. & c. in Policy P6 [COR/301, p.7].

**4B.3** In turning to the emerging Copeland Local Plan, Nirex considers Policies DEV 1 & ENV 33 as of principal relevance [2C.26-7]. Whilst the appeal site is beyond any town or village development limits defined by DEV 1, the RCF development is clearly within the 6th set of developments permitted by the Policy to be carried out outside those limits, because it would be development in relation to the nuclear industry. This LP exemption is seen by Nirex as reinforcing its argument that the RCF would not be inherently inappropriate development in the countryside [4A.18].

**4B.4** ENV 33 is the most significant of all the relevant LP Policies, in Nirex's view [NRX/11/11, para.1.30-1], because it supports the principle of this very appeal development. Its 6 criteria, as recommended to be modified, would be met. This is shown in Nirex's detailed evidence on the planning merits (summarised in Section 6 of this report in respect of the first 3 criteria and in Section 5 in relation to the last 3).

**4B.5** As to the cross-references in the 4th & 5th criteria of ENV 33 to other LP Policies, the development's conformity with DEV 4 & IMP 1 [4A.28-9] is demonstrated mainly in those parts of Nirex's case which relate to the lack of any long-term, adverse socio-economic impact [Ca.5B]. Briefly, there is no demonstrable planning objection on which to base a requirement for an obligation [NRX/11/11, para.1.19]; and also Copeland's suggestions for inclusion in the planning agreement are unreasonable, inappropriate & irrelevant.

**4B.6** DEV 3 [2C.30] is regarded by Nirex as another significant LP Policy in that it seeks to give local effect to the requirements of SP 25 [2C.12]. The general objective of the Policy to respect the character of the surroundings & contribute to a strong sense of place must be subject, in Nirex's judgement, to practicability in terms of safety & the functions of the proposed development. Whereas, in relation to this objective & the 1st principle of the Policy, Copeland wishes the upper parts of the shafts' winding gear to remain exposed in traditional mining fashion, Cumbria as the planning authority prefers them to be clad and has now agreed a revised colour scheme [COR/113, Scheme A]. Nirex considers this to be the

better design approach because Copeland's concept might tend to draw more attention to the presence of an industrial-type activity in the locality. But it would be open to the Secretary of State to agree with Copeland, and exclude from the grant of permission the external design of the upper sections of the headgear & hopper, reserving it for subsequent approval.

4B.7 As to the 6th principle of Policy DEV 3, Cumbria concedes that there would be no conflict with Policies TSP 5-8 [2C.31], because the level of traffic anticipated would not have an unacceptable impact on the local highway network, nor require the provision of footways or road widening for pedestrians or cyclists. It also agrees that a link road between Sellafield and the Surface Site would have an adverse visual impact. Moreover it accepts that the development would not be of a sufficient size to make a rail link practicable in terms of Policy TSP 13 [2C.32].

4B.8 Cumbria also agrees that the proposals, subject to agreed conditions, would be consistent with LP Policies SVC 1 & 5 [2C.34] and ENV 11, 13, 14, 15, 26, 27, 51 & 52 [2C.36-41]. Apart from DEV 3, the only emerging LP Policies which the ES assesses as potentially in conflict with the RCF proposals are ENV 5 & 23 [COR/101, p.56, Table 3.1.2]. The implications are that the main concerns are landscape impact of the spoil disposal and the effects of that & other activities on the habitats of badgers & perhaps natterjack toads. The mitigation measures for these are considered in Chapters 5A & 5E of this report.

4B.9 In relation to the National Park Conservation Map and Policy NE 5 of the deposited National Park Local Plan [2C.42], Nirex does not accept that the appeal development would significantly harm the character or appearance of any part of the National Park.

4B.10 Turning to the Consultation Draft of the Minerals & Waste Local Plan [2C.43], Nirex emphasises the obsolescence of Appendix 1 due to the drafting having preceded the publication of the 2 White Papers. On the other hand, it claims that Draft Policy 43 is in line with its view that the planning merits of mineral exploration proposals are confined to their immediate impact, and are not concerned with the potential for subsequent appraisal & production development [COR/311, para.5.20.1, last sentence]. Moreover, the spoil disposal arrangements of the RCF proposals accord fully with Draft Policy 51, because there would obviously be net benefits in disposing of the spoil on the PRZ adjacent to the Surface Site rather than transporting it to an existing landfill site.

4B.11 **Cumbria**, like Nirex, makes no specific submissions concerning the transitional development control policies, nor for its part about LP Policies DEV 1, 3 & 4.

4B.12 It does submit that the most important criterion of LP Policy ENV 33 as recommended to be modified is the 2nd. The RCF proposal must demonstrate at this stage that further investigations of the suitability of the Sellafield site for an ultimate repository via the RCF are justified. Although Nirex points out that in recommending this wording the Local Plan Inspector specifically rejected a reference to alternative locations as anticipating a DWR proposal, the Inspector nevertheless stated that the recommended wording should not inhibit consideration of all matters relevant to this issue at the RCF inquiry. Cumbria's case is that Nirex has failed to show that further investigations of the Sellafield site are justified at this stage. On the other hand, Cumbria has concluded on balance that there would not be

sufficiently adverse social & economic impacts as to warrant seeking a planning agreement under the 5th criterion of ENV 33 & Policy IMP 1.

4B.13 In the case of Policies ENV 1-5 [2C.35], Cumbria notes the possible effects on the potential SSSI down Newmill Beck & its population of natterjack toads, and also the loss of an area used by badgers for foraging. However English Nature & the Cumbria Wildlife Trust have not objected to the proposals [COR/107, pp.101 & 155]. Although English Nature is concerned about the risk to the potential SSSI of changes to the water quality & flow in the Beck, strict monitoring & enforcement by the EA of the extant water discharge consents for the development would provide adequate protection.

4B.14 In relation to Policy ENV 29 [2C.39], there is an outstanding disagreement with Nirex over controlling hours of operation. It is also important to appreciate that, although Cumbria does not claim that there would be insuperable difficulties in complying with the environmental & transportation policies in the Local Plan as recommended to be modified, it does consider that the increases in traffic, noise & dust would contribute to the loss of rural character & the overall adverse impact of the proposals.

4B.15 Moreover, it does submit on behalf of the National Park Authority [CCC/3/2] that some of the mountain, moor, heath & coast delineated by the Conservation Map in the National Park Plan would be visually affected by the appeal development. Similarly, the Proposals Map of the deposited National Park Local Plan [COR/309] defines as parts of the Quieter Areas subject to Policy NE 5 some stretches of the western fells from which portions of the RCF superstructure would be seen [CCC/3/1, Figs.2 & 3a]. Again on behalf of the Authority, Cumbria submits that the RCF would also visually intrude into these Areas.

4B.16 Copeland points out that Nirex does not merely accept but indeed urges that considerable weight should now be attached to the version of LP Policy ENV 33 which is recommended by the Inspector. Nirex understandably takes this line because the Policy supports the principle of the RCF, but the fundamental point is that most of the specific criteria of the Policy are not met by the appeal proposals. FOE Cumbria add that the conflicts with the criteria of ENV 33 amount in themselves to a strong case for dismissing the appeal.

4B.17 The proposals are not justified by relation to the proposed repository site, because that site has not been chosen by a process which regarded safety as paramount, contrary to the 1st & 2nd criteria. In relation to the 3rd criterion, Copeland also has serious reservations about the scope of the activities to be undertaken in the RCF, particularly the lack of practical tests of the engineered & near-field barriers despite the national policy option of retrievability [GOV/208, paras.99 & 100]. The crucial 4th criterion would very plainly not be met, since the landscape & traffic impacts would be unacceptable; and the Borough's environmental, social & economic resources would all be prejudiced, contrary to the new Policy DEV 4.

4B.18 Nirex has spurned Copeland's suggestions of matters to be covered by a planning agreement, but those suggestions are founded on Policy IMP 1, by seeking to address adverse social & economic costs & effects and to positively encourage investment. It is not for the local authority to go further, and Nirex is in breach of the 5th criterion by failing to bring

forward draft obligations to overcome those clear planning objections to its proposals which cannot be met simply by the imposition of conditions.

4B.19 As for Policy DEV 3, to which also considerable weight should be attached, Copeland is not complaining about the functional nature of the RCF's superstructure but, with the full support of **FOLD**, about the admitted failure to obtain skilled design advice on its external appearance. Nirex has taken professional advice merely about the colour scheme after the start of the inquiry. Also it concedes that views of just parts of the headgear could have moderate to substantial adverse visual impacts, even against a background of the Sellafield Works. Yet traditional local mining headgear is characteristically open [CBC/1/16], not enclosed as in this case. Moreover, the most visible parts of the operational buildings would have flat roofs, and their walls would be clad by plastic-coated, profiled metal sheets. They would be wholly inconsistent with the rural vernacular of pitched roofs & stone or brick walls.

4B.20 Whilst Copeland & FOLD are not insisting that the operational buildings should slavishly replicate the vernacular, the submitted external details would do nothing to assist the buildings to harmonise with the locality. They are part of the application, and cannot be varied or excluded by the Secretary of State. **Cllr DWT Gray** contrasts Nirex's approach with that in Sweden, where the surface facilities at the Äspö Hard Rock Laboratory have been sympathetically designed to match their rural surroundings [GRY/1/4].

4B.21 Having assessed the appeal proposals against the other relevant policies in its emerging Local Plan, Copeland considers that they would conflict with 2 others as well as ENV 33, IMP 1 and DEV 3 & 4. These are TSP 6, because the detailed traffic evidence shows that the relevant stretches of the A595(T) are not to an appropriate standard of road, and Nirex has declined to undertake to improve them; and ENV 29, since Nirex refuses to amend its proposed working arrangements, or accept conditions, to bring the noise generated by the development down to acceptable levels. There would also be a conflict with the spirit of TSP 7, because of the lack of provision for cyclists & pedestrians on the A595(T), albeit the Policy itself applies only to on-site provision.

4B.22 There would arguably be a conflict with EMP 11 [2C.33], for this would be a relatively large-scale, employment-related development outside established or designated employment areas. On the other hand, the already approved conversion of the Longlands Farmhouse [CBC/1/15] accords with EMP 17 [2C.33]. In the case of ENV 5, it is recognised that the development could affect species protected by law, but the mitigation measures proposed should secure adequate amelioration.

4B.1  
4B.11  
2C.22-5  
4B.23 **I conclude** from the representations that no party attaches particular weight to the transitional development control policies retained from the 1988 Structure Plan. They do not seem to me to differ significantly from the policies in the emerging local plans in their approach to any interest of acknowledged importance. Therefore, like the parties, I have concentrated on the emerging policies.

4A.56  
4B.24 My view is that there is an accord between SP Policy 13 and LP Policy DEV 1 as to whether the appeal site is located in the open countryside. The second sentence of para.2.3.2

COR/306 of the Local Plan's reasoned justification, which it is not proposed to modify, describes the land outside the defined limits of the classified settlements as large areas of open countryside & undeveloped coast with scattered hamlets & farmsteads. Later in the paragraph the RCF is implicitly referred to as a large project which does not fit neatly into a traditional settlement pattern. The nearest settlement to the appeal site which is defined in an emerging local plan is of course the village of Gosforth, but as that is about 400 m away on the eastern side of the A595(T) it is in the National Park, and so delimited by Policy NE 2 of the deposited Park Local Plan [COR/309, Inset Map 7].

2B.1  
2B.2  
2C.14  
4B.16  
4B.5  
4B.25 Thus ENV 33 supports the RCF in principle as within one of the exceptional categories of development permitted outside settlement limits. However the RCF proposals are expected to satisfy all 6 of the Policy's criteria. Although these substantially overlap the requirements of SP 54 and encapsulate a number of the major issues on the planning merits, they are not merely indicators or options providing a flexible framework for the RCF, but amount to a set of preconditions which Copeland & others claim have not been met. Other material considerations have of course to be taken into account too; and in particular ENV 33.5 & Policy IMP 1 would only bite if substantial planning objections incapable of being overcome by conditions are identified. But it has already been established at this stage that no planning obligation at all is in fact being offered, over & above the agreement already entered into by BNFL for the management of its local woodlands for 15 years from the start of the RCF [NRX/11/18].

COR/111,  
pp.13-4  
4B.6  
4A.19  
2B.10  
5A.11  
4B.6  
4B.26 In considering the design of the development in accordance with LP Policy DEV 3, it seems to me that Nirex is relying primarily on its landscape architecture to show respect for the character of the surrounding area. The external appearance of the superstructures is being excused on general utilitarian grounds from the criticisms of looking out of place, as well as because of the temporary nature of the development. The cladding of the upper headgear & hopper is an integral design feature of the full, original application, and a focal point of the visual assessment in the ES. To require the omission of the cladding would, in my judgement, amount to an unacceptably major alteration of the application, without adequate information on the appearance of the structures which would be exposed, whereas the details submitted during the inquiry are merely mitigating the appearance of the cladding.

4B.22  
COR/102,  
p.52  
4B.27 The road traffic impact is to be considered under SP Policy 36 & LP ENV 33.4 as well as DEV 3.6 & TSP 6, and it is not appropriate to come to any preliminary conclusions on that impact at this stage. The same is true of noise control under SP Policy 21 & LP Policy ENV 29. On the other hand, I consider that the applicability of EMP 11 can be ruled out at once, since I do not accept that the RCF would be employment-related development in the normal sense of industrial, business or kindred developments. However, there are still difficulties over nature conservation policies such as ENV 5. The precise measures for safeguarding the natterjack toads down Mill Beck have yet to be settled: whilst Cumbria & Copeland seem to have overlooked that English Nature's inference [COR/107, p.104, para.2)] that alternative badger foraging areas are guaranteed by the planning application is incorrect.

2C.42  
4B.15  
4B.28 The National Park Conservation Map and the designation of Quieter Areas by Policy NE 5 of the Park's deposited Local Plan amplify for me some of those characteristics & qualities of the Park which should be taken into account in assessing whether the Park would actually be harmed by the RCF.

4B.29 The consultation draft of the Minerals & Waste Local Plan can be accorded only limited weight, in my view, since it is at an early stage in the plan preparation process. In any event, I do not agree that Draft Policy 43 supports Nirex's claim of a lack of relationship between the RCF and the DWR. This is because, as I have already concluded, the RCF is akin to appraisal development, not mineral exploration. On the other hand, I do accept that the proposals for the disposal of spoil on site are in line with Draft Policy 51, since I note that para.6.4.37 of the draft reasoned justification defines landfill as including land-raising, which is what would be entailed in this case.