The Isle of Harris Superquarry: Concepts of the Environment and Sustainability

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Proposed superquarry development at Lingerbay, Isle of Harris, by Redland Aggregates Ltd. Computer modelling and photomontage © Turnbull Jeffrey Partnership, Edinburgh. Aerial photograph © P. and A. Macdonald.

ABSTRACT: In 1991 Redland Aggregates Ltd. put forward a proposal to embark upon the largest mining project in Europe, the chosen location being the remote island of Harris and Lewis in the Western Isles of Scotland. The proposal sparked off an impassioned debate between planners, conservationists and developers, while the local residents have attempted to come to terms with an operation on a scale previously inconceivable on the island.

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This paper attempts to examine the proposed development from a sociological angle – it is less concerned with justifying or condemning the project on economic or political grounds and more with analysing the roots of the various viewpoints held by those involved, willingly or unwillingly, in the debate. From this analysis arise implications regarding different perspectives on the environment and different interpretations of the term sustainable. It is argued that these diverse perceptions are grounded in different interpretations of the environment, shaped by the cultural and historical context within which the groups or individuals that hold these views exist and interact. Ultimately, the paper makes a plea for a wider recognition of the diversity of meanings and interpretations implied by the term 'environment', a broader definition of the term 'development', and an expansion of the concept of sustainability to incorporate the variety of situations and perceived needs of different cultures.

KEYWORDS: Cultural theory, empowerment, Isle of Harris, sustainability

1. INTRODUCTION

In March 1991, Comhairle nan Eilean, the local authority for the Western Isles of Scotland, received a planning application of mammoth proportions. Redland Aggregates Ltd, a multinational mineral extraction corporation, applied to extract 600 million tonnes of igneous rock – anorthosite – buried beneath the wilderness of South Harris, for export to destinations in southern England, Europe and America. This means ten million tonnes per annum for 60 years. It is 'without doubt … by far the most significant planning application with which the Council has had to deal.' (Comhairle nan Eilean 1993a, p.1).

Reactions to this proposal have been mixed. Comhairle nan Eilean recommended that the proposal be approved in the belief that it presented the opportunity for widespread job creation throughout Harris (Comhairle nan Eilean 1993a). But Scottish Natural Heritage (SNH), the statutory body responsible for safeguarding Scotland's natural environment, objected to the development on grounds of the unknown environmental implications and requested that the Secretary of State call in the development for Public Inquiry (SNH 1993a). A consortium of voluntary conservation organisations, including Friends of the Earth Scotland (FoE Scotland), have also campaigned against the proposal and submitted evidence at the Public Inquiry which lasted from 11th October 1994 to 7th June 1995.[1]

So far the debate has hinged on the issues of the local environment, employment and sustainability. But the discourse has been largely external to

South Harris and its population: Redland Aggregates Ltd is part of an English based multinational company with hitherto no major commercial links with Scotland; the principal protagonists and antagonists are Comhairle nan Eilean, based sixty miles north at Stornoway, and SNH; and of the remaining voices, the most strident have been the nationally based conservation organisations.

The significance of Lingerbay

The proposed superquarry at Lingerbay on Harris is of particular significance in the current debate on sustainability and the environment. Firstly there is the size factor: with the arguable exception of Glensanda on Loch Linnhe, quarries approaching this scale have never been developed before in the UK. Secondly, Lingerbay may be one of several superquarries to be opened on the West coast of Scotland over the next decade and thus the development carries much wider environmental implications. Thirdly, it would be a huge, multinational based development in a remote, relatively undeveloped region, the market being hundreds of miles from the point of extraction. Important parallels exist with developments in Third World countries, where the interests of the developer are frequently at odds with those of the recipient population.

Aims

In this paper, it is argued that different groups perceive the environment and concepts such as development in different ways, according to their own particular cultural background. The aim of this paper is not to condemn or justify the superquarry proposal, but to explore the range of views put forward by different groups and to investigate the interpretations of the environment that underlie these views. It is argued that these interpretations inform views of social needs and ultimately the meanings conferred to terms such as ‘development’ and ‘sustainability’. Finally, it is suggested that development proposals are unlikely to be sustainable unless they address the needs of all the groups affected, as those groups themselves see their needs.

2 LINGERBAY: THE PRINCIPAL ISSUES

Although this report is concerned with the different attitudes towards the superquarry and what motivates them, opinions must be seen in the context of the anticipated effects and development issues. Among the most important are employment prospects, the Sabbath, marine pollution and the landscape. This section considers these principal issues.

International issues

Although Redland have been reluctant to reveal its end-use, the general consensus among conservationists is that most of the rock which is due to be hacked out of the mountains of South Harris will be used for road infill in southern England, America and the continent (FoE Scotland 1994). But the idea of quarrying in a National Scenic Area for the purposes of encouraging more traffic has appalled the conservation lobby. Others bemoan the prospect of selling out a valuable natural asset to foreign interests with few tangible benefits to the Scottish people (Dunion 1993). This is particularly irksome for the many individuals who feel that recent Scottish history is littered with examples of this, not least being the freedom of foreign trawlers to take the lion's share of the fish from Scottish waters.

Development

Harris is an economically depressed area with the main sources of income coming from crofting (including fishing) and tourism. The population is currently 2,141 and declining, with a marked exodus of young people from the island, while unemployment stands at 18% (Comhairle nan Eilean 1993a). The most critical issue as far as many of the Harris people, and certainly the local council, are concerned is the need for jobs in the Western Isles Region (Harris IDP Steering Group 1993; Mineral Planning 1993b). The Council has estimated that up to 290 jobs would be created by the development, but many people are still worried that the jobs may go to outsiders.

Landscape

Perhaps the most potent planning consideration would be the location of the quarry in a National Scenic Area (NSA). While the development is clearly not within the spirit of NSA designation, Redland have argued that:

(a) the site occupies only 1% of a sparsely populated island and contains nothing especially unique within Harris; and,

(b) the quarry would only be visible from the south-east (i.e. from the sea) because the ridge formed by the peaks Beinn na h-aire, Roineabhal and Sletteval and which backs onto the quarry, would not be breached.

A key issue in the landscape debate is restoration. The Council has indicated a strong preference for progressive restoration – work undertaken within the lifetime of the quarry, including revegetation. Redland have suggested that at the close of quarrying operations they could leave a deep sea-loch backed by a high, steep-sided 'corrie' – a landscape which, they claim, could have considerable aesthetic appeal (Redland Aggregates 1991).

Noise dust and vibration

> Our island will be overhung by a huge pall of death-grey dust that will find its way into every corner of our houses and into our lungs, shortening our lives, stunting the health of our children from the day they are born or even before. (McLeod 1994, p. 7)

While not everyone shares this prophecy of doom, dust and noise are of particular relevance in a very quiet and clean rural area where people's tolerance may be lower. A survey undertaken by Harris IDP Steering Group (1993) showed that most Harris residents felt that the best thing about living on the island was 'peace and quiet'. Redland have so far failed to agree to the Council's proposed limits on vibration and noise. Of more crucial concern to many local residents is how any conditions imposed could be enforced: who would police the quarrying activities and how could evidence be provided of any flouting of these conditions?

Marine pollution

Fishing is one of the staple industries of Harris. Naturally, a principal area of concern has been the risk of marine pollution. Ships of up to 120,000 tonnes would discharge up to 60,000 tonnes of ballast water in and around the harbour area. The waters around Harris are Grade A – the highest level of purity recognised in sea water – and the success of the fishing industry depends to a great extent on this reputation. There is an added fear that Redland, rather than the Comhairle, will end up as the harbour authority: could this lead to the undesirable scenario of the developer acting as poacher and game-keeper? (FoE Scotland 1994).

Sabbath observance

> There is not only a determined commitment among many Hebrideans to perpetuate the ancient Biblical interpretations of the Scriptures, but a fiery belief in preserving an uncontaminated state of righteousness. (Cooper 1991, p. 20)

Local communities have indicated that they regard observance of the Sabbath as of critical importance in the acceptability of the proposed development. In Harris on a Sunday, no shops are open, golf is forbidden, it is (in theory) impossible to buy an alcoholic drink, and in some strict households food is prepared the previous evening. But such determined adherence to the Sabbath may be more an expression of self-identity than a reflection of religious fervour (Cooper 1991). To many islanders the operation of a superquarry on a Sunday would be more than just an intrusion: it would spell the start of an irreversible disintegration of that same set of cultural values which they feel makes Harris

unique. However, the Council has indicated that it does not consider the Sabbath to be a planning issue and thus it would not be appropriate for Conditions or Restrictions to cover this issue (Comhairle nan Eilean 1993a).

Sustainability

This has been cited by all the major conservation organisations as the most potent reason for refusing the application. To many environmentalists there seems little doubt that every aspect of the development is inherently unsustainable, but the developers and the Council question whether sustainability is relevant to this type of land use. Perhaps the disagreement stems from the fact that there is more than one definition of the term 'sustainable'.

3. THE DIVERSITY OF GROUP PERSPECTIVES

This section investigates responses[2] by nine different groups (see Table 1) as regards their opinion on the superquarry and their understandings and evaluations of the term 'environment'. The groups chosen represent a range of different viewpoints. Two are government bodies, the Scottish Office being nationally based and distanced from Harris, Comhairle nan Eilean being essentially local. Two are environmental groups: APRS (the Scottish equivalent to CPRE) is a mainstream, nationally based conservation organisation, FoE Scotland is more radical. Two groups represent the local population: crofters/fishermen merit a separate group as these traditionally formed the mainstay of the local economy, and incomers are those people who are not born and bred on Harris but who have moved on to the island as adults.[3] The Quarry Benefit Group[4] is a consortium of local individuals representing the interests of the local population, and Redland is the developer. The groups represent a range of different interests – development, conservation and local community – and represent people from within and outside the Isle of Harris.

Opinions relating to the Superquarry

What are people's feelings towards the concept of superquarries and their suitability as development projects in Scotland or elsewhere?

An interesting pattern emerged from the responses which was based on the geographical scale of group concerns.

- FoE Scotland, with its global remit, was concerned with the global implications of superquarries, including the polluting effects of the rising volumes of traffic that would surely follow expanding road systems.

- Government bodies (Scottish Office, Comhairle nan Eilean) were concerned with development at the national or regional level, justifying the existence of superquarries in terms of their contribution to economic development in the area concerned.
- Harris residents (not incomers) were as a rule unhappy about expressing views on an overall concept of superquarries. Most people considered that each proposal should be considered on its own merits and many did not consider it to be their concern to express views on developments planned outside their neighbourhood.

Many islanders were alarmed by the size of the proposed development, irrespective of whether or not they were in favour. Concern was directed towards the invasion of sense of place by a development that was totally out of scale to any other on the island, rather than linked to issues such as the visual impact. Views on the Harris superquarry are illustrated in Table 1.

Group	**Views on the Superquarry**
Comhairle nan Eilean	An ideal catalyst for development in the region
Scottish Office	Good for economic development in western Scotland, subject to possible environmental drawbacks
Scottish Natural Heritage	Much too big for the area, and it will threaten the landscapes and the Harris culture
Friends of the Earth (Scotland)	Unsustainable for the environment, both locally and globally, and for the local community
Association for the Protection of Rural Scotland	Presents a threat to local wildlife and will damage the beautiful landscape
Quarry Benefit Group	The influx of outsiders and the huge size are causes for concern, but it may provide employment
Crofters/fishermen	Mixed feelings, unsure if it will affect them. Employment may be a bonus, but influx of outsiders and marine pollution are possible drawbacks
Redland Aggregates	Good for jobs, resource exploitation and economic growth. It may improve the environment in the long term
Incomers	Threatens the environment and the way of life on Harris

TABLE 1. Views on the superquarry

Perceptions of the environment

What were considered to be the most crucial issues at stake, in particular those that had swayed the interviewee's opinion in favour or against the proposal?

The issues which were considered by groups to be most critical – those which had the most influence in swaying their opinion in one direction or another – are shown in Table 2. A broad pattern emerged:

GROUP	Scale	Crucial Issues	Landscape Perceptions	Environmental Problems
Comhairle nan Eilean	Western Isles	Employment economic growth population	Of scenic value but not unique, typical of area	Inappropriate land use, solvable through planning
Scottish Office	Scotland	Economic Development	Of scenic value but not unique, typical of area	Inappropriate land use, solvable through planning
Scottish Natural Heritage	Scotland	Natural landscape features, historic heritage	Of aesthetic and cultural value in itself	Unsympathetic development, damage to heritage
Friends of the Earth (Scotland)	World	Sustainable development, indigenous peoples	Important as an expression of a unique way of life	Unsustainable human activities
APRS	Harris/ Highlands	Landscape, wildlife, wilderness	Semi-natural wilderness of great scenic value	Inappropriate or unsympathetic development
Quarry Benefit Group	South Harris	Local Community, cultural values, employment	Deserted wilderness, but it has some scenic value	Lack of development, each problem is unique
Crofters/ Fishermen	Local Area/ South Harris	Local community, employment, cultural values	Varied: deserted, unpredictable hostile, fragile	Lack of resource control/development Each is unique
Redland Aggregates	UK, Europe USA, Asia	Development, growth, resource exploitation	Unproductive wilderness, some scenic value	Information unavailable
Incomers	Harris/ Highlands	Wilderness, wildlife, local culture	Unique, unspoilt wilderness but under threat	Ugly development landscape/cultural despoliation

TABLE 2. Group responses relating to environmental perceptions

- Mainstream conservation groups such as Scottish Natural Heritage and the Association for the Protection of Rural Scotland (APRS), as well as many incomers, gave mention to the local community but spent much more time justifying their opinions on the grounds of sustainability and damage to the country's natural heritage.
- Government bodies gave much more weight to economic development, at the scale of the Western Isles or the whole of western Scotland, although it was not always specified exactly what comprised such development other than the creation of jobs.
- Most native islanders were almost exclusively concerned with the local community, by which the majority claimed to mean the people themselves, their language and lifestyle. But while some were concerned with preserving the existing community, others felt that it had already died and the priority was to revitalise it by the best available means.

What were considered to be the principal environmental problems of the area. actual and potential?

A diverse range of conceptions of environmental problems came to light in the interviews. Particular attention was paid to comments relating to:

(a) the perceived *cause:* for example was it due to inappropriate land use, neglect, lack of ownership/control of resources, or the absence of planning?

(b) the *human element*: for instance, were human activities perceived as being the cause or the potential solution?

(c) *what environment?* Are we talking about the environment as *used,* for example fish stocks, or the environment as *perceived,* for example a beautiful beach?

Conceptions of what constituted environmental problems are shown in Table 2. A stark contrast revealed itself between:

- those who had lived on the island all their lives, many of whom felt that the problem was due to lack of development; and,
- radical conservationists such as FoE Scotland who thought that it was development itself which caused the problems.

Between these two extremes came the stances of the more mainstream conservationists and Comhairle nan Eilean.

- Conservationists considered the problem to be the wrong sort of development – basically that which did not include environmental concerns in the design.

- Comhairle nan Eilean was of the opinion that badly designed development, without proper planning considerations, presented the greatest threat to the environment.

How do people view and value the landscape?

The diversity of perceptions of the landscape reveals a great deal about how different groups relate to their environment. During the interviews it was attempted to establish:

(a) opinions on the *human/environment relationship*: do people see a wilderness with a few people living on it, or a landscape created by and inseparable from the culture of which it is a part?

(b) *use values:* do people talk about the aesthetics of the landscape or its use? Do people see a rugged mountainside or a sloping sheep pasture?

(c) *feelings towards the landscape***:** was it perceived as beautiful, ugly, hostile, useless?
The results are shown in Table 2. At least four clear groups emerged:

- Mainstream conservationists and most incomers saw a unique and extremely special wilderness, of value in itself without the human element, and worth preserving at considerable cost.
- Comhairle nan Eilean saw a landscape of some aesthetic value, but deserted and unproductive.
- FoE Scotland acknowledged considerable value to the landscape, but this was inseparable from the people and their way of life.
- A few islanders saw an ugly, infertile and lonely moonscape.

A CLOSER LOOK AT THE LOCAL PERSPECTIVES

The lack of consensus

The community of South Harris is split as regards the superquarry issue. In 1993 the Harris Council of Social Service carried out a survey to ascertain the prevailing local opinion regarding the Lingerbay proposal. The results were presented for each of the three wards of Harris. They showed Obbe ward in the south of the island (and in which the proposed development would be located) to be marginally against the development, while Tarbert and Bays/Scalpay wards were strongly in favour. But the extent to which the Council's survey accurately reflects the feelings of the islanders at the time of this research is

questionable.[5] A significant number of people interviewed said that while they had initially been in favour of the development, they had since revised their opinions, suspecting that the economic spin-offs may have been greatly exaggerated. As one Leverburgh resident exclaimed in a local newspaper:

> Harris is being ripped apart and her people ripped off (McLeod 1994, p.9)

Many such people claimed that they were far from alone in their misgivings. A possible reason is the long delay since the initial proposal: many islanders were beginning to doubt whether the promised knock-on effects would ever materialise. In the words of one interviewee:

> We were very enthusiastic about the quarry to start with, but that was three years ago. Since then nothing has happened, and who knows how long the inquiry will last?

Locals versus incomers

More significant for the purposes of this research is the wide diversity of groups, holding different opinions, within the wards. One distinction that certainly exists in the minds of many people who were born in the western islands is that between themselves and the 'white settlers' – those people who have moved on to the island as adults. Many native islanders observed that these incomers were often particularly vociferous regarding development and environmental issues, such as the superquarry at Lingerbay, usually coming down firmly against further development. This appears to cause some resentment among the former group, many of whom point to the relative wealth of incomers who were attracted by the unspoilt environment but ignore the considerable economic hardship that is the underlying cause of its wilderness quality.

An important historical element merits discussion here. For the recreational visitor to the Scottish Highlands it is all too easy to forget that the 'beautiful, seemingly untouched' wilderness is the outcome of a history of intense and not always environmentally benign land use. The Highlands of Scotland is, in the words of Frank Fraser-Darling, a man-made wilderness (Watson 1984).

To many Harris residents, the Highland Clearances and resulting abandonment of farmland and villages to make way for sheep is intricately linked with the subordination of Scottish clans and the incorporation of Scotland into the economic hegemony of the British Empire (Prebble 1963). When massive overproduction of sheep provoked the collapse of the wool trade, many estates replaced their sheep with deer – the era of the sporting estates had begun and the Highlands of Scotland had been reduced to a recreational centre for the Victorian landed elite (McIntosh, Wightman and Morgan 1994). This situation still exists today in the minds of some islanders, and was caricatured in the West Highland Free Press:

> The salmon in the private burn, the Monarch of the glen,
> God gave them to his chosen few, a band of wealthy men.
> So keep your distance from my moor,
> Leave undisturbed my pool.
> Drive not past my castle door, tread softly on my shore.
> (Anon, quoted in Cooper 1989, p. 60)

Scotland's unique value as a wilderness area is, unsurprisingly, a highly provocative issue among the Harris population. Evidently, a major factor influencing some local opinion in favour of the development had been frustration with excessively conservationist attitudes of many incomers.

4. SOCIAL INTERPRETATIONS OF THE ENVIRONMENT

The debate surrounding the Lingerbay superquarry proposal has made abundantly clear the contrast between the opinions held by different social groups: for example, which should come first, employment, religious traditions or the landscape? This section investigates the broad range of perspectives on the environment which are held by different groups of people, and asks what might underlie them.

The first point to note is that we are not dealing with a clear-cut case. Despite the claims of Redland, Comhairle nan Eilean and others, the truth of the matter is that planners and conservationists alike simply do not know what the effects of the superquarry would be. In such situations of uncertainty, it is not unusual for groups to adopt a particular belief, based on their own outlook on the world, and attribute more certainty to it than it perhaps deserves (Thompson 1990). For example, Comhairle nan Eilean, in an attempt to justify its support for the proposal, has published figures predicting the number of jobs that should be created as a spin-off from the development. But conservationists, who are for the most part against the proposal on principle, argue that most jobs will go to outsiders and predict an overall loss of local employment.

James and Thompson (1989) claim that what people choose to believe is strongly linked to their outlook on the world and that this in turn is a reflection of the lifestyles those people lead. In developing their theory, they drew up a matrix of different types of social group, based on the group's cohesiveness and the restrictions placed on individual actions within the groups themselves. They then went on to argue that the lifestyles that were particular to any one group encouraged individuals within that group to look at the environment in a certain way. Thus, as Thompson argues,

> It is … not too surprising if those who are in the business of controlling tend, whenever possible, to see things in a way that renders those things susceptible to control: inherently fixable by those with the requisite knowledge and organisation.

It is not the purpose of this paper to uphold or condemn this theory, but the difference in opinions shown by the various groups certainly supports the assertion that we are considering more than one attitude towards the environment. If we accept this view, the grounds on which Lingerbay is evaluated, justified or condemned are no more than a manifestation of the environmental values of the evaluators – in turn, arguably a resonance of the cultural backgrounds of those evaluators. The analysis below examines some of the implicit assumptions behind the opinions put forward by different groups in the superquarry debate.

Myths and the superquarry debate

Table 2 (see p. 102) isolates a number of issues which point to different social interpretations of the environment:

(a) Scale: 'The Environment' is of very different sizes to different people. Some conservationists are concerned with the global environment while many local residents may be concerned only with Harris or, in some cases, only with their village.

(b) Crucial issues: different people have very different ideas as to what is at stake. Some may be concerned with the mobilisation of resources, some with employment and livelihoods, others with pollution of the marine environment.

(c) Perceptions of the landscape: this reflects the different attitudes towards the Harris environment – some value it as an untouched wilderness, others describe it as a deserted, wasted land.

(d) Environmental problems: what do people perceive as an environmental problem? For some it is the curse of modern development, for others the wrong sort of development and for others still it is lack of development.

By looking at group responses to each of these, some light can be thrown onto the different group cognitions of the environment. Attempts to formulate such group distinctions carry the risks of creating false dichotomies and generalising over groups. However, the following are not intended to represent rigid interpretations unique to one group and uniform across that group – each represents a set of flexible assumptions which interact to form distinct interpretations of the environment.

1. The environment is capricious and often hostile, humans coping as best they can. Attitudes towards control are typically fatalistic. Generalised assumptions about environmental problems are rarely made, each one being considered as unique. The community and its culture are of prime importance. This view is typical of many crofters who have lived on the island all their lives.

2. The environment is a source of potential wealth, but it needs to be controlled and developed. Humans have the ability to use it sensibly for their own gain, with the benefit of modern technology. Of paramount importance is human welfare, standard of living and continued economic growth. This is the approach of the developer, Redland Aggregates Ltd.

3. The environment is a fragile entity which needs care and protection from destructive exploitation. Development is generally at odds with environmental interests, although humans and the environment are interlinked. While great importance is attached to human well-being and local communities, the natural environment has value in itself, and planners should take account of environmental issues in development projects. This is a typical perspective of many mainstream conservationists.

4. The environment, humans and human activities are inseparable, and development is unsustainable unless the interests of both underlie it. The fundamental principles of sustainable development are universally applicable, although the implications that this carries vary locally. While individual cultures are important, they are inextricably linked to the wider, global environment. This reflects the more ecocentric principles of FoE Scotland.

5. The environment is inherently capricious but controllable if properly planned. Its importance lies in its ability to affect human welfare. Economic growth comes first but environmental issues should not be completely ignored – it is an extra item to consider in the planning process. This is the perspective of Comhairle nan Eilean.

People's understanding of environment reflects the way in which those people interact with the environment, and is ultimately related to their way of life. For example, we might naturally expect someone who works in an office in London to have a quite different perception of a wild hilly area in the Yorkshire Dales from a person who works on a sheep farm in the same area. The former would most likely look at the landscape with the eyes of a visitor, passing through and admiring the scenery, whereas the latter looks at the landscape as a source of livelihood. The five interpretations outlined above reflect the outlooks of different social groups with different lifestyles.

Redland is a large corporation, with operations in many locations throughout the world, and geared towards maximising profits. The means by which this company creates its wealth is by processing natural resources. Perhaps it is not surprising that the natural environment is perceived as a source of raw materials, which have value given to them primarily by human processing. It is not the raw materials but the power to convert them to valuable resources that may be lacking. Such a view is essential if the intention is to maximise the exploitation of those materials – nature has to be able to give a constant, inexhaustible supply (at least for the foreseeable future) and still be able to heal her wounds, or else

it would be much more difficult for Redland and other mining companies to justify their activities.

FoE Scotland conceives of natural resources rather than raw materials – they have value in themselves (although this can be altered by human activity) and are finite. This goes hand-in-hand with a view of nature as fragile and subject to catastrophes should it be treated wantonly. It would be harder to justify the need for an egalitarian, socially co-operative lifestyle if this were not the case.

Planning hierarchies, on the other hand, have to justify their role as planners and controllers. Nature is seen as resilient within certain limits, but outside these it is viewed as unstable and subject to disasters. Careful control is needed to keep nature in order and obedience.

Mainstream conservation organisations such as APRS uphold many of the principles espoused by the Brundtland Report – economic development but with conservation included (WCED 1987). As Redclift (1987,1993) points out, this can be an effective means of incorporating environmentalist principles into the development process without actually having to alter that process (and in so doing jeopardise the comparatively wealthy position of the western nations). Conservationists, whilst wishing to preserve parts of the natural environment as sacrosanct, are not always willing to relinquish their wealthy lifestyles.

Clearly, we are considering several different outlooks on the environment, each giving rise to different opinions on the merits and faults of the superquarry proposal. The next section considers one aspect of the debate, that of sustainability, in greater detail.

5. SOCIAL INTERPRETATIONS OF SUSTAINABILITY

> There are, quite clearly, two different meanings of *sustainability*. The real meaning refers to nature's and people's sustainability.… There is a second kind of sustainability which refers to the market. It involves maintaining supplies of raw materials for industrial production. (Shiva 1992, p. 192)

Superquarries and sustainability

The superquarry concept is hinged on the drive for long term economic growth. The justification involves long term forecasts regarding needs, supplies and the economic activities that determine these. Furthermore, the superquarries themselves are long term – the Lingerbay project is expected to last at least sixty years from the commencement of operations (Comhairle nan Eilean 1993a). Equally importantly, the potential effects are geographically dispersed: quarrying is related to road building elsewhere, which itself leads to air pollution and global warming. Not surprisingly, the superquarry debate has entered the arena of that all pervasive buzz-word, 'sustainability'.

Sustainability: the problem of definition

It has often been stated that the term sustainable development is universally popular precisely because it can be interpreted to mean exactly what the party interpreting wishes it to mean (Redclift 1993; Shiva 1992). Whether or not the Lingerbay superquarry is judged as sustainable depends on who you ask and what their definition of sustainability is. Before proceeding further it is essential to deconstruct this concept and examine the layers of meaning which form its make-up. 'Sustainability' implies the ability to continue an activity into the future: if we over-fish a lake by taking ten tonnes of fish every day, the activity is not sustainable because soon the fish stock will be so depleted that we will no longer have a viable resource to exploit. But if we limit our catch to one tonne per day then natural regeneration will equal or exceed our harvest, so we can continue to exploit the fish indefinitely – the activity is sustainable. But this concept immediately raises a host of questions: what are we trying to sustain, for how long do we wish to sustain it and over what geographical area are we concerned? Table 3 outlines the responses given by interviewees regarding time scale, geographical area and what should be sustained.

Sustainability and time

One of the most difficult problems for the concept of sustainability is time. Assuming that no activity can carry on ad infinitum because human societies and environments are in constant flux, what is the time scale that should concern us? The moorland ecosystem that the conservationist wishes to sustain may have been a woodland 200 years ago and an ice sheet 20,000 years ago. Similarly, a sustainable transport policy, if applied one hundred years ago, may have contained provisions for controlling the amount of horse manure in the streets – completely irrelevant to twentieth century transport dilemmas (Council for the Protection of Rural England 1991). The further we make projections into the future, the greater the uncertainty, so we have to balance providence with pragmatism, but how? Again, the answer depends on who you are.

Time scale has been inferred from the responses given during interviews and, where applicable, corporate literature. An attempt was made to isolate temporal aspects of all comments, but particularly those relating to 'crucial issues' or people's principal concerns (e.g. do people want *jobs now* or are they more worried about the *future development and prosperity of Harris)* as they typically reflect the issues which motivate individual and group opinion the most.

The categorisations are unlikely to be totally watertight as individuals' comments do not necessarily reflect their true concerns. Indeed, there is a case for claiming that everyone is interested in the short term: as Keynes aptly put it, *'in the long term we are all dead'* (Timmerman 1986).

Notwithstanding this, clear group distinctions can be drawn, and the results are shown in Table 3. Many islanders are concerned with immediate needs or the next few years. In the words of one interviewee:

> What people here want is employment now. Conservationists can always talk about what's going to happen to the environment in the future, but few of them are looking for jobs.

Parallels can be seen with the work of Chambers (1993) in which he argues that the poorer farmers are more concerned with immediate needs because they cannot afford not to be. In contrast, many of Friends of the Earth's concerns are associated with the possible state of the planet in future centuries: the effects of global warming and species loss are likely to bite most deeply in the long term future.

Group	**Geographical scale**	**What to sustain**	**Time-scale**
Comhairle nan Eilean	Western Islands	Economy, population: the community is dying	Next few years to next few decades
Scottish Office	Scotland	Economy, natural resources and the environment	Next few years to next few decades
Scottish Natural Heritage	Scotland	Natural and cultural heritage	Next few decades to long term future
Friends of the Earth Scotland	World	Local lifestyle environment and culture	Long term future
APRS	Highlands/ Harris	Local wildlife environment and landscape	Next few decades to long term future
Quarry Benefit Group	South Harris	Community, jobs, the way of life	Mostly concerned with the next few years
Crofters/ Fishermen	Local area/ South Harris	Various: lifestyle is crucial; but some like it, others want change	Mostly concerned with the next few years
Redland Aggregates	UK, Europe, USA, Asia	Sustainable development is not relevant to this industry	Next few decades (it is unrealistic to anticipate beyond this)
Incomers	Harris/ Western Isles	Natural wilderness unique way of life	Various: next few years to long term future

TABLE 3. Group understandings of sustainability

Sustainability and geographical scale

A second question is one of scale. Over what area are we wishing to apply the concept of sustainability? This is dependent on an individual's perception of space and is closely entwined with individual 'life-worlds'.

The term 'life-world' has been used by the German thinker Edmund Husserl in developing the branch of philosophy known as phenomenology, which attempts to get beyond assumptions and significances to consider pure *essences;* as Simmons puts it,

> ...in the way that countryside precedes Geography or that wild cherry blossom precedes Botany. (Simmons 1993, pp. 79-80)

The argument here is that different individual life-worlds are accompanied by different perceptions of space, within the domains of their spatial interaction. Table 3 shows the group perceptions of space as inferred from interviews, in the same way as was illustrated in Table 2 – the reiteration is justified because the issue of scale is relevant to both interpretations of the environment and interpretations of sustainability. To Redland Aggregates and FoE Scotland the Island of Harris may be unique but it is one of many environments whose needs must be considered alongside those of the rest of an economic world that is increasingly integrated. To many Harris residents, this island is the world – the author spoke to a number of individuals who had not left the island in the last decade and several who had never ventured outside Scotland. This appears to influence individual opinions in two marked ways:

- Perception of *space and distance* is different. A number of respondents felt that the quarry would not affect them as they felt it was located a considerable distance away, although many of these lived within ten miles of Lingerbay. It would be difficult to imagine such attitudes being held by residents in south-east England should the largest quarry in Europe be proposed ten miles from their home.
- Expressions of opinion are much more *locally specific*: questions regarding the context of superquarries generally as opposed to their applicability to the Isle of Harris often appear meaningless to residents of the Island. They can speak for the area within which they live, work and interact, but how can they assume to know what is best for other areas?

To a Harris resident who has never left the island, the world is a smaller and more concentrated place than it is to someone who regularly travels to other continents. It is the activities within each person's life-world which must be judged against the rules of sustainability. To a deep ecologist, who may share Teilhard de Chardin's conviction that any activity anywhere in the world is linked to everything else, the global environment is the proper scale to apply. Thus it is not just local but international implications which are of significance.

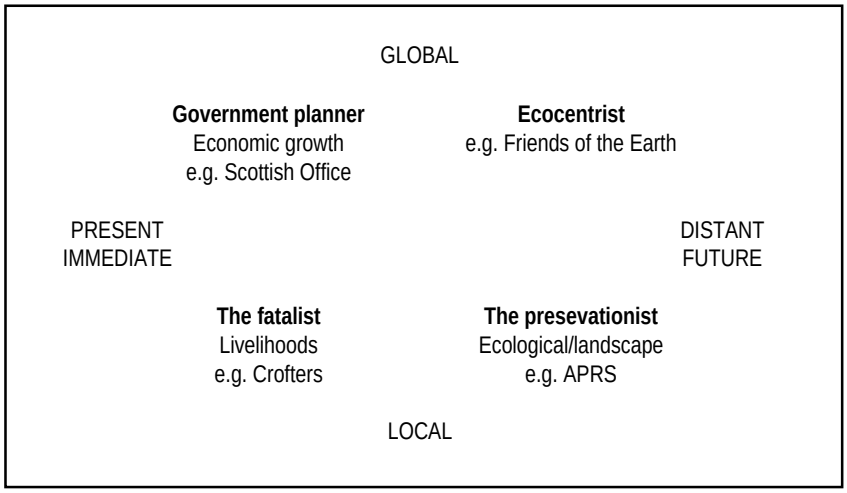

FIGURE 1. The scale/time sustainability grid

What to sustain?

The third question is, what are we trying to sustain? Table 3 describes some of the responses given. The Scottish Office wants to sustain economic growth, Scottish Natural Heritage wants to sustain the environment, and many local residents of Harris wish to sustain the local culture and livelihoods. The matrix shown in Figure 1 suggests that the question 'what do we wish to sustain?' is strongly linked to the other two issues of scale and duration. Ecocentrists take a long term and large scale view: all actions are interlinked, and the effects of any action may be felt over a long period rather than manifesting themselves immediately. The Scottish Office is also concerned with large scale issues – a reflection of its power – but its environmentalist rhetoric is clearly underlain by an interest in short term economic growth. Many local residents of Harris are concerned primarily with the present and the local: their needs (for jobs or services) are perceived as much more immediate and much closer to home. Finally, preservationists are concerned with the long term survival of (primarily) the local environment.

The various different understandings of the term sustainability are intricately linked to the different perceptions of the environment held by different groups. The crofters' concern with the present and a small area reflects a belief in a capricious, unpredictable environment and a limited amount of power over it. The Scottish Office's concern with a much larger area is related to a much greater

faith in its power and influence, and its relatively short time-scale is linked to the government's desire to maintain that power (which it risks losing every five years). FoE Scotland's concern with the Earth's health in the distant future is a manifestation of its ecocentric principles of human activities as inextricably linked to natural processes across space and through time.

6. TOWARDS A NEW APPROACH TO DEVELOPMENT?

The discussion so far has taken the view that the various claims put forward by different groups are based on culturally grounded interpretations of the environment – interpretations which themselves form the bases of conceptions of sustainability. If this is the case, then what are the implications for the proposal itself and what lessons can be learned by planners and development theorists?

Development for whom?

We must begin by asking ourselves exactly whose development we are considering. A number of groups are involved in the debate, but not all have received the same attention because some groups have more political power than others. The proposal as set out by Redland, and warmly endorsed by Comhairle nan Eilean, is rooted in the company's desire to extract anorthosite for commercial purposes, and has the company's interests in mind. On the basis of this premise, attempts are made to design the development in such a way as to justify its existence on environmental grounds and maximise the attractiveness to the local community. Thus ecological reports emphasise the relatively low value of the ecosystem destroyed and there is much talk of the possible economic benefits from employment to local people and the knock-on effects from related developments such as service provision (Redland Aggregates 1991). Whether or not any of these claims prove to be true lies deep within the academic playground of speculation and is not the subject of discussion here. The point is that *the development proposal as originally put forward was designed to further the interests of one group, and reflects that group's attitude towards the environment.*

Economic development and power distribution

So there is a skewed power distribution between the various groups in the debate. Although this partly reflects the relative strength of a powerful company in an area of little economic activity, it is also intricately linked to the broader political structures which empower companies such as Redland. Comhairle nan Eilean, and indirectly the Scottish Office, have played a significant role by supporting the proposal in the interests of 'economic development'. While Comhairle nan

Eilean represents the entire Western Isles, it is based at Stornoway in Lewis, and there is no formal political voice representing the interests of Harris alone. We must therefore ask, *whose economic development is being considered?* As Dunion points out, it is interesting to note that while all of the proposed superquarries are located in Scotland, their justification is based on demand in England, and the policy that promotes them is designed, ultimately, by government in England. Is Scotland, and Harris in particular, being treated like a poor colony, supplying raw materials to satisfy the demands of rich consumers elsewhere? (Dunion 1993). The relatively powerless position of the Harris population reflects, at least in part, the structural anachronisms that ensure development options are decided by other groups elsewhere, with their own interests in mind.

But there can be little doubt that structural constraints are not the only factor maintaining this power dichotomy. Lack of business confidence is a chronic ailment of the Harris community and thus the region has been blessed with little business enterprise. Comhairle nan Eilean is not alone in its opinion that the region needs an injection of capital and investment from the outside to get the economy circulating above the current semi-subsistence level – not one person interviewed in this study did not feel that development of some sort was essential for the long term survival of the island community. The economy of Harris is caught in an unenviable squeeze between structural constraints at the top end and individual apathy at the bottom end, and so the local political voice is being drowned in the roar of the more powerful outside groups.

So how can we ensure that local interests receive the attention they deserve, and are not bulldozed in favour of the interests of planners and potential developers like Redland whose concerns may lie well outside Harris?

Unity within Diversity?

Thompson argues that all of the different interests, reflecting the whole spectrum of interpretations of the environment, should be included to some extent in the development process, their mutual coexistence strengthening each and all of them. But what are the ultimate implications of this lofty ideal, if it is followed to its logical (or perhaps illogical) conclusions? If every culture has its own understanding of the environment and sustainability and therefore each needs its own peculiar development paradigm, how could planners cope with the nightmarish complexity of the task at hand and resolve the inevitable multitude of conflicts of interest?

Such questions may be missing the point. Cultural diversity can and does exist within a greater unity, in exactly the same way as the flow of a river can be broken down into a complex system of eddies, ripples and waves. At any one location in the river channel the flow pattern may appear totally out of phase (or even opposed) to the general direction of the current, but many physicists argue

that the stability of the flow as a whole is dependent on these local peculiarities (Gleick 1988). Could it be that society operates in the same fashion? That is, the best and most stable outcome is achieved when some consideration is paid to the variety of local situations, cultures and environments that invariably exist. Examples of the damage done by strictly top-down, inflexible and growth oriented development projects in the Third World abound. Attempts to straighten rivers and control their naturally sinuous flow can have devastating effects down-stream.

In exactly the same way, we must ask ourselves if there is any reason why development schemes cannot be beneficial to the local people, the environment and certain outside groups. Should Harris really be sacrificed as an open cast mine to service England and the continent's unquenchable thirst for more roads, or preserved as an 'unspoilt wilderness' for visitors who spend most of their lives enjoying the convenience of a wealthy city lifestyle? It is not the purpose of this paper to offer development prescriptions for Harris, but it is worth noting some of the ideas put forward by local residents as alternatives. One of these was forestry. It is unlikely that this industry would ever make a great deal of money, but it would provide local employment, a resource which the UK is a massive net importer of, and it would reintroduce trees into an almost completely deforested landscape. Would reforestation schemes be viable? We do not know, but then have such schemes ever been seriously considered?

Participation and empowerment

Adequate representation of a variety of group opinions should be the aim of any development proposal. The question that leaps to the forefront of the discussion then is *how do we empower the political voice of the local people?* An effective way to include this in the development process is by ensuring public participation in the planning system at all levels of decision-making. Unfortunately this in itself presents difficulties: as with many areas, a large proportion of the local inhabitants express little interest in issues of future development and community participation. Whether this reflects a cynicism stemming from past exclusion from the planning process or a feeling that such matters should be left in the hands of experts, the reality is that grass-roots development *on its own is* unlikely to succeed.

What is needed then is an approach which recognises that development must come from above *and* below. It needs to reflect all the groups involved in the development of Harris: structural and hierarchical, individual and local community. This means:

- *a reform of the planning process,* giving more power and autonomy to the Western Isles and allowing it the freedom to develop and implement its own development agenda;
- *an increase in the funds and resources* available to the region, so that it has the ability to carry out its wishes without having to rely on external inputs on the terms of external interests;
- *an increase in the level of public participation* in the planning process so that, at a local level, a broad range of interests are granted a political voice.

7. CONCLUSIONS

Despite increasing doubts regarding the suitability and long term global sustainability of the traditional development paradigm, it refuses to lie down and die. The emphasis has been on dusting down and patching up the same ideas of an expanding market economy, raised material standards of living and the consumerist ideal. Meanwhile the concept of economic growth stubbornly remains as unilluminating and pervasive in the face of a bombardment of criticism as an intellectual black hole.

Nevertheless, this represents only one view of development, reflecting the interests and cultural perspectives of one group. This paper has set out to argue that there are no value-free conceptions of the environment and its relations with human societies – all such viewpoints are culturally grounded. But the importance of these views transcends the environmentalist discourse. They inform cognitions of more abstract terms such as what is meant by development and sustainability. The inevitable conclusion is that what are seen as benefits by one group may not appear so to another – there can be no broad, all-encompassing definition of development or even sustainable development.

The superquarry proposal at Lingerbay has formidable direct environmental implications. But its also has huge significance because of the questions it poses – in particular, according to what definition of development is the proposal being justified, and according to whose understanding of the environment? The top-down development process reinforced by the political clout of a multinational company in an economically deprived area bears all the hallmarks of many major development projects undertaken by such companies in Third World countries, often with dire consequences for the environment and populace. But might it not be possible to include the interests of other groups and maintain a diversity of opinion within a greater social unity?

NOTES

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[1] The report of the Public Inquiry is still awaited. The day before its close, Comhairle nan Eilean voted to reverse their original approval of Redland's plans, in view of the growth of local opposition to the development. The descriptions in this paper of the quarry plan, and of attitudes towards it, are based on information gathered during the summer of 1994, before the start of the Public Inquiry.

[2] Information was gathered by means of semi-structured interviews, conducted on a face-to-face level wherever possible. This technique does not employ a list of pre-set questions, rather the interviewer has in mind the broad subject areas that it is intended to cover but otherwise allows the interview to proceed in a more conversational fashion. Although there is a distinct disadvantage in that answers are less precise and specific, this technique has the advantage of enabling the interviewee to retain some control over the direction of the conversation and thus define and elaborate on the principal issues *as they see them*, rather than simply indicate to what extent they accord with the views of the researcher. Furthermore, responses to set questions do not always give a true reflection of the way people feel: in many situations a great deal more can be learned from broader discussion as to what really motivates people's opinions. This is particularly relevant in Harris where, at the time of study at least, some degree of suspicion was directed towards researchers from outside the island asking questions. There is a strong sense of community on the island, and many people are unwilling to express views in public that are not in line with general opinion.

[3] A cross section of the local residents. 50 people were interviewed according to the following three groups:

(a) Incomers *v.* native islanders: it became very obvious from an early stage that those who had moved on to the island as adults had very different views from those who had lived there all their lives. The sample was split between 30 native islanders and 20 'incomers', the inequality reflecting the greater number of people who are native islanders.

(b) Proximity to the development: The Harris Council of Social Service referendum showed that those closer to Lingerbay felt less favourably towards it. This study investigates this by splitting the sample between North (10) and South Harris (40). The numerical inequality reflects the fact that the effects of the proposal will be felt much more strongly in South Harris.

(c) Gender: the sample includes people of both sexes (25 women and 25 men) to see if any distinctions could be drawn.

[4] This group has 18 members, including representatives from local grazing committees, fishermen, ministers and community councillors from North and South Harris. It was up to try and secure the maximum benefit for the local communities, assuming that the quarry proposal would go ahead.

[5] A second referendum, carried out in an identical manner towards the end of the Public Inquiry, revealed a majority against the quarry in each ward, with 72% of the voters in Obbe opposed to the development.

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