

Development and the Environment: Perception and Opinion in St Andrews, Scotland

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Abstract

In 2003, three proposals were being mediated through the planning system in the peri-urban environment of St Andrews, Fife: a large housing development, a rail link, and a Green Belt. Using questionnaires and semi-structured interviews with key stakeholders, we investigate the ways in which diverse conceptions of 'the environment' shaped public reactions to these proposals, and evaluate the fit between these and the respondents' stated environmental perceptions. 98% of local residents surveyed describe themselves as 'concerned about the environment'. However, large majorities conceive of the environment as a local rather than a global phenomenon, and regard it primarily in terms of personal benefits (such as landscape aesthetics or traffic considerations). By exploring the environmental perceptions in the light of the planning proposals, the study supports the contention that the 'local environment' is a socially constructed phenomenon which can be fashioned and re-fashioned according to local perceptions of threats and opportunities.

Key words: St Andrews, development, environment, environmental perception, planning system.

Introduction and background

Concern for 'the environment' is a prominent characteristic of modern society, yet such concern embraces a whole host of values and meanings. This paper examines how people perceive and value the environment at a local scale through an exploration of the environmental perceptions and behaviours of residents of St Andrews, Fife. In particular, this research examines the significance attached to 'the environment' by local residents, both intrinsically and in relation to the community, its economy, culture and vitality. It was carried out in the context of three major planning proposals which all achieved local prominence in 2003: a housing development, a rail link and a Green Belt. These three planning proposals in and around St Andrews raised a host of different issues for residents, permitting diverse perspectives on local environmental issues to be explored. Four linked research questions were addressed:

1. How important is 'the environment' to people in St Andrews compared with the importance attached to economic and cultural factors?
2. What meanings and values do people attach to 'the environment' in the context of their own community?
3. How is 'environment' conceptualised in the local planning process?
4. How do 'environmental factors' influence people's stances on development proposals?

'Environment' lies at the heart of geography. Hovarth (in Howitt, 1998) identifies it as one of the four founding principles of the discipline,¹ and Smith (2000: viii) describes landscape, location, place and nature as 'concepts central to geographical enquiry'. Since concern for the environment relates to the way that people construct and value both the human and natural worlds around them, matters relating to the environment are inevitably of interest to geographers (Dalby & Mackenzie, 1997). With the threat to human society posed by global environmental change, and the rise in environmental concern in recent decades (Lowe, 1990a and 1990b), the way in which people perceive and behave towards their environment is highly significant. Like 'nature', however, 'the environment' is a complex and contested term with multiple, shifting meanings (Harvey, 1996; Pepper *et al.*, 2002). It is a portmanteau word. Myers & Macnaghten (1998) show that environmental organisations' conceptions of the environment are often very different from those of the general public, reducing the effectiveness of their attempts to change public behaviour. Similarly, Weston (in Bayliss-Smith & Owens, 1994: 115) insists that 'the environment is much more than "nature"; it is the social, political, economic and physical world in which we live'.

This broad scope is problematic when trying to study environmental behaviour and conception. One useful approach to studying environmental issues, however, has been to examine situations where people are divided over economic development. Development has long been contested, as can be seen with canals and railways in 18th- and 19th-century Britain (Hunter *et al.*, 1998), and frequently such opposition revolves around environmental considerations. Because people may report different environmental behaviour to that which they actually adopt, the 'development conflict' approach is especially useful: people may be tempted to say that they recycle because they feel it is the 'right answer', but their reaction to a development proposal will be more revealing. As such, studies of conflict between environment and development can provide insights into environmental perceptions and values (*e.g.* Duncan, 1994; Harrison & Burgess, 1994; Dalby & Mackenzie, 1997; Warren, 2000, 2002a; Owens & Cowell, 2002).

These and many other studies have clearly demonstrated that environmental conceptions affect environmental behaviour, an idea recognised by Downs (1970). For example, Barr (2003) and Cottrell (2003) refute a simple linear model whereby increased knowledge leads to more environmentally responsible behaviour, showing that many other factors are important. Some of those factors are hinted at by Harrison *et al.* (1996: 231) who found that pro-environmental behaviour was part of a 'complex web of social, economic, political and cultural processes'. Similarly, Burgess *et al.* (1998) found that high levels of environmental awareness co-existed with a resistance to the adoption of pro-environmental behaviour. This was explained in terms of the existence of more pressing social and economic problems, and the seemingly abstract nature of many global environmental problems. The long-running superquarry controversy on the Isle of Harris during the 1990s is another example of a conflict featuring numerous conflicting and co-evolving narratives based on sharply contrasting values, perceptions and aspirations (Barton, 1996; Mackenzie, 1998; McIntosh, 2001; Owens & Cowell, 2002; Warren, 2002b).

In the UK, the planning system has prime responsibility for preventing environmentally damaging development, yet it has frequently been criticised for having a presumption in favour of development (Boucher & Whatmore, 1993; Owen, 1997). Some of the tensions surrounding sustainable development and environmental management (Mitchell, 2002) have a much longer pedigree within the planning system. Many commentators agree that the planning system has been ‘dominated by an environmental narrative centred on a tension between “Development” and “Conservation”, conceived of as oppositional tendencies’ (Whatmore & Boucher, 1993: 169). Such planning issues raise important questions of scale (Owens & Cowell, 2002; Warren, 2002a, 2002b): at what administrative level should development decisions be made – local, regional, national or international? The Scottish Executive’s position is that ‘decisions are usually best taken at the local level’ (2003a). However, with reference to calls for greater local control over environmental resources, Owens & Cowell (2002: 148) suggest that whilst local communities might make better decisions because of their familiarity with their immediate environment, there are ‘reasons to doubt the thesis that sustainability at the wider scale would necessarily emerge from the sum of local interpretations’.

Additionally, the public’s involvement with the planning system has been shown to be not always entirely concerned with ‘environment’ in terms of nature: Myerson & Rydin (1994: 445) found that the vast majority of appeal letters deal with the environment in terms of concern over visual amenity, which ‘can readily shade into a concern with property values’. Similarly, Counsell cites a report which says that ‘the involvement of the public in the planning process is more often characterised by NIMBYism and self interest than with concern for the global environment’ (Cambridgeshire County Council, 1995 in Counsell, 1998: 191). These criticisms of the planning system, however, are actually useful in determining meanings and conceptions of environment. Myerson & Rydin comment that ‘planning is one forum which can connect concrete problems with otherwise diffuse and elusive cultural processes’ (1994: 437). The multiple, competing perceptions of the ‘environment’ that the planning system has to resolve are starkly illustrated in the current furore over on-shore windfarms (Devine-Wright, 2005). This debate is characterised as a ‘green on green’ conflict by Warren *et al.* (2005) because instead of pitting environmentalists against developers, it consists of a clash of environmental arguments. The protagonists on both sides argue for environmental protection, but conflict arises because they value different aspects of the environment and at different scales (from local to global).

Warren (2002b) identifies five recurring themes in Scottish environmental conflicts:

1. ‘Insider’ versus ‘outsider’ tensions: locals are often in favour of economic development whereas outsiders typically attach greater value to environmental preservation.
2. Polarised viewpoints amongst developers, conservationists and locals.
3. Contrasting interpretations of sustainable development due to the authority of the sustainable development paradigm.

4. Criticism of the planning system: the system is attacked for being too adversarial, pushing groups to 'fight their corner'.
5. Disagreement over decision-making procedures: 'Who should take decisions such as these? And who should choose the choosers?' (Warren, 2002b: 121).

Many studies of environmental conflict have concentrated on areas of renowned natural heritage. This is understandable, since it is in such areas that development proposals will be most controversial and will get the most attention from the media and pressure groups. However, development has environmental impacts wherever it takes place. Here we focus on perceptions of environment and development in a peri-urban context where the environments in question are primarily of local rather than national or international significance.

St Andrews and the planning proposals

St Andrews, on the east coast of Scotland, has long been associated with religion, education, golf and tourism (Lamont-Brown & Riddell, 1999; Macintyre, 2000) and is now faced with constant development pressures. The population is approximately 17,000, including some 7,000 students of the University of St Andrews.² Despite its long history, the town experienced greatest growth in the 20th century with the settlement area increasing threefold (Headon Developments, 2002; University of St Andrews, 2003a), leaving an historic centre with a high quality built environment surrounded by more modern developments.

The landscape setting of St Andrews is recognised as vital to the town's character (North-East Fife District Council, 1993), a landscape assessment stating that 'the town's landscape setting is of high quality and in many respects unique' (Fife Council, 1998a). The landscape comprises a natural 'bowl' with high ground to the south and west, the Golf Links to the north-west and St Andrews Bay to the north-east and east (Crumley, 1999; Fife Regional Council, 1994). The natural 'bowl' allows distant views into St Andrews, with its medieval roofscape, whilst allowing views out from the town to undeveloped countryside (Fig. 1). This landscape setting is recognised by Fife Council (2002a) as having a strong relationship with the town's built environment and as being sensitive to change. The surrounding countryside is designated as an 'Area of Great Landscape Value', a local designation which is centred on scenery rather than species or habitat protection.

Although Fife Council is the local planning authority, the town is also represented by a very active Community Council, which has a statutory right to be consulted on planning matters (Royal Burgh of St Andrews Community Council, 2003). The most recent Fife Structure Plan was adopted in 2002 (Fife Council, 2002a) and the St Andrews Local Plan in 1996 (North-East Fife District Council, 1996) (with a new local plan due for adoption in 2006). Additionally, a 'Strategic Study' was conducted by Fife Council in 1998 in response to the development pressures on St Andrews. These result from a variety of factors, including the rapid growth of golf-related tourism, people looking to buy second homes, growing numbers of students needing accommodation, the popularity of the town as a place to retire to, the aim of Fife Council and Scottish Enterprise to use the town as a focus for investment regionally, and the national trend towards



Fig. 1. The landscape setting of St Andrews, looking west from the cathedral.

smaller households (Fife Regional Council, 1994; Fife Council, 1998a; Fife Council, 2002a). Many of these pressures for development occur precisely because of the town's high quality environment (Fife Council, 1998b; Fife Council, 2002a), which is interpreted in this context as both the landscape setting and the built environment. The Strategic Study involved a consultation document (Fife Council, 1998a), a survey of local opinion, and a conclusions document (Fife Council, 1998b). A strong local response led Fife Council to conclude that St Andrews was at its landscape capacity and that new development 'would result in unacceptable impact on the quality of the town's environment' (1998b: 10).

Nevertheless, in 2003, three high-profile proposals were simultaneously being mediated through the local planning process: plans for a housing development of 1,000 houses to the west of the town, calls for a rail link to the town and, in response to development pressures, proposals for a Green Belt encircling the town. All three are of interest because they were proposed by different stakeholders in the local community, were received differently by the local community and were at different stages in the planning process. Figure 2 illustrates the setting of St Andrews and the location of the housing and rail proposals.

The housing development (or 'Western Expansion') was proposed by a local developer and involved a mixture of affordable and market housing being built over 30 years, in addition to a golf course, a relief road, land set-aside for university expansion and educational and health-care facilities (Headon Developments, 2002; St Andrews Citizen, 2002a and 2002b; The Saint, 2002). The scheme was speculative beyond the approved Development Plans, although these do seek to focus development to the west of town where the topographic relief is lower (North-East Fife District Council, 1996; Fife Council 2002a). The developer emphasised the long-term nature of the plans, the need to allow the university room to grow (although the Local Plan does already allow for this) and that an Environmental Impact Assessment would be prepared (North-East Fife District Council, 1996; Headon Developments, 2002).

When the plans were announced, in 2002, they attracted considerable

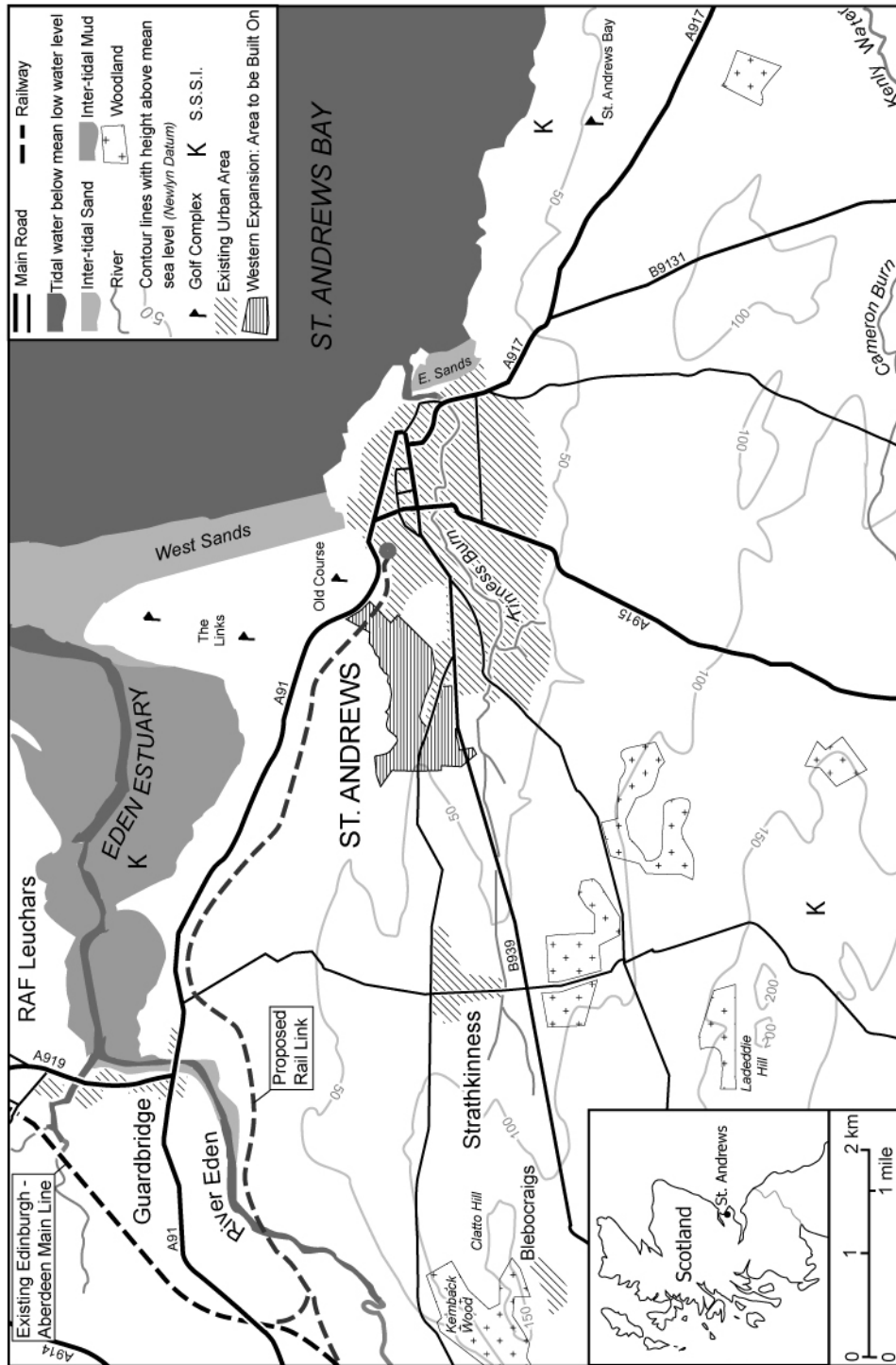


Fig. 2. Map showing the setting of St Andrews and the proposed rail link and 'Western Expansion' housing development.

interest in the local press. The weekly local paper styled the development plans 'shock proposals' (St Andrews Citizen, 2002a). The student newspaper took a different line, arguing that the development would 'help relieve the flat shortage and lower town centre prices' (The Saint, 2002: 2) and commented that expansion to the west was preferable to that on higher land to the south. Such opinion doubtless reflects the fact that the growth of the university has led to higher rent prices for students in private accommodation, to the point where St Andrews is now one of the UK's most expensive university towns (Fife Council, 2001). Although there was a high level of publicity surrounding the proposals, no formal planning application was submitted and the proposal is not likely to be included in the next Local Plan (Fife Council, 2005).

The second high-profile development proposal in St Andrews was for a rail link to the town. The town was connected to the national rail network from 1852 until 1969, when British Railways closed the line between St Andrews and Leuchars (Cook, 2001). Fife Councillor Jane Ann Liston launched the St Andrews Rail Link Campaign ('STARLINK') in 1989. The most recent Fife Structure Plan includes the policy that land for a rail link will be 'safeguarded from prejudicial development' (Fife Council, 2002a: 18). The Community Council has been active in supporting the calls for a rail link, believing that it could solve many of the town's traffic congestion problems and encourage tourism (St Andrews Citizen, 2003a) but despite the high publicity, there have been no specific proposals, and alternative public transport solutions are likely to be included in the next Local Plan (Fife Council, 2005).

As a result of the development pressures, the St Andrews Preservation Trust and the Community Council began calling for a Green Belt to protect the town from inappropriate development in 1995.³ They joined with a number of other local community representatives to form the St Andrews Green Belt Forum in 1997, its stated mission being to 'preserve the town's environment' (University of Dundee, 2003: 2). In 1999, planning permission was given to build the 'St Andrews Bay' hotel and golf complex at Kingask, to the south-east of the town, despite some very vocal local opposition (Royal Burgh of St Andrews Community Council, 1999; Crumley, 1999). A leaflet rich in rhetoric distributed to local houses said that 'life as we know it in St Andrews is under threat' because the hotel would damage the 'green bowl' landscape setting (Green Belt Forum: 1999: 2). Following this controversial development, calls for a Green Belt grew, but it was not included in the draft Fife Structure Plan, written in 2000 (Green Belts can only be established through the Development Plan process) (University of Dundee, 2003). Another leaflet was distributed calling for a Green Belt to protect the town's landscape setting (claimed to be crucial to its character, culture and economy), to preserve the town's sense of community by restraining growth and 'to promote sustainability' (Green Belt Forum, 2000, 4). Lobbying by local pressure groups led the Scottish Executive to impose the Green Belt upon Fife Council and it was thus included in the finalised Fife Structure Plan (Fife Council, 2002a). The precise boundaries of the new St Andrews Green Belt will be drawn as part of the Local Plan process (University of Dundee, 2003), with a draft East Fife Local Plan due in 2005 and adoption of the final plan in 2006 (Fife Council, 2003a).

These three planning proposals all concern development and the environment in a setting which has a strong sense of place (Fife Council, 1998b: 1). When combined with the high profile of these planning proposals within the local community, this provided a rich context for an investigation of environmental perceptions and values.

Methodology

The research utilised questionnaires sent to a sample of local residents, and a series of in-depth semi-structured interviews conducted with selected key players in development and environmental issues locally. It was thus a multi-method approach which aimed to maximise the understanding of a research question and counter the disadvantages of either methodology (Valentine, 1997; Strauss & Corbin, 1999; Hay, 2000). Taken together, the interplay of questionnaires and interviews can offer a powerful method for data collection (Strauss & Corbin, 1999). Triangulation was used to combine the data from the two sources and thus build-up a rigorous and multiply-validated data set.

The questionnaire survey. Following Parfitt (1997) and Kitchin & Tate (2000) the key features of the questionnaire design included:

- Organising the data into five clear topic based sections.
- Informational questions (age, sex) placed first as 'warm-up' questions.
- A mixture of closed and open questions to allow both data for statistical analysis and maximum freedom of expression of opinions.
- Use of five-point scale Likert agreements (Parfitt, 1997; Cottrell, 2003), with the same factors repeated with respect to different planning proposals to save time for respondents.
- For ethical reasons, it was made clear that all answers remained confidential.

The questionnaire sought people's opinions on the three proposals and the factors underlying those opinions, as well as some more general environmental questions. The questionnaire design was refined through a pilot survey.

A postal survey was used to maximise the chances of a representative sample, to allow a longer questionnaire than could have been used for a face-to-face survey, and to reduce interviewer bias (Parfitt, 1997). The target population was the residents of the four electoral wards of St Andrews: St Andrews Central, South, South-East and West.⁴ The electoral register was used to obtain names and addresses. This excluded people under 18, but contact was made with a local school *via* the interview process to help counterbalance this exclusion. It also excluded students living in halls of residences but included students living in private accommodation.

Given these conditions, the target population was 10,802, and 297 questionnaires (a sample of 2.75%) were sent. The sample was obtained using a stratified random technique, with respondents selected proportionately between the four wards to ensure good spatial coverage for the sample and to reflect the town's socio-economic range. Names and addresses were obtained from the electoral register (Fife Council, 2002b) by utilising Microsoft Excel's random number generator. A press release published in the local paper encouraged people to

Table 1. Representativeness of the questionnaire survey sample in terms of sex.

	Male	Female
Population	46.46%	53.74%
Sample	51.40%	48.60%

(Population data from the 2001 Census (General Register Office for Scotland, 2003; Fife Council 2003b) adjusted to exclude students in halls of residence and under 18s using data from Fife Council (2002b) and University of St Andrews (2003b).)

Table 2. Representativeness of the questionnaire survey sample in terms of age.

Age groups	18-29	30-39	40-49	50-59	60-69	70+
Population	33.88%	10.72%	11.72%	12.82%	11.56%	19.24%
Sample	14.7%	8.3%	12.8%	22.0%	13.8%	28.4%

(Population data from the 2001 Census (General Register Office for Scotland, 2003; Fife Council 2003b) adjusted to exclude students in halls of residence and under 18s using data from Fife Council (2002b) and University of St Andrews (2003b).)

answer the questionnaire (St Andrews Citizen, 2003c). A total of 109 questionnaires were returned, a healthy response rate of 37%. The data were coded and analysed using the SPSS software package, this analysis including basic graphical and statistical techniques and chi-squared tests.

Although the sample size was quite small, the postal survey technique lends itself to obtaining a highly representative sample (Cloke *et al.*, 2004) and the sampling technique was carefully designed. Analysis of results relating to questions of age and sex, and comparison with census and electoral register data⁵, allow a picture of how representative the sample obtained was. In terms of sex, the survey was highly representative (see Table 1). In terms of age, there was a good general representation of all age groups (Table 2), but there was some under representation of the 18-29 age group in particular. This can doubtless be linked to the fact that students in private accommodation were included as part of the sample but most were away from St Andrews for the summer, when the survey was conducted. Since, however, chi-squared tests found no significant relationship between age (or, indeed, sex) and opinion on any of the proposals, any slight differences between population and sample are not regarded as significant. Additionally, mapping the spatial distribution of respondents revealed that results were very evenly distributed across St Andrews, and the data may be regarded as highly spatially representative. Given this information, plus the fact that the data collection did not rely solely on the questionnaire survey, but instead included a range of rigorous, in-depth interviews, the data provide a firm foundation for analysis.

The in-depth interviews. The interviews used a 'semi-structured' technique (Dunn, 2000), similar to the 'long interview' technique used by Goodwin (1998) in his study of local participation in conservation. This comprises a mix of prepared, open-ended questions and unprepared follow-up questions. Within a

Table 3. Who was interviewed and why.

Interviewee	Reason for interviewing
Planner A	
Fife Council Officer	Professional role as a town planner for the local authority dealing with development control
Manager B	
University of St Andrews	In charge of the University's environmental plan (the University is a very important stakeholder in the local community)
Developer C	
Developer	The developer behind the Western Expansion scheme
Community Councillors D and E	
Community Councillors	Members of the Royal Burgh of St Andrews Community Council, a statutory body which is vocal on planning matters
Councillor F	
Fife Council Councillor	Member of the Development committee which decides planning applications for St Andrews
Councillor G	
Fife Council Councillor	Member of the council Development committee and of the STARLINK campaign
Teacher H	
Geography Teacher	Teaches environmental issues to pupils at local secondary school
Campaigner J	
Green Belt Forum	A founding member of the St Andrews Green Belt Forum and local anti-development campaigner

common format, this allowed conversational, free-form discussions, maximising the opportunity to explore individual knowledge and experience. The interviewees were recruited partly by contacting people known to be involved in environment and development issues locally, and also *via* 'snowballing', with the initial subjects recommending other people to interview (Valentine, 1997) (Table 3).

The interviews were not tape-recorded as this can make subjects uncomfortable and lead to stilted conversation, and are not suitable in public places (where it was necessary to conduct two of the interviews) (Kitchin & Tate, 2000). Instead, careful and detailed notes were taken during each interview, typed-up immediately, and later verified as a true record by the interviewees. Coding and analysis involved 'manifest content analysis' (Dunn, 2000), conducted using the NUD*IST computer program (searching for certain key words and phrases), and 'latent context analysis' (Dunn, 2000), conducted by 'reading' the transcript

document for themes. Transcripts were 'split and spliced' (Kitchin & Tate, 2000) so that sections of text could be compared, connected and contrasted. Care was taken to ensure that the interview methodology was as rigorous as possible (Baxter & Eyles, 1997).

Results

Questionnaire results

In the questionnaires, the respondents were initially asked about their environmental conceptions in general. An overwhelming majority, some 98.1%, described themselves as 'concerned about the environment' and 33.3% had written to Fife Council with respect to a planning application at some point. When asked what spatial scale they primarily adopted when considering 'the environment', some 33.6% thought primarily at the 'local' scale, 16.8% at the 'distant' scale, 40.2% thought of 'both local and distant' places and 9.3% adopted the 'global' scale. When asked about the ways in which they most value the environment, a large range of answers were received, primarily centred on the environment as an unpolluted, aesthetically pleasing recreational resource.

The bulk of the questionnaire then asked about the proposals. Strong local opinion was expressed about all three planning proposals. For each proposal, respondents were asked whether they supported, opposed, were undecided or did not care about it, and whether they thought that environmental, or economic and social factors should be the most significant influence on the Council's decisions on the schemes. Most respondents thought that these should be balanced equally when considering all three schemes (Table 4), but significant minorities held contrasting opinions.

Clear patterns can be discerned in the ways in which respondents thought that the proposals would impact on a range of local factors (Figs 3, 4 and 5). Respondents were also asked how important each factor was to their opinion. Figure 6 reveals clear differences in the factors ranked as important by supporters and opponents of the housing development. For the rail link, whilst economic factors appear more important to the supporters, environmental impacts appear important to both supporters and opponents (Fig. 7). Economic factors would appear to be most important to opponents of the Green Belt (Fig. 8), but it is clear that environmental factors are most important to supporters.

The chi-squared tests showed that views of the countryside were more important to supporters of the Green Belt than opponents, although both believe that a Green Belt would impact positively on the landscape. Significant patterns also suggest that concerns about wildlife and atmospheric pollution underlay people's support of the Green Belt. Interestingly, supporters were more likely to think that a Green Belt would have positive impacts on the sense of community, and this was a more important factor to supporters than opponents. This may indicate a belief that the Green Belt would constrain development and so positively impact sense of community, but perhaps this aspect, as for the atmospheric pollution result, demonstrates a belief that a Green Belt can 'cure all ills', reflecting the widespread public misunderstanding surrounding Green Belts (Fife Council, 1998a; University of Dundee, 2003).

Table 4. Summary of results to selected questions regarding residents' opinions of the three proposals.

Questions	Answers			
	Support	Oppose	Undecided	Don't care
Opinion on housing development	13.8%	68.8%	13.8%	3.7%
Opinion on rail link	63.0%	24.1%	10.2%	2.8%
Opinion on Green Belt	79.4%	10.3%	9.3%	0.9%
	Environmental	Economic and social	Both equally	
Should environmental or economic and social factors be more important to Fife Council in deciding its position on the housing development?	25.2%	2.8%	72.0%	
Should environmental or economic and social factors be more important to Fife Council in deciding its position on the rail link?	20.2%	16.2%	63.6%	
Should environmental or economic and social factors be more important to Fife Council in deciding its position on the Green Belt?	32.7%	6.7%	60.6%	

Finally, respondents were asked how long they had lived in St Andrews: the mean residency of 25 years may explain the strong sense of community.

Interview results

As the interviews were semi-structured, there was scope for interviewees to direct the conversation and focus on different topics during the conversation. Table 5 summarises the opinions expressed by the interviewees, as well as the underlying themes and framing of each interview. Data from the interviews (in the form of quotations) is further drawn out in the discussion section.

Discussion

The proposals

The housing development. According to Councillor F, the housing development was 'causing great concern locally', and there was general consensus amongst the interviewees that some local residents saw development as a very real threat, Campaigner J speaking about the 'development threat that looms over St Andrews ... various organisations seem to be absolutely hell bent on exploiting the town'. The results suggest that the majority of opposition is on 'environ-

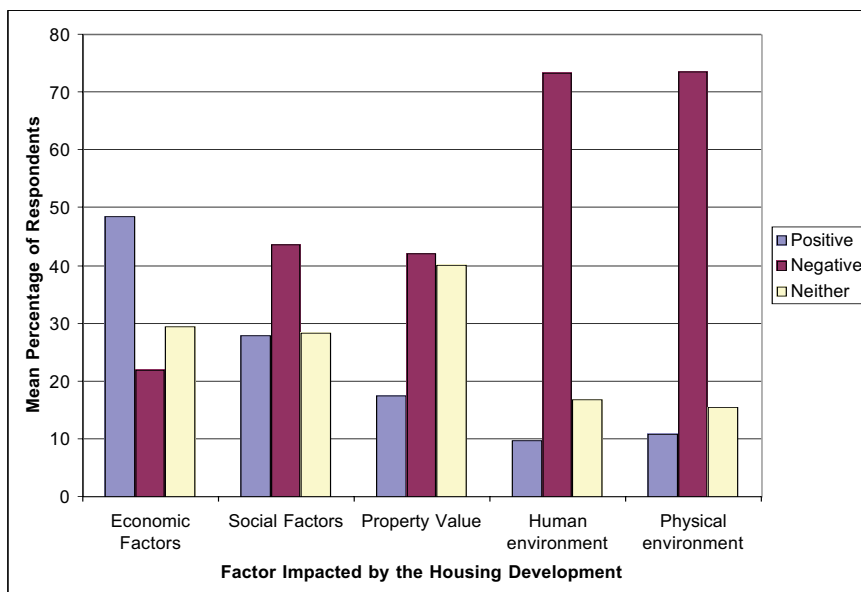


Fig. 3. Did respondents think the housing development would impact positively or negatively on various economic, cultural and environmental factors?

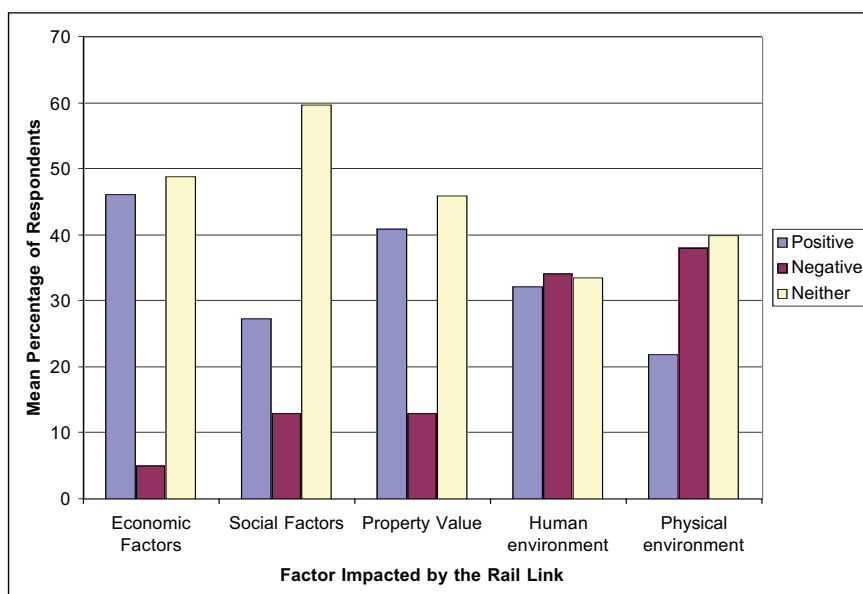


Fig. 4. Did respondents think the rail link would impact positively or negatively on various economic, cultural and environmental factors?

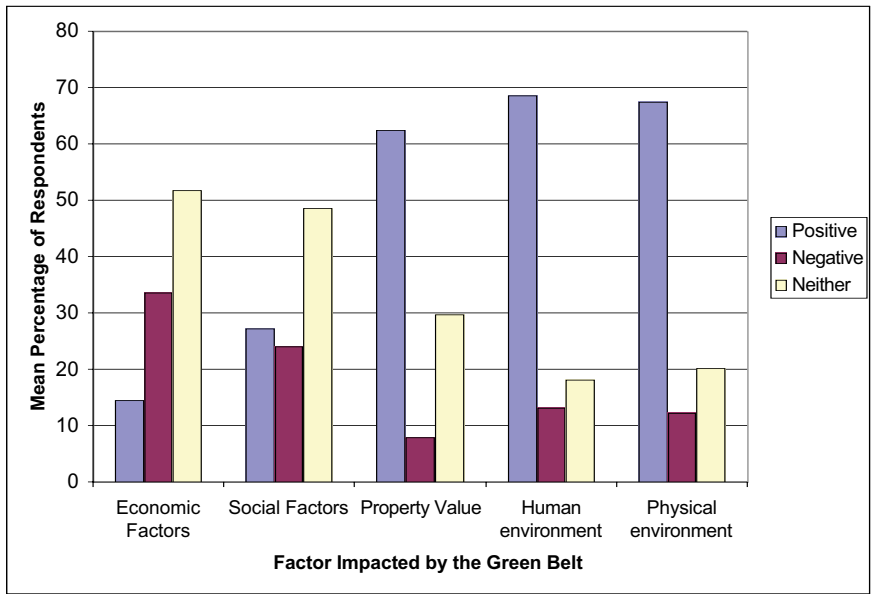


Fig. 5. Did respondents think the Green Belt would impact positively or negatively on various economic, cultural and environmental factors?

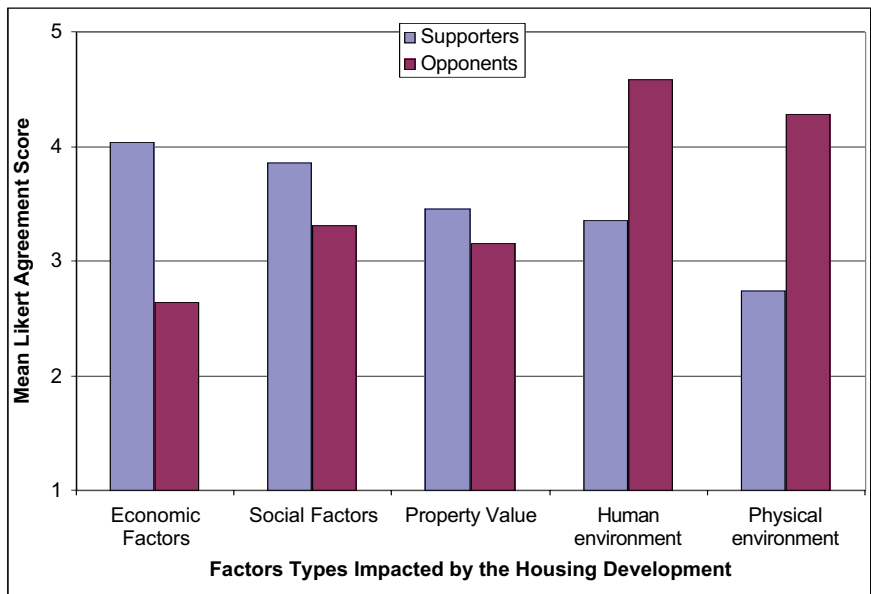


Fig. 6. How important were the various factors amongst those supporting and opposing the housing development? (Answers on a Likert scale where 1 represents 'Not at all important' and 5 represents 'Very important'.)

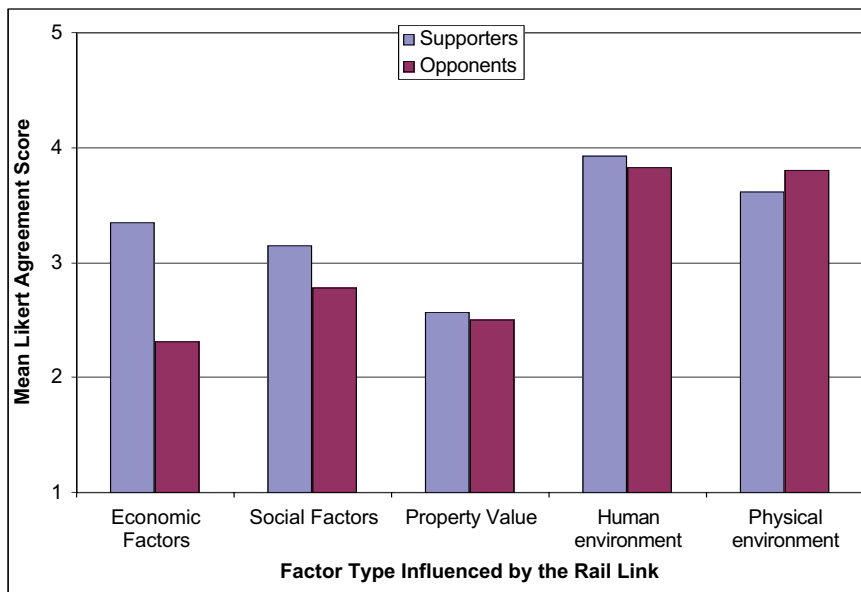


Fig. 7. How important were the various factors amongst those supporting and opposing the rail link? (Answers on a Likert scale where 1 represents ‘Not at all important’ and 5 represents ‘Very important’.)

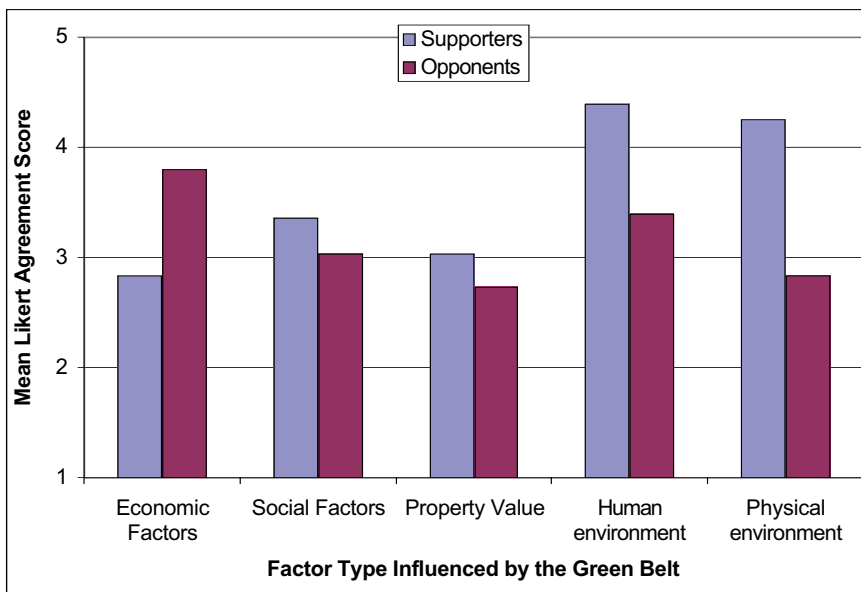


Fig. 8. How important were the various factors amongst those supporting and opposing the Green Belt? (Answers on a Likert scale where 1 represents ‘Not at all important’ and 5 represents ‘Very important’.)

Table 5. Summary of the interviews conducted.**Planner A**

- **Main topic(s) of conversation:** The planning proposals and development pressures on St Andrews. Felt that development needed managing, not preventing, but also commented that 'most objections to development are well-intended and related to a wish to preserve the historic setting of St Andrews'.
- **Underlying themes and frames:** Local community as politically powerful; many local 'pressure groups' focus on environmental issues but not representative of whole community; development as good economically and needed, but in a managed way; landscape and visual concerns the main concern to planners and pressure groups locally.

Manager B

- **Main topic(s) of conversation:** The university's environmental strategy, what this involved and how to promote environmental awareness in the institution.
- **Underlying themes and frames:** Environment in terms of human conception; environment and economics do not need to be in conflict; education vital to promoting environmental behaviour; University an important player in terms of the local environment.

Developer C

- **Main topic(s) of conversation:** The housing development and its environmental impacts, local pressure groups and the planning system.
- **Underlying themes and frames:** Need for balance between development and the environment; development's environmental benefits could be managed whilst economic and social benefits were of over-riding importance; thought financial incentives/taxes as effective ways of promoting environmentally aware behaviour; thought local pressure groups unrepresentative of the wider populace.

Councillors D and E

- **Main topic(s) of conversation:** The planning proposals and environmental awareness in St Andrews.
- **Underlying themes and frames:** Opposition to development; environment in terms of traffic and landscape setting; recycling; planning system as too in favour of development.

Councillor F

- **Main topic(s) of conversation:** The housing development, Fife Council, local economy and environment.
- **Underlying themes and frames:** Environment on local scale; development conflict as environmentally based; environmental concern strong locally but still second to people's way of life; development proposals can cause real anxiety.

Councillor G

- **Main topic(s) of conversation:** Rail link, local environmentally aware behaviour.
- **Underlying themes and frames:** Rail link as a local solution to global environmental problems; environmentally aware behaviour are primarily recycling; environmental concerns as not the primary factor in opposition to development.

Teacher H

- **Main topic(s) of conversation:** All three planning proposals, local pressure groups and environmental concern amongst the young.

- **Underlying themes and frames:** Environmental education key; development locally would not be bad for the environment if properly planned; connections between different scales regarding the environment and between economy, society and environment; use of 'environment' in opposition to development.

Campaigner J

- **Main topic(s) of conversation:** Their campaign against the St Andrews Bay Hotel development, which included taking Fife Council to the Court of Session in Edinburgh.
 - **Underlying themes and frames:** Development versus environment; local environment as central concern; landscape and visual impacts as key concern; Fife Council as unrepresentative of St Andrews.
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mental' grounds (Fig. 3): in the questionnaire results, there are large majorities who think that the development would have negative impacts on both the human environment (defined here in terms of noise, traffic and aesthetics) and on the physical environment (defined here in terms of pollution, wildlife and agriculture). This opposition exists despite the majority belief that the development would have positive impacts on the town's economy. It is perhaps, then, unsurprising to see in Figure 6 that economic factors were more important to the opinion of supporters of the development, and environmental factors were most important to opponents. Indeed, Councillor F was unequivocal: 'I'd say environmental reasons were at the fore of the opposition to development'. Nevertheless, Planner A raised different issues of concern relating to the housing development, commenting that it was modelled purely on the basis of the land the developer happened to own and that it seemed counter to development plan policies.

Interestingly, a significant relationship was found between opinion of the development and whether people think that it will impact positively or negatively on social and economic factors. The question, however, is whether people oppose the development because they think that it will impact negatively on economic and social factors, or whether they think it will impact negatively because they oppose the development. The strength of opinion in this case would seem in accordance with Ribe (2002), who suggests that people evaluate development and environmental controversies with predisposed attitudes, and therefore people choose to believe that the development will have negative economic and social impacts because they already oppose it for other reasons. Similarly, in the context of the wind power debate, Short (2002: 53) concludes that 'opinion is formed not by experience, but rather by ignorance, misinformation, prejudice, and fashion'.

The questionnaire data show that people mainly oppose the development due to 'environmental' reasons, although no single environmental impact seems to have obvious pre-eminence. The interview data are consequently of great interest. Developer C went so far as to suggest that the housing development would actually be good for the environment:

Our Sustainable Urban Drainage systems could actually create new habitats, you know ... I mean, look, 95% of the land we'd develop is farmland just now, so there's very little wildlife there, with all the pesticides and such like, so our development would actually be good for wildlife.

Whatever the truth in this, the developer was clearly talking about the environment in a different way to the majority of the opposition. Campaigner J talked about opposition to the housing development primarily in terms of the landscape setting of the town:

Environmental factors are extremely important to our campaign. There is the question of the ... visual impact on St Andrews ... and the fact that the development breaches the landscape setting of the town.

Similarly, Councillor F felt that the opposition was centred on 'great concern about the image of the town, by which I mean both the views of the town and the surrounding environment', although Planner A, and Councillors D and E also mentioned concern about traffic. The general consensus amongst interviewees that the main concerns were landscape impacts and traffic is in agreement with Myerson & Rydin's (1994) findings. Regarding other 'environmental' factors, it may be that these are a lesser concern, but Developer C felt that objectors to development 'will just try to use whatever they think will have most impact'.

The rail link. The rail link has actually been proposed on environmental grounds, with Councillor G arguing for it as a means of tackling traffic and atmospheric pollution. There was an interesting linking of scales in her suggestion that:

The real primary reason [for the rail link] is environmental. We, as you'll know, have a problem with global warming and raising sea levels – a problem for all of humanity, but also a problem for a town whose famous golf links are only a few metres about sea level. And in order to tackle the global problems of global warming and environmental destruction, well, we need to act locally and in this area that means we should think ahead and build a rail link.

Planner A felt that a rail link would have positive economic impacts as well (which could lead to increased development pressures):

The Borders rail link, you know, was mainly desired to get investment in. In St Andrews, some who want the link don't want any further development and investment, which is an interesting situation.

The questionnaire data support this interview evidence: no relationship was found between people's opinion on the rail link and whether they thought it would have positive impacts on the economic, social and property value factors, suggesting that environmental factors are most important to both supporters and opponents in this case.

Supporters of a railway were more likely to think that it would have positive impacts through traffic reduction, and opponents were more likely to think that a railway would have negative impacts on the local landscape. In the interviews, Community Councillors D and E supported a rail link mainly due to traffic reduction and Councillor G spoke of 'the many environmental problems associated with increased car use'. Teacher H believed that a rail link would cut traffic, with positive outcomes for both the human and natural environments, and that the economic benefits would be an added bonus. Planner A, meanwhile, mentioned that the rail link might involve an embankment which could spoil views on a key entrance route to St Andrews, 'which would cause concern locally'.

It therefore seems that the rail link is an example of a development which is both proposed and opposed on environmental grounds, with supporters most concerned about traffic and opponents focusing on aesthetics. Indeed, the results suggest that opinion of this development is formed primarily by anthropocentric concerns (how environmental changes will affect human society) rather than ecocentric concerns (how changes will affect non-human nature).

The Green Belt. Planner A felt that the Green Belt was proposed entirely due to opposition to development:

My impression is that they wanted a Green Belt to stop development around St Andrews – they didn't even want considered development, they want to prevent any development at all ... I guess opposition to development comes mainly from a desire to keep St Andrews just as it is. I don't think these people know that you can't just stop everything.

Developer C agreed with this, arguing that 'you can't simply shut the gates, as some people seem to want with all this Green Belt stuff'.

In slight contrast to this, Campaigner J, a Green Belt supporter, made the link to 'the environment' quite explicitly: 'yes I am very concerned about the environment in general, hence our Green Belt'. There is agreement here with the questionnaire data that suggest that environmental factors are more important to supporters of the Green Belt than opponents (Fig. 8) but although these data suggest that a range of environmental factors motivate people's support for the Green Belt, both Planner A and Councillor F thought that the primary concern was protection of the St Andrews landscape, the latter commenting that 'there's a real desire to protect the very special setting of St Andrews and preserve the local countryside, and, of course, prevent large development'.

Thus, whilst a range of environmental factors emerge as concerns from all three proposals, it seems that aesthetic reasons are paramount, followed by traffic concerns, and many interviewees characterised these as 'environmental' concerns. This accords with Myers & Macnaughten's (1998) comment on the difference between the rhetoric of environmental organisations and everyday talk about the environment.

Concerning the factors which respondents thought should be most important to Fife Council, the fact that a majority of respondents thought that environmental, economic and social factors should be of equal importance in all cases (Table 4) is perhaps reassuring to those hoping for a new 'age of consensus' (Peterken, 1996: 466). Yet there did not seem to be evidence on the ground of a consensual approach to planning proposals. The interesting factor in these questionnaire data is in the minority responses, with significant patterns existing in all three of these results: opponents of the housing development and supporters of the Green Belt are more likely to believe that environmental factors should be most important. With the rail link the significant results require greater explanation: supporters were divided, some highlighting environmental benefits and some economic, perhaps reflecting a belief that the rail link would overall have positive environmental, economic and social benefits. Opponents of the rail link were, however, much more likely to think that the Council should concentrate on environmental factors. This indicates that, in the minds of respondents, aesthetic factors are a major component of 'environmental' concern.

Environmental behaviour and perception

That 98% of people describe themselves as concerned about the environment concurs with the many studies showing that environmental concern is a leitmotif of modern society (Lowe, 1990a, 1990b; Barr, 2003). Yet the wide diversity of perceptions is illustrated by the interview with Developer C, who when asked 'would you describe yourself as concerned about the environment?' replied 'oh yes, but I'm no environmentalist'. Harrison *et al.* (1996) found that high rates of environmental awareness do not necessarily relate to environmentally aware behaviour.

The questionnaire results also reveal that 74% of people primarily conceive of the environment as a local phenomenon, even if they can also appreciate it at other scales. The questionnaire results imply that people are more concerned about the local environment than the global environment. This is supported by the interview data, with even Developer C keen to point-out that,

this isn't some big PLC. I live locally with my family and don't want to damage St Andrews. I really believe this scheme in a good idea. I believe in this project for the local area.

Councillor F commented that the opposition to development occurred because 'there's been real local resentment at this spoiling of *their* environment' [original emphasis] and both Councillors F and G fundamentally believed that people in St Andrews care more about *their* environment specifically than about *the* environment generally. Such findings have been reported previously (Blaikie, 1996; Myers & Macnaughten, 1998) and stem from the fact that it is local environments that people experience daily. Indeed, whilst global environments may seem distant and difficult to comprehend, local knowledges are intimately linked to local environments through lived experience (Coburn, 2003).

If environmental concern is considered in terms of opposition to economic development, the St Andrews example differs somewhat from previous studies. The development that has the most local support – the rail link – is supported on primarily environmental grounds, but the familiar 'environment *versus* development' picture appears in the housing development, except that the economic benefits are not a primary concern to the majority of local people. Developer C considered the reasoning to be centred on employment: if an area has high unemployment, people are more likely to value development above environmental protection, and *vice versa*. This seems in agreement with While *et al.* (2003) who place economic geographies and social relations at the root of local environmental conflict. Manager B promoted a different perspective on this issue: 'I think it's a fallacy that it's a choice between economics and environment', but it would seem that such a viewpoint is nevertheless sometimes adopted.

Considering environmental concern, both Councillors F and G commented in almost identical terms that people would always put way-of-life concerns ahead of 'the environment', but that this did not mean that people were anti-environment:

Concern about 'the environment' certainly exists locally, and concern about their environment especially, but I think primarily people are concerned first and foremost about their health, job, family, and home before anything else, even the environment ...

these essentials will be put before the environment by the majority, the vast majority ... it's not that people are anti-environment but it's that they care about their way of life (Councillor F).

I think a lot of people do care about their environment, but primarily people care about their way of life – who will their neighbours be if a development goes ahead? They care about noise, crime, their standard of living and, of course, property values' (Councillor G).

This is in contrast to Manager B, who thought that environmental factors were more important to people because of the link to some sense of local place:

In general, people are keen to retain their lifestyle, their heritage, their culture, and a clean environment. These are key things to people. The concept of place, an area locally of whatever size, is important; it's linked to people's perceptions.

Most interviewees believed that opposition to development locally was not centred on environmental issues, both Developer C and Councillor G feeling that people usually opposed development because they had been happy living somewhere and did not wish to see it change:

Without a doubt, environmental factors are most often cited in opposition to development but they're not at all people's main concern. Objectors will just try to, er, use whatever they think will have the greatest impact. I guess if people have lived somewhere a while they don't want to see it change, even when it needs to (Developer C).

I think people are anti-development primarily because they've lived somewhere and been happy there. That's more important than environmental concerns (Councillor G).

Similarly, Planner A concluded:

The anti-development lobby makes a lot regarding environmental issues but beyond the campaign groups, there is a silent majority in St Andrews more concerned about issues such as facilities and transport, and would put these ahead of environmental issues.

In contrast, both Community Councillors D and E believed that environmental concern was a primary motivation for those opposing development. Clearly, then, not only do people perceive the environment in very different ways, but their perceptions of the importance of environmental factors in shaping people's opinions also diverge markedly.

Local politics, planning and the environment

Both Planner A and Teacher H commented that St Andrews is a politically powerful community, Planner A describing the community as 'active and vocal'. Similarly, Councillor F characterised St Andrews as 'simply full of articulate, active people. They are quick to form pressure groups' and Councillor G believed that 'people can ... bring greater pressures to bear in this town'. There are a number of powerful pressure groups locally, which seem dominated by people with anti-development views. Planner A, Developer C and Teacher H all thought that these groups were 'anti any development, even considered development' (Planner A).

Developer C believed these groups were 'a vocal minority who get themselves in positions of power ... they're a vocal minority who push these issues' and even Councillor F, who seemed generally in favour of the right of community

groups to have a say, said, 'they can push their case too far'. These groups seem to be an example of the increasing trend for issues to be taken up by local 'interest communities' as part of the 'new local environmental politics' (While *et al.*, 2003). Goodwin (1998) observed that 'local' views can be dominated by powerful figures, making them as unrepresentative and elitist as centrally imposed ideas, possibly leading to splits within the local population (Mackenzie, 1998). The results suggest that St Andrews could be characterised as a powerful community, similar to those studied by Owens & Cowell (2002), which are able to resist unwanted land uses and obtain a higher quality local environment as a result.

In general, criticism of the planning system does not appear to be a feature of the development conflict in St Andrews. This may well be a consequence of the local community being politically powerful enough to influence the system, for example by getting a Green Belt imposed upon the local authority. Seen in this context, the seemingly high rate of people who had written to Fife Council regarding planning applications (according to the questionnaire results) is unsurprising. Two questionnaire respondents commented specifically that local opposition to development was centred on NIMBYism. When combined with the finding that there is more concern with the local than with the global environment, this suggests that 'environmental concerns' in this community are primarily anthropocentric and local, contrasting sharply with the ecocentric, global arguments of many large environmental organisations.

Indeed, the most striking congruence amongst the reactions to all three proposals is public concern about the landscape setting of the town, suggesting that local residents in this case primarily conceive the environment in terms of personal satisfaction. This is in line with the conclusions of several previous studies of the social construction of nature (Fitzsimmons, 1989; Whatmore & Boucher, 1993; Myerson & Rydin, 1994; Harrison & Burgess, 1994). Whilst the categories of 'human' and 'physical' environment used in the data analysis are clearly artificial, the basis of concern about the St Andrews proposals is generally not one which environmental groups would share. These issues were, nevertheless characterised as 'environmental' by local people. The close inter-connections of environments at various scales and of various types suggests that perhaps environmental groups should be involved with more mundane development proposals, as suggested by Pepper (1987 in Bayliss-Smith & Owens, 1994). This might engender greater connection with public thought on the environment.

Development conflict in the age of sustainability

The 'development conflict' approach adopted by this study seems to offer a useful approach to gaining understanding of the ways in which people conceive and value their environment. Many environmental conflicts share certain attributes. Some of the common threads which have run through recent Scottish controversies have been identified by Warren (2002b) and discussed above. While some of these are clearly discernible in the St Andrews context, others are much less apparent, probably because of the contextual contrast between the peri-urban environmental setting of this study and the extensive, wild landscapes which have

often been the focus of studies of conservation conflict. Specifically, in terms of 'insider *versus* outsider friction', there is some friction between local (St Andrews) interests and Fife Council, but even the developer was keen to press his local credentials. Internal friction appears more important in the St Andrews case than in the national and international controversies discussed by Warren (2002b). Certainly, a degree of polarisation is apparent. For example, the developer commented that the Community Council refused even to meet or discuss development proposals with him, and the local media seem to exacerbate this polarisation.

Myerson & Rydin (1994) characterised the 1990s as the 'age of environment' within planning discourse, and it appears that this decade (and perhaps century) has become the 'age of sustainability'. Whilst contrasting interpretations of sustainable development are not a major feature in the St Andrews case, with little local adoption of sustainability rhetoric by the opponents of development, both the developer and Fife Council seem to have adapted sustainability principles to their own situations. Equally, problems with planning are not a major feature, probably due to the powerful influence that several sectors of the local community are able to exert over the system. The decision making conundrum is seen, with vocal calls for more power locally and Developer C's suggestion that politicians should give planners greater freedom, whilst Planner A and Councillor G suggest that the problem is not with politicians *per se*, but with politicians who depart from their own authority's policy.

It was, however, clear that many people in St Andrews obviously cared in a real and passionate way about 'their' environment (however conceived), to the point of being prepared to invest time and money in fighting to keep it as they think it should be. Since the right to a pleasant view is not specifically protected in planning law, people may seek other justifications to support their stance on a development, and there is good evidence for people pre-judging the planning proposals, entering development controversies with predisposed attitudes that are then simply reconfirmed. It is interesting, for example, that many people who opposed the housing development would not acknowledge any positive economic impacts whilst commenting that their opposition was for environmental reasons, but instead tended to say that the development would have entirely negative impacts. This is hardly encouraging for those who seek to resolve disputes by building consensus, and accords with Gunne-Jones (2003) who asks if planning is being pulled in mutually exclusive directions as local participation in the process increases. There certainly appear to be few signs of an 'age of consensus' emerging in St Andrews, yet more consensual partnership approaches must surely hold the best hope for achieving development that benefits local communities without compromising their environments.

Conclusion

This study highlights the multi-layered complexity of the interplay between communities and 'the environment'. Reactions amongst St Andrews residents to three development proposals illustrate diverse perspectives on development and environmental issues at the local level, showing the ways in which the environmental components of contested issues are differentially interpreted and weighted by different groups at different times. The 'local environment' thus emerges as

a socially constructed phenomenon which can be fashioned and re-fashioned according to local perceptions of threats and opportunities (Myerson & Rydin, 1994; Harrison & Burgess, 1994).

In terms of spatial perspectives, this study demonstrates that local people have a much greater concern with the local than the global environment. Whilst Blaikie (1996) has a point when he describes 'think globally, act locally' as a contradiction in terms, it probably remains the case that attempts to translate global problems into something meaningful locally still represent the best means of promoting environmentally aware behaviour. Manager B and Teacher H both talked, during the interview process, of the need for greater environmental education, something which commentators frequently call for (*e.g.* Crofts & Holmes, 2000; Lister-Kaye, 2001; Fife Educational Network, 2003). Whilst more education is essential in increasing understanding and awareness, there is a danger in assuming that it will automatically lead to more environmentally responsible behaviour. The work of Barr (2003), Cottrell (2003) and Harrison *et al.* (1996) highlights how education is only part of the answer, and parallels can be seen in debates surrounding outdoor recreation management (Manning, 2001). The difficulty may well be that a blanket education policy fails to adequately conceptualise the fact that, as Manager B commented, 'different people conceive of 'environment' very differently, you know, it's totally individual', something clearly evident from the case studies presented here.

Our results emphasise the wide diversity of 'environmental' opinions within communities, a reality which questions the extent to which those who claim to speak for the community actually do represent the range of local opinion. Given the current emphasis on public participation in planning (Welsh Assembly Government, 2002; Scottish Executive, 2003b; ODPM, 2005), this has considerable ramifications. Overall, however, it seems that the 'environment' is valued in St Andrews mainly in terms of a green space surrounding the town and a town free from traffic and pollution. Thus whilst proposals for a housing development that was perceived to threaten this countryside and increase traffic through the town was not generally welcomed, there was support for the idea of a rail link that could 'improve' the local environment.

Perhaps then, in this context, the 'environment' can be understood as a commodity which is utilised by local interest communities as another 'arrow in their quiver' to strengthen their campaign. Like sustainable development, 'environment' has a 'Humpty Dumpty-ish' quality, being moulded to mean just what the speaker intends. Thus even the developer proposing the housing scheme suggested that the 'environment' could be improved by his scheme. That people can have such widely varying conceptions of their environment and of what will enhance or degrade it is a complex reality which deserves greater recognition in planning and environmental debates.

Notes

1. The others are scale, space and place.
2. The 2001 census recorded 14,209 residents for St Andrews (General Register Office for Scotland, 2003), and Fife Council's 2003 estimate is 15,203 (Fife Council, 2003b). However both these figures are based on a student population of 4,457 (General

Register Office for Scotland, 2003). This is a serious miscount, as the resident student population was 6,512 in 2003 (University of St Andrews, 2003b) (and has since grown). Incidentally, a number of non-official sources (for example University of Dundee, 2003) all cite the population as 15,000 *plus* students. This is incorrect.

3. The purpose of a Green Belt, in which there is a presumption against development, was defined by the Scottish Development Department (1985).
4. St Andrews West is part of a ward named Strathkinness and St Andrews West, but all the relevant data sources (the 2001 census and the electoral register) sub-divide it into two parts: Strathkinness and St Andrews West, allowing only the relevant St Andrews West information to be used here.
5. Strictly the sample was drawn from the electoral register, so only this should be used to define the population. However since it includes no information on age, census data were also used.

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