CONFIDENTIAL

REPORT
of the
SCOPING STUDY
into
SOCIAL AND ECONOMIC IMPLICATIONS
of
CROSS-BORDER ROAD CLOSURES

NOVEMBER 1993

CONFIDENTIAL

INDEX

1.	**INTRODUCTION**		1
2.	**CONTEXT, EXTENT AND LOCATION OF CLOSURES**		1
	2.1	Context of Road Closures	1
	2.2	Extent of Road Closures	1
	2.3	Location of Road Closures	3
3.	**ANALYSIS OF COMPLAINTS AND REPRESENTATIONS**		3
4.	**ISSUES IDENTIFIED BY DEPARTMENTS/OFFICIALS**		4
5.	**IDENTIFICATION OF TARGET AREAS FOR FUTURE RESEARCH**		5
	5.1	Louth/Armagh (BCPs 1-34)	7
	5.2	Monaghan/Armagh (BCPs 35-91)	7
	5.3	Monaghan/Tyrone (BCPs 92-108)	7
	5.4	Monaghan/Fermanagh (BCPs 109-166)	9
	5.5	Cavan/Fermanagh (BCPs 167-188)	10
	5.6	Leitrim/Fermanagh (BCPs 189-198)	11
	5.7	Donegal/Fermanagh (BCPs 199-224)	11
	5.8	Donegal/Tyrone (BCPs 225-260)	13
	5.9	Donegal/Londonderry (BCPs 261-291)	14
	5.10	Review of Sectors	15
6.	**STRATEGIES FOR FUTURE RESEARCH**		16
	6.1	Contextual Research	16
	6.2	Survey Research	16
	6.3	Economic Appraisal	18
	6.4	Research Overview	20
7.	**SUMMARY**		21
	APPENDICES		
	ONE:	TERMS OF REFERENCE	23
	TWO:	CURRENT STATUS OF BORDER CROSSING POINTS	24
	THREE :	ECONOMIC DATA SOURCES AVAILABLE	25

1. INTRODUCTION

The purpose of this scoping report is to examine the conceptual, geographical and methodological parameters of a study into the social and economic implications of road closures along the border between Northern Ireland and the Republic. The terms of reference for the scoping study are included in Appendix One of this report.

The report was compiled jointly by the Policy Planning and Research Unit and the Economic and Social Research Institute.

2. CONTEXT, EXTENT AND LOCATION OF CLOSURES

2.1: Context of Road Closures

Northern Ireland and the Republic of Ireland share a common border of over 300 miles. Historically, numerous serious terrorist incidents and deaths arising from the security situation have occurred in border areas.

Security policy in the present conflict (as in previous IRA campaigns) has included attempts to secure the border on the Northern side by selective closure of Border Crossing Points (BCPs). The initial closures in the present conflict took place in the early 1970s. While some of these initial closures remain to the present time, many closures were rapidly reversed by the action of local communities. Since the early 1980s, however, closure has become a particularly important aspect of security policy, especially along the western sectors of the border. In these sectors, Permanent Vehicle Checkpoints (PVCPs) were established and in general border roads not controlled by a PVCP were closed (or kept closed) under emergency legislation. There are currently 16 Patrol Bases/PVCPs operated by the British Army close to the border on the Northern side, in addition to 5 checkpoints operated by the Garda on the Republic's side of the frontier.

The authority to close roads in any part of Northern Ireland is conferred by the Northern Ireland (Emergency Provisions) Act, 1991. Decisions to close are taken by Ministers, based on the professional advice and judgement of the security forces (who have the operational responsibility for actual closures) and take into account social and economic factors. The most commonly used methods for effecting closure have been the cratering of roads and the installation of concrete barriers. Less frequently, bridges have been demolished. In most cases pedestrian access continues to be possible following closure and has on occasions been facilitated by the installation of metal footbridges.

2.2: Extent of Road Closures

Both Governments recognise a total of 291 BCPs. From Table 1 it can be seen that 22 of these BCPs are officially designated as 'A' roads and a further 14 as 'B' roads within Northern Ireland. The preponderance of the remainder are either unclassified roads or lanes/tracks. In addition, there are 31 BCPs classed here as 'Non-Road Features' (e.g. gaps in hedges, rough terrain in forestry, etc.). The distinction between a 'road' and a 'lane/track' and, indeed, the distinction between a 'track' and a 'non-road feature' is necessarily somewhat arbitrary.

It should be noted that a limited number of BCPs are realistically crossing points in name only as they afford no access to the communications network of the other jurisdiction (e.g. roads crossing the border for some yards and then crossing back, farm lanes with no outlet on the other side of the border). Such 'nominal' BCPs are included here in the overall 291 for the sake of completeness.

A total of 62 of these 291 BCPs can be classed as closed for natural reasons (i.e. as being passable only on foot or for short periods during the summer months). This leaves a total of 229 BCPs that would be considered passable or 'viable' to standard vehicles (e.g. a normal saloon car) if it were not for security closures.

Table 1 also provides a breakdown of the 229 viable BCPs by road category and shows that overall 40% of these 229 viable BCPs are closed on security grounds. As might be expected, the proportions both of security closures and of natural closures increase as road categories deteriorate from 'A Road' to 'Lane/Track' categories. Relatively few 'Non-Road Features' are subject to security closure as relatively few of these are passable to standard vehicles in any case.

Table 1: Numbers of BCPs with Current Closure Status by Road Type.

BCP Category	Total BCPs	Total Viable	Total Open	Closed for Security Reasons	% Viable Closed for Security Reasons
'A' Road	22	22	21	1	5%
'B' Road	14	14	9	5	36%
Unclassified Road	144	141	86	55	39%
Lane/Track	80	48	21	27	56%
Non-Road Feature	31	4	-	4	100%
Total	291	229	137	92	40%

The definition of 'closed' must be to some extent judgmental. A number of 'closed' crossings would be passable to tractors/4WD vehicles in most types of weather and some also to standard vehicles during dry periods of weather. Similarly, a small number of 'open' BCPs would become difficult for standard vehicles following periods of bad weather. The figure of 137 open BCPs given therefore represents a realistic assessment of those open to standard vehicles under normal weather conditions. A listing of the status of all BCPs is given in Appendix Two.

103 BCPs are at present subject to closure orders. Of these 92 are currently closed to standard vehicles (see Table 1). In part this reflects a degree of fluidity in the nature of closures and in the way each individual closure is kept under constant review. In addition, attempts at illegal reopening of closed BCPs occur at a rate of around 1 per week. The situation on the ground does therefore vary from week to week. Indeed, during the course of fieldwork to assess the passability of individual BCPs both illegal reopenings and reclosure operations took place.

2.3: Location of Road Closures

The key issue in discussing the location and extent of closed BCPs is the proportion of naturally viable roads that are sealed for security reasons in each area. Accordingly, Table 2 records the number of BCPs along each of the county frontiers excluding naturally closed BCPs to provide a comparison across regions of the extent of security related closure. There are 229 BCPs which fall into this category of being naturally viable to standard vehicles.

Table 2: Proportion of Naturally Viable BCPs Closed on Security Grounds.

ROI County	NI County	Viable BCPs	% Closed
Louth	Armagh	30	3 %
Monaghan	Armagh	44	9%
Monaghan	Tyrone	12	92 %
Monaghan	Fermanagh	50	34 %
Cavan	Fermanagh	20	40 %
Leitrim	Fermanagh	6	100 %
Donegal	Fermanagh	20	50 %
Donegal	Tyrone	26	69 %
Donegal	Londonderry	21	81 %
Total		229	40 %

One can see from the table that the pattern of closure on security grounds varies across different sectors of the border area, with a much higher proportion of BCPs closed on security grounds in the western counties.

The highest levels of security closures occur along the Leitrim/Fermanagh border (100%) and along the Monaghan/Tyrone border (92%). In contrast, the Armagh frontiers with Louth and Monaghan are virtually unaffected by security closures (3% and 9% respectively).

The table also shows a relatively low level of security closure along the Monaghan/Fermanagh and Cavan/Fermanagh borders. The Monaghan/Fermanagh sector includes the Clonooney area in which only 16% of roads are closed by security considerations. However, even after removing the roads of the Clonooney area from the analysis the extent of closure along the Monaghan/Fermanagh frontier is still less than 50%.

3. ANALYSIS OF COMPLAINTS AND REPRESENTATIONS

It quickly became apparent to researchers that the quantification of complaints by some simple form of count would be impractical. This was the case for a number of reasons. First, although systems exist within both jurisdictions for recording and responding to all complaints (whether written or oral) it was found that it would not be practical to submit such complaints to a routine enumeration. Would a persistent complainant on an issue count more than an

individual who made the complaint only once? How would a letter from an individual be quantified in comparison with a letter from a community organisation or chamber of commerce? Was a letter to the President in the same category as a letter to a councillor or newspaper? How would complaints to the different jurisdictions be tallied?

More fundamentally, the notion of a count was flawed by the assumption that failure to complain represented lack of grievance. Failure to complain might simply mean that there was no confidence in a complaint being taken seriously or achieving anything. Equally the number of complaints might significantly misrepresent attitudes within a community as they sampled only one section of opinion; people are simply more likely to write letters of complaint than letters of support.

In addition, the type of issues raised were so disparate in kind that they were difficult to classify in any straightforward way. To cite specific instances, complaints in different areas included the subjects of (a) disrupted access to farm land, (b) dumping of rubbish at closure sites leading to contamination of land, (c) the difficulty of bringing coffins across closures for funerals, (d) damage to property following use of explosives for closures, (e) a business rate bill being unreasonable given the poor quality of the road where the complainant lived, (f) liability for accidents to pedestrians using private land to walk across a closed BCP. All of these complaints may have had validity in themselves. But both their diversity and their geographical variability meant that there were major difficulties in attempting to produce any single overall index for individual geographical areas from them. Moreover, not all the complaints made stood up to scrutiny when more detailed investigation was made.

While there was no simple way of enumerating the complaints raised and 'weighing' them by area, the issues raised in complaints were carefully noted and used to amplify and inform consideration of the kind of issues raised in consultations with relevant state agencies and Government Departments.

4. ISSUES IDENTIFIED BY DEPARTMENTS/OFFICIALS

Both Governments monitor closely the overall situation with regard to closed roads and remain in close contact with local representatives and community organisations. In the Republic, representations and complaints of social and economic disruption caused by closed roads are regularly received by the Department of Foreign Affairs and other relevant Departments. The subject is frequently raised with Ministers in the Dail, at meetings between Ministers and local representatives and interest groups, as well as in Ministerial correspondence. In the course of this scoping study, each Government Department within both jurisdictions was asked to identify those issues within its authority where closure of border roads was felt to be having a detrimental effect. In addition, detailed discussions were held with officials whose work directly involved them in dealing with social and economic consequences of the closure policy.

In grouping the issues which emerged from these discussions, all supported by an analysis of the profile of complaints from around the border areas, it is most important to distinguish between the consequences for individuals and the consequences for the community as a whole. The pattern of complaints and the assessment of official information suggests that, whatever

the general effects on communities, certain individuals are bearing a disproportionate burden of any social or economic disruption. These individuals include (i) farmers/smallholders with lands straddling the border and (ii) those living closest to specific closures.

In all border sectors an issue that came up time and again in assessment of closures was disruption of farms and dislocation of farming activities. Dislocation is something which requires evaluation on a case by case basis. While some evidence was forthcoming of individuals overstating the degree of disruption caused to them by closure and while arrangements for the letting of land, sharing of equipment, etc., are undoubtedly widely used, it is apparent that this is one issue where significant incidence of economic disadvantage has been occasioned to individuals by the closure policy.

Research also revealed a whole range of issues relating specifically to the act of closure and to the consequences of living with closure. In large part, these issues arose from damage to property by the use of vehicles/plant during closure operations and by the use of explosives in closure. Failure to consult over the siting/resiting of closure now seems to be less of an issue. (Although no road closure has taken place since about 1987, some resiting of barriers etc. does take place at BCPs which had been closed before that time.) Once a closure has been effected, the unsightly nature of what is left is also an issue. This applies particularly in the case of the newer concrete and metal tank barriers and in locations where a cycle of reopening and reclosure has taken place. The use of closure sites as rubbish dumps, with attendant problems, is a further factor here.

5. IDENTIFICATION OF TARGET AREAS FOR FUTURE RESEARCH

Given the difficulties in assessing complaints it would obviously have been desirable to have been able to derive objective criteria or indicators by which the extent of any problems linked to road closures in different areas could be evaluated. This led to consideration of the following:

Detours

By definition a policy of road closure entails the diversion of traffic and the disruption of travel patterns. The extent of detour occasioned by closure is therefore a key indicator of the degree to which disruption is being caused. This is capable of objective measurement and as such affords a means for direct comparison across areas. What is not so straightforward in considering disadvantage is the balance between the length of a detour and the numbers of individuals subject to it. For example, closure of a road/track regularly used by 10 individuals and involving a 10 mile detour has more significant personal consequences but less substantial collective consequences than the closure of a road/track regularly used by several hundred people and involving a 2-3 mile detour. Another relevant factor in considering detour is the quality of road on which the detour has to be made. In this respect unadjusted road mileage is not an absolute measure of the time factor caused by detour. In the present case it is probably sufficient to note that as detours tend typically to direct traffic on to higher classification roads, mileage records of detour will typically but not invariably represent a small overestimate of time added on to journeys by closure. Some incorporation of road quality into measure of detour may therefore be appropriate in further study.

Economic Disadvantage

The type of economic disadvantage typically suggested as arising from the closure policy was not one of drastic or sudden demise of a community but a long-term decline and withering of a community as a result of its hinterland being cut off. Measurement of this type of effect requires data in a time series comparing areas immediately affected by road closure with neighbouring areas not immediately affected in terms of their relative performance over time on economic indicators. The limitation of this approach is that the evidence such indicators may yield is only prima facie, i.e. they may indicate relative over- or under-performance of an area but cannot by themselves identify closure or absence of closure as a direct cause of this. In view of these difficulties and the coarseness of the economic indicators that were readily available (e.g. statistics on depopulation and unemployment) it was felt that the scoping study was too limited to derive an objective index which would be sufficiently sophisticated and robust to encompass fully the multidimensionality of economic disadvantage and serve to identify areas which merited inclusion in any future study.

Social Dislocation

Claims regarding the social disruption of communities tended to occur typically in the context of the more general economic complaints rather than as stand-alone issues. However, a substantial proportion of these wider economic complaints did refer to the disruption of community life. This sort of complaint is very difficult to assess objectively, not least when comparison is made between social activity in the 1990s and the social patterns existing in the 1970s when the first road closures of the present conflict took place. It is simply not feasible to assume that if closures were reversed community and social habits would revert to the position 10 or 20 years before. Accordingly, while detour provides an important objective indicator of the likelihood of social dislocation as a result of closure, no alternative simple index or objective measures for the complex pattern of economic disadvantage or social interactions making up " community" were available to the researchers for comparing areas. In what follows, therefore, social and economic issues raised in areas are simply placed in the context of the amount of detour/closure objectively recorded.

A further area that was considered in terms of registering concern over closure was the extent of illegal reopening attempts at a BCP. There are, however, several limitations in treating illegal reopening as a barometer of community concern. For example, certain closures are by their nature more difficult to reopen than others (e.g. demolition of a bridge compared with bypassing of concrete obstructions); as a result it would be misleading to interpret absence of illegal reopening as indicative of less concern than attempts at illegal reopening on more favourable terrain. In addition, to interpret illegal reopening as an indicator of concern among the local community would be to make certain assumptions about those actually involved. In consequence, while it was decided that extent of illegal reopening could not be ignored, it was felt that it could be a potentially misleading indicator of community concern.

5.1: Louth/Armagh (BCPs 1-34)

As noted in discussion of Table 2 above and reiterated in the figures in Table 3 below, security closures of BCPs in this 22-mile sector of the border are minimal, with only BCP 6 being closed on security grounds.

Table 3: BCPs in the Louth/Armagh Sector

BCP Category	Total BCPs	Total Viable	Total Open	Closed for Security Reasons	% Viable Closed for Security Reasons
'A' Road	3	3	3	-	-
'B' Road	1	1	1	-	-
Unclassified Road	21	21	21	-	-
Lane/Track	7	5	4	1	20%
Non-Road Feature	2	-	-	-	-
Total	34	30	29	1	3%

5.2: Monaghan/Armagh (BCPs 35-91)

Security closures in this 38-mile sector of the border are limited to BCPs 71, 75, 90 and 91, although a closure order also applies to BCP 83 which is currently open. The closure policy really starts to operate from Middletown (BCP 90) westward.

Table 4: BCPs in the Monaghan/Armagh Sector

BCP Category	Total BCPs	Total Viable	Total Open	Closed for Security Reasons	% Viable Closed for Security Reasons
'A' Road	3	3	3	-	-
'B' Road	3	3	3	-	-
Unclassified Road	29	29	27	2	7%
Lane/Track	20	9	7	2	22%
Non-Road Feature	2	-	-	-	-
Total	57	44	40	4	9%

5.3: Monaghan/Tyrone (BCPs 92-108)

This 23-mile sector has the second highest rate of road closure of any area along the border (92%). Table 5 shows that of the 17 BCPs in the sector 5 are closed due to natural reasons (BCPs 97, 99, 100, 103 and 104). Of the remaining 12 roads which are viable only 1 remains

open (BCP 95 at Aughnacloy PVCP). As regards the 11 roads which are closed on security grounds 2 are B class -- BCP 92 (the Caledon-Monaghan road via Glaslough) and BCP 108 (the Clogher-Monaghan road). In the former case no substantial difference exists between the length of journey from Caledon to Monaghan via BCP 92 and the open route via BCP 88 south of Middletown. In the latter case, the detour involved in travelling from Clogher to Monaghan is approximately 6 miles (say, 22 miles approx. via Aughnacloy compared with 16 miles approx. via BCP 108).

Table 5: BCPs in the Monaghan/Tyrone Sector

BCP Category	Total BCPs	Total Viable	Total Open	Closed for Security Reasons	% Viable Closed for Security Reasons
'A' Road	1	1	1	-	-
'B' Road	2	2	-	2	100%
Unclassified Road	7	7	-	7	100%
Lane/Track	4	1	-	1	100%
Non-Road Feature	3	1	-	1	100%
Total	17	12	1	11	92%

Concern in this sector has tended to be on a grouping of 4 BCPs in the Clogher Valley (BCPs 105-108, i.e. Kilanny Road, Greagh Road, Cullamore (Connolly's Cross) Road and Drumfurrer (Clogher-Monaghan) Road). These road closures have been a major focus of representations and complaints on the Irish side and the subject of illegal reopening attempts.These roads are in relatively sparsely populated terrain (e.g. with the exception of BCP 105 there is no dwelling in the Republic within 500 metres of any of these BCPs). The main problems involved with these closures are typical of those found in such sparsely populated areas, namely disruption of farming/ smallholding activities among those with lands on both sides of the border and increased journey times/distances for those wishing to visit family or friends living in the other jurisdiction.

The low population density in such cases means that a relatively small resident population will be affected. However, precisely because BCPs in areas of low population density tend to be more remote from passable BCPs, it also means that the level of inconvenience will be disproportionately more severe. In the case of individuals living in, say, Altadavin townland in Northern Ireland and wishing to visit relatives in, say, Drumfurrer in the Republic, a trip of less than 3 miles via BCP 106 and less than 5 miles by any of BCPs 105, 107 or 108 becomes a journey of around 13 miles owing to closures. At its most extreme, a visit of 140 metres between the two dwellings nearest the border in each jurisdiction at BCP 105 becomes, if necessitated by car, a journey of around 14 miles. Obviously it is unlikely that such short trips will be undertaken by car. But it does demonstrate the quite disproportionate increases in detour that are caused to those individuals living nearest the border in sparsely populated wards/parts of wards or to those living nearest the border when several BCPs in sequence are subject to closure. Detailed assessment of the local impact of these closures was made following submission on them to the Anglo-Irish Secretariat in 1989.

5.4: Monaghan/Fermanagh (BCPs 109-166)

Table 6 shows that the incidence of road closures on security grounds in this 40-mile sector is 34% (representing a total of 17 BCPs). The proportion of naturally viable roads which have been closed on security grounds in this sector is therefore low relative to other sectors where the road closure policy is in operation.

This sector has had a particularly high profile in terms of representations and complaints, especially to relevant officials and Departments in the Republic. Most attention has been focused on the closures at Derryvollen (BCP 114) outside Rosslea and Lackey Bridge (BCP 129), both of which have been been the subject of systematic attempts at illegal reopening. These 2 BCP closures are among those most frequently raised in representations to the Irish side.

Table 6: BCPs in the Monaghan/Fermanagh Sector

BCP Category	Total BCPs	Total Viable	Total Open	Closed for Security Reasons	% Viable Closed for Security Reasons
'A' Road	4	4	4	-	-
'B' Road	3	3	2	1	33%
Unclassified Road	35	35	24	11	31%
Lane/Track	10	8	3	5	63%
Non-Road Feature	6	-	-	-	-
Total	58	50	33	17	34%

The maximum possible detour resulting from the closure at Derryvollen (BCP 114) is approximately 5 miles via BCP 117 or 6 miles through BCP 118. No local centre of population is directly affected by this closure.

Both 'A' roads from Northern Ireland into Clones from the west (the main Cavan-Clones and Enniskillen-Clones roads) are open. Concern has therefore tended to focus on closures to the north of Clones where all BCPs are closed. In representations to the Irish side the negative impact of the closure of Lackey Bridge as regards access between Clones and its northern hinterland is often raised. The maximum vehicular detour caused by the closure of Lackey Bridge is 9 miles, if one were to attempt to travel from one side of the bridge to the other by standard vehicle. In terms of centres of population the closure involves the use of alternative routes which add approximately 3 miles on to what would otherwise be a journey of approximately 5 miles from Clones to Rosslea. The neighbouring closure at Clonatty Bridge (BCP 137) adds approximately 3 miles on to the journey from Clones to Magheraveely.

The most substantial detours in this sector arise in the northernmost BCPs. Although the detours in these cases are extreme they occur in remote afforested areas where the nearest dwellings on either side of the border are more than a mile away.

5.5: Cavan/Fermanagh (BCPs 167-188)

From Table 7 it can be seen that 40% of viable roads are closed along this 48-mile sectors of the border (representing a total of 8 BCPs). With the exception of a small number of BCPs which naturally belong to the network of the Clonooney area, this sector of the border divides into 3 clear topographical segments:

(a) the area between Upper Lough Erne and Slieve Rushen, including Aghalane Bridge (BCP 171) and Gortmullan Patrol Base (BCP 173);

(b) the area between Slieve Rushen and Cuilcagh, including Mullan Bridge Patrol Base (BCP 182);

(c) the area from Cuilcagh to the Lough Macneans, including checkpoints at Blacklion/Belcoo.

Table 7: BCPs in the Cavan/Fermanagh Sector

BCP Category	Total BCPs	Total Viable	Total Open	Closed for Security Reasons	% Viable Closed for Security Reasons
'A' Road	4	4	3	1	25%
'B' Road	-	-	-	-	-
Unclassified Road	9	9	5	4	44%
Lane/Track	8	7	4	3	43%
Non-Road Feature	1	-	-	-	-
Total	22	20	12	8	40%

In the first segment the closure of Aghalane Bridge (BCP171) has been the subject of many representations and complaints on the Irish side and, because it lies on a National Primary route, is a matter of particular concern to the Department of the Environment in Dublin. This is a unique closure in that when the bridge was illegally demolished in the early 1970s it was an approved crossing which had 'A' road status in Northern Ireland which it still nominally maintains. The closure adds a detour of 8-9 miles to the journey from Enniskillen to Cavan via Derrylin and entails that the Belturbet-Swanlinbar route (which is part of the secondary network) is now acting as part of the primary road system. One of the main concerns raised in representations is the effective bypassing of Belturbet in the Republic as a consequence of this closure. Representations on file with the Irish side suggest that traffic flows have been redirected, particularly through Ballyconnell and Swanlinbar. It is claimed that this diversion of traffic has contributed to the economic decline of Belturbet over the years.

In the second segment there is no detour involved as a result of closures between Swanlinbar and Kinawley via Mullan Bridge. In the third segment at Blacklion/Belcoo both major roads remain open.

Reference to the tourism potential of this sector is made in Section 6.3.

5.6: Leitrim/Fermanagh (BCPs 189-198)

Table 8 shows that there is a total of 10 BCPs along this 17-mile sector of the border of which 4 are closed due to natural reasons. All of the remaining 6 viable crossing points are closed on security grounds. This is the highest rate of closure of any of the border sectors. Resulting detours are extensive. The road detour from one side of BCP 197 at Garrison to the other side is of the order of 24-25 miles; the corresponding detours at Kiltyclogher (BCPs 191 and 193) are of the order of 20 and 22 miles respectively. Access to the Republic from Garrison is available at Belleek 4-5 miles away and Ballyshannon and the N15 are approximately 9 miles away by the same route. Access to Northern Ireland from Kiltyclogher is available at Belcoo 11 miles away.

Table 8: BCPs in the Leitrim/Fermanagh Sector

BCP Category	Total BCPs	Total Viable	Total Open	Closed for Security Reasons	% Viable Closed for Security Reasons
'A' Road	-	-	-	-	-
'B' Road	1	1	-	1	100%
Unclassified Road	6	3	-	3	100%
Lane/Track	3	2	-	2	100%
Non-Road Feature	-	-	-	-	-
Total	10	6	-	6	100%

What is different about this sector compared with others where large detours are involved is that in other areas it is almost exclusively individuals or households that are the subject of large detours. In the Leitrim/Fermanagh sector there are two small villages (Garrison in Northern Ireland and Kiltyclogher in the Republic) that are affected in this way.

Reference to the tourism potential of this sector is made in Section 6.3.

5.7: Donegal/Fermanagh (BCPs 199-224)

From Table 9 one can see that 10 of the 20 viable BCPs in this 28 mile sector are closed on security grounds. A total of 6 of the 10 BCPs which are open are clustered in the Belleek area and only 2 of the remaining open BCPs (BCP 214 at Pettigoe and BCP 221) afford genuine access across the border.

Table 9: BCPs in the Donegal/Fermanagh Sector

BCP Category	Total BCPs	Total Viable	Total Open	Closed for Security Reasons	% Viable Closed for Security Reasons
'A' Road	3	3	3	-	-
'B' Road	2	2	1	1	50%
Unclassified Road	13	13	5	8	62%
Lane/Track	7	2	1	1	50%
Non-Road Feature	1	-	-	-	-
Total	26	20	10	10	50%

The closure of Letter Bridge (BCP 213) just outside Pettigoe has prompted a significant number of complaints in the Republic, referring particularly to the difficulty of access to neighbouring towns such as Ballyshannon and Belleek and suggesting that Pettigoe has suffered from the loss of its natural hinterland. The closure of Letter Bridge adds a detour of 8 miles on any trips from the west of this sector (say, Belleek) to Pettigoe. It would also seem to be possible, however, that the closure of other BCPs to the north-west and to the north-east of Pettigoe would act so as to funnel additional local cross-border traffic that would otherwise use these BCPs into Pettigoe itself.

The A35 from Enniskillen to Donegal crosses the border at Pettigoe; this crossing (BCP 214) is open. However, in the Crisp application for Pettigoe it was noted that:

"The closing of border roads has severely isolated Pettigoe both from the nearest towns in Co. Donegal as well as from the Fermanagh/Tyrone areas with which it has direct road links. The sole remaining link road to Donegal, the R232 via Laghy is a poor mountain road in bad repair. In addition, improvements to the N15 between Ballyshannon and Donegal Town have furt' isolated Pettigoe by providing a fast road corridor to both west and north Donegal and acting as a by-pass eliminating this south-east region..."

As a result, traffic that might otherwise have been using the R232/A35 route through Pettigoe may now be using the N15/A46 route via Ballyshannon and Belleek to travel from Donegal to Enniskillen.

The most publicised problems arising from closures of BCPs in this sector are those at Tullyvogy (BCP 212). Here lengthy detours are seen with two houses a few hundred yards apart by foot now being approximately 25 miles apart by road as a result of closure.

5.8: Donegal/Tyrone (BCPs 225-260)

Table 10 shows that the incidence of closure of viable BCPs on security grounds in this sector is 69%. This represents 18 of the 26 viable BCPs in this 54-mile sector of the border.

Table 10: BCPs in the Donegal/Tyrone Sector

BCP Category	Total BCPs	Total Viable	Total Open	Closed for Security Reasons	% Viable Closed for Security Reasons
'A' Road	1	1	1	-	-
'B' Road	1	1	1	-	-
Unclassified Road	13	13	4	9	69%
Lane/Track	10	8	2	6	75%
Non-Road Feature	11	3	-	3	100%
Total	36	26	8	18	69%

With the exception of 3 BCPs which naturally belong to the previous grouping and none of which is open, the Donegal/Tyrone sector falls into two clearly separable segments:
(a) the Glenderg/Castlederg basin (BCPs 228-247);
(b) a relatively straight segment heading north through Clady and Strabane (BCPs 248-260).

Characteristic features of the Glenderg basin in Northern Ireland are the convergence of the road network on Castlederg, the only sizeable centre of population in the region, and the absence of any natural pattern of integrated road communications between the Finn valley in the Republic and the Derg valley in Northern Ireland. Population density in the Glenderg area is particularly low (1 person per 8 hectares) and the region is effectively bypassed by the A5 from Strabane-Newtownstewart-Omagh to the east and by the N15 Donegal-Stranorlar-Lifford in the Republic to the north and west. Geographically the area is also clearly demarcated, particularly to the west and south. The main road from Castlederg to Castlefinn (BCP 242) is open; detour as a result of closure from Castlederg to Clady via the Republic is approximately 1 mile; detour between Castlederg and Stranorlar resulting from the road closure is 2-3 miles on what would otherwise be a journey of approximately 12 miles on interlacing farm tracks/unclassified roads.

The importance of keeping BCP 242 open was stressed by a cross-community grouping when the prospect of removing the checkpoint in the Republic was mooted in 1989. A feature of the BCPs in this segment is the distance most of them are sited from private dwellings; of the 14 closed BCPs in this segment, only 2 have dwellings within 500 metres in Northern Ireland and only 5 have dwellings within 500 metres of them in either jurisdiction. This is again a pattern of closure that is likely to have disproportionate impact on specific individuals on a case by case basis.

The remaining segment from BCPs 248-260 is marked by two main road conjunctions, at Clady (BCPs 258-259) and at Strabane (BCP 260). These 3 BCPs are open. Of the 10 remaining BCPs in this segment the 3 security closures (BCPs 249, 250 and 253) result in detours via Clady of approx. 7, 5 and 4 miles respectively.

5.9: Donegal/Londonderry (BCPs 261-291)

Table 11 shows that a total of 81% of viable BCPs in this 14-mile sector are closed on security grounds. This is the third highest rate of closure in any sector. Only 4 out of 21 viable BCPs in the area are open.

Table 11: BCPs in the Donegal/Londonderry Sector

BCP Category	Total BCPs	Total Viable	Total Open	Closed for Security Reasons	% Viable Closed for Security Reasons
'A' Road	3	3	3	-	-
'B' Road	1	1	1	-	-
Unclassified Road	11	11	-	11	100%
Lane/Track	11	6	-	6	100%
Non-Road Feature	5	-	-	-	-
Total	31	21	4	17	81%

The unique feature of the Donegal/Londonderry BCPs is their proximity to a major centre of population. All the Cityside wards of Derry Council and the preponderance of the wards on the Waterside are within 5 miles of the border. In addition, the Cityside wards are in the anomalous position of being connected to the rest of Northern Ireland only by bridge across the River Foyle. The Cityside wards alone comprise a population equivalent to the entire population of Fermanagh and the very size of the population so close to such a high degree of closure makes this sector of particular significance.

In most cases, detours are limited. The greatest detour involved is approximately 7 miles (BCP 282) if one were to travel from one side of the BCP to the other by standard vehicle.

The profile of closures along the Donegal/Londonderry border has been low in terms of representations and complaints.

5.10: Review of Sectors

In view of the relatively detailed nature of much of the discussion of individual sectors it may be helpful at this point to include a brief summary of the main points arising from treatment of each sector. Sectors have been listed below according to their overall rate of closure, with a brief resume of the main issues (representations/complaints, detours, etc.) raised.

(a) Leitrim/Fermanagh (Overall closure rate: 100%)
Detours in this sector are extensive. What is different about this sector is that there are two small villages (Garrison in Northern Ireland and Kiltyclogher in the Republic) that are subject to these detours compared with other areas where it is almost exclusively individuals or households that are so affected.

(b) Monaghan/Tyrone (Overall closure rate: 92%)
Concern in this sector has tended to focus on a grouping of 4 BCPs (BCPs 105-108) in the Clogher Valley. These BCPs are in relatively sparsely populated terrain, meaning that a relatively small resident population will be directly affected by them.

(c) Donegal/Londonderry (Overall closure rate: 81%)
The Cityside wards of Derry Council comprise a population equivalent to that of Fermanagh. The very size of the population so close to this extent of closure makes this sector of particular significance. In most cases, however, detours are limited.

(d) Donegal/Tyrone (Overall closure rate: 69%)
The pattern of closure in this sector is such that it is likely to impact on specific individuals on a case by case basis.

(e) Donegal/Fermanagh (Overall closure rate: 50%)
The closure of Letter Bridge (BCP 213) just outside Pettigoe has prompted a significant number of complaints in the Republic, referring particularly to difficulty of access to Pettigoe from towns in Donegal and from its western hinterland. Pettigoe itself is on an open 'A' road. It has been suggested that the N15 (Ballyshannon-Donegal) may be "acting as a by-pass" for this region. The most publicised problems in this sector are those at Tullyvogy (BCP 212).

(f) Cavan/Fermanagh (Overall closure rate: 40%)
In this sector the closure of Aghalane Bridge (BCP 171) has been the subject of concern on the Irish side, particularly in terms of the redirection of traffic through Ballyshannon and Swanlinbar. It is claimed that this has contributed to the economic decline of Belturbet over the years. This closure is unique in that it is the only 'A' road BCP closed on security grounds.

(g) Monaghan/Fermanagh (Overall closure rate: 34%)
The impact of closures on Clones has been a source of concern in the Republic. Both 'A' roads into Clones from the west are open, but all BCPs to the north of the town are closed. Closures at Lackey Bridge (BCP 129) and Derryvollen (BCP 114) have been among those most frequently raised in representations to the Irish side.

Overall closure rates in the Monaghan/Armagh and Louth/Armagh sectors are 9% and 3% respectively.

6. STRATEGIES FOR FUTURE RESEARCH

In this section, three possible strategies are discussed for conducting research on the road closure issue. These strategies are not necessarily exclusive of each other and varying combinations might be possible, depending on the precise nature and focus of the project.

6.1: Contextual Research

This involves the analysis of economic data which have been previously collated and are currently in the public domain. The purpose of this type of analysis is to develop socioeconomic and demographic profiles of the relevant areas and changes therein over time. Appendix Three provides a detailed inventory of the basic data sets already available on both sides of the border. One can see from this that the available data are of a highly disparate and piecemeal nature, often relating to different time periods in the two jurisdictions. In view of the nature of the proposed research topic one would require high quality data, available at a spatially disaggregated level over a reasonable time period. Such data would allow one to examine changes in socioeconomic and demographic structures at the local level over time.

In reality, the censuses of population in each jurisdiction are the only publicly available data sets which would meet the criteria of necessary quality and spatial disaggregation. Even in respect of the censuses, however, one should note that although 1981 data are available in both jurisdictions only limited data are as yet available from the 1991 Census of Population in the Republic. The currently available set of 1991 data relate to basic demographics on age, sex and marital status. The more relevant information -- on issues such as economic and occupational status -- will be released in mid-1994. In the absence of available 1991 Census data one would have to rely on 1986 data in the Republic to provide insights into change over the period 1981-86 only. Furthermore, although data for the period 1981-91 are available in Northern Ireland analysis is complicated by changes in ward boundaries during this period. Additionally there were problems of non-response with the 1981 Census in Northern Ireland which circumscribe its utility at ward level in some instances.

A further issue in relation to the full range of statistics currently available in the public domain is the extent to which one can establish a causal relationship between process and outcome -- in this case between road closure and any consequent disadvantage. The best that can be achieved from such statistics is a broad description of the socioeconomic and demographic structure of different areas and changes therein over time. It would not be possible to identify direct causality using data such as those outlined in Appendix Three. Their use, however, would be to contextualise the research and provide a frame of reference for the researcher in undertaking his work.

6.2: Survey Research

Given the relative paucity of currently available statistical information it is necessary to assess the possibilities and problems of collecting information in the areas concerned. A number of approaches could be considered in this respect.

The quantitative approach involves selecting a statistical sample (of households or individuals) and carrying out personally administered surveys to collect micro-level information on the impact of road closures and derivative issues. Given the proper sample design the data collected in such a survey could be used to provide representative estimates of the characteristics, attitudes, behavioural patterns, etc., of households in the study region.

In addition to surveys of individuals or households one could also interview retailers with a view to collecting details on their perceptions of the problems created by road closures and, if possible, an estimate of resultant trade losses (or gains). It should be noted that, by definition, one would be able to interview only businesses which have survived over the years. One would not be able to interview those people whose businesses had closed as a result of loss of trade whether as a result of road closures or for other reasons.

From a statistical and scientific perspective a quantitative survey (of individuals or retailers) has the potential to provide accurate and reliable information. In the present context, however, it would not be without its drawbacks. These include the following:

First, because of the sensitivities involved there would obviously be difficulties in ensuring that the information recorded would be objective and spontaneous. Direct questioning could lead respondents in the information they provide. One should further remember that one would be dealing with geographically restricted areas in any future research. In some cases an effective census of an area would have to be undertaken rather than a sample per se. In view of the geographically restricted nature of the study areas, a problem could arise as a result of cross-respondent contamination, i.e. those who have been already interviewed might discuss the content of the questionnaire with future respondents, thus affecting the information provided by the latter. In such circumstances one could possibly find that, after only limited fieldwork, respondents would be answering strategically, further affecting the objectivity of the data provided.

Secondly, one would either have to tell the respondent the purpose of the research, thus possibly creating anxieties or false hope regarding reopenings, or one would have to deceive the respondent as to the purpose of the interview. Not only is the latter unacceptable in terms of research ethics but it is also unlikely to succeed, with the consequence that the same anxieties/false hopes would be engendered at a possibly more serious level because of the perception of a hidden agenda. In general, it should be acknowledged that survey research on a topic such as this could, of itself, affect social processes in the regions in question and heighten tensions within communities by raising the profile of road closures.

Thirdly, many of the questions would necessarily be of a hypothetical nature (e.g. "Would you use road xxx if it were open?"). Inferring actual future behaviour from answers to questions of this sort is a dubious procedure.

Fourthly, the overriding consideration in work of this nature in border areas would be the safety of interviewers and other field-workers. Local perceptions of why interviews are being carried out can be quite erroneous and interviewers' objectives, as well as their corporate or institutional associations, may be misunderstood or misinterpreted.

Fifthly, there is an issue of expense. Given that one might well be involved in examining the social and economic implications of road closures in several different locations it would be necessary to undertake a series of fairly large samples to provide to provide statistically acceptable estimates for each of the areas separately. Collecting data in this way is an expensive business.

As a substitute to personally administered field surveys one could consider undertaking a postal survey of the relevant areas. This would allow one to collect some degree of quantitative information on changes in shopping and travel patterns and the associated cost of same. It would not, however, provide the same objective checks and balances on the accuracy of data as would be obtained from a personally administered survey. Furthermore, response rates in postal surveys can frequently be a problem thus limiting the reliabilty and representativeness of information collected.

As an alternative to the quantitative approach outlined one could adopt a more qualitative methodology to collecting information. The methodology would be based on in-depth interviews with business and community leaders as well as structured discussions with focus groups. Such discussions would enable a researcher trained in qualitative techniques to tap into issues associated with closures, many of which have become a way of life for border residents over the last 10-20 years. It should be noted that this approach would yield a different and more discursive type of information to that provided by the quantitative approach. In particular, it would not allow one to quantify rigorously the extent of social dislocation nor the degree to which closures were seen as a problem nor the associated economic costs of closures. Given the need for disclosure in the operation of focus groups and the security realities of the situation it would be difficult to ensure that representative participation in focus groups could be obtained. In selecting participants of focus groups extreme care would have to be taken to ensure that this research approach would not be swamped or manipulated by the intense sensitivities concerning the issues under investigation.

6.3: Economic Appraisal

The third research method that could be applied is that of standard economic appraisal. This methodology involves the selection of a specific issue/area and an analysis of the economic consequences and implications of following a range of strategies regarding it. In this sense an economic appraisal is prospective (i.e. it looks forward) rather than retrospective (as would be the case with the contextual approach). Economic appraisal is, therefore, essentially a technique for comparing alternative policy options. The main steps include reviewing objectives, identifying alternative options and comparing the costs and benefits of those options.

A particularly important issue for such appraisal is the effect of road closures on tourism potential. A priori there would appear to be substantial potential for developing tourism product in several of the sectors mentioned in Section 5 above. In particular, these would include the Leitrim/Fermanagh border region, especially in the Lough Melvin and Upper Lough Macnean segments around villages such as Garrison, Rossinver, Kiltyclogher and Belcoo, as well as those associated with the opening of the Erne/Shannon system and the development of the Ballinamore/Ballyconnell canal. The potential for developing the tourism

sector has been referred to in several of the economic appraisals made of some of these areas over the years.

To actually operationalise this approach would involve discussions with tourism bodies (both national and local) on each side of the border with a view to investigating existing product and facilities as well as estimating the potential for future development.

Just as there are issues involved in the undertaking of survey work for a project such as this there are similar issues arising in the area of economic appraisal.

Firstly, this sort of activity is not an exact science. No forecasting exercise can be. One's analysis is, by definition, prospective. Because of this it is difficult to take account of all factors which may possibly impact on the economic outcome of any strategy. Initial parameters may change over time; unforeseen constraints may be encountered; transmission mechanisms and rates of economic responses to policy options may in actuality be different to those assumed at the outset. These observations are equally true of rigorous, econometric modelling exercises as well as of the more qualitative economic appraisal one could envisage being feasibly undertaken as part of future research in this project. Detailed discussions with experts in the field (e.g. from NITB, Bord Failte, etc., in the case of tourism) should provide one with the best available opinion on potential developments in the areas in question in the absence of closure policy.

Secondly, in appraising the tourism sector there would be issues involved in attempting to disentangle the impact of road closures per se from the more general negative impact of adverse international publicity arising from political violence in Northern Ireland as well as other factors such as poor road quality, etc.. Although the disentanglement of the different types of processes affecting the tourism sector would seem to be possible only on a qualitative basis, one should remember that closure of border roads has been referred to as an important issue in several reports on the tourism potential of the areas in question over the years.

Thirdly, the establishment of quantifiable and rigorous counterfactuals (e.g. what changes would occur if a particular road or roads were reopened) could present some difficulties to those undertaking the economic appraisal. Because of this one would again be forced to rely heavily on the best estimates of the experts in the field as to the possible outcomes of policy options.

Overall, the sort of economic appraisal which one could undertake would be comparable in its approach to the qualitative survey research discussed in the previous sub-section.

6.4 Research Overview

The preceding objective analysis of the issues arising from the use of different research methodologies, particularly the risks involved, dictates that extreme care should be taken in devising and implementing any future programme of research. In view of the symbolic importance and political salience of the subject matter, the strong community feelings that it engenders and the need to develop and test a research methodology which provides value for money, it would seem to be prudent to pilot any research in one particular locality before attempting to extend it elsewhere.

While no attempt has been made in this report to prioritise areas, it would appear from the information that has been presented on the extent of closure, size of detours and potential impact on village communities that there would be a viable prima facie case for developing and testing any research methodology in the first instance through a broadly based and substantive study in the Leitrim/Fermanagh sector of the border.

7. SUMMARY

This report considers the conceptual, geographical and methodological issues of a study into the socio-economic consequences of road closure policy.

In Section 2 it was seen that 40% (92) of the 229 viable BCPs are closed on security grounds. Incidence of closure was highest along the Leitrim/Fermanagh border (where all BCPs are closed) followed by Monaghan/Tyrone (92%), Donegal/Londonderry (81%) and Donegal/Tyrone (69%). Lowest incidence levels were found along the Armagh border with 3% in the Louth/Armagh sector and 9% in the Monaghan/Armagh sector.

In Sections 3 and 4 consideration was given to methodological issues in the evaluation of complaints and representations and to issues identified in discussions with Government Departments and relevant officials.

In Section 5 each of the 9 border sectors was reviewed in terms of the extent of closure involved, informed by the nature and extent of representations and complaints received regarding closure of specific BCPs and the amount of detour occasioned. This was in terms of identifying sectors/areas within sectors which could be targeted for further study. In this respect it is important that the reader should note that there is no implication in identifying an area that it has suffered from social or economic disadvantage as a result of road closure. Whether or not it has been adversely affected by the policy can only be decided by primary research.

In Section 6 different research strategies were discussed. Three approaches were considered as follows: contextual research, survey research and economic appraisal. Each would provide a complementary perspective on the research issues involved and none should be seen as exclusive of the other.

Contextual research is based on existing datasets currently in the public domain and would be used to situate the study areas and changes therein within their respective regional contexts. The most useful data set for this purpose is the Census of Population from each jurisdiction. A comparison of changes in the 1981-91 period could be undertaken for Northern Ireland. In the Republic some of the 1991 Census data will not be made available until mid-1994 and so one would be forced to look at trends over the period 1981-86 with only limited reference being possible for 1991. In undertaking this sort of contextual analysis it is important to note that one can say nothing of causality as regards road closure and social or economic disadvantage. Nonetheless it would provide an important starting point and frame of reference for research into changing socio-economic structures.

Quantitative survey research is based on statistical samples which are drawn from the study region(s). Given that one is interested in a number of different geographical areas one would have to mount a number of relatively large samples to allow one to derive acceptable statistical estimates for each of the areas separately. This has clear cost implications. In addition to cost a number of other considerations was raised in respect of personally administered survey work on such a sensitive issue as road closure policy. These included spontaneity and accuracy of the information provided; problems associated with raising false hopes or fears regarding closure policy; and, most importantly, considerations of interviewer safety.

An alternative to personally administered surveys is a postal survey. Response rates and reliability of the information collected are issues which should be considered in relation to this approach.

A further methodology is a qualitative approach based on focus groups, etc..This approach will clearly not provide one with strong quantifiable information but may provide some insights into the issues associated with the closure policy.

The contextual and survey research could be complemented with economic appraisal, focusing in particular on aspects of economic activity, such as tourism. The purpose of this would be to assess the degree (if any) to which a sector is not currently realising its full potential and to which any such under-realisation can be linked to road closure policy.

In view of the sensitivities associated with the closure of border roads and the potential difficulties in researching this issue it was felt that in devising and implementing any future programme of work it would seem to be prudent to develop and test any research methodology in one particular area before attempting to extend it elsewhere.

APPENDIX ONE: TERMS OF REFERENCE

The following were the Terms of Reference agreed for the conduct of the scoping study.

The scoping study would include the following:

(a) a brief description of the context, extent, location and pattern of closures along the border, including identification of closures on maps;

(b) analysis of complaints by different geographical area;

(c) interviews with relevant officials, including civil representatives;

(d) review of relevant information currently available within both Governments;

(e) examination of the availability of relevant economic data, and identification of information needs for the economic appraisal;

(f) identification of geographical areas which could be targeted for further study;

(g) identification of aspects of the consequences of border road closures which could be encompassed in subsequent research;

(h) consideration of any other relevant information material; and

(i) preparation of a report.

APPENDIX TWO: CURRENT STATUS OF BORDER CROSSING POINTS

At an early stage of the scoping study the Irish Government furnished a list of those BCPs which it then held to be closed. This list concurred with that held by the British Government in respect of 270 (i.e. 93%) of the 291 BCPs. There is therefore a high level of agreement between the two Governments on this issue.

This is particularly encouraging given that there is necessarily a degree of subjectivity involved in judging whether or not certain types of terrain can be classed as 'open' to standard vehicles.

Open BCPs
The following 137 BCPs are classed by the British authorities as currently open to standard vehicles. This list is that used throughout the report. In 18 cases the Irish list differs from that held by the British Government in classing a BCP as "closed". Such BCPs are marked by an asterisk.

1, 2, 3, 4, 5, 7, 8*, 9, 10, 11, 12, 13, 14, 16, 17, 18*, 19, 21, 22, 23, 24, 25, 27, 28, 29*, 30, 31, 32, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45*, 48, 51, 53, 54, 55, 56, 57, 60, 61, 62, 63, 64, 66*, 68, 69*, 70, 72, 73, 74, 76, 77, 78, 79, 80, 83*, 84, 85, 86, 88, 95,115, 116*, 117, 118, 119, 130, 131, 132, 133, 134, 135, 136, 138, 139, 140*, 141, 142, 143, 144, 145, 146, 147, 148, 150, 151, 152, 153*, 155, 157, 158, 162, 163, 164, 168, 169, 170, 172, 173, 174, 175, 182, 183, 185*, 187, 188, 201*, 202, 203, 204, 205*, 207*, 214, 219, 220, 221, 230*, 242, 244*, 245*, 256*, 258, 259, 260, 264, 266, 277, 288.

Closed BCPs
The following 154 BCPs are classed by the British authorities as currently closed to standard vehicles. In 3 cases the Irish list differs from that held by the British Government in classing a BCP as "open". Such BCPs are marked by an asterisk.

6, 15, 20, 26, 33, 46, 47, 49, 50, 52, 58, 59, 65, 67, 71, 75, 81*, 82*, 87, 89, 90, 91, 92, 93, 94, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 137, 149*, 154, 156, 159, 160, 161, 165, 166, 167, 171, 176, 177, 178, 179, 180, 181, 184, 186, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 206, 208, 209, 210, 211, 212, 213, 215, 216, 217, 218, 222, 223, 224, 225, 226, 227, 228, 229, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 243, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 257, 261, 262, 263, 265, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 289, 290, 291.

APPENDIX THREE: ECONOMIC DATA SOURCES AVAILABLE

Terms of reference for the scoping study required researchers to identify data sources which might be of use in any subsequent study undertaken on the economic factors associated with closure of border roads. Ideally what is needed in this respect is (a) quality data which are (b) available at a suitable disaggregated level (c) over the requisite period of time. In other words, to be of use for analysis of the consequences of closure data must be at a level which can be linked specifically to closure by time and place.

The main data sets identified for these purposes would be:

(i) National Population Census

The main source of relevant socio-economic data in both jurisdictions is the Census material. In the Republic the national census has been undertaken on a quinquennial basis since 1946. Information is collected on the usual range of socio-demographic variables including age, sex, marital status, economic status, occupation, industry and education. The Census data are released at a number of different levels of areal disaggregation. The most disaggregated areal data unit is the District Electoral Division (DED) of which there is a total of 3438 in the Republic as a whole. One can therefore provide an extremely detailed analysis of intra-county variations in socio-demographic structures using the data provided at this level of disaggregation.

In Northern Ireland the Census is conducted on a ten-yearly basis with information covering the same broad range of socio-demographic data as in the Republic. The lowest level of disaggregation in the Northern Ireland Census is at Ward level. In 1991 there were 566 such wards in Northern Ireland.

One strength of Census material for the current exercise is that the timing of the Census in 1981 in both jurisdictions permits a baseline analysis of the state of each ward at the beginning of the policy of systematic closure. 1981 data are therefore critical for the present analysis. One limitation arising from this in the Republic is that although the 1981 census is in principle available in a computer readable form one should assume that analysis of all data prior to the 1986 census would have to be undertaken from printed publications, thus affecting both the speed and flexibility of any subsequent analysis. In Northern Ireland (and to a lesser extent in the Republic) boundary changes also introduce a complication in that a major review of local government boundaries led to widespread changes in wards between 1981 and 1991. This means that there are typically small but occasionally very substantial discontinuities between wards in the 1981 and 1991 Censuses. In addition, there were certain limitations in the 1981 Census in Northern Ireland owing to the relatively high level of non-response experienced.

(ii) Census of Services (including Distribution)

In the Republic, Censuses of Distribution covering all retail and wholesale establishments were undertaken in respect of 1933, 1951, 1956, 1971, 1977 and 1988. The census was undertaken on a postal basis with appropriate imputations for non-response. Non-response among retail outlets in the 1988 census were in the order of 15 percent. Information in these censuses could be used to track changes in retail activity in towns with a population in excess of 1000 persons. Relevant variables could include type of retail activity, number of establishments, turnover, wages and salaries, numbers of persons engaged, numbers of employees and selling space.

No comparable data source exists for Northern Ireland.

(iii) Census of Industrial Production

In the Republic, the census of industrial production is an annual census of industrial establishments which employ three or more persons. Annual reports on its findings date back to 1979. No disaggregation is possible below county level. In Northern Ireland information on industrial production is available at Northern Ireland level only. In neither case would such data be at the level of disaggregation necessary to be of use in relation to border road closures.

(iv) Unemployment Statistics

Since 1979 a monthly release on the geographical distribution of unemployment statistics from the Live Register has been published in the Republic. The sub-county figures are presented at the level of local employment office. In Northern Ireland figures for the number of claimants disaggregated to ward level are obtainable with records dating back to the mid-1980s. Prior to this records are likely to be of less use since they will not be directly reconcilable with current ward boundaries.

(v) Census of Employment

In Northern Ireland the Census of Employment is available for 1984-1991 with information disaggregated to ward level. A historical supplement is being prepared which may give figures as far back as 1971. No comparable data source is available in the Republic.

(vi) Revenue Data

In the Republic in recent years a relatively detailed regional code has been attached to Vat returns. Access to this might allow comparison of turnover figures for a number of different types of retail outlets. However, even if access were to be allowed, it would cover only the period of the last 2-3 years. No comparable data could be obtained in Northern Ireland.

(vii) Adhoc Data Sources

Various adhoc studies could also be used for different areas. These might include:

Crisp Applications
Specific Economic Appraisals (e.g. The Lough Melvin Catchment Area Study (1986))
Northern Ireland Tourist Board/Bord Failte data sources
NESC/Ross studies
Rural Development Council reports