An increase in local crime is normally associated with the construction stage of major projects. The Leiston police division did see a significant increase in the

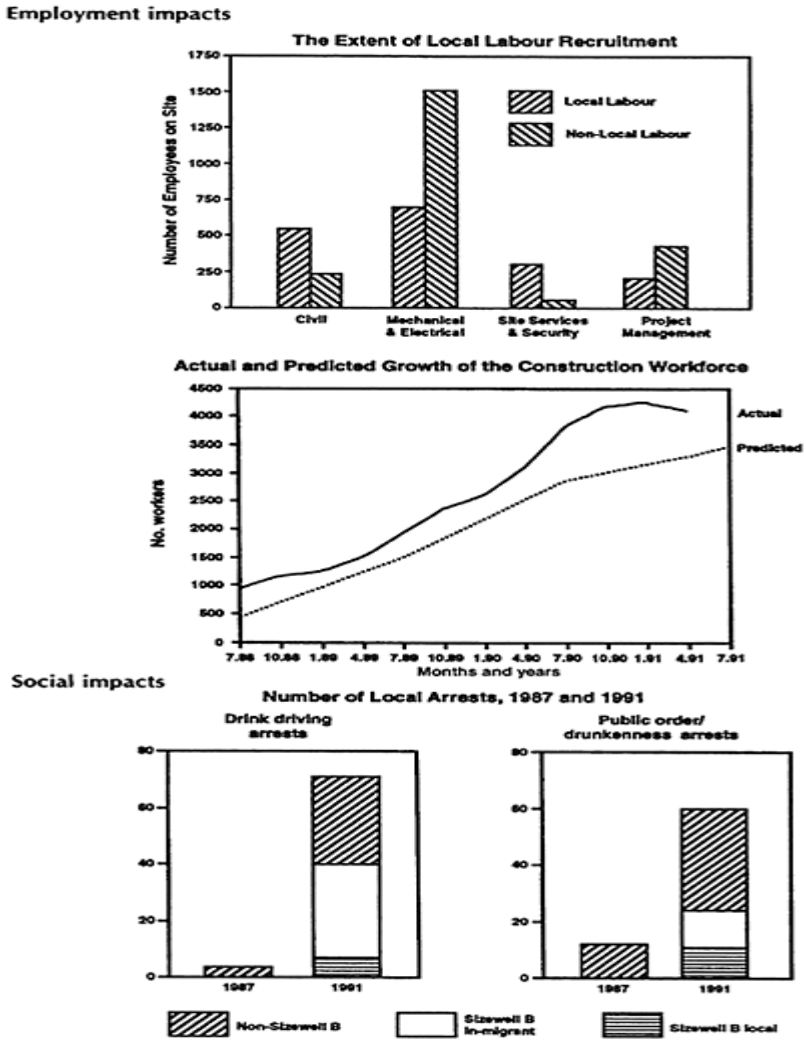


**Figure 7.5(a)** Brief summary of some findings from the Sizewell B PWR construction project monitoring and auditing study. (*Source:* Glasson et al. 1989–97.)

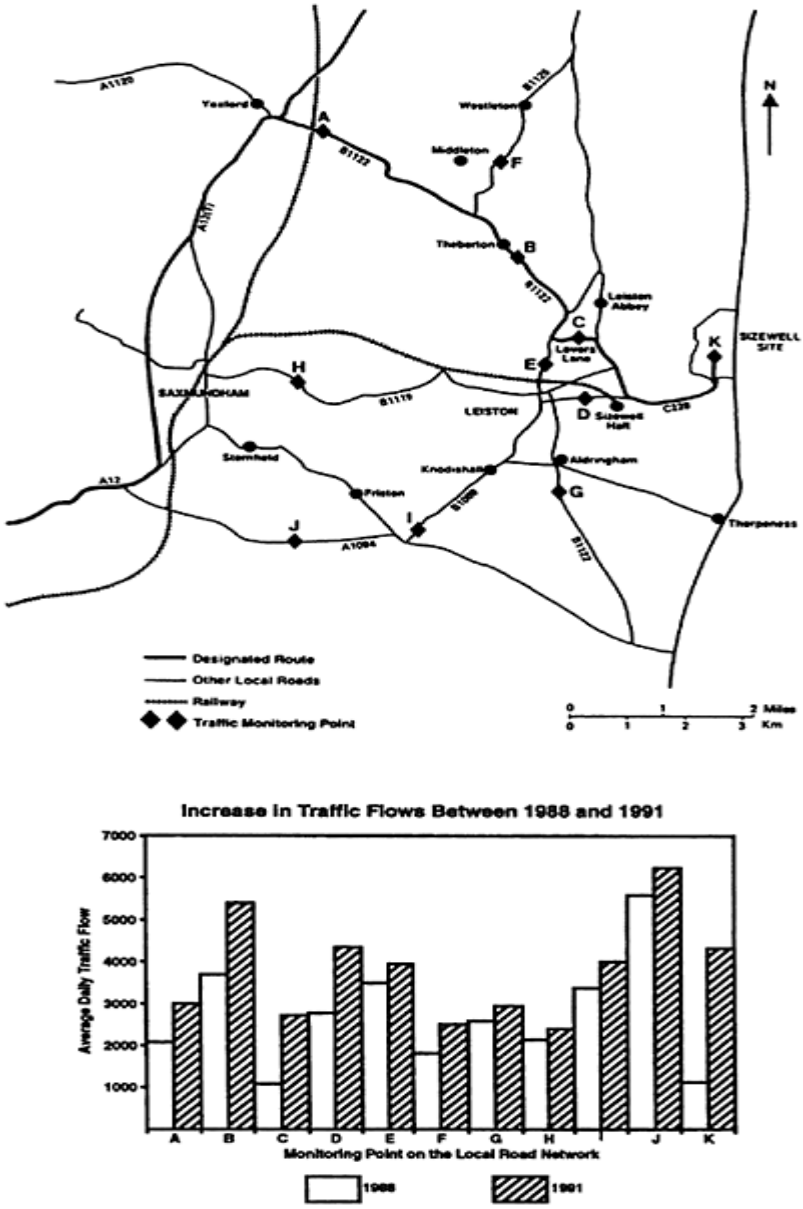


**Figure 7.5(b)** More findings from the Sizewell B PWR construction project monitoring and auditing study. (*Source:* Glasson et al. 1989–97.)

number of arrests in certain offence categories after the start of the project. However, local people not employed on the project were involved in most of the arrests, and in the increase in arrests, with the exception of drink-driving, for which Sizewell B employees (mainly in-migrants) accounted for most arrests and for most of the increase. However, the early diagnosis of the problems facilitated remedial action, including the introduction of a shuttle minibus service for workers, the provision of a large bar in the site hostel, the stressing at site-workers' induction courses of the problems of drink-driving, and the exclusion from the site (effectively the exclusion from Sizewell B jobs) of workers found guilty of serious misconduct or crime. Since the early stages of the project, worker-related crime has fallen substantially, and the police have considered the project workforce to be relatively trouble-free, with fewer serious offences than anticipated.

*Residents' perceptions*

Surveys of local residents in 1989 and 1991 revealed more negative than positive perceived impacts, increased traffic and disturbance by workers being seen as the main negative impacts. The main positive impacts of the project were seen to be the employment, additional trade and ameliorative measures associated with the project. The monitoring of complaints about the development revealed substantially fewer complaints over time, despite the rapid build-up of the project.

### *7.5.4 Learning from monitoring: Sizewell B and Sizewell C*

Table 7.4 shows the nature and auditability of the Sizewell B socioeconomic predictions. In contrast to the findings from previous post-auditing studies (see Dipper et al. 1998), a vast majority of the Sizewell B predictions were expressed in quantitative terms. The monitoring of impacts and the auditing of the predictions

**Table 7.4** Nature and auditability of the Sizewell B predictions

| | *No. of predictions* | *% of total* |
|---|---|---|
| *Nature of prediction* | | |
| Quantitative | | |
| Expressed in absolute terms | 35 | 51 |
| Expressed in % terms | 21 | 30 |
| Qualitative | 11 | 16 |
| Incorporates quantitative and qualitative elements | 2 | 3 |
| Total: all predictions | 69 | 100 |
| *Auditability of predictions* | | |
| Auditable: monitoring data subject to no or little potential error | 30 | 43 |
| Auditable: but monitoring data subject to greater potential error | 28 | 41 |
| Not auditable | 11 | 16 |

| | | |
|---|---|---|
| Total: all predictions | 69 | 100 |

(*Source:* Chadwick & Glasson 1999.)

**Table 7.5** Accuracy of auditable Sizewell B predictions

| *% error in prediction* | *No. of predictions* | *% of total* |
|---|---|---|
| None: prediction correct or within predicted range | 15 | 26 |
| Less than 10% | 9 | 16 |
| 10–20% | 11 | 19 |
| 20–30% | 5 | 9 |
| 30–40% | 5 | 9 |
| 40–50% | 2 | 3 |
| Over 50% | 8 | 14 |
| Prediction incorrect, but % error cannot be calculated | 3 | 5 |
| Prediction cannot be audited | 11 | – |
| Total: all predictions | 69 | 100 |

*Notes:* For quantified predictions, the predicted value was used as the denominator in the calculation of the % errors in the table. For non-quantified predictions, the % error could not be calculated and predictions were classified as either "correct" or "incorrect", based on assessment by the research team. (*Source:* Chadwick & Glasson 1999.)

and mitigation measures revealed (Table 7.5) that many of the predictions used in the Sizewell B public inquiry were reasonably accurate—although there was an underestimate of the build-up of construction employment and an overestimate of the secondary effects on the local economy. Predictions of traffic impacts, and on the local proportion of the construction workforce, were very close to the actual outcomes. Mitigation measures also appeared to have some effect. Overall, approximately 60 per cent of the predictions had errors of less than 20 per cent. Explanations of variations from the predictions included the inevitable project modification (particularly associated with new-technology projects, with few or no comparators at the time of prediction), and the very lengthy project authorization process (with a gap of almost 10 years between the predictions and peak construction). Other local issues have been revealed by monitoring, allowing some modifications to manage the project better in the community. Unfortunately, such systematic monitoring is still discretionary in the UK and very much dependent on the goodwill of developers.

Information gained from monitoring can also provide vital intelligence for the planning and assessment of future projects. This is particularly so when the subsequent project is of the same type, and in the same location, as that which has been monitored. Nuclear Electric applied for consent to build and operate a replica of Sizewell B, to be known as Sizewell C. A full EIS was produced for the project (Nuclear Electric 1993). Its

prediction of the socioeconomic impacts drew directly on the findings from the Sizewell B monitoring study. Figure 7.6 provides an overview of the cumulative employment impacts of the operational Sizewell B plus the construction of Sizewell C (with two reactors, C1 and C2). The regular peaks in the figure are the refuelling intervals. However, this proposed follow-on project fell victim to the abandonment of the UK nuclear power station programme.

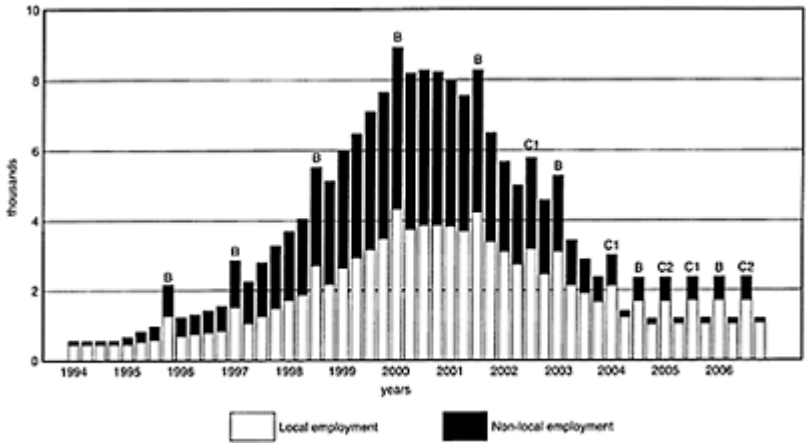


**Figure 7.6** Predicted local employment impacts of Sizewell B operational station and Sizewell C construction project (with reactors C1 and C2). (*Source:* Nuclear Electric 1993, 1994.)

### 7.6 Summary

A mediation of the relationship between a project and its environment is needed throughout the life of a project. Environmental impact assessment is meant to establish the terms and conditions for project implementation; yet there is often little follow-through to this stage and even less follow-up after it. Arts (1998) concludes, after a thorough examination of "ex-post evaluation of EIA", that in practice it is lagging behind the practice of EIA itself. Few countries have made arrangements for some form of follow-up. In those that have, experience has not been too encouraging—reflecting deficiencies in often over-descriptive EISs, inadequate techniques for follow-up, organizational and resource limitations, and limited support from authorities and project proponents alike. Yet many projects have very long lives, and their impacts need to be monitored on a regular basis. Morrison-Saunders et al. (2001) show how this can bring positive outcomes for different stakeholders. Figure 7.7 shows the benefits not only to the proponent and the community (as exemplified by the Sizewell B case study), but also to

the regulator—in the form of a better decision, and improvement of the EIA process. Such monitoring can improve project management and contribute to the auditing of both impact predictions and mitigating measures. Monitoring and auditing can provide essential feedback to improve the EIA process, yet

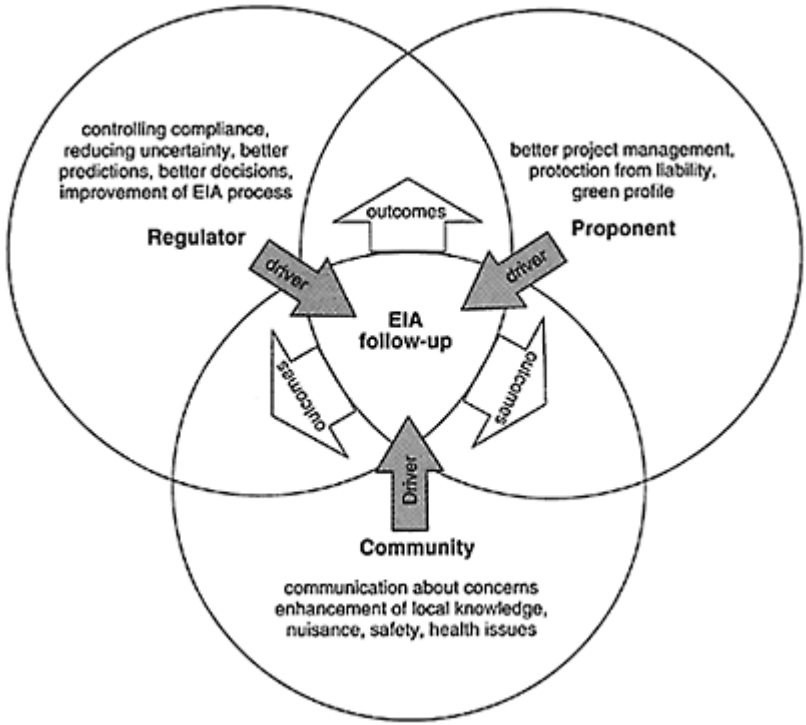


**Figure 7.7** Outcomes of EIA follow-up for different stakeholders. (*Source:* Morrison-Saunders et al. 2001.)

this is still probably the weakest step of the process in many countries. Discretionary measures are not enough; monitoring and auditing need to be more fully integrated into EIA procedures on a mandatory basis.

**Note**

1. Early drafts of the EC Directive did include a requirement for an ex-post evaluation of EIA projects. Section 11 of the 1980 draft (CEC 1980) stated that the competent authority should check at set intervals whether the provisions which are attached to the planning permission are observed or adequate, or other provisions for environmental protection are observed, and whether additional measures are required to protect the environment against the project's impacts.

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# Part 3
# Practice

LET'S MAKE SURE I'VE GOT THIS RIGHT. WE GET TO KEEP SOME LIZARDS AND BLUE BUTTERFLIES ON OUR HEATHLAND, AND IN RETURN YOU GET TO BUILD 3,200 NEW HOUSES ON OUR GREEN BELT....

# 8
# An overview of UK practice to date

## 8.1 Introduction

Part 3 considers EIA practice: what is done rather than what should be done. Chapter 8 provides an overview of the first 15 years or so of UK practice since EC Directive 85/337 became operational. We develop this further with reference to particular case studies in Chapter 9. The case studies seek to develop particular themes and aspects of the EIA process raised in this and in earlier chapters, for example, on the treatment of alternatives, of public participation and on the effect of divided consent procedures. The case studies are largely UK-based, and project-focused, although a case of SEA is also included. Chapter 10 discusses international practice in terms of "best practice" systems, emerging EIA systems and the role of international funding agencies in EIA, such as the World Bank.

These chapters can be set in the context of the important international study on EIA effectiveness, a major three-year study, whose results have been written up by Sadler (1996). Sadler suggests that EIA effectiveness can be tested at different stages in a cycle of EIA systems: (1) whether a given EIA policy is effectively translated into practice through the application of relevant processes and procedures, (2) whether the practice results in effective EIA performance through contributions to decision-making and (3) whether this performance then effectively feeds back into changes in the EIA policy by examining whether EIA realizes its purpose.

Sadler also notes that these questions and the attendant techniques for investigating them must be seen in the context of the decision-making framework in which the relevant EIA system operates. As was discussed in previous chapters, EIA in the UK can broadly be described as having been

- imposed on a reluctant government by the EC;
- implemented since then relatively punctually and thoroughly;
- based on a strong pre-existing planning system, but with inelegant "patching" where Directive 85/337 has required EIA for projects covered by other authorization systems, and where regulations have since been amended;
- often implemented through negotiations rather than through direct confrontations between the relevant interest groups, with the attendant weakening of many decisions but also relatively good implementation; and
- focused on qualitative rather than quantitative techniques, eschewing high-tech methods and leading to short, quite readable EISs.

Chapter 8 broadly addresses Sadler's first two points in sequence. Section 8.2 considers the number, type and location of projects for which EIAs have been carried out in the UK

since mid-1988, as well as where the resulting EISs can be found. Section 8.3 discusses the stages of EIA before the submission of the EIS and application for authorization. Section 8.4 addresses what has, to date, been the most heavily studied aspect of EIA practice, the quality of EISs. Section 8.5 considers the postsubmission stages of EIA, and how environmental information is used in decision-making by LPAs and inspectors. Finally, Section 8.6 discusses the costs and benefits of EIA as seen from various perspectives. Sadler's third point is partially addressed by government-published good-practice guides on EIA preparation and review (DETR 1997a and DoE 1994, 1995, 1996), which reflect a first cycle of limited policy changes by the UK government in response to early research findings regarding EIS and EIA effectiveness.

The information in this chapter was correct at the time of writing in 2004; it will obviously change as more EISs are carried out.

## 8.2 Number, type and location of EISs and projects

In the absence of a central government lead in maintaining a comprehensive database of EISs, several organizations have begun to establish such databases (e.g. IEA 1993, Wood & Bellanger 1998). This section considers how many EISs have been produced, for which projects and developers, and where. It concludes with a brief review of where collections of EISs are kept.

This analysis is complicated by several problems. First, some projects fall under more than one schedule classification, for example mineral extraction schemes (Schedule 2.2) that are later filled in with waste (Schedule 2.11), or industrial/residential developments (Schedule 2.10) that also have a leisure component (Schedule 2.12). Second, the mere description of a project is often not enough to identify the regulations under which its EIA was carried out. For instance, power stations may fall under Schedule 1.2 or 2.3a depending on size. Roads may come under highways or planning regulations depending on whether they are trunk roads or local highways. Third, many EISs do not mention when, by whom or for whom they were prepared. Fourth, locational analysis after 1995 is complicated by local government reorganization and many changes in the nature and boundaries of authorities in England, Scotland and Wales. All these factors affect the analysis. This chapter is based primarily on information from Wood & Bellanger (1998), but their findings are very similar to others (e.g. Wood 1996, 2003).

### *8.2.1 Number of EISs*

Between the mid-1970s and the mid-1980s, approximately 20 EISs were prepared annually in the UK (Petts &. Hills 1982). After the implementation of Directive 85/337, this number rose dramatically and, despite the recession, about 350 EISs per year were produced in the early 1990s; but, as can be seen from Figure 8.1, this number began to drop in the mid- 1990s partly as a result of a fall in major development activity under the planning regulations. However, the numbers quickly recovered in the late 1990s and, as noted in Chapter 3, there has been over 600p.a. since the implementation of the amended Directive. This probably reflects many factors—more projects

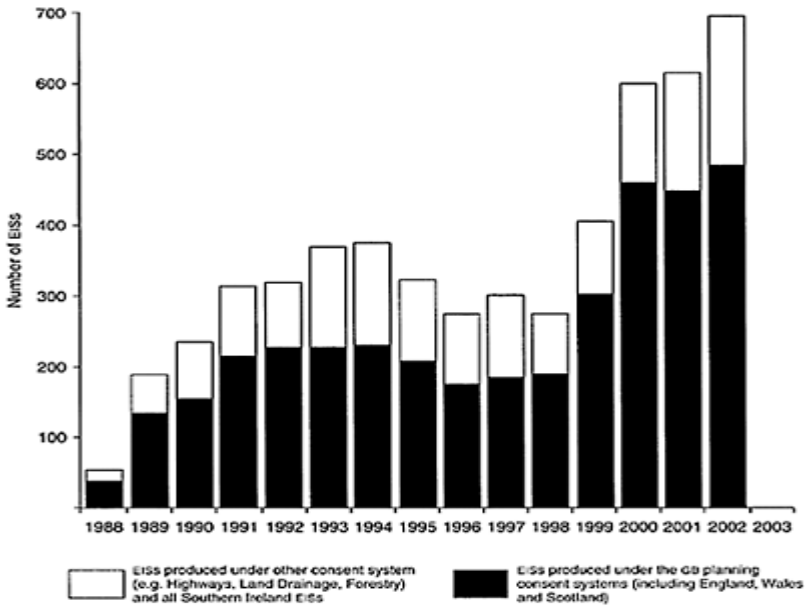


**Figure 8.1** EISs prepared in the UK, 1988–2002. (*Source:* ODPM, DETR, Oxford Brookes University IAU statistics, Manchester University EIA Centre statistics.)

included in the amended Directive, a stronger UK economy and concern by developers and LPAs about certain court judgments involving the EIA Directive. By the end of 2003, approximately 6,000 EISs had been prepared, with approximately 70 per cent produced under the Planning Regulations for England, Wales and Scotland. The remainder are for projects in Northern Ireland and, more significantly, for projects under the other consent procedures (e.g. highways, forestry) as discussed in Chapter 3.

In parallel with the increase in the number of EISs, the participants in EIA have become increasingly familiar with the process. Surveys of UK local authorities carried out by Oxford Brookes University in the mid- 1990s showed that over 80 per cent of LPAs even then had received at least one EIS. On average, strategic-level authorities (county and regional councils and national park authorities) had received 12 EISs and local-level authorities (district, borough, metropolitan boroughs and development corporations) had received four. Surveys of environmental consultants (e.g. Radcliff & Edward-Jones 1995, Weston 1995) found that about one-third of the consultancies surveyed had prepared 10 or more EISs. As noted, the total number of EISs is now approximately 6,000, compared with approximately 2,500 by the end of 1995, and LPA and consultancy activity and experience with the process has continued to grow accordingly.