Figure 14.2
The disused Oakington Barracks Development Site in 2002.

multi-disciplinary project teams. The team focused their study on Oakington Barracks, formerly a Ministry of Defence base, to the northwest of Cambridge (Figure 14.2). The Cambridge Futures Project, the Cambridge Structure Plan and South Cambridgeshire District Council had previously identified the 390 hectare site as suitable for future development. The site's suitability was premised on three significant factors. Firstly, the site was largely disused 'brownfield' land, as opposed to agriculturally valuable 'greenfield' agricultural land. Secondly, the site was located in the economically successful Huntington–Cambridge development corridor and thirdly, the site was located on the route of a proposed rapid transit system that would link Cambridge and Huntingdon.[7] Additionally, the site seemed 'topical' because Gallagher Homes had recently published a development proposal for a high-density new town of some 10,000 homes. The challenge to the project team was to produce an alternative development model to the existing Gallagher proposal.

Inter-disciplinary working

The aim of the Oakington design team, consisting of an economist, a planner and an architect, was to work throughout the project in an integrated way towards envisioning a sustainable development proposal for the site. Although individual team members had worked in inter-disciplinary teams, none had worked in multi-disciplinary teams. Recognising the 'new' and 'particular' nature of multi-disciplinary team working, the academic staff inducted the students as part of the project

briefing to the theory and practice of successful team working (Stott and Walker, 1995). The key elements of this training included understanding individual roles, team working and decision-making processes and particularly the need to establish team 'ground rules' including:

- shared goals and objectives
- recognition of the contribution of each discipline to the solution
- shared leadership and decision-making
- the need for effective communication

Equipped with the knowledge of successful multi-disciplinary team working, the project team set about employing their newly acquired knowledge to produce a sustainable development proposal for the Oakington site. In effect, the project set the team an ill-defined problem that required the adoption of a 'creative' problem-solving approach. As there was no 'correct' answer, only solutions that were more or less convincing, students were asked to make their own decisions about the bounds of the problem and subsequently to argue the case for their solution on the basis of researched evidence. Within this scenario the role of the academic tutors was framed less as 'master' (transmission model), as is traditional in architectural education, and more as 'liminal expert' (student-centred model) where the tutor helps the students to think critically about their work as well as facilitating their learning processes. At the end of the project each team was asked to produce a report charting their research, design process and solution. Observations and reflective interviews with the Oakington team confirmed that they adopted classic creative problem-solving techniques (divergent thinking, brainstorming, etc.) and moved through the recognised phases of creative problem solving[8] during the process of designing their development model for Oakington. Interestingly, it was apparent that all three members had engaged in creative thought both within their own disciplines and across disciplines, and that creativity was not the sole territory of the architect. Thus, the 10-week project was characterised by seemingly endless cycles of research, design and testing, as ideas were continually informed, generated tested and accepted or rejected, revealing the need for further research of alternative ideas, against the multi-dimensions of sustainability, as translated to the locale. Hence, the Oakington team started their project by researching the problem as they perceived it rather than as defined by the Gallagher development brief (so that the solution was no longer bounded by a narrow definition of the problem). Each specialist, economist, planner and architect, viewed the design problem through his or her