promoting 'sustainability'. Yet, beneath the rhetorical surface of the sustainability debate, there remains disagreement about even the most basic issues underpinning sustainable development, for example, whether future sustainability lies in moving towards urban densification or urban dispersal (Breheny, 1993). Further, close scrutiny of new urban paradigms which make claims to be integrated sustainable solutions, such as the Urban Villages concept in the UK[1] or New Urbanism in the USA (Calthorpe, 1993), seem to rest their visions of a sustainable future largely on the appeal of the architectural aesthetics of the past with little regard to the contemporary condition or notions of progress, either social, economic or environmental.[2] For the apologists of these paradigms, attaining sustainable futures seems merely a matter of 'choosing where in the past we would like to live in the future' (French, 2000). Despite a growing number of alternative, but as yet largely theoretical, models emanating from Europe and particularly the Netherlands,[3] the current position facing those involved in steering urban change is that both the mechanisms for attaining sustainable development and the future form which sustainable development might take remain ill-defined and contested.

The chapter that follows reports on the methodology and findings of a multi-disciplinary team of graduate students from Massachusetts Institute of Technology (MIT) and Cambridge University who investigated issues surrounding the creation of new sustainable rural communities, in relation to both process and product, through a design case study. The results of the case study project made several contributions to current practice. Firstly, in relation to process, the project team developed the concept of a charitable trust as an innovative development model for new rural communities. It was argued that a charitable trust, made up of local stakeholders charged with a holistic and continuing sustainability remit, would be more likely to produce an ongoing sustainable settlement than the present developer-led models. The team also demonstrated how such a development model would work financially in today's economic climate. Secondly, in relation to urban design, the project team demonstrated how the design of physical infrastructure could make a significant contribution to its lasting environmental sustainability. Additionally, and counter-posed to the paradigms offered by the New Urbanist movement, the case study project also demonstrated how quality infrastructure design can provide a sense of place without constraining the architectural language of individual developments that might take place within it.

The case study context: the future of the Cambridge region

One of the many urban growth scenarios that presents challenges for those who strive towards the realisation of sustainable futures is found in cities and regions around the world, from Silicon Valley in the USA to Silicon Fen in England, that have seen rapid economic success due to the proliferation of 'high-tech' and more recently 'bio-tech' spin-offs from university research laboratories.[4] The economic growth of such regions has resulted in population growth and consequential demands for new housing, office accommodation and transport infrastructure. Well-rehearsed arguments, based on a thorough analysis of these phenomena, suggest that if these regions do not respond to the pressures for physical growth and infrastructure improvements they risk stifling future economic growth (Sainsbury, 1999). Therefore, the pressing question for these regions is how, where and in what form sustainable development might occur?

Silicon Fen, within the Cambridgeshire sub-region, faces all the challenges mentioned above. Over the last 20 years the spiralling success of new industries, mainly in the fields of biotechnology, telecommunications, software development and technology consultancies, which have spun-off from primary research carried out at Cambridge University, have placed enormous pressure on the region's landscape, settlements and infrastructure (Segal Quince, 1985; Segal Quince Wicksteed, 2000). This technology-driven growth and the consequential changes in the production, distribution and marketing of goods have altered both the space and location requirements for firms and their employees, and resulted in huge demands for new types of accommodation (such as offices, laboratories, housing, schools) and more efficient distribution systems (such as roads, public transport systems).[5] Yet, despite the success of the Cambridge region, public policy has found difficulties in responding rapidly enough to the changing needs of the regional economy. A recent evaluation of the situation by the Cambridge-independent economic development and management consultancy Segal Quince Wicksteed (2000) concluded that:

> **The private elements (in the region) are evolving well, but they are in many ways let down by the formulae and traditions that determine the current spending and investment by the public sector, whether in the education of children or the provision of roads and public transport . . . Cambridge is suffering from congestion that is in danger of choking the growth dynamic.**