'preferred alternative' embodies concepts, which are similar to London's 1946 Greater London Council (GLC) Plan: that is they are clustered, transit-oriented communities of varying sizes surrounded by greenbelts. Like London, similar regressive initiatives and lack of political leadership have compromised this vision and programme for a more sustainable future.

This 'Tale of Two Cities' vividly conveys the 'best and worst of times' (Dickens, 1859; Bartuska, 2002). The principles of this brief tale of two cities are the same: sustainable cells of urbanism require the creation and/or regeneration of clustered, pedestrian, and transit-oriented communities of a variety of sizes (large to small) defined by areas that conserve green or amenity land.

A clustered, sustainable regenerative plan for Pullman: theory and practice

In contrast with Seattle and London, Pullman is a relatively small community of 25,000 people located in the Pacific Northwestern Palouse Region of Eastern Washington (Figure 12.4). It is the size of some of the nested towns and villages in larger metropolitan areas and provides a subset of critical challenges and opportunities for sustainable regenerative development. The regional climate of Pullman has distinct seasons with cold, wet winters and warm, dry summers. The city's economy

Figure 12.4
The Palouse region in eastern Washington, USA.

services the region's agricultural industries and supports a major public university.

Pullman's sustainable community plan was based upon ecological (or biological) modelling techniques, which carefully balance **on-site** interchanges between the human–environmental systems of the city. These interchanges become indicators of sustainable development and define inherent qualities, carrying capacities, and the required ecological footprint of this community. In general, this approach allows communities to effectively model, measure, and programme a series of design strategies for sustainable development. Also, this method allows communities to define and monitor the human–environmental indicators of a regenerative process over time. Sustainable indicators are commonly generated and agreed upon by the community. This study predates the community-generated processes and takes a more theoretical approach based upon fundamental ecological or biological criteria.

The approach was derived from first establishing a working definition of sustainability. There are, of course, many definitions of sustainability. In a review of this term, the **site** or the **human–environmental context** is a critical aspect to most working definitions of sustainability. This emphasis is expressed in the following composite, working definition, which directed the Pullman regenerative study:

> **Sustainable developments are those that fulfill present and future needs while [only] using and not harming renewable resources and human–environmental systems of a site: [air], water, land, energy, and ecology and/or those of other [off-site] sustainable systems. Sustainability integrates natural systems with human patterns and celebrates continuity, uniqueness, and place making (WCED, 1987; Early, 1993; Rosenbaum, 1993; Vieria, 1993).**

The Pullman study models the variables of air, water, land, energy, and human ecology as primary indicators of sustainable community development. These fundamental human–environmental exchanges of the community's 'site' were useful in developing the critical 'input ↔ output' modelling techniques which guide the community's regenerative process. This ecological method illustrates the challenging requirements for programming, measuring, and achieving sustainability. The variables are, of course, interrelated and form the basis for modelling any sustainable community and/or society. The selected variables of the community's human and environmental interrelationships are shown in Figure 12.5.