

## ALL ABOARD FOR ECO-PLANS

Consultants Paul Zanna and Kirsty Davison from Steer Davies Gleave explore the transport challenges that will be addressed in proposals for the Government's Scottish Sustainable Communities Initiative.

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As the deadline is reached for proposals for the Scottish Government's Scottish Sustainable Communities Initiative, **Paul Zanna** and **Kirsty Davison** explore the transport challenges these proposals must address.

**T**he advent of the Scottish Sustainable Communities Initiative (SSCI), a programme for 21st century living, shifts the current Scottish planning system up a gear. In June, the Scottish Government asked local authorities, landowners and the development industry to submit proposals by 17 September for inspirational, innovative and environmentally sound developments that will serve as exemplars of the highest quality.

Akin to the eco-towns south of the border, the new Scottish sustainable communities should go beyond standard design, quality and sustainability solutions. Unlike the English eco-towns, though, which required sites with a minimum of 5,000 dwellings, the Scottish Government has not been prescriptive on scale.

Successful proposals will benefit from an easing of the regulatory burden, since the Scottish Government expects some proposals to have been developed in partnership with local

communities. However, the delivery of sustainable communities poses key challenges for professionals and auditors alike.

The first challenge is defining 'sustainable community'. According to the Scottish Government, there is no simple definition. Nonetheless, it does state that the fundamental criteria of a sustainable community relate principally to environmental considerations, of which transport and energy are key components.

The second challenge is ensuring that transport is integral to the lifecycle of any scheme – from conception to delivery and operation, how we move around in, access, service and exist in our communities – since it will inevitably dictate quality of life now and in the future.

Transport professionals are unlikely to be raising their eyebrows at the requirement for sustainable travel. Details in the recent SSCI document refer to road and transport design that encourages a reduction in the use and dominance of private cars by providing enhanced accessibility for pedestrians, cyclists and those using public transport. Streetscenes should be safer and attractive for all modes of travel, with comprehensive foot-path networks encouraging links to surrounding areas, while buildings should incorporate cycle storage. That is it.

This is already bread and butter work for many transport professionals. So, if innovative and inspi-

ration submissions are to be delivered, transport professionals must go a few steps further.

While sustainable housing technologies, such as reed-bed waste management and geothermal energy systems, have been available for a long time, sustainable travel and alternative fuel technologies have been slow to catch up. But with concern growing over climate change, and peak oil production looming, 'green' transport solutions are now at the forefront of current thinking.

To exceed standard solutions and deliver exemplar communities the function of transport and its implications in terms of the location, design and construction, along with the present day and future operation of transport systems, must be understood.

Efficiency of delivery is also key. Proposals should not just identify a sustainable community, but demonstrate a realistic, efficient and effective delivery programme that minimises environmental impacts.

In transport terms, a 'sustainable location' is one where accessibility, connectivity and integration facilitate movement to, through and between the site, where, for example, topography is viewed as a character feature to be enhanced rather than removed.

Applying basic design principles to the design, layout and orientation of a scheme will influence how and why people move around. Designing out some of the historic components of regular street-



David Cowland/CABE

Leading by example: Hammarby, Sweden is a new suburb of Stockholm built on sustainable principles. Integrated planning ensured transport infrastructure was established at the start of the project. It is well serviced by trams (left) and a free ferry (above), helping to cut car use by 10%. Even some accessibility issues have been addressed (inset)

scenes can induce a dynamic shift in the perception that the car is the transport mode of choice.

Another prerequisite of sustainability is that transport is integral to the lifecycle of a scheme, from concept to delivery and future operation. How we access, service and move around in our communities now and in the future is a key challenge.

Developers can combine the tangible location and design components of transport schemes with other complementary measures to deliver transport solutions. In terms of influencing the operation of a sustainable community, locational and design principles will largely influence the way people travel. However, to deliver above average innovation, another approach is needed.

A truly effective and innovative approach is one that combines complementary soft and hard measures with new technologies where appropriate.

Steer Davies Gleave has been advising developers and governments for 30 years on innovative approaches to influencing travel choice and changing behaviour towards sustainable modes. These approaches have included a range of initiatives, incentives and technological innovations.

The concepts of car sharing and car clubs are proving highly successful across Europe. In Germany and Switzerland such initiatives are operating in every major city.

Sometimes car use is regarded as a necessity. However, introducing a transport scheme that is

accessible, cost-effective and fully integrated within a community can give people a real incentive to give up the private car. While these schemes are traditionally associated with city environments, they can be equally effective in rural and other locations, if they are marketed correctly.

A number of sustainable housing technologies are available. One such innovation is the house display, where a real-time transport information portal is installed in the home. These can display bus, rail, airport and ferry timetable information, and integrate with local car-share and car-club schemes as well as community websites. The device also incorporates a facility to monitor personal electricity, water and gas consumption, encouraging individuals to take greater responsibility for their carbon footprint.

Europe is leading the way in the use of alternative fuels. Again, while alternative fuels have tended to be used mainly in city-based public transport schemes, it is possible to integrate their use into sustainable community transport schemes based on both buses and cars.

Several English eco-town bids, including Dunsfold Park in Surrey, propose the manufacture of biodiesel from local sources. In certain developments, truly sustainable, locally-sourced biodiesel can have a role to play in reducing dependence on oil, while the use of appropriate exhaust filters can improve air quality.

Practical hydrogen fuel-cell technology is a few years away, but electric vehicles can contribute to a sustainable transport solution, too.

The legacy of a sustainable community will contribute to the lifecycle analysis of an SSCI proposal. Scandinavian countries have completed a number of developments where buildings are designed to be highly adaptable – suitable for residential purposes, but easily converted to commercial or other use should the demands of time and economics dictate.

It is a solid and sustainable approach, which does not let the popularity of private car travel influence the overarching agenda of sustainability.

Nevertheless, raising awareness about these solutions, and marketing and 'incentivising' them will be the hardest challenge for developers.

Strategies to create sustainable communities need to be underpinned by sound advice, high-quality research and the experience gained from successful schemes. If the experience needed does not exist elsewhere, the opportunity is there for forward thinking professionals to raise the bar and create it themselves.

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For more on the Scottish Sustainable Communities Initiative, visit The Scottish Government's website.  
<http://cci.scot.nhs.uk/Publications/2008/06/25093645/0>