

An assessment of the state of the UK's infrastructure by the Institution of Civil Engineers

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The 2006 ICE State of the Nation report, launched on Tuesday 17 October, is the annual examination of the UK's infrastructure. It is compiled each year by a panel of experts drawn from the various fields of expertise across ICE's membership and the report features material from across ICE's UK regions.

Some of the key findings of this year's report include:

Water and wastewater

Water services in the UK generally continue to be excellent. However, the drought of 2006 is showing that, in some parts of the country, our existing water supplies are only just adequate for current demands. With rising demand, cutbacks in existing supplies and the threat of climate change, the need for increased water provision is becoming more urgent.

Economically-justified investment in infrastructure is vital to keep our water supply topped up. The appropriate mix of resource solutions and demand management should be maintained. This must include planning new reservoirs,

stepping up the replacement of old, leaky mains, recycling sewage effluent (a measure we have hitherto only paid lip service to) and developing desalination plants to treat brackish water in times of supply shortages. Inevitably, water prices will have to rise to fund the investment – an uncomfortable fact that Government, regulators and customers must recognise.

Energy

In 2005, energy consumption rose, fuel prices shot up and domestic production fell.

The July 2006 report from the Government's Energy Review recognises the need for simpler planning and regulatory processes for new energy projects, and the need to give greater encouragement to the public to make energy efficiency part of their daily lives. It also recommends maintaining the mix of fuel sources in order to sustain or improve our security of supply. However, more consultations and reports are inevitable before the strategy is implemented.

Waste management

We should move away from using the phrase "waste management". "Material resources and waste management" describes today's industry more accurately and could

help to eradicate the image of landfill mountains and flocks of scavenging seagulls.

Changes in terminology can change perceptions; what has to follow are real efforts by the industry, Government and the public to put this new emphasis to work. We must aim for a situation in which the majority of materials that have traditionally entered landfill are entering a cycle of reuse. To meet its targets the UK will require 1,700 new facilities of a range of sizes to be up and running by 2012, at a cost of some £10 billion.

Flood management

Over the three years to March 2006, improved protection had been provided to 100,000 more properties. There are also now 200,000 people on the Flood Warning Direct service, with 113,000 new users in England and Wales. Flood-risk management has become more strategic and sustainable.

However, over 4.5 million people, 2.3 million homes and 1.7 million hectares of land remain at risk from flooding in the UK. And studies by the Environment Agency report that 5% of the country's 30,000km of flood defences are in a poor condition. At the same time the potential cost of floods, in human and financial terms, is increasing.

The
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Rail

Nine out of ten British trains arrive on time. However, in England especially, the rail network is at full stretch. We need a long-term national strategy to move passengers and freight in comfort and on time.

In England the future investment programme is weighted towards London and there is a danger that major projects will soak up funding and human resources, leaving only the opportunity of minor tweaking of the rail infrastructure elsewhere. It is encouraging that Network Rail has set up a strategy group to look at the human resources issue, and its £400 million discretionary fund will allow vital minor improvements to the network over the next three years.

Roads

Congestion isn't just an inconvenience; it's a millstone around the country's neck. Hold-ups on our motorways and trunk roads cost the economy £15 billion every year. Measures in place now, such as the Traffic Officer Scheme and the installation of real-time information displays, are designed to cope with congestion, not reduce vehicle use. For this, the most effective policy would be for the Government to take a lead on road user charging. Progress on demand management has been far slower than expected. We need to start seeing more pilot schemes and the development of a national system of charging. Roads are the cheapest form of transport; they are also an undervalued resource.

Local transport

Over the last six years bus use in the UK has risen steadily after many years of decline. Scratch the surface, however, and the story isn't so cheery. The increase is almost entirely the sole achievement of the capital, where a franchise system, allowing Transport for London to control bus routes, frequencies and fares, has delivered a 55% increase in bus use since 1985-86. Outside London bus services are still fully deregulated and the same period has seen huge falls in bus use.

If this trend is allowed to continue, congestion will worsen, transport will become less accessible, and the implications for regeneration and urban development will be serious.

Airports

In spite of security scares, a rise in oil prices and a softening of the UK economy, passenger traffic at London's airports still grew by 4%. At regional airports traffic grew by 9% for the second year running.

Airports throughout the country have ambitions for an unprecedented period of expansion. But even with changes to the planning system, getting planning approvals will be difficult. Already, the legal basis of airports' expansion plans has been challenged in the courts. There is also the challenge of improving the transport infrastructures that serve airports. Road and rail connections need to be upgraded in a co-ordinated, strategic way by the relevant authorities.

Seaports

Ports are vital to our economy and could do more to move freight



efficiently around the country, yet their further development is in question. Port developers here cannot absorb the cost of major off-site works. But to remain competitive with continental European ports, whose development is often supported by regional governments, they cannot afford to remain the size they are. The Government must recognise ports as a vital organ in the national economy and fund the infrastructure that will help to keep them healthy.

Conclusion

It is now time that we started answering the questions posed in this year's report:

How do we intend to reconcile rising demand for water with dwindling resources?

Where is our electricity going to come from in the future?

How can we stop our rubbish piling up on landfill sites?

How do we tackle congestion on our roads and railways

To read the complete report please visit uk-infrastructure.org.uk

For more information about ICE or the report, you can contact the ICE External Relations team on 020 7665 2265.

About ICE

The Institution of Civil Engineers (ICE) is a leading source of professional expertise in transport, water supply and treatment, flood management, waste and energy. ICE is a global membership organisation that promotes and advances civil engineering around the world. Established in 1818, it has around 80,000 members throughout the world – including over 60,000 in the UK