

FOOTPRINT RESPONSE TO THE FUTURE YORK REPORT (FYR)

Purpose: This briefing note identifies the impact on the Footprint of some of the proposals and recommendations from the Future York report. It also suggests a couple of scenarios by which to reduce the footprint.

1. Context/background to environmental economic drivers:

The Stern Review (Oct 06) was commissioned by the UK Government to identify the economic impacts of climate change. Stern identified climate change as one of the largest and most significant threats facing the global economy. Stern calculated the economic cost of responding to climate change as 1% of GDP in order to reduce greenhouse gases to a level avoiding climate catastrophe. He identified the cost of not responding significantly higher. Put simply, to enjoy future economic growth we must deal with climate change now.

Within the Without Walls Community Strategy for York, a headline indicator has been set to reduce the ecological footprint of the city from its current base at 5.3 ha per person to 3.33 ha by 2033. The current York resident carbon footprint is 11.5 tonnes per person. A 60% reduction (in line with proposed Climate Change Bill legislation) is 6.9 tonnes per person.

2. The use of REAP (Resource, Energy Analysis Programme) to model the footprinting impacts of the Future York report.

REAP helps decision makers understand the impact of policy on the ecological and carbon footprint. The Future York report contains a set of proposals and recommendations providing a view for the future economic development of York.

The following scenarios have been modelled through REAP based on the available information from the Future York report. Some additional assumptions have had to be added to the information provided by the report in order to provide meaningful future scenarios. All additional assumptions have been identified below. Assumptions of behaviour and activity are based on national trends.

Footprint measurements:

Ecological Footprint – measures the amount of productive land required for all the goods, services, energy and activities consumed and waste produced within York, which is then given as an average per resident of York. Measurement is in global hectares per person.

Carbon Footprint - measures the amount of energy required for all the goods, services, energy and activities consumed and waste produced within York, averaged out for each resident of York. Measurement is in Tonnes of Carbon emitted per person.

Scenario 1: The impact of doubling the economy on increased consumption.

The footprint links closely to level of disposable income. This scenario considers the impact of increased consumption as a result of a rise in the disposable income of the population through increased wages as a result of increased job availability and more highly skilled jobs resulting from a doubling of the economy.

Assumptions made within this scenario:

- Consumption of goods (the amount of consumables such as clothes, music technology and DIY equipment bought by the residents of York) will increase on average by 5% over the next 20 years.
- The distance travelled on international flights will increase by 10%
- Car ownership will increase by 10%

IMPACT: The Ecological Footprint rises to 7.5 ha per person. The Carbon Footprint rises to 18 tonnes per person.

Scenario 2: The impact of doubling the economy on increased home energy conservation.

This scenario considers the impact of increased energy conservation within people's homes as a result of a rise in the disposable income of the population through increased wages as a result of increased job availability and more highly skilled jobs resulting from a doubling of the economy.

Assumptions made within this scenario:

- A decrease of fuel use within the home, both for heating and electricity, by 10%.

Note: Existing housing stock accounts for over 90% of homes

IMPACT: The Ecological Footprint drops to 4.4 ha per person. The Carbon Footprint drops to 9 tonnes per person.

Scenario 3: The impact of dualling the Northern Ring Road.

This scenario considers the impact of making the Northern Ring Road of the city a dual carriageway, and the impact this will have on traffic within the city.

Assumptions made within this scenario:

- Based on DTI research, the introduction of additional lanes and road space increases volume of traffic by 15%. Therefore a 15% increase in cars and lorries has been modelled.
- A 10% increase in bus service has also been assumed, to increase public transport accessibility around the perimeter of the city.

IMPACT: The Ecological Footprint rises to 7.82 ha per person. The Carbon Footprint rises to 20 tonnes per person.

Scenario 4: The impact of the increase in new housing being built around the city.

This scenario considers the impact on energy from the projected increase of 850 houses per year (as proposed within the developing LDF) until 2026. The Council currently has a policy for a 50:50 affordable housing split in all new developments. All affordable homes must be built to the new Code for Sustainable Homes Guidelines Level 3, which reduce energy consumption by up to 20% from current building regulation standards.

Assumptions made within this scenario:

- The energy efficiency measures within all new homes are assumed to increase overall by 10% to 2026. This assumption is based on an 'average' energy efficiency improvement across all new housing from the 20% requirements from affordable, and the other 50% of housing which is not, as yet, required to meet further than Building Regulation efficiency standards.
- An assumed increase of 850 additional homes built per year in line with the proposals within the LDF.
- An assumed population increase of 20% by 2029 as proposed within the Future York report.

IMPACT: The Ecological Footprint increases to 6.1 hectares per person. The Carbon Footprint increases to 13.2 tonnes carbon per person.

Scenario 5: Improved traffic demand management

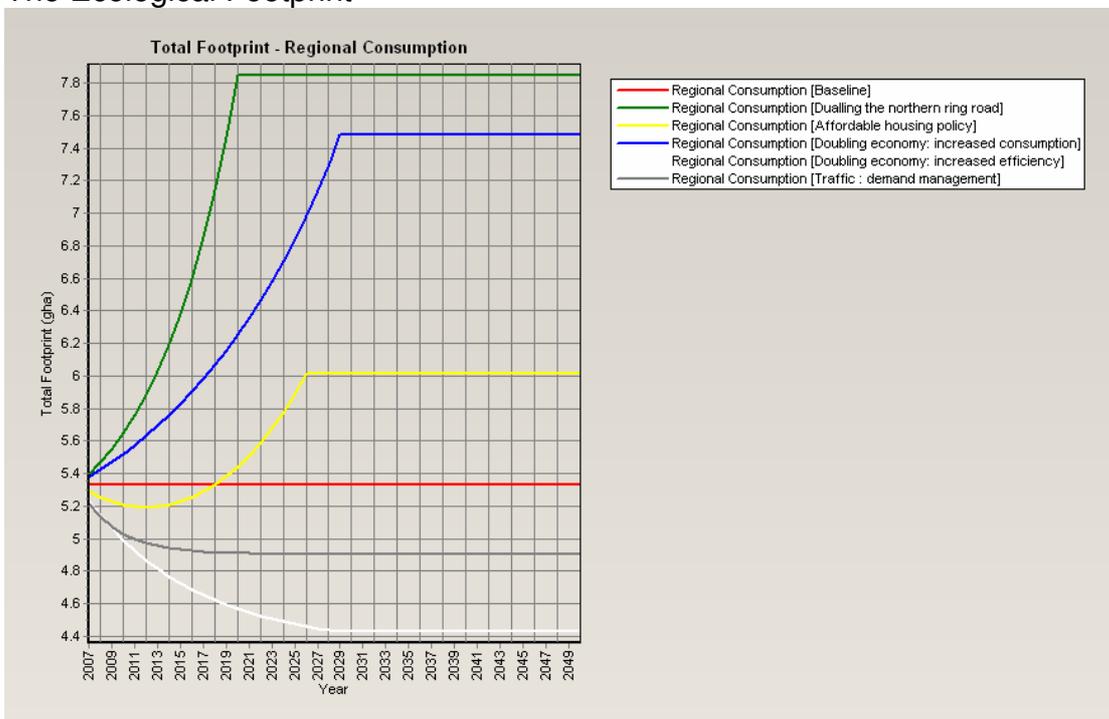
This scenario considers the reduction of car mileage undertaken by residents of York, and an increase in average car occupancy.

Assumptions made within this scenario:

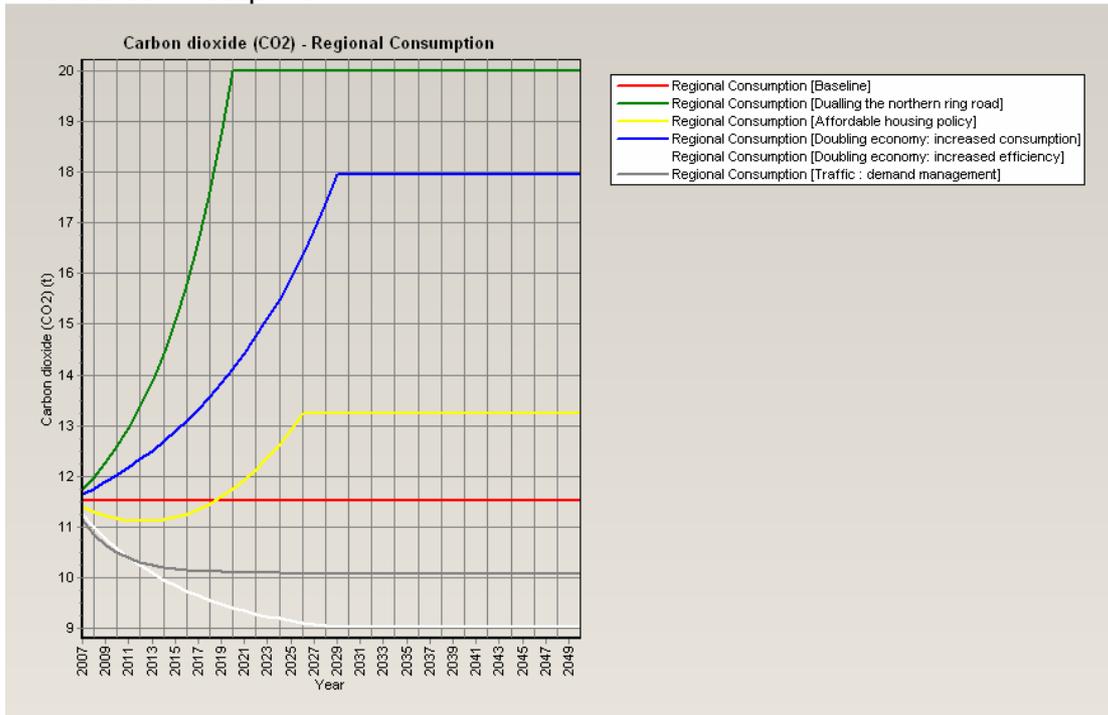
- Increasing car occupancy from the average of 1.2 people to 2.2 people
- Reducing overall car passenger kilometres by 10%.

IMPACT: The Ecological Footprint reduces to 4.9 ha per person. The Carbon Footprint reduces to 10.1 tonnes per person.

The Ecological Footprint



The Carbon Footprint



3. Opportunities for a Sustainable Economic Development Strategy for York

The analysis has offered examples of the 'Business as Usual' scenarios alongside low carbon alternatives. Stern suggests the low carbon economy is worth £5 billion. Many other cities (London, Leicester, Birmingham) and regions (East Midlands) are formulating their economic strategies along the model of a low carbon economy. York has many ingredients to develop along the same lines and respond not only to the growing economic threat of climate change, but also respond positively to this growing economic opportunity.

The development of a low carbon cluster within Science City York, would be a significant first step in stimulating a strategic approach to this very real challenge.

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