Some discussion topics for 5 April 2016

Boxing Day Floods:

The Government has published the scoping report for the Leeds Flood Alleviation Scheme, although copies are currently hard to come by! We will have full details for the meeting. Be careful what you wish, because this is not an easy problem to solve. Residents should take on board the enormous scale of the works that might be required, think about the costs and exactly who will benefit.

Flood defences for Kirkstall could be enormous, a bit like the Berlin Wall. The Cardigan Fields section of the 2007 scheme had reinforced concrete walls a mile long and over 2 metres high, with no public access to the water's edge. Hopefully the need for such monstrosities can be avoided by doing more work upstream, although somebody will suffer flooding none the less.

If land is liable to flood, then the tenants face additional costs for high insurance premiums and / or damage to plant and equipment and / or lost stock. The effect of these additional costs is to eat into profits and reduce the money available to pay rent. The landowner must either reduce the rents, or watch the tenants move away to better sites. The fall in long term rents is directly proportional to the financial risk, and as the rents fall the capital value of the land also declines.

If we build flood defences, the risk declines and rents recover. The land value rises, and the entire benefit is creamed off by the landlord. The tenant and the workers get absolutely nothing from it. This is an inevitable, built in consequence of free market economics. Unless some vigorous countermeasures are taken, 100% of the taxpayers money invested in flood defences will flow to the landlords, who are probably living in off-shore tax havens, and pay no tax.

Kirkstall District Centre:

The Kirkstall District Centre includes the whole of the gyratory system, Wm Morrisons supermarket and the new Metric development off Bridge Road. It also includes the former Kwik Save store in the old district centre between Beecroft Street and Kirkstall Lane. This last area has been largely derelict for the last ten years. Tesco acquired most of this site for a planned megastore that never went ahead. It is now up for sale, but no purchaser has come forward.

The Tesco site is zoned for either retail or housing (or both) and in reality any reasonable town centre use could be acceptable. There are three main problems: (1) the land is massively over-valued and Tesco are asking more than it is really worth; (2) the steep slope makes the area very expensive to develop; and (3) the site is likely to face the costs of making the gyratory system work properly, and this could prove very expensive indeed.

The gyratory is saturated with traffic at peak times, and long queues develop on all the approach roads, on both sides of the valley. No allowance has been made for the

substantial additional traffic expected when Kirkstall Forge opens. There is no money in the budget for this, the Forge is not making any developer contribution (and is unlikely to do so) so at present the entire highway remedial costs are loaded onto the former Tesco site, effectively killing off any development prospects. Unless something happens to break this impasse, we could be stuck with it for thirty years.

This outcome is particularly galling for the Kirkstall councillors, who identified these problems nearly twenty years ago. Unfortunately the Council was over-ruled by a succession of Planning Inspectors from Bristol, who allowed development to proceed on Planning Appeals in the face of growing evidence that the highway system would not work properly. It now fails in precisely the ways we predicted all that time ago.

What exactly is wrong with the gyratory?

The fundamental problem is that the links are too short. To a traffic engineer, a link is the highway lane from one traffic signal stop line to the next. It contains a cohort of vehicles which are ready to move forwards when a signal goes green, and subsequently an empty space that can fill up with new vehicles joining from the rear. If the links are too short, the supply of vehicles runs out too quickly, and green signal time is wasted waiting for more vehicles to arrive from the previous junction. What is worse, short links mean that vehicles arriving from behind have nowhere to go, so they queue across the junctions, fouling up other traffic movements as well. Short links also make it difficult for vehicles to change lanes.

The Kirkstall gyratory system is full of short links, for example: Wyther Lane outside Hollybush Farm, the left flare from Commercial Road into Savins Mill Way, and the right turn from Abbey Road or Kirkstall Lane into Savins Mill Way. If you look closely there are many more. Reducing the traffic signal times can help, but there are limits to this: drivers need time to respond to signal changes, and engineers allow a short safety gap every time the signals change. These fixed overheads reduce the overall vehicle capacity when the signals change quickly. The Kirkstall system is already running a short signal sequence.

What else could we do?

A fundamental re-design might help, for example: a second river crossing, and / or a tunnel under Kirkstall Hill so that the junction with Savins Mill Way becomes a cross-roads. We are talking serious money here, tens of millions, and be careful what you wish: unless additional measures are taken, the improved system will simply fill up with additional cars until the queues are as bad as ever.

It may be worthwhile promoting a design competition, so that residents have more options. It could also be a great career boost for the eventual winner. But be warned, there are no quick fixes, and anybody seeking a long term solution will have to think big. If we do nothing then the present problems are likely to get considerably worse.

A zero carbon future?

A few years ago climate change was a distant prospect, and government responses were largely cosmetic. Not any more: each year scientific predictions become more certain and

more alarming. The call for action gets more pressing. Although the present government killed off domestic solar PV incentives, they left renewable heat incentives largely intact for big industrial users. Industry insiders claim that the Civil Service expects energy costs to rise inexorably, to the point where the hideously expensive Sizewell B nuclear plant looks economic, and solar panels make sense without any subsidy. Oil prices are currently low and the world is awash with natural gas, but long term energy price trends are up and up and up…

A zero carbon economy has no net carbon dioxide emissions. This requires a wholesale switch away from fossil fuels. No more coal, oil, petrol, diesel or natural gas. It will see electric cars and public transport, much higher insulation standards, and a different lifestyle which imposes fewer burdens on the planet.

If we are planning for the long haul, and our neighbourhood plan endures for the next twenty years, then it makes sense to plan for a zero carbon future. It is easy to foresee a situation where the next government, of any colour, decides to throw money at the problem. If we are looking for major subsidies to resolve our local issues, then it might be wise to have our zero carbon development plans ready.

What could we do in Kirkstall?

Solar panels on roofs are still good sense, although they are no longer the money spinner they once were. We are a poor location for wind or hydropower, and very few local residents will want their own nuclear plant! However there is one local resource that we have largely overlooked. In addition to the salmon and trout that are now re-colonising our unpolluted River Aire, this is also a potential source of heat, using modern heat-pump technology. In essence, a heat pump is a gigantic fridge, connected back to front so that it heats the inside of a building and cools the outside. It needs some power to drive it, but you get out around four times more heat than the power you put in. Heat pumping is much more efficient than direct heating.

There are air-source heat pumps that chill the air outside, and ground source heat pumps that chill the ground, but the absolute bees knees is a water source heat pump, because of the huge thermal capacity of river water. A water source heat pump in central Kirkstall, based on the River Aire, could easily export 45MW (yes, megawatts) of heat, perhaps a lot more, depending on Environment Agency approval. That is enough energy to drive a decent district heating scheme, and wonderful news to people stuck in high-rise blocks with expensive electric storage heaters.

How many people would be up for this?