



Linlithgow & Linlithgow Bridge Community Council

Please reply to:
Dr John Kelly
Planning Secretary
8 Pilgrims Hill
Linlithgow
EH49 7LN

29th April 2020

Planning for Scotland in 2050
National Planning Framework 4
Scottish Government

Dear Sirs,

Call for ideas – response from Linlithgow and Linlithgow Bridge Community Council

If there is one thing that the current Covid 19 emergency has taught us it is the importance of planning for strategic self-sufficiency and national sustainability. Before setting down ideas it is useful to rehearse those basic precepts for sustainable development. Sustainable development must presume a whole systems approach that considers the environmental, social and economic impact of any planning decision. In this context the optimal sustainable development solution is one which balances the total economic cost and social change together with the inevitable environmental consequences. Planning must ensure that scarce and/or finite resources e.g. land and minerals are not squandered either deliberately or through ignorance. The Brundtland definition (1987) is helpful “sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs”.

In considering strategic self-sufficiency it is useful to reflect on the basic human needs of; food, water, shelter (housing), energy (heat/light), clothing, clean air, sleep and well-being. In addition to this and from a community perspective are; communication, education, health and care, social living and security. Any planning solution should be nationally sustainable and conducive to strategic self-sufficiency. However, parallel to national sustainability and strategic self-sufficiency are the political decisions regarding the impact on global supply chains. A “Scotland first” solution could have a significant impact on our global supply chain partners some of whom are in less developed countries.

The ideas generated below require option appraisal undertaken using a whole life cost benefit analysis. The HM Treasury Green Book provides helpful guidance on the appraisal of public investments to ensure that policies, programs and projects adopted are the best ways to achieve policy objectives and make the best use of public resources.

1. What development will we need to address climate change?

- a. Any development must be on an “infrastructure first” basis. No planned development should take place in the absence of necessary infrastructure.
- b. From an energy perspective the primary development will be in the provision of a renewable electric supply. Scotland has a long history of hydroelectric power and the more recent provision of wind power. The future however is in tidal power which unlike wind is totally predictable. Scotland has the best tidal stream resource in Europe. Unlike a tidal range resource requiring expensive infrastructure in the form of a tidal barrage, tidal stream generators only require a small boat moored in a tidal stream. Orkney Marine Power have successfully demonstrated the world’s most powerful floating tidal turbine moored in the Pentland Firth. Other more sheltered tidal streams exist around the coast e.g. the Sound of Luing (which runs at 5 kn), Dorus Mor (which runs at 8 kn) and many more. Investment for further research into this technology is needed now. Like wind turbines there would be potential opposition to these boats moored in some of the most beautiful (and often inaccessible) parts of Scotland. Planning and research are paramount.
- c. Renewable electricity generation needs to be linked to pump storage schemes such as the power station at Cruachan.
- d. Renewable electricity generation can be linked to hydrogen production plants as in the USA.
- e. For operation in 2045 considerable work will be required to the National Grid and local distribution networks.
- f. In addition to national energy provision local and household energy generation in the form of photo voltaic roof panels and solar hot water panels should be mandatory for new build and encouraged as a retro fit to existing buildings. For community benefit photo voltaic panels should be mounted on buildings such as schools, industrial buildings, leisure centres, etc.
- g. A carefully planned increase in forestry would effectively provide a carbon capture resource.

2. How can planning best support our quality of life, health and wellbeing in the future?

- a. Carefully planned communities living in energy efficient houses supported by a new energy infrastructure would best support our quality-of-life, health and well-being in the future.
- b. 20% of the Scottish housing stock is over a hundred years old and 75% was built before 1982 when measures were taken through the building regulations to increase the energy efficiency of buildings. Planning needs to support the reconstruction of housing nearing the end of life and where retro-fitting of insulation is not practical. Rather like the car scrappage scheme, a carefully planned house replacement scheme is required but on an estate by estate basis so that housing density can be increased but importantly without losing community.

- c. Electricity is not currently a primary heating fuel. Those dwellings which use electricity as a heating fuel are predominantly flats. Electric supply to a modern house is often fused at 60 A. This presumes a consumption of no more than 14.4 kW. Modern gas boilers are capable of 30 kW or more. A straight switch to grid supplied electric powered heating is not practical. The Scottish gas grid is not capable of carrying hydrogen. However, the grid can carry hydrogen enriched natural gas. In the short term it is suggested that hydrogen produced by renewable electricity is blended with natural gas. In the long term the requirement is for either a more capable electricity supply network or a hydrogen pipe network feeding domestic hydrogen fuel cell electricity generators. The USA has over 1600 miles of hydrogen gas grid. Belgium, France, Germany and the Netherlands are installing hydrogen gas pipe networks.
- d. Houses built currently comply with strict legally enforced energy efficiency requirements. However, the heat loss calculation comprises two parts, fabric heat loss and ventilation heat loss. The regulations have dealt with fabric heat loss but have ignored ventilation heat loss. We open windows for ventilation exactly as hundreds of years ago. To support health and well-being houses should have controlled ventilation systems with effective heat recovery. Heat exchangers recovering heat from exhaust air could heat incoming air allowing good ventilation with minimum energy consumption.
- e. The present climate prediction states that Scotland will become hotter. This may mean that cooling is necessary in dwellings, shops, offices and other workplaces. The simplest way to provide cooling is by cooling/conditioning ventilation air but this can be expensive in energy consumed. The best way to provide cooling is by design taking advance of energy free methods which may include shading, solar reflective glass, convection chimneys, overnight purging, etc.
- f. Planning must change from a “field by field” basis to one driven by a community masterplan. New communities are of course much easier to plan in that respect but existing communities need a masterplan now if the 2050 target date is to be achieved.

3. What does planning need to do to enable development and investment in our economy so that it benefits everyone?

- a. It is difficult to anticipate the shape of the 2050 Scottish economy. It is safe to assume however that any planning solution should be nationally sustainable and conducive to strategic self-sufficiency. Covid 19 has shaken the world and identified those countries which can manage within their own borders and those which cannot. It may be necessary to consider a planning system which is national in context but is conducive to Scotland joining a European or global alliance.
- b. The task for the Scottish government is to move quickly but with a high level of public support. To move quickly is relatively straightforward for socialist market economies such as the People’s Republic of China but more difficult for capitalist democracies, even those with a socialist leaning. To move quickly the consultation methodology has to be inclusive, simple and agile.

- c. The biggest challenge to the planning system is to meaningfully engage with national and local communities to plan and invest in national infrastructure and facilitate planning and investment in local communities.
- d. Scottish government planners should therefore direct, empower and engage with local communities directly using existing local place plan legislation. Local communities should be funded by Scottish Government to enable the process. Local authorities should be directed to consolidate local place plans within a pro forma guided local development plan which takes direction from the National Planning Framework.
- e. Land ownership is the key to any development plan. It may be necessary to introduce measures which forbid landowners from compromising the locally developed masterplan. No one should have the power to create gap sites and derelict spaces in our towns and cities and no one should have the power to hold up vital infrastructure.

4. What policies are needed to improve, protect and strengthen the special character of our places?

- a. Policies and legislation are required to protect our heritage, our wild places where people do not live and our maritime environment.
- b. On land, consultation should commence on the identification of wild places, further national parks, and places where people might live and work.
- c. Around our coastline and inshore coastal waters further work must be done to protect our maritime environment with designated places for aquaculture. Inshore fishing should be tightly controlled, and dredging should be banned.
- d. The Scottish government should financially support brownfield development and the remediation of contaminated land.
- e. Planning should recognise the seasonality of agriculture with proper accommodation for seasonal workers.

5. What infrastructure do we need to build to realise our long-term aspiration?

- a. Recent events have demonstrated the possibility of increased working from home which has significant benefits in the reduced requirement for passenger transportation. A primary infrastructure requirement is for a high-speed broadband Internet connection to every dwelling and workplace.
- b. Transport infrastructure should focus on improving the current network and carefully planning support for new towns. Modes of transport will need to be fully converted to electric power.
- c. Lessons can be learned from Sweden where primary road junctions are sites for small car parks of not more than 100 spaces together with a shelter. These are sites for bus interchanges serving local towns and cities. People drive from their dispersed homes and villages to the bus interchange point. This fits well with the use of electric cars.
- d. Payment for public transport is a subject for discussion. A countrywide pass like the current concession card should be available for all, for all forms of public transport. The state pension and other qualifying benefits should be enhanced to cover the cost and the concession discontinued. A study is needed on the charge for such a pass and whether zoning would be required.

- e. As stated above a radical rethink is required on the sources of power i.e. the electricity and gas network.

This concludes our submission in response to the call for ideas.

Yours faithfully,



John Kelly
Planning Secretary.