

Ironbridge Power Station Master Plan

Response from Severn Gorge Countryside Trust (SGCT)



Preamble

The proposed development site lies adjacent to land managed by SGCT at Benthall Edge, which is a Site of Special Scientific Interest, as well as a key recreational route into Ironbridge. The rest of SGCT's 270 hectare landholding provides a unique opportunity to link the development site on a landscape scale regarding nature conservation and recreation into the Ironbridge Gorge World Heritage Site.

Conversely, SGCT does have concerns about the impacts of the proposed development on local traffic and infrastructure, nature conservation and flood risk.

We understand that Harworth will be making a considerable investment in the site and would require a commercial return. Economic rules are changing and it is clear that developers need to be ahead of the curve in terms of green regulation and emerging fiscal policy, particularly in relation to Climate Change and Natural Capital.

At the public consultation meetings which we attended, there was a clear direction from the local community that, if a development had to happen, it should be designed and built as a 21st Century Garden City. At the moment, the Master Plan proposals fall short of this aspiration and we would encourage a bolder vision which in turn should deliver more profit for the developer.

General

Make the site as carbon neutral as possible by ensuring that as little energy from fossil fuels is used by the housing, commercial buildings and the community facilities. This could well mean that the houses and buildings would need to be oriented east/west so that they have a south-facing roof for solar panels. The proximity to Benthall Edge may make this option more difficult to deliver by not allowing unrestricted sun throughout the year. Nevertheless, such a commitment over the 10 year development programme will increasingly become part of mainstream policy and planning in Britain to try to avoid the climate crisis.

The redevelopment of the Rugeley Power Station site aims to do just this – see extract and weblink below:

In line with ENGIE's commitment to energy efficiency and decarbonisation it is envisaged that, once redeveloped, the Rugeley site could be entirely maintained by green/renewable energy, up to 50% of which could be generated on site."

<https://www.engie.co.uk/about-engie/news/engie-begins-consultation-for-landmark-rugeley-redevelopment/>

Circular Economy – cutting development, construction and running costs through embodied energy and life cycle analysis and using principles of the Circular Economy and Triple Bottom Line accounting to make it more profitable as well as sustainable.

<https://www.ellenmacarthurfoundation.org/circular-economy/what-is-the-circular-economy>

<https://mbdc.com/project/construction-specialties/>

<https://researchportal.bath.ac.uk/en/publications/embodied-energy-and-carbon-in-construction-materials>

https://en.wikipedia.org/wiki/Life-cycle_assessment

https://en.wikipedia.org/wiki/Triple_bottom_line

For example:

- Pulverised fuel as (Pfa) already on site being either made into blocks on site or blocks from the Pfa being brought back on the empty trains cutting both costs and CO2 emissions
- Sand and gravel planned for extraction being made into concrete for use on the site cutting extraction costs and CO2
- Setting clear design standards for materials used in construction such as sheep's wool loft insulation (does not burn to 500 degrees c) and uses a renewable resource rather than glass fibre

Sustainable Energy

- Roofs of the 2 massive transformer buildings being used together with new house roofs to generate local electricity via SOLAR POWER
- Provide all houses with solar panels/tiles as well as vacuum hot water panels on their roofs together with hot water tanks to part heat water to cut costs from a District Heating system
- Installation of a DISTRICT HEATING SYSTEM throughout the site so that homes would not have the inconvenience and expense of a boiler to service/renew or worry about Carbon Monoxide, instead homes would pay on demand per unit of energy delivered. Modern systems utilise particulate capture. This has been done successfully in countries like Denmark for over 20 years. Telford as the original Forest City, with millions of trees planted which now need regular tree surgery which generates thousands of tonnes of timber waste and we manage several hundred acres of neighbouring woodland which we manage as forestry. This could provide a local source of fuel from a renewable energy source instead of fossil fuels of gas or oil.

Using SUDS – Sustainable Urban Drainage

- to capture and reuse water from houses for toilet flushing and other purposes as necessary
- To use SUDS techniques and materials to both reduce run off and store water for slow release during periods of high rainfall

Flood Risk

Ironbridge suffers from flooding from the River Severn, the UK's longest river, and the Lydebrook, which is a Rapid Response Catchment. The Environment Agency and Shropshire and Telford &

Wrekin Councils will no doubt submit detailed responses with regard to flood risk. These comments are based on lessons learned locally from co-leading a DEFRA Natural Flood Management research project called Farm the Flow and Learning about Lydebrook. SGCT also has responsibility for opening resident flood barriers at Bower Yard and (from October) at Maws so any increase in flood peak will increase this risk.

- The Master Plan proposals should be subject to a hydro-geological analysis to calculate proposed run off, particularly during periods of 100 mm rainfall events, which are likely to become more frequent due to Climate Change
- This analysis should include possible effects on River Severn levels during flood events which are so critical to flood risk in Ironbridge
- This should take account of the changes caused by the proposed removal of one million tonnes of pulverised fuel ash and sand and gravel from the site, together with the reduction in evapotranspiration rates due to the removal of mature trees
- The developers should sign up to a good soil practice scheme to ensure that subsoil is not massively compacted and stripped topsoil simply dumped back on top as is common practice, thereby creating hard pans which reduces the soils ability to store water

Landscape

- Create a 'working landscape' as we have done the last 30 years within nearly 1,000 acres of the Ironbridge Gorge World Heritage Site with hay cut and sold, sheep bred, local wool yarn made and sold, honey made, timber/products made and sold. Local people tell us they want to see farm animals and hay being made, see wildflower hay meadows, and for their children to experience natural habitat. This also cuts mowing and maintenance costs

Ecological issues

- Adopt a **Net Biodiversity Gain** approach for the whole site. A No Net Loss of Biodiversity approach is not challenging enough.
- Use limestone spoil and the underlying limestone geology on parts of the site to create a limestone habitat which uses steep slopes to maximise environmental stresses and therefore to maximise the diversity of limestone flora and associated flora. This is a rare habitat in Shropshire and would complement features like Patten's Rock Quarry on Benthall Edge.
- Transfer the woodland block to the south of the cooling towers to SGCT as it lies immediately next to Benthall Edge SSSI which we already manage and from which, due to the steepness of the slope, is the only access for management works
- Transfer the ancient woodland block that is part of the GCN mitigation area to the neighbouring Dugdale Estate.
- Plant native black poplars on the floodplain adjacent to the river. This is a notable and unusual tree.
- **Natural Capital** - using Flood water from the River Severn to manage newly created flood meadows in your open zones which you have identified and using the silt as a natural fertiliser and taking a saleable hay crop (as we do with our meadows in Ironbridge now) – which can increase the asset value by up to 90% as per the attached examples
http://www.floodplainmeadows.org.uk/sites/www.floodplainmeadows.org.uk/files/VNP09-NatCapSynthesisReport-Floodplains-A4-16pp-144dpi_0.pdf

- **Education** – teach the children in the new school in the new local habitats about how natural processes can cut costs and so they can experience local butterflies and birds
- **Grow Local** – using local materials eg local larch and sweet chestnut as we do for cleft and sawn fencing from our own woodlands which looks attractive and is longer lasting

Community Development, transport and other impacts

The Master Plan suggests creating a new community of up to 3-4,000 new residents, a school and commercial outlets. The local community in Ironbridge (which is actually formed of several distinct communities, including Ironbridge, Coalbrookdale, Jackfield, Coalport, Sutton Maddock and Madeley as well as adjacent parts of Broseley and Barrow) have had to cope with increased pressure from new housing developments at Lightmoor and the Beeches, with another on the old AGA site potentially in the pipeline. The above communities are severely constrained by the beautiful and geologically unstable landscape. In practice this means congested roads during the summer tourist season, an ever present flood risk from both the River Severn and the Lydebrook Rapid Response Catchment and strain on the pumped sewerage system.

SGCT uses the local roads to access its large landholding which stretches right across the Ironbridge Gorge and the above communities. This includes planned and emergency work to over 60 historic structures, trees, tracks, rides and paths, clearance of trash screens to avert flooding, movement of livestock, materials, timber and hay. In this we work closely with a range of local organisations including Telford & Wrekin and Shropshire Councils, Environment Agency, Parish and Town Councils, as well as the emergency services.

SGCT shares the concern of the local community regarding a potential huge increase in traffic pressure related to the Ironbridge Gorge. There is only one obvious route into Ironbridge by road from the Much Wenlock Road, along the river.

If 50% of the 1,000 new homes are 2 car occupants and 10 % of them access the Gorge this will potentially add an additional 100 to 200 cars using the roads daily, not including the extra delivery vans and lorries servicing the homes and commercial areas.

Harworth is to be commended for exploring rail options which could aid commuters travelling to work.

A Park and Ride scheme for Ironbridge is however not feasible as it lies on the wrong side meaning visitors would have to drive past the World Heritage Site to get back to it.

The Master Plan does not currently address these transport issues and the developer would need to work with Shropshire and Telford & Wrekin Councils as well as the Parish and Town Councils to come up with a mitigation plan.

Conclusion

The Development offers an opportunity to deliver a sustainable Garden City for the 21st Century, as well as delivering a future proofed profit within rapidly changing economic metrics, due to Climate Change and resource shortages. Impacts on Ironbridge could be profound.

SGCT would be able to meet with Harworth again to continue to discuss these issues in more detail.