



LEP – Sub Committee

Business Support Management Board

Private and Confidential: No

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North West Coastal Arc Clean and Sustainable Growth
(Appendix 'A' refers)

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Executive Summary

In the autumn of 2015, the UK Government announced regional Science and Innovation Audits to catalyse a new approach to regional economic development. Science and Innovation Audits enable local consortia to focus on analysing regional strengths and identifying mechanisms to realise their potential.

The North West Coastal Arc Partnership for Clean and Sustainable Growth was formed in 2017, to focus on the North West's strength in science and innovation for Clean and Sustainable Growth. This report presents the results which include broad-ranging analysis of the North West Coastal Arc Clean and Sustainable Growth Partnership's capabilities, the challenges and the substantial opportunities for future economic growth.

The Business Support Management Board is advised that the Lancashire Enterprise Partnership is a named partner in the North West Coastal Arc.

Recommendation

The Business Support Management Board is asked to:-

- (i) Note the contents of this report and the accompanying presentation, set out at Appendix 'A'.
- (ii) Recommend the North West Coastal Arc Science and Innovation Audit Report to the Lancashire Enterprise Partnership Board.
- (iii) Reflect on how clean growth strengths in Lancashire and the wider North West might be reflected in the development of the Local Industrial Strategy.



1 Background and Advice

1.1 The 2017 UK Industrial Strategy White Paper recognises that Clean Growth is not simply a challenge but a very significant opportunity to increase productivity, create jobs and scale-up earning power right across the country. In 2014, the global market for low carbon products and processes alone was worth \$3.4 trillion and this is predicted to rise to in excess of \$8 trillion by 2025. In the UK employment, turnover and GVA in this sector are all growing rapidly (12%, 25% and 28% respectively between 2010 and 2013) and is predicted to grow by 11% per year between 2015 and 2030 – 4 times faster than the rest of the economy. This could deliver between £60 billion and £170 billion of export sales by 2030.

2. The North West Coastal Arc Clean Growth Science and Innovation Audit

2.1 This Science and Innovation Audit provides the evidence base to demonstrate that the North West Coastal Arc is exceptionally well-positioned to lead globally in developing both those solutions and the skilled people that will drive forward the economic and environmental benefits of Clean and Sustainable Growth. The North West Coastal Arc partners share a collective vision of translating world-class research via innovation for Clean and Sustainable Growth to create regional economic value.

2.2 The partners structured this audit around three prime capabilities in 'science and technology' research and innovation namely **Environmental Industries Technologies & Services, Future Energy Systems and Advanced Manufacturing, Chemicals and Materials**. They also included a fourth 'enabling' capability representing acceleration points for innovation and productivity across each of the prime capabilities. These include co-location of business, support for collaborative research and demonstration capabilities. These complement each of the technical innovation strengths and act to amplify the translation of research quality into new products and process for the global market place.

2.3 Based on the top 1% of cited publications, the collective research leadership of the partnership is globally leading in Environmental Industries, Technologies and Services, and exceptional in the Agronomy and Crop Science, Plant Science and Waste Management sub-disciplines. The North West Coastal Arc's outstanding research excellence in Aerospace Engineering and Materials and Chemistry, particularly Metals & Alloys and Polymers & Plastics is very strong against global comparators. In terms of cross cutting and complementary research capability, the region has outstanding research excellence in Statistics, Probability and Uncertainty, Decision Science, Data Science, Management Science and Management of Technology and Innovation.

3. Science and Innovation Audit Actions and Recommendations

3.1 The audit has identified five key opportunities emerging from our vision for Clean and Sustainable Growth.

1 Communicating the economic importance of clean and sustainable growth



North West Coastal Arc partners will work together to use the outcomes of this audit to highlight the immense benefits of Clean and Sustainable Growth for the economy and people, as well as the environment. Communication activities will be an initial priority.

2 Improving connectivity between the region's assets for Clean and Sustainable growth

The audit has identified specific opportunities for a more 'joined-up' approach to the region's existing research, development, demonstration and co-location facilities. These include research and innovation in to hydrogen-based energy systems, below-ground energy resources and 'place-based synergies' focussed on the role of North West Coastal Arc's uplands and coasts supporting the region's urban areas.

To enhance the regions existing assets, an International Centre of Excellence for Clean and Sustainable Growth would act as a gateway for stakeholders to access to the North West Coastal Arc's existing prime capabilities, targeting the challenges and opportunities at the interaction of the Clean Growth Strategy and 25 Year Environment Plan. The proposed 'Eden Project for the North' offers a unique opportunity to develop new research, development and demonstration capacity, serving the whole of the North West Coastal Arc partnership, both its research base and business communities, and developed alongside public engagement facilities.

3 Enhanced support for connecting business to global markets

The audit has identified the opportunity to take a more coordinated approach to leveraging the international campuses and technology transfer facilities of the region's Higher Education Institutions in order to develop Small and Medium Enterprises internationalisation support programmes across the Higher Education partners.

4 Training regional talent to support and lead Clean and Sustainable growth

Consultation with business and other stakeholders highlighted a gap in training at all levels relevant to Clean & Sustainable Growth. Improved integration and connectivity across the region's Further Education and Higher Education providers would create a 'skills escalator', for example through a virtual Clean Growth Training Academy.

5. Freedom and flexibility in supporting industrial Research and Development for Clean and Sustainable Growth, particularly in Small and Medium Enterprises

A clear conclusion from the audit is that achieving our aspirations of significantly increased Small and Medium Enterprises Research and Development for Clean and Sustainable Growth requires funding mechanisms (for example the multiple mechanisms of government investment highlighted in the Clean Growth Strategy



that operate at an appropriate and transformational regional scale across individual LEP boundaries.

This audit has proved the strength of the North West Coastal Arc partnership and shown a real commitment by each of the organisations involved to create a Strategic Alliance, develop an action plan for the first 12 months and convene an implementation group to drive progress.

The Science and Innovation Audits consortium is led by Lancaster University and includes all the region's LEPs (Cumbria, Lancashire, Cheshire, Liverpool City, Stoke-on-Trent and Staffordshire), the North Wales Economic Ambition Board and the Mersey-Dee Alliance, together with companies of all sizes, and across a wide range of sectors. It brings together the complementary research strengths of ten regional universities, Lancaster, Liverpool (both members of the N8 partnership), Bangor, Chester, Cumbria, Edge Hill, Keele, Liverpool John Moores, University of Central Lancashire and Wrexham Glyndwr and other national research assets, together with Blackpool & the Fylde College.

List of Background Papers

Paper	Date	Contact/Tel
None		
Reason for inclusion in Part II, if appropriate		
N/A		