**The Road from COP26: How Innovation is Leading the Way**

The visual notes have been created within a template which utilises the University of Liverpool’s ‘Making an Impact 2022’ and the Academy’s colour schemes of dark purple, a golden orange and accents of pink, green and blue. The bottom of the note includes a colourful banner incorporating the Making an Impact 2022 visual which includes bright colourful triangles. The Academy which has a purple background and a colourful pyramid of stripes. A second Academy banner focussed on Researcher Development which has a white banner with an image made up of four colourful petals (purple, pink, green and orange) It states “positive and inclusive research culture”. The final banner is the logo of the University of Liverpool featuring a blue shield with three doves and a book in the centre. Underneath this runs the social media information:

www.liverpool.ac.uk/researcher/making-impact

#unilivimpact22

@LivResearcher

@LivUniAcademy

And the words “illustrated by @swantonsketches”

The title of the talk ‘The Road from COP26: How Innovation is Leading the Way” is presented in the top banner.

The top left corner of the note features a portrait of the panel convenor, Professor Laura Harkness-Brennan. It is a purple monochrome portrait featuring a smiling white woman with blond hair and glasses. The banner also features four portraits of the panel speakers: Steve Rotheram (Metro Mayor of the Liverpool City Region); Dan McGrail (CEO Renewables UK); Prof. Anthony Hollander (Pro Vice Chancellor for Research and Impact, University of Liverpool) and Prof. Andy Plater (Environmental Sciences, University of Liverpool). Columns have been drawn under each of the four portraits.

The first column represents the key elements of Steve Rotheram’s talk. It states:

“led the regional delegation to the 2021 UN Climate Change Conference in Glasgow. Liverpool was the first city region to declare climate emergency and is seeking to achieve net zero carbon by 2040”. This is illustrated by a target with 2040 in the centre and an arrow making its way to this. Underneath the target reads “How?” and examples are illustrated in the lower half of the column.

* An illustration of the River Mersey with a simplified barrage to reflect the tidal energy potential for 1 million homes.
* A carbon capture pilot illustrated by a butterfly net capturing a cloud and an arrow pointing to a silhouette of a car with the words “equivalent of removing 4 million cars each year”.
* Ambition to triple offshore wind energy – represented by drawings of wind-turbines.
* Launch of bus fleet with zero emissions – illustrated by a drawing of a green bus with “hydrogen buses” on the side.

These examples highlighted the investments and job opportunities provided and were intended to demonstrate approaches to growing Liverpool City Region’s reputation in leading action to tackle climate change.

The second column represented Dan McGrail’s contribution.

Renewables UK is a Trade Association representing 450 companies (representing 450 companies – primarily wind and tidal).

It highlighted that the drivers in rapidly changing energy policy include geopolitical conflict; energy security; climate change. Leading to an investment in renewable energy technologies (illustrated with a green pound sign). Underneath was a drawing of offshore wind turbines.

To meet ambitious targets – 50GW offshore wind energy which is five times the current output.

Innovation is required to scale up (illustrated by the words scale up gradually getting bigger with an upward pointing arrow behind it). Requiring partnership with industry and academics – but recognising that it will generate opportunities. It leads to a statement “Quantum Leap in Technology”

Five examples are listed:

1. Hydrogen power emergent technology
2. Floating offshore wind (utilising deeper water)
3. Use of sustainable materials
4. Digitally enabled demand management
5. Net zero maritime industry

The third column represented Prof Hollander’s contribution and his call that “we must take action now” Prof. Hollander led the University of Liverpool’s delegation to COP26 and leads N8 – Net Zero North.

Climate Futures in the new research theme established in 2020. Interdisciplinary focus on climate, environment and energy research across the University. 160+ staff responded to contribute to the theme.

The theme facilitates partnerships and optimises ability to respond to funding opportunities.

Some examples are provided:

Funding to design and build six prototype houses which are carbon zero; plastic free; environmentally sustainable. This is illustrated by a drawing of a house in a green colour tone with solar panels on the roof.

£13M investment to develop low carbon chemistry laboratory for the future. Illustrated by a drawing of a test-tube containing a green bubbling liquid.

There is a University pledge to achieve net zero by 2035.

Developing SKILLS to equip future workforce – illustrated by a stick person being filled up with green with an arrow to a set of fully green people with an orange lightbulb above them. Under the arrow reads “better placed to deliver innovation”.

The final column represents Andy Plater’s contribution. He is the University of Liverpool Academic Lead for ECO-INNOVATORY and ECO-I NORTH WEST.

The ECO-INNOVATORY is represented by a drawing of green hands supporting stick people representing SME businesses where the businesses are linked to academic expertise to support the development of low carbon innovation and skills. It has been running since 2012 and has supported 700+ businesses; created 300+ jobs and developed 120+ new low carbon products and services.

Some examples are presented including:

Farm Urban (local social enterprise) – hydroponic technology to grow food for local businesses (4 mile radius) uses 90% less water and no pesticides. This is illustrated by a stick person growing vegetables on vertical poles as ECO INNOVATORY developed a strategic tool to support vertical farming.

Preventing Coastal Erosion - Illustrated by a simplified coastline with grey coastal defences next to a beach and the sea. Normal coastline defences involve huge carbon intensive structures. Technology allows for better effective use of natural defences.