



Greater
South East
Net Zero Hub

Net Zero Delivery Vehicle

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Net Zero Programme Lead (South)

APSE Energy – The Big Energy Summit – March 2024

Net Zero Delivery Vehicle

Executive Summary

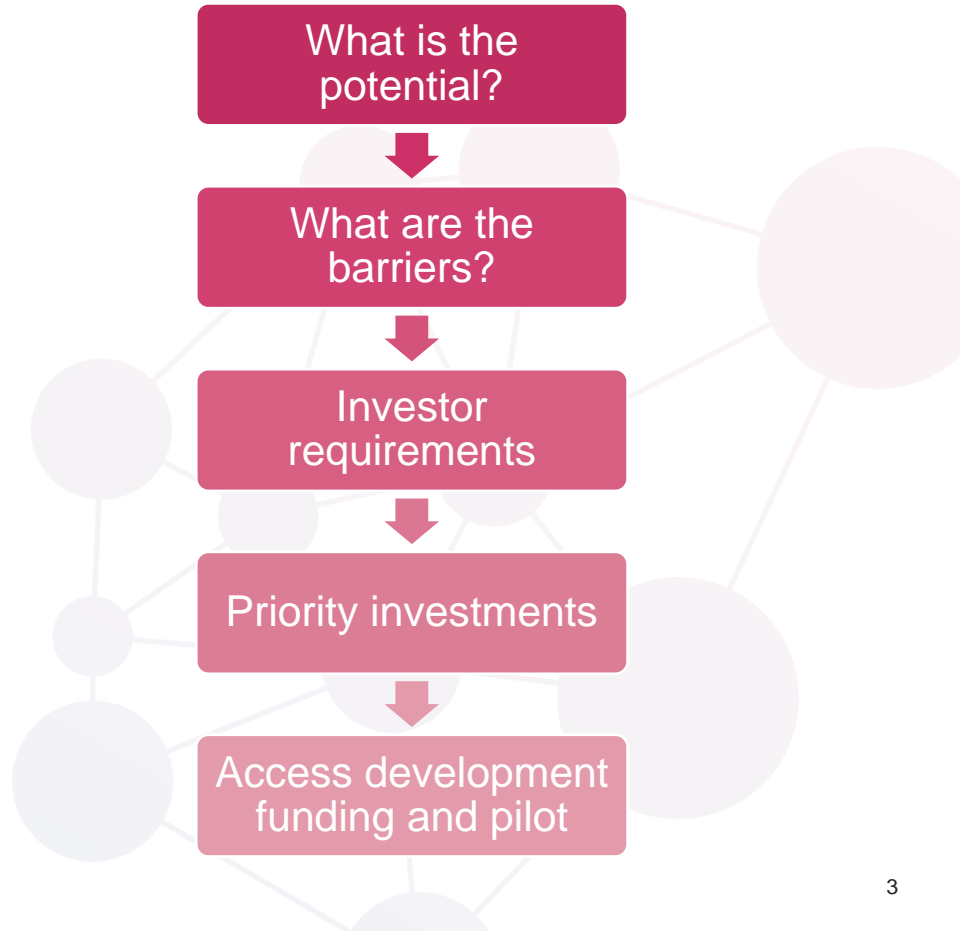
- A model for local net zero investment:
A financing instrument with de-risking tools & transaction enablers
- Developed by EP Group for the Greater South East Net Zero Hub
- 2 years of R&D with Local Authorities
- Designed for less urban, 2-tier and unitary authorities
- Build capacity
- Build investor confidence
- Inspiring a re-design of Net Zero Hub's services
- 4 x Local Authorities considering pilots



Development timeline

Hypothesis

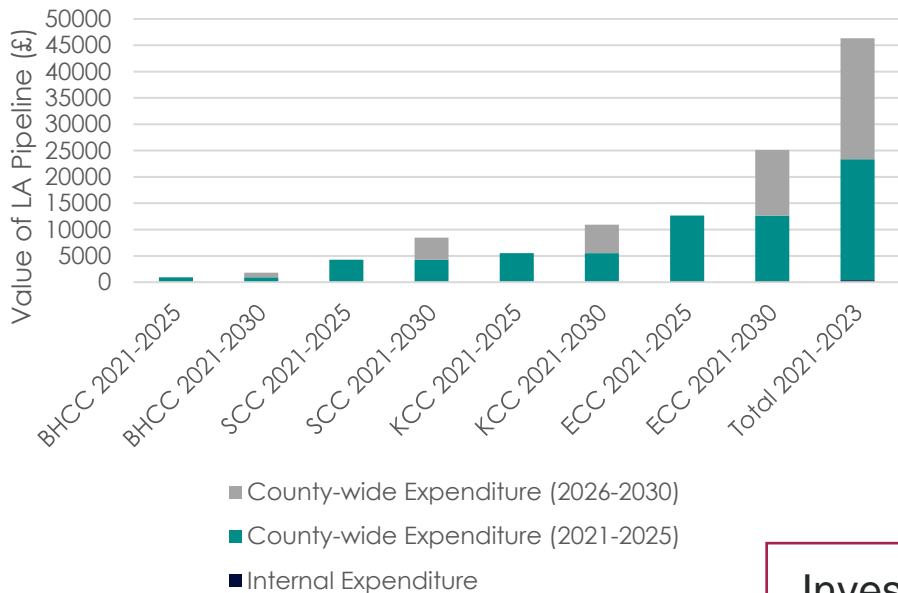
To increase the flow of capital into Local Net Zero projects we need to address the lack of development and financing capacity to turn economic potential into bankable projects.



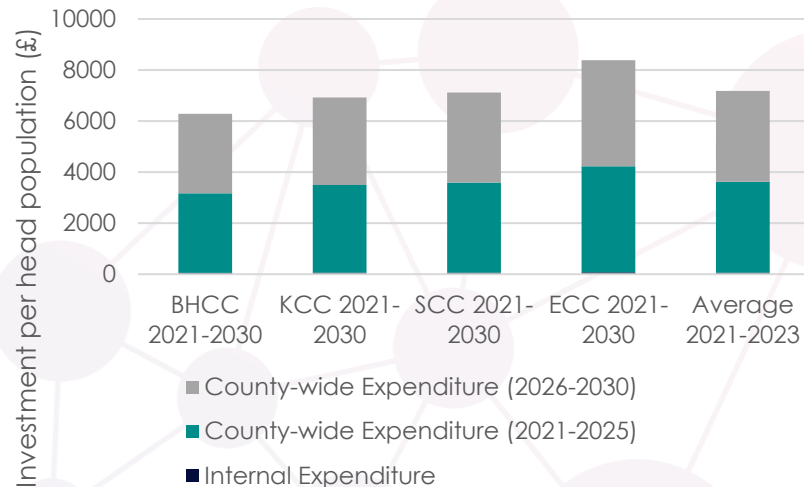
Net Zero Pipelines 2021-30

Estimated total value of over **£46 billion** across the four authorities. Approx £4k per capita.

Categorised Value of LA Decarbonisation Pipelines



Planned Decarbonisation Investment Per Head Population



Investments were **tagged** according to net zero impact

- Domestic building decarbonisation
- Non-Domestic building decarbonisation
- Renewable energy generation
- Transport decarbonisation
- Waste management decarbonisation
- Green infrastructure (Natural Capital)

Surrey County Council (SCC)

Net-zero Targets and Strategies:

- 1 Climate Change Delivery Plan (CCDP) 2021-25**
Countywide emissions targets to be achieved by 2025
- 2 Carbon Management Plan**
Emissions targets for the Council to reach Net-Zero
- 3 Greener Futures Finance Strategy**
Finance requirements for implementation of both the Climate

Required finance and delivery:

£65-71mil.

The cost of the Council's
2030 NZ carbon plan capital

£3.4-4.2bil.

The cost of Surrey County Wide
Delivery Plan 2021-2025 capital

Building retrofits

By 2023: 21 buildings retrofitted.
By 2025: 110 buildings retrofitted.

EV fleet conversion

By 2023: 68 vehicles converted to EV.
By 2025: 272 vehicles converted to EV.

Decarbonisation support for fuel-poor, off-grid or vulnerable homes (countywide)

By 2025: Support 53,000 vulnerable homes.

LOCASE (countywide)

Offers SMEs grants of up to £10,000 for energy efficiency or "green business development" opportunities, along with an environmental training scheme & events.
By 2023: engage 600 SMEs.
By 2025: support 7,800 businesses.

Public EV infrastructure (countywide)

Ground mounted solar

By 2023: Project development processing/complete.
By 2025: 15MW (peak) installed.

LED streetlighting

In progress to be completed by 2023.

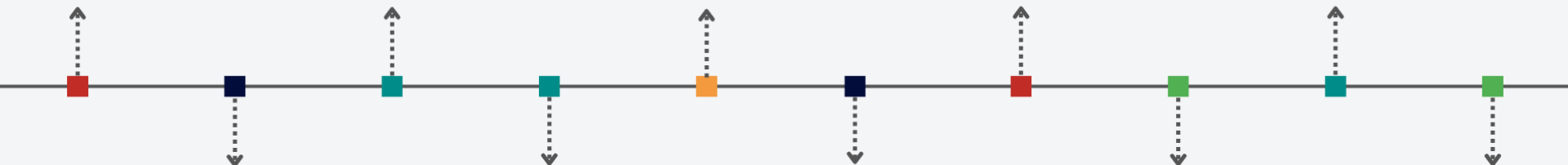
Solar Together group residential procurement (countywide)

By 2023: 1,200 homes installed with solar panels.
By 2025: 6.2m solar panels installed.

Tree planting (countywide)

By 2023: ~110,000 trees/hedges planted.
By 2025: 600,000 trees/hedges planted.

Local Nature Recovery strategy (countywide)



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Decarbonisation support for fuel-poor, off-grid or vulnerable homes (countywide)

By 2025: Support 55,000 vulnerable homes.

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Local Nature Recovery strategy (countywide)

Brighton and Hove City Council (BHCC)

Net-zero Targets and Strategies:

Required Finance:

> £14.5mil.

The amount the projects in advanced stages are expected to exceed, while no specific financing target has been identified. BHCC associate "high upfront costs" with the remaining projects in the in their 2030 plan.

£720 - £904 million

Worth of county investments indicated by SCC's leverage rate.

Expected Project Outcomes

- A comprehensive, nature-based response major flooding risks across the Brighton region
- Renewed efforts to decarbonise buildings under the BHCC's jurisdiction, including energy efficiency audits at 49 sites, measures at 20 public schools, and construction of two new carbon neutral sports facilities

Restructuring SMEs with e-bikes and e-cargo bikes

Completed: Purchase of 12 e- and e-cargo bikes, scoping further development

A27 balancing pond

By Sept. 2022: Construction begun on natural balancing/infiltration system

Public bikeshare reorganisation

By Summer 2023: 100% Bikeshare accessibility

Norton Road water capture system

Medium-Term: Interceptor designed, awaiting installation

Preston Park sewer

Long-term: Attenuation and infiltration system in preliminary discussions

Sports facilities investment plan

By 2031: Two large new carbon neutral facilities

Heat pump pilot

Near-term: Retrofitting of heat pumps in progress

Local flood risk strategy

By May 2023: Hotspots identified, sustainable drainage system designed

Water efficiency fund

Near-term: 40 highest consuming sites to have smart consumption meters installed

Energy efficiency in schools

Medium-term: 20 schools to have energy efficiency projects developed

LCB - Changing Chalk

Long-term: 18 landscape scale conservation projects to be delivered

The living coast - Landbridges

Multiple wildlife/pedestrian corridors across the A7

Essex County Council (ECC)

Net-zero Targets and Strategies:

- Adopting to Climate Change Action Plan**
Adaptation targets supporting 2080 climate resilience
- Making Essex Carbon Neutral Recommendation Set**
A range of sectoral targets from 2022-2050, as well as next steps for strategy

Required finance and delivery:

£200 million

The cost of the Council's "Making Essex Carbon Neutral" plan

£10.5 - 11.8 billion

Worth of county investments indicated by SCC's leverage rate. However, Parity Project estimates £3bil.

Council estate retrofit strategy

By 2022: Setup followup surveys and PSDF skills funding (at least £75m) for 250 core council buildings.
Ongoing target: Installation of LED lighting, and 100Wp of battery-integrated solar at Essex Records Office.

Zero CO2 homes:

By 2022: 85 homes were retrofitted with external wall, loft and cavity wall insulation, and air source heat pumps.
Near-term: Construct 62 zero carbon homes (70% affordable), with an additional 40 to come.
Transport: Construction of walkable neighbourhood with 1 electric charging station and storage for 69 bikes.

Varied solar (countywide)

Since 2018, 770 solar PV have been installed in households, generating 3,17MWh of electricity.
Short-term: 610 new solar installations, adding 2.4 MW of generation capacity, displacing 1,200 tonnes of CO2e annually
By 2050: All roofs to have solar panels.

Tree planting (countywide)

Essex Forest Initiative:
By 2022: 142,000 trees planted
By 2025: Another 233,000 trees need to be planted (Colchester).
Long-term: Essex Forest Partnership committed to plant 1 million trees

University waste (county improvements)

By 2022: Ban all sales of single-use plastic on Anglia Ruskin campus.
By 2025: Increase recycling rate by 60%.
By 2030: Zero land fill

Climate Focus Areas (CFAs)

By 2025: Creation of two regional CFAs, one aiming to manage 30% of land as natural infrastructure and double tree cover to 10%, the other to build 23,000 new sustainable homes (50-40% will be "affordable")

LOCASE (countywide)

Offers SMEs grants of up to £10,000 for energy efficiency opportunities, along with an environmental training scheme.
Since 2016, 597 businesses received funding to reduce 2,902 tonnes of CO2e.
By 2023: "250 SMEs, saving ~1,500tCO2e and £50k yearly.

Kent County Council (KCC)

Net-zero Targets and Strategies:

- 2030 Carbon Neutral Plan**

KCC have committed to reduce greenhouse gas emissions from their own estate, operations and wholly owned services to Net Zero by 2030.

Required Finance:

> £ 91.5m

The cost of the Council's net zero masterplan; Kent needs a coordinated approach to truly realise the potential of a flourishing green economy.

~£5.00b

Worth of county investments indicated by SCC's leverage rate.

Expected Project Outcomes

- Reduce CO2e by 17,500 tonnes per annum to meet 2030 target, and end all reliance on oil fired heating by 2025.
- Identify priorities for the restoration of biodiversity, map existing valuable areas of nature and make specific proposals to create or improve habitat and wider environmental goals.
- Turn the curve on transport emissions and road pollution by developing approaches to road space, parking, public transport and electric vehicle infrastructure with a presumption towards more sustainable travel modes.

LED streetlighting

Completed in 2015: Conversion of 120,000 streetlights to LED

Solar Panels

Completed by 2020: Installation of 2,500 solar panels in KCC's buildings

Bee Action Plan

By 2025: Implement Plan Bee Action Plan across KCC managed land including highways, PROW, corporate estates and country parks

Heat Network

By 2025: Build Maidstone heat network

Low Carbon

By 2030: Move 30% of Gas heating to Heat Pumps, and insulate buildings for 20% reduction in heat loss

Reprocess Waste Materials

Long-Term: Create infrastructure to reprocess waste materials, to maintain closed loop economy.

Heat pump installation

Completed: Installation of heat pumps in 3 KCC buildings, which saves "62 tonnes of CO2e annually

Biodiversity

By 2025: Secure policy commitment to 20% biodiversity net gain in Kent

Solar Parks

By 2024: Enable 52 MW of solar parks to help meet energy needs

Low Carbon Heating

By 2030: Switch oil fuelled back-up generators to low carbon alternatives

EV fleet conversion

By 2030: 80% Business miles and 100% fleet miles to be via electric vehicle

EV charge points

Long-Term: Install EV charge points at appropriate KCC locations

Selected findings



We always have to **fund feasibility studies** and never get a return.

The private sector just wants to take the **easy projects and the big returns**, leaving the public sector with the rest.

We need **shovel-ready projects**. We only fund project development in exchange for exclusivity.

We want the public sector to take a first loss position, so we can **take only the risks we want to take**.



Developing de-risked, bankable projects

Starting points

Standardisation makes markets BUT every **place** is different. So we need ...

- (i) Local leadership and delivery
- (ii) Standards & codified good practice
 - Underwriting and extra de-risking measures
 - Transaction enablers
- (iii) Pathways for delivery
 - Project development
 - Finance
 - Procurement

Good projects are not developed for free:

Development finance must be made available as investor confidence grows

Example: bankable energy efficiency projects built on standards and codes of practice



ESCO-in-a-box (EP Group)

System for financing and local delivery of business EE projects



EFIG Underwriting Guide

'How-to' for bankable EE projects



Investor Confidence Project

Standards for bankable EE projects



International Performance Measurement & Verification Protocol (IPMVP)

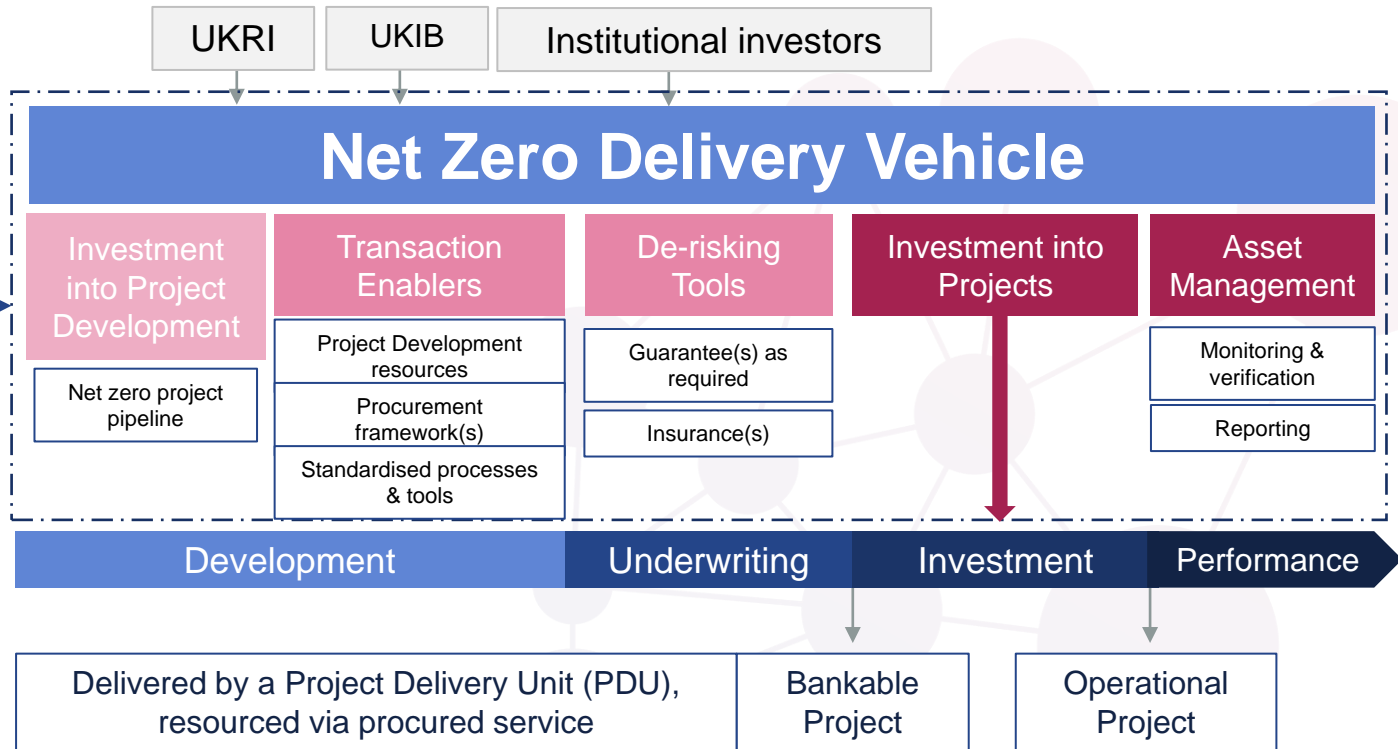
Standard for verification of EE projects

Operational view

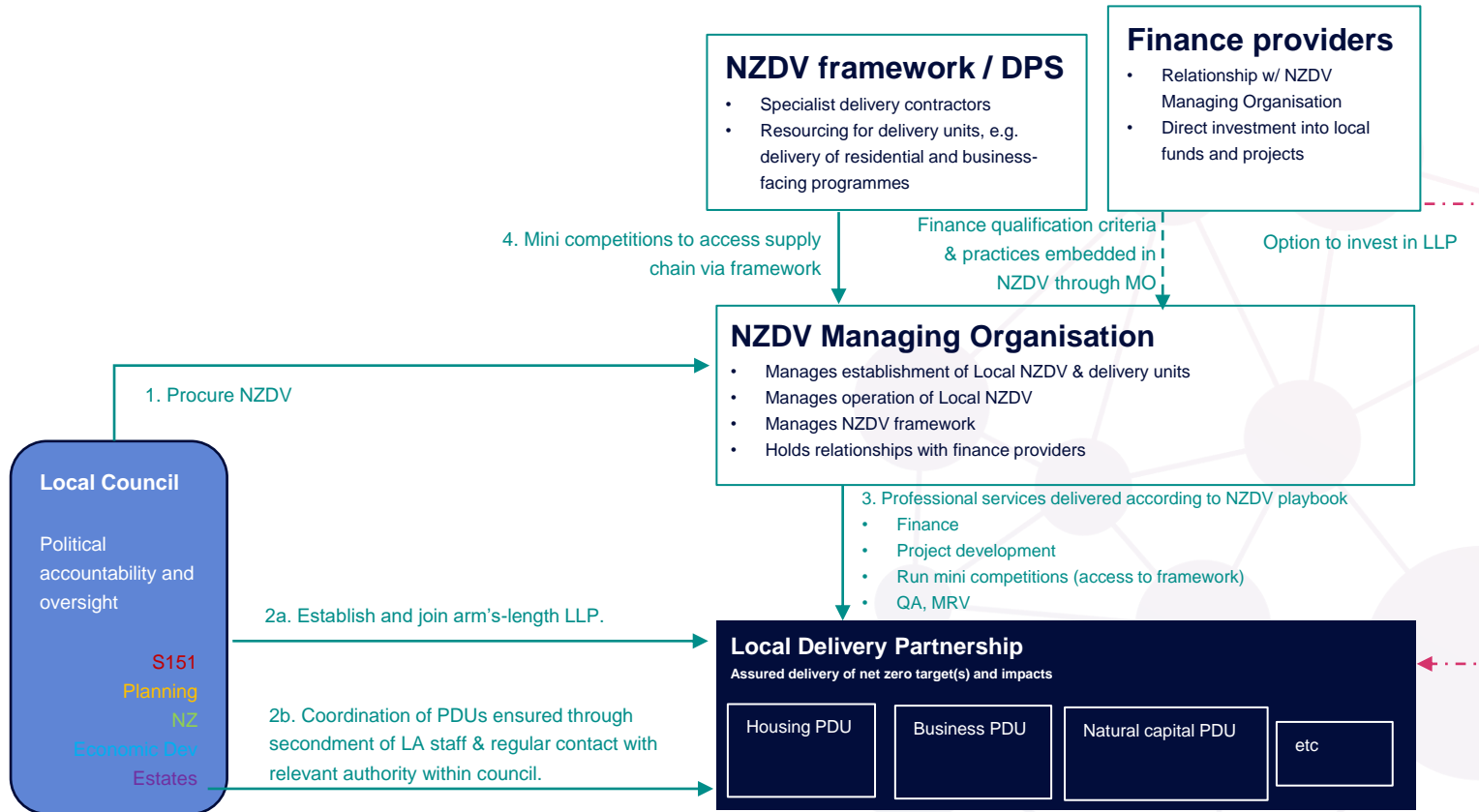
Local Authority

- Political commitment to net zero
- Statutory roles
- Access to PWLB / low cost funds

Net zero by ... 2030

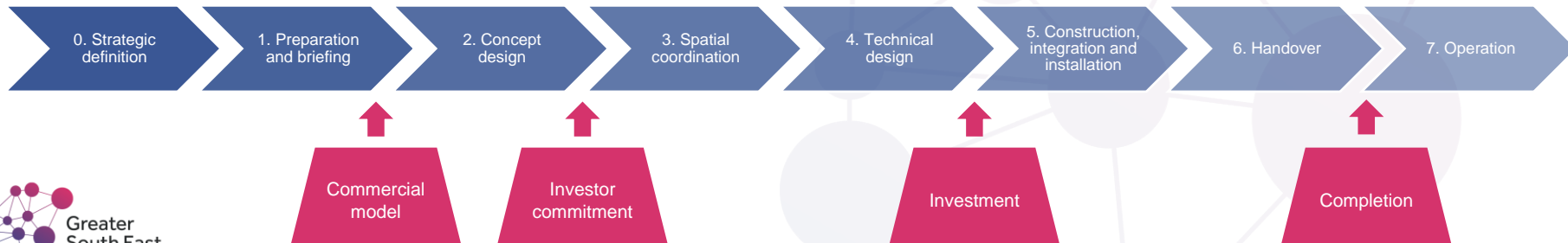
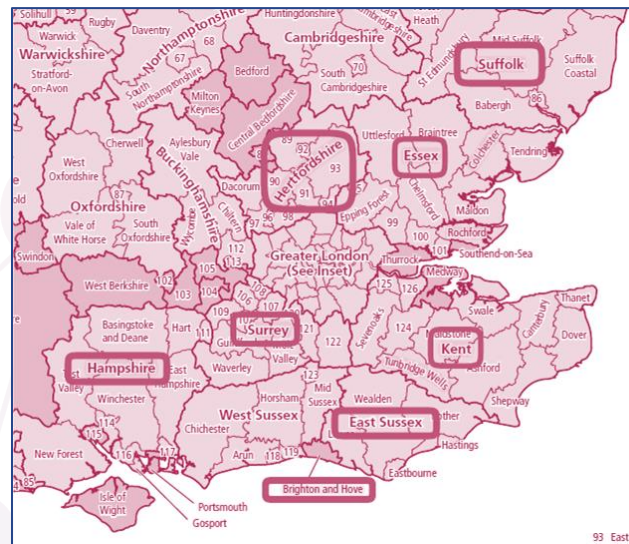


Structural view



Next steps

- Support a funded project to develop the first Vehicle and deliver Priority Investment(s)
- Incorporate findings into our services
 - Developing bankable projects
 - Integrating de-risking measures
 - Alignment of terminology, project stages
 - Extra support at investment stage gates
 - Links to finance providers





Greater South East Net Zero Hub

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Department for
Energy Security
& Net Zero



GREAT
LONDON
AUTHORITY



Buckinghamshire
LOCAL ENTERPRISE
PARTNERSHIP
THE ENTREPRENEURIAL HEART OF GREAT BRITAIN

NEWANGLIA
Local Enterprise Partnership
for Norfolk and Suffolk



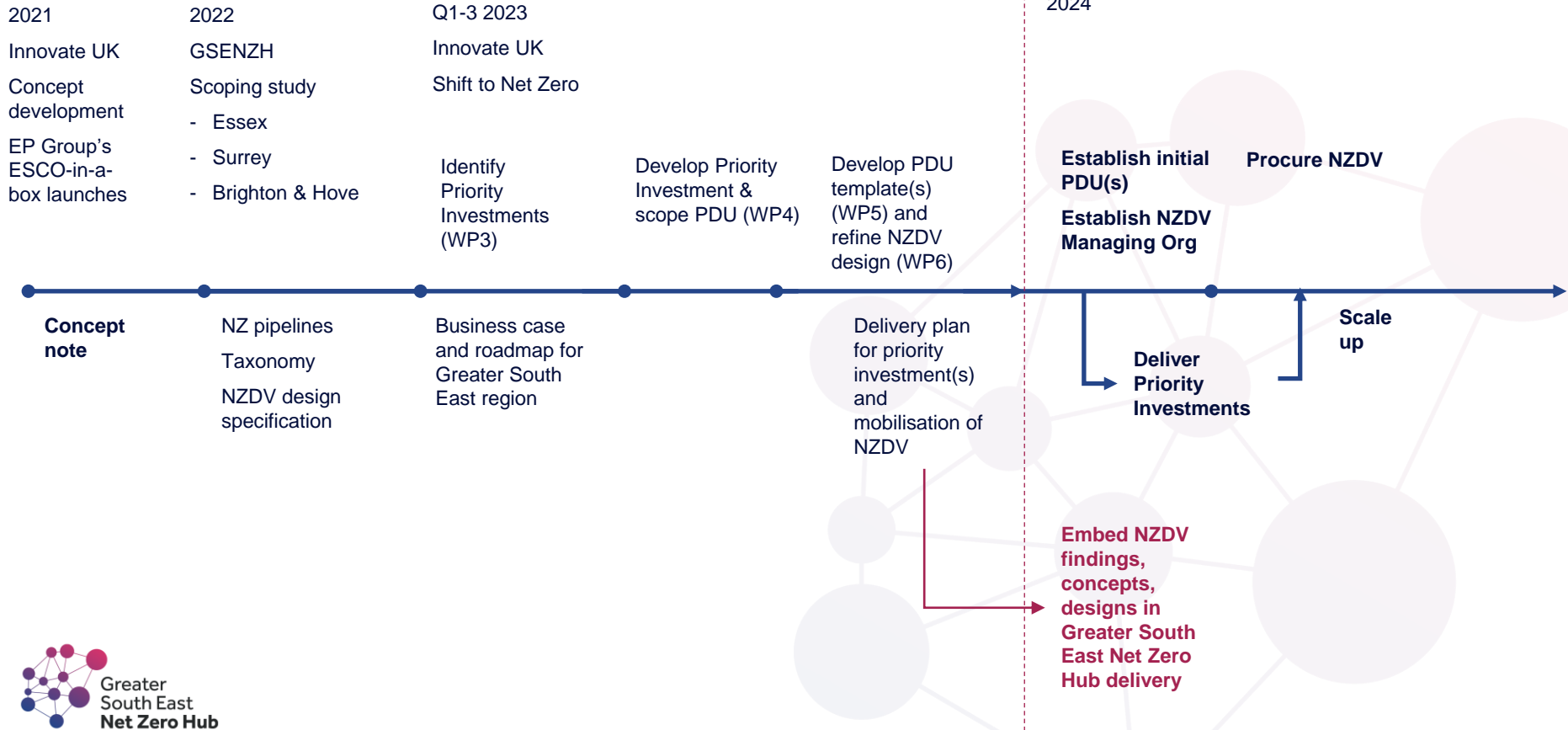
Coast to
Capital



enterprise**m3**
Delivering prosperity through innovation

SEMLEP
South East Midlands
Local Enterprise Partnership

Appendix: Background



Appendix: Accessing finance

Tools employed by the NZDV

Finance types

- Balance Sheet
- Grant (govt or other, e.g, PSDS)
- Public Works Loan Board
- Concessionary Funding
- Commercial Debt
- Commercial Equity
- Crowdfunding
- Outcome seeking

Instruments

- Bonds
- Asset Finance
 - Operating Leases
 - Finance Leases
- Project Finance
- Secured Debt
 - Assets, inc mortgage
 - Revenue
- Unsecured Debt
- Shares
 - Community Ownership

De-risking measures

Underwrite specific *risk perceptions* of investors

- Financial risk
- Technology risk
- Operational risk
- Modelling risk
- Compliance
- Business risk

For example:

- Technical assistance
- Standardisation
- Quality assurance
- Capacity building
- Verification

Transaction enablers

- Development finance
- Best practice
- Access to best-in-class external expertise
- Development and delivery capacity
- Cornerstone investment
- Credit enhancements e.g. performance insurance

Competences

- Business cases
- Funding stack
- Finance matchmaking and blending