

# Can green infrastructure development in cities be equitable? An eclectic review of Dundee City's electric vehicles strategy

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# Introduction

- Significant element of SDGs and targets:  
“integrated and indivisible, global in nature and universally applicable, taking into account different national realities, capacities and levels of development and respecting national policies and priorities.” (SDG 2015, section 55)

# Research Questions

- How/Why did the Dundee City local authority prioritise the installation of electric vehicle charging infrastructure?
- Having selected this intervention, how equitable is it?
  - Complementarity and benefits of the strategy from the obvious lenses of SDGs 7, 11 and 13.
  - The alignment or otherwise of the EV strategy with the other SDGs.

# Literature snippet

- Though agreed at supranational level, success depends on mechanisms of national implementation (various).
- Peculiar local issues and development needs must be suitably prioritised (various).
- Suitable indices are required to link interventions to SDG indicators (various).
- Unequal benefits distribution may arise if interventions not carefully aligned (various).

# Why an eclectic review?

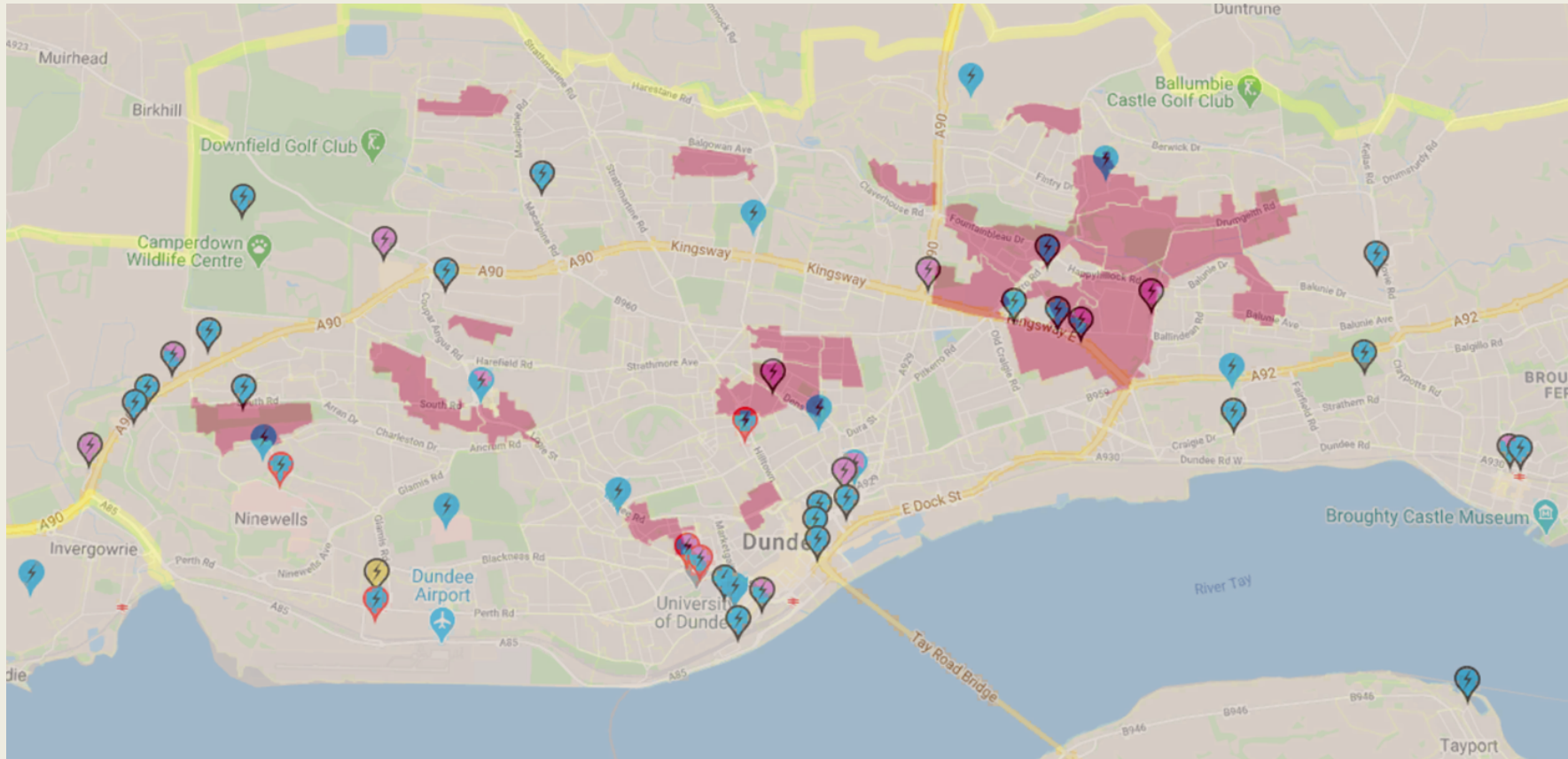
- Baseline data for several of the targets are unavailable (SDG 2015, section 57).
- There is the need to take into account different realities, capacities and levels of development while respecting national policies and priorities.
- Explorative review sequel to study for understanding mechanisms for intervention prioritisation.

# Findings & Discussion (1)

- Dundee's historical development/past industrial settings and existing infrastructure appear to support an EV agenda.
- The EV infrastructure of Dundee follows a 'destination' or hub approach, where charging points are located in clusters around car parks and work places rather than residential areas or areas of deprivation.

# Findings & Discussion (2)

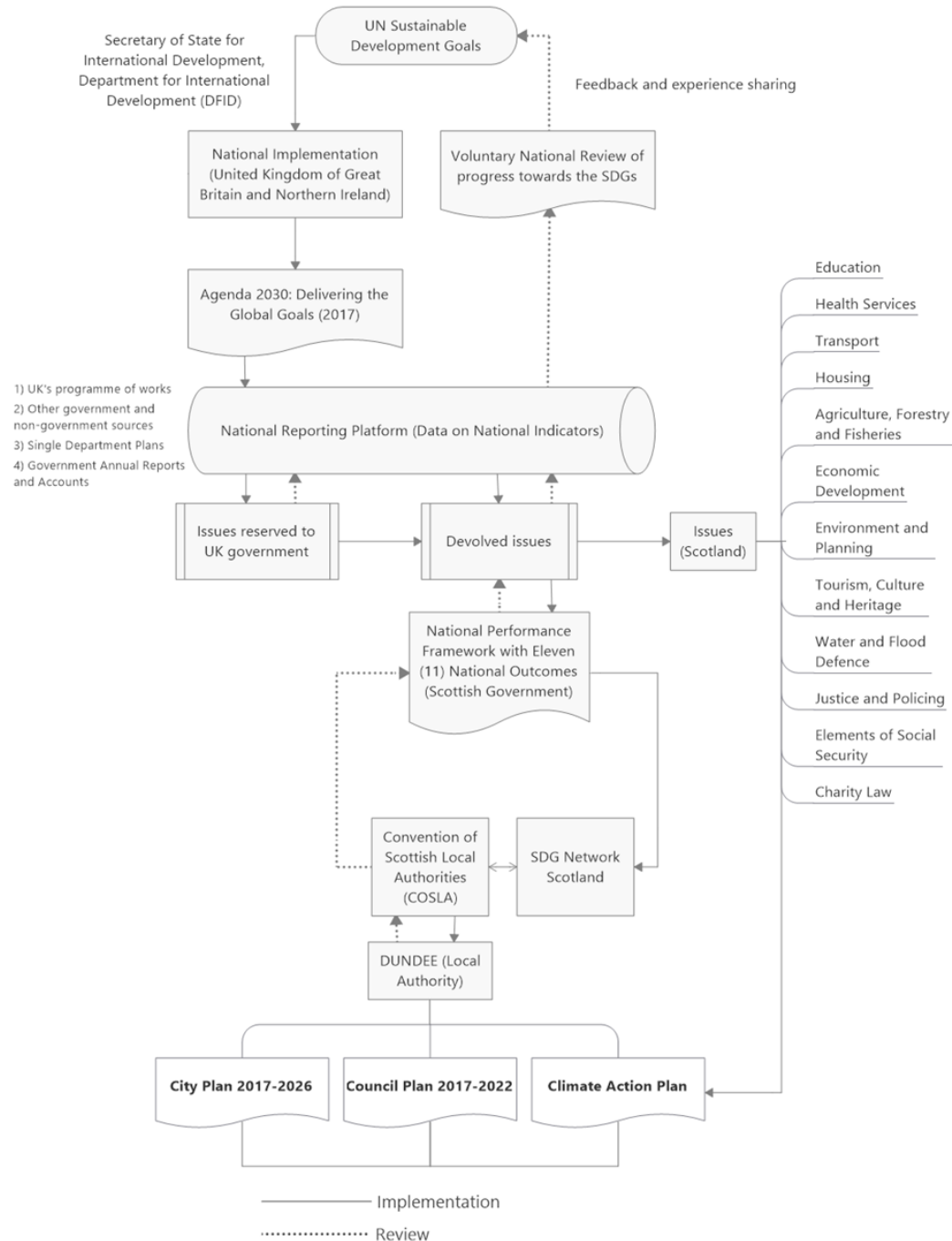
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Dundee's 5% multiple deprivation (red shaded) areas and location (icons) of EV infrastructure.

## Findings & Discussion (3)

- The policy framework is consistent with the devolution of government arrangement that allows national and local agendas.



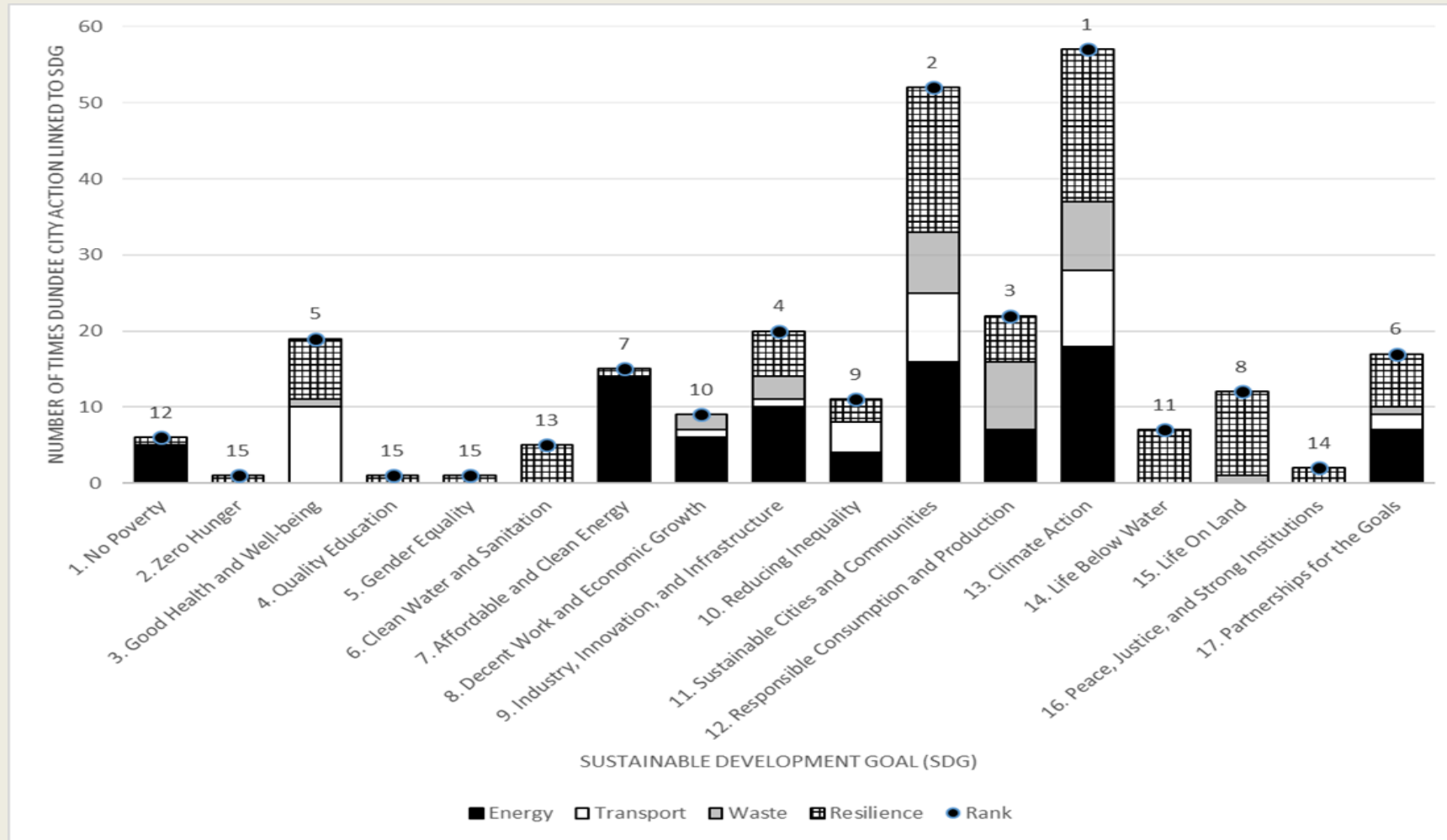


# Findings & Discussion (4)

- Dundee's Climate Action Plan (2019) identifies five action categories with actions mapped to the SDGs.
- These actions associated with the Climate Action Plan, to which the EV strategy relates, map adequately to the SDGs but in a different proportion to the Scottish National Performance Framework outcomes.

# Findings & Discussion (5)

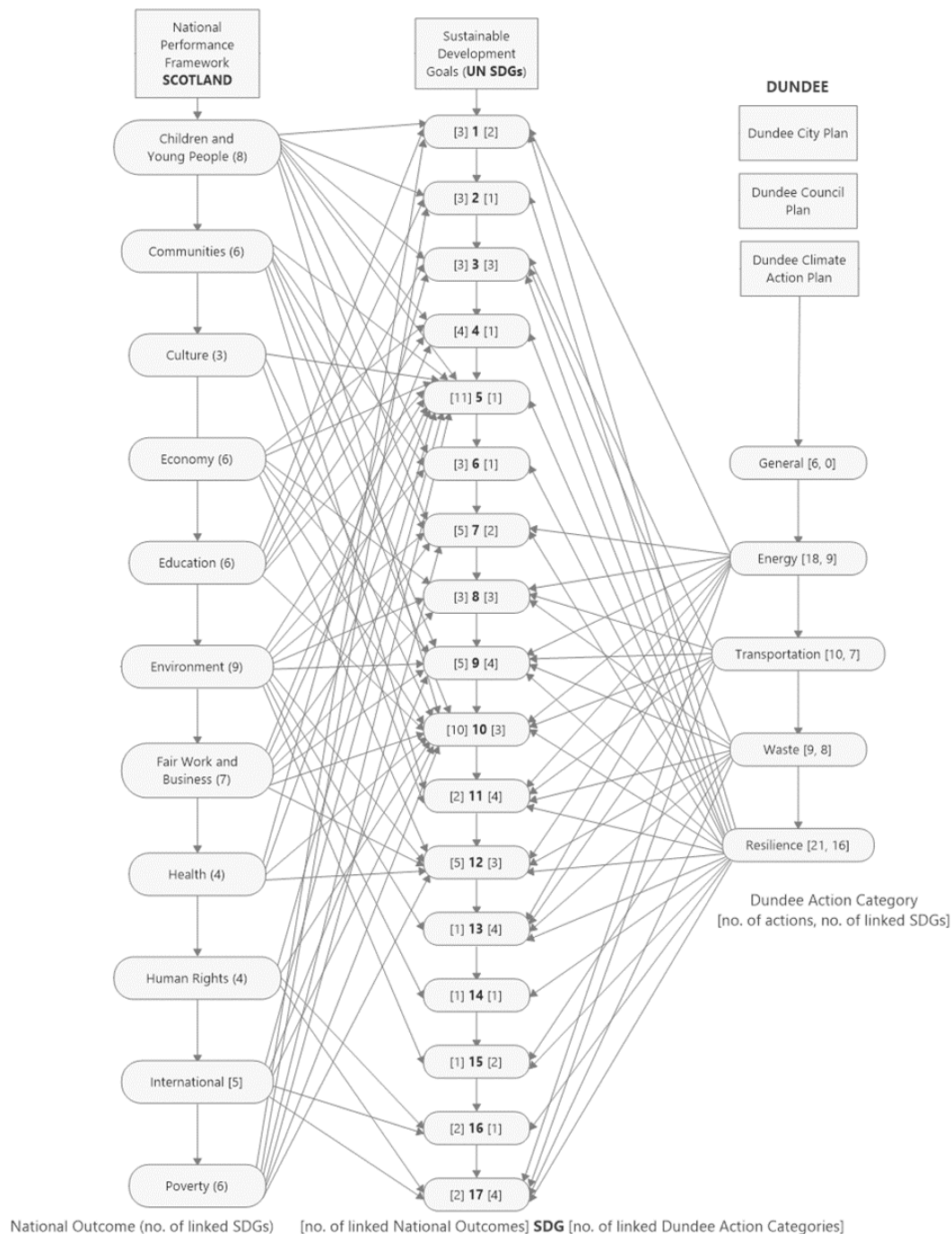
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Frequency of linkage of Dundee's energy, transport, waste and resilience actions to the SDGs in Dundee Climate Action Plan (2019)

## Findings & Discussion (6)

- Mapping of Dundee's actions (right hand side) and the Scottish National Performance Framework outcomes (left hand side) to the SDGs (middle)



# Findings & Discussion (7)

- Funding arrangements and incentivisation may not be fully supportive of SDGs 5 (Gender Equality) and 10 (Reducing Inequality).
- Making EV installation compulsory for developers may disadvantage some stakeholders.

# Conclusion

- Dundee's EV project planned and executed in alignment with many SDGs but alignment can be improved.
- Given hub/destination approach, perhaps more immediate needs of city-dwellers should be considered.
- Low-income groups may not access infrastructure and their needs must be considered in respect of SDGs 4 and 10.