

# A whole place approach to public transport

The Scottish APSE Energy Summit 2022 – Day 2, 6<sup>th</sup> October 2022

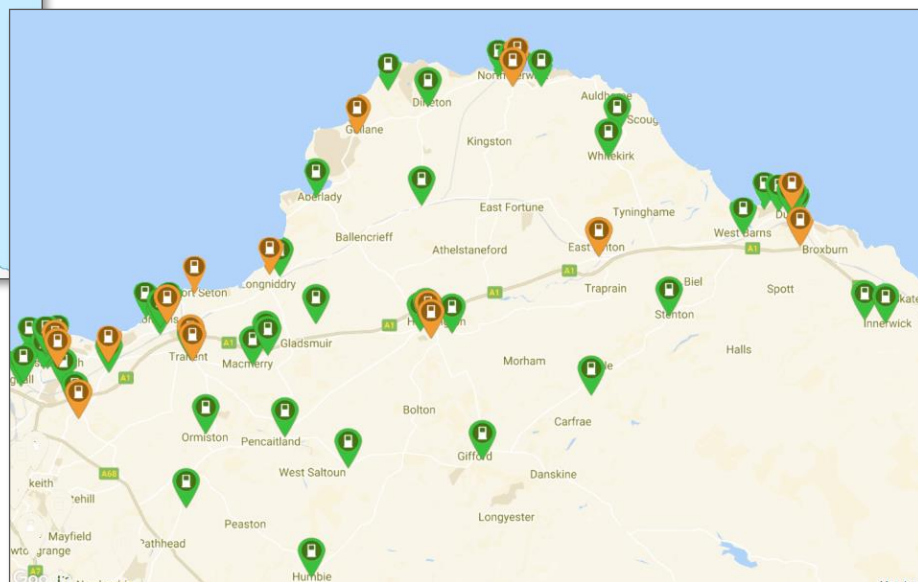
Ryan Robertson

EV Infrastructure Officer, East Lothian Council



# East Lothian Council

- “Unitary Authority”
- Population ~100,000 - rapidly growing
- Six towns 5-20k pop, no cities (yet neighbour Scotland’s capital)
- 70% of households have driveways
- 1 trunk road



# A Whole Place Approach

- Journey Hubs  
*East Lothian Council*



- Vehicle charging network  
*East Lothian Council and private charger operators*



- Bus service improvements and MaaS app  
*Bus operators*  
*SEStran (our Regional Transport Partnership)*



# Our ~~EV~~ Car Chargers



50kW+



7-22kW



7kW

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7kW

# Simple, Scalable 5 Year Plan 2018-23

1 Site per town



1 Site per 5,000 population



1 Site per town



Hotspots of "On-Street Households"



# Simple, Scalable 5 Year Plan 2018-23

1 Site per town

ALPHA HUBS



# Simple, Scalable 5 Year Plan 2018-23

1 Site per 5,000 population

BETA HUBS





# Simple, Scalable 5 Year Plan 2018-23

1 Site per town

OMEGA SITES



# Simple, Scalable 5 Year Plan 2018-23



Hotspots of “On-Street Households”



# Simple, Scalable 5 Year Plan 2018-23



ALPHA BETA



OMEGA







ON-STREET

# Where have we got to?

One of the **highest number of car charging devices** in the UK per head of population

**141** Council chargers including:

-  2 x High-power Journey (up to 150kW) chargers
-  21 x 50kW Journey chargers
-  79 x 7-22kW Destination chargers (+24 in progress)
-  39 x 7-22kW On-street chargers (+50 in progress)

100% funding secured via Transport Scotland & OZEV ORC schemes

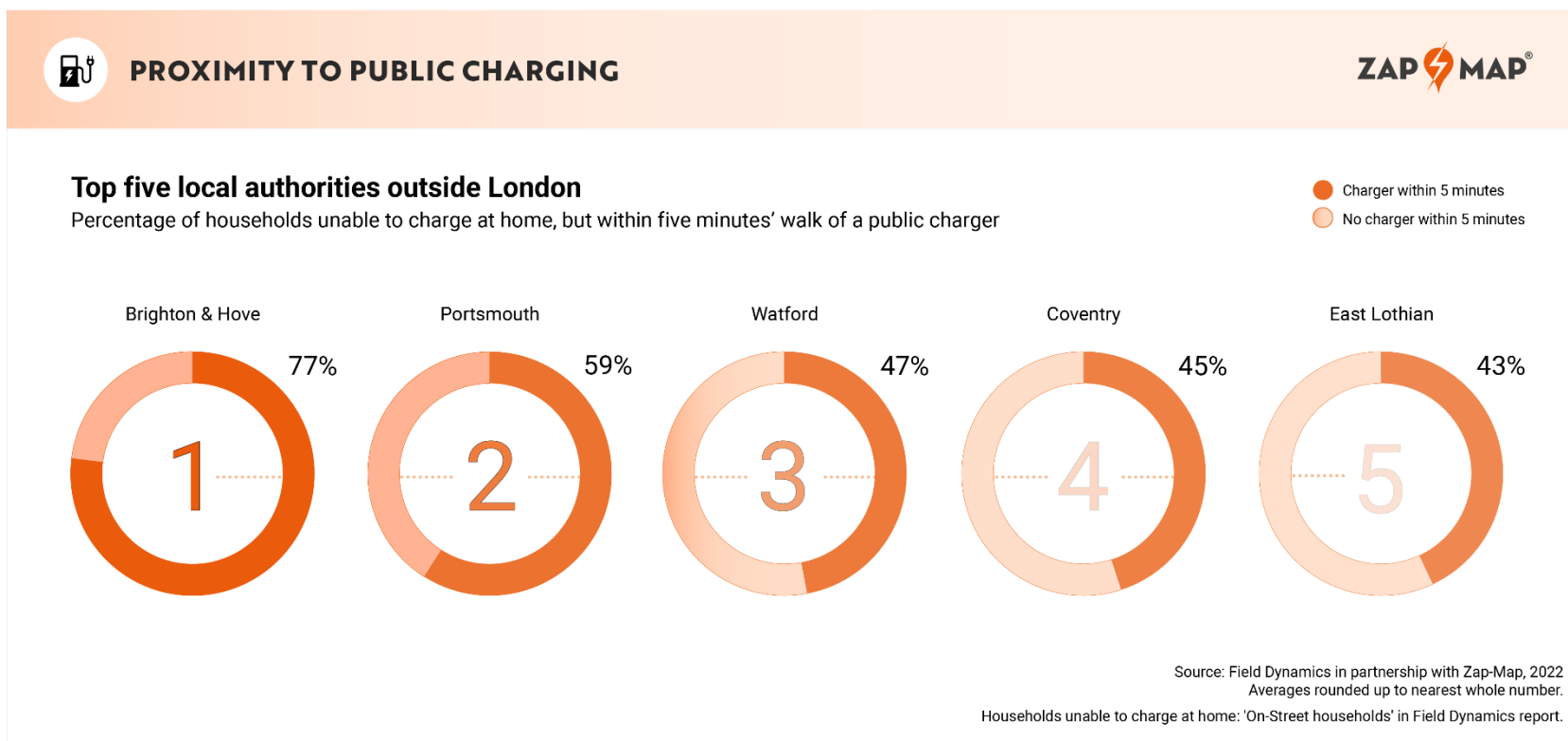
Commercial operators:

- A few destination chargers at restaurants/resorts
- Beginnings of commercial investment along A1 corridor (4 x Journey chargers)

An increasingly diverse, resilient & capacious network

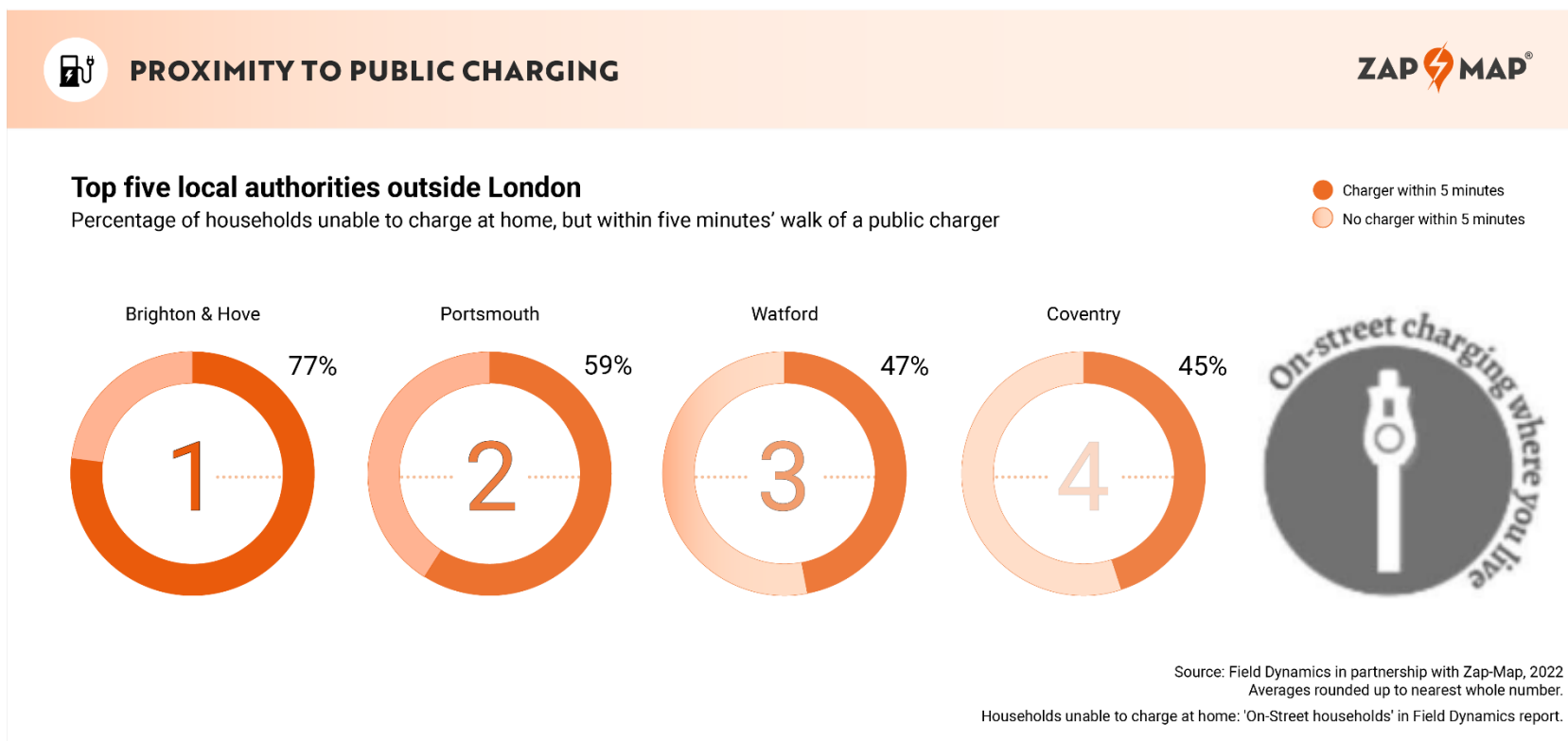
# Where have we got to?

One of the **highest number of car charging devices** in the UK per head of population,  
Located in the **right place, at the right time, with the right terms and conditions to stimulate and support adoption.**



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# Safe places to park & charge at home

1990's-2000's new build housing developments

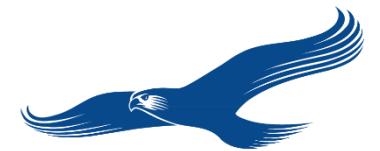


A safe place

Maybe/unsure

No safe place

“Market Housing”  
100% Driveways



**East Lothian**  
Council

# Safe places to park & charge at home

2010's+ new build housing developments

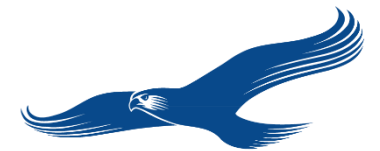


Yes

Maybe

No

Market & Affordable Housing  
Driveways & (Factored) parking  
courts?



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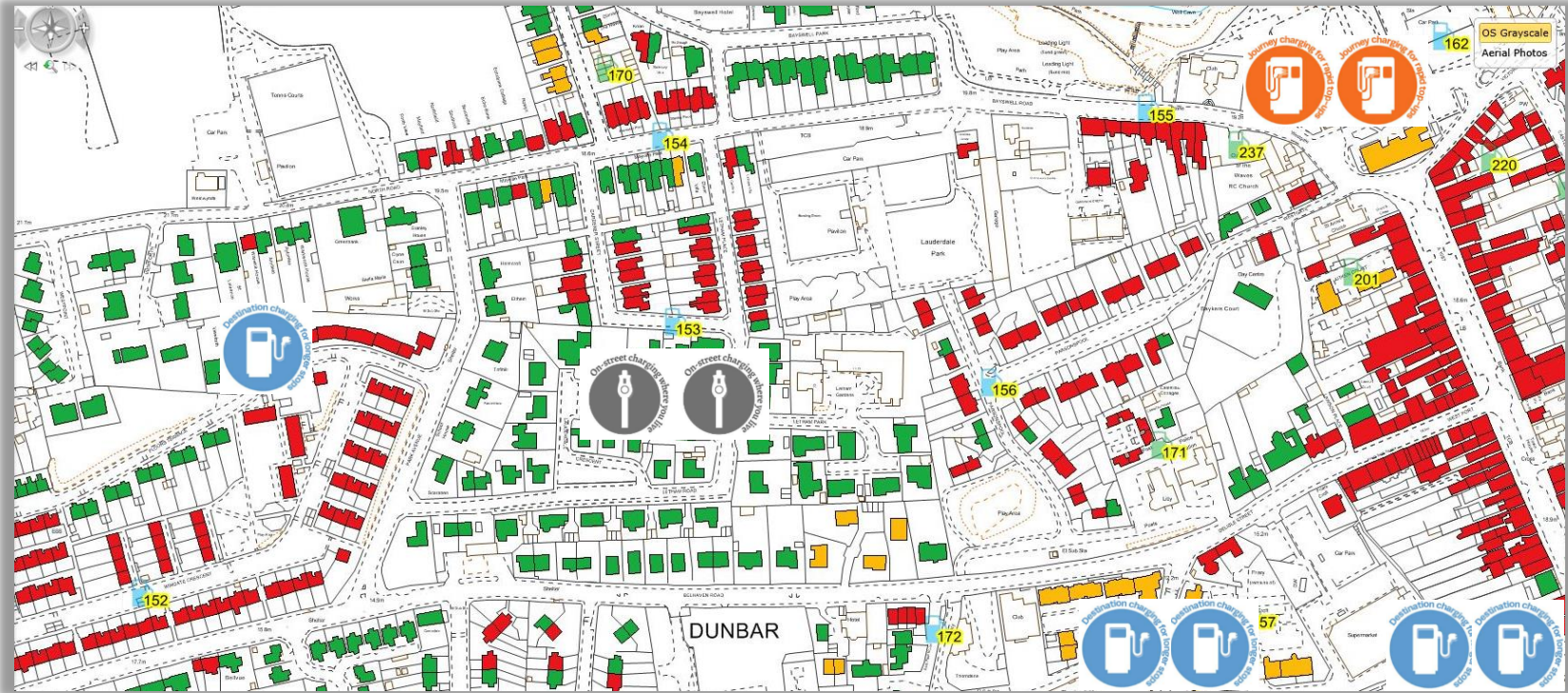
# Safe places to park & charge at home

Victorian-1990's expansion from Medieval town centres

Yes

Maybe

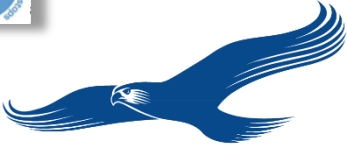
No



Increasing complexity

Decreasing time/distance to various sites

Increasing choice, incl. alt. modes.



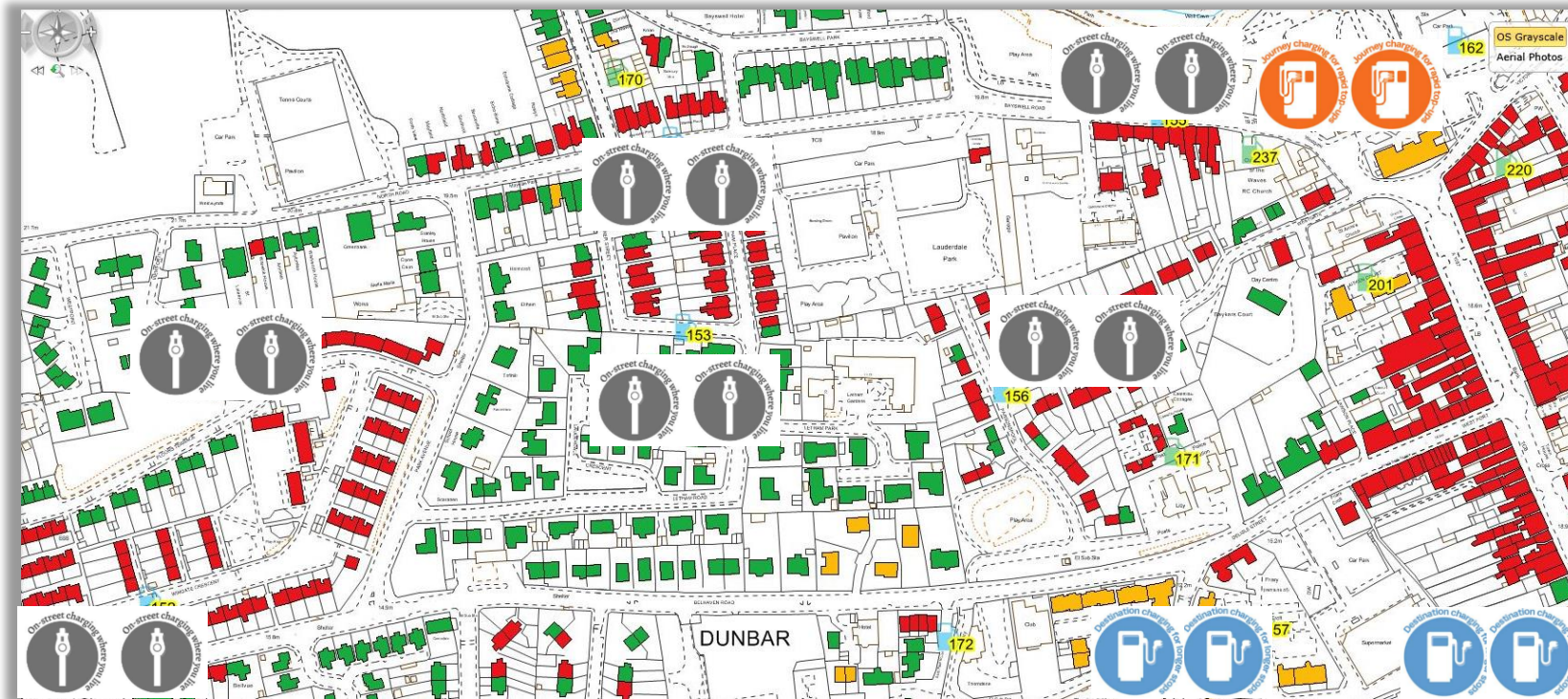
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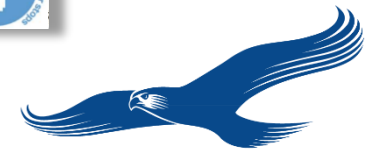
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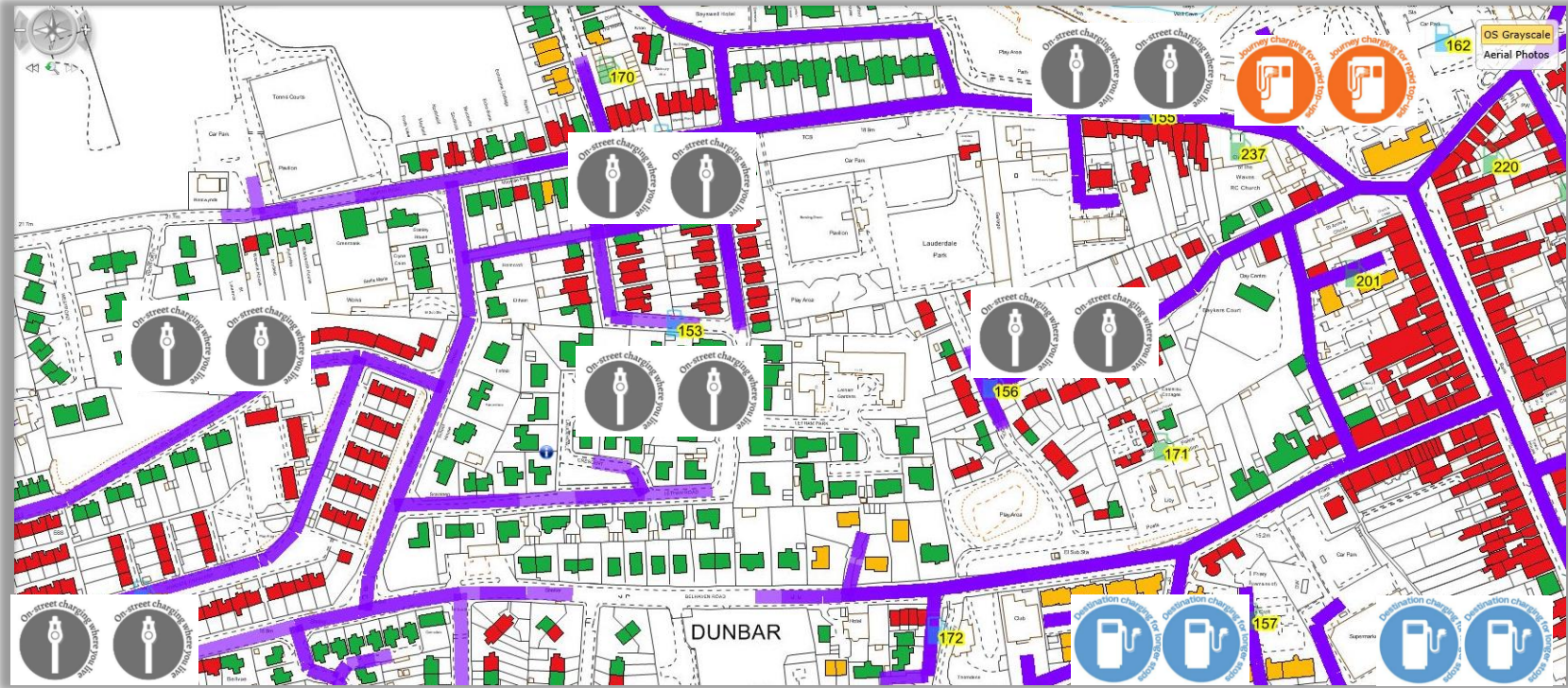
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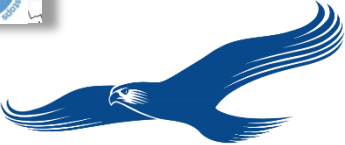
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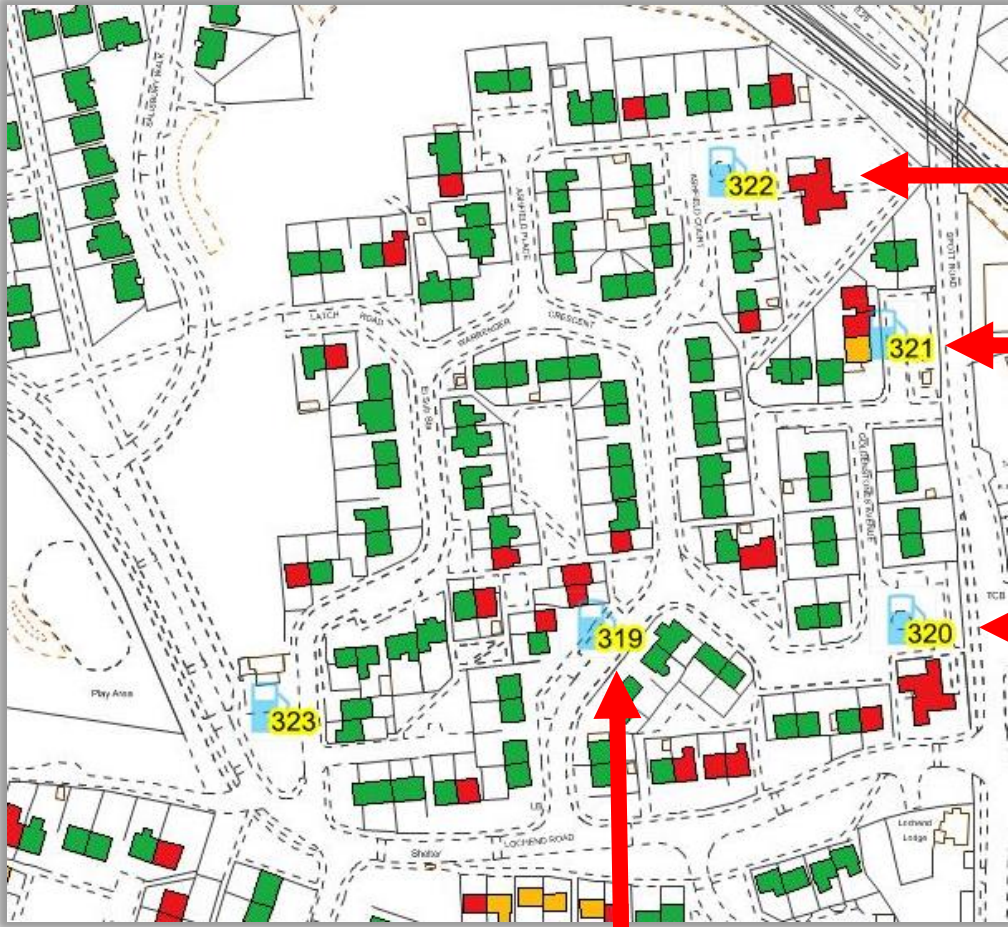
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# Safe places to park & charge at home



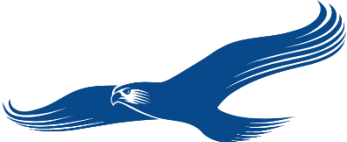
8 flats

6 flats

8 flats

Neighbouring estate!

Hotspot of 8 houses



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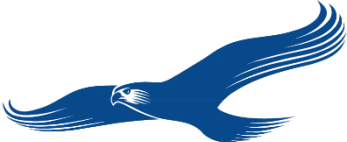


Neighbouring estate! ↓

# Safe places to park & charge at home



Neighbouring estate! ↓



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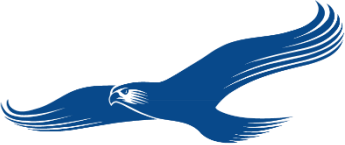
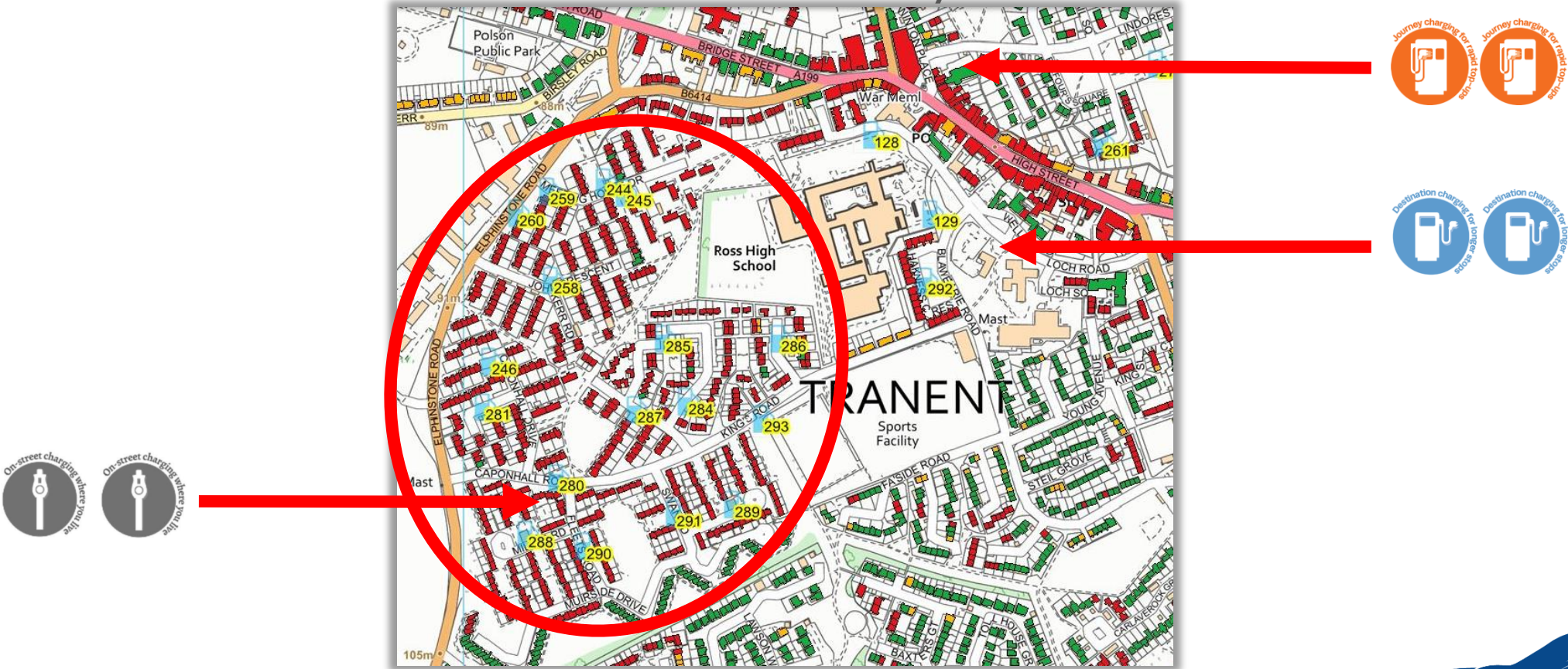






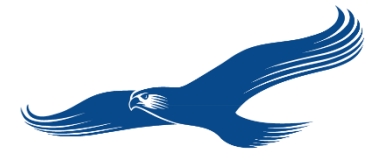
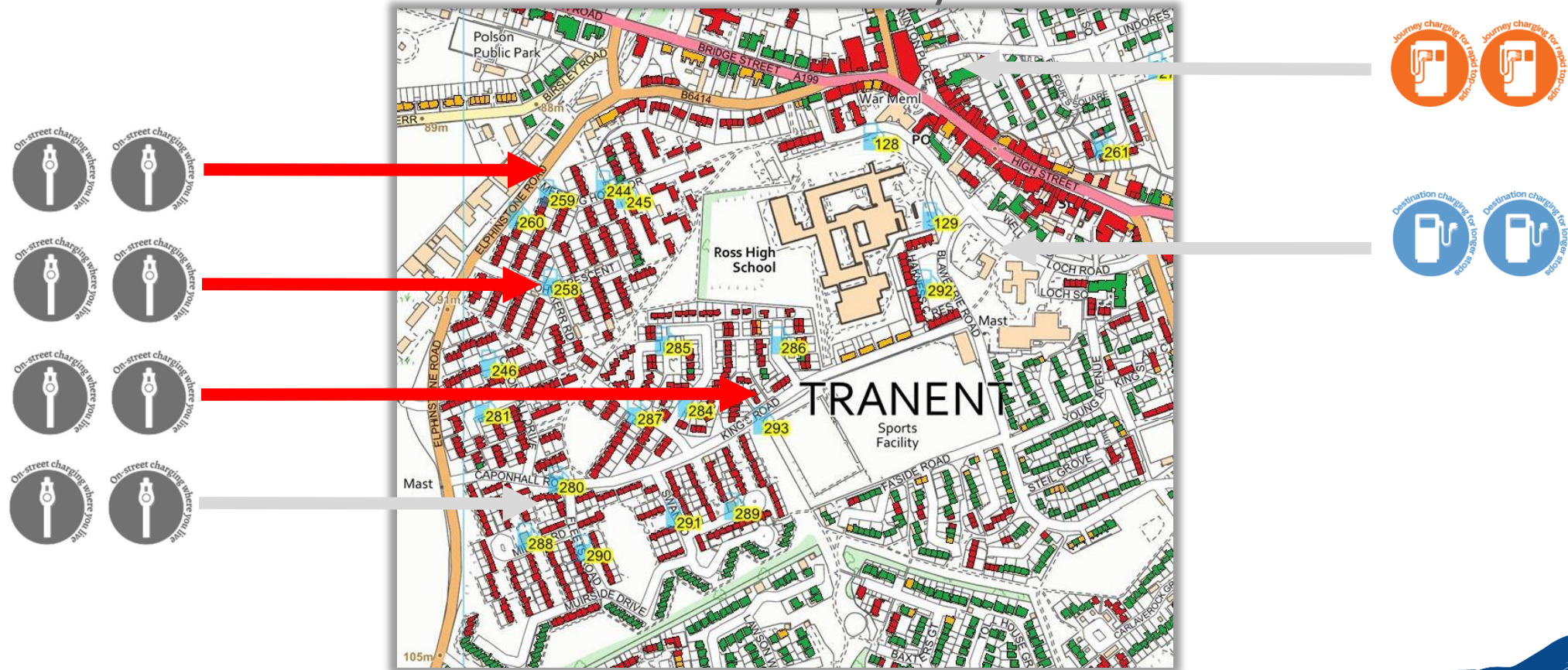
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Where is easy



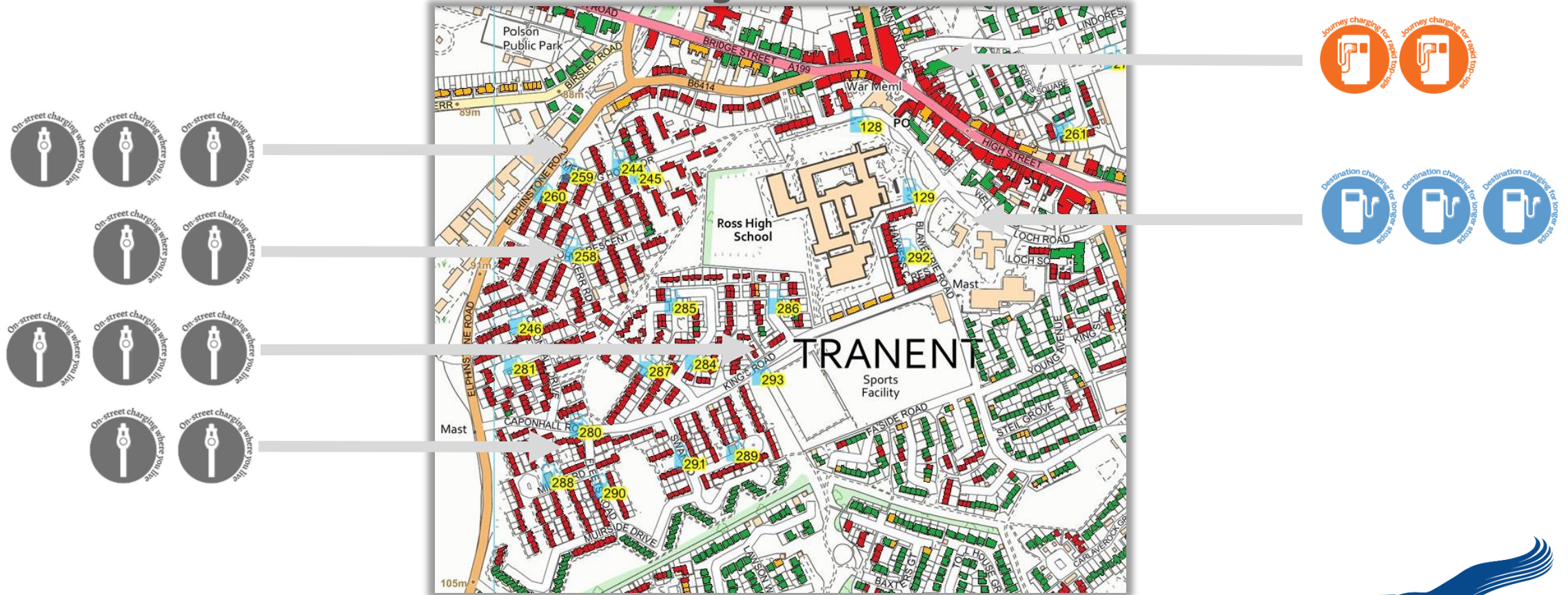
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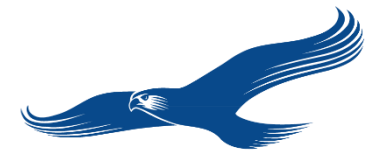
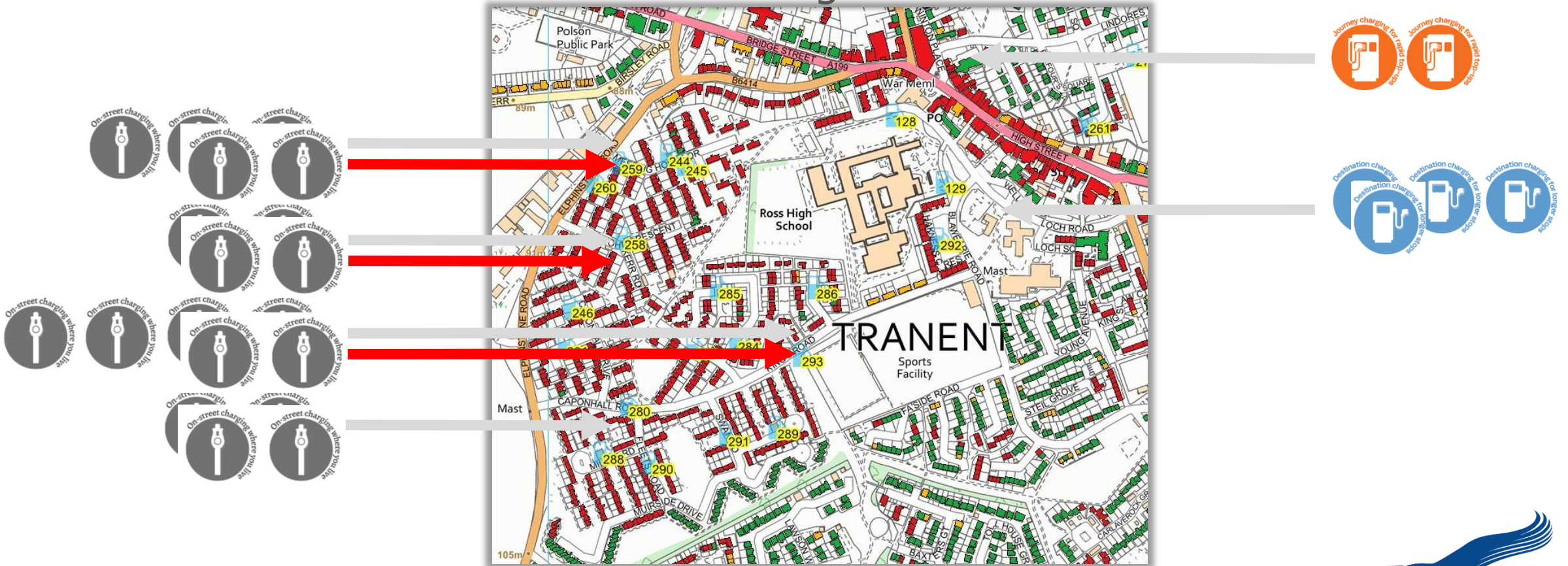
# Safe places to park & charge at home

# of Sockets grows with demand



# Safe places to park & charge at home

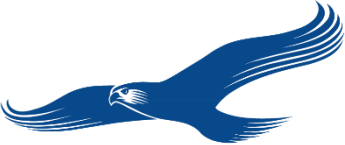
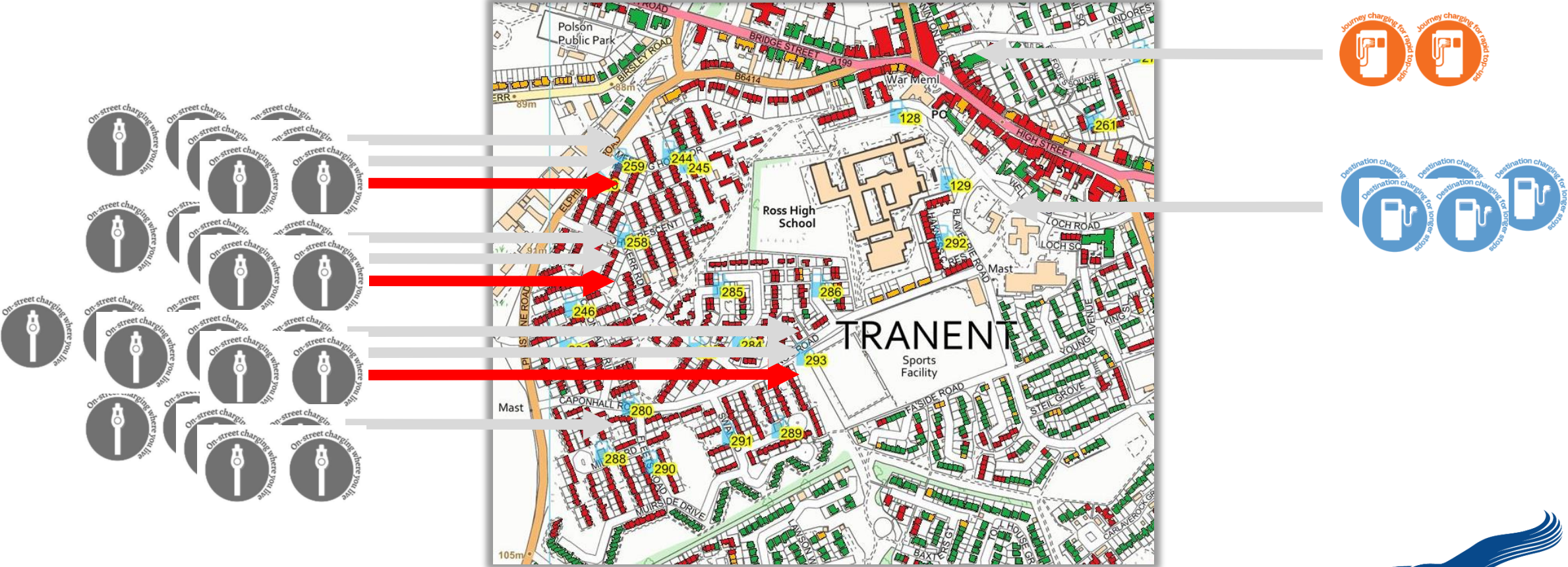
# of Sites grows too?



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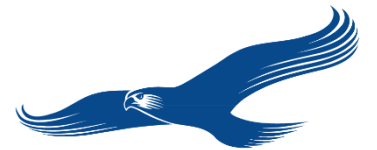
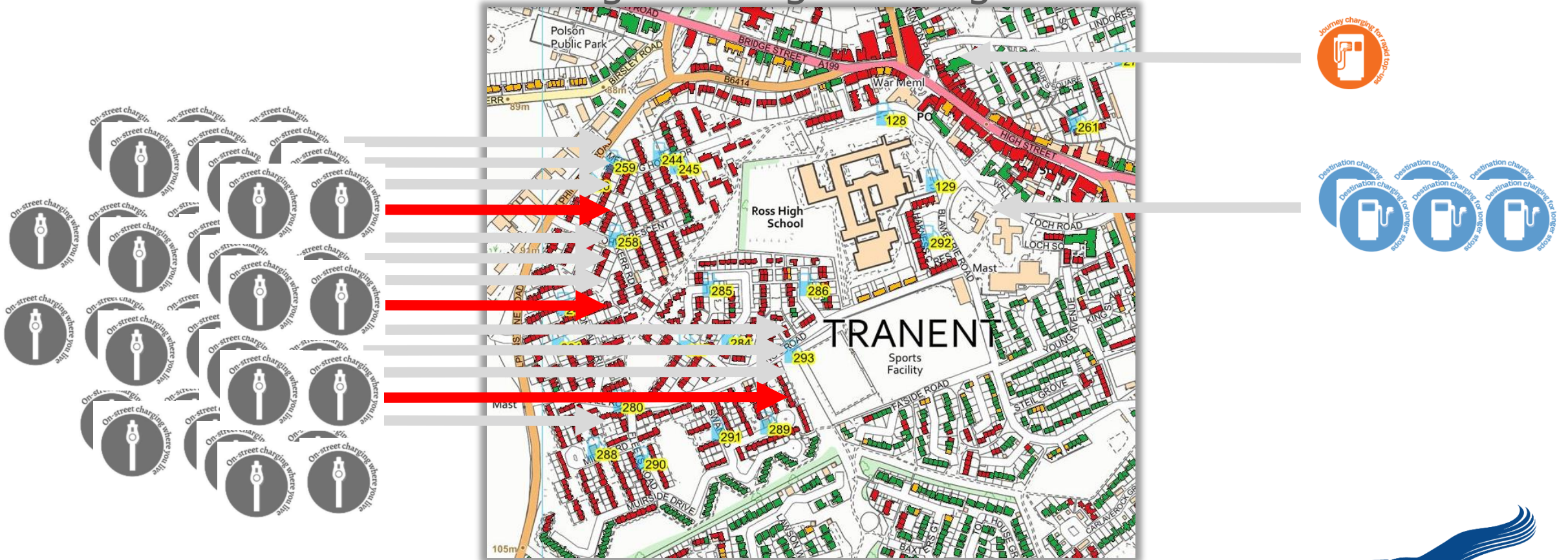
# Safe places to park & charge at home

And grows & grows?



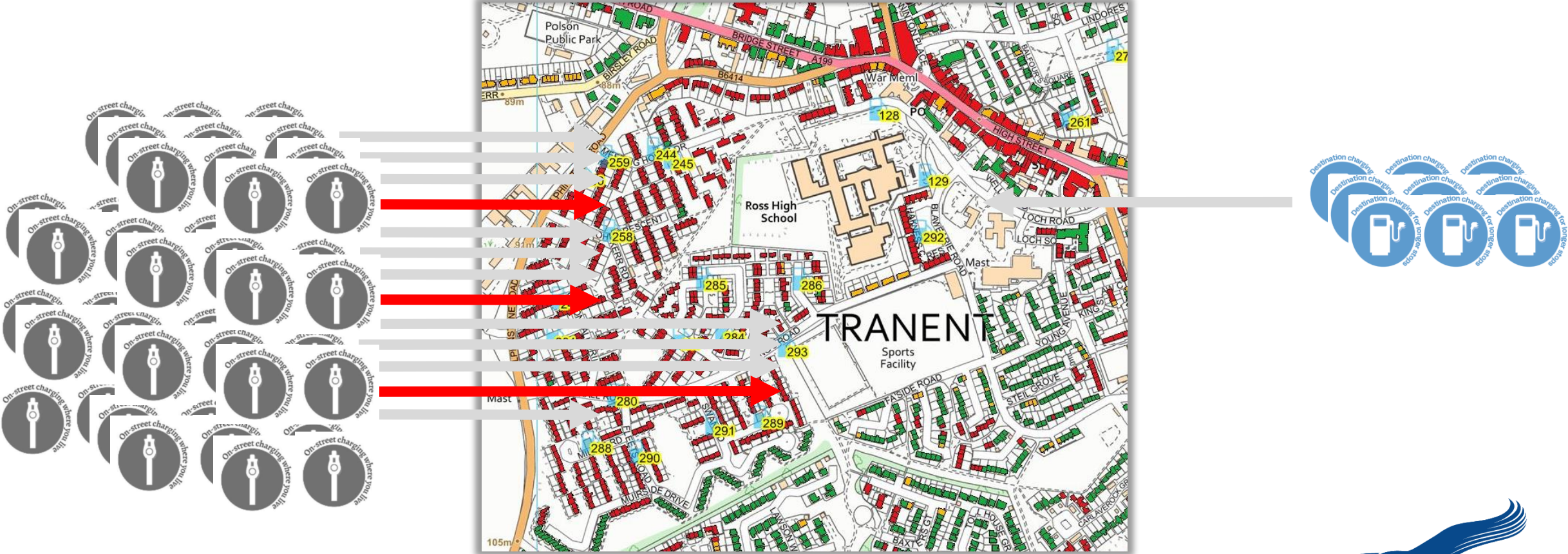
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And grows & grows & grows?



# Safe places to park & charge at home

And grows & grows & grows?



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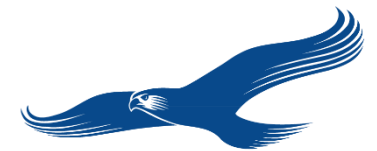
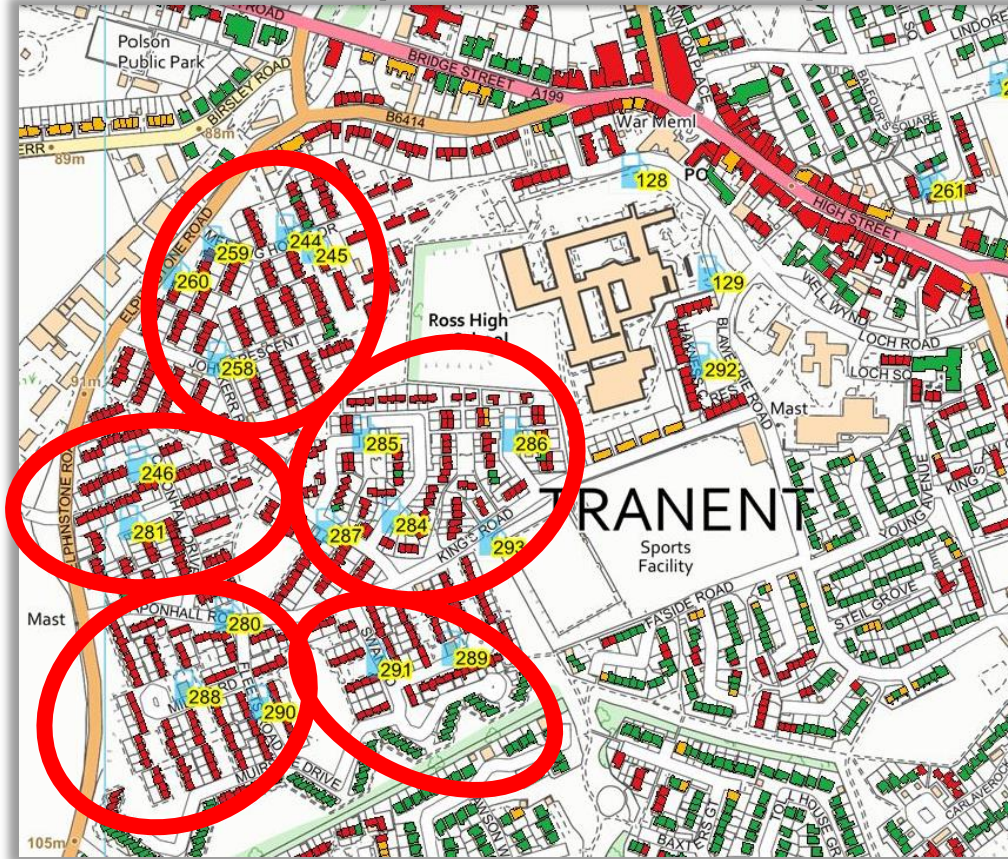
Where is easy – How many is hard

~600 Buildings  
~900 Addresses

ratio of addresses : sockets?  
6:1 = 150 sockets?

17 sites = 9 per site?  
9 x 10A = ~100A 1ph  
5 x 100A 3ph 69kVA cabinets?

350 streetlights  
150 sockets  
3:1 ratio lights/sockets






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# Safe places to park & charge at home

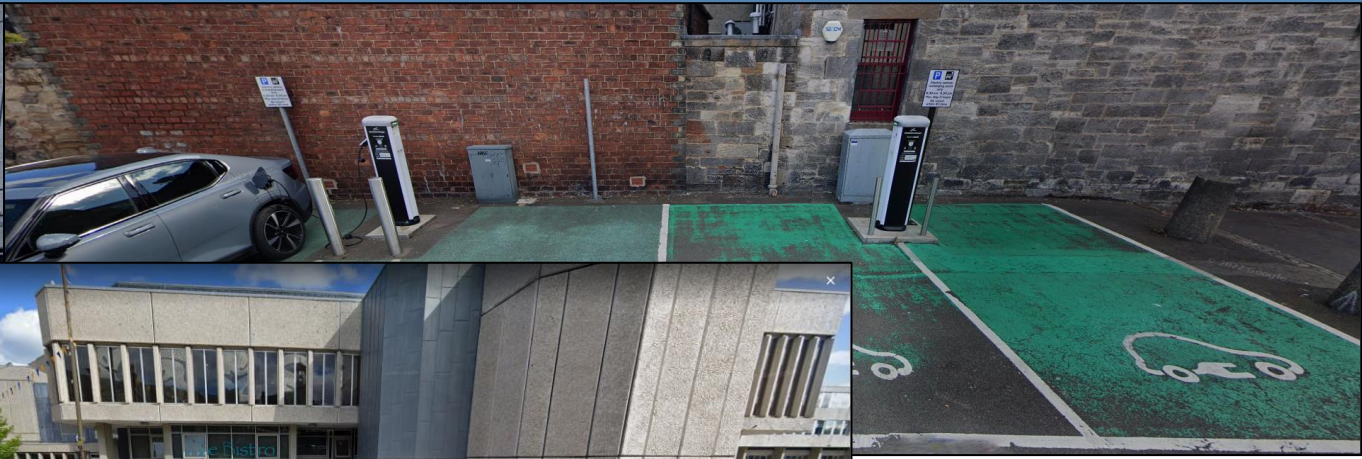
Where is easy – How many is hard

		Segment A	Segment B	Segment C	Segment D	Segment E	Segment F	Segment G
		Rural home top-up	Rural home high mileage	Urban on-street top-up	Urban on-street high mileage	Urban depot	Urban home top-up	Urban home high mileage
Location		Rural / suburban	Rural / suburban	Urban	Urban	Urban	Urban	Urban
Property		Detached / semi-detached house	Detached / semi-detached house	Terraced house / flat	Terraced house / flat	Terraced house / flat	Detached / semi-detached house	Detached / semi-detached house
Length of Commute		Short	Long	Short	Long and return to home	Long and return to depot	Short	Long

# Safe places to park & charge at home

Increasing scale, sophistication & complexity/flexibility? (Agile Streets)





# Town Centre Journey Hub



# Residential & Rural Journey Hub



## Available now

- Active travel links
- Car parking
- Bus stops
- Demand responsive transport

## Coming soon

- On-Street chargers

## Coming later?

- eBike hire
- eCarClub hire

# Corridor Journey Hub



Figure 6: Emerging Concept Plan

## Available now

- Car parking (15% Destination chargers)
- High-power Journey chargers (Up to 150kW) accessible by up to 15m long vehicles
- Rail station
- Bus stops

## Coming soon

- eBike hire
- Bookable eBuses & eHDVs charger
- Better Cycle links

## Coming later?

- Toilets & Covered Waiting area
- Climate adaptation canopy

# A whole place approach to public transport

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