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Decarbonising transport –

from council fleets to borough streets

1st December 2020

Greg Chant-Hall, Square Gain
Greg Poole, Square Gain

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forum

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Transport

- Decarbonising transport, the decarbonisation of council fleets to create momentum.
 - Challenges
 - Case study examples
 - Pragmatic actions
 - Common pitfalls
 - Costs and potential funding



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LEDNet, TEC joint statement

- Retrofit London:** Retrofit all domestic and non-domestic buildings to an average level of EPC B. Programme timescale: 2020 – 2030.
- Low-carbon development:** Secure low carbon buildings and infrastructure via borough planning. Programme timescale: 2020 – 2022.
- Low-carbon transport:** Halve road journeys made by petrol and diesel via combined measures that can restrict polluting journeys and incentivise sustainable and active travel options. Programme timescale: 2020 – 2030.
- Renewable power for London:** Secure 100% renewable energy for London's public sector now and in the future. Programme timescale: 2020 – 2030.
- Reduce consumption emissions:** Reduce consumption emissions by two thirds, focusing on food, clothing, electronics and aviation. Programme timescale: 2020 – 2030.
- Build the green economy:** Develop London's low carbon sector and green our broader economy. Programme timescale: 2020 – 2030.
- Creating a resilient and green London**

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Blueprint – relevant programme

We are asking the Government to prioritise:

- Invest in low-carbon and climate-resilient infrastructure
- Support reskilling, retraining and research for a net-zero well-adapted economy
- Upgrade our homes to ensure they are fit for the future
- Make it easy for people to walk, cycle, and work remotely**
- Accelerate tree planting, peatland restoration, green spaces and other green infrastructure



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Cleaning up London's air

- LEDNet/ ADPH London
- Making air quality a unifying priority





 <p>9000+ LONDONERS die early every year because of air pollution</p>	 <p>£3.7 BILLION the cost of air pollution to London's economy</p>
 <p>20% PRIMARY SCHOOLS are in areas that breach the legal limit for NO₂ (air pollution)</p>	 <p>2x AS LIKELY TO DIE from lung diseases if you live in deprived vs affluent areas of London</p>

Image: GLA

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Decarbonising transport– the challenges and opportunities

The importance of transport

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Transport accounts for 28 % of UK domestic carbon emissions (2018)

Road transport is the largest emitter

Cars contribute 55% of domestic transport

The challenge and the opportunity

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UK transport emissions are largely unchanged since 1990

“Learning to ride feels amazing...it felt like I was flying”

Londoner, Surinder (source: Sustrans)

EVs aren’t new

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Making eco, aspirational

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Making eco, aspirational

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In London

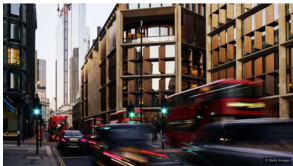
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In order to get to net zero by 2050, we would need nearly a 60% reduction in car mileage by 2035, even if all cars were low emission

Journeys in London (2018):


- 37% by car or motorcycle
- 36% by public transport and
- 2.6% by bicycle
- 25% by walking




What's causing this in London?



Residential
37%



Business
36%



Transport
26%

2000-2017
% change:

Transport

-9%

Business


-54%

Residential


-35%

Scope

Council fleets



Borough streets



Poll question

Are there too many cars on London roads today?

No


1

Yes

12

www.menti.com

67 23 05 4



Poll question

How often is a car in use or parked?

Parked at home

64.6

In use


12

Parked elsewhere

17.5

www.menti.com

67 23 05 4



Poll question

How often is a car in use or parked?

Parked at home: 80%

In use: 4%

Parked elsewhere: 16%

Challenges

Capital cost

Regulatory framework

Cyclist safety and air quality

Transport as a service – sharing economy

Attitudes across different communities

Changing mindsets and behaviour

Lease periods

Decarbonisation of vehicles

Greening public transport

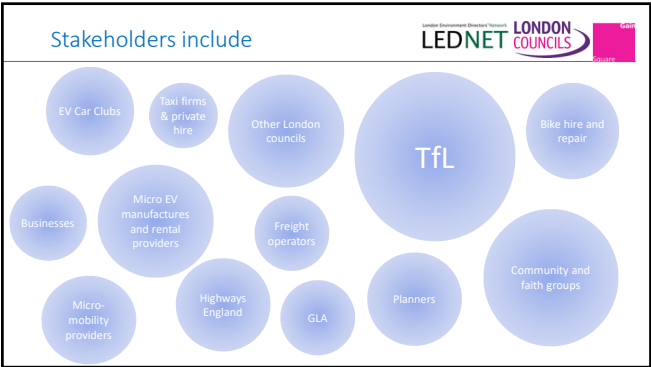
EVs and bikes

Green and Blue infrastructure

Energy system readiness

Refuelling & recharging infrastructure

Greening fleets



Cycling & Walking Investment Strategy

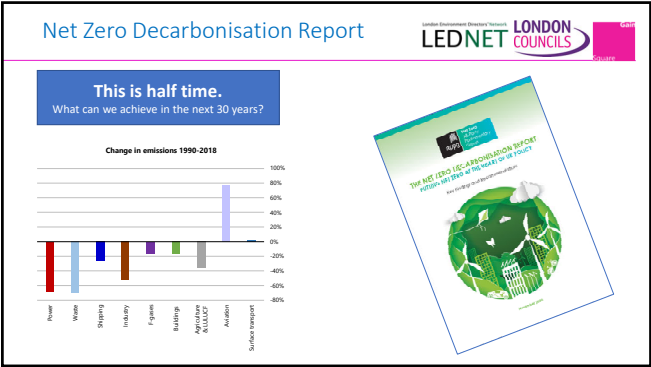
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HM Government

Encouraging Cycling and Walking

Funding will improve cycling and walking infrastructure to encourage healthier and greener travel habits



Green industrial revolution?

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HM Government

The Ten Point Plan for a Green Industrial Revolution

Building back better: supporting green jobs and accelerating net zero by 2050

Decarbonising our public transport could deliver...

Up to 3,000 jobs by 2025	Government investment of £5bn in buses, cycling and walking this parliament	Savings of around 2MtCO ₂ e from green buses, cycling and walking between 2023 and 2032
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Accelerating the shift to zero emission vehicles could deliver...

Support for around 40,000 new jobs in 2030	Around £3bn of private investment by 2030	Savings of around 5MtCO ₂ e to 2032 and 300MtCO ₂ e to 2050
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Mayor's Transport Strategy

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- Uses the [Healthy Streets Approach](#). This makes health and personal experience the priority as we plan our city.
 - Healthy Streets and healthy people
 - A good public transport experience
 - New homes and jobs
- Supported by a series of action plans:
 - Walking Action Plan
 - Vision Zero Action Plan
 - Cycling Action Plan
 - Freight & Servicing Action Plan
- COVID 19

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Mayor's Transport Strategy

MAYOR OF LONDON

Go Ultra Low City Scheme

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London aims to be the Ultra-Low Emission Vehicles (ULEV) capital of Europe

RESIDENTIAL CHARGING

CAR CLUBS

COMMERCIAL FLEETS

NEIGHBOURHOODS OF THE FUTURE

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Pragmatic actions and common pitfalls

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The opportunity around green travel

COVID-19 since lockdown:

↓ ↓ in public transport use

↓ in car use, and

↑ in active travel in London


25%

35%

10%

15%

40%



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Positive reinforcement

From Vicious Circle

Clean air and less traffic

More cyclists

To Virtuous Cycle!

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Behavioural - nudges

1 Pre-contemplation

Does not intend to take action within the next 6 months

Education, gamification, increase the importance of cognitive dissonance

2 Contemplation

Intends to start the behaviour within the next 6 months

+ Increase users' awareness of their current behavioural patterns

3 Preparation

Ready to take action within the next 30 days

+ Extrinsic rewards (linked to gamification)
+ Persistent visual feedback of their current behavioural patterns

4 Action

Have recently begun behaviour change and intend to continue

+ Tracking use and (optional) gamification
+ Elements of social influence

5 Maintenance

Sustained efforts for more than 6 months and intend to maintain it going forward

+ Ongoing feedback to increase awareness of achieved results
+ Overcome problems arising

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Behavioural - nudges

1 Pre-contemplation

2 Contemplation

3 Preparation

4 Action

5 Maintenance

Single-occupancy to multi-occupancy

Existing private vehicle

Low Emission Vehicles

Public transport

EV and hydrogen fleet vehicles, cars, motorbikes, bikes, scooters, cargo-bikes

Cycling

EV and hydrogen busses

Walking

Inter-connectivity

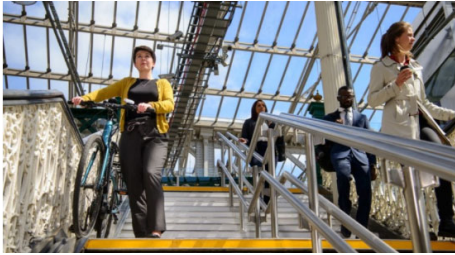
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Engagement - example



sustrans

Low Traffic Neighbourhoods

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Low traffic neighbourhoods

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1

Communication & Education

Navigation

2

Fairness

Least trade-offs

3

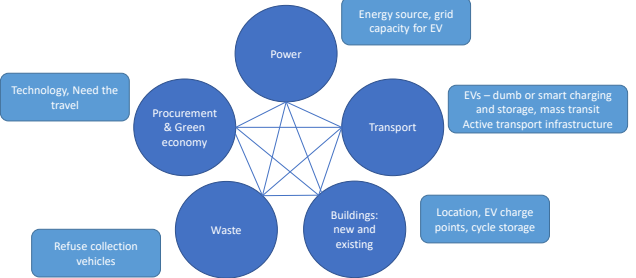
Culture

Shift norms through influencers & partnerships

Interlinked targets

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Smart EV charging

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Standard “dumb” chargers

charge the vehicle at a fixed rate according to local power availability

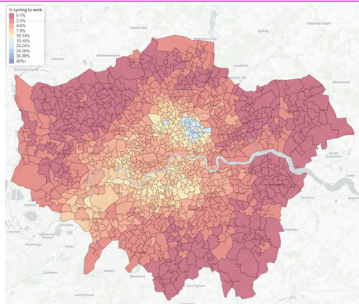
Smart chargers

- charge according to network needs (inc response to remote operators & price signals)
- bidirectional (vehicle to-grid chargers)
- respond dynamically to local power prices or network availability.

Propensity to Cycle Tool

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Electric Vehicles

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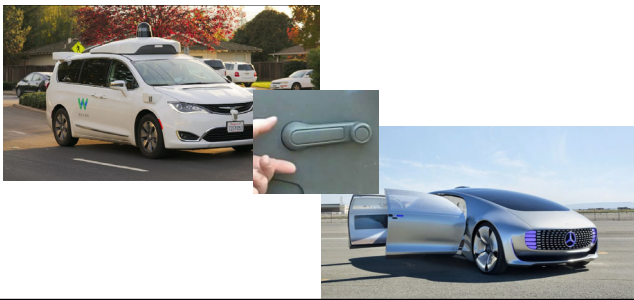
- Expected purchase price parity by mid 2020s
- Charging infrastructure will be critical to building consumer confidence
- Electricity source must be clean
- Charging requirements will increase grid demands, esp. super-chargers
- Vehicle-to-grid technology will create opportunities e.g. higher renewable energy penetration and grid stability
- Demand response tools for grid operator and consumer incentives will be key.

Autonomous vehicles

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Poll Question

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• How should we reduce the emissions of the transport sector?

1st	Improve the cycling infrastructure
2nd	Further investment in public transport
3rd	Increase taxation on petrol and diesel
4th	Subsidise electric vehicles
5th	Tailpipe carbon capture and storage

Go to www.menti.com

Enter the code

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Or use QR code

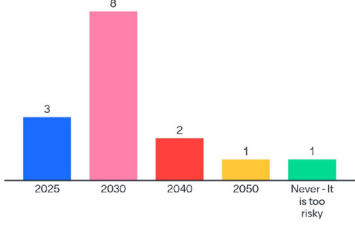
Poll Question

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• When will we start to see self driving vehicles on London's Street?




Year	Count
2025	3
2030	8
2040	2
2050	1
Never - It is too risky	1

Go to www.menti.com

Enter the code

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Or use QR code

Case study examples

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Streets for Londoners

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Liveable neighbourhoods

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"Cars, cars, cars, why not pedestrians?"
Residents, commenting on Shortlands Village Parade of shops

"Lights here would enable year 6 to cross independently to use shops and get to school."
Teachers, commenting on Station Road Crossing

Bromley

THE LONDON BOROUGH

Liveable streets

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Green infrastructure

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Example – Waltham Forest

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Example – Kingston upon Thames

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Mini Holland – Enfield Council

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Car clubs

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EV 100

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EV 100 °C

Major fleets go green as big business grasps electric vehicle opportunity



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Birmingham – hydrogen buses

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TfL rental e-scooters trial


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Costs and potential funding

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Green New Deal

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Green Industrial Revolution

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- £5bn in buses, cycling and walking between 2023-2032
- £3bn by 2026 (public and private)

Funding

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- Cycling and Walking Investment Strategy
- OLEV Volts Funding
- The Green Finance Institute




Net Zero Infrastructure Bank

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Roundtable discussion

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Square

Greg Chant-Hall

Square Gain

www.squaregain.co

gregchanthall@squaregain.co

Reminder of next workshops

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Dates and times:

• Existing buildings	20 October, 10:00 – 11:00
• New buildings	17 November, 10:00 – 11:00
• Transport	1 December, 10:00 – 11:00
• Power	15 December, 10:00 – 11:00
• Procurement, consumption and waste	12 January, 10:00 – 11:00
• Green economy	2 February, 10:00 – 11:00
• Measurement and reporting	9 March, 10:00 – 11:00

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Feedback and immediate actions

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• Feedback forms via Survey Monkey – required for your CPD certificate

<https://www.surveymonkey.co.uk/r/2XK6NRD>

• Register for the next workshops

TEMA

CPD

• Visit the LEDNet Climate forum

forum

www.greenRecovery.co.uk

Blog

FAQs

Session recordings

Slide handouts

Climate e-learning

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