

Low Carbon Vehicles North East England

**Dr Colin Herron, Managing Director,
Zero Carbon Futures**

North East England
Leading the way for
Low Carbon Transport



**Zero Carbon
Futures**

Innovative Transport North East England

**North East England is at the
forefront of low carbon vehicle
development and has an
international reputation in that field.**



**Zero Carbon
Futures**

Innovative Transport North East England

The region is making rapid progress in bringing together the diverse elements required for the transformation of the automotive industry.



**Zero Carbon
Futures**

Innovative Transport North East England

Zero Carbon Futures

Zero Carbon Futures has been created to do the following:

- **Enhance the portfolio of Gateshead College**
- **Generate economic wealth for the low carbon economy**



**Zero Carbon
Futures**

Innovative Transport North East England

The regional image for the development of low carbon vehicles

Potential partners:

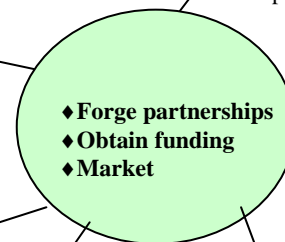
Funding bodies: TSB, DECC,
Partners: Nissan, Smiths, plus others
Public bodies: TRL, Councils CBI, NECC and
OLEV
Universities: All 5 in the region.



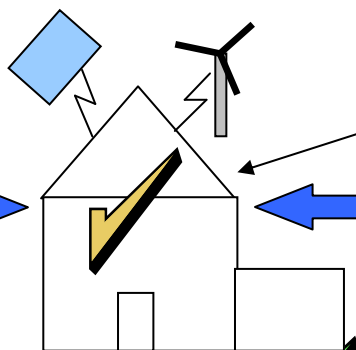
Infrastructure installation



Operational back office



- ♦ Staff training for EV
- ♦ Dealer training
- ♦ First responder training
- ♦ Apprentices

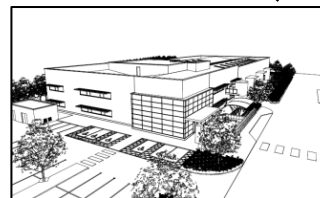


• Vehicle to house

- ♦ IET partnership
- ♦ Development centre
- ♦ Energy Storage



Construction academy



Academy for sustainable
manufacturing



Vehicle development centre and business park

• In place or activity started

• Planned

North East England
Leading the way for
Low Carbon Transport

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The North East Plugged in Places Project Providing EV charging infrastructure

Josey Wardle

NE Plugged in Places Project Manager



What is Plugged In Places (PIP) ?

- ≡ Programme Nationally funded by the Office for Low Emission Vehicles (OLEV)
- ≡ NE PIP project = £7.8m over 3 years to March 2013, funded by ONE, OLEV, public & private partners in NE
- ≡ Over 60 partners – all 12 Local Authorities, private businesses, transport providers, academia, NHS, retailers, business park operators, fleet operators, home builders etc
- ≡ 1 of 3 projects in PIP Phase 1
- ≡ 2nd Largest PIP, after London
- ≡ **Aim = Create a comprehensive connected network** of electric charging infrastructure, across the NE region, within 3 years from April 2010



Objectives

≡ INFRASTRUCTURE

- ≡ Install 1000 charging points
 - ≡ Public access areas, Workplaces & in Homes
 - ≡ Smart, Standard 3/7 kW chargers & 50 kW DC Quick Chargers
 - ≡ EV User Access Scheme - Single RFID card access, Membership, Live website map
 - ≡ Multi-manufacturer charge point estate
 - ≡ Direct CP communications with back office

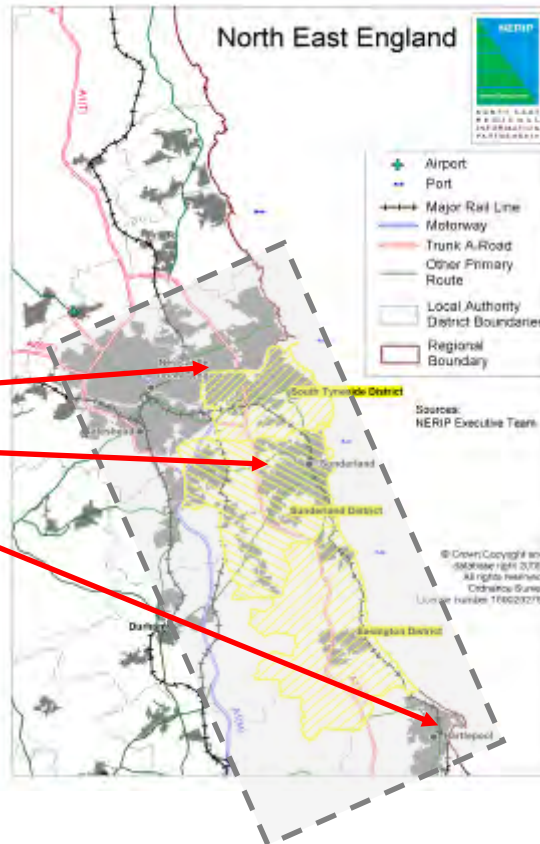
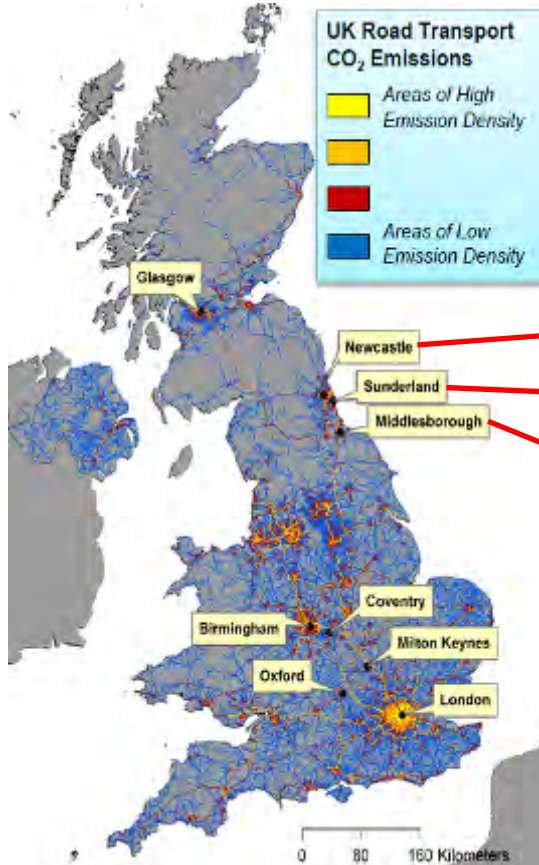
≡ LEARNING – A DEVELOPMENT PROJECT

- ≡ Working with OLEV and other PiP projects to:
 - ≡ Advance common standards
 - ≡ Evaluate different technologies
 - ≡ Harmonise local incentives
 - ≡ Understand user behaviours and the impact upon infrastructure
 - ≡ Induction charging and smart grid trials

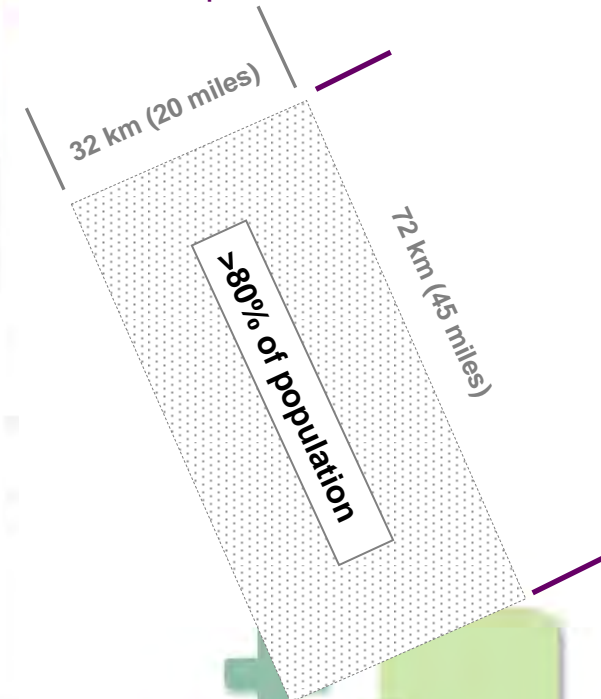
Why in North East England ?

Population spread

Joined Up Cities



NE Population = 2.5 million



Ideal for EV

NE PIP Model

- ≡ Partner Contributions – new partner offer to make it even more attractive to be involved
- ≡ Host Charge Point Ownership
- ≡ Free parking & electricity until March 2013
- ≡ Majority – Standard 3/7 kW charge points
- ≡ Few – 50 kW DC Quick Chargers – first aid points, key spine road locations
- ≡ Domestic units for EV Customers' Homes
- ≡ Links to NE projects :
 - ≡ TSB LCV Demonstrator programme – Switch-EV project
 - ≡ LCNF – Customer Led Network Revolution project

Creating a comprehensive connected charging network across the NE region

**CHARGE
YOUR CAR**
PARK + PLUG + RECHARGE

- ≡ **Operational NE Charging Points – Jan 2012**
 - ≡ **Standard chargers (3/7 kW) 257 Installed**
 - ≡ **Quick Chargers (50 kW DC&22 kW AC) 8 Installed**
 - ≡ First in the UK to install publicly accessible quick chargers
 - ≡ At key locations to reduce range anxiety – along main spine routes around the North East
 - ≡ Four more locations already identified in the South of the region
 - ≡ **Domestic Chargers 77 Installed**
 - ≡ **Back Office + EV User membership “Charge Your Car”**
 - ≡ 65 Users & Useful Feedback starting to come in
 - ≡ Total energy supplied = 17,640 kW
 - ≡ **Still the best performing PIP**



EV Membership scheme – Charge Your Car Operating from Oct 2010

[+ Member Sign Up](#)
[+ Fleet Owner Sign Up](#)

Contact Us

[Home](#)
[Search a Charge Point](#)
[All You need to Know](#)
[Buying an Electric Vehicle](#)
[Recharging The Facts](#)
[Becoming a Member](#)
[Useful Links](#)
[FAQS](#)

+ Charge your Car is North East England's project to provide a comprehensive Electric Vehicle charging infrastructure across the region.

Between now and 2013, **over 1,300 charging points** will be put in place at key locations on streets, in car parks, at residential and commercial locations and at retail and leisure facilities across the North East.

Electric vehicle users can register to use any of these points for free by becoming a Charge your Car member. Becoming a member is easy – simply complete the **online registration form** and you'll be sent all the details you need to access the charging posts. Membership is subject to a **low cost fee of £10 per month** or £100 for an annual subscription.

The membership scheme is set up to trial the project with new electric vehicle users. Until March 2013 all electricity used to **charge your car will be free** and you'll be eligible for **free parking whilst you recharge**.

More charging points are being introduced all the time and their locations will be added here as the project progresses so keep checking back for more information.

The Charge your Car project cements North East England's position at the forefront of low carbon vehicle development, as the region continues to provide the UK with its blueprint for charging

Username

Password

Login

Search for a Charge Point

EV: All You Need to Know

Buying an Electric Vehicle

Recharging The Facts



Hello alexandra, Welcome Back.

Your account allows you to subscribe for a Charge Your Car access card, so you can plug in to a CYC Charge Point and recharge your vehicle. Once you have subscribed, there are no further costs for electricity. The first step is visit the **My Vehicles** tab.



Logout



My Usage History



Recent Locations:

Metrocentre Green

2011-06-07 12:18:44
Metrocentre Green Car P

Collingwood St jun with St Nicholas St

2011-05-26 16:02:38
Collingwood St junction w
Nicholas Street

Bigg Market

2011-05-26 08:29:41
Bigg Market

Grey Street junction with Mosely Street

2011-05-25 10:40:55
Grey Street junction with Mosely
Street



Charging Time:

2 Hrs 35 Mins



Power Used:

2.731 kWh



My Recent CO2 Reduction:

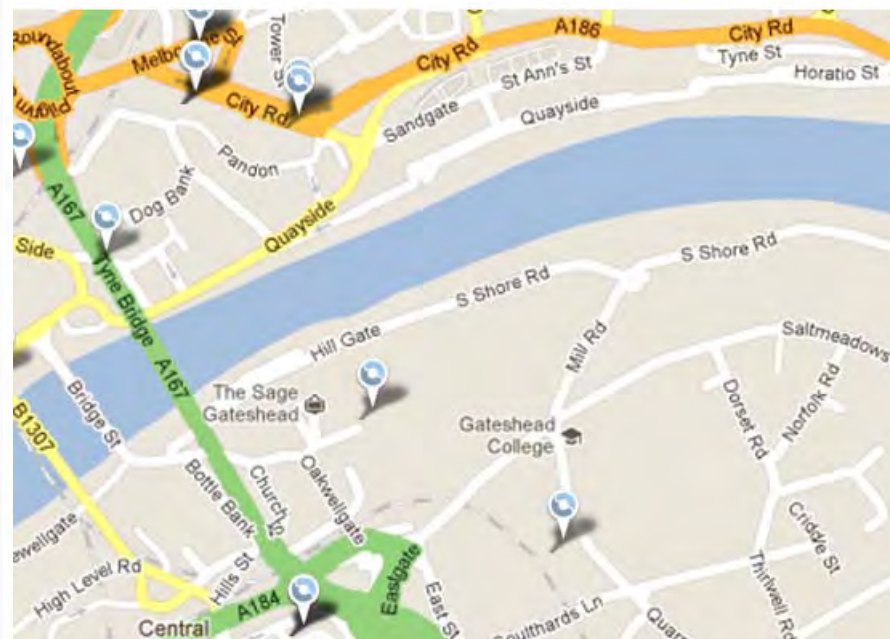
1.81 kgs

My CO2 Reduction Total:

2.38 kgs



Charge Your Car Network



Find a CYC Charge Point

Search



My Favourites

St Marys Car Park Level Two

St Marys Car Park Level Two SR1 2HN

St Marys Car Park Level One

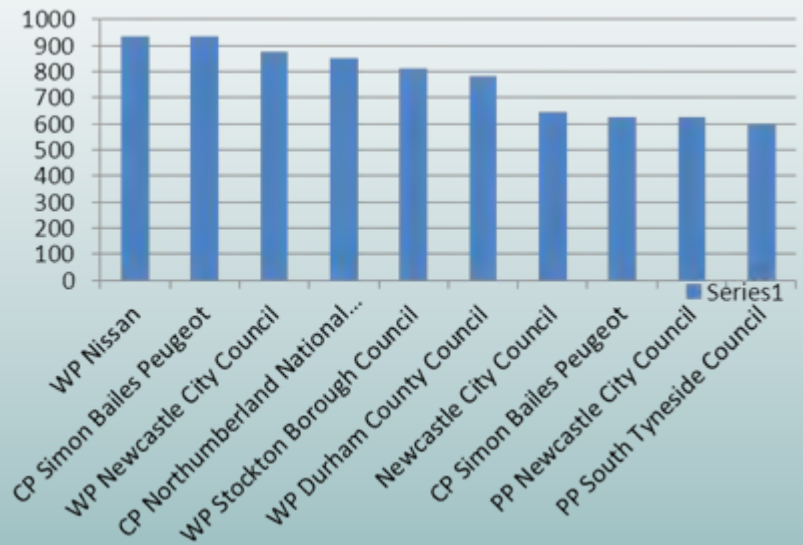
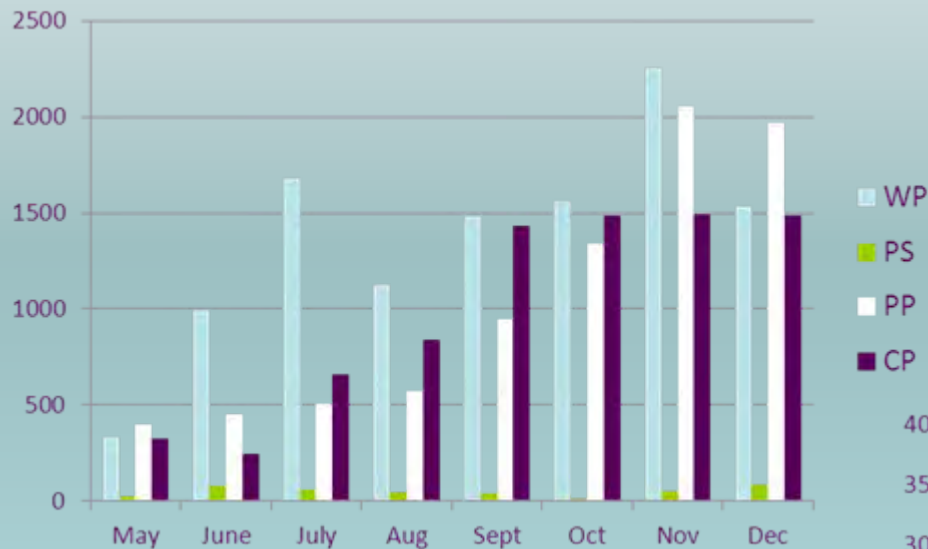
St Marys Car Park Level One SR1 2HN

Bigg Market

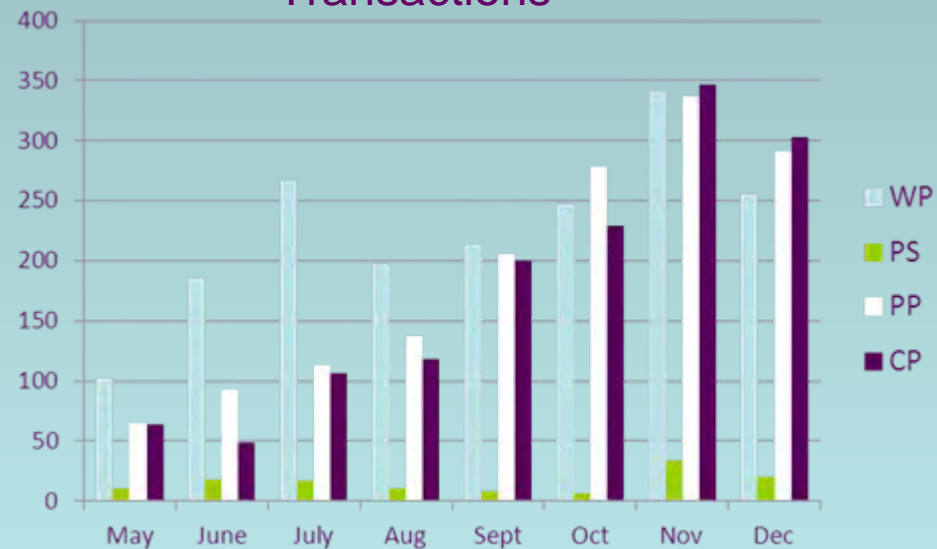
CYC Usage Data : One Year On

Top 10 Posts

Power - Kw Hours



Transactions



Lessons Learnt

- ≡ More difficult than we thought to find good locations & willing Hosts for CPs
- ≡ Economic Downturn
 - ≡ **CUTS** – L.A.s, Public sector & Private sector
 - ≡ **& EV Consumers**
- ≡ Severe Restrictions on Marketing activities
- ≡ Closure of RDAs
- ≡ Lack of technical standards
 - ≡ Major contributions made to development of Technical Standards, Codes of Practise etc
 - = Largely unrecognised
- ≡ Emerging market
 - ≡ Requirements of EV Users
 - ≡ Developing products
 - ≡ Evolving Requirements of funders
- ≡ Ministerial View
 - ≡ targets & spend
 - ≡ v development flexibility required

Lessons Learnt (2)

- ≡ No influence over:
 - ≡ EV sales
 - ≡ Hosts priorities
- ≡ Public Procurement
 - ≡ Time
 - ≡ Lack of flexibility
 - ≡ Developing products
 - ≡ Lack of response from market – induction
- ≡ Partner projects
 - ≡ data sensitivities
 - ≡ Competing ?

Thank You

<http://www.leadthecharge.org.uk>



Newcastle Sustainable City: securing a low carbon future in transport

Sally Herbert
Transport Strategy
Newcastle City Council

Newcastle Sustainable City

- Newcastle maintain ranking at top of sustainable index for cities by Forum for the Future
- Secured our position with key partners and stakeholders; universities, developers, investors, business and retail, schools and residents
- Delivered a consistent and co-ordinated approach on a range of measures
- Demonstrate city leadership on sustainable growth and investment



Co-ordinated Delivery

Simple Measures

- School engagement
- Climate Change Family Programmes
- Residential energy reduction measures
 - Home energy assessments
 - Insulation measures
 - Low energy light bulbs

City Wide

- 100 Enviro Schools
- Invest to save – extra low voltage traffic signals programme 80% energy saving
- Green Flag parks
- Science City Development
- Bee Strategy
- Travel Planning
- Electric Vehicle Infrastructure

Electric Vehicles and Infrastructure

Phase 1 2009 -2010

Infrastructure Pilot

- Pilot e/v infrastructure technology
- 40 electric vehicle charging points across the Tyne and Wear City Region: Newcastle, Gateshead and Sunderland
- Trained our Technical Services workforce in key services; installation and maintenance
- Established the infrastructure platform
- Match funded via Local Transport Plan Funding

Electric Vehicle Fleet

- Low Carbon Vehicle Procurement Programme



- Cenex Smart EV Trial



Electric Vehicles and Infrastructure

Phase 2 2010 - 2011

Phase 2

- Developed an infrastructure platform of 47 charging points in Newcastle
- Secured authorisation from DfT for electric vehicle recharging point
- Secured funding from LCVPP for 4 Smith Eddison Transit



Electric Vehicles and Infrastructure

Phase 3 2012 - 2013

- Develop infrastructure platform with focus on Council car parks and new developments
- Utilise Section 106 funding and LTP funding
- Regional Growth Fund Central Station – electric vehicle recharging hub
- Secure greater uptake in electric vehicle charging infrastructure through planning process
- LSTF Tyne and Wear Large Bid (£15M DfT) Low Carbon Car Clubs
- Seek trial opportunities through other areas such as European funding on freight deliveries

Electric Vehicle Car Club



- Standard hourly rate, low mileage rate
- Phase 1 Trial - one electric vehicle within fleet for 6 months in Central Newcastle
- Phase 2 Trial – one electric vehicle within fleet for 6 months on Quayside
- Opportunities to extend electric vehicle across car club fleet
- Key part of LSTF Tyne and Wear Large Bid

Sustainable Distribution via Freight Consolidation

- To provide a Freight Consolidation Centre for the city of Newcastle upon Tyne
- Support city centre retailers
- Offer a sustainable and low carbon approach to deliveries
- Enable retailers to take advantage of consolidation delivery services
- Provide additional 'back of house' services for retailers
- European project SMART FUSION to trial low carbon vehicle within last mile of delivery



Thank You

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