Office for Low Emission Vehicles

Leicester City Council

GoUltraLo Leicester

On the Road to Zero Emissions

A project that will significantly accelerate ULEV uptake by employing targeted initiatives that extend from Leicester city into the surrounding suburban areas, wider county and beyond.

A bid to the Go Ultra Low City Scheme from Leicester City Council with support from Leicestershire County Council and the District Councils.

PREFACE

The ***GoUltraLo Leicester*** **Project** is seeking a total of £11.7 million from the Office for Low Emission Vehicles (OLEV) to help deliver an innovative and ambitious five year programme of measures to transform the local plug-in car market in the Leicester urban area, achieve a step-change in the uptake of Ultra-Low Emission Vehicles (ULEVs), deliver measurable improvements in air quality and support innovation, leading to business growth and new jobs.

The OLEV funding will be matched by a commitment from Leicester City Council to invest over £5.9 million into the Project, with up to £12 million additional investment that could be leveraged into the Project from private and public sector partners.

With investment from OLEV, Leicester City Council and its project partners, the ***GoUltraLo Leicester*** **Project** will deliver:

1. A ***'game-changing' increase in ULEV uptake*** with over ***10,000 new registrations*** of ULEVs achieved in the Leicester urban area by April 2021.

2. A ***comprehensive publically accessible charging infrastructure*** comprising of over ***10,800 charge points*** in the Leicester urban area by April 2021, reassuring current and potential ULEV owners and users there will be safe and convenient access to charge points across the City and beyond.

3. New ***innovative technological solutions*** that help remove barriers to ULEV uptake, developed by the world-class low carbon vehicle expertise in the area's universities and research institutions.

4. ***Measurable improvements in air quality***, transforming people's quality of life in the Leicester urban area and bringing forward Leicester's compliance with EU limit values on Nitrogen Dioxide.

5. ***'Exemplar'*** status for the City of Leicester as an internationally outstanding example for the adoption of ULEVs in a local area.

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£35m Go Ultra Low City Scheme

Applicant Information

Lead Authority (See Appendix A for Letter of Commitment)**:**
Lead Local Authority: **Leicester City Council**
Lead Contact: **Mark Wills, Head of Transport Strategy**

Senior Responsible Owner name and position is:-
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Partner and Participating Authorities:
Leicestershire County Council
Hinckley & Bosworth Borough Council
North West Leicestershire District Council
Blaby District Council
Melton Borough Council

Partner and Participating Universities, Colleges and Schools:
University of Leicester
De Montfort University
Loughborough University
Leicester College
Hinckley College
Stephenson College
Babington Community College
Medway Community Primary School
Sparkenhoe Community Primary School

Partner businesses:
Tusker
British Gas
CENEX
AEA Ricardo

Participating businesses include:
Pepsi Co
Next plc
Pick Everard
MIRA
Belanda Consulting

See Appendix B for letters of Support

FOREWORD

Go Ultra Low City Scheme Fund

As a City we recognise the importance of improving air quality and also the key role that the accelerated uptake of Ultra Low Emission Vehicles (ULEVs) will play in achieving this. The City has a longstanding reputation for its commitment to sustainable development and undertaking the most ambitious, comprehensive and continuous environmental improvement ever carried out by a British city involving the whole city community. It enjoys the distinction of being Britain's first ***'Environment City'*** and was singled out for special praise at the 1992 Earth Summit in Rio for its environmental achievements and the commitment by local organisations to sustainable development.

One of my key priorities as City Mayor is to help improve the health of people in Leicester by reducing air pollution from road traffic emissions. This is set out in Leicester's Air Quality Action Plan. The ***GoUltraLo Leicester* Project** will help support the delivery of the Air Quality Action Plan, in particular reducing air pollution in the City. It will have a significant impact on our designated Air Quality Management Area, where studies have shown the contribution from ULEVs to be highest.

This bid complements our Clean Bus Technology Fund and Clean Vehicle Technology Fund work, and will help us achieve sustained reductions in air pollution. It also seeks to build on the established *"Choose How You Move"* campaign led jointly by Leicestershire County Council and ourselves that is enabling people to find cheaper, quicker, healthier ways to get from A to B using a range of sustainable modes of transport, such as ULEV, buses, walking and cycling.

This document sets out in detail how the Project's objectives will be achieved, what funding is required, what success will look like, including interim points, which could be trigger points for the staged release of funds.

In developing this bid we have consulted widely with public and private organisations. The City Council has demonstrated its commitment to the Project by approving a substantial investment package of over £5.9 million to support the delivery of a comprehensive package of measures. Project partners have also demonstrated their support for this Project and believe an additional £12 million can be leveraged into the Project through the actions of our partners.

I commend this bid to OLEV. In my opinion this proposal has tremendous merit, it will advance the objectives of the Go Ultra-Low Scheme and, most importantly, the ***GoUltraLo Leicester* Project** is deliverable.

If successful, I am committed to delivering all the elements of the ***GoUltraLo Leicester* Project** with our partner and other stakeholders. I will drive the project forward for early delivery.

Sir Peter Soulsby – City Mayor

Councillor Adam Clarke - Assistant City Mayor - Energy & Sustainability

EXECUTIVE SUMMARY

1. INTRODUCTION

The City of Leicester is the tenth largest city in United Kingdom and the second fastest growing city in the country[1]. The City has a population of approximately 330,000 and the wider urban conurbation of Central Leicestershire has a population of over 590,000. Leicester's population is also marked by its diversity, with an estimated 49% of the population from an ethnic minority background. Leicester City Council is the largest unitary authority in the East Midlands. The Leicester urban area is located in the centre of England, at the heart of the national motorway network, with excellent intra-regional connectivity with the other major conurbations in the East and West Midlands, namely Nottingham, Derby, Coventry and Birmingham. East Midlands Airport on its doorstep, which is the UK's largest pure freight operation airport

The *GoUltraLo Leicester* Project is seeking a total of £11.7 million from the Office for Low Emission Vehicles (OLEV) to help deliver an innovative and ambitious five year programme of measures that will transform the local plug-in car market in the Leicester urban area, achieve a step-change in the uptake of Ultra-Low Emission Vehicles (ULEVs) and support business growth and new jobs. The OLEV funding will be matched by a commitment from Leicester City Council to invest over £5.9 million into the Project and over £12 million in potential partner match funding.

The *GoUltraLo Leicester* Project will focus on seven key objectives:

1. Increasing the number of charge points in the Leicester urban area to ***over 10,800*** by implementing a coordinated infrastructure investment programme to ensure there is a comprehensive publically accessible ***charging infrastructure*** available to reassure current and potential ULEV owners and users that there will be safe and convenient access to charge points across the City and beyond.
2. Delivering a 'game-changing' ***increase in ULEV uptake*** with over ***10,000 new registrations*** of ULEVs in the Leicester urban area by April 2021, by raising ***awareness and acceptance*** of ULEVs through engaging with public and fleet audiences to demonstrate how ULEVs offer competitive practicality, making available ***financial and non-financial incentives*** to make ULEV uptake a viable choice in the future and establishing a strong and economically viable ***used ULEV market*** centred on Leicester.
3. Promoting ***innovation*** that helps remove barriers to ULEV uptake and demonstrates the capabilities of new technologies, leading to economic growth and job creation, by exploiting the world-leading expertise in Low Carbon Technologies found in the area's universities and research institutions.
4. Achieving measurable ***improvements in air quality*** that will transform people's quality of life in the Leicester urban area by reducing Nitrogen Dioxide, bringing forward Leicester's compliance with EU limit values, and ***reducing carbon emissions*** to help deliver the Council's ambitious climate change targets.
5. Ensuring the *GoUltraLo Leicester* Project is intrinsically ***linked to a wider range of schemes*** being carried out in the City to improve local air quality, reduce carbon emissions and promote sustainable methods of travel.
6. Undertaking an effective ***monitoring, evaluation and review*** programme to ensure the *GoUltraLo Leicester* Project remains on track to deliver its key deliverables and outcomes.
7. Achieving ***'Exemplar'*** status for the City of Leicester as an internationally outstanding example for the adoption of ULEVs in a local area.

[1] It is estimated that Leicester's population will increase by 5.4% from 2015 to 2020 to 359,000

The *GoUltraLo Leicester* Project will cover the Central Leicestershire area (referred to in this document as the Leicester urban area). This area comprises of the administrative areas of Leicester City Council and Oadby & Wigston Borough Council, most of Blaby District Council and parts of Harborough District Council, Hinckley & Bosworth Borough Council and Charnwood Borough Council.

2. WHY LEICESTER?

There are eight key factors why the *GoUltraLo Leicester* Project will make the City of Leicester one of the UK's first 'Go Ultra-Low' cities and an internationally outstanding example for the adoption of ULEVs in a local area:

1. ***Britain's first 'Environment City' with a long-standing commitment to tackle climate change***
2. ***Commitment to achieving sustained reductions in air pollution***
3. ***World-class expertise in low carbon vehicle technologies and an extensive network of European partners***
4. ***Ideal location for Go Ultra Low investment***
5. ***Strong and committed project partnership***
6. ***Feasible and realistic project targets to achieve a step-change in ULEV uptake***
7. ***Delivering substantial investment, business growth and job creation opportunities***
8. ***Building blocks in place for 'Exemplar' Status***

The City of Leicester recognises the importance of improving air quality and also the key role that the accelerated uptake of Ultra Low Emission Vehicles (ULEVs) will play in achieving this. The vision for ***Leicester*** is ***to be the most forward looking, sustainable and environmental city in Britain and Europe***. This Vision is long established. The City of Leicester enjoys the distinction of being Britain's first ***'Environment City'*** and was singled out for special praise at the 1992 Earth Summit in Rio. The award recognised Leicester's environmental achievements and the commitment by local organisations to sustainable development. It also acknowledged Leicester's commitment to undertake the most ambitious, comprehensive and continuous environmental improvement ever undertaken by a British city involving the whole city community. Leicester has amongst the longest-standing and most ambitious climate change targets of any UK local authority – committed to halving both city-wide and Council emissions by 2025/6.

One of the City's key priorities is to help improve the health of people in Leicester by reducing air pollution from road traffic emissions and promoting more sustainable forms of transport. The City of Leicester currently exceeds the European threshold for nitrogen dioxide (NO_2) levels. The City's Air Quality Action Plan (AQAP) sets out a clear programme of measures to transform people's quality of life by achieving sustained reductions in air pollution in Leicester. The *GoUltraLo Leicester* Project will play an important role, alongside other initiatives, to realise the priorities and targets set out in the AQAP and bring forward compliance with the EU Limit Value on NO_2.

Key strengths of the *GoUltraLo Leicester* Project are its clear project goals, identified priority action areas and feasible and realistic targets and outcomes. This is combined with a 'commitment to deliver' from a strong partnership across Leicester and Leicestershire, led by Leicester City Council and involving public authorities, businesses, world-class universities and research institutions, developers, investors, voluntary and community groups and the general public. The project partners are confident that the projections for uptake identified in the *GoUltraLo Leicester* Project are both feasible and realistic and that partners will commit to making significant investments in ULEVs for their fleets and employees. It is expected that this will act as a catalyst and raise the profile of ULEVs in the wider area and lead to further significant interest in investing in ULEVs. The *GoUltraLo Leicester* Project will ensure that none of its proposals constitute State Aid.

Leicester's geographical location, its growth estimates/potential and the diversity of its population also make it an ideal location for Go Ultra Low investment. The *GoUltraLo Leicester* Project will help bring low-cost motoring to thousands more motorists in the Leicester. It will also help build a stronger local economy by supporting innovation within the Low Carbon Sector, creating opportunities for growth and job creation.

These factors provide all the building blocks needed to deliver ***'Exemplar'*** status for the City of Leicester as an internationally outstanding example for the adoption of ULEVs in a local area. As an exemplar City, Leicester will disseminate, promote and share its experiences of ULEV ownership. Leicester City Council, and its partners, has a significant existing network of contacts locally, nationally and across Europe.

3. KEY PROJECT DELIVERABLES

The *GoUltraLo Leicester* Project will use the OLEV funding to help achieve two key project deliverables by April 2021, namely:

1. ***Delivering over 10,000 new registrations of ULEVs in the Leicester urban area.***
2. ***Increasing the number of electric charge points in the Leicester urban area to over 10,800.***

4. PRIORITY ACTION AREAS

To achieve these deliverables and thereby realise a step-change in ULEV uptake in the Leicester urban area, the *GoUltraLo Leicester* Project will implement a coordinated programme of action that focusses on six key priority areas and 21 specific measures. The six key priority areas are illustrated in Figure 1.

Figure 1. The *GoUltraLo Leicester* Project's Six Priority Areas for Action

5. TWENTY-ONE KEY PROGRAMME MEASURES FOR 2021

For each of the six priority area, the *GoUltraLo Leicester* Project will deliver a programme of action that includes a range of measures to help achieve the key project deliverables and outputs. The 21 measures that will be delivered by 2021 by the *GoUltraLo Leicester* Project are summarised below.

PRIORITY 1. ***PROVIDING THE NECESSARY INFRASTRUCTURE TO SUPPORT ULEV USERS:***

Measure 1. ***Direct public investment*** **to deliver and maintain new publically accessible charging points in public car parks, Park & Ride terminals and selected on-street parking areas.**

Measure 2. ***Providing match funding*** **to lever additional public and private sector investment in publically accessible chage points including privately operated and work-based charging points.**

Measure 3. ***Making network capacity 'fit-for-purpose' including provision of*** **new/upgraded sub-stations where required (in partnership with Western Power).**

Measure 4. **Delivering an Awareness Raising Campaign targeted at existing and prospective ULEV owners.**

Measure 5. ***Implementing public policy interventions*** **that support the establishment of a comprehensive network of charging points in the Leicester urban area.**

PRIORITY 2. ***PROVIDING A RANGE OF FINANCIAL AND NON-FINANCIAL INCENTIVES:***

Measure 6. ***Encouraging employers to open up employee access to ULEV salary sacrifice schemes,*** **including rolling out Leicester City Council's unique ULEV salary sacrifice scheme to public sector partners and developing a flexible salary sacrifice model, in conjunction with Tusker, that can be deployed in large and small businesses.**

Measure 7. ***Providing support, stimulus and encouragement in order to establishing a strong and economically viable used ULEV market*** **in the Leicester urban area.**

Measure 8. ***Implementing public policy interventions*** **that provide a range of incentives to promote private and business ULEV uptake, including free ULEV parking and free electricity when parking in City Council car parks.**

PRIORITY 3. ***RAISING CONSUMER AWARENESS AND ACCEPTANCE OF ULEVS:***

Measure 9. ***Public procurement initiatives*** **to demonstrate local public authorities are leading by example through initiatives such as procuring ULEVs for public fleets, which will also demonstrate the benefits of ULEVs to local residents and businesses.**

Measure 10. ***Providing fleet specific information, tools and support*** **targeted at fleet managers to encourage the replacement of fleet vehicles with ULEVs.**

Measure 11. ***Implementing a coordinated and sustained marketing and communications campaign*** **to raise awareness of ULEVs, their benefits, incentives and address barriers to uptake.**

Measure 12. ***Delivering an Education and Community Awareness Programme*** **to enable local schools to participate in the implementation of the *GoUltraLo Leicester* Project.**

Measure 13. ***Increasing direct consumer exposure to ULEVs*** **by organising ULEV test drives and other demonstration events and encouraging the establishment of new ULEV mobility services such as ULEV car clubs, ULEV taxi fleets and other car sharing schemes using ULEVs.**

Measure 14. **Supporting a *Business Network and Training Programme* to promote uptake of ULEVs.**

PRIORITY 4. ***PROMOTING INNOVATION:***

Measure 15. ***Working with local universities, research institutions and businesses (including CENEX, De Montfort University, the University of Leicester, Loughborough University and MIRA)*** **to actively encourage and support innovation in ultra-low emission technologies and intelligent mobility that builds on the area's world-class expertise in Low Carbon Technologies to help remove barriers to ULEV uptake and promote business growth and job creation.**

Measure 16. ***Collaborating in trans-national research and development projects*** **to provide real-world opportunities to demonstrate innovation in ultra-low emission technologies and intelligent mobility and promote the uptake of ULEVs in local areas.**

PRIORITY 5. ***MONITORING, EVALUATION AND REVIEW:***

Measure 17. ***Delivering a comprehensive monitoring scheme*** **to collect vital information on ULEV uptake, delivery of the supporting infrastructure, use of the infrastructure, air quality data, public and business attitudes and awareness, innovation.**

Measure 18. ***Undertaking a rolling evaluation and review programme*** **to ensure the measures implemented through the *GoUltraLo Leicester* Project maintain full effectiveness.**

PRIORITY 6. ***COMMUNICATING AND DISSEMINATING PROJECT OUTCOMES AND RESULTS:***

Measure 19. ***Delivering a Communications and Dissemination Strategy*** **to disseminate the key outcomes and results of the *GoUltraLo Leicester* Project to other cities, public and private organisations across the UK and Europe.**

Measure 20. ***Organising specific dissemination events*** **to share learning with other cities in the UK and Europe and promote active roll-out of the successful measures delivered by the *GoUltraLo Leicester* Project.**

Measure 21. ***Developing and managing a project website*** **to publish project information and act as the most important dissemination channel for the *GoUltraLo Leicester* Project, by building on the existing "Choose How You Move" website.**

6. KEY PROJECT OUTPUTS AND OUTCOMES

The *GoUltraLo Leicester* Project programme of action will deliver a number of key outputs and outcomes for the City of Leicester.

GoUltraLo Leicester's Key Outputs:

1. **10,000 ULEV new registrations** (an increase from 6,000 from the screening phase submission) on the road by April 2021. This is estimated as 2,500 new 'Business As Usual' registrations and 7,500 new registrations delivered through accelerating uptake with the support of a successful Go Ultra Low (GUL) City Scheme submission. This will be equivalent to 9% of vehicles in the Leicester urban area in 2021, with proposals to further increase uptake to 28,750 by 2026.
2. **10,800 new charge points** (an increase from 8000 from the screening phase submission). This is a 'game changing' increase in the number of charge points in the Leicester urban area, comprising of 10,000 new charge points associated with uptake including fleet, workplace and residential, and 800 new charge points in publicly accessible areas – 500 in the first three years with another 300 in

the following two years.

3. **Healthy used ULEV Market –** Providing support, stimulus and encouragement in order to develop a healthy used ULEV's market in Leicester. As used ULEV purchases are not included in the current Government Schemes, the *GoUltraLo Leicester* Project will provide funding for:
   a. Used ULEV purchase – A grant of up to £1500 or 10% off the purchase price (whichever is the greater) to Leicester City residents or regular commuters in Leicester. Application and reasonable proof required.
   b. Charge point for used ULEV purchase – A grant of up to £700 (mirror the National Scheme)

GoUltraLo Leicester's Key Outcomes:

1. Transforming the local plug-in car market in the Leicester urban area and breaking down actual barriers to general ULEV uptake to achieve a step-change in the uptake of ULEVs.
2. Transforming people's quality of life by achieving measurable air quality improvements, particularly in Leicester's Air Quality Management Areas, including:
   a. 2-3 µg/m3 improvement in NO_2 concentrations in the AQMA (Air Quality Management Area), bringing forward compliance with the EU Limit Value
   b. 4% reduction in NOx by 2021 and 8% by 2026,
   c. 7% reduction in CO_2 by 2021 and 9% by 2026
   d. 2% reduction in $PM_{2.5}$ by 2021 and 3% by 2026
3. Bringing low-cost motoring to thousands more motorists in the Leicester urban area.
4. Supporting business growth and job creation.
5. Achieving 'exemplar status' for Leicester as an internationally outstanding example for the adoption of ULEVs in a local area.

7. PROJECT MILESTONES

Cumulative Milestones

Project Initiative / Financial Year	2015/16	2016/17	2017/18	2018/19	2019/20	2020/2021
New ULEV Registrations (cumulative)	600	1,500	2,800	4,700	7,100	10,000
ULEV Salary Sacrifice Vehicles (LCC Staff)	25	75	175	350	630	1,020
Business Adopting ULEV Salary Sacrifice		5	10	12	15	17
Business Salary Sacrifice ULEV sales		25	50	55	60	65
ULEVs purchased on the used market		50	125	225	350	500
LCC Fleet ULEVs (cumulative)	15	60	110	120	160	200
LCC Fleet Review				●		
LCC Installed Charging Points	15	165	300	500	650	800
Apprentices Trained		5	13	23	39	55
Education Awareness Programme (events)	10	58	116	174	232	290
Businesses Engaged		60	120	180	240	300
Business Travel Plans		10	20	30	40	50

8. PROJECT FUNDING

The *GoUltraLo Leicester* Project is seeking a total of £11.7 million from the Office for Low Emission Vehicles (OLEV) to help deliver an innovative and ambitious five year programme of measures that will transform the local plug-in car market in the Leicester urban area and achieve a step-change in the uptake of Ultra-Low Emission Vehicles (ULEVs) as well as support business growth and new jobs. The OLEV funding will be matched by a commitment to invest over £5.9 million from Leicester City Council and over £12 million in potential partner match funding.

Leicester City Council's commitment to the *GoUltraLo Leicester* Project is demonstrated by its decisions to:

- **Purchase 200 ULEVs** for its own fleet by 2021, including:
  - 110 by 2017/18 **(£2.16m – 100% funded by LCC)**
  - 90 from 2018/19 to 2020/21 **(£2.26m – 100% funded by LCC)**
- **Expansion of its 'unique' ULEV 'Salary Sacrifice' Scheme** that is open to all 16,000 employees – including additional incentives to promote ULEV uptake **(£350k – 100% funded by LCC)**
- **Support a range of incentives** – as detailed in this proposal **(£1.1m – LCC Match Funding)**

See Appendix C **Electrification of Leicester City Council's Fleet Vehicles Fleet Board Briefing (17th September 2015)**

See Appendix D **Assistant City Mayor Briefing – OLEV Go Ultra Low Bid: Encouragement Through Free Parking in Council Controlled Off Street Car Parks (16th September 2015)**

This commitment will have the effect of:

- Propelling Leicester City Council into an exemplar for ULEV uptake into its existing fleet.
- Providing the City Council with the moral authority, knowledge and real life experience of managing a ULEV programme to disseminate to all interested parties.
- Enhancing the ability to break down actual barriers to general ULEV uptake by other public authorities (Fleets and employees), business (fleets and employees), regular commuters, community groups and the general public.

Table 1 *GoUltraLo Leicester* Project Funding Summary (See Appendix P for full 5 year breakdown)

Go Ultra Low City Scheme bid – Total Project Funding			
Project initiatives Phase 1 (2015 to 2021)	**Total**	**Percentage of funding**	**Financial & Explanatory Notes**
OLEV City Scheme Contribution	£11,717,000	66%	Funding requested from OLEV to deliver Exemplar Scheme
Leicester City Council (LCC) Match Funding Commitment	£5,944,000	34%	Match Funding from Leicester City Council
Total Project Cost	£17,661,000	100%	
Partner Match Funding – Additional Match Funding that is likely to be available from Partners and other funds (e.g. LeicsCC, District Councils, British Gas, PepsiCo, LLEP, H2020, etc)	12,160,000		This potential partner match funding has not yet been included as it is outside the control of LCC as lead authority

National Government Schemes

These are existing funds to help support ULEV uptake

- Plug-in car grants (26th August 2015) - The Plug-in Car grant can provide up to £5,000 off the purchase of a new an ultra low emission car with choices rapidly increasing. Just as with the Plug-in Van Grant, there's no fuss or hassle, everything is done by the dealer.

- Grants for infrastructure (13th April 2015) funding to help purchase and install a dedicated charge point at home. A grant of up to 75% towards the cost of installing a charge point in a home, capped at £700. These grants will be available until 31 March 2016.

9. SCALABILITY AND FLEXIBILITY

The GoUltraLo Leicester project has been designed to be both flexible and scalable.

Flexibility will be achieved by instigating a monitoring, evaluation and review methodology of our initiatives to provide the evidence needed to make informed decisions in relation to initiative success, or otherwise, and how we are achieving our project priority – ULEV uptake. Benefit v Cost will be a major factor in prioritising, expanding and if necessary curtailing our initiatives.

Scalability can be achieved as the project has been designed to be modular, allowing easy removal, or size alteration, of each module depending on the funding available. The value of each module, on ULEV uptake, has been designed to allow us to quickly alter the composition of the project.

10. EXEMPLAR STATUS

The *GoUltraLo Leicester – On the Road to Zero Emission* Project has been designed to 'go the extra mile' in supporting a significant acceleration of ULEV uptake. The strength of this project is its clear project goal, identified priority action areas and outcomes combined with a commitment to deliver all elements of the bid from Sir Peter Soulsby, City Mayor, Leicester City Council. We therefore believe that *GoUltraLo Leicester* provides all the building blocks needed to deliver and maintain an 'Exemplar' project and the City to be an internationally outstanding example for the adoption of ULEVs in a local area.

See PART 6

11. MONITORING

This document also sets out how the *GoUltraLo Leicester* Project will monitor, evaluate and review the programme of measures that will be implemented. A monitoring, evaluation and review strategy will be developed and taken forward, including agreed trigger points for the staged release of funds. This will provide a clear demonstration to OLEV of how the package of measures are being delivered and the impact they are having on the Leicester urban area.

Leicester City Council is committed to a long term programme to help improve the health of people in Leicester by reducing air pollution from road traffic emissions and promoting more sustainable forms of transport. It has set long term targets to progressively reduce emissions from the Council's fleet operations by 50% by 2025.It is working towards an Ultra-Low Emission Zone (ULEZ) for all vehicles over the period to 2025.

See PART 5

PART ONE – PROJECT CONTEXT

WHY LEICESTER?

There are seven key factors why the *GoUltraLo Leicester* Project will make the City of Leicester one of the UK's first 'Go Ultra-Low' cities and an international exemplar.

Britain's first 'Environment City' with a Long-Standing Commitment to Tackle Climate Change

The City of Leicester recognises the importance of improving air quality and also the key role that the accelerated uptake of Ultra Low Emission Vehicles (ULEVs) will play in achieving this. The vision for ***Leicester*** is ***to be the most forward looking, sustainable and environmental city in Britain and Europe***. This Vision is long established.

The City of Leicester enjoys the distinction of being Britain's first ***'Environment City'*** and was singled out for special praise at the 1992 Earth Summit in Rio. The award recognised Leicester's environmental achievements and the commitment by local organisations to sustainable development. It also acknowledged Leicester's commitment to undertake the most ambitious, comprehensive and continuous environmental improvement ever undertaken by a British city involving the whole city community. Leicester has amongst the longest-standing and most ambitious climate change targets of any UK local authority – committed to halving both city-wide and Council emissions by 2025/6.

Commitment to Achieving Sustained Reductions in Air Pollution

Another of the City's key priorities is to help improve the health of people in Leicester by reducing air pollution from road traffic emissions and promoting more sustainable forms of transport. The City of Leicester currently exceeds the European threshold for nitrogen dioxide (NO_2) levels and the main cause of air pollution is from road traffic emissions, particularly from diesel vehicles.

The Leicester Air Quality Action Plan (AQAP) sets out some ambitious targets to help improve local air quality, reduce carbon emissions, promote sustainable travel and bring the City below EU NO_2 thresholds. These targets include achieving a 50% reduction in CO_2 emissions by 2025[2] and reducing the 162 premature deaths each year attributed to poor air quality. The AQAP also sets out a clear programme of measures to achieve sustained reductions in air pollution in Leicester, including the designation of Low Emission and Ultra-Low Emission Zones by 2025.

The *GoUltraLo Leicester* Project will play an important role, alongside initiatives such as the Clean Bus Technology Fund and Clean Vehicle Technology Fund, to realise the priorities and targets set out in the AQAP and bring forward compliance with the EU Limit Value on NO_2. This will be particularly the case in the City's designated Air Quality Management Area, where studies have shown the contribution from ULEVs to be highest.

World-Class Expertise in Low Carbon Vehicle Technologies and an Extensive Network of European Partners

Leicester and Leicestershire has a wealth of world-class expertise in alternative fuels, low carbon vehicle technologies, intelligent mobility and air quality in its local universities and research institutions, including MIRA, CENEX, the Energy Technologies Institute, Intelligent Energy, De Montfort University, Loughborough University and the University of Leicester. Through their participation in a range of innovative partnership collaborations, these partners, along with the City Council, have an extensive network of partners in industry and academia across Europe.

[2] 50% reduction in the amount of carbon emitted through City Council operations by 2025 (2008/09 baseline) and 50% reduction in CO_2 emissions for the City within the scope of influence of local authorities by 2025 (1990 baseline)

The *GoUltraLo Leicester* Project will provide a platform to stimulate innovative thinking and joint collaborations between these organisations. This level of expertise will enable the area to demonstrate innovations in ULEV transport that have rarely been possible in many places globally. The Project will also enable its partners to gain a better understanding of which measures could be rolled out to other cities across the UK and the rest of Europe.

Ideal Location for Go Ultra Low Investment

Leicester's geographical location, its growth estimates/potential and the diversity of its population also make it an ideal location for Go Ultra Low investment. Leicester will act as a catalyst in the East Midland area and nationally. As an exemplar City, Leicester will disseminate, promote and share its experiences of ULEV growth with cities and regions across the UK and Europe. Leicester City Council, and its partners, have a significant network of partners and contacts locally, nationally and across Europe.

Strong and Committed Project Partnership

Key strengths of the *GoUltraLo Leicester* Project are its clear project goals, identified priority action areas and outcomes, combined with a commitment to deliver from a strong partnership across Leicester and Leicestershire, led by Leicester City Council and involving public authorities, businesses, world-class universities and research institutions, developers, investors, voluntary and community groups and the general public. This is illustrated by a long-term commitment to breaking down the barriers to ULEV uptake, providing the infrastructure that will support the growing popularity of ULEVs in the region and making significant investments in ULEVs for fleets and employees.

Feasible and Realistic Project Targets to Achieve a Step-Change in ULEV Uptake

The project partners are confident that the projections for uptake identified in the *GoUltraLo Leicester* Project are both feasible and realistic. Furthermore, the *GoUltraLo Leicester* Project will ensure that none of the measures proposed in its programme of action constitute State Aid.

Delivering Investment, Business Growth and Job Creation

As the lead partner in the *GoUltraLo Leicester* Project, the City Council is committed to investing over **£5.9 million** into the Project over the next five years, including range of financial and non-financial incentives for prospective ULEV owners and users, as well as replacing up to 200 of its current fleet vans and cars with ULEVs and expanding its unique ULEV salary sacrifice scheme.

It is expected that the strong commitment by project partners to the *GoUltraLo Leicester* Project will serve as a catalyst and raise the profile of ULEVs even further in the wider in Leicester and Leicestershire area and across the wider East Midlands, which in turn will lead to further significant interest in investing in ULEVs from other public organisations, businesses and the general public.

The *GoUltraLo Leicester* Project will help bring low-cost motoring to thousands more motorists in the Leicester area. It will also help build a stronger local economy by supporting innovation within the Low Carbon Sector that will create opportunities for business growth and job creation.

Building Blocks for 'Exemplar' Status

These factors provide all the building blocks needed to deliver ***'Exemplar'*** status for the City of Leicester as an internationally outstanding example for the adoption of ULEVs in a local area.

POLICY CONTEXT

Leicester City Council has identified one of its key strategic priorities for the City is to transform people's quality of life in order to substantially improve their health and reduce premature deaths. To help achieve this, the City Council has set out an innovative and coordinated programme of action that will be delivered under the umbrella of six key policy documents, namely:

- Leicester Economic Action Plan. – http://www.leicester.gov.uk/your-council/city-mayor-peter-soulsby/my-projects/economic-action-plan
- Leicester Local Development Framework / Local Plan – http://www.leicester.gov.uk/your-council/policies-plans-and-strategies/planning-and-development/local-development-framework & http://www.leicester.gov.uk/your-council/policies-plans-and-strategies/planning-and-development/local-plan-for-the-city
- Leicester Local Transport Plan – http://www.leicester.gov.uk/your-council/policies-plans-and-strategies/transport-and-streets
- Leicester Air Quality Action Plan (2015 to 2025) – https://consultations.leicester.gov.uk/city-development-and-neighbourhoods/air_quality/consult_view
- Environmental Policy – https://www.leicester.gov.uk/your-council/policies-plans-and-strategies/environment-and-waste/environmental-policy
- Leicester & Leicestershire Strategic Economic Plan (SEP) – Leicester & Leicestershire Enterprise Partnership (LLEP) – http://www.llep.org.uk/strategies-and-plans/our-strategic-economic-plan-sep/

The City Council is currently implementing a wide ranging programme of sustainable transport measures. Many of these focus on providing quality alternatives to single occupancy car use, to help tackle congestion, improve air quality and reduce carbon emissions. However, the City Council recognises that the use of cars and vans will remain significant for the foreseeable future. In light of this, the City Council is actively embracing opportunities presented by maturing technologies and as such is supportive of measures that achieve a step change in the uptake of ULEVs. For example, while there is a strong case to pursue measures that seek to reduce car dependency, where that is possible, but for journeys where a car is needed the City Council's approach is to work towards making driving a ULEV a convenient and normal option.

Promoting the uptake of vehicles which are clean at the point of use can help achieve important City Council objectives. The *GoUltraLo Leicester* Project will play an important role in helping to make a substantial difference to the local environment and quality of life. Success in Go Ultra Low schemes will accelerate and support a number of Leicester City Council's policies and objectives. These are:

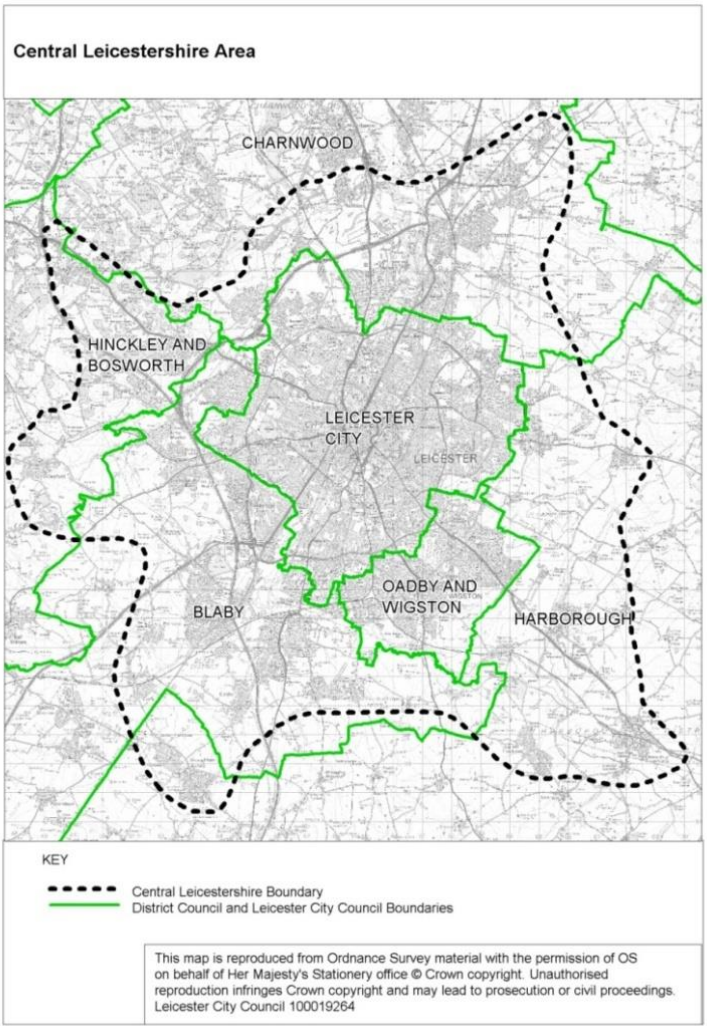
- Improve air quality
- Help to deliver the objectives set out in Leicester City Councils Air Quality Action Plan (AQAP)
- Help meet our climate change targets
- Supporting the ULEV market in Leicester and Leicestershire
- All new cars will need to be effectively zero emission by 2040
- Help support the use of sustainable energy
- Support the objectives of Strategic Economic Plan (SEP)
- Attract jobs and investment in Leicester and Leicestershire

LEICESTER – SOME BASIC FACTS

The *GoUltraLo Leicester* Project will cover the Central Leicestershire area (referred to in this document and the Leicester urban area). This area comprises of the administrative areas of Leicester City Council and Oadby & Wigston Borough Council, most of Blaby District Council and parts of Harborough District Council, Hinckley & Bosworth Borough Council and Charnwood Borough Council. The Central Leicestershire area is illustrated in Map 1.1.

Leicester is the tenth largest city in England and the largest unitary authority in the East Midlands. The City has a population in excess of 340,000 and is a key focus of economic development, regeneration and business growth in the East Midlands. The City is a compact, densely populated area at the centre of a wider Central Leicestershire urban area that is home to over 590,000 people.

Leicester is the second fastest growing city in the country and it is estimated that the City's population will increase by 5.4% between 2015 and 2020. The City's population is also marked by its diversity, with an estimated 49% of the population from an ethnic minority background. Nearly half the workforce commutes into Leicester daily, with over 34,172 people travelling into the City Centre at peak hours.



Map 1.1 The Central Leicestershire Area

The City of Leicester provides employment, shopping, public administration, leisure, health care at three hospitals and further and higher education facilities for some 600,000 people. There has been substantial investment in the new Highcross shopping centre and cultural facilities such as the Curve Theatre and the new Performing Arts Centre that has raised the status of the City as a regional centre. The City's two universities, the University of Leicester and De Montfort University have a combined total student population of around 29,088 full time students, plus 7,307 part time students. The University of Leicester is also one of Britain's largest providers of distance learning for an additional 8,000 students.

The City enjoys excellent road access to the rest of the region and the UK via the M1, M69 motorways, and A46 that are part of the UK's strategic road network. National cycle routes cross the City and it is on the national canal network. The Midland Mainline railway passes through Leicester City Centre, north to south and provides an excellent service to London, Loughborough, Nottingham and Derby. With the opening of the channel tunnel rail link to St. Pancras, Leicester now has direct access to the European high speed rail network. There are also rail lines west to Birmingham and east to Peterborough and Stansted Airport. East Midlands Airport is located in the north west of Leicestershire, accessed via the M1 and is the largest UK freight airport for dedicated freight aircraft.

PART TWO- PROGRAMME OF ACTION TO ACHIEVE A STEP-CHANGE IN ULEV UPTAKE IN THE LEICESTER URBAN AREA

OVERARCHING STRATEGY

Following the submission of the City of Leicester's screening phase proposal to OLEV, Leicester City Council has undertaken considerable work to consult with project partners and other key stakeholders to assess in detail how to achieve a significant acceleration in ULEV uptake in the Leicester urban area. This has given confidence to project partners that more can be achieved than was initially identified. As such the ambition of project partners has increased and they are confident that the programme of measures proposed by the *GoUltraLo Leicester* Project will deliver the outputs and outcomes outlined in this submission document.

KEY ISSUES

The *GoUltraLo Leicester* Project recognises that delivering a step-change in the uptake of ULEVs in Leicester and the surrounding area will not happen overnight and a key factor will be convincing consumers that ULEV purchase or lease is a practical and viable choice. The *GoUltraLo Leicester* Project will achieve this by breaking down the barriers (both perceived and actual) to ULEV uptake. Many of these barriers are long established and are supported by evidence from research undertaken to date in cities across the world indicates that there are five key factors currently influencing the purchase of ULEVs, namely:

a) ***Initial vehicle price, running costs and residual values***: The average commute is less than 10 miles and therefore ULEVs should be attractive to commuters however, the vehicle price is the most important factor influencing vehicle choice. The high initial purchase cost of ULEVs compared to conventional vehicles is viewed as a significant barrier. Running an electric car can offer fuel saving of £750 - £1000 a year and if kept for four years does generally result in a saving in total cost of ownership terms however these are still by and large insufficient to offset the ULEV capital premium as perceived by most car buyers. This is still a major factor even in cases where innovative acquisition models are employed (e.g. battery leasing).

   The ***GoUltraLo Leicester solution*** is to promote local and national financial incentives and promote national incentives (such as the Government's Plug-in Car and Van grants of respectively up to £5,000 and £8,000) to offset the higher purchase price of ULEVs and reduce the Total Cost of Ownership (TCO). To raise awareness of the savings motorists could achieve. For example, motorists could save around £800 per year in tax and fuel by switching to ULEVs versus the average car on the road. ULEVs are exempt from Vehicle Excise Duty (road tax). Company car drivers are also an important and growing market with 'Benefit in Kind' savings through tax liability assessment of greater than £1,000 per annum. The ***GoUltraLo Leicester solution*** is also to encourage employers to open up employee access to ULEV salary sacrifice schemes, which can provide a cost effective and tax efficient way to make ULEV 'ownership' more attractive for employees.

b) ***Limited choice:*** a general concern that the current brands and range of ULEV models available is limited and this has an impact on brand loyalty *and brand confidence*.

   The ***GoUltraLo Leicester solution*** is to work with vehicle manufacturers to raise consumer awareness of the fact that there is a ULEV model available to suit most needs. For example, in the past four years alone, more than 20 electric and plug-in cars and vans have been launched in the UK. In total, there are 35 models (26 cars and 9 LCVs) that are eligible for a plug-in grant.

c) ***Range anxiety:*** relating to concerns over the relatively short driving range capability and limited access to recharging infrastructure due to the poorly developed network of publically accessible charging points in the UK.

   The ***GoUltraLo Leicester solution*** is to deliver a significant increase in the home and workplace charging infrastructure in the Leicester urban area, achieve a better understanding of type of journeys currently appropriate for ULEV usage and raise awareness of the fact that there is an ULEV

that meets everyone's lifestyle. Pure electric cars are capable of journeys of around 100 miles. Range-extended cars are capable of journeys of up to 200 miles. Plug-in hybrids are capable of journeys of up to 700 miles. The average commute is less than 10 miles. Furthermore, research shows that *actual* and *perceived* needs for access to publically accessible charging infrastructure is different. Currently, the majority of ULEV owners prefer to use overnight charging at home and/or at work during the day. However, evidence also shows that potential ULEV buyers and ULEV owners frequently demand more public charging infrastructure, which is based on their *perceived* need to drive longer distances than currently offered by ULEVs.

d) ***Recharge time:*** the long charging times when charging away from home is consistently reported as a barrier by ULEV users, regardless of the ability to recharge overnight. ULEV users place a high value on reducing charging time.

   The ***GoUltraLo Leicester solution*** is to support the development of a network of *rapid (*50 kW) chargers in the Leicester urban area as the most efficient way to complement overnight charging and support the high ULEV adoption targets in this Project.

e) ***Unfamiliarity with the technology:*** due to lack of experience and information, leading to poor consumer receptiveness to plug-in vehicles (uncertain costs, resale value, performance (of battery in particular), reliability and safety).

   The ***GoUltraLo Leicester solution*** is to increase direct consumer exposure to ULEVs by organising ULEV test drives, demonstration events and encouraging the establishment of new ULEV mobility services such as ULEV car clubs.

PRIORITY ACTION AREAS AND KEY PROGRAMME MEASURES

To achieve a step-change in ULEV uptake in the Leicester urban area, the *GoUltraLo Leicester* Project will implement a coordinated programme of action that focusses on six key priority areas and 21 specific measures. The six key priority areas are illustrated in Figure 2.

Figure 2. The *GoUltraLo Leicester* Project's Six Priority Areas for Action

For each of the six priority area, the *GoUltraLo Leicester* Project will deliver a programme of action that includes a range of measures to help achieve the key project deliverables and outputs. The 21 measures that will be delivered by 2021 by the *GoUltraLo Leicester* Project are summarised below.

PRIORITY 1. ***PROVIDING THE NECESSARY INFRASTRUCTURE TO SUPPORT ULEV USERS:***

- **Measure 1. Direct public investment.**
- **Measure 2. Providing match funding to lever additional public and private sector investment.**
- **Measure 3. Making network capacity 'fit-for-purpose'.**
- **Measure 4. Delivering an Awareness Raising Campaign targeted at existing and prospective ULEV owners.**
- **Measure 5. Implementing public policy interventions.**

PRIORITY 2. ***PROVIDING A RANGE OF FINANCIAL AND NON-FINANCIAL INCENTIVES:***

- **Measure 6. Encouraging employers to open up employee access to ULEV salary sacrifice schemes.**
- **Measure 7. Establish a strong and economically viable used ULEV market.**
- **Measure 8. Implementing public policy interventions.**

PRIORITY 3. ***RAISING CONSUMER AWARENESS AND ACCEPTANCE OF ULEVS:***

- **Measure 9.** ***Public procurement initiatives*.**
- **Measure 10.** ***Providing fleet specific information, tools and support*.**
- **Measure 11.** ***Implementing a coordinated and sustained marketing and communications campaign*.**
- **Measure 12.** ***Delivering an Education and Community Awareness Programme*.**
- **Measure 13.** ***Increasing direct consumer exposure to ULEVs*.**
- **Measure 14. Supporting a *Business Network and Training Programme***

PRIORITY 4. ***PROMOTING INNOVATION:***

- **Measure 15.** ***Working with local universities, research institutions and businesses (including CENEX, De Montfort University, the University of Leicester, Loughborough University and MIRA***
- **Measure 16.** ***Collaborating in trans-national research and development projects***

PRIORITY 5. ***MONITORING, EVALUATION AND REVIEW:***

- **Measure 17.** ***Delivering a comprehensive project monitoring scheme*.**
- **Measure 18.** ***Undertaking a rolling evaluation and review programme*.**

PRIORITY 6. ***COMMUNICATING AND DISSEMINATING PROJECT OUTCOMES AND RESULTS:***

- **Measure 19.** ***Delivering a Communications and Dissemination Strategy*.**
- **Measure 20.** ***Organising specific dissemination events* to share learning with others.**
- **Measure 21.** ***Developing and managing a project website*.**

The remaining sections of Part Two of this document set out in detail the programme of measures that will be implemented by the *GoUltraLo Leicester* Project to deliver the following key outputs and outcomes:

1. Achieving 10,000 ULEV new registrations
2. Increasing the number of charge points to 10,800
3. Creating a healthy used ULEV Market –
4. Transforming the local plug-in car market
5. Breaking down barriers to general ULEV uptake to achieve a step-change in the uptake of ULEVs.
6. Transforming people's quality of life by achieving measurable air quality improvements,
7. Bringing low-cost motoring to thousands more motorists in the Leicester urban area.
8. Supporting business growth and job creation.
9. Achieving 'exemplar status' for Leicester as an internationally outstanding example for the adoption of ULEVs in a local area.

PRIORITY 1. INVESTING IN SUPPORTING INFRASTRUCTURE

KEY ISSUES

In order to achieve a step-change in ULEV uptake in the Leicester urban area, potential ULEV owners and users will need the reassurance that a comprehensive publically accessible charging infrastructure will be in place in the Leicester urban area. It has already been highlighted that one of the key barriers to ULEV ownership and usage relates to concerns over the current limited access to recharging infrastructure due to the poorly developed network of publically accessible charge points in the UK.

Research shows that *actual* and *perceived* needs for access to publically accessible charging infrastructure is different. Currently, the majority of ULEV owners prefer to use overnight charging at home and/or at work during the day. However, evidence also shows that potential ULEV buyers and ULEV owners frequently demand more public charging infrastructure, which is based on their *perceived* need to drive longer distances than currently offered by ULEVs. A key priority for the GoUltraLo Leicester Project will be to deliver a deliver a comprehensive network of charging points (rapid and fast) in the Leicester urban area, including a significant increase in the home and workplace charging infrastructure.

A further barrier to current ULEV uptake is the long charging times when charging away from home is consistently reported as a barrier by ULEV users, regardless of the ability to recharge overnight. ULEV users place a high value on reducing charging time. In response, the GoUltraLo Leicester Project will support the development of a network of *rapid (43kw/*50kw) chargers in the Leicester urban area as the most efficient way to complement overnight charging and support the high ULEV adoption targets in this Project.

The *GoUltraLo Leicester* Project will build on the 'Plugged in Places' Project (2,391 charging events so far) to create a comprehensive network of fast and rapid chargers in the Leicester urban area accessible to the public and businesses. The Project will also take steps to ensure sustained coordination in the delivery of the supporting infrastructure (regarding connectors, communication and payment systems) to ensure the new publically accessible charge points installed in the Leicester urban area are part of an interoperable, visible, and contractually inclusive national network.

PROGRAMME OF ACTION

It is known that the two most popular locations for vehicle recharging are; work and home. The *GoUltraLo Leicester* Project will deliver a significant increase in the home, publicly accessible and workplace charging infrastructure in the Leicester urban area and through its awareness raising activities it will help demonstrate that ULEV usage can now be a viable option for 'everyday' trips.

The Project aims to ensure the Leicester urban area has a network of 10,800 charge points by April 2021. This is a 'game changing' increase in the number of charge points. It will include:

- 10,000 associated with uptake including fleet, workplace and residential
- 800 in publicly accessible areas – 500 in the first three years with another 300 in the following two years)

Zap Map has been used to study charge point installations in; Birmingham, Coventry, Nottingham, Derby, Corby and Milton Keynes. This has helped the *GoUltraLo Leicester* Project identify which are the most appropriate power ratings for different location types and also helped determine charging rates accessible for a range of ULEVs. There is wide accessibility to fast 7kW and 22kW charge points. However, for rapid charging ULEVs seem to be accessible to either 43kW AC or 50kW DC charging.

The *GoUltraLo Leicester* Project has also acquired information on patronage levels and stay lengths for the car parks in the central Leicester area, and this has allowed assumptions to be made on the overall utilisation

patterns of these sites, i.e: the approximate proportions of different trip types supported by each car park. This process is summarised in **Appendix I.**

The *GoUltraLo Leicester* infrastructure installation programme will be delivered through a combination of public investment using the OLEV funding, leveraging additional private sector investment and encouraging all new ULEV owners to install a dedicated overnight charging point on their premises, where this is feasible.

The *GoUltraLo Leicester* Project has identified three key issues related to the delivery of supporting infrastructure:

a) Location
b) Installation
c) Access/use

The *GoUltraLo Leicester* Project will address these issues by implementing five key measures to help deliver and maintain a strategic infrastructure network of publically accessible, home and work-based charge points at strategic locations across the Leicester urban area. These are:

Measure 1. **Direct public investment in new charge points** to deliver and maintain new publically accessible charge points in the City Council's public car parks, Park & Ride terminals and selected on-street parking areas.

Measure 2. **Providing match funding to lever additional public and private sector investment** in publically accessible car parks including privately operated and work-based charge points

Measure 3. **Making network capacity 'fit-for-purpose'** including the provision of new/upgraded sub-stations where required (in partnership with Western Power).

Measure 4. **Delivering an Awareness Raising Campaign** to encourage all current and prospective ULEV owners and regular users to install a dedicated overnight ULEV charging unit.

Measure 5. **Implementing public policy interventions** that support the establishment of a comprehensive network of charge points in the Leicester urban area

MEASURE 1. Direct Public Investment in New Charge Points

The *GoUltraLo Leicester* Project will directly fund around 800 new publically accessible charge points through a coordinated Charge Point Installation Programme that will deliver a combination of rapid and fast charge points in strategic locations across the Leicester urban area.

The *GoUltraLo Leicester* Project has already carefully considered the appropriateness of all the locations for publicly accessible charge points in the Leicester urban area. This has been achieved by compiling a database of 629 car parks (all sizes, in public and private operation, with and without public accessibility) and developing a site selection methodology to assist with this process. **See Appendix I & J**

From this long list of 629 car parks, the *GoUltraLo Leicester* Project has been able to apply a screening process to identify the car parks most likely to support a step-change in the uptake of ULEVs in the short term within the Leicester urban area. **See Appendix I**

The *GoUltraLo Leicester* charge point installation programme will focus on developing a strategic network that caters for three distinct markets, all of which have different needs. The three markets are:

1) Commuters – The city's main commuter car parks including other commuter car parks including those at workplaces for people who travel in the morning and leave their car at or near their place of work until they leave for home in the evening.
2) Locations on prime orbital and radial routes, including shopping centres, supermarkets, fast food restaurants, service stations district centres, leisure locations, visitor attractions, train stations and park & ride terminals.
3) Residents in terraced housing areas

In the initial years, the *GoUltraLo Leicester* Project will focus on installing charge points in busy car parks serving key destination. This will help maximise their use, which also serves the important role of boosting the credibility of ULEVs with other car park users who pass by and notice.

In addition, the *GoUltraLo Leicester* Project will prioritise the provision of convenient en-route charging locations for customers on the local strategic road network (similar to existing petrol/diesel filling stations) with a high level of passing traffic which will mean maximum visibility to potential future purchasers of ULEVs. Therefore significantly contributing to breaking down perceived and actual barriers related to ULEV use.

Commuter trips are generally undertaken during peak periods which feature low traffic speeds and stop start conditions. These are the most challenging circumstances for achieving lower emissions from diesel /petrol powered vehicles. In view of this, the *GoUltraLo Leicester* Project will give a high priority to encouraging as many commuting trips as possible to be made by ULEVs. This will enable the Project to have the greatest impact on reducing emissions levels in peak periods. This increases the likelihood of Leicester being able to un-declare parts of its Air Quality Management Area, which is comprised of radial routes and much of the city centre. See **Appendix I**

This strategy will maximise usage by combining prime network locations with the most appropriate charge points. To this end, 32 suitable public car parks have been identified in the city and categorised, based on their attractiveness to different types of users. Evidence suggests that there are a number of prime city centre car parks that are particular used by commuters. The *GoUltraLo Leicester* Charging Point Installation Programme will install a concentration of fast charge points (4- 6 hour charge) at a number of prime car parks. This will provide users with the option of parking in prime city centre locations with appropriate charge points to a deliver a full charge in the typical length of the customer's stay. For standalone radial and orbital sites (such as supermarkets, fast food outlets, etc.) these will require rapid charge points (30 – 40 minutes charge) with associated facilities such as internet access/café.

Around 30% of UK households do not have a suitable location for home-based, overnight ULEV parking; with areas of terraced housing being a typical example. The *GoUltraLo Leicester* Project will introduce a range of measures and incentives to improve the range of supporting infrastructure available in targeted terraced housing areas. Delivering charge points in such areas requires innovative solutions.

The *GoUltraLo Leicester* Project will deliver an awareness raising campaign to ensure all current and prospective ULEV owners and regular users in the Leicester urban area have either installed a dedicated overnight ULEV charging unit or are aware of the process of having one installed and the financial incentives available to help cover all or the majority of purchase and installation costs.

The decision on where to locate the new publically accessible charge points will follow a close consultation process with local businesses and residents, in addition to a comprehensive feasibility study of all potential locations. The City Council is already aware of increasing ULEV uptake amongst Leicester residents and requests for on-street charging facilities have been received from the Knighton and Clarendon Park wards.

In relation to on-street charge point provision , the City Council is also aware that time is required to prepare Traffic Regulation Orders to permit Electric Vehicle Parking Places. The *GoUltraLo Leicester* Project will study the work done by Birmingham City Council in this regard.

It is recognised that the greatest delays in installing charge points occur where contractual agreement is needed to install on land owned by an external organisation. Here permission through a legal agreement is needed with the landowner. Contractual negotiations of contract clauses can cause delays and specific issues can include:

- Access to the charging point and mains connection
- Landowner's consent

- Indemnities and liabilities

The *GoUltraLo Leicester* Project will introduce robust project management procedures to mitigate the risks of damaging delays arising. The Project will also ensure that our communication channels inform all individuals considering a ULEV purchase are made aware of any relevant Government grant schemes, such as:

National Government Schemes

- Plug-in car grants (26th August 2015) - The Plug-in Car grant can provide up to £5,000 off the purchase of a new a ultra low emission car with choices rapidly increasing. Just as with the Plug-in Van Grant, there's no fuss or hassle, everything is done by the dealer.

Grants for infrastructure (13th April 2015)

- Government funding to help purchase and install a dedicated charge point at home. A grant of up to 75% towards the cost of installing a charge point in a home, capped at £700. These grants will be available until 31 March 2016.

The *GoUltraLo Leicester* Project will ensure that its communication channels inform all eligible individuals considering a ULEV purchase are made aware of the current grant schemes available at any given time.

KEY ACTIONS TO PROVIDE DIRECT PUBLIC INVESTMENT IN NEW CHARGE POINTS:

Specific actions that will be undertaken by the *GoUltraLo Leicester* Project to deliver and maintain 800 new publically accessible charge points in the Leicester and the surrounding area, include:

- **Direct capital investment to develop a network of publically accessible fast chargers (4 hour charging) to cater for the commuter market in a range of appropriate locations including:**
  - **a) City Council off-street long term car parks and targeted on-street parking, particularly in areas of the City where homes lack driveways so they are difficult to leave charging.**
  - **b) Park & Ride sites (in Birstall, Enderby and Meynalls Gorse: there are a total of 2,500 parking spaces across the three park-and-ride sites)**
- **Direct capital investment to develop a network of publically accessible rapid chargers (20-30 minute charging) to cater for the short stay market in a range of appropriate locations including:**
  - **a) Publically accessible short stay parking areas on-street, at libraries, community centres, leisure centres, supermarkets, fast food outlets, shopping areas, leisure facilities, sports grounds, etc.**
- **Introducing a range of measures and incentives to improve the range of supporting infrastructure available in targeted terraced housing areas, , with reference to; Innovative on-street EV charging solutions, White Paper, Jan 2015 which could include:**
  - a) **Cable Channel and guides** – a standard wall-mounted EV charger would be installed on the property and required would be a reserved parking space and a cable long enough to connect with car on-street beneath a hinged protective grille.
  - b) **Drop Kerbs** – dependent on planning consent. EV charging is transferred from the public space on to private property
  - c) **'Pop-up power' and 'power bollards' –** have a low-power hidden power supplies with are only accessible by known registered key holders.
  - d) **Street lighting – shared power supplies –** ones that are used in street furniture and infrastructure.
  - e) **Shared EV-parking solutions –** Some EV owners have made arrangements with local business allowing them to use the business premises for EV charging outside working hours. The Council will consider applying this approach with; schools, depots, community centres, etc. This approach could be successful in relation to convenient charge point locations for car clubs and taxi companies.
  - **f) Supporting the development inductive charging plate technology and trial installation in the street and on the ULEV to support inductive charging of a terraced house or flat resident's ULEV; including possible trials for Qualcomm's 'Halo' wireless charging system**

g) **We will ensure that key installation issues such as TRO preparation and contractual negotiations are efficiently handled**
h) **Ensure communication channels deliver effectively re: available infrastructure and funding**

MEASURE 2. Providing Match Funding to Lever Additional Public and Private Sector Investment

Comprehensive charge point provision across the Leicester urban area will require engagement with car park owner/operators across different sectors. The City Council already has a well-established contacts network within the City to make this process run smoothly, which has been assisted by the use of contacts established through;

- The City Council's successful Local Sustainable Travel Fund 'Fit for Business' programme,
- An employer work shop led by led by the Go Travel Solutions consultancy
- The Chamber of Commerce
- The City Council's on-going travel planning work

The *GoUltraLo Leicester* Project will establish a *'GoUltraLo Leicester'* Grant Scheme to provide match funding towards the cost of installing additional charge points in the Leicester urban area in publically accessible locations on-street, at libraries, community centres, leisure centres, supermarkets/shops, leisure facilities, sports grounds, etc. as well as work-based charge points for employees/fleet vehicles. This new grant scheme will be open to local businesses and community groups in the Leicester urban area and match funding will be offered on a sliding scale. Each application for match funding will be assessed in its individual merits.

With regard to running costs following the installation of new charge points, all partners will be responsible for covering all the running costs associated with the charge points they are hosting. Sample costs are provided in **Appendix I**

KEY ACTIONS TO LEVER ADDITIONAL PUBLIC AND PRIVATE SECTOR INVESTMENT IN NEW CHARGE POINTS:

Specific actions that will be undertaken by the *GoUltraLo Leicester* Project to leverage additional private sector investment in the provision of new charge points, include:

- **Establishing a *GoUltraLo Leicester* Grant Scheme to provide match funding to businesses to cover up to 50% of the cost of installing new charge points in:**
  a) **Publically accessible locations including such as supermarkets/shops, leisure facilities, sports grounds, etc**
  b) **Work-based locations for employees/fleet vehicles**

MEASURE 3. Making Network Capacity Improvements

The City Council has already held preliminary discussions with Western Power Distribution, the main District Network Operator for the Leicester area, with regard to the potential energy supply implications in connection with the *GoUltraLo Leicester* Project. The City Council and Western Power are in full agreement about the importance of working together during the five year programme to capture the lessons to be learnt on growing a network of charge points, in a manner that is technically and financially manageable and sustainable, in terms of network power supplies.

In view of the potential large scale demands that charging may place on the supply network, and as the market for electric cars is in its early stages; the *GoUltraLo Leicester* Project has decided to implement a gradual ramp up in the City's power requirements. The *GoUltraLo Leicester* Project bid will use the charge point provision standard of serving 10% of a car park's capacity.

Progress towards this target will be in two stages:

- Initial **Pump Priming installations**; installing modest numbers at a large number of sites, in years 2016/17 & 2017/18;
- With further **Demand Led installations** up to the 10% level in the years 2018/19 to 2020/21.

Other parts of the *GoUltraLo Leicester* Project bid include monitoring work to track charge point use, and a marketing programme in partnership with the car companies, etc, which will be specifically tasked with driving up demand. In order to enable increasing demand to be met quickly, the *GoUltraLo Leicester* Project will ensure that any initial installation work will have a future proofing element, whereby the ducting and appropriate thermal capacity cabling for further charge points up to the 10% figure is provided from the outset. This will minimise the disruption when more charge points are installed. **Appendix H & J**

The *GoUltraLo Leicester* Project will adopt a two stage approach, which is both pragmatic and incremental, and which;

a) Is inherently scalable
b) Recognises the ULEV market is in its early stages, and avoids the damaging vista of large numbers of charge points standing unused.
c) Represents a smaller ask to potential hosts, which reduces resistance to installing, as initial numbers are perceived as being proportional for a new facility
d) Means smaller initial match funding commitments per site, and ensures that further installations are based on evidence of demand – which other parts of the bid are tasked with growing
e) Thus represents value for money

The *GoUltraLo Leicester* Project will adopt an initial approach of installing a small number of charge points at key sites. This approach represents an effective way to seed a network of charge points across an area. By future proofing from the outset, with cabling for more charge points than the initial installations, this approach will provide a simple and minimally disruptive response to further installations, as demand grows. This two stage approach also recognises that there is a strong pace of technological change in the ULEV sector. It provides early support for ULEV uptake with existing technology, whilst having the flexibility to meet future demand with newer technology; such as induction charging.

The roll out of charge points will be proportional to ULEV demand, but it is accepted that even lots of small quantity installations run the risk of overloading the network. A gradual build-up of charge points, with patronage and power use closely monitored will be the best way of ensuring provision of the necessary network supply for these facilities. Clear channels of communication are essential, and as the link between the installation hosts and WPD, (and supported by appropriate monitoring data), the City Council will have a strategic oversight on the developing power demand/supply picture resulting from a growing network of charge points across the Leicester area.

This means that all proposed installations will always be considered in terms of the current supply availability; and if necessary the programme will maintain momentum, by demonstrating the flexibility to 'steer' charge point roll out around areas with a current supply shortage. It will enable informed choices on where best to install bid funded new sub-stations, and provide advance notice of developing needs for more significant and expensive primary sub-stations. We are also aware of portable energy storage systems which can also help address supply shortages.

Discussions with Western Power have highlighted the potential of maximising the use of existing spare capacity that may exist at target premises. Tapping into such spare capacity could mean that (initial) power requirements are available without the need for extra network capacity. Work has already begun to identify possible supply/demand surpluses at Council premises. Some sites relevant to the bid which have surpluses are shown in **Appendix I & J.** Also see 'Vehicle to Grid', in Part 4: Innovation.

KEY ACTIONS TO ENSURE THE POWER NETWORK HAS SUFFICIENT CAPACITY TO SUPPORT A COMPREHENSIVE CHARGE POINT INFRASTRUCTURE IN LEICESTER:

Specific actions that will be undertaken by the *GoUltraLo Leicester* Project to ensure the power network has sufficient capacity to support a comprehensive charge point infrastructure in Leicester, include:

- **Working in partnership Western Power to support a growing charge point network**
- **To ensure the power network in the Leicester urban area is fit for purpose with sufficient capacity.**
- **Taking action to provide new/upgraded sub-stations where required**

MEASURE 4. Delivering an Awareness Raising Campaign targeted at existing and prospective ULEV owners.

The *GoUltraLo Leicester* Project will deliver an awareness raising campaign to ensure all current and prospective ULEV owners and regular users in Leicester and the surrounding area are informed about the charge point network expansion and how to access these charge points.

Providing Information to Drivers

The *GoUltraLo Leicester* Project is aware that the range of factors involved in accessing charge points can represent a barrier to the uptake of ULEVs; thus its installation programme will be supported by an awareness raising campaign to clearly explain access details and options available. The project will arrange ULEV events at council and partner premises, (such as the event at PepsiCo in September 2015), some such events will be in conjunction with partners such as Chargemaster and Cenex. The Project will provide Zap Map with full information on the growing network, access details, and the opportunity for organisations to make match funded bids for charging infrastructure. It will also provide key charge point user information on the City Council website and the "Choose How You Move" website, including car park opening times, with links to other relevant sites

Who Will Operate the Network?

The City Council has met with Chargemaster, the new operators of the Plugged-in Midlands (PiM) electric vehicle charging network. Operation and use will be based on the PiM network. The takeover means that this network of 870 charge points has been added to Chargemaster's national network of over 4,000. This makes it easier to drive an ULEV across the Midlands and around England. The PiM Back Office (Charge Point Management System)_will be merged with Chargemaster's. All PiM cards are okay for the enlarged Chargemaster network. There is access to the Chargevision web based system for tracking charge point use; and this will be a key element in the Project's monitoring work._The City Council will investigate the possibility of link the Back Office with its One Card / smart card use; and with smart grids via its (expected) Vehicle to Grid work.

How Will the Network Link to Others?

Providing drivers with ease of access to charge points across different schemes, tackles a key barrier to ULEV uptake; making this a key technical consideration from the outset._Chargemaster have network density in the Midlands, London and the South._Chargemaster are working with tie ups with other national networks, eg: Charge Your Car, who have strong networks in the North East and Scotland._Chargemaster have an Open Charge Point Protocol, which permits other suppliers, (CYC, DBT, ABB, Elecktromotive and Siemens) to connect to their network.

How Will Customers Use the Network?

PAYG access is recommended, via a Smartphone App, which allows payment for charging as you go, by direct debit; (presuming there is a fee – see below). This represents an easy route to use, and provides ease of interoperability with adjacent charging networks. This is set to be the norm by the end of 2015._All charge points will have PAYG functionality, although subscription to Chargemaster's Polar network is also available

Currently PAYG and membership requires a swipe card to access the charge points.

The *GoUltraLo Leicester* Project is aware that membership and cards represent a potential barrier to use, and are aware of developments in the industry which are moving away from swipe cards. The Project will keep this situation under close review, and will be very interested in chip and pin PAYG charge point access. This helps those people who do not have a Smartphone, and Zap Map describes such a system as; "… a system that the public are comfortable with (and) it also has the added benefit of being available to anyone and anywhere."

Will the Network Be Free?

For the Phase 1 of the programme (2016-2021) the City Council will provide free charging and parking at its car parks and premises. These incentives will be reviewed ahead of the intended Phase 2 (2021-2030). The cost of electricity used by the two charge points at our Newarke Street car park works out at 12p/kWh; see **Appendix I**

The *GoUltraLo Leicester* charge point programme will apply to publicly accessible car parks, which are both publicly and privately operated, as well to the car parks of private employers, serving staff and visitors. Thus there may not always be partner buy-in with free parking and/or free charging. Some private sector operators such as supermarkets may want to keep free charging in the light of similar provision at competing stores.

KEY ACTIONS TO INFORM ALL CURRRENT AND PROSPECTIVE PRIVATE ULEV OWNERS ABOUT AND REGULAR USERS ABOUT THE EXPANSION OF THE CHARGE POINT NETWORK AND HOW TO ACCESS THESE CHARGE POINTS TO PROMOTE AND ENCOURAGE THERE USE

Specific actions that will be undertaken by the *GoUltraLo Leicester* Project to ensure robust access and operational arrangements, supported by a comprehensive awareness raising campaign, include:

- **Provide existing and potential ULEV users with a comprehensive information and promotional package**
- **Work with network operator Chargemaster and partners to ensure that charge point access and operation runs smoothly as the network grows**
- **Monitor developments with PAYG access**
- **Work with partners to take all opportunities to maximise the extent of free parking and charging across the network**

MEASURE 5. Implementing Public Policy Interventions

The *GoUltraLo Leicester* Project will help encourage the implementation of a range of public policy interventions that will help facilitate an increased provision of supporting infrastructure for ULEVs.

Planning Policy and electric vehicles
Existing policy situation
The adopted City of Leicester Core Strategy (2011 revised 2014) strongly promotes the use of low emission vehicles as a way of reducing air pollution.
Policy CS2 - Addressing Climate Change and Flood Risk states that all development must mitigate and adapt to climate change and reduce greenhouse gas emissions, and that one of the ways this can be achieved is by ensuring that development encourages a shift to the use of sustainable low emission transport to minimise the impact of vehicle emissions on air quality, particularly in Air Quality Management Areas.

Policy CS 15 managing the demand for Car Use states to meet the key aim of reducing Leicester's contribution to climate change, opportunities should be provided that will manage congestion on the City roads. This policy is further expanded by the adopted Leicester City Centre Car Parking Strategy Supplementary Planning Document (Appendix 11'Proposals to Support the Use of Low Emission Vehicles Planning' states) that conditions should be used to support the use of low emission vehicles by requiring:

1) 5% of all parking places should include an Electric Vehicle recharging point, with single phase wiring (both 13 amp and 32 amp);
2) Wiring should be installed from the outset that will allow a minimum of 25% of parking spaces to have access to a single phase charging point in the future;
3) Wiring should be installed from the outset that will allow the provision of 64 amp provision (3 phase) charging facilities in the future;
4) Priority parking should be provided for 2 electric taxis close to the disabled parking spaces. The spaces should include an Electric Vehicle recharging point, with single or 3 phase wiring as appropriate (13 amp, 32 amp and 64 amp);
5) Consideration should be given to the provision of priority parking or differential parking rates for electric vehicles, other low emission vehicles and car club vehicles or other such incentives;
6) Consideration should be given to the provision of additional bike parking above the required standard, to the provision of safe bike storage facilities, adequate changing facilities and the provision of bike/ electric bike hire schemes; and
7) Consideration should be given to additional Powered Two Wheeler (PTW) parking above the required standard.

Future policy situation
In order to meet the strict emission standards the replacement emerging City of Leicester Local plan which is timetabled for adoption in 2016, will as part of a wider strategy on sustainable transport continue to support the provision of low emission vehicles and electric vehicle charging points. The plan will contain specific policies giving priority to low emission vehicles within new development as well as criteria based policies regarding the setting and location of new electric charging points and car parking spaces. The council will also look to provide additional design guidance supplementary to the local plan about electric vehicle charging points to help the delivery of electric vehicle infrastructure.

The Council has a wide ranging programme of sustainable transport measures. These often focus on providing quality alternatives to single occupancy car use, to help tackle congestion, improve air quality and reduce carbon emissions. However, it is important to recognise that the use of cars and vans will remain significant. It is therefore sensible to use the opportunities presented by maturing technologies and support a step change in the uptake of ULEVs. It is sensible to reduce car dependency, where that is possible, but for journeys where a car is needed we should work to make driving a ULEV a convenient and normal option; through provision of an extensive network of carefully located charge points, and supported by an incentive package which includes free parking and free charging for ULEVs in City Council car parks.

Promoting the uptake of vehicles which are clean at the point of use can help achieve important council objectives relating to;

- Improving air quality
- Improving public health
- Potentially reducing carbon emissions

City Scheme funds would represent a major step towards helping us achieve our existing Strategic Objectives; as set out in our Local Transport Plan, Air Quality Action Plan and our Climate Change Programme of Action (currently being revised). They would also be a major boost to existing work programmes – PiM installations and with more planned for delivery.

The City Council will use its Transport, Parking, Planning and Environment teams to provide a significant increase in charge points to create a comprehensive network of fast and rapid chargers in the city and the Principal Urban Area in partnership with adjoining authorities, developers, the private sector and the public.

KEY ACTIONS TO SUPPORT THE IMPLEMENTATION OF PUBLIC POLICY INTERVENTIONS THAT FACILITATE AN INCREASE IN THE PROVISION OF ULEV SUPPORTING INFRASTRUCTURE

Specific actions that will be undertaken by the *GoUltraLo Leicester* Project to support the implementation of public policy interventions that facilitate an increase in the provision of ulev supporting infrastructure, include:

- **Encourage local planning authorities to adopt new planning conditions that require all parking spaces in new developments and major refurbishments to be "ULEV-ready" and fitted with a dedicated charging point(s)**
- **Continue delivery of our existing programmes and partnership working, which will be much enhanced by City Scheme funds**

PRIORITY 2. FINANCIAL AND NON-FINANCIAL INCENTIVES

KEY ISSUES

Evidence from other countries has shown that ULEV sales can be encouraged through offering financial incentives and introducing public policy interventions that result in a range of non-financial incentives targeted at ULEVs. Indeed, the evidence shows that ULEV owners place a significant value on non-financial incentives, such as preferential parking and road access.

For public authorities, many non-financial incentives can provide high value benefits to end-users at relatively low cost. Non-financial incentives can also play a role in developing and supporting the used ULEV market in a local area. This will be an important factor in achieving high levels of ULEV uptake.

PROGRAMME OF ACTION

The *GoUltraLo Leicester* Project will promote a range of financial incentives and support the introduction of a number of targeted public policy interventions designed to provide a range of non-financial incentives to help encourage and stimulate ULEV uptake in the Leicester urban area.

The *GoUltraLo Leicester* Project will focus on three key measures to promote the availability of a range of financial and non-financial incentives for existing and prospective ULEV owners and regular users. These are:

Measure 6. ***Encouraging employers to open up employee access to ULEV salary sacrifice schemes***, including public local authority examples

Measure 7. ***Providing support, stimulus and encouragement*** to establish a strong and economically viable used ULEV market in the Leicester urban area.

Measure 8. ***Implementing public policy interventions*** that provide a range of non-financial incentives to promote private and business ULEV uptake

MEASURE 6. *Encouraging Employers to Open Up Employee Access to ULEV Salary Sacrifice Schemes*

The *GoUltraLo Leicester* Project will help to address one of the main barriers to ULEV 'ownership', namely the initial purchase cost of the vehicle, by encouraging employers to open up employee access to ULEV salary sacrifice schemes. A ULEV Salary Sacrifice Scheme can provide a cost effective and tax efficient way to make ULEV 'ownership' more attractive for employees. Such schemes can also create savings for employers and enable these savings to be re-invested to provide further incentives for staff who take on ULEV's. Employees participating in a ULEV Salary Sacrifice Scheme can also unlock Government funding to help cover the cost of purchasing and installing a charging point at their home. **Appendix F**

The key elements in a standard ULEV salary sacrifice scheme illustrate how these schemes can help address barriers to ownership, namely:

- All servicing and maintenance included in the agreement
- Fully comprehensive, fixed-cost motor insurance
- Annual Road Fund Licence
- Full breakdown cover
- Replacement tyres
- Worry-free motoring: drive away a brand new ULEV at a fixed, up front monthly cost
- Average savings of £80 per month in tax, NI & pension (if applicable)
- A new ULEV typically every three years, therefore creating a strong and sustainable second hand market
- One call number for all vehicle needs
- Excellent fleet discounts

- Protection against some of life's unexpected events

Case Study: Leicester City Council leading by example with its unique ULEV Salary Sacrifice Scheme

Leicester City Council is leading by example by working with their partner organisation Tusker, to introduce a ULEV Salary Sacrifice Scheme, which is open to all 16,000 City Council employees. Over a 24 month period, Leicester City Council, together with Tusker, have developed, implemented and improved a salary sacrifice scheme that is unique and provides one of the most cost effective, tax efficient and convenient ways of 'owning', running and using ULEVs. So much so that a brand new ULEV vehicle could and often is cheaper than maintaining an employee's current car.

The City Council has provided a number of incentives to its staff to accelerate private uptake of ULEVs, including the opportunity to enter into a three year lease for a ULEV and the ULEV being made available to purchase on a lease expiry basis, as well as a subsidised cost for installing a charging point at the employee's home address. This all-inclusive, fixed monthly ULEV package means an employee can drive away worry free in a brand new, fuel efficient ULEV car from as little as £152 per month after subsidies and Employers National Insurance savings have been applied.

The City Council has also produced a video explaining the benefits of the ULEV salary sacrifice scheme: http://intranet/Car_video/TUSKER_MASTER%20electric%207.8.14%20h264.mov

Currently, the City Council has delivered over 250 vehicles through its salary sacrifice scheme with a CO_2 cap of 120gms. The City Council proposes to lower this cap to 100gms and are already seeing increasing take up in the below 50gms area with the expectation being that once other incentives and subsidies are applied the major take up will be in the below 50gms area.

This salary sacrifice scheme is unique to Leicester City Council in that it not only offers a tax efficient way of car ownership but also takes the employer savings and re-invests these in incentives for staff who take on ULEV's, it already has a cap on CO_2 in place, plus its own dedicated on-line portal for ULEV's thus removing the initial cost barrier and encouraging the take up of ULEV's beyond what any other employer without this scheme could achieve.

Leicester City Council and their partner organisation, Tusker, will commit significant resources to raising the profile of ULEV salary sacrifice schemes by engaging with large and small businesses and public authorities across Leicester and Leicestershire to demonstrate how the City Council's ULEV salary sacrifice scheme works. The City Council's Employee Engagement Team will be able to offer support and guidance to interested employers and their employees to make sure staff fully understand how such a scheme works and how to choose the ULEV that is right for them.

The City Council and Tusker are also developing a flexible salary sacrifice model that can be deployed in large and small businesses and still achieve the same results and ensure a ULEV is delivered for use by their employees. The support offered by Leicester City Council and Tusker will potentially make ULEV salary sacrifice schemes available to hundreds of thousands of public sector staff across Leicester and Leicestershire. .

KEY ACTIONS TO OPEN UP EMPLOYEE ACCESS TO ULEV SALARY SACRIFICE SCHEMES

Specific actions that will be undertaken by the *GoUltraLo Leicester* Project to encourage local employers to open up employee access to a ULEV Salary Sacrifice Scheme, include:

- **Engaging local large businesses, SMEs, public and voluntary sector authorities in Leicester and Leicestershire to raise awareness of ULEV salary sacrifice schemes, highlighting potential benefits and financial savings for businesses and their employees, and demonstrating how the City Council's ULEV Salary Sacrifice Scheme works (including providing a demonstration site illustrating real life costs and vehicle choices).**
- **Engaging with employees in organisations considering opening up access to Salary Sacrifice**

Schemes, with a view to:

a) **Raising the profile of ULEV salary sacrifice schemes and explaining the potential benefits and savings as well as demonstrating how such schemes operate.**
b) **Comprehensively addressing the perceived barriers to ULEV ownership**
c) **Raising awareness of additional local and national incentive schemes aimed at helping to meet the costs associated with ULEV 'ownership'.**

- **Launching a dedicated website and producing a video, in association with Tusker, to promote the ULEV salary sacrifice concept.**
- **Offering support and guidance to businesses and public authorities through the City Council's Employee Engagement Team to help ensure their employees fully understand the scheme and can choose the ULEV that is right for them.**
- **Developing a flexible salary sacrifice model, in conjunction with Tusker, that can be deployed in large and small businesses and still achieve the same results and ensure a ULEV is delivered for use by their employees.**
- **Developing ULEV [pop-up and other forms of] events, with project partners, to allow employees to trial various demonstrator ULEV vehicles.**

MEASURE 7. Providing support, stimulus and encouragement in order to establish a strong and economically viable used ULEV market

Establishing a strong and economically viable ***used ULEV market*** centred on Leicester is a key priority for the *GoUltraLo Leicester* Project. In reality, there may be many Leicester households who support the objectives of the *GoUltraLo Leicester* Project and aspire to driving an ultra-low emission car but are simply not in the market for purchasing a new ULEV vehicle. This measure will broaden the market by providing support, stimulus and encouragement to enable households unable to afford the purchase of a new ULEV to aspire to drive an ultra-low emission vehicle, including making available vehicular purchase and charge point grants.

Working in partnership with local dealerships and commercial partners, the *GoUltraLo Leicester* Project will work to establish a strong and economically viable used ULEV market focussed in the Leicester urban area. Since used ULEV purchases are not included in current Government Grant Schemes, the *GoUltraLo Leicester* will provide funding to assist with the purchase price of a used ULEV and installation of a charge point.

KEY ACTIONS TO ESTABLISH A STRONG AND ECONOMICALLY VIABLE USED ULEV MARKET IN THE LEICESTER URBAN AREA

Specific actions that will be undertaken by the *GoUltraLo Leicester* Project to support, stimulate and encourage the establishment of a strong and economically viable used ULEV market in the Leicester urban area, include:

1. **Providing a grant of up to £1500 or 10% off the purchase price (whichever is the greater) to Leicester City residents or regular commuters in Leicester. Application and reasonable proof required.**
2. **Providing a grant of up to £700 (mirror the National Scheme) towards the cost of purchase and installation of a charge point relating to a used ULEV purchase.**

MEASURE 8. *Implementing Public Policy Interventions*

The *GoUltraLo Leicester* Project will support the introduction of targeted public policy interventions designed to provide a range of non-financial incentives to help encourage and stimulate ULEV uptake in the Leicester urban area.

KEY ACTIONS TO PROVIDE NON-FINANCIAL INCENTIVES TO HELP FACILITATE A STEP CHANGE IN THE UPTAKE OF ULEVS

Specific public policy interventions that will be considered by Leicester City Council and adjacent local authorities to provide non-financial incentives designed to help achieve a step-change in the uptake of ULEVs in the Leicester urban area, could include some or all of the following:

- **Designating a Low Emission Zone – where all Buses and Taxis using bus lanes, Bus Stations and taxi ranks to have at least a EURO IV compliant engine by the end of 2017. This will be enforced through some type of Voluntary Partnership Agreement / Automatic Number Plate Recognition (ANPR) Cameras for buses and the taxi licence / ANPR for taxis.**
- **Designating an Ultra-Low Emission Zone – where all vehicles entering the proposed zone (such as inside the inner or outer ring road – to be determined) will have to be to a EURO VI or better engine standard by certain date before 2025. Enforcement would be by ANPR camera. Vehicles that don't apply will have to pay a penalty payment.**
- **Providing free/preferential/discounted parking for ULEVs (residential and business) and priority parking for ULEVs in public car parks in the Leicester urban area (off-street parking, on-street parking and park-and-ride).**
- **Providing free charging for ULEVs in Leicester City Council car parks.**
- **Undertaking further work to investigate the possibility of permitting ULEV access to bus lanes, which could decrease journey times for ULEV users.**
- **Providing a concierge service at car parks for ULEVs using rapid chargers – arrive hand over keys and car is charged and parked.**
- **Encouraging public authorities to encourage their contractors to use ULEVs, where possible.**
- **Providing investment in training/skills/apprenticeships relating to ULEVs. (Appendix L)**
- **Extending the City Council's Local Sustainable Transport Fund (LSTF) framework to support a step-change in the uptake of ULEVs, through:**
  - **a) Making available grants of up to £5,000 (match funded) for businesses to include purchase of ULEV, electric bike, work place charge points, other infrastructure and workplace promotion of ULEVs.**
  - **b) 'Wheels to work' scheme to include a fleet of electric scooters and bikes for use for apprentices in conjunction with Leicester College.**
  - **c) Extending the LSTF's 'Sustainable Travel Challenge' to include ULEVs within the scheme that issues reward points for traveling sustainably, which can be redeemed at local and national outlets.**
  - **d) Making a contribution towards the up-keep of 'Choose How You Move', the Travel Portal for Leicester and Leicestershire, where information on ULEV vehicles could be directed.**
  - **e) Travel training workshops run with Jobcentre Plus that will provide information on affordable travel and car clubs.**
  - **f) Personalised Travel Planning and MyPTP (on-line business travel planning) programmes to incorporate information on ULEVs.**
  - **g) Including electric bike, scooter, and ULEVs within future maintenance training programmes.**
  - **h) The Bike-It community programmes to include electric bike try-outs, training and maintenance sessions.**

PRIORITY 3. RAISING CONSUMER AWARENESS AND ACCEPTANCE OF ULEVS

KEY ISSUES

The *GoUltraLo Leicester* Project recognises that delivering a step-change in the uptake of ULEVs in the Leicester urban area will not happen overnight and a key factor will be convincing consumers that ULEV purchase or hire is a practical and viable choice. For the purposes of this Project, a ULEV must be a vehicle that emits less than 75 grams of CO_2 per kilometre driven and must be able to travel a minimum of 70 miles in between charges (electric vehicles) and plug-in hybrid electric vehicles (PHEVs) must have a minimum electric range of 10 miles.

A key priority for the Project will be to engage with consumers in the Leicester urban area (private and business) to persuade them to engage with ULEVs. This will involve a two step process, starting with raising consumer *awareness* of ULEVs, followed by achieving greater consumer *acceptance*, in terms of their readiness to consider purchasing or using a ULEV, and ultimately leading to a step-change in ULEV *purchase*.

In order to raise consumer awareness and acceptance, an initial priority for the Project will be to gain a better understanding of the main consumer motivations that influence vehicle purchase, the (real and perceived) financial and non-financial barriers to ULEV uptake and to evaluate the most effective measures to address these barriers.

PROGRAMME OF ACTION

The Project will implement five key measures in Priority 1 to help raise consumer awareness and acceptance. These are:

Measure 9. *Public procurement initiatives*
Measure 10. *Providing fleet specific information, tools and support*
Measure 11. *Implementing a coordinated and sustained marketing and communications campaign*
Measure 12. *Delivering an Education and Community Awareness Programme*
Measure 13. *Increasing direct consumer exposure to ULEVs*
Measure 14. *Supporting a Business Network and Training Programme*

MEASURE 9. Public Procurement Initiatives

The *GoUltraLo Leicester* Project will also seek to raise consumer awareness and acceptance of ULEVs by implementing a series of public procurement initiatives to demonstrate that public authorities are leading by example in the ownership and usage of ULEVs.

Case Study: Leicester City Council leading by example with its commitment to procure 200 ULEVs for its fleet

As project lead for the GoUltraLo Leicester Project, Leicester City Council has made a commitment to the early purchase of approximately 200 ULEVs by April 2021 as part of its fleet vehicle replacement programme over the period to 2021. Following the completion of its 2015 Fleet Review, the City Council has made a commitment to purchase 200 ULEVs for its fleet while reducing the fleet from 800 to 600 vehicles by 2021 (See appendix xx – Briefing paper to City Mayor). This will help towards achieving the City Council's requirement to reduce its fleet vehicle emissions by 50% by 2025. Initial estimates also indicate a potential saving of up to £1,000 per vehicle per year for the City Council (not including infrastructure investment costs). Furthermore, staff who take fleet vehicles home could be eligible for a 75% grant to install a charging point at their home, where such a vehicle is assigned for at least a 6 month period. This commitment will also ensure Leicester is on the right path to

achieving ULEV take-up that compares with and exceeds other exemplar cities in the UK, Europe and around the world.

The public sector is a significant purchaser when it comes to fleet vehicles and in this area it can play an important role in promoting an early take-up of ULEVs. The *GoUltraLo Leicester* Project will encourage local authorities to lead by example and adopt a policy of replacing its fleet vehicles with ULEVs. This will provide an important tool in demonstrating the benefits of ULEVs to local businesses and local communities and stimulating demand, as well as playing an important role in improving air quality and reducing Greenhouse Gas emissions.

The *GoUltraLo Leicester* Project will work with all the local authorities in Leicester and Leicestershire to encourage the adoption of a pro-ULEV fleet procurement policy.

KEY ACTIONS TO ENCOURAGE PUBLIC AUTHORITIES TO LEAD BY EXAMPLE IN INCREASING THE UPTAKE OF ULEVS

Specific actions that will be undertaken by the *GoUltraLo Leicester* Project to encourage public authorities to lead by example and implement public procurement initiatives to increase uptake of ULEVs, include:

- **Working with local authorities in Leicester and Leicestershire to encourage the implementation of public procurement initiatives to replace public fleet vehicles with ULEVs.**
- **Providing ULEV fleet specification information (range, total cost of ownership (TCO) and payload) and tools to assess the suitability of ULEVs and highlight the potential benefits and financial savings for local authorities.**
- **Providing information and support to help local authorities build a robust business case for replacement of fleet vehicles with ULEVs (in partnership with CENEX) and demonstrate the ease of selecting, procuring, using and managing the ULEV vehicles.**
- **Organising ULEV pop-up events, with project partners, to enable local authorities and their staff to trial various demonstrator ULEV vehicles.**

MEASURE 10. Providing Fleet Specific Information

Fleet best practice dictates that vehicle operating choice decisions should be based on whole life costs because they provide the best forward estimate of the real costs to an organisation over the replacement cycle. There are a number of potential benefits and financial savings for businesses and other employers who decide to replace their existing fleet vehicles with ULEVs, including:

- Savings of over £60 a month for every electric car chosen over a conventionally-powered equivalent. Over a typical four-year vehicle replacement cycle a company could save nearly £3,000 per company car, according to fleet size.
- Businesses operating ULEVs can significantly reduce annual fleet management costs - more than £9,000 per vehicle over four years (*based on £3,200 fuel and £5,972 tax savings*)
- Reducing overall fleet vehicle emissions.
- There are also potential savings for local company car drivers, in terms of company car tax, fuel costs.
- Unlocking Government funding to install a charging point at an employee's home, where such a vehicle is assigned for at least a 6 month period.

The variety of ULEVs available to fleet buyers is greater than ever. There is an ultra-low emission commercial vehicle that meets the majority of range needs. Pure electric vans are capable of up to 106 miles, while plug-in hybrids are capable of up to 513 miles. Furthermore, ULEVs are particularly suitable for many local fleet operators that run small and medium-sized vans as back-to-base or short-haul vehicles, a duty-cycle perfectly suited to pure-electric vans as well as plug-in hybrids.

The *GoUltraLo Leicester* Project will encourage local businesses and other employers with their own fleet of vans and cars to adopt a policy of gradual replacement of their fleet with ULEVs over the next five years. This will be achieved through a number of actions to raise awareness of the benefits of replacing fleet vehicles with ULEVs.

Case Study: "County Fleet Managers Group"

Leicester City Council has created a "County Fleet Managers Group" bringing together Leicestershire County Council and the seven Leicestershire district councils to:

- *Review fleet composition and look into replacement of vehicles ULEVs*
- *Sharing best practice*
- *Sharing specialist vehicles*
- *Looking into joint contracts for vehicle maintenance and purchasing*
- *Delivery of driver training to reduce accidents and realise fuel efficiency*
- *Placement of refuelling / charging facilities throughout the county*

This group has already identified 150 vehicles which will be replaced with ULEV's before 2025.

Fleet Managers – Private organisations

Leicester City Council has engaged extensively with the private sector through their established Freight Quality Partnership, Taxi Forum and Bus Improvement Strategy Groups. In total over 100 businesses have been made aware of the potential assistance this bid offers their fleets. Already we have worked with the following organisations to deliver presentations or provide offers relating to the take up of ULEV's:

- *Toyota*
- *Nissan*
- *E Car club*
- *Cenex*
- *Intelligent Technologies (hydrogen)*

Through direct engagement gaining buy-in for using LCC's work on optimising and greening their own fleet, there has been promotion, help and delivery of:

- *Greener Safer Driving*
- *Car Share Clubs*
- *Introduction of ULEV's into the fleet*
- *Concept of optimising vehicle size*

KEY ACTIONS TO ENCOURAGE REPLACEMENT OF EXISTING FLEET VEHICLES WITH ULEVS

Specific actions that will be undertaken by the *GoUltraLo Leicester* Project to engage with fleet managers/decision makers of public authorities and businesses with fleet vehicles to encourage the replacement of fleet vehicles with ULEVs, including:

- **Providing ULEV fleet specification information (range, total cost of ownership (TCO) and payload) and tools to assess the suitability of ULEVs and highlight the potential benefits and financial savings for businesses.**
- **Providing information and support to help employers build a robust business case for replacement of fleet vehicles with ULEVs (in partnership with CENEX) and demonstrate the ease of selecting, procuring, using and managing the ULEV vehicles.**
- **Implementing public procurement measures to demonstrate and implementing public procurement initiatives to test cases set the example for replacing fleet vehicles with ULEVs**
- **Organising ULEV pop-up events, with project partners, to enable local authorities, businesses and their staff to trial various demonstrator ULEV vehicles.**

MEASURE 11. Implementing a Coordinated and Sustained Marketing and Communications Campaign

The *GoUltraLo Leicester* Project will implement a coordinated and sustained marketing and communications campaign to provide consumer information to help motorists understand the benefits, cost savings and capabilities of the variety of new ULEVs on the market. It will raise awareness of ULEVs, including their efficiency, variety and practicality as well as addressing perceived barriers to ULEV ownership and usage. The aim is to demonstrate that ULEV purchase or hire will be a practical and viable choice in the future for businesses and members of the public and to address concerns and preconceptions about the cost of ULEV vehicles, the reliability of the technology and the range of the battery/ease of recharging

Leicester City Council has been working with vehicle manufacturers, such as Toyota, to understand the local market of ULEVs and to look at the potential to expand the second hand market for ULEVs. While the technology behind ULEVs has progressed to a level where using ULEVs is now a practical reality for many people, there are a range of perceived social and cultural barriers holding back many people from considering ULEV ownership. An important priority for the *GoUltraLo Leicester* Project will be to help achieve a social and cultural shift in public attitudes towards ULEVs. This will include awareness raising activities to help achieve a better understanding of type of journeys currently appropriate for ULEV usage.

The City Council has also been working with the UK's market leading salary sacrifice car provider, Tusker, to develop a brand concept, initial visuals and communications plan for the *GoUltraLo Leicester* Project as well enlisting the expertise of a local marketing company, Sandstar Communications, to develop recommendations for a marketing strategy and communications plan, as well as developing ideas that will raise awareness across diverse channels.

Central to establishing the marketing campaign, the *GoUltraLo Leicester* Project will build on the existing "Choose How You Move" Campaign (http://www.choosehowyoumove.co.uk/) a joint programme currently being implemented by Leicester City Council and Leicestershire County Council to encourage more sustainable travel in Leicester and Leicestershire. This is an established overarching brand for consumers, fleets and businesses to encourage people to get around the Leicester and Leicestershire area using a range of sustainable modes of transport, such as ULEV, buses, walking and cycling. the *GoUltraLo Leicester* Project will also provide information to allow people to find cheaper, quicker, healthier ways to get from A to B.

The *GoUltraLo Leicester* marketing and communications campaign will be a coordinated and sustainable activity carried out across the whole length of the project timeline. It will primarily be a *marketing* campaign, rather than purely *educational*. The campaign structure will be informed by recommendations from previous studies of ULEV campaigns and will demonstrate the following basic characteristics[3]:

a) Simple and consistent messaging and terminology
b) Content specific - focussing on disseminating information that consumers need, including availability, cost and specification of ULEV models available, incentives and addressing perceived barriers
c) Branding that characterises ULEVs as trendy, desirable, fun to drive, emotional, fascinating, modern and stylish.
d) Utilising a broad range of marketing and communication channels, including radio, digital and social media advertising.
e) Targeted – aiming to find ways to get drivers to reassess their vehicle requirements, including opportunities for ULEV test drives
f) Highlighting charging options and availability in the Leicester urban area
g) Involving local celebrities and high level politicians
h) Ensuring consistent and coordinated approach – to marketing, information, and incentives

[3] Electric Vehicles in Urban Europe (EVUE). URBACT, 2012: www.urbact.eu/project.

The *GoUltraLo Leicester* marketing and communications campaign will adopt a segmented approach to raising awareness based on an attitudinal approach. This will divide consumers into a number of different groups. Each group has a different set of characteristics and needs, in terms of raising awareness. These groups are:

1. ***'Enthusiasts'*** (early adopters) who are driven by innovativeness and prepared to pay a premium for ULEVs.
2. ***'Aspirers'*** who are interested in ULEVs but concerned by their technical limitations. ULEV adoption by this group improves with the increased availability of ULEV models from trusted brands and the provision of market incentives that address both cost and technical barriers
3. ***'Mass market'***; while ULEVs have no particular interest or symbolic meaning to this group, they are followers of social norms and are likely to become more receptive to ULEVs as their numbers increase.
4. ***'Resistors'*** who are currently unlikely to buy ULEVs as they strongly reject their symbolism (the perceived status and social acceptability of owning a ULEV). This group's receptiveness to ULEVs will require sustained promotional measures.

The marketing and communications campaign will be targeted particularly at the ***Mass Market*** and ***Resistors*** Groups and will provide consumer information focussing on:

- Model availability and tools to help selection process
- Ensuring local dealerships are able to support and inform prospective ULEV buyers.
- The true capabilities of ULEVs
- The incentives available
- Addressing perceived barriers

An outline of the *GoUltraLo Leicester* Marketing and Communications Campaign is provided in **Appendix G**. The campaign will include launching an enhanced "Choose How You Move" website – to provide a one-stop-shop for information on ULEVs and the *GoUltraLo Leicester* Project.

KEY ACTIONS TO DEMONSTRATE THAT ULEV UPTAKE CAN BE A PRACTICAL AND VIABLE CHOICE

Specific actions that will be undertaken by the *GoUltraLo Leicester* Project to demonstrate that ULEV purchase or hire can be a practical and viable choice in the future for many people include:

- **Publicising the *GoUltraLo Leicester* Project and the local neighbourhood, city-wide and regional benefits that mass uptake of ULEVs could bring including better air quality, improved health and economic growth/job creation linked to research, development, manufacture, sales and servicing of ULEVs by companies in the region.**
- **Informing the public, businesses and other employers with the facts about the latest generation of electric and other ultra-low emissions cars and vans now available: their purchase costs (including grants available), their running costs, their range and reliability.**
- **Providing the public, businesses and other employers with opportunities to see and test drive the different makes and models available.**
- **Promoting car clubs using ULEVs and their roll-out across the City as a sustainable alternative to owning a car.**
- **Raising awareness of additional local and national incentive schemes aimed at helping to meet the costs associated with ULEV 'ownership', including:**
  - **a) A subsidy of £5,000 off the purchase price of a new ULEV car and £8,000 off a new ULEV van.**
  - **b) Funding to cover 100% of the costs of installing an on-street charging point in a residential area.**
  - **c) Funding to cover 75% of the costs of installing a charging point within an individual residential home**
- **Business engagement when rolling out the ULWEV salary sacrifice scheme opportunities.**

MEASURE 12. *Delivering an Education and Community Awareness Programme*

The *GoUltraLo Leicester* Project recognises that local schools have an important role to play in helping to achieve the Project's ambitious targets as well as the City's wider long term vision. With that in mind, the Project will develop and deliver an Education and Community Awareness Programmer targeted at schools, including its teachers and other schools staff, the pupils and their parents and the local communities.

The Education and Community Awareness Programme **(Appendix K)** will exploit the natural advantages of a local authority, schools and higher education in being able to reach and influence today's and tomorrow's car owners through services to and links with local communities. The Programme will work with at least 90 of Leicester's 109 schools and, with community centre managers, festival and event organisers, shopping centre management companies and others, engage with community groups and the public through at least 200 events during the Project.

The Programme will be developed to deliver a package of activities and educational/information resources suitable for delivery in schools and community settings e.g. festivals, events, community meetings and shopping centres. Activities and resources would build on and be delivered as an extension to existing outreach programmes undertaken separately by Leicester City Council and the University of Leicester. Between them the programme will cover primary age, secondary age and adults (the latter targeted at events, meetings, etc.).

The Programme will be designed to couple the science and technology focused educational elements with the more promotional elements designed to influence potential purchasers of low emissions cars. For example, schools might be offered a themed assembly or 'science club' session in return for hosting an information stand on electric vehicles, including a demonstration EV, at their next parents' evening or school fair.

A series of 'science busking' activities would be developed as part of the programme, suitable for engaging adults as well as children in an entertaining and thought-provoking way.

This programme will be led by a full time co-ordinator, with an education/teaching background. The co-ordinator's role would be to:

- Develop the package of activities/resources – in collaboration with partners where appropriate
- 'Sell' the programme to schools and plan and co-ordinate its delivery – liaising between schools and partners delivering activities
- Personally deliver much of the content e.g. assemblies, 'science club' type activities and perhaps individual lessons. Also the information/promotional presence at school fairs, etc.
- Do the same selling, co-ordinating and delivery role with community groups or others who can offer us a way into community settings e.g. organisers of festivals and events, shopping centre management companies
- Help promote the Tusker salary sacrifice offer to school staff and to help identify suitable schools for charge points to be installed
- Work with University of Leicester staff during year one of the OLEV-funded programme to help secure additional funding from the Royal Society for Chemistry for the Clean-Tech educational outreach programme in target secondary schools.

Additional delivery capacity for the activities in the programme will be provided by training a pool of individuals who could be booked in to run activities on a day-rate basis e.g. science busking or school science club sessions. These are likely to be from the University and might be made up of PhD students, Student Ambassadors, Interns or others.

KEY ACTIONS: DELIVERING AN EDUCATION AND COMMUNITY AWARENESS PROGRAMME

The *GoUltraLo Leicester* Project will invest over £250,000 in a five-year Education and Community Awareness Programme that will be targeted at 90 local schools and involve over 200 community events to promote the early uptake of 740 ULEVs in the Leicester urban area. Specific actions will include::

- **Disseminating information to teachers and other school staff about taking up an ultra-low emission vehicle for their personal use.**
- **Opening up the opportunities for teachers and other staff employed by schools to obtain an electric vehicle at a very competitive price through a salary sacrifice scheme.**
- **Providing an opportunity for schools to host charge points in school car parks, where there is space and an identified demand to use ULEV vehicles, where the costs of installation covered through the Project and schools are encouraged to offer their staff free charging.**
- **Delivering an education and outreach programme to teach pupils about air quality and familiarise them and their parents with ULEVs, which could include:**
  - **a) Designing a specific 'clean technologies' teaching package that will help schools meet the requirements of the transport topic in their Eco Schools work, including the loan of ULEV vehicles and the offer of school visits by educationalists, researchers and other experts from universities and other organisations in the local area.**
  - **b) Providing an opportunity for schools to become an electric/clean technology hub within the education sector and/or their local community to help publicise the Project and encourage uptake in the local community, including amongst parents, neighbouring schools, community organisations and local businesses. Options could include:**
    - **Installing solar photovoltaic (PV) panels or other renewable technologies within the school to charge ULEV vehicles,**
    - **Becoming a base for an electric car club serving the local area (opening up the possibility of affordable electric vehicle use to parents or local community groups for example) and,**
    - **Hosting electric car demonstration days (where space allows) for parents and the wider community to see the technology for themselves, allowing the opportunity for people to trial various demonstrator ULEV vehicles and providing an opportunity to comprehensively address the perceived barriers to ULEV ownership and usage.**

MEASURE 13. Increasing Consumer Exposure to ULEVs

One of the key barriers to ULEV uptake is consumer unfamiliarity with the technology associated with ULEVs. This is due to a lack of direct experience of owning and driving ULEVs and a lack of relevant information. This has led to poor consumer receptiveness to plug-in vehicles. Key concerns relate to uncertainty over costs, resale value, performance (of battery vehicles in particular), reliability and safety.

The *GoUltraLo Leicester* Project aims to increase direct consumer exposure to ULEVs in order to help raise consumer awareness and acceptance of ULEVs (**Appendix E and O).** It will do this by implementing a range of actions including organising ULEV test drives, demonstration events and encouraging the establishment of new ULEV mobility services such as ULEV car clubs. The Project will build on Leicester's established programme of New Driver Days and offer new drivers and their parents the opportunity to see and test drive ULEV models and to ask questions.

In the case of **car clubs**, the participation in a ULEV car club can provide private and business members with a range of potential benefits, including:

- **Lower Costs** – For those that drive less than 10,000 miles a year, it has been estimated that using a ULEV car club car could generate savings of £2,000 or more, compared to owning, insuring and maintaining a vehicle[4]. It can also reduce the need for pool cars or staff use of their own vehicles.
- **Lower Emissions** – ULEV car clubs use the most environmentally friendly cars available. It has been estimated that each car club car ultimately replaces 24 privately owned vehicles on the UK streets[5].

[4] E-Car Club, 2015
[5] Carplus, *"A Cost-effective Route to a Low Carbon Britain"*

- **Reduced Carbon Footprint** – enabling business travel to be conducted in a way that has no negative effects on local air quality, as well as reducing the need for pool cars or staff using their own vehicles, which will also have a positive impact on air quality, congestion and parking pressure by taking cars off the road.
- **More Convenient** – pay-per-use ULEV cars can be found in carefully selected bays located in strategic locations within a city.
- **Less Hassle** – using a ULEV car club car removes the need to deal with insurance, breakdown cover, MOTs, finding parking spaces, servicing, cleaning, re-fuelling.
- **More Flexibility** – using a pay-per-use ULEV car club car means you only need to use a vehicle when you need it, avoiding the need to purchase an expensive asset that might not be used all the time.

ULEV Car clubs provide members with pay-per-use access to a pool of ULEV vehicles, which can be rented on a regular and casual basis from as little as one hour (up to several days) on a self-service basis through a flexible, online booking system. Typically a car club company will own the vehicles and co-ordinate their use. ULEV car club vehicles typically have 100 mile range, have set locations and can be booked out via an app or calendar diary, using pre-programmed cards to enter the vehicles. Users are charged an annual fee, and then a £/mile when used. A car club normally requires a minimum of 12 partners to make a club financially viable.

KEY ACTIONS TO INCREASE CONSUMER EXPOSURE TO ULEVS

Specific actions that will be undertaken by the *GoUltraLo Leicester* Project to increase consumer exposure to ULEVs, include:

- **Working with the private sector and community groups to encourage the establishment of new ULEV mobility services (e.g. ULEV car clubs, ULEV vehicle rental, ULEV taxi fleets and other car sharing schemes using ULEVs), including not-for-profit ULEV car clubs**
- **Encouraging employers, the general public and community groups to participate in ULEV car clubs and other car sharing schemes that use ULEVs, by highlighting the potential benefits and financial savings resulting from ULEV car club membership.**
- **Organising ULEV test drives and other demonstration events targeted at private and fleet drivers to provide opportunities for mainstream consumers to have direct experience of ULEV driving performance, range and recharging to raise consumer awareness and acceptance of ULEVs.**
- **Building on existing business travel networks, sustainable travel training workshops and roadshows to local businesses to include information on car clubs using ULEV vehicles.**

MEASURE 14. *Supporting a Business Travel Package Programme*

The *GoUltraLo Leicester* Project will seek to build on the existing successful Business Travel Package Programme delivered as part of Leicester City and Leicestershire County Council's Local Sustainable Transport Programmes. Using this method of changing behaviour amongst employees has already resulted in a 20% modal shift in those businesses participating in the programme.

KEY ACTIONS TO SUPPORT A BUSINESS TRAVEL PACKAGE PROGRAMME

Specific actions that will be undertaken by the *GoUltraLo Leicester* Project to build on the existing successful Business Travel Package Programme, include:

- **Phase 1 workshops delivered to 50 businesses per annum. Completion of Phase 1 will give first year free membership to Smartgo Leicester the business network for support in sustainable travel giving a mechanism for access to approx. 30,000 employees**
- **Phase 2 workshops delivered to 10 businesses approximately 6 weeks after the Phase 1 session, and will deliver one to one support in putting together a sustainable travel plan for the business and support in applying for grants to implement infrastructure to support ULEV's.**
- **Mini roadshows delivered at 4 of the Phase 2 businesses. The roadshows will give staff the opportunity to try electric vehicles and become familiar with the technology.**
- **Developing the Apprenticeship/Engineering Training Programme (Appendix L) to provide the**

necessary skills for maintenance and support of ULEVs (in partnership with Leicester College, Stephenson College, Hinckley College, MIRA and local businesses.

- **Supporting the 'Wheels 2 Work' Programme that offers a wide range of 2 wheelers including electric scooters and cycles (funded by the LSTF scheme) available to those who are struggling to access employment or education throughout the county due to transport barriers**

PRIORITY 4. PROMOTING INNOVATION

KEY ISSUES

Low Carbon Sector

The low carbon sector has been growing rapidly in recent years and it has a vital role to play in driving economic growth and creating jobs in Leicester and Leicestershire. The area has significant areas of world class expertise, both within its Universities and within research institutions, such as MIRA. This includes strengths in alternative fuels, low carbon transport and low carbon vehicles in particular.

The Low Carbon Sector in Leicester and Leicestershire already generates around £2bn for the UK economy, with over 700 businesses employing about 14,000 people driving a sector that is currently growing faster than the national average[6]. The area contains many innovative, companies and world class research establishments and facilities. The largest sub-sectors are alternative fuels, renewable energy and building technologies.

The Low Carbon Sector has been identified as a Priority Sector for Intervention by the Leicester & Leicestershire Local Enterprise Partnership (LLEP). The LLEP has allocated £4.5 million over the period 2015 to 2020 to support the Low Carbon Sector. In view of this, the LLEP has developed a Low Carbon Sector Growth Plan to identify the key interventions that will support the low carbon vision fir the sub-region and to accelerate the development of a low carbon economy. The LLEP aims to enhance the competitiveness of the low carbon sector in the LLEP area by identifying opportunities, unpicking barriers and developing specific, tangible actions to unleash the potential for growth of the sector and to stimulate a broader shift to a low carbon economy. The Plan sets out strategic low carbon priorities and will shape the way that key funding streams are used.

The key priorities for LLEP investment are:

- Innovation support to expand the links between businesses and universities to enhance university-business interaction and promote innovation in new technologies, products, services and processes.
- Developing a central, integrated hub for demonstration of low carbon technologies.
- Low carbon vehicle technologies and provision of infrastructure required for vehicles deployment.

World-Class Expertise

Leicester and Leicestershire has a wealth of world-class expertise in low carbon vehicles, intelligent mobility and air quality in its local universities and research institutions, including:

- MIRA
- CENEX
- Energy Technologies Institute
- Intelligent Energy
- De Montfort University
- Loughborough University
- University of Leicester

These organisations have well established partnerships with all the major global brands, including Ford, Jaguar Land Rover, Lotus Engineering, Nissan, Renault and Rolls-Royce.

[6] Leicester & Leicestershire Low Carbon Sector Growth Plan (LLEP, 2015)

MIRA

MIRA is a provider of product engineering, research, testing, information and certification to the worldwide automotive industry. It was developed to provide research for UK companies but now provides research to clients worldwide. It also carries out work for the defence industry. It is developing a Technology Park that has Enterprise Zone status and is the focus of considerable future investment.

The designation of the MIRA Technology Park Enterprise Zone and development of the MIRA Technology Park will provide 1.75 million sq. ft. of high quality R&D space on an 80 hectare estate. This will make it the largest transport sector R&D technology park in Europe. MIRA is already home to 32 world-class automotive firms including Jaguar Land Rover and Toyota. The MIRA Enterprise Zone is set to become a global centre for automotive R&D and could be the location for the Advance Propulsion Centre.

In relation to Low Carbon Vehicles, MIRA is home to the Future Transport Technologies and Intelligent Mobility Teams. They are involved in undertaking research, development, validation and testing of low carbon vehicles and intelligent connected vehicles, new hydrogen storage technology for the automotive industry, and Intelligent mobility and automation technologies.

Cenex

Cenex is the UK's centre of excellence for low carbon and fuel cell technologies is a not-for-profit, independent delivery and research organisation. Cenex was originally established in 2005 with support from the Automotive Unit of the Department of Trade and Industry (now the Department of Business Innovation and Skills) and now operates as a not-for-profit company limited by guarantee and is managed by a team of full and part-time staff, supported by associates.

Cenex has an established track record of delivering programme and project activities for a range of public and private sector clients associated with low carbon vehicles and infrastructure, including low carbon fleet reviews and technology trials. Cenex is known for its research into the market dynamics for low carbon transport, as well as its analysis of real-world operation and user behaviour for electric vehicles and vehicles running on natural gas, biomethane and hydrogen.

Cenex annually organises "LCV", the largest low carbon vehicle event in the UK. Cenex also provides the secretariat for The Electric Vehicle Supply Equipment Association and currently chairs the organisation. Cenex is a board member of the Advanced Propulsion Centre, the Automotive Council and the European Union's Climate Knowledge and Innovation Community West Midlands Region.

Loughborough University

Loughborough University has world-class expertise in low carbon vehicle technology, including:

- £1 billion Energy Technologies Institute, which is accelerating the UK's transition to a low carbon economy
- Low Carbon Technologies Group, working on electric and hybrid vehicles and hydrogen fuel cell vehicles, including the £3.5 million FUTURE Vehicles project, which is looking at the interaction of components and control systems for electric and hybrid electric vehicles.
- Low carbon city transport systems
- Sustainable transport for the urban poor
- Markets for alternatively fuelled vehicles

The university has a long held a reputation for automotive research and currently has 8 dedicated state-of-the-art test cells specialised in power and emission measurement and control. It also has strong links with industry and an excellent track record in technology transfer. The powertrain group at Loughborough comprising 17 full-time academic staff and over 35 researchers has made significant advances in a number of Low Carbon Electric Vehicle, CO_2 reduction projects, pollutant formation and emissions control.

Loughborough University is also working with the Low Carbon Vehicle Partnership to coordinate a report investigating the potential for L-category vehicles in the UK: www.lowcvp.org.uk/projects/innovation-working-group/l-category-vehicles.htm

De Montfort University

- The **Interdisciplinary Group in Intelligent Transport Systems** (DIGITS) - is a research group who focus on a wide range of intelligent transport and transport infrastructure solutions. This includes research and development to progress the introduction of sustainable urban and regional transport policies across the European Union and internationally. By working in partnership with industry, transport service providers, government and other research institutes and communities the group provides answers to technological, economic and societal questions around sustainability and modal change. In particular, the health and well-being of communities. DIGITS are working closely with Leicester City Council on areas of intelligent integrated traffic control, air quality control and application of computational intelligence in optimal design of a charging infrastructure and in energy management of hybrid electric vehicles.
- The **Institute of Energy & Sustainable Development** - carries out research in Low Carbon Transport, Smart Grids and Demand Response, Low Carbon Buildings, Sustainable Energy for Developing Countries and Low Impact Living. Low Carbon Transport projects include: major contributions to the Ofgem-funded My Electric Avenue project, studying user responses to intelligent charging of electric vehicles, and the 2050 Energy Infrastructure Outlook (for the Energy Technologies Institute); the development of a demountable fuel cell range extender for electric vehicles (EVs); EVs for demand shaping on smart grids; EVs for the developing world; real-world EV performance and carbon footprint; development of new ownership, service delivery and business models for sustainable transport; electrolysis for demand shaping and hydrogen fuel production; participation in the International Energy's Hydrogen Implementing Agreement Task groups and membership of the Science Committee of the Hydrogen and Fuel Cell SUPERGEN consortium

University of Leicester

The University of Leicester is a powerful research base in Space Science, Earth Observation and Remote Sensing. It has a strong track record of application programmes using space technologies in different market areas. For example:

- **Earth Observation Science Group:** research in remote sensing, instrumentation development and atmospheric chemistry, with strong public and private sector collaborations locally and internationally, offering transport solutions to make mobility more efficient, cost-effective and environmentally friendly; including developing dynamic traffic management systems to enable city planners to route traffic more effectively to minimise the impact of transport on the health of citizens and the environment by reducing pollutant emissions; as well as helping businesses to better manage their fleet, saving travel time, fuel and improving carbon emissions.

THE ISSUE Project

THE ISSUE Project was a three year European transport innovation project involving a consortium of 13 core partners and 22 associate partners in 12 difference European regions. Leicester City Council was the Project Coordinator and the University of Leicester and De Montfort University were the project scientific leads. The Project identified opportunities to exploit newly-emerging and existing technologies, particularly in fields relating to ICT and Space Technologies, to deliver major advances towards the operational implementation and market growth of innovations in intelligent traffic management and urban mobility to improve the economic environmental and social health of cities & regions across Europe. THE ISSUE created a vibrant network of partners in 12 European regional research-driven clusters with common interests and expertise in the fields of Transport, Health and the Environment and a shared desire to identify intelligent solutions for sustaining urban environments. This network has now been formalised into a new legal association, called

THE ISSUE Meta-Cluster, which represents over 380 industry actors, including 300 SMEs, as well as 110 research centres and 135 local authorities. Its aim is to provide a legacy for THE ISSUE Project and promote new trans-national collaborations in sustainable transport and intelligent mobility.

PROGRAMME OF ACTION

The *GoUltraLo Leicester* Project will seek to build on the world-class expertise available in the Leicester and Leicestershire area and work with the LLEP and the area's universities and research institutions to promote innovation in low carbon vehicle-related technologies. It will work closely with the LLEP to support the delivery of the LLEP's Low Carbon Sector Growth Plan.

Specific areas of opportunity identified by LLEP that relate closely with the *GoUltraLo Leicester* Project, include bridging the gap between initial research and commercial launch. This includes technology development and proper field testing/proving and the provision of infrastructure required for new and emerging low emission vehicle technologies to be used on a daily basis in the Leicester urban area (for example, charging points or gas fuelling stations for biogas, CNG etc).

In the field testing and demonstration/proving of vehicles or products/services relating to ULEVs, there is currently little funding available. This is a critical area which can raise the profile of the area as a centre for ultra-low emission vehicle development and can attract inward investment from companies wishing to set up new manufacturing/testing facilities.

There is currently very little infrastructure in place in the Leicester and Leicestershire area, which makes use of any new technology or fuel source difficult and costly. The *GoUltraLo Leicester* Project will work closely with the universities and research institutions to support opportunities for demonstration, testing and proving as the infrastructure is developed within the Leicester urban area. The *GoUltraLo Leicester* Project will provide real-world testing opportunities for new and emerging technologies and business models. The priority will be to support innovations which address the barriers to mass ULEV uptake, both technical and behavioural, and which create growth opportunities for the low carbon sector as outlined in our sector growth plan[7].

The key priorities will be:

- To support the development of new products/services for low emission vehicles that have already gone through the research phase and need field testing prior to commercial launch.
- To provide the supporting infrastructure required for new and emerging low emission vehicle technologies to be used on a daily basis in the LLEP area.

The *GoUltraLo Leicester* Project will focus on two key measures to promote innovation and growth in the low carbon sector in Leicester and Leicestershire. These are:

Measure 15. ***Working with local universities, research institutions and businesses to actively encourage and support innovation in ultra-low emission technologies and intelligent mobility*** that meet the needs of the local area.

Measure 16. ***Collaborating in trans-national research and development projects*** to promote innovation in ultra-low emission technologies and intelligent mobility and the uptake of ULEVs in local areas

MEASURE 15. *Working with local universities, research institutions and businesses to actively encourage and support innovation in ultra-low emission technologies and intelligent mobility*

[7] Leicester and Leicestershire Low Carbon Sector Growth Plan. Leicester and Leicestershire Enterprise Partnership, July 2015.

The *GoUltraLo Leicester* Project will work with local universities, research institutions and businesses to actively encourage and support innovation in ultra-low emission technologies and intelligent mobility that meet the needs of the local area, including research and development to:

a. Increase the performance and range of ULEVs, including developing and testing new (petrol and hydrogen fuel cell) range extenders and new electric vehicle power trains.
b. Demonstrate trials of future technologies, such as dynamic charging, range extenders and apps to help select most appropriate ULEV.
c. Promote sustainable vehicle selection for fleet vehicles to purchase the optimum ULEV vehicles that meet the needs of the fleet.
d. Increase the hydrogen infrastructure in the Leicester urban area.
e. Utilise Computational Intelligence to help identify the best locations for new charge points in the Leicester urban area.
f. Better integrate ULEVs into the transport system and investigating innovative new ideas to charge vehicles without a damaging impact on the Grid.
g. Improve the performance of advance driver assistance systems for semi-autonomous vehicles.
h. Support retro-fitting existing vehicles with electric engines

Areas of support:

- Funding to support the field testing/demonstration of vehicles, products or services.
- Engagement with companies involved in low emission vehicle development in the LLEP and neighbouring areas – important to become the centre for the Midlands.
- Funding to install and maintain the infrastructure.
- Assessment of use and effectiveness of vehicles using the infrastructure.

KEY ACTIONS: SUPPORTING INNOVATION TO HELP FACILITATE A STEP CHANGE IN THE USE AND UPTAKE OF ULEVS

Specific actions that will be undertaken by the *GoUltraLo Leicester* Project to support innovation, include:

- ***Vehicle-to-Grid* – Leicester City Council (LCC) to provide trial site(s) to develop a Vehicle-to-Grid (V2G) project in partnership with CENEX to help enable better grid balancing and support demand side management. Match funding may be available via the EU INTERREG Programme, LCC will pilot the use of V2G technology to manage renewably generated electricity and EV charging at one of its facilities. The project will test a business model for incentivising EV uptake by using EV batteries as part of an electricity storage-use-trading system.**
- ***Charging trials utilising existing street furniture* – LCC will investigate the potential for using existing street furniture such as lamp posts for EV charging on the public highway and semi-private areas. A suitable site will be identified to trial this type of charging facility. Provisionally a residents' only parking zone may prove for such a trial.**
- ***Lower Carbon 'Range Extended' Electric Vehicles* (EV's) – Help trial, with our partners, H_2 refuelling technology and the use of hydrogen fuel cell APUs with British Gas and Intelligent Energy. Partners including Intelligent Energy and De Montfort University are active in the development of improved, lower carbon range-extended EVs including hydrogen fuel cell technology and improved engine management systems. Opportunities for trial deployments, and for establishing a hydrogen refuelling capability in or near the City, are being explored.**
- ***Induction Charging* – This technology could play a big part in building consumer confidence by addressing concerns around EV charging and range. Leicester City Council in partnership with MIRA will actively look to identify and support the development of induction charging facilities and offer trialling opportunities for induction charging of electric cars.**
- ***Autonomous Vehicles* – Support research leading towards driverless electric vehicle trials. Potential route identified between Leicester Railway Station and Leicester's Haymarket Bus Station.**
- ***Vehicle Conversion* - For the same reasons as developing and supporting a healthy used ULEV market in Leicester, the same is also true for supporting and developing vehicle conversion technologies. Developing these skills and knowledge will provide demand for the extensive infrastructure network that will be provided as part of the *GoUltraLo Leicester* Project funding and well as developing skills and**

technology to support a growing economy. To this end, the *GoUltraLo Leicester* Project will work with manufacturers, commercial partners, MIRA and the Universities to develop these technologies.

- ***Leicester Air Quality Action Plan:* The_AQAP is the overarching programme for substantially improving local air quality, reducing carbon emissions and promoting sustainable methods of travel in the City of Leicester. The plan aims to reduce the 162 premature deaths each year attributed to air quality.**

MEASURE 16. *Collaborating in trans-national research and development projects*

The *GoUltraLo Leicester* Project will seek to leverage additional public and private capital investment to deliver and maintain additional charge points in the Leicester urban area and support innovation in charging technology, including trialling of induction charging, through the preparation of separate funding bids for national and European funding to support the City's collaboration in trans-national projects, including funding through the European Structural and Investment Funds, Horizon 2020, INTEREG, Smart cities.

KEY ACTIONS TO FACILITATE COLLABORATION IN LOCAL, REGIONAL AND TRANS-NATIONAL PROJECTS SUPPORTING INNOVATION TO HELP FACILITATE A STEP CHANGE IN THE USE AND UPTAKE OF ULEVS

Specific actions that will be undertaken by the *GoUltraLo Leicester* Project to facilitate collaboration in local, regional and trans-national projects supporting innovation and helping to facilitate a step change in the use and uptake of ULEVS, include:

- ***LLEP European Social Infrastructure Fund* – Low Carbon – the City Council is working with the LLEP to develop a_complementary £4.5million ESIF bid to increase the uptake of ULEV's. This will involve linking more with Universities and research organisations to realise new technologies, encouraging entrepreneurship in the emerging sector of zero emission vehicles and providing supporting infrastructure for all ULEV's.**
- **Development of collaborative trans-national projects aimed at promoting the use and uptake of ULEVs, including working with THE ISSUE Meta-Cluster Consortium to develop proposals to the EU's Horizon 2020 Programme.**

PRIORITY 5. MONITORING, EVALUATION AND REVIEW

KEY ISSUES

Monitoring, evaluation and review requires a participative process involving project partners, other key stakeholders, businesses, community groups and the general public. Initiatives today operate in a highly competitive and changing business, technology and community environment, one which requires effective, responsive and well-managed processes and practices to bring about positive change.

The *GoUltraLo Leicester* Project's strategy for monitoring, evaluation and review will be based on an iterative process and essentially formative, participative and developmental. This means a continuous cycle of engagement, monitoring, extracting and reviewing outcomes with stakeholders to reinforce how the project proceeds, monitor progress against milestones and surface emerging indicators of benefits and impact.

Stakeholder consultation is a critically important element of change management. The evaluation and dissemination work undertaken by the *GoUltraLo Leicester* Project will operate hand in hand to engage the appropriate people and partners early on and throughout the work, fostering the kind of cultural shifts required for ULEV uptake and transfer of sustainable new practices.

Quantitative measures will underpin qualitative narratives, which will offer the *GoUltraLo Leicester* Project robust analysis and deep understandings, as well as producing highly insightful and compelling evidence, communications and case studies that can support sharing and understanding of strategies, tactics, procedures and templates.

PROGRAMME OF ACTION

The *GoUltraLo Leicester* Project will focus on two key measures. These are:

Measure 17. ***Delivering a comprehensive monitoring scheme*** **to collect vital information on ULEV uptake, delivery of the supporting infrastructure, use of the infrastructure, air quality data, public and business attitudes and awareness, innovation.**

Measure 18. ***Undertaking a rolling evaluation and review programme*** **to ensure the measures implemented through the** ***GoUltraLo Leicester*** **Project maintain full effectiveness.**

MEASURE 17. *Delivering a comprehensive project monitoring scheme*

A robust project monitoring framework will be developed at the inception stage of the *GoUltraLo Leicester* Project, which will set out the review (diagnostic/baselining), formative (continuous) and summative (final) components of the monitoring, evaluation and review strategy.

The *GoUltraLo Leicester* Project will seek to deepen and share understanding of the interplay between strategy and culture, technology and innovation, and partnerships and policy, in order to develop dissemination materials that foster step-change, behavioural shifts, adoption strategies and uptake of successful approaches to promote ULEV ownership and usage.

KEY ACTIONS TO DELIVER EFFECTIVE PROJECT MONITORING

Specific actions that will be undertaken by the *GoUltraLo Leicester* Project to ensure the project is effectively, include:

- **Developing a robust project monitoring framework at the inception stage of the *GoUltraLo Leicester* Project, which will set out the review (diagnostic/baselining), formative (continuous) and summative (final) components of the monitoring, evaluation and review strategy.**
- **Adopting a participative process to monitoring activities involving project partners, other key stakeholders, businesses, community groups and the general public**
- **Seeking to deepen and share understanding of the interplay between strategy and culture, technology and innovation, and partnerships and policy.**

MEASURE 18. *Undertaking a rolling project evaluation and review programme*

The evaluation element of the *GoUltraLo Leicester* Project is intended to assist the Project to keep track of its key performance indicators, using the tangible metrics specified as well as softer qualitative measures of emerging impact that will emerge in the early consultation period.

This sophisticated methodology will interweave monitoring, evaluation and review into the *GoUltraLo Leicester* Project's programme of action, extracting and responding to evidence and lessons learned before and during the work, rather than measuring only at the end. It will enable the *GoUltraLo Leicester* Project to be able to make 'course corrections' if some measures are not working as expected or when it sees that performance can be better monitored in a different way to suit particular audiences.

The output of the monitoring, evaluation and review work will feed into the *GoUltraLo Leicester* Project's dissemination activities by generating evidence and exemplars that demonstrate and illustrate how Leicester's initiatives are working and potentially be applied in other cities as well. This will help establish Leicester's credibility as an 'Exemplar' and Centre of Excellence for the take-up of ULEVs in local areas. The monitoring, evaluation and review work will also be about gaining a better understanding of both what works and what doesn't, in which contexts, for whom and in what ways. Different audiences may need a different approach and we may not know what that is at the outset.

The outcomes of this work is intended to give OLEV confidence to maintain its support for the Project as well as provide evidence to support future funding opportunities in Europe. It will also provide evidence for proof of concept, quality, benefits and impact that the Project and its partners will be able to use in future funding bids as well as provide evidence of any gaps in support that could be met in future bids for funding from Europe.

KEY ACTIONS TO IMPLEMENT AN EFFECTIVE EVALUATION AND REVIEW PROGRAMME

Specific actions that will be undertaken by the *GoUltraLo Leicester* Project to carry out a rolling programme of project evaluation and review to ensure the programme of action remains effective throughtout the lifetime of the Project, include:

- **Developing a robust evaluation strategy will be based on an iterative process and essentially formative, participative and developmental.**
- **Adopting a continuous cycle of engagement, monitoring, extracting and reviewing outcomes with stakeholders to reinforce how the project proceeds, monitor progress against milestones and surface emerging indicators of benefits and impact**
- **The evaluation and dissemination work undertaken by the *GoUltraLo Leicester* Project will operate hand in hand to engage the appropriate people and partners early on and throughout the work, fostering the kind of cultural shifts required for ULEV uptake and transfer of sustainable new practices**

PRIORITY 6. COMMUNICATION AND DISSEMINATION

KEY ISSUES

An important aspect of the work to be carried out in the ***GoUltraLo Leicester*** Project will be to undertake a range of communication and dissemination activities across all years of the Project. These activities will be closely linked to the monitoring and evaluation work carried out within the Project. The aim being to raise awareness of the Project and promote an exchange of knowledge, best practice and mutual learning between project partners, other key stakeholders and the general public at the local area, as well as with other cities in the UK and across the rest of Europe. It will support the extension of the network of beneficiaries and contributed to awareness rising and establishing communication channels within and outside the Project. These activities will also serve to-demonstrate how the measures implemented by the Project could be rolled out across other cities and regions across the UK and beyond.

PROGRAMME OF ACTION

The ***GoUltraLo Leicester*** Project will deliver the following:

- To establish a project dissemination team and to work closely with those monitoring and evaluating the Project.
- To establish a project website and maintain it on a regular basis.
- To prepare a dissemination activity plan for the activities carried out within the Project and the results obtained from it and to identify the most relevant dissemination tools and actions to reach the target audience and to make sure all the relevant information is transmitted to the stakeholders
- Design the visual identification of the project (project's logo and slide template),
- Effective dissemination of the Project activities to a wide ranging audience, including national and regional programming authorities, Public, European offices, Regional delegations, other Networks and Internal groups and SMEs.
- Communicating and disseminating project outcomes and results, including organising events to share learning.
- Contributing at conferences, seminars and workshops (presentation and posters)

The ***GoUltraLo Leicester*** Project will focus on three key measures to promote the communication and dissemination of key project outcomes and results to other cities across the UK and Europe. These are:

Measure 19. ***Delivering a Communications and Dissemination Strategy***
Measure 20. ***Organising specific dissemination events*** **to share learning with other cities in the UK and Europe**
Measure 21. ***Developing and managing a project website***

MEASURE 19. *Delivering a Communications Plan and Dissemination Strategy*

The ***GoUltraLo Leicester*** Project will prepare a Communications Plan and Dissemination Strategy to disseminate the key outcomes and results of the ***GoUltraLo Leicester*** Project to other cities, public and private organisations across the UK and Europe.

The focus of this work will be on raising awareness of the Project with stakeholders, local authorities, the industry base and the general public. This work will be responsible for the preparation of a Communications Strategy at the beginning of the Project to ensure effective communications throughout the implementation phase.

KEY ACTIONS TO DELIVER AN EFFECTIVE PRIOJECT COMMUNICATIONS AND DISSEMINATION STRATEGY

Specific actions that will be undertaken by the *GoUltraLo Leicester* Project to develop and implement a effective project communications and dissemination strategy, include:

- **To raise awareness of the Project with stakeholders, regional authority planners, commission officials, the industry base and the general public.**
- **To promote and publish the key events and outcomes from the Project.**
- **To establish close liaison with OLEV.**
- **To establish working contacts with OLEV.**
- **To keep the Project Team informed of current and future developments in UK and EU policies and programmes and calls for proposals.**
- **Events to share learning with other local authorities**

MEASURE 20. *Organising specific dissemination events to share learning with other cities in the UK and Europe*

The *GoUltraLo Leicester* Project will organise specific dissemination events to share learning with other cities in the UK and Europe and promote active roll-out of the successful measures delivered by the ***GoUltraLo Leicester*** Project

A key objective will be on-going dissemination of Project activities and results. This work will focus on helping to raise awareness of the Project with stakeholders, local authorities,, the industry base and the general public.

KEY ACTIONS TO DISSEMINTE PROJECT OUTCOMES AND FINDINGS

Specific actions that will be undertaken by the *GoUltraLo Leicester* Project to deliver specific dissemination events to share learning with other cities in the UK and Europe, include:

- **Establishing a Project dissemination team and preparing a Project dissemination activity plan, which included tools and actions for the successful dissemination of the Project**
- **Designing the visual identification of the project (project's logo and slide template)**
- **Delivering the project website and maintaining it on a regular basis**
- **Supporting the extension of the network of beneficiaries**
- **Establishing communication channels within and outside the Project**
- **Presentations on the Project at national and international conferences, seminars and events and the preparation of project posters**

MEASURE 21. *Developing and managing a project website*

An important element of this measure will be to the launch of the Project Website in the first few months of the Project. Developing and managing a project website to publish project information and act as the most important dissemination channel for the GoUltraLo Leicester Project, by building on the existing "Choose How You Move" website. The website will be used both to publish project information and act as a means of communication and knowledge exchange between partners and other stakeholders.

The website will be divided into two sections; a public and private section. The public section will provide a broad overview of the project with its objectives and goals and holds all the information that can be released into the public domain during the Project. This includes general project information, published reports, action plans, news, events, Project newsletters, links to other related projects and organisations and project contact details.

The private section of the website will be password-protected and only accessible to the Partners. This part of the website will provide project participants with a document repository and more detailed information about the Project concept and its achievements. Information in the private section includes meeting minutes, draft documents under development and confidential information relating to the project.

KEY ACTIONS TO DEVELOP AND MAINTAIN A PROJECT WEBSITE

Specific actions that will be undertaken by the *GoUltraLo Leicester* Project to develop and maintain a Project website, include:

- **Building on the existing "Choose How You Move" website to publish project information and act as a means of communication and knowledge exchange between partners and other stakeholders.**

PART THREE - AIR QUALITY IMPROVEMENT

KEY ISSUES

The City of Leicester recognises the importance of improving air quality and also the key role that the accelerated uptake of Ultra Low Emission Vehicles can play in achieving this. The City has a longstanding commitment to improving the health of people in Leicester by reducing air pollution from road traffic emissions and promoting more sustainable forms of transport

The Leicester Air Quality Action Plan sets ambitious targets to help improve local air quality, reduce carbon emissions, promote sustainable travel and bring the City below EU NO_2 thresholds and includes an ambitious programme of measures. The targets include achieving a 50% reduction in CO_2 emissions by 2025[8] and reducing the 162 premature deaths each year attributed to poor air quality. The programme of measures includes the designation of Low Emission and Ultra-Low Emission Zones by 2018 and 2025 respectively. These measures also demonstrate innovative approaches that could be adopted in other cities in the UK and wider across Europe.

The *GoUltraLo Leicester* Project will play an important role, alongside other initiatives such as the Clean Bus Technology Fund and Clean Vehicle Technology Fund to realise the priorities and targets set out in the Action Plan. The Project will also help bring forward compliance with the EU Limit Value for NO_2.

We predict a 2-3 µg/m3 reduction in NO_2 concentrations in the Air Quality Management Area as a result of this project being implemented.

Objective

<u>Context and Commitment to delivery</u>

Air Quality Management Area (AQMA)

Leicester has had an Air Quality Management Area (AQMA) in place since 2000 covering the city centre and key radial routes. The AQMA was declared on the basis of exceedances of the annual mean objectives for nitrogen dioxide (NO_2) that exceed the EU Limit Value, largely as a result of emissions from road traffic.

Leicester has an extensive and robust air quality monitoring network, including two Automatic Urban and Rural Network (AURN) urban stations. The City Council works in partnership with Leicester Universities who are internationally recognised for their knowledge in assessing and evaluating air quality.

The LestAir Project

The LestAir project was set up to build on existing work by the Council to tackle air pollution and identify new solutions. It developed an integrated Preferred Package of measures in the form of a Low Emission Strategy (LES) aimed at reducing emissions from transport activity and contributing to the achievement of air quality objectives. The work done for this Project formed the basis of Leicester's revised Air Quality Action Plan, 2015. The Package comprised four main areas of intervention which were identified as likely to yield cost-effective benefits:

1. Tackling bus emissions (e.g. by introducing gas fuelled buses);
2. Managing freight emissions;
3. Promoting low emission behaviours (*including promotion of electric vehicles*).
4. Council Practice documents on land use planning and procurement

[8] 50% reduction in the amount of carbon emitted through City Council operations by 2025 (2008/09 baseline) and 50% reduction in CO_2 emissions for the City within the scope of influence of local authorities by 2025 (1990 baseline)

Clearly the OLEV scheme is highly relevant to item (3). However, the target for the promotion of ultra-low emission vehicles proposed in the study was a 5% uptake by 2020.At the same time, it was determined that this Preferred Package of measures would not of itself achieve compliance with the nitrogen dioxide Objective. The overall respective reductions in emissions were estimated to be, 14% in NOx, 6 to 8% in particulates and 6 to 8% in CO_2. This leads to the conclusion that there is clearly a gap within the Preferred in the level of intervention regarded as feasible with respect to light vehicles and the uptake of ULEV's. A successful OLEV bid would therefore make a major contribution to Leicester's Air Quality Action Plan.

Leicester's Air Quality Action Plan (AQAP)

Leicester's AQAP puts into effect the Preferred Package of measures identified by the LestAir Project including increased ULEV penetration, capable of reducing emissions of NOx and particulate matter and subsequent concentrations of NO2 and PM2.5. The Leicester Air Quality Action Plan (AQAP) is due to be adopted in November 2015.

Our ambitions by 2025, are set out in Leicester's AQAP (2015-2025) 'Healthier Air for Leicester' consultation draft are:

- To substantially improve people's health and reduce premature deaths by improving air quality.
- To reduce emissions from the Council's fleet operations by 50% by 2025
- For bus, taxi and freight operators to use the cleanest lowest emission vehicles as their first choice for fleet replacement
- To introduce a Low Emission Zone and an Ultra-Low Emission Zone for the most polluting vehicles in the City Centre
- For all land use planning decisions to minimise the need for travel by polluting vehicles
- To deliver Phase II of our 'Connecting Leicester' initiative by 2019 in the city centre to extend pedestrianisation and remove vehicles from where they are not required.
- To double the number of people cycling daily to 26,000 by 2018 and again by 2023

Actions 1, 2, 4, 5 and 13 of Leicester's consultation draft AQAP are all related to the support of uptake of low and ultra-low emission vehicles, including proposals for a Low/Ultra Low Emission Zone

OLEV Go Ultra Low (GUL) City Scheme

The Go Ultra Low City Scheme target of 9% increase in ultra-low emission vehicles is up from a 5% uptake by 2020 proposed in the LestAir study. It will therefore greatly enhance and expedite progress with the LestAir Preferred Package and the LestTAir Advanced Development Scenarios, as set out in the AQAP. The initial assessment carried out in the LestAir project was based on a 3% uptake of EVs between 2011 and 2016. This assessment indicated around a 2% reduction in emissions of NOx in 2016 compared to 2011. The assessment also carried out a basic cost benefit analysis (CBA) and this suggested that the benefit cost ration of the EV measure would be 3.76 and was the 2nd highest ranking measure. These results provided the evidence to encourage the Council to go forward with a Go Ultra Low City bid to support work in this area.

LCC commissioned Ricardo AEA to undertake an emissions assessment of the EV scenarios to support its GUL City Scheme bid. This report includes technical information and modelling scenarios and is included in full in **Appendix M**. This basic assessment of the impacts of this on emissions and air quality in the city are set out in the paragraphs below. The assessment uses the existing LestAir emissions model.

The target set within the bid is an uptake of 10,000 (6,000 in screening phase) light duty vehicles by 2021, which is equivalent to 9.1% of the vehicles registered in Leicester. The national trend, taken from the National Atmospheric Emission inventory (NAEI), is significantly less than this at 0.6% or 660 vehicles locally. Therefore the bid uptake target is a significant acceleration of the expected national trend.

In order to assess the sensitivity of the bid target on improvement on air quality a number of other uptake scenarios have been considered:

- 2016 as a base year from LestAir emissions model
- 2021 Business As Usual (BAU) scenario with no additional EV's apart from the national trend
- 2021 – 4,000 ULEV's or 3.6% of fleet (low uptake);
- 2021 – 6,000 ULEV's or 5.4% of fleet (medium uptake);
- 2021 – 8,000 ULEV's or 7% of fleet (high uptake);
- 2021 – 10,000 ULEV's or 9.1% of fleet (very high uptake) where the funding generates our submission target of 10,000 vehicles by 2021 and will represent a pathway to meeting EU target by 2030
- 2026 BAU as the long term trend with no EV investment, EV vehicles, 4,000, 6,000, 8,000 and 10,000
- 2026 continuing trend from bid – 28,750 vehicles (26% of fleet, another 10,000 vehicles) continues level of uptake same as from 2021 and would put us on a pathway to get to about half of the EU target of 50% urban cars as non-conventional by 2030
- Year 2030 – EV vehicles: 4,000, 6,000, 8,000 and 10,000

The increased ambition within the Go Ultra Low city bid of 10,000 by 2021, increasing to a projected figure of 28,750 by 2026 has been assessed in terms of emissions reduction and potential impact on air quality using the models developed for the LestAir project. The assessment has shown that target uptake of light duty electric vehicles will generate significant further reduction in emissions beyond that estimated by the general renewal of the vehicle fleet. The expected reductions are as follows:

	2021	**2026**
NOx	4%	8%
$PM_{2.5}$	2%	3%
PM_{10}	No real impact	No real impact
CO_2	7%	9%

These emission reductions from the introduction of electric and plugin vehicles will play a particularly important part in reducing emissions from road traffic This benefit will be even more important if the Euro 6 emission standards do not perform in real world, as was seen for Euro 5.

Leicester's Partners.

As part of a successful bid the University of Leicester is keen on the utilisation of state of the art equipment which will permit measurements of the air pollution, in order to assess the ULEIV impact in the Leicester region. One type of such an instrument is the AQMesh:

AQMesh allows air quality to be monitored in-situ and in the exact locations that need to be monitored rather than where equipment can be conveniently positioned. The small lamp post or wall mounted units "pods" are completely wireless, using battery power and cellular communications. AQMesh measures the main air polluting gases and wirelessly communicates data to a cloud network where sophisticated data management algorithms generate highly accurate readings and monitor hardware performance.

As well as roadside monitoring, it is also proposed to install additional air quality monitors (NOx sensors) on EVs in partnership with University of Leicester / De Montfort University / Cenex to provide real time data and deliver smart traffic management to reduce NOX hotspots.

PART FOUR - INNOVATION

KEY ISSUES

One of the long-term objectives of the *GoUltraLo Leicester* Project is to understand how those measures that are implemented successfully in Leicester to promote technological innovation or display an innovative approach can be rolled out across the UK and beyond. The *GoUltraLo Leicester* Project will seek to set precedents and understand how its innovation measures might transfer in the future.

One of the *GoUltraLo Leicester* Project's key objectives is to support research and development designed to accelerate ULEV uptake and grow the local carbon sector, by providing real-world testing opportunities for technologies and business models.

PROGRAMME OF ACTION

The *GoUltraLo Leicester* Project will support an ambitious and exciting programme of innovation that will build on the world-class expertise in low carbon vehicle technology found in the area. It will also support the development of trans-national collaborations, to promote innovation in low carbon vehicle technology, building on the extensive partner network available. This includes *THE ISSUE* network.

In additional to promoting technological innovation, the *GoUltraLo Leicester* Project will also demonstrate a range of innovative approaches in the measures it will adopt to achieve a step-change in ULEV uptake.

Technological and Commercial Innovation

Leicester and Leicestershire have an established and growing network of commercial and academic activity around low emissions, transport technologies and 'intelligent mobility'. The *GoUltraLo Leicester* Project will build on these existing relationships in order to capitalise on the research and development opportunities arising from mass deployment of ULEVs and associated infrastructure. The Project will also seek to work with partners, including those in THE ISSUE Meta-Cluster, to develop potential collaborative proposals with partners across Europe to respond to the opportunities that will arise over the coming years through the European Commission's Horizon 2020 programme, which aims to promote research and innovation in areas such as smart, green integrated transport and low carbon vehicle technology.

The *GoUltraLo Leicester* Project will provide real-world testing opportunities for new and emerging technologies and business models and support the development of collaborative proposals with partners across the UK and in the rest of Europe. The priority will be to support innovations which address the barriers to mass ULEV uptake, both technical and behavioural, and which create growth opportunities for the low carbon sector as outlined in the LLEP's Low Carbon sector growth plan[9].

There are a range of specific research and development opportunities that the *GoUltraLo Leicester* Project will seek to support. The City Council has held detailed discussions with a number of key partners about future collaboration opportunities that will help take forward the objectives of the and position the City of Leicester and an internationally renown centre for ULEV uptake. The range of innovation opportunities the *GoUltraLo Leicester* Project will seek to support, include:

[9] Leicester and Leicestershire Low Carbon Sector Growth Plan. Leicester and Leicestershire Enterprise Partnership, July 2015.

- **Vehicle-to-Grid** – Leicester City Council (LCC) to provide trial site(s) to develop a Vehicle-to-Grid (V2G) project in partnership with Cenex to help enable better grid balancing and support demand side management. Match funding may be available via the EU INTERREG programme, LCC will pilot the use of V2G technology to manage renewably generated electricity and EV charging at one of its facilities. The project will test a business model for incentivising EV uptake by using EV batteries as part of an electricity storage-use-trading system. **Appendix N**

- **Charging trials utilising existing street furniture** – LCC will investigate the potential for using existing street furniture such as lamp posts for EV charging on the public highway and semi-private areas. A suitable site will be identified to trial this type of charging facility. Provisionally a residents' only parking zone may prove for such a trial.

- **Lower Carbon 'Range Extended' Electric Vehicles (EV's)** – Help trial, with our partners, H2 refuelling technology and the use of hydrogen fuel cell auxiliary power units (APUs) with British Gas and Intelligent Energy. Partners including Intelligent Energy and De Montfort University are active in the development of improved, lower carbon range-extended EVs including hydrogen fuel cell technology and improved engine management systems. Opportunities for trial deployments, and for establishing a hydrogen refuelling capability in or near the City, are being explored.

- **Induction Charging** – This technology could play a big part in building consumer confidence by addressing concerns around EV charging and range. Leicester City Council in partnership with MIRA will actively look to identify and support the development of induction charging facilities and offer trialling opportunities for induction charging of electric cars.

- **SELECT** (Selection of Efficient Low Emission City Transport) - A software tool being developed by Loughborough University for sustainable vehicle selection for local authorities using "multi-criteria decision support (MCDS) for fleet vehicle selection". An effective and efficient method for making a collaborative Team based decision to purchase the optimum vehicle. The MCDS can be used in decision making when several alternatives under various parameters compete to be selected as the best one. The decision elements are represented with a systematic process of the analytic hierarchy method to solve decision-making problems. In this technique to arrange the essential rationality, a problem is broken down into the smaller elements in further levels and then pairwise comparison judgments are performed to develop the priorities in each level.

- VESPR (Vehicle Evaluation, Selection and Emission Prediction based on Routing) – The aim of this project is to enhance existing expertise in the above area by making use of a PEMs system to establish and experimentally validate methodology for city bus fuel consumption and emission prediction. This will be used by the local authorities for vehicle selection and traffic management The outcome of the project would be a software tool and measurement procedure for comparing and evaluating different types of vehicles currently on offer to the fleet operators. Vehicle fleet operators have a difficult task of choosing the correct vehicle for their district. There are a vast number of vehicle choices in terms of the type of available technology with many more becoming available. The matter is complicated by additional retrofit technologies each with their own (usually exaggerated) claim for emissions reductions. The methodology has been developed by the APG (Advanced Propulsion Group) at the Loughborough University that is a capable of simulating vehicle CO2, tail pipe emission and fuel consumption of

different vehicles based on measured city drive cycles (terrain, traffic and environmental conditions).

- **Autonomous Vehicles** – Leicester City Council is in discussion with De Montfort University and its partners in the Transport Catapult-funded project IMPART with a view to identifying a 'short-hop' city centre route for research relating to autonomous and driverless vehicle technologies. The research will not, at this stage, directly test autonomous vehicles on Leicester's roads. Rather, it will employ a range of monitoring equipment both at the roadside and fitted to conventional vehicles to 'map' the features of a selected route – a necessary step towards autonomous vehicle development and possible future testing. Whilst not directly delivering additional ULEV registrations in the city, the research would generate significant media coverage and public interest in new technologies which we would expect to boost consumer interest in ULEVs. The research would also create new opportunities for SME technology firms in the region: for example those developing vehicle and transport instrumentation.

Innovative Approaches to ULEV Uptake

Drawing upon lessons learned and research elsewhere, along with communications, marketing and behavioural expertise amongst the project partners, the *GoUltraLo Leicester* Project will implement a programme of measures that will demonstrate an innovative approach to achieving a step-change in ULEV uptake. These include:

- **Salary Sacrifice Scheme** – LCC's scheme addresses the cost barrier through the tax-efficient leasing arrangement. This scheme will also create consumer confidence in the technology through the legitimacy of an established scheme with a track record, endorsed by the employer. In an innovative extension of the salary sacrifice concept, Leicester will bring these benefits to employees of organisations without an established scheme. Smaller employers, for whom it wouldn't be viable to set up their own scheme, will instead be offered the chance to affiliate to the Council's scheme. This represents a new and innovative business model for salary sacrifice with the potential to reach many more people and to help create a 'community' of EV users spanning the Council and other employers.

- **Schools** offer a potentially highly effective means of reaching households and communities. Leicester will use its established schools environmental programme to do this. Working through the Council's Environmental Education Co-ordinator and the University of Leicester's science outreach, an education and outreach programme will be developed and delivered in 90 schools. The programme will offer curriculum activities, projects and out-of-school activities around air quality, travel and new technologies linked to information and ULEV demonstrations at school fun days, parents' evenings and similar events.

- **Driver Days** – Leicester has an established programme of New Driver Days. Building on this programme, we will offer new drivers and their parents the opportunity to see and test drive ULEV models and to ask questions.

- **Used ULEV Market** – Realistically, there are many Leicester households who will not be in the market for a new vehicle, but who may aspire to drive a low emissions car. Working with local dealerships and commercial partners we will support the development of a healthy used ULEV market focused in Leicester.

- **Vehicle Conversion** – For the same reasons as developing and supporting a healthy used ULEV market in Leicester we believe the same is true for supporting and developing vehicle conversion technologies. Developing these skills and knowledge will provide demand for the extensive infrastructure network that we will provide as part of the Go Ultra Low City Scheme funding. This will also develop skills and technology to support a growing economy. To this end we will work with manufacturers, commercial partners, MIRA and the Universities to develop these technologies.

PART FIVE - MONITORING

KEY ISSUES

The *GoUltraLo Leicester* Project will monitor, evaluate and review the programme of measures that will be implemented. A monitoring, evaluation and review strategy will be developed and taken forward that, includes agreed trigger points for the release of funds. This will provide a clear demonstration to OLEV about how the package of measures is being delivered and the impact they are having in the Leicester urban area.

Evidence will inform the decision making processes throughout the life of the Project. This will enable the Project to refocus and reallocate funding, where necessary, to support and extend the most successful measures. This approach provides the Project with the ability to use the flexibility of the City Scheme funding to promote successful initiatives, refocus or curtail others, to maximise uptake in the most cost efficient way.

The Project's monitoring and evaluation programme will be based on measuring the following:

ULEV uptake

- New ULEV registrations in Leicester and Leicestershire (DVLA Quarterly data)
- New ULEV registrations by Leicester City Council, its partners and others as a direct result of this project (LCC & partners)
- Used ULEV sales (Local Dealerships/Vouchers used)
- Purchase through Salary Sacrifice Scheme (LCC & partners)

Infrastructure Delivery – Number of charge points installed

- Database of funded installations through the OLEV City Scheme
  - Car parks – Publicly accessible car parks (LCC & partners)
  - Public Highway – Publicly accessible (LCC & LeicsCC)
  - Public Highway – 'Residents Only' parking zones (LCC & LeicsCC)
  - Private areas – Workplace car parks (LCC & partners)
  - Private areas – Residential in shared areas i.e. flats (LCC & partners)
  - Private residents (LCC/Local Dealerships)
- Records of council installations (LCC / LeicsCC / District Councils)
- Installations funded through ULEV purchase (Local Dealerships)

Infrastructure use – Charging point use, frequency & electricity consumption

- Car parks – Publicly accessible car parks (LCC & partners)
- Public Highway – Publicly accessible (LCC & LeicsCC)
- Public Highway – 'Residents Only' parking zones (LCC & LeicsCC)
- Private areas – Workplace car parks (LCC & partners)
- Private areas – Residential in shared areas i.e. flats (LCC & partners)
- Private residents (LCC via questionnaires issued through local dealerships)

ULEV Car Clubs – Established in Leicester and Leicestershire

- Vehicle numbers
- Usage data

Attitude Surveys – Local

- Feedback from Local Dealerships
- Salary Sacrifice enquires (LCC & partners)
- Employer/employee questionnaires (LCC & partners)
- Event questionnaires i.e. Leicester Motor Show, etc. (LCC & partners)

Air Quality

- Data from Air Quality Monitoring Stations in Leicester City (LCC)
- Develop a robust and extensive ambient air quality monitoring and modelling programme (LCC/ University of Leicester / De Montfort University)
- Installation of NOx sensors on new EVs in Leicester to provide real time data and deliver smart traffic management to reduce NOX hotspots (University of Leicester / Cenex / LCC)
- Develop live pollution map based on inside and outside car data in partnership with University of Leicester and Cenex.

Innovation

- Data from the development of Vehicle-to-Grid (V2G) project to help enable better grid balancing and support demand management (LCC / Cenex)
- Data from the support of a trial of hydrogen fuel cell range extenders (Intelligent Energy/LCC)
- Data from the support of pre-trial research into the feasibility of a trial of driverless electric vehicles (IMPART Project partners including De Montfort University, with LCC)
- Supporting the development of induction charging facilities including site identification and data from subsequent trial of the technology

Business Network and Training Programme

- This is a well-established scheme currently operated under the Local Sustainable Travel Fund (LSTF). We will continue to support and built on this successful initiative with a programme of ULEV Events over the next 5 years (LCC / Go Travel Solutions). This will provide information and feedback on the:
    - Attitudes to ULEV uptake
    - Attitudes to perceived and remaining barriers to ULEV uptake
    - Economic benefits of ULEV uptake, including apprenticeship schemes
    - Effect on tourism (including sports)
    - Anticipated health benefits (cost savings to health services) for the residents of Leicester
- Vouchers issued and redeemed under the 'Business Network' incentive programme to purchase a ULEV (Local Dealerships)

Education and Awareness Programme

- Questionnaires following each visit to the 90 schools and 200 Community Events under this programme in 5 years (LCC / University of Leicester). This will provide information and feedback on the:
    - Attitudes to ULEV uptake
    - Attitudes to perceived and remaining barriers to ULEV uptake
    - Economic benefits of ULEV uptake, including apprenticeship schemes
    - Effect on tourism (including sports)
    - Anticipated health benefits (cost savings to health services) for the residents of Leicester
- Vouchers issued and redeemed under the 'Education and Awareness' incentive programme to purchase a ULEV (Local Dealerships)

Supporting Local Training and Employment (Apprenticeship) Programme

- Students enrolled on this programme annually (Apprenticeship Co-ordinator / Leicester College / Stephenson College / Hinckley College / MIRA)

PART SIX – BECOMING AN EXEMPLAR

INTRODUCTION

The package of measures contained within the ***GoUltraLo Leicester*** Project proposal provide the right balance of actions to deliver a rapid and significant step-change increase in ULEV adoption in the Leicester urban area. The strong commitment of Leicester City Council and its partners to deliver the key objectives, outputs and outcomes set out in this document will ensure this change is rapid and so significant that other cities around the world take notice. With the support and commitment of the area's world-class expertise in alternative fuels, low carbon transport and low carbon vehicle technology, Leicester will be able to do things with ULEV transport that have been done in only a few places globally. This will enable Leicester to compete with the best examples around the world and be recognised as an internationally outstanding example for the adoption of ULEVs in a local area.

We believe that our proposal will deliver 'a game changing' uptake of ULEVs in our area. This will be supported by a comprehensive package of measures to support the users and breakdown perceived and actual barrier to uptake. Our Monitoring & Evaluation Strategy will provide us with comprehensive data sets to allow us to focus on successful initiatives to drive the project forward and to provide a sound evidence base to feed into our Dissemination Strategy.

OBJECTIVES

- To achieve ULEV take-up that compares with and exceeds other exemplar cities around the world.
- Consult on proposals for an Ultra Low Emission Zone in Leicester as part of Air Quality Action Plan Consultation (2015).
- To work with partners in the UK and Europe to develop and trial a range of interventions, options, incentives and a methodology 'tool kit'.
- Dissemination Strategy

Leicester City Council, as lead authority, is fully committed to the project. The City Mayor, Sir Peter Soulsby, is fully supportive of the project and is committed to delivering all the elements covered by the bid.

LEICESTER CITY COUNCIL'S COMMITMENT

The early adoption of ULEV's supports Leicester City Council's long term strategy for the city and a successful bid(s) to Go Ultra Low Schemes (City, Taxi and Bus) will be a significant accelerator to our plans including revoking Air Quality Management Areas (AQMA). As such Leicester City Council is fully committing to this bid.

In summary Leicester City Council will support the project by:

The purchase of ULEV

Leicester City Council has recently completed its 2015 fleet review and it has the commitment and ability to the purchase 200 ULEV for its fleet while reducing the fleet from 800 to 600 vehicles by 2021 (See appendix xx – Briefing paper to City Mayor). This will ensure that Leicester is on the right path to achieving ULEV take-up that compares with and exceeds other exemplar cities in the UK, Europe and around the world. **The purchase of 200 ULEV** into its own fleet by 2021

- 110 by 2017/18 **(£2.16m – 100% funded by LCC)**
- 90 from 2018/19 to 2020/21 **(£2.26m – 100% funded by LCC)**

LCC's ULEV 'Salary Sacrifice' Scheme

Leicester City Council's has an existing and unique ULEV 'Salary Sacrifice Scheme'. This scheme with expanded, including additional incentives to ULEV uptake, of LCC's existing and unique scheme **(£350k – 100% funded by LCC)**

- **Other incentives** – As detailed in the proposal **(£1.1m – LCC Match Funding)**

Roll out of LCC's ULEV 'Salary Sacrifice' Scheme

This scheme is ready to roll out to other local authorities, businesses, etc. The dissemination of this scheme will remove a significant barrier to ULEV uptake to a significant number of employees.

Ultra-Low Emission Zone (ULEZ)

Leicester has already consulted on proposals for an Ultra-Low Emission Zone (ULEZ) in Leicester as part of our Air Quality Action Plan Consultation (2015)

Air Quality Improvement – Modelling

The preliminary modelling of vehicle emissions indicates that the actions within the bid will lead to measurable reductions of air pollution in Leicester.

Air Quality Improvement – Monitoring

The University of Leicester and De Montfort University are internationally recognised authorities on air pollution issues and will assist in the assessment of air quality benefits arising from the Go Ultra Low Project.

Leicester & Leicestershire Enterprise Partnership (LLEP)

Encourage and facilitate knowledge transfer associated with LLEP supported Technology Park (MIRA)

European funding

Leicester will seek Horizon 2020 European funding to support and promote the Go ULEV project by building on the partnerships and knowledge gained as lead member of THE ISSUE (Traffic Health Environment – Intelligent Solutions for Sustaining Urban Economies) http://www.theissue.eu/en to develop the Smart, Green Integrated Transport Challenge in partnership with our 13 European partners from four regional research clusters - each regional cluster includes representatives from universities/research institutions, business, and regional/local government.

This commitment will have the effect of:

- Propelling Leicester City Council (LCC) into an exemplar city for ULEV uptake into its existing fleet.
- Providing LCC with the moral authority, knowledge and real life experience of managing a ULEV to disseminate to all interested parties.
- The ability to break down actual barriers to general ULEV uptake including other public authorities (Fleets and employees), business (fleets and employees), regular commuters, community groups and the general public

Partners: Leicester & Leicestershire Local Enterprise Partnership, Leicestershire County Council, Leicester NHS, Leicester University, De Montfort University, British Gas, Pick Everards, Scottish & Southern Electricity (SSE), PepsiCo, NCP, John Lewis, Next, Walkers Crisps, Royal Mail, Marks & Spencers, Hoteliers, Leicester Tigers, Leicester City FC, Leicestershire County Cricket Club, Arriva, First Bus, Centrebus, Fire Service, Police

Authority, Cenex in partnership with Bosch, MIRA, eCar Club, Co-Wheels, Go Travel Solutions and Leicester College.

Partnerships with the Private Sector

Confirmed and potential project partners include, Leicester & Leicestershire Local Enterprise Partnership, British Gas, Scottish & Southern Electricity (SSE), NCP, John Lewis, Next, Walkers Crisps, Pick Everards, Royal Mail, Marks & Spencers, Hoteliers, Leicester Tigers, Leicester City FC, Leicestershire County Cricket Club, Arriva, First Bus, Centrebus, Cenex in partnership with Bosch, MIRA, eCar Club, Co-Wheels, and with the Not for Profit sector

The range of potential interventions, options, incentives and innovations are summarised throughout this document. We would seek to develop all these with various partners and disseminate our results and experience to other UK and European groups/cities.

In discussions with our partners we believe our projections for uptake are feasible and realistic and that partners will commit to making significant investments in ULEVs for their fleets and employees. It is expected that this will act as a catalyst and raise the profile of ULEVs in Leicester & Leicestershire that will lead to significant interest in investing in ULEVs from other public organisations, businesses and the general public through an effective communication strategy. We will ensure that none of our proposals constitute State Aid.

Conclusion

The strength of this project is its clear project goal, identified priority action areas and outcomes combined with a commitment to deliver from all elements of the bid from Leicester City Council. This therefore provides all the building blocks needed to deliver and maintain an 'Exemplar' project.

PART SEVEN – LINKING WITH OTHER SCHEMES

The Go Ultra Low City Scheme Project will be part of an integrated programme of initiatives and will link with the objectives of the Go Ultra Low (CITY, TAXI and Bus) Schemes:

OLEV Go Ultra Low (CITY, TAXI and Bus) Schemes
The OLEV 'Go Ultra Low' schemes provide Leicester City Council with the perfect opportunity to accelerate its existing plans for ULEV uptake and become an exemplar by delivering a package of measure that will gain national and European recognition.

To this end Leicester City Council, as lead authority, has put together with its partners an extensive package of measures to deliver this ambition.

Taxi Scheme: Recognising many taxi / private hire journeys either originate or terminate out of the "City", it was decided a joint submission from all of the Leicestershire based Councils was required. Although our bid for Energy Savings Trust feasibility study funding was unsuccessful, all partners have contributed to a £30,000 study, currently being undertaken by the Low Emission Strategies Ltd. consultancy. It is hope a delivery phase funding bid will be submitted in the New Year.

Bus Scheme: One or more of our bus companies may be applying for the OLEV Bus Scheme funding as a result of:

- The introduction in 2017 of a bus Low Emission Zone as outlined in the draft AQAP
- A DEFRA funded feasibility study on gas buses
- A Voluntary Quality Bus Partnership agreement relating to the new Haymarket Bus Station that opens in March 2016

Plugged in Places (2011 to 2013)
This project involved installing charging-points in Leicester. The total budget of the project was £220,000, of which the city council contributed some £55,000, with the remainder of the project funding coming from the Government and other partners.

Air Quality Capital Grant Fund 2014-15 (Defra)
Gas Bus Feasibility Study
Road space reallocation Scheme

Clean Vehicle Technology Fund 2014 (DfT) – Retrofit 5 Centrebus Euro III buses with SCRT systems

Clean Bus Technology Fund 2013 (DfT) – Retrofit of 34 Arriva double deck Euro III buses with SCRT systems

Leicester Bus Study TRL 2013 (Defra) – In 2011/12, this Study identified buses as contributing over 40% of NOx emissions in key pollution hotspots

Local Sustainable Transport Fund (LSTF)
This proposal links with our established LSTF initiatives and networks including:

- Grants for businesses
- Wheels to Work scheme
- Sustainable Travel Challenge which issues reward points for traveling sustainably
- Business travel networks
- Sustainable travel training workshops
- Sustainable travel roadshows
- 'Choose How You Move' the Travel Portal for Leicester and Leicestershire
- Travel training workshops run with Job Centres to give information on affordable travel

- Personalised Travel Planning and MyPTP (on-line business travel planning) programmes to incorporate information on electric vehicle
- Cycle and scooter maintenance training
- Bike-It community programmes

Development of Smart Ticketing
There will be an extension of current Smart ticket development (Leicester's 'One Card') to incorporate EV car club and access to charging infrastructure into One Card

Local Pinch Point Fund (DfT Oct 2013)
Leicester City Centre Bus Improvement Scheme (Haymarket Bus Station redevelopment). Currently under construction

Park and Ride
Building on and expanding our existing charging facilities at park and ride sites and looking to introduce hybrid and/or electric park and ride buses, with charging for cars, cycles and buses.

eCar Club development
This is in association with City and County Councils, Pick Everard, British Gas, University of Leicester and De Montfort University

PART EIGHT - PROJECT FUNDING

INTRODUCTION

The *GoUltraLo Leicester* Project is seeking a total of £11.7 million from the Office for Low Emission Vehicles (OLEV) to help deliver an innovative and ambitious five year programme of measures that will transform the local plug-in car market in the Leicester urban area and achieve a step-change in the uptake of Ultra-Low Emission Vehicles (ULEVs) as well as support business growth and new jobs. The OLEV funding will be matched by a commitment to invest over £5.9 million from Leicester City Council and over £12 million in potential partner match funding. Table 2 sets out the Project Funding Summary for the *GoUltraLo Leicester* Project.

Scalability and flexibility

The GoUltraLo Leicester project has been designed to be both flexible and scalable.

Flexible
The initiative monitoring, evaluation and review methodology provides the evidence needed to make informed decisions in relation to initiative success, or otherwise, and how we are achieving our project priority – ULEV uptake. Benefit v Cost will be a major factor in prioritising, expanding and if necessary curtailing our initiatives.

Scalable
The project has been designed to be modular, allowing easy removal, or size alteration, of each module depending on the funding available. The value of each module, on ULEV uptake, has been designed to allow us to quickly alter the composition of the project.

Increase in Funding
If additional funding were available we would look to expand and accelerate our 'Raising Consumer Awareness and Acceptance of ULEVs' programme. We believe this will be a key factor in convincing consumers that the purchase or lease of ULEVs is now a viable option to the purchase of diesel / petrol powered vehicles.

Reduction in Funding
If funding is scaled back initially we would reassess the phasing of our infrastructure implementation programme. An extensive list of charge point locations across the city area has been identified. This comprises of a variety of strategic and 'destination' locations combined with charge point numbers and proposed power ratings (7kw / 22kw / 43kw or 45kw). The total cost for the purchase and installation of this is c. £8.3m.

We can scale down the infrastructure programme, by taking account of one or more of the following criteria:

- Our priority is to promote ULEVs amongst city centre commuters, to assist with improving air quality. Thus we would further prioritise city centre car parks identified as popular with commuters and remove other sites
- Or reduce charge point numbers at selected sites
- Or reduce the number of rapid charge point where they have been proposed

Our provisional programme to implement the charging points could also be extended to seven years (with years six and seven supported by other funds. H2020, ERDF, City Council Capital Programme bid for example).

The effect of reduced funding on our programme will also depend on the level of engagement from our partners, which includes the amount of match funding they can offer.

Table 2 *GoUltraLo Leicester* Project Funding Summary (See Appendix P for full 5 year breakdown)

Go Ultra Low City Scheme bid – Total Project Funding		
Project initiatives **Phase 1 (2015 to 2021)**	**Total**	**Financial & Explanatory Notes**
Uptake Strategy of ULEV	10,000	Government Scheme in place - Maximum contribution off purchase price (£5000 car or £8000 van or 10%)
Leicester City Council (LCC) Fleet Review - Early uptake of ULEVs into LCC fleet	200	ULEV uptake scheduled for 2018/19, 2019/20 & 2020/21 is dependent on technological advances for transit sized vehicles and successful bid to our Fleet Board.
110 Vehicles identified through in LCC Fleet Review 2015 (Delivered 2015/16 to 2017/18)	**£2,345,000**	**LCC contribution** Gross cost: Prudential borrowing costs including interest (over a 12 year period)
90 Vehicles to be identified in LCC Fleet Review 2018 (To be delivered 2018/19 to 2020/21)	**£2,445,000**	**LCC contribution** Gross cost (predicted): Prudential borrowing costs including interest (over a 12 year period)
Used Market (up to 500 ULEV) - Purchase support incentive	£750,000	Up to 500 Used ULEV - Maximum contribution to purchase of up to £1,500 or 10% ULEV purchase price. 100% funded by City Scheme bid.
Infrastructure Strategy		
Charge Points - A 'game changing' increase in the number of charge points. It includes • 10,000 associated with uptake 'origin' including fleet, workplace and residential • 800 in publicly accessible areas – 500 in the first three years with another 300 in the following two years)	£7,030,000	Of these 800 publicly accessible charge points; 500 have already been identified. Our developing infrastructure delivery plan current estimates these 800 charge points will be made up of 520 x 7kw, 240 x 22kw and 40 x (43kw/50kw) Rapid. 100% funded by City Scheme bid.
Charge Points – Workplace 'destination'	£710,000	100% funded by City Scheme bid.
Charge Points – Residential 'shared' private	£360,000	100% funded by City Scheme bid.
Charge Points - to support Used purchase	£500,000	To mirror the Government scheme for new purchase, i.e. up to £1000. 100% funded by City Scheme bid.
Electric Sub-Station - Provision or Upgrade (Western Power)	£240,000	Additional sub-stations and upgrades are required following consultations with Western Power. Full details are not yet known and are subject to detailed site survey. 100% funded by City Scheme bid.
Incentives available to the public		
Free ULEV parking in LCC car parks (loss of income to LCC)	£343,000	Loss of income from car parking revenue budget. 50% funded by LCC and 50% by City Scheme bid

Free Electricity in LCC car parks		100% funded by LCC and 50%% by City Scheme bid
Incentives available to LCC staff		
Salary Sacrifice Scheme ULEV purchase and parking – NI contributions reinvested in project	£350,000	Saving to be reinvested to encourage ULEV uptake. 100% funded by LCC.
Education and Awareness		
Education and awareness programme (90 Schools and 200 Community Events in 5 years) including an incentive of £100 Voucher off the purchase of a ULEV at participating dealerships	£326,500	Environment Section proposal in conjunction with the University of Leicester (Outreach Activity). 100% funded by City Scheme bid. Education programme £272,500 Voucher incentive £54,000
Apprenticeship/Engineering training programme for the maintenance and support of ULEVs	£272,500	Contact: Tracy Waterfield (Mike Dalzell) for Apprenticeship programme. Leicester College, Stevenson College, Hinckley College with MIRA. 50% funded by City Scheme bid and 50% funded through employers' sponsorship/LLEP funds or LCC.
Wheels to Work programme	£124,000	This is well-established scheme operated by Melton Borough Council across Leicester and Leicestershire. A pool of 45 push bikes, electric bikes and scooters is already owned by the City Council. Total cost £124,000 (£80,000 operating cost and £44,000 fleet renewal costs) 50% of fleet will need renewing in March 2017 and the remaining 50% in March 2018.
Business travel networks and training	£175,000	Well-established scheme operated by Go Travel Solutions across Leicester and Leicestershire. 50% funded by LCC / 50% funded by City Scheme bid.
Marketing Campaign		
Branded Marketing Campaign under the 'Choose How You Move Banner' to encourage uptake and addresses perceived barriers	£265,000	Sandstar have undertaken initial brief and marketing ideas. Next stage 100% funded by City Scheme bid.
Marketing Events Strategy. Attendance and promotion at business and public events.	£210,000	Promoting ULEV at local public events (e.g. Leicester Motor Show) and business events (e.g. PepsiCo). Future years 100% funded by City Scheme bid.
Promotion of e-car club and engagement for further rollout in the city/PUA as an alternative to owning a car/second car	£50,000	50% funded by LCC / 50% funded by City Scheme bid.
'Choose How You Move' (CHYM) Travel Portal	£200,000	Disseminate ULEV information and events through this well established Portal. Total £200,000 (£120,000 staff time, £40,000 maintenance and marketing costs and £40,000 contract renewal costs). Contribution to the development and maintenance of the Portal. Officer time 50% funded by LCC and Local growth Fund (LGF) and 50% by City Scheme bid. Plus maintenance costs to operators
Innovation & Research		

Vehicle to Grid Project*	£60,000	Via LCC Fleet Review. 100% funded by LCC.
Hydrogen refuelling/fuel cell Auxiliary Power Units (APU's) trial	£3,000	100% funded by LCC
Automated driverless electric vehicular trials	£3,000	100% funded by LCC
Monitoring		
Air Quality – effects of ULEV uptake	£132,500	LCC match funding contribution from Transport Strategy Revenue Budget (Jolanta and Ricardo AEA). 100% funded by LCC.
Project Management and OLEV Scheme Design and Delivery		
Project Manager	£262,500	50% funded by LCC / 50% funded by City Scheme bid. LCC match funding contribution from Capital Programme (AQAP) - bid required
Consultant support	£20,000	Cenex and LES. 100% funded by LCC.
Car Parking processing, enforcement and software development	£134,000	50% funded by LCC / 50% funded by City Scheme bid. LCC match funding from Capital Programme (AQAP) - bid required. Office funded from Highway Management Revenue budget.
Implementation and delivery team	£350,000	50% funded by LCC / 50% funded by City Scheme bid. LCC match funding from Capital Programme (AQAP) - bid required. CR funded from Transport Strategy Revenue Budget.
TOTAL	**£17,661,000**	

Go Ultra Low City Scheme bid - LCC Match Funding

Go Ultra Low City Scheme bid - LCC Match Funding		
Project initiatives **Phase 1 (2015 to 2021)**	**Total**	**Financial & Explanatory Notes**
Uptake Strategy of ULEV		
Leicester City Council (LCC) Fleet Review - Early uptake of ULEVs into LCC fleet	200	ULEV uptake scheduled for 2018/19, 2019/20 & 2020/21 are not identified in current review. These will be subject to our next fleet review.
110 Vehicles identified through in LCC Fleet Review 2015 (Delivered 2015/16 to 2017/18)	**£2,155,000**	**LCC contribution** Gross cost: Prudential borrowing costs including interest (over a 12 year period)
90 Vehicles to be identified in LCC Fleet Review 2018 (To be delivered 2018/19 to 2020/21)	**£2,265,000**	**LCC contribution** Gross cost (predicted): Prudential borrowing costs including interest (over a 12 year period)

Incentives available to the public		
Free ULEV parking in LCC car parks (Loss of income to LCC)	£171,500	Loss of income from car parking revenue budget. 50% funded by LCC and 50%% by City Scheme bid
Free Electricity in LCC car parks		100% funded by LCC.
Incentives available to LCC staff		
Salary Sacrifice Scheme ULEV purchase and parking – NI contributions reinvested in project	£350,000	Saving to be reinvested to encourage ULEV uptake. 100% funded by LCC.
Education and Awareness		
Education and awareness programme (90 Schools and 200 Community Events in 5 years) including an incentive of £100 Voucher off the purchase of a ULEV at participating dealerships	£0	Environment Section proposal in conjunction with the University of Leicester (Outreach Activity). 100% funded by City Scheme bid. Education programme £272,500 Voucher incentive £54,000
Apprenticeship/Engineering training programme for the maintenance and support of ULEVs	£136,250	Contact: Tracy Waterfield (Mike Dalzell) for Apprenticeship programme. Leicester College, Stevenson College, Hinckley College with MIRA. 50% funded by City Scheme bid and 50% funded through employers' sponsorship/LLEP funds or LCC.
Wheels to Work programme	£62,000	This is well-established scheme operated by Melton Borough Council across Leicester and Leicestershire. A pool of 45 push bikes electric bikes and scooters is already owned by the City Council. Total cost £124,000 (£80,000 operating cost and £44,000 fleet renewal costs) 50% of fleet will need renewing in March 2017 and the remaining 50% in March 2018.
Business travel networks and training	£87,500	Well-established scheme operated by Go Travel Solutions across Leicester and Leicestershire. 50% funded by LCC / 50% funded by City Scheme bid.
Marketing Campaign		
Branded Marketing Campaign to encourage uptake and addresses perceived barriers	£0	Sandstar have undertaken an initial brief and marketing ideas. Next stage 100% funded by City Scheme bid.
Marketing Events Strategy Attendance and promotion at business and public events.	£0	Promoting ULEV at local public events (e.g. Leicester Motor Show) and business events (e.g. PepsiCo). Future years 100% funded by City Scheme bid.
Promotion of e-car club and engagement for further rollout in the city/PUA as an alternative to owning a car/second car	£25,000	50% funded by LCC / 50% funded by City Scheme bid.
'Choose How You Move' (CHYM) Travel Portal	£100,000	Disseminate ULEV information and events through this well established Portal. Total £200,000 (£120,000 staff time, £40,000 maintenance and marketing costs and £40,000 contract renewal costs). Contribution to the development and maintenance of the Portal. Officer time 50% funded by LCC and LGF and 50% by

		City Scheme bid. Plus maintenance costs to operators
Innovation & Research		
Vehicle to Grid Project*	£60,000	Via LCC Fleet Review. 100% funded by LCC.
Hydrogen refuelling/fuel cell Auxiliary Power Units (APU's) trial	£3,000	100% funded by LCC
Automated driverless electric vehicular trials	£3,000	100% funded by LCC
Monitoring		
Air Quality – effects of ULEV uptake	£132,500	LCC match funding contribution from Transport Strategy Revenue Budget (Jolanta and Ricardo AEA). 100% funded by LCC.
Project Management and OLEV Scheme Design and Delivery		
Project Manager	£131,250	50% funded by LCC / 50% funded by City Scheme bid. LCC match funding contribution from Capital Programme (AQAP) - bid required
Consultant support	£20,000	Cenex and LES. 100% funded by LCC.
Car Parking processing, enforcement and software development	£67,000	50% funded by LCC / 50% funded by City Scheme bid. LCC match funding from Capital Programme (AQAP) - bid required. Office funded from Highway Management Revenue budget.
Implementation and delivery team	£175,000	50% funded by LCC / 50% funded by City Scheme bid. LCC match funding from Capital Programme (AQAP) - bid required. CR funded from Transport Strategy Revenue Budget.
TOTAL	**£5,944,000**	

Go Ultra Low City Scheme bid - Partner Match Funding

Go Ultra Low City Scheme bid - Partner Match Funding		
Project initiatives **Phase 1 (2015 to 2021)**	**Total**	**Financial & Explanatory Notes**
Uptake		
"County Fleet Managers Group" which includes the Leicestershire County Council and the seven district councils to review fleet composition and look into replacement of vehicles with ULEV.		This group is currently identifying vehicles from their combined fleet of 1440 that can be replaced by ULEV's. A target of **150** vehicles has been discussed for replacement by 2025.
British Gas – Fleet purchase of ULEV into their Leicester fleet		
Infrastructure		

British Gas – Match funding towards Infrastructure/Charging points		
Leicester and Leicestershire Enterprise Partnership (LLEP)		
LLEP - Call PA4 Low Carbon (£15m)		
Energy efficiency and retrofit infrastructure programme	£7,000,000	This Call could be used as match funding. Supported in principle by LLEP
Low emission vehicle development, infrastructure and low carbon	£4,500,000	This Call could be used as match funding. Supported in principle by LLEP
Education and Awareness		
University of Leicester – Staff and resource contribution towards education and awareness programme	£50,000	This figure will increase if the University is successful in bids to the Royal Society for Chemistry and others for a Clean-Tech outreach programme in specific secondary schools
Marketing Campaign		
Tusker – Contribution to branded Marketing Campaign to business and the public to encourage uptake and addresses perceived barriers	£50,000	
Innovation and development of new low emission technologies		
Leicester and Leicestershire Enterprise Partnership (LLEP)	£500,000	
EU INTERREG*	£60,000	
MIRA		
TOTAL	**£12,160,000**	

*Awaiting decision from EU on Funding

PART NINE – STATE AID

Summary of our legal advice

Introduction
The City Council is under a number of statutory requirements to work towards achieving cleaner air; as part of the State's response to achieving the improvement of Air Quality pursuant to the EU Directive on Air Quality. Further; the current general power of competence (s1 Localism Act 2011) includes provision for its exercise for the economic, social and environmental well-being of an authority's area.

The City Council considers that it is good practice to consider whether any aspect of our developing proposal for bidding for the Office of Low Emission Vehicles (OLEV) Go Ultra Low City Scheme funding, Taxi and Bus funding would constitute State aid. Legal Services have advised project officers concerning this question and, in summary, based on the information provided during the preparation of the bid and in the submission, in principle it is considered that the proposed grants to businesses will not constitute State aid provided certain safeguards are built into the terms of the grant. These are dealt with by inclusion of the following terms upon which the grant is available to the City Council:

i) That the infrastructure equipment (charge points) to be fitted should be such as is approved by the Council in order to achieve specified criteria (set out in the grant) in order to ensure it achieves the required level of contribution towards improving air quality.
ii) That fitted equipment (charge point) should continue to operate for five years in order to secure the full benefit of the equipment in its contribution towards improving air quality.
iii) That in the event i) and ii) are not complied with provision will be included to ensure that the grant is reclaimable and repaid on a pro-rata basis together with any additional value arising from the improvement.
iv) That there be open book provisions to enable adjustment of the grant if the financial case changes.
v) That the infrastructure equipment (charge points) and operating data be open to inspection to ensure that purposes of the grant are being adhered to.
vi) If it is found to be State aid, (following a determination by a court) that the grant be repayable.

To constitute State aid, the relevant EU rules require that all four questions below have to be answered as: 'Yes'. In this case, only one question answers as 'yes' and therefore we are content that this proposal does not constitute State aid within the meaning of the Treaty.

1. Is the assistance granted by the state or through state resources?
'Yes' in terms of both OLEV (DfT) and LCC involvement. It should be noted that there are circumstances where government interventions are necessary for a well-functioning and equitable economy. There are 'horizontal rules' aimed at solving problems that may arise in any industry and country. This project aims to reduce air pollution from traffic and its related illnesses; as well as helping to reduce traffic related carbon emissions. This project may also come under one of these other categories.

2. Does the assistance give a selective advantage to one or more undertakings over others?
'No'. Lower vehicle emission levels are not a direct business driver to increased profitability. The Council will provide capital support, to numerous business applications, to encourage earlier uptake of ULEV's. This will be funded up to a maximum level over the five year project period. The annual sums budgeted for this infrastructure (charge points) is currently estimates, as the exact costs cannot be known until the scheme is operating and applications are submitted. Funds will come from the City Scheme grant funding. In providing financial support, the Council will be careful to adhere to the overriding principle of delivering a cost neutral outcome for company involvement in this project.

3. Does the assistance distort or have the potential to distort competition?
'No'. In terms of reputation, it is no more than a good news story. The delivery and use of this infrastructure (charge points) will not constitute a business advantage. All businesses operating in Leicester have been invited to come in as partners to this bid.

4. Does the assistance affect trade between Member States?
'No'. LCC don't believe that air quality is 'tradable'. There is no equivalent of carbon trading. OLEV have stated that the Go Ultra Low City Scheme should contribute to an improvement in air quality. Further, regardless of their country of origin, any companies with a local base will have the opportunity to apply for the grant so as not to preclude companies form other member states.

Notwithstanding the above, the Council has considered how, if it is successful in its bid and it looks to pass on the funding through grant funding, how to deal with any state aid issues should they arise.

If state aid implications arise, the Council would need to explore whether the aid can be given under the de minimis exemption or under one of the General Block Exemption Regulations ("GBER").

De minimis aid can be given to a business so long as the aid does not exceed 200 thousand euros and subject to the recipient not receiving in total, de minimis aid exceeding 200 thousand euros over a rolling three year period.

The terms of the GBER are quite detailed and specific and whether an initiative is cover by this would be confirmed by Legal Services as part of initiative development.

Whilst the Council is confident this scheme will not give rise to state aid the Council would look to ensure that any funding received is channelled in compliance with rules on state aid in the event issues of state aid arise.

APPENDICES

APPENDIX A Letter of commitment City Mayor – Sir Peter Soulsby

APPENDIX B Letters of Support

- Business
- Education
- Health
- Local Government
- Other organisation

APPENDIX C Electrification of Leicester City Council's Fleet Vehicles Fleet Board Briefing (17th September 2015)

APPENDIX D Assistant City Mayor Briefing – OLEV Go Ultra Low Bid: Encouragement Through Free Parking in Council Controlled Off Street Car Parks (16th September 2015)

APPENDIX E Leicester Mercury Motor Show (16th August 2015) – CENEX Questionnaires

APPENDIX F 'Salary Sacrifice' ULEV scheme (LCC / Tusker)

APPENDIX G Marketing Strategy and Communication Plan (Sandstar / Tusker)

APPENDIX H Infrastructure Strategy – Soft Marketing Testing

APPENDIX I Infrastructure Strategy – Charge point locations methodology (sieving, prioritisation and associated location maps)

- Survey of Off Street Car Parks
- Table of Preferred Car Parks
- Plan of Preferred Car Parks
- Indicative Site Selection table (costing provision at the preferred car parks)
- Supporting Infrastructure – assorted technical notes (incl. charger/dwell time, AQMA map, surplus electrical capacity, city centre parks with high commuter occupancy)
- Sample charge point electrical costs
- Sample charge point running costs

APPENDIX J – Infrastructure Strategy – Grid Adequacy Assessments

- Notes on methodology for calculating power requirements which are costed in Appendix I.4, and used in costing request to Western Power Distribution (WPD)
- Charge point power requirements (no diversity applied) sent to WPD for costing (Sheet2)
- Annotated site plans sent to WPD with costing request
- WPD response - covering letter
- WPD response – budget

APPENDIX K Education and Awareness Programme

APPENDIX L Apprenticeship Programme

APPENDIX M Air Quality (ULEV Uptake Scenarios) – Modelling and Assessment Report (Ricardo AEA)

APPENDIX N Innovation – V2G

APPENDIX O Leicester Business Forum – Shaping Future Transport Initiatives (25th August 2015)

APPENDIX P Project Funding Programme (Total Project, LCC Match Funding & Partner Potential Funds

Office for
Low Emission
Vehicles

Leicester
City Council