



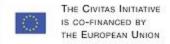
Low Carbon Vehicle Partnership Bus Working Group

2 June 2005

Andy Wren Site Leader







CIVITAS Cities





Rome

















Barcelona







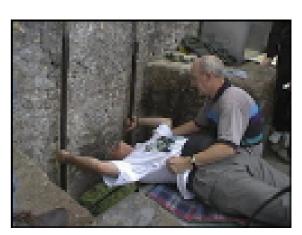






Cork















The CIVITAS Initiative (City VITAlity Sustainability)

Key Objectives:

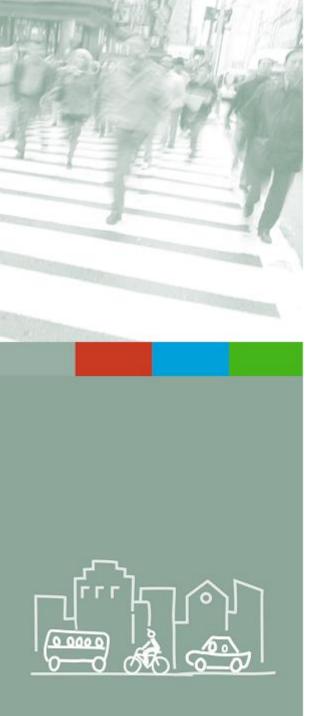
- Energy-efficient and clean vehicle fleets for public and/or private transport (mandatory)
- Schemes for access control, permitting access only to clean vehicles, walking & cycling
- Integrated pricing schemes
- Stimulating the use of collective passenger transport

- New forms of vehicle use/ownership, less car-dependant lifestyles
- New concepts for the distribution of freight
- Innovative 'soft' measures for managing mobility demand
- Integration of transport management systems, information systems and passenger services









MIRACLES Project

Funding

(Barcelona, Cork, Rome and Winchester)

Total project costs €7.60m

(£ 4.6m)

EC Funding (35%) € 2.70m

(£ 1.6m)

Winchester €3.40m

(£ 2.1m)

EC Winchester funding (35%) € 1.20m (£ 0.75m)

Key dates

Contract with EC signed 18 December 2001 Four year contract started 1 February 2002

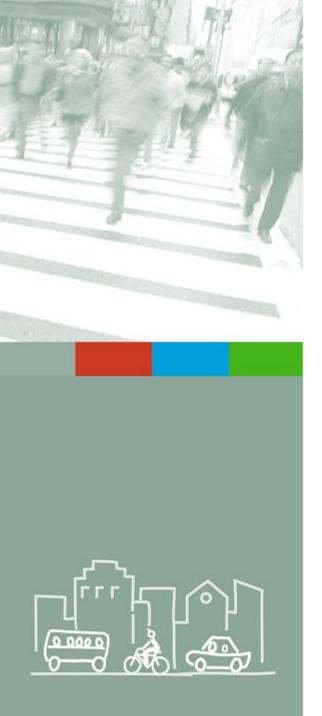
End of demonstration phase 31 August 2005

Contract finish 31 January 2006









MIRACLES Workpackages

WP1 Project Coordination

WP2 Integration, monitoring and technical

management of demonstrators

WP3 Dissemination

WP4 Evaluation

WP5 Access restrictions

WP6 Integrated pricing strategies

WP7 Collective Passenger Transport

WP8 New forms of vehicle use

WP9 New concepts for the distribution of

goods

WP10 Innovative soft measures

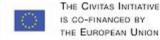
WP11 Integration of transport management

systems

WP12 Clean public and private fleets









Winchester partners

HCC



TRG, University of

Southampton TRG



Met Office



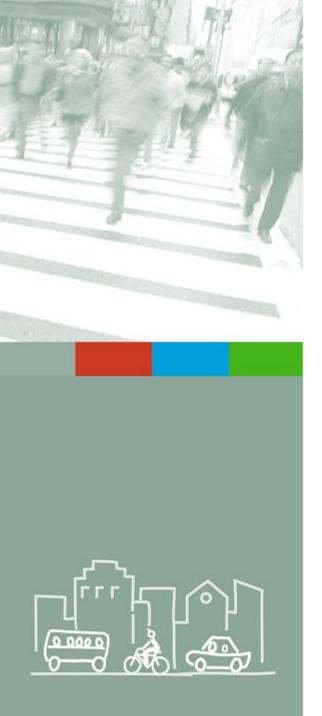
Atkins











Significant events in MIRACLES

- The declaration of an Air Quality Management Area (AQMA) by Winchester City Council on 4 September 2003. This was later than envisaged pre-project due to extended modelling being undertaken;
- The Quality Bus Partnership with Stagecoach, signed on 22 September 2003;
- The 760 space extension of Winchester Park and Ride, opened on 18 December 2003 after delays due to legal challenges, and
- The subsequent full parking review undertaken by Winchester City Council in spring 2004.





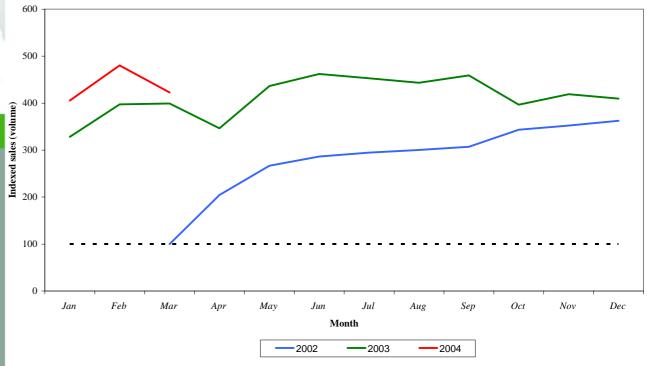




Winchester baseline – Energy Fuel sales

Year by year comparison of volumes of AUTOGAS (LPG) fuel sold at SHELL WINNAL petrol station (indexed)

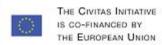
Based on daily average of volume sold by month













Aims

- Reduce impact of traffic on the environment
- Target reduction of high polluting vehicles by 5%
- Increased awareness of the impact of highly polluting vehicles

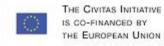
Objectives

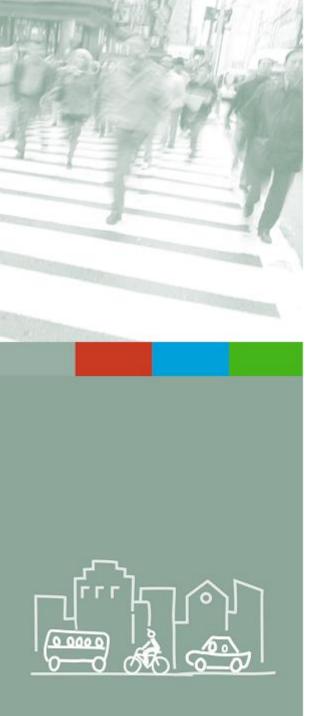
- To trial portable roadside emissions monitoring equipment developed by EU REVEAL project at various locations around Winchester, monitoring vehicles entering the City
- To identify high polluter travel patterns
- To test four different escalating enforcement scenarios against gross polluters and their impact on the laboratory area.



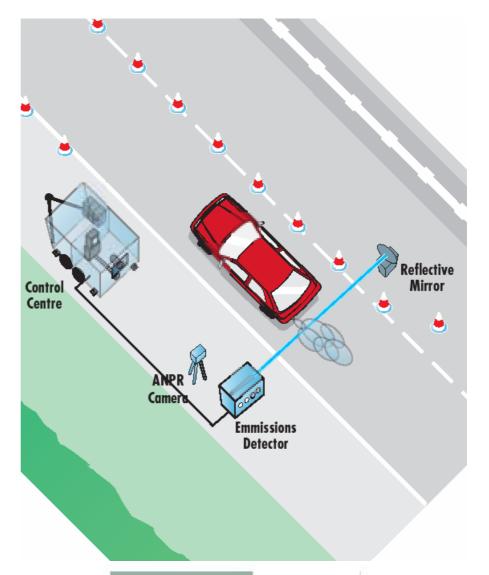








Site set up









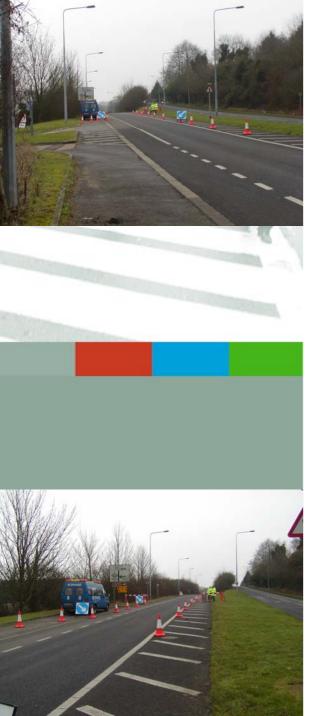










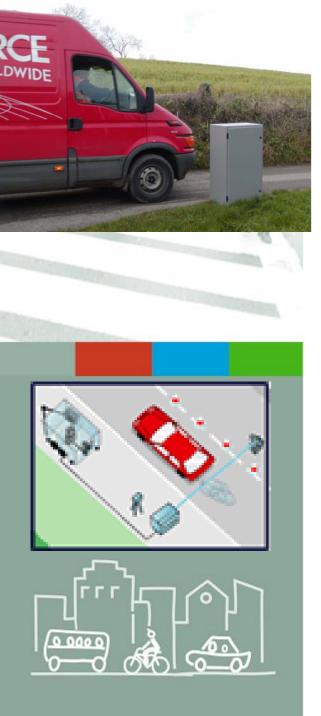








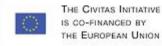




- Following emissions monitoring tests a larger than expected number of gross polluters was encountered
- The monitoring equipment was returned to the manufacturer Golden River Limited for repair and the addition of NO channel. Now completed
- Accompanying awareness programme has been developed
- A draft air quality action plan has been produced by Winchester City Council and is currently out for public consultation









WP 6 Integrated Pricing Stategies

Aims

- Demonstrate an environmentally linked pricing strategy
- Promote energy efficiency of car parking in city centre

Objectives

- Promote optimal pricing policy
- Promote energy efficiency of the Winchester vehicle fleet parking
- Promote the take up of clean vehciles









WP 6 Integrated Pricing Stategies

Achievements

- Park and Ride extension completed
- Four city centre car parks converted to pay-on-foot
- Parking surveys / emissions assessment completed
- Environmentally linked chraging strategy completed and implemented as permanent policy by Winchester City Council. Key elements:
 - Free parking for electric and hybrid vehicles
 - 75 % discount for AAA (up to 100 g/km CO₂) and 50% discount for AA (101 to 120 g/km CO₂) vehicle road fund categories
 - Initaially aimed at season ticket holders









WP 6 Integrated Pricing Stategies

- 30 city centre season ticket holders have taken up the 10 day free P+R trial with over 15 permanently converting to a P+R smart card
- The environmentally-linked discounted parking scheme continues with an increasing number receiving 50% discount and ten hybrid cars signed up for free parking
- ANPR interface to the car park system next stage of development













WP 7 Collective passenger transport

Aims

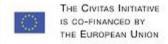
- The improvement of existing public transport
- Information provision and promotion
- Introduction of new services
- Integration of public transport with other modes

Objectives

- Increase patronage and user satisfaction by 8% 2002-05
- To improve the satisfaction rating of public transport by 8% 2003-05













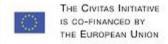
WP 7 Collective passenger transport

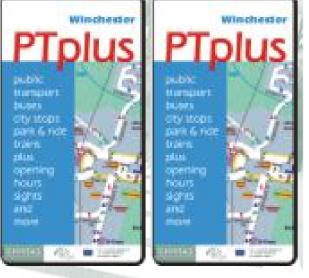
Achievements

- New bus / rail interchange completed March 2003
- 76 new flags, poles and stop-specific timetables on services 1, 5 and park and ride, introduced in June 2003
- Bus quality partnership agreed with Stagecoach in September 2003
- New urban public transport pocket map "PT Plus" introduced in November 2003
- New routes associated with Park & Ride and major employers under discussion
- Increase in patronage on target











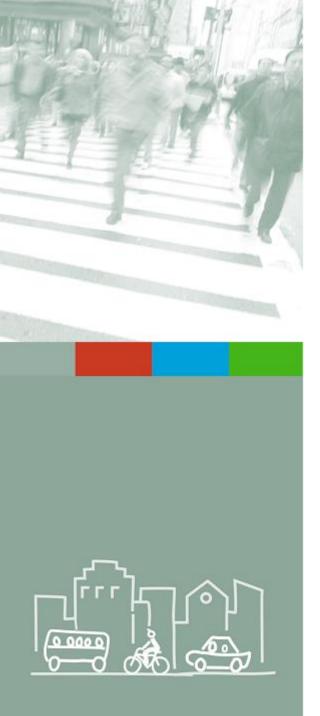
WP 7 Collective passenger transport

- Four month trial of P+R route extension to Romsey Road operating from April to August 2005
- The new PT Plus leaflet updated in September 2004 continues to be circulated – and to new target groups
- Quality audit carried out on the onstreet information
- Measure largely complete









Hybrid bus questionnaire survey

Electric/diesel hybrid bus trialled in Oct 03 & Dec 04 Questionnaire survey carried out for each trial Samples of 168 (Oct 03) & about 200 (Dec 04)



Initial results:

79% - quieter

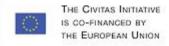
59% - more comfortable

77% - preferred them (even if more expensive)

24% would use service more regularly















WP 8 New forms of vehicle use

Aims

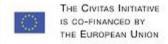
- To demonstrate a Bikeabout scheme
- Increase the level of cycling in Winchester
- Support the uptake of electric bicycles
- Introduce new additional cycle parking

Objectives

- Contribute to the quadrupling of cycling by 2012 (compared with a 1996 base)
- Stimulate sustainable transport for tourist and residents
- Support the uptake of electric bikes











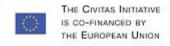
WP 8 New forms of vehicle use

Achievements

- Initial user survey and report completed
- Three new cycle schemes completed
- Ten bike pilot trial with University College Winchester
- Installation of compounds at University
 College and Winchester railway station
- MIRACLES Bikeabout scheme launched at Winchester Bike Fair, 40 bicycle scheme
- New updated Winchester cycle map produced
- Electric bikes available for HCC staff
- Trail of electric scooter undertaken











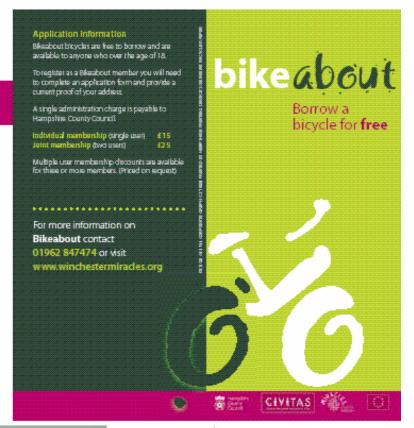
Borrow a bicycle for free

01962 847474

www.winchestermiracles.org















WP 9 New concepts for the distribution of goods

Aims

- To raise efficiency of freight delivery in Winchester
- To introduce a freight guidance map

Objectives

 To develop a clean urban delivery service









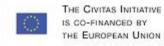
WP 9 New concepts for the distribution of goods

Achievements

- Surveys with shops and businesses and freight carriers and couriers completed
- Freight guidance map completed
- Alternative Collectpoint delivery service implemented and locker bank trial planned
- Trial underway involving recyclable waste collection, using electric van









WP 9 New concepts for the distribution of goods

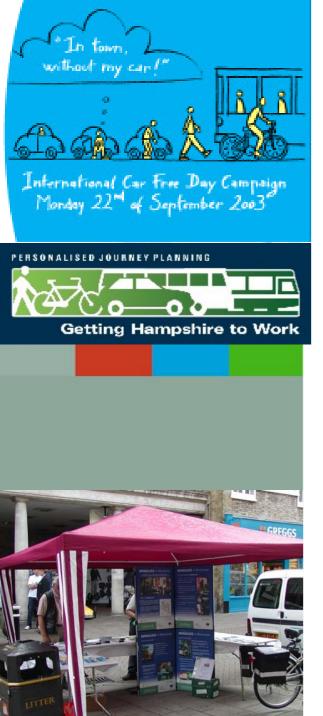












WP 10 Innovative soft measures and awareness programme

Aims

- Raise awareness about air quality and alternatives to the conventional uses of motor vehicles
- Provide improved facilities for cyclist and pedestrians
- Implement car pooling scheme
- Implement commuter planning and mobility management tools

Objectives

- Encourage a change in modal choice for business related travel
- Raise public awareness of sustainable transport by 25%
- Introduce a pollution forecasting model
- Achieve fastest uptake of clean engine technology nationally













BikeWeek

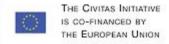
WP 10 Innovative soft measures and awareness programme

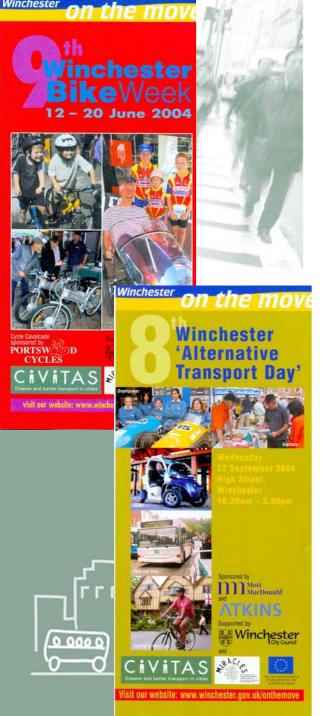
Achievements

- Car sharing scheme introduced at HCC and Winchester City Council
- Key events and media programme established (e.g. Bike week, European car-free city day).
- A public relations and marketing strategy and schedule has been developed
- MIRACLES sponsorship of, and attendance at, bike week and alternative transport day
- Over 2,000 workplace travel plans completed
- An air quality forecasting model and web-site completed.
- A workshop and business/ seminar completed related to WPs and linked to AQAP development.









WP 10 Innovative soft measures and awareness programme

 MIRACLES sponsored and exhibited at the following events:

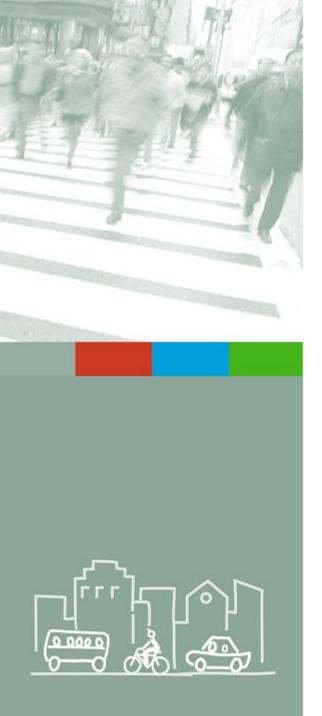
 8,9 & 10th Winchester Bike Week, in June 2003/4/5

 7,8 & 9th Winchester 'Alternative Transport Day' in September 2003/4/5









WP 10 Innovative soft measures and awareness programme

Art competition prizes awarded

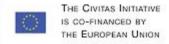




- The theme was 'low pollution public transport'
- Community involvement focus groups delayed to late February
- The Winchester MIRACLES web-site updated and reconstructed. See <u>www.winchestermiracles.org</u>















MULTI INITIATIVE
FOR RATIONALISED
ACCESSIBILITY
AND CLEAN LIVEABLE
ENVIRONMENTS













Cheaper rates for drivers of low emission cars

Parking miracle!

A GROUND-BREAKING eme to save both the motorists' wallets has been

notorists' wallets has been inveiled in Hamsphire. The scheme sees drivers of low mission cars offered cheaper arking fees in a bid to reward km or less offered parking season tickets with up to a 75 per cent



CHEAPER PARKING: David Pounds was one of the first people to benefit from the new Miracles parking scheme at St Peter's car park, Winchester, time pimes by Ohris Mr.

'Never miss postman' with

Collectpoint parcel trial

A NEW scheme aimed at ensuring you never miss the post-

man delivering a parcel to your door has been launched in

The ground-breaking service, called Collectpoint, allows

people to designate one of ten secure pick-up points across

the Winchester district as alternatives to having parcels

Then, rather than re-arrange their day to wait for the

postman to knock, customers can pass by the pick-up

Local Press Coverage

Children's art

focuses on

air pollution

CHILDREN in Winchester are being invited to take part in a art project aimed at highlighting pollution in the city.

The project has come about thanks to a citywide initiative, the Miracles Project which

aims to make Winchester a more s and environmentally-friendly future Young people are being asked to pa of work which highlights the impor

reduction in pollution throughout th Guildhall art gallery will display arty August 1 to 8 in partnership with W City Council and bus operator Stageo

The winner will receive a £200 do their school's art department and a with Stagecoach on the theme of low-

Hampshire County Council's execuber for the environment, Council Estlin, said: "Together with Stagecoa

working through a programme of bu replacements and improvements w reduce these emissions, leaving W with one of the cleanest bus fleets in

"Bringing environmental concern attention of our city's children and y ple will help ensure a cleaner and les future. This is also a wonderful oppor the children to have their art pul

'Green' way to travel



THE emphasis was on green travel when Winchester staged an Alternative Transport Day yesterday.

Exhibits included GoinGreen's Reva G-Wiz, which is said to be the most energy-efficient and environmentallyfriendly car in Britain.

Winchester's Mayor Cecily Sutton (pictured above) had a chance to take the wheel when she toured the show. A number of bicycles were also on display, along with two Greenpower electric racing cars produced by St Swithuns School.



Jim's greener car is a MIRACLE in gas

Young & Rutt brought in to I Cantle

points on their way home from work and collect their So far five collection points in Winchester have been set up, with people able to direct orders made over the phone

or on the Internet to be dropped off at one of the sites. For the initial ten-week trial period, the five Collectpoints are: Arrow News on Jewry Street, Stanmore News on Cromwell Road, Stanmore Convenience Stores on Wavell Way in Stanmore, One Stop on Garbett Road in

Winnall and Londis on Fraser Road in Kingsworthy. The idea is being launched as part of Hampshire County Council's MIRACLES project, which is charged with improving Hampshire's cities and making them more environmentally friendly.

For more information, call 01962 847474.

delivered to their door.





THE CIVITAS INITIATIVE IS CO-FINANCED BY THE EUROPEAN UNION

Electric bus dreams are nearing reality



SHAPE OF THINGS TO COME? The hybrid electric bus

By Andrew Napier

andrew.napier@soton-echo.co.uk

IT might not be as striking as an inter galactic spaceship but this humble bus could be the future of Hampshire's public transport.

A hybrid electric bus is being trialled by Stage in Winchester on the city's park-and-ride until the weekend as part of a nationwide experiment.

The single decker bus runs emission-free and sp cial braking technology means the batteries on th bus are charged when brakes are applied. The bu has 30 seats and space for 30 standing passengers.

Stagecoach is working with Hampshire coun and Winchester city councils to trial new technol gy as part of the Miracles environmental initiativ Previously hybrid electric cars were unveile through the project, on an alternative transport da in the city.

The city council has since offered free parking fo frivers of any fully electric cars and a 50 per cent dis count to anyone driving a hybrid electric car in the city A spokesman for the county council said: "The eletric bus is the way forward for our towns and cities." Nigel Deacon, managing director of Stagecoach is Winchester, said: "It's incredibly popular."

Local Press Coverage

Top-draw bus art

inspiration for prize-winning children's art.

Youngsters from Compton All Saints CE Primary School and Owslebury Primary School won gift tokens for their pictures of green public transport in a county council competition.

More than 200 pupils entered the competition. After whittling the entries down to seven finalists, the public voted for their favourite

The two winning schools received a £200 voucher for art materials and Compton school also won a class day trip courtesy of Stagecoach.



ARTISTIC ACHIEVEMENT: Councillor Keith Estlin, Hampshire County Council executive member for the environment, county council chairman John Bryant and Winchester mayor Cecily Sutton with prizewinners Lilli Davies (red top) and Christina Lewis.

growin and nomelessness. need for housing, the plan The housing figures and uary, Working Miracles Driving a Miracles car As aeronyms go, "Miracles" is possibly

able, fast-and good for the envi-

The Volvo S40 Miracles car LPG-Liquid Petroleum Gas-and the other for unleaded petrol.

A button on the dashboard enables the driver to change from gas to petrol but should the LPG One approach is to encourage the use of on out, then the car automatical- "alternative energy" vehicles and ly switches to petrol. switches to petrol.

I ran the cur solely on LPG. The nozzle in but it's not difficult. Andy Wren, manager of the "Hopefully, we can over

people would think -there are two in quietly on it. in Southampton, for instance.

It was smooth, quiet, comfort-It stands for Multi-Initiative for Rationalised Accessibility and Clean, Liveable Environments.

as two fuel tanks-one for A quite forgettable mouthful, it's the name of a Hampshire County Council project that seeks to reduce pollution by tackling the problem in a variety of ways.

The car came with a list of all significantly lower than most reduces running costs. the LPG stations across the coun- petrol or diesel-fuelled cars, "There is nothing unusual try so you could always look up which is better for the environ- about these ears and people are caused by transport, so if we can ment and for air quality in gener- pleasantly surprised when they clean up the vehicles we use, it There is a knack to getting the al-and fuel economy is good.

that's why the council has used Eurofunding to buy two electric/petrol hybrid cars, two battery-powered vans and two LPG-powered cars.

Because Winchester is currently Hamp-shire's only designated "Air Quality Management Area", firms and organisations there are being offered a month's use of one of the vehicles.

Reporter, Louise Glyde, couldn't wait to leave her own 15-year-old banger at home and try a dual-fuel Volvo S40.

I fan the car solely on LPG. The
Shell garage at the top of Winnial. Then there are the benefits, LPG
Miracles project, said: "All the the fear factor that goes with ryis half the price of petrol, for a
feeback has been positive. Peating sometimes." Manor road, wincheser, sens a and start, and the car runs incredibly ple feel they can save money by ple may consider buying an envidriving these vehicles because ronmentally-friendly car when Carbon dioxide emissions are the fuel is cheaper and this replacing their own or part of



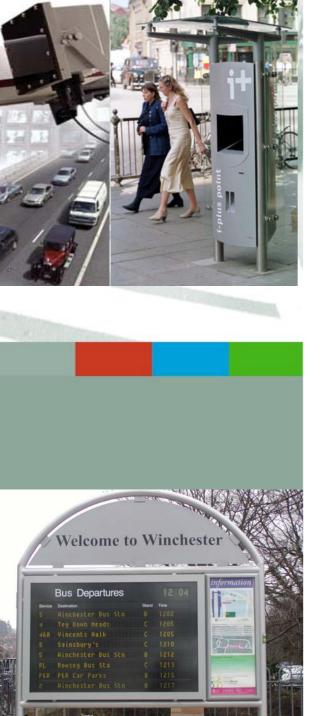
Miracles project assistant, Frankie Dunkley, with the dual-fuel Volvo S40 which reporter, Louise Glyde, borrowed for a month J4040

Businesses Charles harries and









WP11 Improved multi-modal traveller information

Aims

 The general objective of this WP is to improve network monitoring disseminate improved information to travellers, thereby allowing them to make informed decisions about their travel, whilst also contributing to achieving modal spit targets.

Objectives - to install:

- An ANPR system
- Three new bus departure information screens
- Four new information kiosks
- Four new variable message signs
- Three real-time information displays
- Improved information on ROMANSE on-line
- Information on hand-held devices













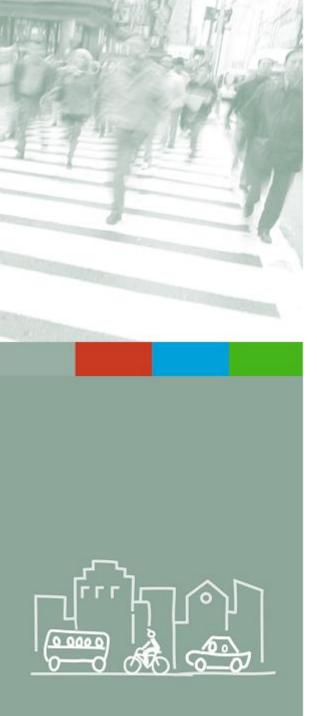
WP11 Improved multi-modal traveller information

- ANPR system installation complete
- Four journey time / travel information air quality VMS now installed
- Four new integrated journey planning kiosks installed in October / November 2004
- New bus departure information systems installed in October 2004
- Improved traffic and travel information on "ROMANSE On-line" completed
- PDAs travel information service launched and will be developed further









WP12 Clean public and private - Winchester

Aims

 To break down current barriers to the use of alternative fuel vehicles whether by private or public sector organisations

Objectives

- Buses
 - Reduce the environmental impact of the public transport fleet
- Municipal fleets
 - Reduce the impact of public authority vehicle activity in the City
 - Establish a business case for the introduction of clean engine technology
- Private fleets
 - To overcome the barriers to the introduction of cleaner vehicles











- Review of bus fleet composition completed and an emission reduction programme developed
- Grant awarded to Stagecoach for 13 new Euro III powered buses and for fitting emission reduction equipment
- Average age of bus down from 7.8 years to 6.1 years
- Demonstrations of alternative fuelled buses on the park and ride service have started









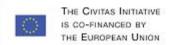


Task 12.1 Clean buses

- Designline electric/diesel hybrid bus retrialled on Winchester P+R in December 2004
- Pre Euro / Euro I re-power programme completed with ten new Euro III engines installed in Stagecoach bus fleet
- All four P+R Euro II buses have been fitted with CRT
- SCR programme has started
- On-vehicle promotional campaign under development









Euro III engine





Task 12.1 Clean buses

Programme summary:

- 13 new Euro III low floor vehicles introduced
- 10 pre-Euro / Euro I to be re-powered to Euro III
- The above to be fitted with continuously regenerating traps and catalysts selective catalytic reduction (SCR)
- 4 Euro II park and ride vehicles fitted with CRT
- 12 Euro II double-deckers may be fitted with traps and catalysts







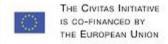


Task 12.1 Clean buses

- Demonstration of clean diesel / electric buses on Winchester Park and Ride route
 - Wright bus (UK)
 - Design line (NZ)
 - Transbus? (UK)
 - Minitram? (UK)







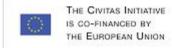


Task 12.2 Clean Municipal Fleets

- Purchased 7 LPG and 30 Euro IV fleet vehicles
- New fleet management and fuel monitoring systems installed in January 2004
- Initial consultation with Motorvate (a government sponsored best practice "green fleet" programme) in December 2003
- MOTORVATE site visit in April 2004
- MOTORVATE have analysed the County Council's "grey-fleet" with interesting results









WP12.2 Clean Municipal Fleets

- Motorvate seminar held 8 December
 - internal group HCC
 - Benchmarking and data analysis
 - HCC grey fleet
 - HTM targets: 12% reduction in CO₂
 mileage and 3% in mileage in three years
 - local businesses
 - Increase awareness of sustainable transport, local air quality & MOTORVATE
- Clean vehicle advice and calculators included on Winchester MIRACLES web-site
- Four new Euro IV HCC library buses (discovery centres) fitted with CRT







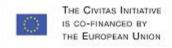


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Task 12.3 Clean Fuel Support Services

- 6 alternatively fuelled vehicles procured
- Pre-trial tests December 2003
- Tracking devices fitted January 2004
- Full trials commenced Feb 2004
- Trial of electric moped December 2003 to February 2004





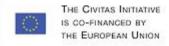


Task 12.3 Clean Fuel Support Services

- Six alternative fuel vehicles have been out on trial since April 2004:
 - over 50, month long trials completed
 - the new year recruitment campaign for future trials successful
 - trials now booked to July 2005
 - our unreliable electric van was repaired and returned by Citroen UK, only to go faulty again within a week
 - interesting experience from trials:
 - accidents, bumps and dents, broken aerials, flat batteries, lost keys, faulty tracking devices, dirty vehicles, a few difficult customers!







Task 12.3 Clean Fuel Support Services



One of our two Citroen Berlingo battery electric panel vans





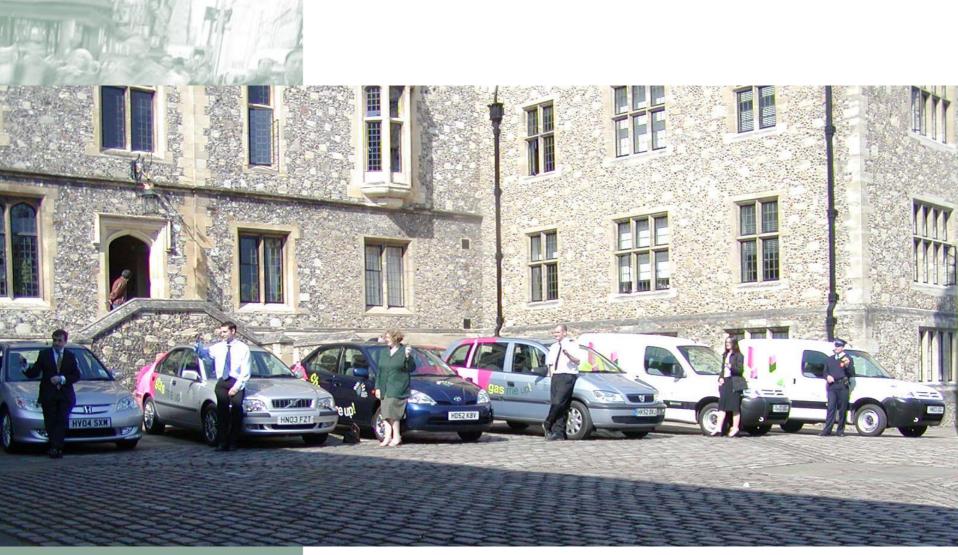




Volvo S40 Bi-fuel LPG/petrol car























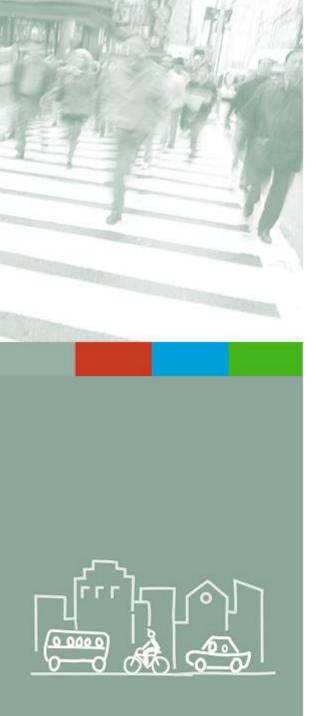


www.civitas-initiative.org











Winchester





