



An Occasional Newsletter from Parry People Movers Ltd,
Parry Building Products Ltd and Ultra Light Rail Partners Ltd

ISSUE NO 75

OCT 2018

www.parrybuildingproducts.com

www.parrypeoplemovers.com

TROUBLE ON LINE: SO GOVT INITIATES FRESH REVIEW

After an era of vanity rail projects, as if costs were no problem, we now see things in the cold light of BREXIT and the prospect of economic slow down in this and other prosperous countries. This indicates that we, in the UK, will have to start thinking harder about how we will be able to earn our keep and perhaps start making more things that we need for ourselves.

Nevertheless, at the same time, the arguments for investing have never been stronger. Traffic congestion and traffic-related air pollution waste money even

quicker than an inebriated sailor in a foreign port does and break the law as well.

Nationalisation may not be the answer as it is the same as rearranging the deck chairs. It is not ownership that needs to change, but *technology*. Discussions have begun with key individuals and agencies involved in national planning which mean that the scope of enquiry may be extended into how to roll out proven cost-saving innovations so the benefits already being harvested can apply further. More reopened small railways for far lower cost. (see Page 6)

PRE METRO'S FIVE MILLIONTH PASSENGER MAKES FRONT PAGE NEWS



Symptomatic of the local pride in the rail Shuttle service running between Stourbridge Town and Junction, when the total number of passengers carried passed the 5 million mark the main news group, Express & Star, made the event front page news. The lucky passenger, 80 year old Mrs Jo Aldred, received a gift and a certificate and a moment of fame. The event was organised by Pre Metro Operations Ltd with the support of the franchise holder, West Midlands Trains.

In This Issue

- ◇ P2 JPA Liquidation confused by will to live
- ◇ P3 Senior Automotive Engineer Charles Morgan steps in
- ◇ P3 Parry Building Products provide further help on low carbon brick project
- ◇ P4 Zero Carbon Transport Cascade for Clean Air Zones
- ◇ P5 James Skinner Tells It as It Should Be
- ◇ P6 How the Intermediate Mode may find its Place
- ◇ P7 Stourbridge-Kinver electric railway—a Victorian Pioneer of Tramtrain Concept
- ◇ P8 What is there not to like about double deck trams?

CAR 10 ARRIVES AT STOURBRIDGE TO PREPARE FOR NEW DRIVELINE TRIALS



The original Bristol Electric Railbus (PPM Car 10), kept in temporary storage at Cradley Heath until early 2018, has been picked as the ideal vehicle to act as a test-bed for the latest evolution of the successful gas-flywheel hybrid driveline of the Class 139 Stourbridge rail cars. The rail bus, owned by James Skinner of the Sustaco environmental transport firm, which has financed the external refit of the vehicle which was delivered to ULRPtnrs Stourbridge base on Friday 31st August, has agreed to support the next phase of the project.

Air Apparent

With all the ideas being paraded about the need for better batteries (back in the 1990s the Technology Foresight Panel looked into different energy storage devices which were going to do the job for the Planet and we discovered 32 different on-going projects even at that time). Compressed air as a *mechanical rather than chemical* means of storing it did not get a look in at the time but should do now. The timing of the ebbs and flows of surges of natural, sustainable energy are either inconvenient or unpredictable. The sunshine is best in summer when we need least heat and the difference in the energy output of a wind turbine between when there is wind or no wind, is infinite.

When bad weather closes down building sites, the brickmakers do not stop making bricks. They build up an inventory or stock. So the emphasis should be (and probably is) moving towards finding ways to store energy—but not, please, in Elon Musk's Power Walls built of batteries.

Conspiracy of Slowness

People think that I am joking when I speak about a 'conspiracy of slowness', but this is as pernicious as the smell of a dead rat in a cellar. Within the service industries there are individuals who feel discomfort by the approaching end date of a project when the gravy train runs out of steam. By actions and omissions deliberately intended to stretch out the work they can be as destructive of value as committing acts of sabotage. Meanwhile 5 of the world's 7 billion population are unlikely ever to take home so much pay that a technocrat will devise a way of automating their jobs. It seems more sensible to invest resources into making *manual* work more congenial, healthier and achieving high quality results rather than investing to make idle a resource in plentiful supply.

HS2

It seems like quite a good idea at this time to create a third, London-bound railway terminal close to the centre of Birmingham. However, if part of the on-going viability of the project is the turnover from new retail outlets and office accommodation on the station site, as the song goes; 'Times they are a Changing'. There is no shortage of retail and other commercial capacity in town centres nowadays and the outlook is not that warm because

the technology for using 'on-line' is being applied to more and more transactions. New plan called for?

Will We Ever Get to Love Bendy Buses?

Articulated buses have been used successfully for 50 years or more, so it is a puzzle why, because of the improvements they contribute to labour productivity, they are far less popular than rigid buses. They work perfectly well in airports - and in cities with wide roads and fairly level topography, but what about places with medieval road layouts such as most of the Black Country?

One helpful thought might be to phase in the new technology with pathfinder projects - perhaps to ask the Belfast City to lend the West Midlands one of their own fleet of 'Eco-Gliders' (nice name for a diesel bus!) to pioneer at least one route so as to be sure of avoiding snags encountered with unsuitable road layouts. The Eco-Gliders are made by the same Netherlands firm as the 'Sprint' articulated buses planned for Birmingham and the Black Country, and are likely to be similar. The current proposal seems to be to introduce three articulated bus services at the same time rather than a phased approach.

STREET SCULPTURE? STRANDED WHALE? - NO, IT'S AN ECO-GLIDER!

Teething troubles in Belfast. On 24th September one of the new Eco-Gliders with a trainee driver came to a halt at a road junction causing traffic congestion for some while. Early snags are to be expected with new technology, even the ultra sophisticated European kind.

**LIQUIDATION CONFUSION CAUSED BY UNEXPECTED VITALITY**

The work of Liquidation is obviously far from simple after a firm is forced to cease trading by the Companies Court division of the High Court in London. What is left to clear up is often a state of confusion and a mess left over by managers who have lost the plot. What Liquidator JD Travers found on his arrival on site in August 2013 were people very much involved in trading situations; overseas customers awaiting their goods; a branch line part of the railway network needing engineering support to ensure safe, reliable operation; several strands of promising R&D activity supported by the Business Department's Regional Growth Fund and one of the Science Research bodies and new rail project consultancy projects in progress. Fortunately, two firms operated from the same site using common facilities, but separately owned and controlled by different Boards. While the one Company could not be saved (there being no appeal against a winding up order) the other Company could not be killed. It had too far reaching responsibilities and too strong a commitment to proceed with vital work. In the end all of the work of the wound up Company continued, initially in a dysfunctional manner, because of the artificial severances created, but in the fullness of time all have found ways of continuing to work harmoniously and effectively because of the sense of common purpose.

SO WHERE ARE WE NOW?

There is still a funny smell about the fact that an innovatively talented, multi-skilled, internationally-experienced technical firm was suddenly starved of its working capital by a large household name financial institution. The experience of JPM Parry & Associates Ltd (in Liquidation) was far from unique in the post financial crash period.

JPA appeared to have a great future with opportunities well outweighing threats, but the pendulum at that time was still swung on the side of the 'Post Industrial Society' (who needs British designers and engineers when Foreign competitors can do everything so much better?) The experience of Mrs Aldred and the 4,999,999 passenger journeys before she stepped on the PPM Class 139 railcar on 23rd August 2018 justified the steadfastness of the backers and their faith in the originators' technical ability. Though in several different hands, good work continues in the field of building materials, energy and transport development.

PPM Ltd is far less isolated than it was when its 'parent' fell through the ice in 2013. What had been dismissed as 'a Solution looking for a Problem' was actually just common sense.

STOURBRIDGE MEETING CONVENES ULRPartners CLUSTER



Founding group of industrial and academic pioneers coming together at the new Stourbridge Visitor Reception on 7 September to form Ultra Light Rail Partners Ltd. From the left; Phil Evans, PreMetro Operations Ltd, Assoc Prof Beverley Nielsen, of B'ham City University, James Skinner, Sustraco Ltd and John Parry, PPM Ltd. Missing from the photo is Major (Rtd) CB Holden OBE who participated in the inaugural meeting by phone from Scotland. (Kit Holden, formerly a senior official of HMRI, is a director of PPM).

During the course of a visit to Cradley Heath and Stourbridge in December 2012 by the then Chairman of Network Rail, Mr Richard Parry-Jones CBE, a clear need was identified for a Centre to be established where interested parties could learn from the knowledge and experience of the pioneers of Ultra Light Rail. The town and surrounding hinterland of Stourbridge has played a unique role in the development of

rail transport. Where better to start than at the main source of strategic and engineering innovation into lighter forms of light rail in the locality where the most notable pathfinding achievements have taken place. The story began when Queen Victoria was on the throne! See the amazing pioneering achievement of the Stourbridge to Kinver Light Railway - Page 7.

RESPECTED AUTOMOTIVE ENGINEER OFFERS TO LEND A HAND

PPM has invited to take an interest in its activities one of Britain's most experienced automotive engineers. With a background not in mass market car production but with a respected, family-owned producer of an internationally recognised brand, MORGAN CARS, **Charles Morgan** (left in photo with John Parry) came into contact with PPM through Birmingham City University.

An advisory role has been agreed under which Charles will provide guidance on testbed projects with zero-carbon prime movers and various range-extending energy-storage technologies as needed by PPM for its tram and tramtrain developments. His extensive business experience

will contribute to the corporate affairs of PPM and the associated cluster of ULR firms.



PARRY BUILDING PRODUCTS ASSISTS ADVANCES IN LOW CARBON MATERIALS

Under the new management of the two Brothers, Jim and Oliver Glendenning, the original engineering works of JPM Parry & Associates Ltd, having been transferred to Gainsborough Trading Estate in Stourbridge presents a fresh and smart image. PBP also sits alongside the ULR Partners Visitor Reception and can take advantage of the meeting accommodation which will be mainly used by the rail transport entities working alongside Building Products.



As PBP already has a reputation in creating lightweight forms of traditional construction, it was the natural private sector counterpart to be appointed by Leeds University to assist it in its work on CO2 reducing additives which will enable clay bricks to be cured at a surprisingly low temperature, similar to in an oven baking bread.

*Leeds University's Dr Hung with experimental wall built with low-carbon bricks made with Parry Building Products technical support and production equipment. **A tree saved!***



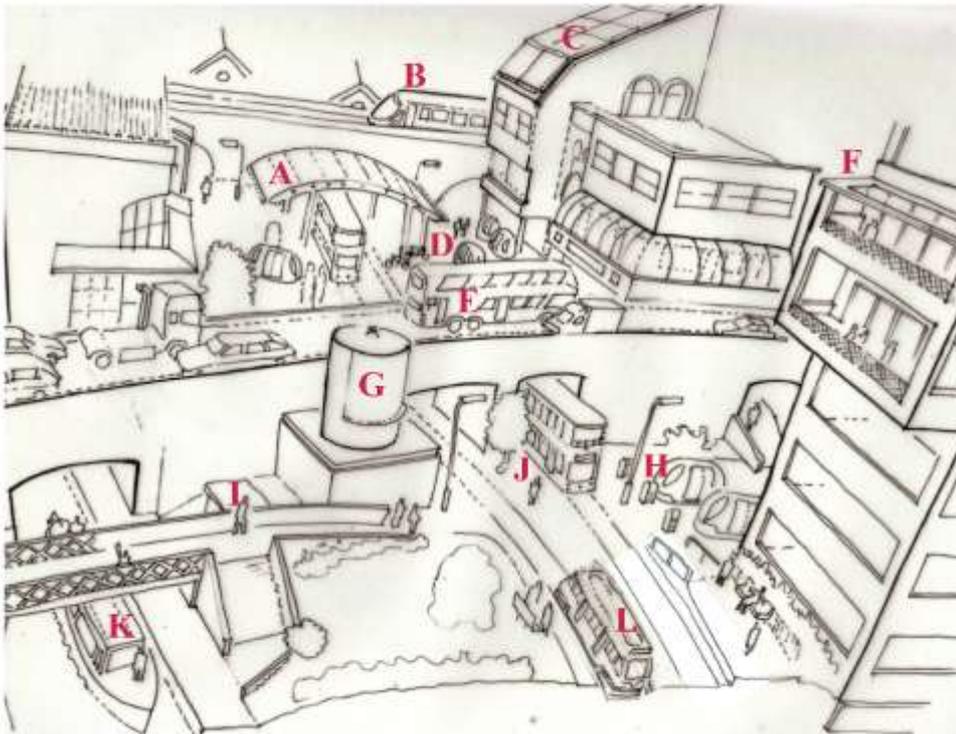
TRANSPORT 'CASCADE' FOR CLEAN AIR ZONES



The Clear Air Zone model illustrates a 'cascade' of transport amenities with, at the top, a fast metro service linking to a cross town tramway, then to 'CAV' (Connected Autonomous Vehicles 'pods') A conventional highway crosses the 'zone' by means of an overpass with provision for buses to drop off passengers and motorists to park their cars at the edge of the zone.

LEGEND

- A) Metro/tram interchange
- B) Metro suburban rail service
- C) Photo-voltaic array powering compressed air supply
- D) Autonomous 'pods' and bikes
- E) Commuters/shoppers arriving by double deck coach
- F) Vacant building space converted to apartments
- G) Cryogenic store of liquefied air
- H) Battery charging points for autonomous pods
- I) Pedestrian only route
- J) Cross town tramway using compressed air for fuel
- K) Leisure rides by compressed air powered boats
- L) Town & Country tramtrain links to local rail branches



MR JAMES SKINNER TELLS IT AS IT SHOULD BE



The performance by the PPM Class139 light rail cars over the last 9 years of service in Stourbridge is the potential foundation for a major new export industry, based in the region of Britain where it originated, producing low-cost, energy-efficient, zero-emission vehicles with steel wheels on steel rails, Ultra Light Rail. ULR offers a zero emission technology that can provide a simple and effective way to up-grade public transport services worldwide to prevent people dying from air pollution.

In transport technology particularly, it is a successful "track record" that is most essential of all attributes, worth more than any amount of theoretical blueprints. The proven success of the Stourbridge rail car, which has just carried its 5 millionth passenger, gives the West Midlands a lead role in meeting the worldwide demand for public transport that does not produce polluting particulates.

The Stourbridge rail car is the successor to our Bristol PPM Tram, providing a highly popular and dependable public transport service for 2 ½ years along the Bristol Harbourside, demonstrating its use as a street-car running amongst pedestrians, cyclists and motorists.

In 2012 air pollution is said to have caused 3 million deaths, predominantly in low and middle-income countries. In the UK deaths from air pollution are estimated to be around **twenty times** the number of deaths caused by road accidents. Governments have been tackling part of the problem by measures to reduce the use of fossil fuels, but new evidence has now emerged to show that the most toxic pollution of all comes not so much from ozone, nitrogen dioxide and sulphur dioxide but from *particulates*. In the UK in 2012 it is estimated that whereas 14,100 deaths were attributed to nitrogen dioxide pollution, 37,800 were attributed to particulate matter (PMs) in the form of tiny particles of road, tyre and brake wear. (see Oslo effect at <https://>

www.applrguk.co.uk/media/files/L-R-Applrg-Oslo-Effect-2-v12pdf).

The evidence also shows that the heavier the vehicle the more PMs it will produce, to be breathed in by passers-by and residents, causing extra heart attacks, strokes and asthma attacks as air pollution surges. The extra weight of battery-driven, electric eco-vehicles, will thus still be responsible for much of the mortality from air pollution, even when they are not burning fossil fuels.

The solution to the problem revealed by this new evidence regarding the principal source of air pollution mortality, is to re-engineer the running gear of heavy axle vehicles which generate the particulate pollution which is currently killing so many people. It needs to be replaced with up-to-date technology in the form of affordable, light-weight, rail-based public transport that produces neither fossil-fuel emissions nor particulates.

Conventional modern trams are too expensive for any but the most prosperous cities. For the rest, an enlarged version of the Stourbridge railcar adapted to street running seems to be exactly what is required.

The technology is designed to be as simple and robust as possible so that it may run successfully in any country. The concept comes from the same design engineers and workshops that have devised construction technology that is currently being used to build schools and low-cost housing in many low-to-medium income countries. Simplicity, robustness, durability and low cost characterise intermediate technology, the guiding principle of the intermediate mode.

ULR trams have been made possible through the support of small investors. Local companies have cooperated willingly in the development of the vehicles. What is now required is for public investment to encourage the manufacture of vehicles on a much larger scale and to mobilise a worldwide sales programme.

The concept can be centre-piece of a new industry, spreading worldwide this new ULR public transport system that has been developed by private initiative exclusively in the UK. And not just rolling stock, a more economical new design of tramway track, based on a metal "Waybeam" is being devised to speed up track laying. This not only reduces the cost of the track but also makes it possible to install it as quickly and neatly as a railway level crossing.

Re-engineering the bus mode to adapt to

rail is overdue. Rail-based vehicles will have other advantages as evidenced by the fact that cities all round the world have chosen to transform their main transport systems to rail when they can afford to do so. Now that this up-grading is known to be essential in order to save lives, a low-cost rail solution has become attainable. A tram successor, based on the Stourbridge rail car, can provide the required solution.

The advantages are:-

Energy efficiency: Steel wheels on rails incur far less rolling resistance than rubber tyres on tarmac.

Durability: Bus-sized trams to last longer than rubber tyred buses being guided more safely and smoothly on rails.

Lower infrastructure upkeep cost: Maintenance of rails is less costly than for tarmac roads.

Safety: Buses if on rails become safer and more acceptable in city centre pedestrianised areas.

Lower capital costs: New lightweight ULR tram systems will be less costly than the modern train-type trams because they are so expensive. By using the same suppliers used for modern buses, but placing them on rail running gear, costs will be reduced considerably

Popularity: The public strongly prefer travelling on rail-based vehicles rather than buses. Public transport use has risen sharply when rail-based vehicles have replaced bus services.

Now is the time for the UK to grasp this opportunity for establishing a major new industry that has the potential to provide new employment and wealth from exports whilst at the same time saving lives and fighting climate change.

James Skinner has managed national development corporations for two African nations and, later promoted new hotels and an environmental transport firm. Convinced of the PPM vision he organised the demonstration running of the first use of flywheel energy in a public rail service in Bristol between 1998 and 2000 .



JUST ROUND THE BEND; A NEW RAIL REVIEW COMING

Clear Scope seen for Intermediate Rail Technology to Reinstate Lost Network Lines

Rail Network as it was in 1952



Rail Network 50 years later



At first glance nothing seems to have changed but closer scrutiny shows 'deserts' with now almost no lines left in mid Wales and the South Scottish coast. Areas around Newcastle, North Yorkshire, the East Midlands and Cheshire have also lost their lines, and almost unbelievably, also in the Home Counties around London.

Flat Earth Thinking

Our political masters frequently think about the railways, as in Christopher Columbus' time, ship captains worried about the edge of the World—travel too far and you fall off! We hear the words 'we must concentrate on the interests of passengers' means those people who are already passengers, rather than on those who might like to be rail passengers, but there are no railways for them to ride on. In the 1960s when Dr Richard Beeching began implementing railway closures, rail passenger numbers were declining so fast that no one would have believed that a few decades later more people would be using the railways than ever before. But in order to save money, the amazing matrix of inter-connected lines became full of holes!

The two railway maps illustrate most of the area of mainland Britain extending from the South West Scottish coast to Southern England. Whole areas, now without rail lines, have become totally dependent on the use of public roads. 'Desertification' patches now exist in every part of Britain. Anyone travelling from these to an urban destination is likely to depend entirely on using a car. Hearing about the announcement by Secretary of State, Chris Grayling, following the Chancellor's Autumn budget statement in November 2017 that the DfT will be encouraging the re-opening of former branch lines, rail enthusiasts will largely be disappointed if they expect these to be returned to their original form. More likely they will be aimed

just at passenger traffic with light axle loadings, far lighter than would be needed if heavy locomotives were using the same line. Potential for saving money, sensibly!

Reversing the Beeching Blight

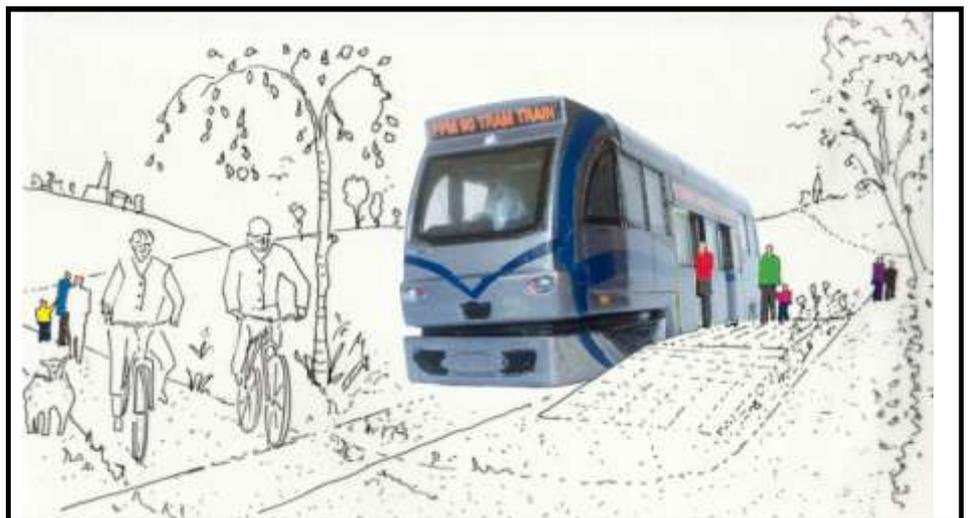
If the economists, planners and engineers who worked under Dr Beeching in formulating a mass destruction of lightly used railways had applied the approach of Technology Foresight they would not have decided upon such a comprehensive dismantling of so many railway routes.

Similarly, had there been equally well-informed guiding minds overseeing transport arrangements in towns and cities, they would certainly not have considered it wise to discard the tram systems which existed in up to 150 localities. Nor the scrapping of tens of thousands of electrically-powered vehicles which had run harmlessly on rails, not generating the noxious particulates which pollute today's urban air.

Now in 2018, yet another review of the rail industry is about to take place under the Chairmanship of Mr Keith Williams, not a rail expert but highly experienced in transport and business matters. For the first time the reviewers have irrefutable evidence that air quality improves in direct proportion to the total of journeys not taken by rubber tyred vehicles rolling on (and wearing down) the surface of roads. The more people use rail for routine journeys the more the health and life-expectancy of the whole population will improve.

Getting Involved

PPM has been contacted by organisations that will be involved in the Rail Review regarding the scope for cost saving innovations. Applying the *intermediate mode* concept, railway re-opening projects can be implemented more inexpensively so that there can be many more of them. Suggestions for different practices already on the table include lines which could in effect operate as rural tramways...



Concept of 'Town and Country' rail-based public transport which combines features from train, tram and bus in providing reliable, high quality journeys via shared but un congested corridors linking outlying settlements to town centres. The track is standard 80 pound flat bottom rail set in level crossing-style 'waybeams'. The vehicle accommodates 90, including passengers standing and is mounted on two gas/flywheel hybrid powered bogies adapted from the Class 139 railcar driveline design.

**TRAILWAY'S REFURBISHMENT
SKILLS TURN HERITAGE INTO
FACTORY-FRESH APPEARANCE**



A Birmingham Corporation single deck bus over 50 years old, restored as new.

The small specialist company, Trailways Ltd, which is skilled in passenger vehicle coachwork both original construction and in damage repair, has played an important role in the evolution of the Class 139 railcars.



PPM Class 139 internal trim

Much of the designing of the coachwork was done in Lancashire, in the towns of Leyland, Blackpool and Blackburn, but Trailways had the skill and experience to put everything together. Bus industry materials and methods, had been used previously in the 'Pacer' rail buses but not very skilfully. This has not been the case with the PPM vehicles which, though having external cladding and interior trim almost entirely drawn from the bus and coach supply chain, are well regarded.



Photographed in September 2018 after the body was re-united with its re-engineered chassis, the Class 139 prototype 'Car 12' appears pretty well ready to return to public service

**VICTORIAN ERA FORESIGHT: A LITTLE KNOWN SUBURBAN
ELECTRIC RAIL SERVICE SUCCESSFULLY INTRODUCED IN
THE LAST YEAR OF THE REIGN OF QUEEN VICTORIA**

**A Remarkable 'First' for the Town of Stourbridge Described in Recently
Published Account by Dr Paul Collins, a Black Country Historian**



The Light Railways Act of 1896 was put through Parliament in order to bring about lower cost rail transport. Light railways could replace painfully slow rural road journeys in many remote parts of the UK. Not possible with the heavy rail standards applied on the lines that were being constructed by the main railway developers.

The case for *light* railways was that they could also be operated far more informally, and be authorised inexpensively by Light Railway Commissioners not needing Acts of Parliament. They were still safe by virtue of train speeds generally being restricted to 25mph. Their original purpose was to cut the cost of transporting farm produce into cities but passenger demand quickly emerged as well. A Stourbridge to Kinver line had pioneered the category of affordable intermediate mode based on electric rail cars. Until the emergence in the 1920s of petrol-engine rail buses, the new light railway trains used small steam engines.

When the Great Western Railway decided not to construct a steam line from the Stourbridge to Bridgnorth local promoters built a shorter line instead which could perform two functions, providing a far quicker way for residents of Kinver village to get to work in Stourbridge, a two hour walk, and making it convenient for Stourbridge townfolk to visit the scenic area known as Kinver Edge. Instead of steam they opted for electric power. Once up and running by 1901, the line also assisted the residential development of the Western parts of Stourbridge because of the affordability of the lightweight suburban transit amenity. The original Stourbridge 'toast-rack' railcars were 45 feet long which, thirty years later, was the length adopted for the American PCC streetcars which are generally regarded as opening up standardised street running rail transport applicable throughout the world. The 45 ft (14 m) length seems just right for the 90 passenger PPM tram train.

The Kinver Light Railway - Echoes of a Lost Tramway by Paul Collins is published by The History Press



A century of evolution of the compact tram train or streetcar, left a Kinver rail car, centre an American 'PCC' streetcar (Corgi model), and right a '3D' printed model of the PPM 90 passenger tram train, now on the drawing board.

WHAT IS THERE NOT TO LIKE ABOUT DOUBLE DECK TRAMS?

Forget nostalgia, just consider the practicalities and what people really want. In terms of practicability comparing the similar 'footprint' of the most common form of double deck vehicle, the iconic red London buses and their equivalent in virtually every British town

and city and the far fewer single deckers, the two deck vehicles accommodate 40-50% more passengers. This directly mitigates on the severity of traffic congestion. Replace the double deck by single deck vehicles and times of Gridlock will start

earlier and extend later. At the time that tramway systems were ripped up in over 150 localities, the war-weary public were more trusting than nowadays and let it happen. They would not do now.



Stylish in Aberdeen

In the early years post World War II a general consensus prevailed, Britains vast network of street tramways having suffered a decade of neglect, except from the Luftwaffe in the Blitz, were in a sorry state with worn out vehicles and track. A few cities such as Aberdeen strived to put matters back to good order and some modernised vehicles

began to appear which, if noticed by the rest of the country, would have suggested that systems should be preserved not scrapped. But the arrival of smart, modern diesel buses such as the Routemaster (see below) pointed to a future based on modern bus fleets. Looked at with contemporary eyes, over 100 towns and cities would have still have their trams. Now there are seven!

See and be seen in Birmingham

Some of the early vehicles such as the above historic Birmingham tram reflected the spirit of municipal pride at the beginning of the 20th century. The open balconies at the ends of the upper deck provided an ideal viewing platform for locals and visitors to the city. The traditional British tram is truly History's orphan!



Classic Routemasters still rolling on

A surprising high proportion of the buses in service in the many cities that attract large visitor numbers make use of the upper deck as a popular means of travel around the places of interest.

Originally built with fully enclosed upper saloons, the tour operators have found that the vehicles with the roof partially cut away are the most suitable. Open top buses are not only popular all over Britain but a British firm, the Big Bus Company has begun running fleets of them in America, Europe and Asia and the Southern Hemisphere including in Paris, Rome, Istanbul, Chicago, San Francisco, Washington, Singapore, Sydney and 12 other cities.



Double deck trams in modern street scene

There is no reason why thoroughly modern engineering cannot be accommodated in an iconic external appearance - examples include today's 'Fiat 500s' and BMW-built Minis and the brick fascias of modern houses. It is suggested that cross-town tram systems might have vehicles with balconies at each end of the upper deck. Back to the future!