



An Occasional Newsletter from Parry People Movers Ltd ,
ULRPartners Ltd, Parry Building Products Ltd and
Intermediate Technology Ltd

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PPM-CLAYTON CNG/HYBRID TRAMS AND LOCOS PREFERRED FOR MULTIPLE PROJECTS

UK and foreign transport scheme promoters acknowledge benefit of innovation concepts proven by 10 year success story in a major railway franchise. Projects supported by credible resources now moving forward.



Computer-generated vision of a PPM 60 tram with 'period' style coachwork set against the KL skyline with its iconic 'Twin Towers'.

The nation of Malaysia has, since independence in the 1960s, acknowledged the importance of transport in the economic and environmental advance of the Nation. Unlike many post imperial era countries which neglected their railways, Malaysia has modernised Keretapi Tanah Melayu (KTM) having moved with the times.

Kuala Lumpur, the capital city, now has a network of LRT and Metro lines, but still afflicted by traffic congestion in the admin and commercial districts, the authorities have looked for small, lighter systems to deal with 'Last Mile' journeys currently dependent on road vehicles.

The City, now popular with tourists, the authorities have been considering the attraction of smaller trams.

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HIGH COURT ACTION 'STAYED' AFTER SETTLEMENT AGREED WITH LIQUIDATOR

The hearing, scheduled for 12th August to adjudicate over assertions of misfeasance against former JPA directors, mainly concerning their sale to PPM of Intellectual Property rights, was 'vacated' in the hours before the trial was due to begin. In a Pre Trial intervention by the Judge, the parties were instructed to engage experts in IP valuation. As a result of the experts' reports which had been passed to the Court, the liquidators agreed to a settlement including abandoning the claims. Had these succeeded, they might have involved an award of over £2 million against the Respondents. There will still be an accumulation of various costs about one tenth that amount which is what the financial settlement has been based upon.

Liquidators and Foresight. Page 2

Meanwhile, interest in PPM technologies for light tramways is stirring in several parts of the UK and other overseas countries . See Page 3

Shouldn't Liquidators be trained in Foresight?

Comment by John Parry



The Minister of State for Transport, Jesse Norman, led a small DfT party on a visit to the Stourbridge operation in early May. His highly positive comments reinforced the previous indication given by his department. A DfT 'Call for Evidence' outlining an ambition to greatly expand light rail use in Britain at last sees a role for PPM's Ultra light methods.

How therefore did it come about that the engineering source of innovative ideas in light rail when temporarily short of cash was put in front of the firing squad and shot? JPA was an 'incubator' and one of its fledglings, Parry People Movers Ltd, has been pursued since then by liquidators investigating the circumstances which led to

Scene at Stourbridge Junction taken by a Modern Railways magazine photographer for the July 2019 issue shows 'Little and Large' units, now with new West Midlands Trains liveries. The PPM Class 139 on the right is in its 10th year under a new Franchise now in the hands of the Dutch Government firm, Abellio, which also owns train companies in Germany and the Netherlands.

the end of JPA. They were looking for evidence of wrongful or fraudulent trading. In the event, there was none and now all that is left for the law to do is try and get cash together to meet costs associated with the liquidation activity itself.

Liquidation rarely seems to take into account *the future*. Foresight is what sets the goals for Research and Development which is vital in ensuring that an economy is prepared for change. Change happens. For most people this only becomes apparent when it is 'in their face' - summer temperatures in February, '100 year interval deluges' happening every year, glaciers melting away, sea levels rising. Foresight is applied to planning and product innovation in anticipation of such things.

Clear trends can be discerned by analysis of economic statistics. In the 1980s-90s growth trends in private car use and decline in bus patronage could have been used to predict conflicts over road space that is now the subject of stress-related illnesses and frequent TV programmes about 'Car Parking Wars'. Many hospital and station car parks are battlegrounds.

Meanwhile, liquidation can, on the one hand, be 'forensic', seeking out villainy. On the other hand, it can be a form of trading - what can this or that be quickly sold for? What liquidators do not seem able to do is consider *future* potential. There is no time

A tree covered in apple blossom which in four months could be full of saleable apples might, for instance, be kept, not chopped down and sold for firewood. Research and development could be seen as similar to planting a tree that blossoms in year one and produces a crop of delicious fruit a year later - but don't put it in the hands of a liquidator in a hurry!

In a competitive world, the most valuable small firms will often be those that are working on ideas which come to fruition, not in weeks but in decades. There are fortunately a few investors out there that realise these things and will deploy money for the long term. Otherwise, who would ever plant a tree?

If you want to stump Google, ask it the question - 'Is training in foresight given to Liquidators?' Apparently not.



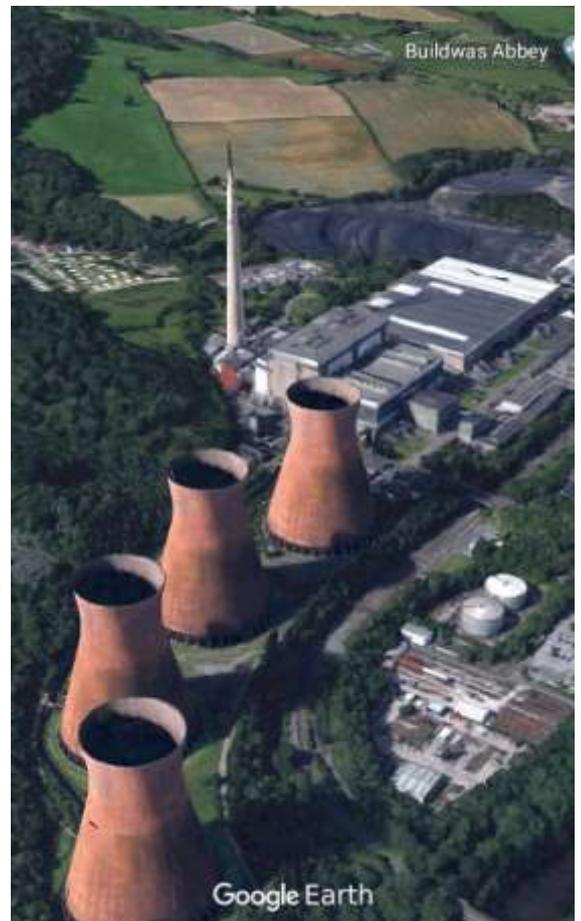
MAIN ROUTES TO MARKET FOR PPM TECHNOLOGY INCLUDE URBAN CENTRE SYSTEMS AND HOUSING DEVELOPMENTS' WITH NEED FOR TRANSIT LINKS

Project values likely to be enhanced when new homeowners have access to rail for their routine journeys.

In a typical large development comprising over a thousand units, any factor that increases a house's selling price by £10,000 adds ten million pounds to the value of the development as a whole. The property market in different parts of the country see this access factor as very important - especially if good rail connections eliminate the need to use a car for the journey to work.

PPM and PMOL are in touch with several UK developers wishing to investigate the feasibility of rail connections. Two of these are in the West Midlands, one just South of the Scottish border and two more at the end of the London Underground network in Essex, and Southeastern Railway in Kent. The concept of 'TOD' - Transit Oriented Development - was introduced to PPM by the American Architect/Construction engineer, Kevin Hart, who is involved in new settlement developments in South Carolina and the Georgia Keys where 'trolley' systems will enhance saleability of housing.

Parry Building Products Ltd whose customers are mainly in Africa, South Asia, Latin America and the Caribbean, find customers for brick and tile making machines are also interested in the applicability of the people mover technology. One in particular, in Ghana, is an old customer who has bought several consignments of building materials equipment in previous years.



Demolition of large coal fired power stations can release sites for hundreds, sometimes over a thousand, houses. The example above is at Ironbridge in Shropshire.



The Klang Valley, close to the Western coast of the Malay Peninsular, centres on the City of Kuala Lumpur with a fairly dense network of main commuter services.

PARALLEL FEATURES BETWEEN MALAYSIAN AND BRITISH CIRCUMSTANCES

PPM's counterpart in Malaysia is D'TRAM SDN BHD of Ampang near Kuala Lumpur. As a member of the Commonwealth and once a part of the British Empire, many instances of Malaysia's laws and procedures are similar, and this reflects in aspects of the transport networks. The diagrammatic map of the transit lines serving Kuala Lumpur and map of the West Coast and East Coast railway lines from Johore Bahru in the South and the Thai border illustrate this similarity.



PPM's relationship is a long standing one, including when in 2014 D'Tram's proprietor, Nik Azmi, led a large delegation of Malaysian Government officials and professionals to Britain to view the PPM technology.

'FIRST OF A KIND' R&D PROGRAMME ENABLING THE INTRODUCTION OF CNG/ FLYWHEEL HYBRID TRACTION INTO BOGIE RUNNING GEAR

Larger, faster, greener trams and trains will become available when development is complete.

The UK Government's objective to invest in transport infrastructure to improve the economy while reducing the extent of noise and air pollution has led to a number of research and development grants made available via bidding competitions. Ultra Light Rail Partners Ltd (ULRP for short) is a promotional and project management organisation comprising the Director of Birmingham City University's IDEA Institute, Prof Beverley Nielsen, and three PPM shareholders; James Skinner, Major 'Kit' Holden and John Parry.

The timescale of the hybrid bogie development work is 9 months with 1st July 2019 the starting point.

The work, which has already begun, draws its principal design elements from the highly successful driveline of the Class 139 light railcars which have now been in 7 day a week service on the Stourbridge Town Branch in the West Midlands for ten years.

The approach being taken at the commencement of the work has been to set a dimensional limit in terms of plan area in which all working parts can be accommodated. The extent of the framework will be no larger than the usual bogie running gear used by longer, rigid trams and light railcars. (Shorter trams and some of the railbuses which ran in the 1950s only had 2 axles and no pivot mechanism).

The bogie wheelbase of the new unit will in other respects be conventional. The bogie will be very novel. In particular it has the same form of large diameter steel flywheel that is the innovative approach to hybridisation that makes the PPM Class 139s different from all other rail vehicles on the UK rail network. The flywheel hybrid arrangement is the centre piece of the IP and features in the 2008 patent owned by the Parry People Movers company.

The Programme budget and timescale will not stretch to the construction and testing of a full length rail vehicle. However, in order that the mechanism can be test run, then made to move on a standard gauge line, one of the collaborating firms, Sustraco, owned and chaired by Mr James Skinner has made available one of the original rail vehicles that were built in the late 1990s. This was the PPM Car 10 or 'Bristol Electric Railbus' which ran in demonstration public service along the Bristol Harbour Railway between 1998 and 2000.

This vehicle has been assigned to the project with the intention that the short coachwork can be

installed on top of the testbed frame and then made to run in working trials.

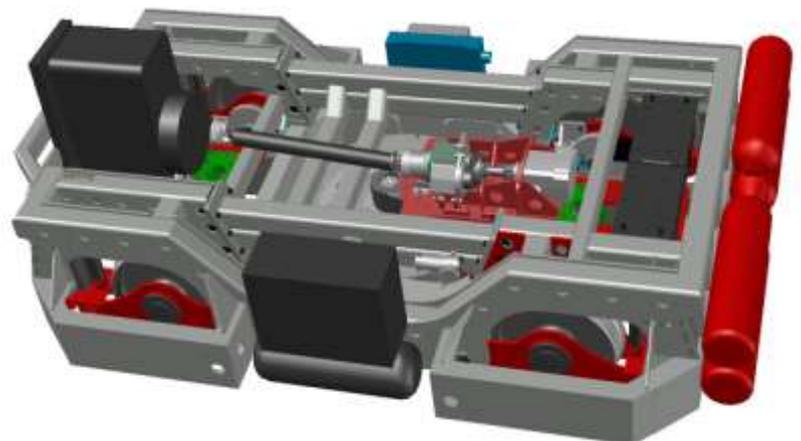


Sustraco's donor vehicle 'Car 10'

For the trials and testing, the project managers are fortunate to have obtained permission by previous collaborators, the Severn Valley Railway, to carry out testing on their line.



The 'Car 12' prototype of the Class 139 is seen here performing a test run between Bewdley and Kidderminster in 2005.



Design for bio-methane powered hybrid bogie

EXPLOITATION PLANNING

Parry People Movers Ltd have a technically proven 'platform' in the form of the running gear, clean prime mover, hybrid drive-line and regenerative braking capability contained within a 10m long rail chassis. Following recent official acknowledgement by the authorities of PPM's relevance in current transport planning, the 60 passenger vehicles have become specifiable and marketable when equipped with a variety of styles of coachwork - railcars or street trams; 'modern/contemporary' or 'period/heritage'.

The new design of powered bogie greatly enhances the scope for market penetration as it will make the flywheel-hybrid

technology applicable to services requiring trams and railcars suitable for longer distance services demanding enhanced speed and passenger capacity.

Without its own capability at present to create its own manufacturing facilities, PPM will be obliged to consolidate its links with already closely associated and friendly firms such as Clayton Equipment Ltd of Burton-upon-Trent.

Key relationships have to be mutually beneficial and have aligned objectives. Clayton, similar to JCB, is another British firm well placed to take full advantage of the prospects of this country exporting to more world markets. Clayton already do business in over 60 countries.



One of seven Clayton locomotives at work transporting materials during current construction activity on London's rail network



The 'yellow' areas of the World map show the countries where the company has been supplying mining and tunnelling rolling stock

DESIGNING VEHICLES TO SUIT MARKET TASTES

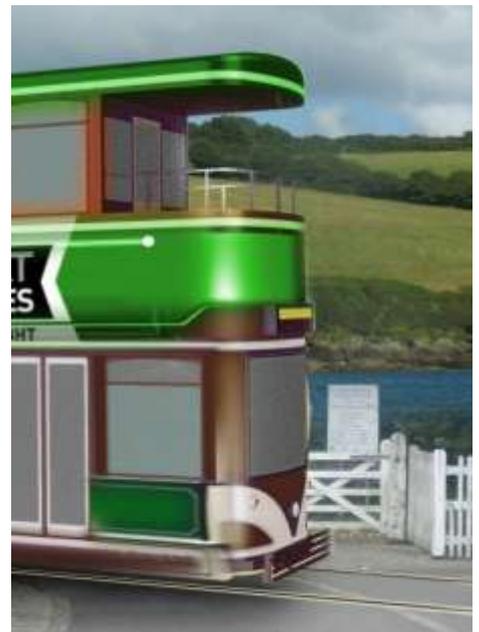
Holidaymakers returning from resort cities overseas describe experiences different from that in Britain where the journeys are dull compared to the cheerful, welcoming impression given by some of the vehicles encountered overseas. The transatlantic saying 'Go with the flow' summarises the need to be alert, not to what the experts say, but to evidence of what is happening on the ground.



In the city of Savannah, Georgia, popular with tourists, some old street car tracks are still in place. In an American style Quick Fix, the tour operator has provided a bus which pretends it is a tram.



A senior level delegation comprising government officials, professionals and contractors from Malaysia visited PPM's operations in Stourbridge and Cradley Heath in 2014. A one sixth scale model produced for a possible scheme in Llandudno caught the eye of the visitors, so something similar may enter service in Kuala Lumpur.



Ancient but modern, PPM envisage the possibility of putting a double deck tram with balcony ends on a Class 139 chassis.



A not unfriendly rival of PPM, the Severn Lamb firm of Alcester has begun pathfinding export of battery powered double deck trams to tour operators.

TURNING BUS ROUTES INTO TRAM ROUTES

THE URBAN MISSION FOR PPM AND ITS PARTNERS

Many modern buses are attractive and well built vehicles and they are quieter, cleaner and more reliable than previously thought possible. As a means of moving people they are far more efficient in fuel and other operating expenses than individual cars. An excellent starting point.



Bus travel however is a less acceptable alternative to motorists than is travel by rail guided modes, like trams. In congested urban centres buses are often seen, not as the solution, but part of the problem. Conventional thinking has however leapt from the present, bus-filled streets, to the ultimate solution, LRT- magnificent train-like vehicles costing say £3 million each, gliding on rail lines which might cost £10 million a kilometre or sometimes much more. Vanity satisfied, but the coffers totally depleted

'So why can't highly specified buses on perfectly formed roadways achieve the equivalent benefit of LRT, affordable, bringing people to their places of work or to popular destinations such as urban centres?' That is the question which will inevitably be asked by 'tram-sceptics'.

There are reasons why not, despite all of the earnest initiatives aimed at bringing modern bus technology to the forefront in the effort to reduce the use of private cars for routine journeys.

The evidence is that:-

- 1. Passengers are willing to pay higher fares to travel by tram than by buses which are only usually chosen because of the cheap fares.*
- 2. It is more difficult for bus drivers than for tram drivers to control journey speeds. Unreliable arrival times cause great aggravation.*
- 3. Even high quality bus vehicles and infrastructure do not enhance property values in the way that rail based public transport routes are seen to do.*
- 4. Vehicles that don't run on fixed tracks are unsuitable to operate in pedestrianised streets*

and may become excluded from town centres. To complete the journey then requires a taxi or a long walk.

From the point of the urban authorities and operating firms there are other reasons why buses have lost favour compared with trams.

Buses need to be replaced more frequently than trams or train carriages. Though their fares are cheaper, their operating costs are higher than trams and so many urban bus services rely on operating subsidies, most tram services do not.

Particulates released during the wearing down of road surfaces and tyres pollute the air and drainage systems. Steel wheel on rail is clean by comparison.

With the exception of in London, buses are seen as less of a tourist attraction than trams.

Trams effectively enlarge the economic size of cities improving productivity associated with scale. They also, with the visibility of their tracks, increase strangers' confidence of being able to find their way around. What has been missing is affordability and that is what PPM and its partners are determined to achieve.



COMING TOGETHER: The UK's bus builders are probably the best in the world for coachwork and are successful exporters. They will be able to adapt readily to producing tram bodies built onto PPM chassis.

CALL FOR IMPORTANT SUSTAINABLE TECHNOLOGY R&D WORK TO BE RESUMED AS NEW RESOURCES COME AVAILABLE AND SITE IDENTIFIED FOR WORKSHOP

A practical Anglo-German economist, Dr EF (Fritz) Schumacher CBE, who was the author of 'Small is Beautiful', (one of the 20th Century's most influential books) pointed to things which are increasingly relevant today:-

1. *Intelligent beings living on a beautiful, but fragile planet, must live within their means (if all the Earth's people consume as much as we do in the West, it would require the resources of three planets, not one).*

2. *Innovative ideas are followed by research and development. Innovation is fine, but too much money is spent on big glamour projects. Small, plain initiatives are equally important.*

3. *Technology should not aim to 'Eliminate the Human Factor' because we are the human factor!*

The approach was refined by Fritz and his colleagues and then categorised as 'Intermediate Technology'.

The winding up of JPM Parry & Associates (one of Intermediate Technology's group of founders) in July 2013 caused the termination of valid, even crucial R&D in energy, construction and transport. Several companies are still utilising earlier 'Parry IP' including Parry Building Products Ltd and Parry People Movers Ltd. Also continuing to tick over, quietly and 'below the radar' under the Chairmanship of Rev Michael

Kneen, Rector of Leominster, is ITW Ltd which is Intermediate Technology Workshops Ltd, but has been without a workshop base.

Now that the prospects of PPM have strengthened, it has been decided that under the banner INTERMEDIATE TECHNOLOGY LTD, it will be possible to recommence innovation, prototyping, trials and testing at the existing Cradley Heath site. This will be in collaboration with the new owners, Grabloaders Groundworks Ltd, who will undertake the physical preparation work on the access and foundations of a new small facility. Intermediate Technology Ltd's workshop will then be able to recommence product development and testing that will be helpful to the World.

Research & Development Themes and Activities



For communities prone to flooding, further development of low cost methods of building on raised columns, already tested in Benin and Mozambique

Mechanical engineering development, integrating and trialling prototype systems aimed at energy conservation and regeneration



Ultra lightweight concrete elements produced by incorporating waste plastic into the mortar mix



'Stabilite' concrete which, though non-porous, is able to float on water and is thermally insulating and light to transport



Development and prototyping of quick-to-install and, when required, to remove: 'Waybeam' embedded tracks for tramways



Processing equipment able to turn EPS into graded particles in order to be used in Stabilite

INTERMEDIATE TECHNOLOGY TO RESUME RESEARCH & DEVELOPMENT ACTIVITIES AT CRADLEY HEATH BASE

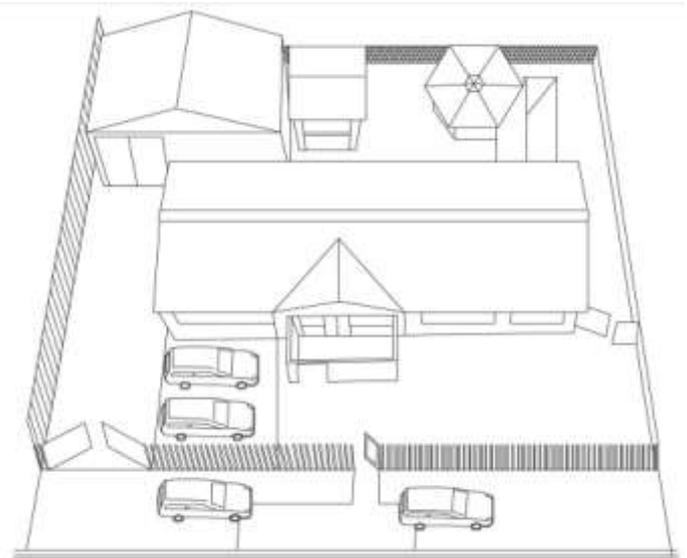
Whilst the space for practical development work is confined, there is already accommodation available for product display and storage of tools behind PPM's single storey office block. Creation of new 100 sq m of covered space will enable trials and testing of small machines

and tools to take place, and for the integration into frameworks or chassis of mechanical components that have been sourced or manufactured elsewhere. Part of the project will involve provision of a new truck-sized gateway into the compound making it possible for vehicles to reverse in and

deliver heavy or bulky items. Work on the project can begin straightaway once the necessary funds (less than £20,000) have been sourced. Prospective joint proprietors or collaborators are being contacted from the energy, construction, charity and international development sectors. Four IT projects are pending.



PPM's office compound viewed from satellite altitude by Google shows at the top left corner adequate space for a 100 sq m covered area. Existing demonstration structures include a High and Dry two storey flood refuge and a hexagonal roof built with light-weight Parry tiling. These can be seen at the rear of PPM's offices.



A sketch of the site shows the covered area once installed on a concrete slab. This measuring 10m x 10m will be constructed by the landlord.

Methods that were used in construction work at Stourbridge are rarely commented on. However, the railcar depot is packed with innovations that are now used in low cost construction worldwide. The platform and parts of the floor incorporate material-saving precast "waffles". The wall columns use hollow shell blocks and panels in between are made from 'Stabilite' concrete which incorporates waste plastic. The roof is clad with micro concrete light-weight Super Roman tiles, the most widely used of the Parry building products.



The eventual form of the workshop will be a repeat of the methods used to build the depot at Stourbridge Branch used by PMOL.



In order for R&D effort on urgent projects to begin without delay, a temporary American style timber barn can be installed in a few days' notice on top of the slab. This can be relocated when a double bay PBP materials-based R&D workshop is constructed at a later date.

