

PARRY NEWS



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An Occasional Newsletter from JPM Parry & Associates Ltd (JPA),
Parry People Movers Ltd (PPML) and Pre Metro Operations Ltd (PMOL)

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PEOPLE MOVER WINS STOURBRIDGE!



Lightweight rail chosen for permanent seven-day branch operation

PARRY PEOPLE MOVERS rail technology has been selected for permanent, full-week operation on the Stourbridge Junction to Stourbridge Town branch line as part of the new rail franchise for the West Midlands.

On 21st June, the Department for Transport announced that the franchise, including the lines through Birmingham Snow Hill, had been awarded to Govia – the transport firm that also runs the Southern and Southeastern franchises. The new operation will serve London and Liverpool as well as Birmingham local trains, and will be branded 'London Midland'.

From December 2008, two new PPM 60 lightweight railcars will provide all services on the branch. The new vehicles, which will replace the single-car Class 153 diesel units that currently provide the service, will be based at the depot on the branch line at Stourbridge Junction. This is being extended to house two vehicles, and equipped with full maintenance facilities.

Lightweight rail, lightweight depot, page 4



Passengers enjoying the PPM experience at Stourbridge

A NEW 'PARRY' TOWN IN KENYA

Best example yet of local building materials technology in Africa

AFTER THIRTEEN MONTHS of hearings, on 12th April 2006 approval was granted to build Kaputiei town. Just one month after this ruling, the opposition appealed to the High Court of Kenya against the decision of the tribunal.

On 21st March 2007 the High Court ruled in favour of the town and dismissed the appeal with costs. Construction has now started and the houses are being built at great speed, according to the project promoter Ingrid Munro.

Kaputiei is being developed using solely Parry technology and materials, with all

tiles, walls and floors made on Parry machines. The manufacturing and construction staff involved in the project come mainly from the slum areas around the city of Nairobi, and at least half are Kenyan women who had previously lived in absolute poverty.

Triumph over adversity, page 3



Site workshop producing roof tiles at Kaputiei, 25 miles south west of Nairobi

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By John Parry

THE RAILWAY and tramway industries have no shortage of talent and, under normal circumstances, the vast engineering resources of the

leading firms are capable of coming up with any solution that the market requires. So how did such a modestly-resourced organisation as ourselves manage to bring a light railcar product packed with technical innovations to the grand status of being specified within a national rail franchise? Not without difficulty and not without help, it must be said. There needed to be a whole difference in orientation in order to identify and fill an unoccupied niche. So what were the differences? Firstly, it needed the freedom of not being the servant of historic investments in facilities. Large companies naturally achieve high productivity and consistent quality by building up massive production assets. However, such investment at such a scale imposes a discipline of innovating by *increment* and not by *leap*. Wherever practicable, you have to make it possible for the company's existing resources to respond, not to be left high and dry. Incremental innovation is not something to be scorned: among my 'heroes' are

Henry Ford, the Wright Brothers and Lord Beaverbrook, who in World War II turned Britain's ploughshares into swords to avoid defeat by Nazi Germany. At the turn of the 20th century the Wright Brothers, although in the bicycle business, saw the development of lighter and more powerful car engines as creating the opportunity for powered flight. But despite the triumph of manufacturing rationalisation then being achieved by Ford ('simplify and add lightness!'), the brothers did not start by sticking wings on the sides of a motorcar. It would have taken eight decades of adding lightness to the materials used in car construction to get one off the ground. Instead they *leapt*, assembling design ideas from every direction — their own bicycles, sailing boats, even birds — until it was possible to achieve the necessary forward speed, wingspan and means of control to get off the ground and down again in one piece. The Wrights made the leap after which, in ten short years, incremental innovation could come up with aeroplanes made and used in their thousands for military reconnaissance and later combat. The Canadian industrialist Beaverbrook was picked out by Britain's political leaders as having attributes which their ordinary civil servants did not have: the technical understanding, planning skills and decisiveness to bring about the conversion of car plants into aircraft

factories. Then wire-rope making and tennis ball machines produced floating defences against anti-shiping mines and so on. This capability is something we had to develop (on a smaller scale) in order to prepare ourselves in case the floodgates open following the long awaited breakthrough at Stourbridge. Secondly — and moving to a musical analogy — to play a different kind of tune it is sometimes necessary to make changes to the band. The changes in technology involved in the development of lightweight forms of rail vehicle have been accompanied by a process of simplification, especially where the complexity of controls, instrumentation and driveline engineering can be made plainer than that needed for the very fast, very heavy mainline railway operation. Finally, new approaches can often be seen as a threat. The largely unspoken opposition to the lightweighting innovations stems from the deduction that wider introduction will reduce the requirement for the type of abilities and skills presently employed in the rail industry. We have said it before but it bears repeating: success for our concept takes nothing away. Our ambitions are entirely directed towards railway expansion with new and reopened smaller lines supporting a larger capacity main network: 'More jobs all round'.
Cradley Heath, August 2007

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NEW TOWN: TRIUMPH OVER ADVERSITY FOR KENYAN TRUST

Parry building materials play key role in improving living conditions

AS REPORTED in Parry News 35 (April 2003), Parry roofing technology achieved a major advance following the decision in the early 1990s by the architects and developers of the major housing development at Koma Rock, to the east of Nairobi, to specify Parry Pantiles for the roofs. Over a million tiles were produced using Parry Multivibe vibrating tables and moulds.

Livelihood creation

Much of the tile production for Koma Rock's 3,000 houses was undertaken by the Humama women's group who were brought together by the director of the African Housing Fund (AHF), Swedish architect Mrs Ingrid Munro. Ingrid saw the opportunity to create livelihoods for people from Mathari Valley, the notorious shanty town on the edge of Nairobi city. The initiative was a great success creating up to 60 workplaces and many spin-off little businesses adjacent to the production site. The workshop remains functioning, providing tiles for additions and repairs.

Slum dwellers' self-help

The Jamii Bora Trust is listed by UNITUS within the category 'innovative solutions to global poverty'¹. Its initiators were a group of inhabitants of Nairobi's slum settlements, who were seeking a way to escape from the squalid conditions of their daily lives. They knew and trusted Ingrid Munro, through her previous practical development work with AHF.

The need they saw was for micro-finance to provide start-up cash for the myriad small enterprises on which the economies of slums and shanty towns are based. Also, they perceived that it might be possible to use the locally produced building materials — which Ingrid had introduced in low cost housing schemes in Kayole and elsewhere using Parry technology — to build something better than the corrugated iron shacks which characterise a Kenyan urban slum.

Ingrid then helped them to create and win support for the Jamii Bora Trust, and took on the role of chief executive.

Instant success

Because the Trust had been an instant success, attracting 70,000 micro-finance clients by 2004 (and well on the way to its goal of 500,000 by 2009), its managers envisaged obtaining land well away from the slum area. By employing the physical effort of the prospective residents for materials manufacture and construction, their incomes would be enough to meet mortgage payments on new houses of \$20 per month — no greater than the rent charged for a hovel in the shanty town. On this basis the settlements could thrive. Therefore the supreme effort that was needed to acquire land and obtain planning permission to build will have been worthwhile. As happens in Africa, a spontaneous local economy of markets,



A Kenyan woman worker in the factory producing Parry roof tiles (Photo: J Parry)



Ingrid Munro and JPA chairman John Parry meet in Nairobi (Photo: Nick Evans)

small traders, and makers of items as simple as brown paper bags and cooking stoves is beginning to cluster around the settlement. A new town is born!

¹ For further information see http://www.unitus.com/sections/partners/partners_ken_jamii.asp

PARRY REPRESENTATIVE PROMOTES SOUTH AFRICAN SHANTY UPGRADING

Trainees arrive in Cradley Heath to prepare for Durban project

thousands of people — from the surrounding countryside, from further afield in South Africa and even from other neighbouring countries such as Mozambique — have moved in search of work and livelihoods.

JPA's Southern Africa representatives are Southern Marketing Services, whose proprietor Deva Pannoosami identified the prospects for Parry building materials technologies to be used for upgrading conditions in the slums.

Malawi visit impresses

Several months ago he persuaded civic leaders to make a trip to Malawi to see the highly successful school building programme, where already over a thousand classrooms and district education centres have been constructed using Parry tiles.

The South Africans were impressed, and representatives have also visited the UK for discussions.

The prospect now is for the shanty dwellers to be assisted in forming themselves into as many as twenty co-operatives, which will organise the manufacture of building materials and construction of brand new houses in place of the shanty shacks.

Training the trainers

In July, Southern Marketing Services arranged for technicians Kerushin Reddy and Goonasagaran 'Tutti' Ganasen to spend a fortnight at JPA's Cradley Heath workshops preparing to be trainers who will assist in the housing programme back in South Africa. They have now returned home, and Deva himself has flown out to Durban to negotiate the final terms for procuring up to twenty sets of equipment so that the co-operatives can make an early start on this most important programme.



Tutti (left) and Kerushin at the JPA workshops

THE DURBAN METRO authority in South Africa controls a large urban area on KwaZulu-Natal's Indian Ocean coast. Like many South African cities, this has a major formal urban area but also includes huge areas of shanty settlements to where

LIGHTWEIGHT RAIL FOR STOURBRIDGE

Continued from page 1

The full, all-week lightweight rail service is planned for introduction at the timetable change in December 2008, once the two new railcars have been built and tested for public service use. The new railcars will be PPM 60 type vehicles, built by a British industrial supply chain including Clayton Equipment, East Lancashire Coach-builders, Power Torque Engineering, Linde Hydraulics, and Brecknell Willis Composites.

The PPM 60 vehicles will be around one metre longer than the existing PPM 50 and will have a maximum capacity of 60 passengers inclusive of standing.

A successful experiment

Govia's announcement follows the experimental service, using prototype PPM 50 railcar No. 999 900 and licensed train operator Pre Metro Operations Ltd, which ran this route on Sundays only between 11th December

2005 and 17th December 2006. With over 4,000 trips operated in passenger service, reliability and punctuality stood at 99%. Emissions of carbon dioxide, noise and pollutants had been significantly cut compared to the Class 153 unit.

The Sunday services were withdrawn in December 2006 after completion of the Centro-funded experimental operation, which had shown that lightweight rail was a viable option for the branch line.

Stourbridge's best ever rail service

The new service will run seven days a week and will be more frequent than the current trains, with a ten-minute turn-up-and-go frequency throughout the day. It will give Stourbridge Town its best ever rail service, especially as regular Sunday services will be reintroduced — apart from PMOL's operation last year, these had not run since 1915.

Supply chain beats starting gun, page 8

CORNWALL CALLING

THE LOCAL TRANSPORT PLAN for Cornwall at last includes numerous references to enhancement of the county's rail network. This is notable because, not so many years ago, some transport proposals envisaged a main railway line from London going no further than Plymouth, with Cornwall almost a rail-free zone!

With the growth of the market for secondary aggregates (material pushed aside when mining for china clay) the freight market seems assured. And in these greener times it becomes ever more urgent to find ways of moving people conveniently by train, whereas once the car was the automatic choice for travel to the far south west. PPML has made numerous enquiries and visits to Cornwall in response to a continuing low-level hum of interest.

The hum has now become a buzz, and the active and capable management team of the Bodmin & Wenford Railway are striking north towards the Atlantic coast. Meanwhile, the world-famous Eden Project is looking for ways to reduce the environmental impact of the millions of annual visitor car journeys. The planners in this far-flung corner of the UK are well aware of the potential offered by PPML.

NEW RAILCAR DEPOT AT STOURBRIDGE DEMONSTRATES LIGHTWEIGHT CONSTRUCTION TECHNIQUES



The newly extended depot building seen on the left of the line, with a main line train (inbound from Worcester) on the right of the picture

BY LATE JULY 2007 the railcar shed, which Parry Associates has been constructing within the PMOL leased compound area at Stourbridge Junction station, had been enlarged to accommodate two railcars — each larger than the PPM 50 vehicle that operated the Sunday service in 2006.

The circumstances at this main line station are extremely awkward due to a complete lack of road access. As a consequence all the materials for this 25m long depot building had to be brought to the site using a small four-wheel hand truck, with the heaviest items brought up in the passenger lift

To make the project feasible it was vital to minimise the weight of materials used in order to build what nevertheless had to be a robust and durable structure. Parry technology, which is used worldwide for building projects in countries where prices of materials such as cement are extremely high, has always specialised in conserving weight. Parry tiles are half the weight of normal roof tiles and the High and Dry waffle technology used in the floors saves raw materials as well.



The slender but strong and durable steel structure supporting the Parry roof tiles

THE MOUNTAINS MOVE AS THE DEPARTMENT FOR TRANSPORT ADOPTS 'PARRY' CONCEPTS IN RAIL POLICY ANNOUNCEMENTS

THE GOVERNMENT White Paper and Technical Strategy for the railways, published on 24th July, reveal extensive official recognition of the need for high-efficiency, lightweight, hybrid technology in future rail development — an approach pioneered by PPML since the 1990s and developed in building and running a series of testbed and prototype vehicles.

This recognition followed the 21st June announcement that the new West Midlands franchisee Govia had selected PPML's railcars to operate services on the Stourbridge Town branch from 2008 (see pages 1 and 4).

The company expects that the supply of two PPM 60 vehicles to the London Midlands franchise will increase revenue by as much as £750,000 starting in the current financial year. This will be the first conversion of a national rail line to 'lightweight rail' technology.

PPML's earlier rail vehicle, the PPM 50 railcar (pictured right), was the first in passenger service to feature lightweight construction, a hybrid power supply, and a

patented energy storage system that enables the vehicle to recover kinetic energy when it brakes and then re-use it to accelerate away from stops (a technical feature known as regenerative braking).

The experimental operation on the Stourbridge Town branch in 2005-06 revealed a calculated 80% cut in carbon dioxide emissions compared to conventional diesel trains, a 45% reduction in operating costs and considerable cuts in both noise and pollutants. The base technology, which uses propane gas as fuel, can be adapted to use other energy sources including biofuels and hydrogen if these are preferred.

The Government's Rail Technical Strategy makes frequent reference to the need for carbon reduction through the use of lightweight vehicles, hybrid technology, regenerative braking and the potential for hydrogen and biofuel to power rail transport systems.

Senior figures in the transport industry are now admitting that 'Parry People Movers got there first!'



PPM 50 railcar at Stourbridge

PPML'S BUSINESS PLAN SHAPES UP WITH NEWS OF STOURBRIDGE WIN

THE CONFIRMATION that Govia will require two new PPM 60 railcars to operate the Stourbridge Town branch has placed Parry People Movers Ltd on a firm commercial footing, looking forward to a future where transport planners and campaigners see lightweight rail as the natural choice for the provision of high-quality local transport.

This strengthened position has enabled a review of the firm's achievements and likely future performance.

In summary, the company has:

- Secured intellectual property rights to exploit a new, very competitive technology for branch line trains and street-running trams.
- Assembled a highly competent and well-resourced manufacturing supply chain to build rail vehicles to its designs.
- Secured a 'breakthrough' specification for its product to be used within one of the new franchises of the UK rail industry.
- Completed, to the authorities' satisfaction, a rigorous trial programme involving over 4,000 timetabled public services.
- With its licensors/technical support associates, secured a training nucleus of manufacturing, operating and maintenance skills.
- Achieved recognition of its technologies by the UK transport establishment.
- Influenced the framing of forward policies.
- Obtained reliable estimates showing profit margins of between £50,000 and £100,000 on each vehicle sold.
- Identified a large market both at home and overseas.

These strengths are based on a technological achievement of considerable importance: an attractive, affordable, environmentally-friendly form of transport that reproduces the amenity of the one mode most able to bring about modal shift from cars: modern light rail.

IAIN COUCHER DESCRIBES NETWORK RAIL'S CHALLENGES

New chief executive emphasises role of lightweight trains

NETWORK RAIL's AGM, held at the Hilton Hotel in Manchester on 18th July 2007, was the occasion when chief executive John Armit CBE stepped down in favour of his long-standing deputy Iain Coucher.

During an eventful five years, Mr Armit has presided over an extraordinary recovery — creating a functioning organisation out of the bankrupt Railtrack plc. Network Rail has turned into the world-class company around which Britain's rail industry is experiencing strong growth in passenger numbers and quality of service, and is now moving into an expansive phase.

Seven objectives for the railway

Mr Coucher set out the 'challenges' for the future with the objective of satisfying, and even delighting, all those who use and do business with the railway.

Moving forward into Control Period 4 (2009 to 2014) Network Rail will be aiming for:

- High reliability
 - Full operations seven days a week
 - Easier maintenance of both track and trains
 - Greater energy efficiency and sustainability
 - A more affordable railway
 - Improved capacity
 - A good 'whole journey experience', with the railway taking a greater interest in how people access its services, not just in the train ride
- He noted that rail's 'green advantage' had been slipping, with other forms of transport gaining better and better environmental performance, especially as extensive automotive industry

research and development programmes bear fruit.



Iain Coucher

The role of lightweight rail

Parry People Movers Ltd and its associates intend to make a strong practical response to the aims declared by Network Rail.

Already, the combination of PPML technology and the appropriate operating regime pioneered by Pre Metro Operations Ltd have brought major advances.

In the areas of affordability, efficiency and ease of maintenance, lightweight rail brings substantial benefits. The revitalisation of branch lines, with more frequent stops than before, is achievable because of the better acceleration provided by the flywheel drivelines in PPM railcars. New services create additional network capacity and can enhance the whole journey experience by bringing the railway closer to people's doors.

Lightweight rail at the periphery of the national rail network can integrate local and inter-city transport and make the train truly competitive with the convenience of the car.

Seven-day-a-week operation of the Stourbridge Town branch will demonstrate how Network Rail's challenges can be met in local transport circumstances, complementing the projects being taken forward simultaneously by the Department for Transport aimed at improving the quality and environmental performance of suburban and long-distance rail services.

WORKSHOP PLANNED ON ISLAND OF DOMINICA

A PROJECT to bring benefits to one of the world's more pleasant backwaters, the small island of Dominica in the Caribbean, is being put together. Dominica has an exposed east coast where the Atlantic breakers fill the air with saltwater mist — bad news for anything made of iron or steel, including the corrugated metal sheets used for roofing.



Town scene in Dominica, with rusty iron roofs
(Photo: J Parry)

Although citizens of an independent nation, Dominica's population of less than 100,000 is no greater than a small European town and is mainly dispersed around the coastal fringes. Long-term associates of JPA based in New Zealand, Kris and Matesha Gledhill nonetheless have many friends and some relatives on the island, as well as business interests in Marigot and

Portsmouth. They have spotted an opportunity to create a small building materials enterprise serving remote areas away from the more heavily populated south. An initial plant is being procured comprising equipment to make roof tiles, concrete blocks and paving slabs. In June, Matesha spent a few valuable hours at Cradley Heath familiarising herself with the equipment and methods. She has just finalised the contents of the consignment, to be shipped in early August.

BII PLANS FURTHER GROWTH IN ZAMBIA

UK-BASED CHARITY Build IT International is currently involved in a project in Filwa in Zambia, and has requested quotations for further equipment. Parry Associates' building materials products are becoming increasingly popular in Zambia and Build IT is in the process of purchasing a second Super Roman tile plant with an option to bring in the 'High and Dry' lightweight floor/ceiling system. Malcolm Alcock, a Parry-trained technician, is overseeing the Filwa project and intends to stay in Zambia when the new equipment arrives there to commission it and continue training local builders.

ONLINE BUILDING MATERIALS CATALOGUE NOW AVAILABLE

Improved product information leads to instant results

PARRY ASSOCIATES' website, which can be found at www.parryassociates.com, has been upgraded to give visitors direct access to the information they need when deciding which equipment to buy.

Downloadable and printable

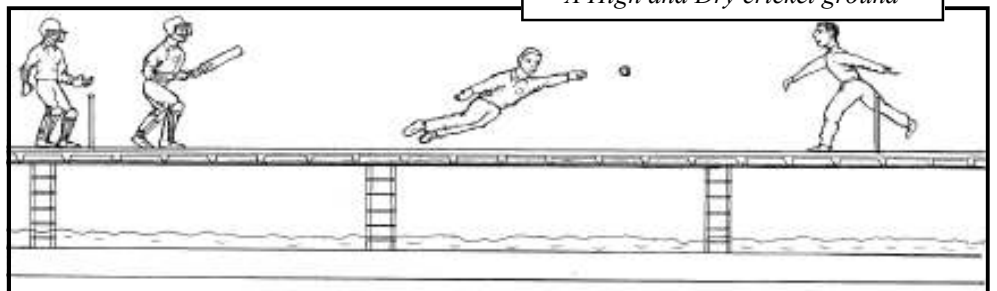
A click on the 'construction products' button leads to an easily-navigable, web-based catalogue that gives full details of the full range of Parry building materials equipment and its uses. Furthermore, each section of the online catalogue can be downloaded in printable format, and — if full details of the range are required — the entire catalogue can be printed as a single document. Other recent additions to the JPA website include an illustration of the 'global reach' of Parry construction technology throughout Africa, Asia, and Central and South America, and a single page bringing together the company's information brochures and leaflets.

The improved catalogue information has already proved useful to potential customers, with highly informed enquiries now being received.

PPML too

The Parry People Movers webpages have also continued to evolve with regular updates and improvements. The site, www.parrypeoplemovers.com, saw its heaviest use ever when it was announced that Parry People Movers railcars were to be used for the full service on the Stourbridge Town branch, with over 300 visits per day recorded.

A High and Dry cricket ground



STAYING 'HIGH AND DRY' ON THE UK'S FLOOD PLAINS

PARRY ASSOCIATES' interest in monsoon rainfall and flood plains has — up to now — concerned the Limpopo, Zambesi, Ganges and Padas rivers; not the Severn, Thames, Don or Avon. An extraordinary irony of the recent unusual situation in the Midlands of England can be observed in a queue of people standing under umbrellas in pouring rain queuing for fresh water!

Television coverage in the aftermath of the recent flooding showed some (but by no means all) of those affected making use of their houses' downpipes to fill containers with fresh rainwater. Regrettably, many people seemed unaware that the stuff falling on their heads was quite possibly the very thing they were queuing for.

Meanwhile the next series of 'hosepipe bans' is probably only a few months away as things dry out, and one's mind turns to looking for a 'two problems, one solution' opportunity. Let's look at these flood plains and today's media focus on the large expanses of 'hard surfaces' — car parks, roads, paved driveways and garden decking which cause rainwater to run off too fast.

It would be wrong to be too hard on hard surfaces: the Glastonbury mud-wallow illustrates the problems of not providing them. But is there any way of combining a hard surface with a way of reducing the rapid run-off which is causing all the problems?

A solution for the flood plains is actually to use them for what they are — a vital defence against the most violent inundations. The flood plain, or 'water meadow' as we also call it, encourages the river to spread out over low-lying areas adjacent to its normal banks. Life could still go on at times of extreme heavy rainfall if the hard surfaces which we desire were rebuilt on piles about 1½ to 2 metres higher than the original

ground level. As a result roads, car parks, tennis courts and even Worcestershire County cricket ground could be reinstated on a thin shell of reinforced concrete slab covering large 'cisterns' capable of receiving and storing thousands of tonnes of water. Not only could these new level spaces be available to receive flood water spreading from swollen rivers, but they could also collect and store rainfall as a reservoir, making it available during times of shortage. Any new buildings in these flood plain areas would obviously be best constructed on mounds or preferably on stilts — also the natural form of construction in Brunei, the Mekong Delta and even in prehistoric Somerset, before the 'Levels' were drained. For buildings already there on the flood plain and built at the original ground level, either their perimeters should be raised to dam out the flood, or anything which could be destroyed by flooding, such as electric wiring, should be kept well above ground level. What must not be done is the building of tall embankments to try and restrain the river in its 'normal' narrow channel. The volumes are too great for that and water will find its way, either deluging the folks downstream or bursting over the raised banks. So, if anyone asks us, we say that the future for living on the UK's flood plains is to stay 'High and Dry'.

TRANSPORT ENQUIRIES FROM HOME AND OVERSEAS

After Stourbridge announcement, the approaches keep on coming

FOLLOWING THE SELECTION of lightweight rail for full operation of the Stourbridge Town branch under Govia's franchise, PPML has received a series of enquiries concerning the potential for similar technology to be deployed elsewhere.

Recent communication from within the UK has included approaches from local authorities, transport promotion groups and railway operators for four potential applications, including the replacement of heavy rail operations with frequent lightweight rail services, revitalisation of old railway alignments and a combined operation of lightweight public transport and steam-hauled services on an extension to an existing heritage line.

Export markets eye lightweight rail

PPML has always viewed its products as internationally-competitive, with their innovative powertrains — based on widely-available automotive technical skills and components — giving much wider applicability than specialist, highly sophisticated tramway and railway technology. It has therefore been gratifying but not too unexpected to receive recent expressions of

interest from locations as diverse as Portugal, the American Mid-West, Arabia and south east Asia.

Australian opportunities

A particularly active source of enquiries is Australia, where numerous projects across the country have approached PPML for potential assistance with the provision of environmentally-friendly and cost-effective transport.

The organisation Going Solar (see Parry News 40) has been actively promoting the concept of lightweight rail across Australia and in recent months this has led to a visit to Stourbridge by Rod Duncan, the city centre programme manager of the City of Greater Bendigo in Victoria. Bendigo has retained elements of its tramway system, with a route following the boulevard spine connecting the Victorian city centre and gold mining heritage sites.

New plans envisage a new, modern public transport system connecting with the heritage route, and the Parry People Movers approach has emerged as a potential solution to this city's transport problems.

Cornish rail links proposed, page 4

NEW WAYBEAM CONCEPT FOR TRAMWAY CONSTRUCTION

PARRY WORKSHOPS have begun work on a method of putting down rails in a way that spreads the load, putting less demand on the bearing strength of the soil below and reducing the amount of steel needed for the running rails.

PPML director Major Christopher 'Kit' Holden is a senior figure in the light rail field. During his time with HM Railway Inspectorate, Kit influenced the framing of regulations which released Britain's new tramways from the stifling effect of heavy rail practice, and with this new innovation he is again setting out to achieve commonsense engineering solutions without introducing operational risk.

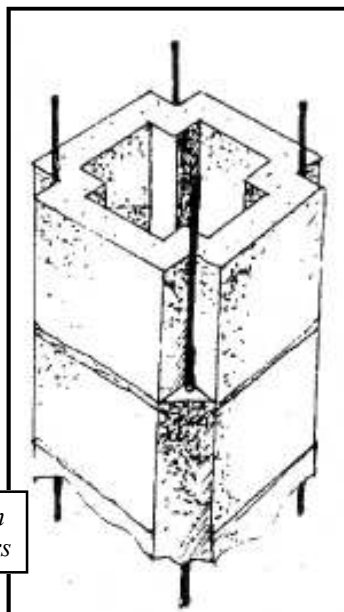
The contemporary context for new rail-based systems includes spiralling costs of metals — steel included — due to rising international demand. Asking the sensible question 'If the vehicles are light, then how massive must the rail be?', Kit observed the method that Parry Associates use for constructing reinforced concrete columns. This originated from the intervention of JPA director Nick Evans, a structural engineer.

In the case of this new type of column, which has a hollow core

and reinforcing bars positioned at the corners (where they are most effective), materials are minimised and high performance assured.

These columns are used in the High and Dry product range for raised floor construction, as well as the hybrid column-and-infill method of building the walls of new schools and other large buildings.

A new reinforced concrete design of waybeam is at a design stage. This greatly reduces the weight of rail needed, relying instead on the ability of reinforced concrete to bridge weak ground spots.



Parry column construction, with steel reinforcement at the corners

The end objective of Parry developments in tramway track construction is a system that can be easily, quickly and affordably installed in existing streets, with the minimum possible disruption to city life.

INTERNATIONAL NEWS IN BRIEF

Liberia

A UK-based Christian Fellowship group is keen to ship a consignment of Parry building materials products to Monrovia, where a local church wishes to start a building materials enterprise to benefit the local community. They are also interested in purchasing a stone crusher for use in grinding stone to gravel at a nearby quarry.

South East Asia

Parry Associates is in the process of dealing with enquiries from all parts of this region, including Papua New Guinea, Malaysia, Sumatra and the Philippines. An enquiry for Laos has come through our agent for the area, Geoffrey Wheeler of CVBT, who has a customer requiring a substantial amount of ARMCON paving slab moulds along with an electric vibrating table top machine.

South Sudan

JPA's associate in South Sudan, Mr Aniek Tong Atak, has recently confirmed his appointment as Resident Engineer to the University of Juba, a post he expects to take up soon. When he arrives in Juba he will be taking delivery of a building materials plant donated by the UK-based charity Burdens Charitable Foundation, which his company ACBS Ltd will then commission and operate. Aniek has recently undergone a refresher training course at the company's West Midlands workshop.

Turkey

Françoise Summers, an old customer of Parry Associates, has recently been in contact regarding roof tile machinery for the Kerkenes Eco Centre in northern Turkey. Françoise is currently endeavouring to raise funds for this much needed equipment and has also been involved in trials using lactose waste (a by-product of cheese making) to make fuel briquettes. A similar trial was conducted at Cradley Heath in early 2005 combining lactose with shredded paper to form a compressed lightweight briquette using a modified brick press, which can be supplied by Parry Associates.

PLUS MARKET STATUS ENHANCED

THE PLUS MARKET, on which shares in Parry People Movers Ltd are listed, has been granted Recognised Investment Exchange status by the UK's Financial Services Authority, giving it the same standing as the London Stock Exchange. RIE status is an internationally-recognised benchmark which enhances the PLUS offering, opens the market to more investors and gives access to wider pools of capital across Europe.



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PPML SUPPLY CHAIN BEATS THE FRANCHISE STARTING GUN

British component manufacturers start preparations for delivery Initial powertrain and bodywork component production commences



Brecknell Willis Composites: Taking a 'splash' mould of the railcar lower cab area (above); First-off cab mouldings produced in Chard in July (below)



Scandus UK: Trial fitting of seats in existing PPM 50 railcar on 6th July



Power Torque Engineering: Ford DSG423 engine, newly delivered from the United States

UNLIKE THE successful PPM 50 vehicle (No. 999 900 or 'Car 12', which ran in public service on the Stourbridge Town branch between December 2005 and December 2006), the two railcars for Govia's London Midland franchise are being constructed in a series of modules. Work had even begun in advance of the franchise announcement thanks to support provided by the Government's Manufacturing Advisory Service West Midlands (see Parry News 47) and using funding made available by Close Asset Finance, under a sale and leaseback arrangement involving Car 12.

Chassis component design commences

Clayton Equipment has begun design work on the mainframes of the vehicles in Burton-on-Trent. Priority is being given to a change to the final drive system used on Car 12. There will be an 'in line' gearbox on the driven wheelset which will be considerably more compact and should be quieter in operation.

First engine received in the UK

The second module involves automotive firm Power Torque Engineering, which specialises in Ford products. Power Torque have already procured the first of the prime movers (propane-fuelled engines): the first component in the power train which also includes fluid coupling, main bevel gear box and air operated clutch. The engine is more powerful than the unit used in the PPM 50 railcar, reflecting the increase in size (1 metre longer, 10 more passengers) of the new vehicles.

Flywheel-to-wheelset hydrostatics

As previously, the secondary transmission is being engineered by

Linde Hydraulics with hydrostatic pumps and motors uprated from those used in Car 12.

A coachwork partnership

Whereas Clayton, Power Torque and Linde have all been previously involved in the PPML venture, construction of the bodies now involves one established and one new supplier. Cladding components for the body are being produced as before by Brecknell Willis Composites of Chard, which has already tested its moulds by producing two sets of the GRP cab mouldings.

The complete body assembly has now been put in the highly professional hands of North West Bus & Coach Repairs - the special projects division of East Lancashire Coachbuilders, one of Britain's leading bus builders. The same organisation has been engaged in the major build work including framework cladding, internal trim, wiring harness, and fitting-out the driver's cabs.

Accessibility assured

Bodywork design has included not just the structure but also a careful look at the interior. Stourbridge-based seat manufacturer Scandus UK have joined the project team as a supplier, while the requirements of the Rail Vehicle Accessibility Regulations have been fully assessed to ensure compliance.

Looking to the future

Because Parry People Movers expects shortly to embark on the development of larger and faster vehicles mounted on power bogies, all aspects of the two-axle railcar design are being reviewed and, where necessary, upgraded in order to be useable in 'the next generation'.

FOCUS ON CAB ERGONOMICS TO IMPROVE DRIVER COMFORT

EXPERIMENTAL OPERATION of the PPM 50 railcar on the Stourbridge Town branch during 2005-06 brought with it numerous opportunities for learning what improvements could be made. One of the most crucial aspects was feedback from the Pre Metro Operations crewmembers who operated the Sunday service. A clear requirement for improvement of cab ergonomics was seen, and so the driver's position in the new PPM 60 railcars will be significantly different from that on 'Car 12' (illustrated right). Better seats, improved access to controls, clearer instruments and better warning systems are all planned.

