

Acquisition by Lease of Wirral Tramway and Associated Assets
(CX/16/12)

Report of the Director of Resources

1. **Introduction**

- 1.1 The Authority will recall that as part of its Strategic Asset Review, Wirral Metropolitan Borough Council (WMBC), sought to dispose of, the Pacific Road Arts Centre, the Taylor Street buildings and Wirral Tramway as a package and invited expressions of interest on that basis.
- 1.2 Members will recall that the Authority at its meeting of 3 February 2011 resolved that:-
- (a) The recommendations of the Passenger Transport Executive (PTE) Board to request the Integrated Transport Authority (the Authority) to support the lease for the acquisition and operation of the assets of the above be not approved because of cost; and
 - (b) The Authority believes that work should continue to further examine the possibility of acquisition of the Wirral Tramway infrastructure and report back on progress and cost.”
- 1.3 The objective of the meeting is to seek a decision of the Authority on whether to submit a bid for the tramway or not.

2. **The Core Proposition**

2.1 WMBC are inviting tender bids for organisations to operate the Wirral Tramway on the following basis:-

“Competitive bids should be sought to dispose of the Council’s interests in Pacific Road, the Transport Museum and Tramway

- (a) *The Pacific Road facility should not be disposed of separately from the tramway operation.*
- (b) *Continued operation of the theatre should not be a requirement for the future.*
- (c) *The opportunity to use the Pacific Road building to improve the display of museum contents and the operation of the tramway and to strengthen the visitor attraction should be considered by bidders, together with other appropriate uses.*
- (d) *Bidders should be required to show how they will engage with and include community and voluntary groups in future operations.*
- (e) *A requirement should be included in any disposal for the new operator to provide secure and satisfactory arrangements for the housing and management of the museum collection”.*

3. **Rationale for Bidding**

3.1 The current heritage tramway operates along a short part of the Birkenhead waterfront, starting at the Woodside Ferry Terminal. In its current form it cannot form part of a transport network. However, it does have potential to form the basis of a future tram network to serve the Wirral Waters development. In simple terms it is probably only worth bidding for the tramway if the Authority believe that acquiring the Wirral Tramway would have a realistic prospect of forming part of the transport infrastructure of the Wirral Waters development.

3.2 The presentation of Scott McIntosh of Mott McDonald at the meeting will allow Members the opportunity to assess the potential route into Wirral Waters and as a further possibility, Seacombe.

3.3 Merseytravel has worked very closely with WMBC and Peel Holdings to ensure that the transport infrastructure can be

enhanced in tandem with the development. Thus, a draft Section 106 Agreement is in place with WMBC and Peel for funding of a number of significant transport enhancements around the area, e.g. improvement to rail stations, Birkenhead bus station, the Mersey Tunnels and the provision of additional new bus services to link the development with Birkenhead and city centre bus services. A more detailed explanation will be given by Officers at the Authority Meeting.

- 3.4 However, Members do need to be aware that the Wirral Tramway was not part of the Section 106 Agreement other than the requirement to protect a potential alignment within the development of the tramway. The tramway was not however, seen as an essential element in the initial project concept.
- 3.5 Peel Holdings will be represented at the meeting and Members will therefore have the opportunity to raise and clarify issues with Peel and why they believe the Wirral Tramway will enhance Wirral Waters.
- 3.6 Informal discussions with Officers and with Peel have been very productive and have allowed some initial ideas to be developed, e.g. a first phase of the Tramway extension (Twelve Quays-Hydraulic Tower into the landscaping of Wirral Waters).
- 3.7 Peel is prepared to provide the land required for the operation of the tramway (track space, stop sites and sites for additional traction sub-stations), at a peppercorn rent. Furthermore, Peel will ensure that all practicable efforts are made to clear all utilities and other obstructions from this operational space as part of the general land preparation for redevelopment (i.e. at no cost to the tramway project).
- 3.8 Peel has proposed the provision of a branch from the Wirral Waters loop tram line to their International Trade Centre site. For this line Peel would provide space along the former Mersey Docks and Harbour Company dock railway alignment.
- 3.9 Peel has agreed to provide £10,000 cash to fund the outline alignment development for this proposal from its own funds and will provide the resultant outline design proposal to Merseytravel at no cost.

4. **Financial Implications**

- 4.1 A business plan was produced in September 2010 which is attached for reference and background. However, since it was produced, the economic landscape has changed. Accordingly, if the decision is taken to bid for the Tramway, Officers would ensure that an updated business plan was commissioned and prepared. This would clearly to be shared with Members, as a pre-requisite before any contract was entered into.
- 4.2 From the initial work undertaken, it is considered that an on-going revenue allocation i.e. subsidy of c£250,000 per annum would be required simply to operate the Heritage Tramway. Again, should Merseytravel take on the Wirral Tramway then every effort would be made to reduce this level of subsidy. The actual level of revenue support required to support a tramway extension into Wirral Waters is not known, and would need to be subject to a properly assessed business case.
- 4.3 In the short-term, i.e. up to five years, the decision Members would need to take is around whether they would wish revenue support of that level to be made; an issue therefore of spending priorities.
- 4.4 In terms of the longer-term development, Members need to be very clear that the required capital expenditure of up to £30m to develop the Tramway through Wirral Waters is not in place, i.e. the tramway does not feature in the current Capital Programmes. Again, before we entered into any contract, both Members and Officers would wish to be clear on what potential sources and funding might be available, e.g. European Structural Funds, Regional Growth Funds or Section 56 Grants.
- 4.5 WMBC has a Section 106 Agreement to fund transport enhancements which has been obtained through close negotiation and partnership working with Merseytravel and Peel Holdings. As referenced to earlier in this report, the Wirral Tramway is not included in that agreement, and is recommended that the existing agreement is not amended to accommodate Wirral Tramway.
- 4.6 However, whilst the estimated £30m CAPEX is unfunded, Members should be aware that from our discussion with Peel, that they have indicated that they would contribute land. and assist in site clearance of utilities which could save in the region of £20m on whole life project costs. Other areas, where CAPEX can be reduced can come from;-

- (a) the provision of second hand transformer rectifiers from London Underground which will save the project in the region of £1m.
- (b) the existing tramway will be acquired for £1 when to construct a similar length of tramway today, using standard industry costs would be in the region of £5m.
- (c) As stated in previous reports, Wirral Tramway has a number of existing rolling stock. However, if the extensions are approved we will need to refurbish a number of ex-Blackpool trams which if the Authority decides to proceed, will cost in the region of £150,000 to refurbish as opposed to £400,000 originally quoted by a specialist.
- (d) As previously advised to the Authority, if the tramway was acquired 3.5 FTE staff would TUPE over. The staffing costs of £90,000 are included in the £250,000 revenue cost.

5. Project Evaluation

5.1 The following SWOT analysis (which is not exhaustive), is intended to summarise the issues that Members should consider in making their assessment, as to whether Merseytravel should bid for the Wirral Tramway.

Strengths	Opportunities
<ul style="list-style-type: none"> • Work done to date suggests that Merseytravel could deliver a “low cost” tramway • A putative network is in place for a short part of the proposed route • An existing operation that with the right management has potential to improve its commercial performance 	<ul style="list-style-type: none"> • A potential enhancement to the public transport offer for Wirral Waters. • Potential job creation opportunities just for operation of the tramway. • Scope to seek Government funding for funding such a scheme. • Development and closer tie-in with existing Merseytravel tourism attractions

Weaknesses	Threats
<ul style="list-style-type: none"> • Development of a tramway would also require Merseytravel to ensure that we had the right staff resources and skill sets to deliver the full tramway vision. • The tramway does not form part of any of our revenue and capital budgets 	<ul style="list-style-type: none"> • There is no clarity on whether the potential funding source, either in timescale or quantities are available. • If no funding can be secured for the extension, Merseytravel is faced with an on-going revenue commitment unless it decides to terminate and close the operation.

6. Equality Impact Assessment

The Assets will be operated in accordance with all relevant equality legislation and policies.

7. Environmental Implications

The existing tramway is clean, green and sustainable at point of use. If authorised, this scheme will provide an opportunity for a low cost, low emission transit system to connect Wirral Waters with the existing transport network, thus helping to reduce car-borne access to the site, with its associated problems of road congestion and pollution.

8. Risk Implications

- 8.1 Should the bid for the assets be successful Officers will present a fully costed Business Case, Development Plan and Project Risk Register regarding any extensions to the Executive and Authority at the appropriate time.
- 8.2 If the heritage tram is acquired in its current form and the extensions are not approved then the exposure to the Authority is likely to be as follows:-
 - (a) Continuing revenue allocation of £217,000 for a period to be determined by the Authority which would form part of any contractual discussion with WMBC. This figure is based on actual costs and visitor numbers provided as part of the initial assessment.

- (b) An increased revenue allocation no greater than £250,000 per annum if the projected visitor numbers are not achieved. A sensitivity analysis on total projected income including visitor numbers is set out below showing the effect on overall income being 20%, 30%, 50% and 75% below projections.

Projection	Year 1 (£000)	Year 2 (£000)	Year 3 (£000)	Year 4 (£000)	Year 5 (£000)
Net Cost at 20% of Projected Income	237.2	236.3	225.54	230.1	236.1
Net cost at 30% of Projected Income	234.7	229.4	209.21	212	215.95
Net Cost at 50% of Projected Income	229.7	215.6	176.55	175.8	175.65
Net Cost at 75% of Projected Income	223.45	198.35	135.7	130.55	125.3

- (c) In a worst case scenario showing no extensions and a continuing drop in passenger numbers, the Authority could insist on provisions in any legal agreements that give six months notice to terminate and hand the assets back to WBC.

9. **Conclusions**

- 9.1 Whilst the decision the Authority is being asked to make is whether we should bid to operate the Wirral Tramway, or not. It is important that the implications and the rational for any bid is clearly understood.
- 9.2 Accordingly, if a bid is to be submitted, the following steps will need to be undertaken
- (i) an updated business case will be commissioned;
 - (ii) assuming that a Merseytravel bid to operate was accepted, Officers would bring an appropriate report to the Authority on both the business case and a draft Head of Terms so that a proper and informed debate could take place;
 - (iii) before formal contract negotiations would take place Member approval to proceed would be sought.

10. **Recommendations**

It is recommended that the Authority:-

- (a) Note the contents of the report;
- (b) Advise officers if it wishes to submit a bid to acquire the assets;
and

Background Papers

Appendix 1 – Business Plan, September 2012

Report Prepared By

J R Barclay, Interim Chief Executive and Director General

Contact for Media and Public Enquiries

Ian Kenyon, Head of Media & Communications.

Appendix 1 Business Plan

Wirral Tramway & Birkenhead Transport Museum



Business Plan

2011-2015

Date: September 2010

Wirral Tramway & Transport Museum

(This is the information contained in the original document that was submitted with CX/26/11 in the February 2011 report but with references to Pacific Road Arts centre taken out.)

Improving the performance of existing assets

Introduction

Originally the Wirral Tramway was an integral part of the Docks and its workings.

After years of disuse, the Wirral Tramway was originally promoted as a heritage tramway and as an 'anchor' for Wirral Borough Council's (WMBC) first phase of urban improvements in the historic Birkenhead Docks. Unfortunately a number of technical problems with the tramway, including its lack of a northern traffic destination and the unsatisfactory nature of the two new cars bought to operate the regular service, have limited the commercial prospects of the tramway.

When first opened WBC entered in to an operating arrangement with Blackpool Transport Services, the operators of the Blackpool Tramway. This agreement lapsed and the tramway lacked the commercial drive to build a business.

The dedication of the small permanent staff should be recognised, as should the significant achievement of the Merseyside Tramway Preservation Society in rescuing and refurbishing a number of tramcars and the efforts of a number of bus enthusiasts who have done similar work on historic buses located in Taylor Street.

Nevertheless, there would seem to have been a lack of concentrated management action and investment by WMBC which has resulted in the poor commercial performance of the operation.

However, it should also be pointed out that the original concept would appear to have been that the commercial profits from Pacific Road would cover the operating losses on the Tramway and the Transport Museum.

Obvious financial difficulties at WMBC have resulted in the sale of a number of assets, including the tramway. Merseytravel has sought to obtain control of the tramway for a number of reasons;

- It provides a strategic fit with the existing tourism assets at Woodside and Seacombe.
- The short term objective is to minimise the losses on the operation, to contribute to the cultural and educational assets on Merseyside by providing a professionally-run transport museum and keep the tramway in operation as a precursor to the medium and long term developments.
- The medium term objective is that an improved and extended heritage tramway service can support Merseytravel's commercial objective of increasing off-peak ridership on the network. It would do this by providing a link from the Woodside and Seacombe ferry terminals, via the transport

museum, thus increasing the opportunity for '*String of Pearls*' circular trips via the ferries, trams and rail; and

- The overarching strategic reason is that the tramway provides a stepping stone to creating a cost-contained affordable and novel public transport link between the established Merseyrail and Mersey Ferry network and the major new traffic objectives that are expected to emerge as a result of the Wirral Waters development.

Improving the Performance of Existing Assets

In assessing the prospects for the existing heritage tramway and the museum it must be observed that income is appallingly low and early efforts must be made to increase income. There are a number of ways that this can be achieved;

- Operate the tramway for 5 days per week and market it, both as a destination of itself and as part of the *String of Pearls*, using a temporary heritage bus link from Taylor Street to Seacombe.
- Develop a historic bus hire business to use the bus fleet that currently stands idle for much of the time.
- Develop a souvenir/enthusiasts retail business.
- Develop ancillary business as venue for filming, commercial photography, etc.

Five Days a Week Operation

It is assumed that two cars would be in operation for approximately 7 hours per day, 35 hours per week. On most occasions these would be two of the ex Blackpool cars acquired by Merseytravel, these cars are robust and will require minimum maintenance, they will be supplemented by cars from the Museum Fleet as required or when specifically chartered by special interest groups.

Operating Costs

It is assumed that the tramway would require the following staff during operating hours.

Paid Staff

One Duty Foreman
One Tram Driver
One part time maintenance Fitter

Volunteer (Unpaid) Staff

Two part time Tram Drivers
Two part time Shop Assistants

Assuming that the tramway runs for 5 days per week for 20 weeks per year and 3 days per week for 20 weeks per year the total operating year is 160 days.

It is assumed that all paid staff could be found from the current staff allocation.

There would be an additional requirement for a linking bus from Taylor Street to Seacombe, assumed to cost £250 day

The total additional operating cost for the year would thus be;

Wages	already included elsewhere
Traction current and supplies	£6,000
Sundries	£2,000
Maintenance	£3,000
Bus	£40,000
Total	£51,000

Revenue

Revenue can be estimated by extrapolation from existing tourist attractions operated by Merseytravel

Ferries 2009/10	683,896 passengers
U-boat 2009/10	42,000 visitors
Spaceport 2009/10	40,000 visitors
Beatles Story 2009/10	200,000 visitors

(Above is from Merseytravel's Passenger Services Monitor)

It is noticeable that the Cheshire-side attractions have an attendance that is only approximately 20% of that at the Beatles story, notwithstanding the significant use of the Ferries and the Metro level of service provided by Merseyrail (a train every 5 minutes with a journey time of 5 minutes from central Liverpool to Hamilton Square). Part of this may be accounted for by the relative remoteness of the Pier Head from the current commercial centre of Liverpool, although this should change with the new attractions emerging on Mann Island and at the Pier Head itself.

A joint marketing strategy for the entire String of Pearls and a simple through ticket, or smart card to cover all activities should help to improve use of the attractions.

It is difficult without further market research to disaggregate ferry users, visitors to the U-boat story and Spaceport and any total figures will inevitably include some double counting. For the purpose of this estimation it is assumed that the tramway will attract approximately the same number of visitors each year as the U-boat story and Spaceport, giving a target annual visitor attraction of approximately 40,000.

Assuming that 75% of passengers would travel in Summer and 25% in Winter the daily loadings would be;

Summer 292 visits per day
Winter 162 visits per day

As a check it is useful to compare this estimated visitor number with ridership on other heritage tramways in the UK. The following list shows annual ridership [for the most recent year available] on railway or tramway lines that have some demonstrable similarity to the proposed Tramway;

Railway	Annual ridership
Manx Electric Railway	180,000 in Summer, 20,000 in Winter
Seaton Tramway	120,000
Great Orme Tramway	120,000
National Tramway Museum	105,000
Leighton Buzzard Railway	42,000
Romney, Hythe and Dymchurch Railway	100,000 (estimated)
Bluebell Railway	179,595
Beamish Museum Tramway	Awaiting data

If the Wirral Tramway is given the same level of promotion as these lines it is possible to consider that ridership could reach these levels over time – particularly if the heritage tramway extension to Seacombe was completed.

Revenue

The charges for Spaceport are currently £8 adult and £4-50 child, for the U-boat story they are £9 adult and £5 child. Assuming that on average 40% of tickets sold are full price and 60% child/concession then the average revenue per visit will be approximately £5. If the tramway charges at this rate then the yearly revenue will be $(40,000 \times £5) = £200,000$. In practice, many visitors will be using combined (String of Pearls) tickets and there will be a discount of up to 40% on the allocated revenue, even at this discount revenue could be £120,000.

Additional Sources of Revenue

Many transport museums find that they can make a good income chartering historic buses for wedding parties, sightseeing, visits to race meetings, office parties, etc. The bus fleet at Taylor Street stands unused for much of the time, it is therefore proposed that a Bus Charter business is set up and vigorous efforts are made to market the offer. If it is assumed that each Charter brought in £350 on average at a 50% profit margin and that two charters a week could be achieved then this aspect of the business would bring in £35,000 pa in turnover and a profit of £17,000.

A steady source of revenue for many historic railways and museums is the catering facility and a retail shop. These activities can bring in significant revenue, but they also involve significant management effort. It is therefore proposed that the Wirral tramway should franchise these activities to outside contractors and for the purposes of this business plan it is assumed that these activities would yield £10,000 pa to tramway funds.

Friends of the Museum

All museums operating as charitable institutions have a support organisation, this can consist of personal members and corporate members. Most historic railways charge individual members around £20-£25 pa, corporate members are asked to pay from £250 - £5000 pa. Personal members can be a useful source of volunteer labour and corporate members can provide more tangible support and may wish to hire the tramway as part of a corporate entertainment.

The cost of servicing the membership is comparatively low – often consisting solely of a quarterly newsletter and free travel on the railway for the member. For the purposes of this business case it is assumed that there would be 200 individual members at £20 each and 10 corporate members at an average contribution of £1,000. This would give a total income of £14,000, of which £4,000 is consumed in publishing and sundry expenses, giving £10,000 to be allocated to the tramway.

The following spreadsheet shows possible revenue for the tramway and museum in its present form over a 5 year period, with two years of under

performance during setting up of the operation and modest growth over the final two years. Costs are assumed to rise at the current Consumer Price Index of 3.1% over the period.

Item	Year 1	Year 2	Year 3	Year 4	Year 5
Expenditure	£000	£000	£000	£000	£000
Staff Wages and overheads	96	99	102	105	109
Premises	64	66	68	70	72
Transport	9.4	9.7	10	10.3	10.6
Supplies	16.5	17	17.6	18.3	19
Support	5.3	5.4	5.6	5.7	5.8
Tram + Bus operation	51	53	55	57	60
Total	242.2	250.1	258.2	266.3	276.4
Income					
Visitor Revenue	20	50	124.3	130	140
Bus charters	5	9	18	25	30
Sales Franchises	0	5	10.5	11	11.5
Friends	0	5	10.5	15	20
Total Income	25	69	163.3	181	201.5
Net Cost	217.2	181.1	94.9	85.3	73.9

Conclusion

By improving the offering and marketing there is a significant potential to increase the use of public transport services. It is worth noting that a recent economic impact analysis carried out by TMP shows Merseytravel's attractions are worth £34.5m to the City region and support 750 jobs. If the museum and tramway make a pro rata contribution then they could be contributing approximately £5m and 100 jobs to the City region by year 5

The acquisition of Wirral Tramway would be a strategically significant move to show Merseytravel's commitment to provide a low cost, low emission transit system serving Wirral Waters development. It will drive business to Merseyrail and Merseytravel visitor attractions, including Mersey Ferries. The development of the tramway and refurbishment of ex-Blackpool trams will help secure jobs across the region and also provide opportunities to train apprentices and aid the economic regeneration of one of the poorest areas of Merseyside.

Developing the Heritage Tramway

Section 1 of this technical note examined ways to improve the performance of the existing assets such that the cost of providing the museum and heritage tramway could be reduced over time.

Section 2 looks at the benefits that could be derived from extending the tramway and upgrading the museum to attract a wider clientele.

It should be remembered that the improvement in the heritage operation is only an intermediate stage in the strategic objective of providing a public transport link between the established Merseyrail and Mersey Ferry network and the major new traffic objectives that are expected to emerge as a result of the Wirral Waters development.

Whilst the heritage operation is important in cultural and educational terms it is the provision of a sustainable and attractive public transport service into the Wirral Waters development that will provide the majority of the traffic on the tramway.

Improving Commercial Performance

Section 1 has shown that support to Merseytravel's commercial objective of increasing off-peak ridership on the network can be supported by providing a link from the Woodside and Seacombe ferry terminals, via the transport museum, thus increasing the opportunity for 'String of Pearls' circular trips via the ferries, trams and rail. In the first stage this link required a transfer from tram to heritage bus at Taylor Street, with inconvenience to passengers and a significant addition to operating costs.

Extending the tramway to provide a complete link from Woodside to Seacombe would have a number of advantages;

- One of the problems with the current Wirral Tramway is that it provides a ride from 'somewhere' – the Woodside Ferry Terminal/U-boat Story - to 'nowhere', or at least a place with very limited public appeal – Taylor Street/Wirral Transport Museum. The commercial appeal of the tramway would be greatly increased if it actually went to 'somewhere' at the northern end. Upgrading the Wirral Transport Museum until it becomes an all-Family entertainment and extending the heritage tramway operation to Seacombe Ferry Terminal/Spaceport would 'plug the tramway in' to the lucrative family day out market.
- The part of the extension from Twelve Quays to Tower Road would be common with the proposed Wirral Waters Loop, obtaining the agreement of WBC highways to this section is vital for the delivery of the Loop and early engagement with them will help to minimise delays at a later stage.
- The provision of a short spur from the extension into the Northbank East section of the Wirral Waters development will enable a commuter service to be introduced at an early date; this will establish the bona fides of

Merseytravel when dealing with the developer and allow for an early increase in passengers and revenue.

- The section of route from the Alfred Dock sea lock to Seacombe will give spectacular views across the Mersey to Liverpool. Whilst this will be attractive in its own right it will also compensate tourists for the rather mundane first section of route along Shore Road, helping to make the overall offering more attractive to potential passengers.
- This attractive section will also be attractive at night, opening up the market for Party Tram trips along the waterfront, running from Woodside and from the growing Wirral Waters development.

The extended tram service can be covered from the refurbished heritage tram fleet, thus saving the operating cost of the bus link and releasing more of the heritage buses for use on charter operations, thus increasing the overall revenue-earning capacity of the operation.

Costs

The extension has been designed on cost-contained principles. A single track is proposed from Bridge Street to Seacombe, with a single intermediate passing loop and twin tracks at the terminal. This should be sufficient to support a quarter-hourly service. The track will not be laid in a roadway but in grass-covered ballasted track alongside the walkway. This is the least expensive form of tramtrack and careful planting with grasses and flowering plants will help to enhance the walkway.

The total distance from Twelve Quays to Seacombe is approximately 1700m, mostly single track. Most of the alignment is simple roadside track; the only difficult section will be the approximately 400m in Tower Road and the reuse of the Egerton and Tower Road bridges. No costing estimates have been commissioned for this alignment to date, but costs for comparable schemes in the USA have ranged from;

- Portland \$35m for 7.8km infrastructure - around \$6million/km in 2010 dollars - an astoundingly low cost for a rail system installed entirely in city streets (usually by far the most expensive form of surface construction).
- Kenosha single track, mostly in grass, amounting to \$3 million per mile (2000), or about \$2.5 million/km per in year-2010 dollars.
- Tampa, single track, in street, \$7m mile (2002) say \$5million/km in 2010 dollars.
- New Haven estimated \$7.6m mile (2009) say \$4.9m/km.

It may therefore be assumed that a possible figure for the infrastructure cost of this section of the Wirral tramway would cost \$4million/km = £2.6m/km.

However, the Wirral Tramway has a number of additional cost saving advantages;

- the rails for the extension could be provided from the stock already held by Merseytravel, if this is not acceptable then second hand rails could be recycled from Network Rail at a significant saving;
- London Underground (LU) has agreed to supply the Wirral tramway with a number of redundant substations free of cost, these substations are rendered surplus as part of the LU Sub-surface Lines traction power upgrade and will have many years of service life left in them;
- it is thought that many of the overhead line poles can be recycled from former tramway traction columns formerly used in Liverpool;
- much of the land over which the tramway will run is owned by the MDHC, given that Peel Holdings are enthusiastic supporters of the tramway project there is a good prospect that this land can be obtained free of charge; and
- Bridge Street will probably need to have new traffic signalling to deal with increased traffic flows arising from the Wirral Waters development; this will mean that the cost of extra signalling for the tramway will only be marginal.

All of these cost saving measures will be factored in to the cost estimate, but for the purposes of this initial outline business case it is proposed that the figure of £2.6m/km is maintained. The extension is 1700m long so the infrastructure cost may be estimated at £4.42m plus any utility relocation costs.

The rolling stock for the extension can be found from the existing fleet owned by Merseytravel. It is estimated that the upgrading cost for each car will be approximately £100,000 per car, three cars will be necessary to cover the service and provide a spare, so a budget of £350,000 would give Merseytravel a fleet suitable for the operation of the extended service without having to use the MTPS fleet.

Funding the extension

The extension could be one of the least expensive tramways in the EU, nevertheless it does represent a significant capital investment. Merseytravel will have to consider the best way of raising these funds.

Funding for a project of this nature would involve a range of options:-

- in replicating the Heritage Railway Services some initial seed corn funding could be raised by the sale of shares for a sum of between £10 and £100 plus an annual subscription which would enable the owner to have a certain number of free rides on the tram.
- Other bodies, such as local businesses, charitable trusts and individual enthusiasts could provide loans or bonds which would be interest bearing (it is worth noting that Nottingham used a similar mechanism for raising the initial funding for the highly successful Nottingham Express Transit).
- In view of the likely income from the tramway, 'green' bank funding could well be obtained to support any other grants or charitable fundraising.

- If developments are already underway on the Wirral Waters site then there is scope to apply section 106 funding to the tramway in respect of the elements that serve the development.
- TIF funding would seem to be particularly relevant to such an innovative scheme.

As a community-based project within the ethos of the “Big Society”, there may be opportunities for a range of funding from either a National Lottery or the new Big Society Bank as well as other charitable sources (the National Tramway Museum at Crich has been the recipient of many awards over the years, they are currently undertaking an exhibition project financed by grant funding from the Wolfson Foundation (£150k) and the Derbyshire Economic Partnership, DEP (£350k). They have also been awarded funding for a £1 million project to create an Exhibition and Learning Centre on site).

Possible Improvements to Business Plan following Opening of Extension

The initial outline business plan for phase 1 of the project demonstrated how the operating cost of the tramway and museum could be reduced from over £170,000 pa in 2010 to approximately £75,000 in 2015. It is possible that the extension of the tramway would lead to a significant reduction in operating costs (mostly achieved by the replacement of the heritage bus service) and a significant increase in ridership and fare yield per trip. If the extension was in position by year 4 of the previous business plan the figures might be changed as follows:-

Item	Year 4	Year 4 with extension	Year 5	Year 5 with extension
Expenditure	£000	£000	£000	£000
Staff Wages and overheads	105	120	109	125
Premises	70	70	72	72
Transport	10.3	10.3	10.6	10.9
Supplies	18.3	20	19	20
Support	5.7	5.7	5.8	5.9
Tram + Bus operation	57	20	60	22
Total Expenditure	266.3	246.	276.4	255.8
Income				
Visitor Revenue	130	160	140	165
Bus charters	25	30	30	33
Sales Franchises	11	11	11.5	12
Friends	15	15	20	20
Total Income	181	216	201.5	230
Net Cost	85.3	30	73.9	25.8

Conclusion

As with most heritage operations the capital cost of the extension will have to be funded from a broad mix of grants, low interest loans, non interest bearing bonds, contributions from local businesses that will benefit from the tramway significant benefits-in-kind are already pledged to the tramway by London Underground Limited and have been provided by Blackpool Transport Services who have sold cars to the project at considerably below their true market value.

It is possible that some funds may also be obtainable from the TIF fund in recognition of the benefits brought by providing a cost contained link into the first phase of the Wirral Waters development and the strategic benefit arising from having the core alignment in place.

Developing the Wirral Waters Loop

Section 1 of this technical note examined ways to improve the performance of the existing assets such that the cost of providing the museum and heritage tramway could be reduced over time.

Section 2 looked at the benefits that could be derived from extending the tramway and upgrading the museum to attract a wider clientele.

It should be remembered that the improvement in the heritage operation is only an intermediate stage in the strategic objective of providing a public transport link between the established Merseyrail and Mersey Ferry network and the major new traffic objectives that are expected to emerge as a result of the Wirral Waters development. Whilst the heritage operation is important in cultural and educational terms it is the provision of a sustainable and attractive public transport service into the Wirral Waters development that will provide the majority of the traffic on the tramway.

This section looks at how the heritage tramway can be used as the rootstock for a cost-contained tramway to serve the new developments.

Wirral Waters



[Plan of proposed Wirral Waters development, recommended route of Wirral Waters tramway loop shown in black](#)

The plans deposited by Peel Holdings with the Planning Authority show that Wirral Waters will form a dense, high rise development on boat sides of the great float in the area from Duke Street in the west to Bridge Street in the east. Developments will use both banks of the Float and a large part of the Vittoria Quay, with the remainder forming public open spaces. Although Peel proposes that the development should follow sustainable principles the development does contain a large underground car park with a final capacity

of approximately [4000] vehicles. Although parts of the development are allocated to affordable housing the Wirral Waters development will rebalance the population of Birkenhead, with many of the incoming workers and residents being in socio-economic groups A, B and C1. These groups are disproportionately large users of private transport and show a marked disinclination to use public transport, particularly 'buses – although there is ample evidence that rail services, including tramways, can attract both people who have a car available to make their journey and established car commuters to sustainable public transport.

The environmental challenges of Wirral Waters are further complicated by much of the development being a significant distance away from the established Merseyrail services. Propensity to use rail services is inversely proportionate to the distance between the railway station and the final destination and tends to decline even more rapidly when walk times are over 10 minutes. This would mean that many inbound commuters to work in Wirral Waters and outbound commuters from Wirral Waters would tend to use their motor cars. This could impose an unmanageable strain on the road network, particularly the two Mersey Tunnels; it will also undermine the major efforts being made to improve sustainability within the Liverpool City Region and North West England.

Providing a rail-quality link that can run close to the main entrances of many of the buildings in the development, is acceptable in pedestrian areas and in public open spaces and can feed in to the established rail and ferry network at suitable interchanges would alleviate many of these problems. Initial research commissioned by Merseytravel shows that a tramway light railway loop can be introduced into the development relatively easily thanks to the technical adaptability of conventional tramway technology. It is also expected that the great majority of the route can be located clear of general road traffic. At the eastern end of the route the loop would be grafted on to the extended Wirral Tramway, giving a route that could place tram stops within 400m of all major traffic objectives within the development and serves both Hamilton Square station and the Woodside Ferry Terminal.

Rail Access

The three Merseyrail stations nearest to the site are;

- Birkenhead Park – approximately 750m from the centre of the Wirral Waters development.
- Conway Park - approximately 1500m from the centre of the Wirral Waters development.
- Hamilton Square - approximately 1700m from the centre of the Wirral Waters development.

Although Hamilton Square station is the furthest from the centre of the development there are a number of reasons why this would be the best railhead for Wirral waters;

- It after the junctions for the West Kirkby, New Brighton, Chester and Ellesmere Port lines, thus maximising the single-interchange accessibility.
- It is on the busiest part of the Merseyrail system – offering the opportunity to use the marketing tagline '*links to Liverpool – Every 5 minutes in 5 minutes*'.
- It maximises the opportunity to use the existing alignment of the Wirral Tramway.
- The station is currently relatively underused.
- It can help in the rejuvenation of the 'dead heart' of Birkenhead.

Our assumptions are therefore that Hamilton Square station is the tramway interchange onto the Merseyrail network.

Wirral Waters Layout Concept

It is proposed that the Wirral Waters link is a large balloon loop around the development, with all trams going in one direction around the loop. There are problems with large loops, particularly the problem that some journeys are disproportionately long in one direction.

Against this problem should be set a number of potential advantages;

- the loop will be single track, reducing the 'stripe' needed for the tramway from over 7m wide to slightly over 3m;
- stops are smaller and less obtrusive, with opportunities to incorporate them into buildings;
- the capacity of the system is large, with trams closely following each other around the loop;
- the delays inherent in reversing at termini are avoided;
- the overhead line equipment can be simplified and more easily 'lost' against a background of large buildings; and
- safety can be increased as all pedestrian/tram or vehicle/tram interactions will feature trams moving in the same direction.

It is therefore proposed that for this initial conceptual layout Wirral Waters shall be served by a single track loop, branching off the proposed Wirral tramway alignment close to the junction of Tower Road and Dock Road and then proceeding around the Wirral Waters development to rejoin the tramway near the Twelve Quays Campus. The section of tramway running east from Twelve Quays would be upgraded to double track as far as is reasonably possible and the line would join the single track terminal loop serving Woodside and Hamilton Square station at the Woodside Dock Gates. The whole route will thus form a figure of 8.

The concept of a 'downtown loop' is well precedented; Chicago uses such an arrangement for its urban metro, it is used in Liverpool for the Merseyrail Wirral Lines and the highly successful Croydon Tramlink system uses the same concept to link its 3 branches around the town centre. Initial layouts show that stop spacing would be near to the commercial optimum for an

urban operation and that speeds would be broadly comparable to such attractive and successful tramways as Budapest (which has the busiest tramline in Europe in its city centre), Helsinki, Melbourne and Zurich, speeds would be higher than in Hong Kong – which has an extremely heavily loaded tramway, notwithstanding severe bus competition and a very modern Metro in the same corridor.

Using established Heritage Tramway/Vintage Trolley techniques for the route will mean that it can be built at significantly lower cost than a conventional modern LRT/tramway system, without sacrificing safety, comfort and reliability – but gaining an extra marketing edge by being significantly different to any other system in the UK.

Costs

The initial layout proposals for the Wirral Waters Loop and the Woodside loop are only at a preliminary planning stage and will be subject to refinement in consultation with the developers and Wirral Borough Council. Consequently Merseytravel has not thought it appropriate to undertake a costing exercise at this early stage of the work. The following outline estimates, based on the costings used in Section 2 of this note gives some idea of the possible scale of investment required to deliver the loops.

Item	Units	Indicative Cost
Wirral Waters Loop	2800 single track metres @ £2.6m/km	£7.3m
Woodside Loop	800 – 2000 single track metres @ £2.6m/km	£2.1m - £5.2m
Overhead equipment	3600 – 4800m @ £350k/km	£1.3 - £1.7
Sub stations	Equipment provided free by LU, upgrading, enclosures etc £200k per sub station 5 provided	£1m
Utilities	Mostly new build so utilities located away from tramline, nominal allowance for all other utilities	£2m
Duke St Bridge	Nominal cost of restoring single rail track to bridge	£1m
Rolling stock	6 refurbished cars at £150k each	£1m
Depot	Taylor Street refurbished to become operational Depot	£1m
Museum	Contribution towards relocating Museum	£1m

Item	Units	Indicative Cost
	away from Taylor St	
Powers	Obtaining Transport and Works Powers	£1m
Design		£0.5m
SUB TOTAL		£19.2 - £22.7
Contingency	Early stage allowance 40% i.a.w DfT standard methodology	
Total		£26.9 - £31.8 (in 2010 pounds)

It would therefore be possible to consider the Wirral Waters Loop Tramway a “£30m project”. This should be compared with other tramways in the UK and the rest of Europe to understand the value for money offered by using cost containment techniques and by building on the initial establishment of the Heritage tramway.

Ridership

Initial estimates of ridership have concentrated upon ridership generated by the development of the Wirral Waters loop. Plans for this area are the most developed and established modelling techniques can be used to make some initial predictions. These show that if the development proceeds at the pace currently predicted by Peel Holdings then the tramway ridership could be;

	2015	2030	2050
10 minute headway	772,000	3,739,000	6,201,000
7.5 minute headway	1,046,000	5,098,000	8,505,000
6 minute headway	1,252,000	6,119,000	10,229,000

Comparison with Other UK Tramways

Croydon Tramlink	25.8
Manchester Metrolink	19.6
Sheffield Supertram	14.7
Nottingham	9
Birkenhead median case after 15 years	5.1
Midland Metro	4.7
Blackpool	2.2

System	Type	Length km	Cost £m in £ at year of opening	Cost normalised to 1Q 2010	Ridership Million/pa	
Midland Metro 1999	Surface LRT	20	144	212	4.7	45.1
Sheffield 1994	Surface LRT	30	240	405	14.7	27.6
Nottingham 2003	Surface LRT	14	180	198	9.	22
Manchester 1992	Surface LRT	28	152	261	19.6	13.3
Croydon 2000	Surface LRT	28	220	301	25.8	11.7
Birkenhead median figure			30 (conjectural)	30	5.1	5.9

Capital Cost to Ridership Comparison

The table above compares the capital cost of the original system against current ridership to give an approximate cost/rider ratio. This figure can then be used as a proxy for the capital efficiency of the system.

Although these crude figures need to be treated with some caution, they do demonstrate that a cost contained system, building on the Heritage tramway, can offer an extremely capital efficient method of providing rail transit into the emerging developments in Birkenhead.

Further Possible Developments

It is to be expected that the developments in the Woodside area will also bring significant 'short hop' trips to the tramway, as people use it to provide access to the Merseyrail metro network at Hamilton Square. This traffic has not been considered in this initial work as the planning for possible developments in this area is only in its conceptual stages.

Experience in areas such as London Docklands has been that a successful core development can encourage regeneration to spread outwards from the original area. There are significant areas of land 'soft' for development in Birkenhead; the area to the south of Corporation Street/City Boulevard could see consequential development if the Wirral Waters scheme is successful. This would increase patronage of the tramway and could lead to pressure for an extension, with links to Conway Park and/or Birkenhead North Merseyrail stations.

A conceptual route, running from Hamilton Square, via Europa Boulevard, Conway Park station to Birkenhead Park has already been considered, it is understood that Wirral borough Council may be keen to see such a route as it

would help to spread urban regeneration and would help to plug heritage sites such as Hamilton Square and the Park into the developing greater Liverpool metropolitan area. Such developments would increase traffic on the tramway and improve the overall market share of public transport in central Merseyside.

Potential Governmental support In a speech made by The Secretary of State for Transport, the Rt Hon Philip Hammond MP to the IBM START Conference: Business Summit on 10 September 2010 the Secretary of State said *inter alia*;

.....most journeys, of course, are made not on those national networks, but on our local roads and it is at local level that most can be done to change patterns of behavior and to create more genuinely sustainable transport modes while stimulating urban regeneration, economic growth and social integration at the same time:

Light rail and tram schemes that link outlying and isolated estates with wealth-creating city centres.

Cycling initiatives that transform peoples' way of traveling around urban centres.

Attractive, air-conditioned buses running on prioritised routes that have the kind of appeal to passengers that metro systems have traditionally enjoyed.

*Smart cards to make multi-modal journeys easy and seamless.
All of these types of scheme, when carefully thought-out and properly implemented, demonstrate extraordinarily high value-for-money. But they all have something else in common: they are essentially local.*

That means they cannot be mandated from Whitehall. They have to be devised, developed, owned, promoted and implemented locally.

The Wirral Tramway gives Merseytravel an excellent opportunity to meet the aspirations of the Secretary of State, to demonstrate the ITA's ability to develop and deliver schemes in co-operation with developers and to make the government the funder of last resort. This would challenge government to live up to its promises.

13th January 2011

Mark Dowd OBE
Chairman
Merseyside Integrated Transport Authority
24 Hatton Garden
Liverpool
L3 2AN

Dear Mark

Re : Wirral Waters – Merseytravel & Wirral Trams

I am writing to you regarding Peels proposed developments in Wirral: The Wirral Waters regeneration project – the largest in the country - and the associated Woodside Master Plan regeneration scheme.

As you may be aware, the Peel Group is a leading infrastructure, transport and property investment company based in Manchester with a particular focus on the NW Region of the UK .

We have been investing in the infrastructure of the Liverpool City Region for over a decade – in the Port, the Airport and renewable energy schemes. This investment helps to underpin the Wirral and Liverpool Waters projects.

Central to our plans and aspirations is a commitment to promote sustainable development through environmental innovation and long-term sustainable economic growth.

No doubt you will be aware that Peel’s long-term ‘Waters’ schemes – Wirral and Liverpool Waters - are centred around the revitalisation of largely derelict dockland areas situated on either side of the banks of the River Mersey. They are ‘sister’ projects that provide the opportunity to significantly grow and diversify the economy of the City Region so that it competes much better both internationally and with the SE of the UK.

More locally, the projects also help to redress the imbalance in investment between the two sides of the River Mersey – These two projects provide the ‘gateposts’ to Peels ‘Atlantic Gateway’ concept.

Wirral Waters – now consented and last week visited by both the Prime Minister David Cameron and Lord Heseltine – is the largest and most visionary regeneration project of its type in the UK.

The Wirral Waters and Woodside Master Plan schemes are hugely significant in the context of social and economic progression of the inner East Wirral area - Woodside, Wallasey and Birkenhead, as well as for the City Region itself by creating in excess of 20,000 permanent new jobs over a 30+ year time horizon.

As part of our commitment to promote sustainable development and sustainable economic growth, we wish to see high-quality public transport as an integral part of the scheme: Public transport that will be a real alternative to the motor car; public transport that is used for commuting to and from Wirral Waters; that's used for working, for shopping, for learning, for leisure, for tourism and for entertainment purposes. We are strong believers in the role public transport can help in catalysing regeneration.

This is where we see Merseytravel's support, expertise and participation as key to delivering our Wirral Waters vision. The development and extension of the Wirral tramway at Birkenhead to serve the Wirral Waters project is considered crucial to our success in delivering a world class development that is underpinned by innovative and integrated public transport links.

Recognition of the benefits that a tramway will bring to the development, and our desire to support Merseytravel in the true spirit of partnership is demonstrated by our agreement to allocate a 'transport corridor' to Merseytravel i.e. a strip of land to facilitate the tramway extension to and through our development at no cost to Merseytravel.

To deliver the tram Peel would be very supportive of the Transport and Works Act Order application that was necessary to extend the existing tramway into our development and beyond. We would however hope that the timescale for such an Order would be short.

As the majority of land proposed for the extended tram routes falls in either ours or Wirral Borough Council ownerships – both parties support the project - this presents an attractive opportunity for Merseytravel to deliver a cost effective and 'fit for purpose' solution.

Please note that the tram initiative was discussed at the Wirral Waters presentation to the Prime Minister and Lord Heseltine last week as one of the 'next steps' for the project. The Leader of Wirral Council was also part of the meeting. The PM recognised the need to 'get on and deliver' Wirral Waters and was asking how the Government can assist. This provided a positive endorsement to the project at the highest level.

Peel of course recognises that Merseyside and Wirral specifically already benefits from a locally run metro system and the acclaimed Merseyrail. It also benefits from the iconic 'Ferry 'cross the Mersey'. What is needed is a 'feeder system' that can link these two transport systems into the Wirral Waters development – a 'feeder' that offers rail levels of comfort, reliability and

attractiveness. This can be delivered through the tram. It also provides an opportunity to increase the patronage of the Mersey Ferries.

From our research and 'precedent studies' of global cities, we see that other cities have the vision and foresight to recognise that tramways and light rail can provide that type of link that serve to underpin development. From Stockholm to Seville and Dublin to Warsaw, European cities are investing in tram systems. Merseyside needs to deliver a similar vision if it is to properly compete on the international stage.

We have already had the opportunity to observe and work with Merseytravel in developing their conceptual design for a Wirral Tram. We are impressed by Merseytravel's commitment to grow the existing tram operation into a high quality link that will tie the different neighbourhoods of Wirral Waters and the wider area, into the public transport network on a phased basis. This can help to provide the high quality public transport that the Wirral Waters development needs for sustainable development without compromising the existing Heritage operation that we recognise already provides a tourist draw in its own right. This will only grow as time goes on.

Accordingly, for these reasons I reiterate that we have already agreed to allocate a strip of land for the tramway as our contribution to the delivery of the Wirral tram.

We will be proud to work with Merseytravel on the further development of this unique project and are pleased to see that Merseytravel are intending to seize this 'once in a generation' opportunity to take responsibility of the Wirral Tramway and develop it as an exemplar of innovation and best practice to the UK and Europe.

Turning to Woodside, Peel is working with partners to drive regeneration of this landmark site, capitalising on Woodside's magnificent views of the Liverpool waterfront skyline and creating a high quality development mixing commercial buildings with leisure, tourism and residential uses.

Both the tramway and the Pacific Road Arts Centre play a significant role as 'enablers' and 'attractors' in driving the regeneration of this area.

It is anticipated that the first phase of the Woodside masterplan will involve the creation of a 'development spine' running from the Woodside Ferry Terminal up to the historic Hamilton Square and its station. The link will not only include a range of new buildings suitable for mixed use development such as leisure, office and residential, but also be used to produce a series of public spaces and an enhanced public realm to strengthen the link from Birkenheads waterfront to its commercial and shopping areas.

One of the key themes is to develop a distinctive environment around Woodside that can draw on its unique waterfront and its world-class views across to Liverpool. It is envisaged that the development will be an 'attractor' in its own

right with its food, beverage and cultural offer. The development of a quality hotel is an important element of this development mix and forms part of the strategy to attract a wider range of visitors to Birkenhead and to drive the night-time economy. Pacific Road Arts Centre and the tramway are both important elements to these plans.

Finally, I know that part of Merseytravels bid was to set up a 'School of Excellence' and to employ Apprentices in order to provide meaningful employment opportunities for young people. Peel shares this vision and invests in people and training. To that end, as part of Wirral Waters, we have helped to create a 'training centre' with Silvertrack Training, to deliver young talent to the rail industry. This was the first initiative that Peel committed to following the momentous decision of DCLG not to call Wirral Waters in for a public inquiry.

Silver Track Training have already started the recruitment process to fill 100 apprenticeship places aimed at 16-24-year-olds from the Birkenhead area. Demand has been excellent. Silver Track's initial £115,000 investment will also create eight full-time jobs for trainers, recruiters and administrative staff.

The centre is focused on a 400m stretch of disused railway line in Peels ownership which runs along the southern boundary of the Wirral Waters site. It also includes indoor track, points and crossings for apprentices to work on as part of their training.

We appreciate that skills improvement, opportunity and social inclusion are all essential to the people of Birkenhead and indeed Merseyside. This scheme will provide us with the opportunity to work across Merseyside with both Merseytravel and Merseyrail on rail and tram infrastructure enabling the Apprentices to attain the broadest practical experience base as possible. We wish to see this facility grow.

I hope the information I have provided you is sufficient to illustrate how supportive Peel are of your vision and how we can work together not only to regenerate a particularly deprived area of Wirral but also to bring apprenticeships and job opportunities in rail and tram to the youth of Merseyside.

Yours sincerely



John Whittaker
Chairman



