

**NON-COMMERCIAL CONTRACT REIMBURSEMENT:
THE INSTITUTE OF TRANSPORT STUDIES (ITS)
MODEL**

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Preamble

This document reviews the current method of reimbursement to non-commercial contract operators in the bus industry in NSW as originally developed by Price Waterhouse Coopers. The Institute of Transport Studies at the University of Sydney (ITS) has developed an alternative approach that adds clarity to the process of establishing an efficient costing regime for funding the delivery of bus services under a non-commercial regime. The ITS model is put forward as a more transparent, representative and justifiable method.

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1 INTRODUCTION

The Institute of Transport Studies (ITS), under its quality partnership with the Bus and Coach Association (BCA) of New South Wales (NSW), was commissioned to examine and review the current payment base for non-commercial bus contracts in NSW. The current payment base was devised by Price Waterhouse Coopers (PwC) and has been in place since 1991, with revisions, in 2000, to accommodate the implementation of the Goods and Services Tax (GST). The BCA requested ITS to review this payment base under the Quality Partnership between BCA (NSW) and ITS (Syd). The request arose out of concerns presented by the Independent Pricing and Regulatory Tribunal of NSW (IPART) in a report dated June 2002. IPART promoted the need to critically examine and consider alternatives to the following components of the payment base: asset depreciation, risk premium, and the representativeness of the components of bus related costs in a post-GST economy. The BCA asked ITS to recommend a defensible level of risk, real rate of interest, and residual value for the BCA's submission to IPART for the 2003-2004 determination. The BCA specifically requested that we examine a payment base in which funds are received for the dollars of the year in which services are provided, providing an alternative to the current situation of paying in the previous year's dollars. The BCA also requested advice on the financial impact, if any, of the varying road surfaces (in particular bitumen vs. gravel roads) on which rural operations occur.

To ensure that the data on cost and performance was current, the BCA undertook a survey of non-commercial bus operators in the last quarter of 2002, seeking details of operations for the year starting 1 July 2001. The BCA supplied ITS with a total of 231 completed surveys: 21 category one, 72 category two, 58 category three, and 80 category four. This represents approximately thirteen percent of all non-commercial bus contracts in NSW. It was assumed that this constituted a representative sample.

Accompanying the electronic version of this report are the following files:

- the ITS BIC model in 2002 dollars;
- the ITS BIC model updated to 2003 dollars;

The report is structured as follows:

- Part Two examines the survey data and details assumptions that were made.
- Part Three examines the ITS model as a replacement for the PwC model. The ITS model is a mixture of specific improvements to the PwC model together with features of the PwC model that are valuable inclusions. Differences between the PwC and ITS approach are documented. Part Three is further divided into an examination of the replacement value of the vehicle, bus related costs, distance related costs, the effect of gravel roads on business running costs, and an examination of defensible inputs for the 2003 determination in 2003 dollars.
- Part Four recommends methods and factors with which to update the 2003 determination into 2004 dollars.

2 QUALITY OF SURVEY DATA

The survey data for the estimated capital value of a vehicle compares closely to the figures provided by an industry source, a private second hand vehicle dealer (Table 1).

Table 1: Capital Costs of category four vehicles in 2002, Survey and Industry data.

CAPITAL COST – Category Four		
AGE OF VEHICLE	2002 SURVEY DATA	2002 INDUSTRY DATA
0	\$223,833	\$195,000
1	\$183,333	\$175,000
2	\$183,571	\$150,000
3	\$148,056	\$145,000
4	\$145,000	\$140,000
5	\$136,667	\$130,000
6	\$106,200	\$125,000
7	\$103,000	\$120,000
8	\$95,833	\$105,000
9	\$83,571	\$95,000
10	\$88,333	\$90,000
11	\$87,500	\$80,000
12	\$61,667	\$75,000
13	\$95,000	\$65,000
14	\$0	\$55,000
15	\$25,000	\$50,000

Note: 2002 industry data supplied by Colin Coy of Mercedes with revisions made by Frank D’Apuzzo of BCA.

The comparability provided one source of evidence for a high level of confidence in the survey data. Although the capital costs reported by the respondents for twelve to fifteen year old vehicles were dissimilar to industry data, this was due to the small number of respondents. Overall the similarity of the two sets of data portrays the strength of the survey data. The data received from operators was in varying states. Due to misunderstandings on what was being asked of operators, some ambiguities presented themselves in the data. As such, cleaning of the data was necessary.

2.1 Cleaning the data

The standard editing and follow up on specific data items was undertaken prior to analysis. A series of assumptions were made (and documented below) as we progressed through the editing task, resulting in what we deem to be a 'clean' data set. Some or all of the factors that necessitated these assumptions were the result of an ambiguous survey instrument, which the BCA might consider revising in the next round of data collection. A copy of the survey form including notes for improvements in the future is provided in Appendix 1. The main assumptions imposed in the data editing process are given below:

1. Contract and Actual Hours were assumed to be in hours and minutes and therefore altered to a decimal number to aid data manipulation.
2. Although the survey asked for fuel prices without allowing for the Diesel and Alternative Fuels Grant Scheme (DAFGS) rebate, where low prices were given (relative to our experience on prices), we assumed that a respondent had allowed for the DAFGS in the reported fuel cost. A rule was used as follows: if the respondent reported a diesel price per litre of less than or equal to 85 cents, DAFGS was assumed taken into account.
3. A number of respondents included very high depot improvement costs (at G2 'other') and administration costs at 'other plant/equipment' (E37). These costs were assumed to be purchase costs. If unadjusted, these costs would skew the overall costs of the respondents' operation. It is unreasonable to assume that these costs be written off in one year. Therefore, the Annualised Cost of Capital (ACC), discussed later in the report, was used. The ACC assumed an economic life of 20 years and, in the absence of other information, used a residual rate of zero.
4. As intended by the BCA, costs reported under 'other contract costs' (G1) and 'other administration costs' (E33) were either deleted or relocated. The most frequent entries into 'other contract costs' were wages and workers compensation. The likelihood of this occurring was

high because wage related costs were not requested elsewhere within the survey instrument. Most costs reported under 'other administration costs' were in error and relocated to the appropriate heading.

5. The reported income received through charter was deemed unreliable. This data was of no consequence to non-commercial contract cost determination (although we note that it often provides the financial support that has enabled survival of many operators).
6. Wage costs were calculated by assuming that the employee was being paid for the specific task undertaken. Driving hours were paid as casual and subject to the dual capacity allowance. Administration hours were paid as casual at grade five. Mechanic hours were paid as casual. All wage rates used were current award conditions as of July 2002
7. Loan repayments that were incorrectly included under bank charges (E3) were moved to the item "annual capital repayment cost" (F2).
8. Operators that reported administration, and repairs and maintenance costs that were grossly dissimilar to other operators, which would have resulted in total costs dwarfing total revenue, were deemed unreliable and excluded.
9. Operators with low contract kilometres and therefore very high costs per kilometre, even if there was a reason for this, were excluded on the basis of skewing the results across all operators.
10. Where an operator reported no expenditure on rent or rates, an average for all reported rates across the sample in the contract class was entered.
11. The costs reported in the survey were assumed to include GST unless stated otherwise. The GST component was removed.
12. Due to ambiguities in the survey, respondents could enter the cost amount for lube/oil under two different categories. Where the respondent did not report an oil/lube amount it was assumed that this was included under repairs and maintenance. The component of lube/oil for operators that reported lube/oil and repairs and maintenance separately was taken and applied to other operators such that a separate figure was generated for lube/oil cost to be used in the ITS model.
13. Where the age of the vehicle was not provided, the year of acquisition and age at purchase was used.

3 THE ITS MODEL

The ITS model and the PwC model exhibit a number of differences. The major differences coincide with the concerns raised by IPART in their June 2002 report (IPART 2002a). These concerns dominate the BCA's mandate for this report. Each component of the model is presented in turn.

3.1 Asset Replacement Value

A weakness of the PwC model's approach to depreciation is the reliance on weighted average capital costs through time. This approach appears to be a response to insufficient capital cost information. PwC did not have recent survey data from a sample of operators. Given such data together with access to industry knowledge of specific items (eg market value of vehicles by type and vintage) we are able to improve on this very aggregated assumption. ITS promotes an alternative method to account for depreciation, using a method called the annualised cost of capital (the ACC). ACC takes into account depreciation, the (real) rate of interest and the economic life of the vehicle rather than the 'useful life' utilised by PwC. A real rate of interest is used as a measure of the opportunity cost of capital and assumes that if capital is borrowed that it is repaid at the same real rate of interest plus inflation. If money is not borrowed it is assumed that it could be invested elsewhere at the stipulated real rate of interest.

We use the market value of a vehicle as the minimum risk estimate of what an asset is worth (regardless of vintage) even though the market for used vehicles is not in any sense perfect (in a fully competitive sense). Simply put, we want to ensure that the amount of money paid to an operator includes a sum that reflects the cost of replacing a bus at the same level of quality when the time arrives to replace it (i.e. no diminution in asset quality). This need not be at the end of its economic life, in which case the residual sale value would be higher. The value of the asset does not include the costs of financing a loan. The cost of servicing the loan (relative to the opportunity cost of capital in ACC) is an additional risk of the business and must, therefore be included in the risk premium. Essentially this is the difference between the real rate of interest used in the ACC formula (a minimum-risk rate) and the loan or investment rate secured.

It is important to shift the focus from the accountant's straight definition of depreciation and consider the replacement cost of the vehicle. The strength of the approach to the depreciation of the vehicle must be measured by the ability of the operator to replace the vehicle at the end of its economic life.

3.1.1 Calculating the Annualised Cost of Capital (ACC)

The following two equations outline the method of calculating the ACC for a specific vehicle during a specific year. Defensible values for the inputs are included later.

$$ACC = (MV - RV) * AF$$

where: *ACC* = Annualised Cost of Capital (\$/annum in constant dollars)
MV = the market of the vehicle in constant dollars
RV = the residual value of the vehicle (= to the *MV**residual rate)
AF = amortisation factor or cost recovery factor (below)

$$AF = \frac{r}{1 - \frac{1}{(1+r)^{(e-a)}}$$

where: *r* = real interest rate (eg 0.06)
e = economic life of vehicle
a = age of vehicle

The interest rate used depends on the status of the capital. If the vehicle was bought outright a real rate of interest is used based on the gilt-edged 10 year bond rate plus the additional return on investment that operators claim they get by investing capital in more risky portfolios . If the vehicle is leased or hire purchased an interest rate including the cost of servicing the debt is used (which is the 10 year bond rate plus an increment if appropriate). Utilising vehicle capital costs provided by industry organisations and vehicle suppliers for a typical vehicle type in each contract class, the ACC was calculated for each age for a given year, e.g. for the non commercial category four contract in 2002. ACCs were derived for each vintage, from new vehicles through to the maximum economic life of the vehicle, the sixteenth year of life. From the results of the survey we know the age of the fleet. The ACC for each age of vehicle was weighted by the vintage shares in the sampled contracts to provide a contract class weighted average annual cost of capital.

$$TOTAL_ACC = (ACC_0 * W_0) + (ACC_1 * W_1) + (ACC_2 * W_2) + + (ACC_e * W_e)$$

where: *ACC* = the Annualised Capital Cost for a given aged vehicle
W = proportion of total vehicles of that age in the fleet (%)

Full details of the calculation inputs into ACC are provided in Appendix 2. Appendix 2 shows the ACC work sheet for a category two contract from the ITS model for the 2002 reimbursement year. The worksheet shown represents the components of ACC

from the ITS model. However, due to space constraints, the look and feel of the worksheet in Appendix 2 differs to that used in the implementation model. Each year it will be necessary to input the key variables: namely the real rate of interest, the economic life of the vehicle, the residual value of the asset, and the market value of the vehicle for each vintage.

3.1.2 Discussion

IPART in its report ‘Weighted Average Cost of Capital (WACC) – Discussion paper’, August 2002, discusses the WACC concept and why it is the preferred measure of annualised capital cost. The ITS formulation presented in the previous section is similar in intent to WACC but is much simpler to calculate as well as being appropriate to the nature of the business in the bus sector. WACC is of primary benefit to stock exchange listed companies in fields that are readily comparable, e.g. public utilities. WACC assumes that a company will have a spread of investments across stocks and bonds. This is not the case of private bus operators. The majority of bus operators are small operators, where the main form of investment is the capital purchase of the vehicle itself.

Importantly the annualised cost of capital is calculated for sixteen *different* buses in the case of an economic life of sixteen years. That is a new bus in the given year, a one year old bus in the given year, etc., up to a fifteen year old bus in the given year. Therefore, we are dealing with a different bus for each age (essentially vintage), and as such ACC does not lend itself to linear analysis as would be the situation with a single vehicle being amortised through time. The ACC represents the capital cost of the vehicle ‘consumed’ by working the asset for each year of the rest of the economic life of that vehicle. The ACC is very responsive to the asset’s economic life, its residual rate and the opportunity cost of capital.

The ACC assumes that the vehicle is either bought outright at the minimum-risk real rate of interest or financed at the same rate. In practice, most operators borrow at a rate above the minimum-risk rate. The addition of a separate ‘full cost of servicing debt’ factor in addition to the ACC would not be appropriate as it would produce double counting (or ‘double dipping’). The operator would be paid for the opportunity cost of capital they did not possess (given the asset is ‘owned’ by the finance agency)

as well as reimbursement for the debt that they entered into. The most appropriate method of including the cost of servicing the debt is by defining it as the sum of the opportunity cost of capital based on the 10 year bond rate (and included in the Annualised cost of capital) plus a differential to account for the additional cost of servicing the loan by a more riskier source of finance than the 10 year bond rate. In addition it seems appropriate that we recognise the additional opportunity cost when the operator's own finances are used to acquire the bus instead of investing such capital in other portfolios that are likely to yield a return above the minimum-risk real rate of interest.

3.2 Bus Related Costs

Bus related costs include those related to the administration of the bus operation, the maintenance and running of the depot, and the running of the contract route. This includes costs such as accountancy fees, bus registration, utilities, rates, rents, greenslip, bank fees and so on. Examination of the basket of costs included under 'bus related costs' was two fold. We undertook a review of the applicability of the existing method used to factor bus-related costs from one year to the next, and, a determination as to whether the costs currently being used in the model were representative of a typical bus operation. If this was not the case we recommended new cost values and categories.

3.2.1 Factoring of costs from year to year

The method employed in the PwC model to update the basket of bus-related costs from one year to the next requires all costs to be indexed by an ANTS impact adjusted CPI rate. This was imposed no matter the extent to which CPI impacted upon the cost. PwC argued that CPI affected all the costs to varying degrees and that overall the increase reflected the CPI rate. IPART has expressed reservations about this approach. When constructing the methods used to factor the costs within the ITS model, we focussed on an approach that would make the model as transparent as possible. It was important not to make the implementation of the ITS model difficult and ambiguous to use, for whatever reason such as demand on the amount of input data required. This

review separates those costs which can be easily updated and are independent of regular CPI related increases.

The PwC model used data contained in ITS reports from 1996 (King 1996, 1996a). The data from these reports were factored to 2000 dollars by the implementation of yearly CPI rates. The first CPI rate applied to the data was for the period March 1996 to March 1997. However, the data included in the 1996 ITS reports was collected in October and November 1995. The PwC model did not account for the inflation on costs between December 1995 and March 1996 – a task that would have been easily achieved.

The new model uses award rates of pay to factor increases in the administration and cleaning wage rates. This entails updating the wage sheet at the introduction of new award wage rates. This arrangement was already the case for driver wages included under ‘driver related costs’. The bus related costs sheet will maintain the same look for this category.

3.2.2 Changes to categories and costs

A deficiency of the PwC model is the double counting of some cost items. Items included at ‘Other Costs’ and individually were ‘signs and advertising’ and ‘bus cleaning’. The double counting of ‘signs and advertising’ contributed an extra \$101 on average to each operator in 2002. The ITS model, where possible, contains only data gained from the survey. Therefore, the likelihood of double counting appears minimal as opposed to the PwC approach which utilised two overlapping data sources. Table 2 presents a comparison of the percent representation of components of bus related costs, excluding administration and cleaning wage costs (examined later), in the PwC model and the BCA survey results. The survey data are unweighted averages across all respondents; when a ‘no answer’ was assumed to be a zero value (after extensive checking for validity of such responses).

A number of cost item categories used by PwC do not adequately present the costs faced by bus operators. When the survey costs are re-categorised into those used in the PwC model ‘other costs’ shows an increase of 516.86%. The survey did not provide costs for ‘hire replacement bus’, ‘off street parking’, or ‘timetable/pass’ and

only part costs for ‘depot cleaning’. The PwC model did not include depot costs such as occupational health and safety compliance costs, environmental protection act compliance costs, and local government costs. The survey indicates that bank charges and bus registration costs have declined significantly. ‘Insurance’ and ‘greenslip’ costs have significantly increased.

Table 2: Comparison of the survey and PwC model ‘bus related’ component costs in 2002 for a category four contract.

PwC model categories for ‘Bus related costs’	Survey		PwC 2002		% change survey vs. PwC
	\$	% of total ¹	\$	% of total	
Accountancy	807	5.87%	848	8.13%	-4.82%
Bank fees, charges	468	3.40%	969	9.29%	-51.77%
Bus registration	795	6.61%	1,888	18.09%	-51.84%
Cleaning materials	219	1.59%	261	2.50%	-16.13%
Depot cleaning	48 ²	0.35%	485 ⁵	4.65%	-90.11%
Electricity	253	1.84%	222	2.12%	14.23%
Greenslip	1,168	12.00%	1,037	9.94%	59.21%
Hire replacement bus	³	0.00%	349	3.34%	-100.00%
Insurance	562	19.31%	1,151	11.03%	130.88%
Maintenance facility	1,286	9.35%	993 ⁵	9.51%	29.47%
Off street parking	³	0.00%	332	3.19%	-100.00%
Other costs	3,212	23.88%	532 ⁵	5.10%	516.86%
Rates, rents	1,498	10.21%	709	6.79%	98.25%
Signs and advertising	134	0.98%	101	0.97%	32.50%
Telephone	636	4.62%	465	4.45%	36.79%
Timetable/pass	³	0.00%	93	0.89%	-100.00%
PwC cat.s TOTAL	11,086	100.00%	10,436	100.00%	
Depot costs ⁴	6,547				
TOTAL	17,633				

¹: percent of survey total cost excluding depot costs, as not included in the PwC model.

²: only part costs included in survey.

³: not included in survey.

⁴: Depot costs were not included in the PwC model.

⁵: PwC model uses a parts and labour division, combined here.

The concerns expressed by IPART over the representativeness of bus related costs post GST implementation seems founded. The survey results indicate that the PwC basket of costs did not represent those incurred by the operator in fulfilling the contract. It was necessary to construct a transparent ‘bus related’ cost structure. The PwC model included ‘bus insurance comprehensive’ costs on a per kilometre basis. This approach was inappropriate, as this is a fixed cost. Accordingly, ‘bus insurance comprehensive’ cost was moved from ‘distance related costs’ to ‘bus related costs’ as a fixed cost. Table 3 shows this structure and details the components of each category.

Table 3: Revised structure of bus related costs with components in 2002.

ITS model cost categories	Contract Category Type (Costs (\$))				Components
	One	Two	Three	Four	
Associated staff costs	293	329	560	517	Conferences and seminars, OH&S systems, Staff recruitment, Training, Uniforms
BCA membership	255	253	251	246	BCA membership
Bus insurance comprehensive ²	580	692	1,028	1,400	Bus insurance comprehensive
Bus registration	528	599	665	795	Registration
Communications	434	535	560	666	Telephone/Fax, Internet, Couriers and Freight
Depot Cleaning Costs	259	482	462	485	Cleaning materials, plus shortfall of PwC amount ¹
Depot Costs	904	1,377	4,876	6,547	Depot costs Security, Waste/EPA
Financial management costs	1,032	1,181	1,512	1,440	Accountant, Bank charges, Legal fees
Greenslip	1,019	1,102	1,150	1,168	Greenslip
Hire replacement bus	346	346	346	349	PwC amount ¹
HVIS costs	102	120	167	142	HVIS costs
Maintenance facility	856	1,203	1,055	1,286	Repairs and Maintenance, Surveillance systems, Communications Equipment, Computer hardware, Other Plant/Equipment
Off Street Parking	330	330	330	332	PwC amount ¹
Office supplies	305	353	393	556	Amenities, Computer consumables, Computer software, Postage, Printing, Stationery
Other	586	133	191	212	Donations, Journal subscriptions, Other, Sponsorships, Towing
Other insurance	321	579	549	562	Other insurances (e.g. public liability)
Property costs	1,608	942	1,176	1,529	Rates, Rent, Land tax
Signs	31	36	53	134	Signage
Survey vehicle	539	720	912	1,251	Motor vehicle running costs to survey route
Utilities	216	234	239	23	Electricity, Gas
TOTAL	10,542	11,546	16,475	19,871	

¹: No value available from 2002 survey, value used from the PwC model which was 1995 survey data from a 1996 report then factored for inflation.

²: included in PwC model as a distance cost.

The costs included at 'other' in Table 3 were identified as a range of items each below \$100, for category four contracts. Many cost items had no unique or obvious classification and indeed they are a disparate set of items. Donations and Sponsorships, included at 'other', represent a real cost for operators, with an average reported cost of \$91. Operators, particularly in small communities, argued this as a

legitimate cost to their business, as it was expected of them to contribute to the school that they serviced through the contract. The fuel costs associated with the running of a survey vehicle were included. Operators reported that road flooding necessitated the use of a survey vehicle to regularly assess the condition of the contract route and possible alternative routes. The expense associated with the production of timetables and bus passes has been assumed in some cases to be included in 'printing' and 'stationery' costs and in some cases included in 'office supplies'. Given the ambiguity in the survey it has not been entered separately. Water rates were not requested in the survey. If the operator is cleaning the bus on site they are using water, it therefore follows that they are paying for that water. It was not possible to factor this expense into the cost structure. Given many operators work out of their residential premises we might reasonably argue it is a shared cost fully allocated to the residential activity.

Concerns exist over the representativeness of the PwC estimates for 'hire replacement bus' used as in the ITS model given the absence of suitable survey data. The PwC amount was based on a survey with a high representation of metropolitan operators (provided by ITS in 1996). The majority of non-commercial contracts are in rural areas where you would expect a greater need for the hire of replacement buses, due to extreme road conditions. Therefore, due to the lack of country based data the figure used in the ITS model may under represent 'hire replacement bus' costs. Responses to the cost of land tax on the business seemed low but there was no way to rectify this without additional data.

In 2002 there were redundant columns in the PwC cost sheet, which were associated with the implementation of GST. These columns, e.g. 'expected flow-on effect' and 'Other ANTS impact', have now been deleted together with other minor inputs associated with previous policies (eg the rows used to factor in extra administration hours to account for GST implementation and DAFGS compliance). These 'add-on' rows are no longer necessary in the new model; survey information provides an up to date evaluation of the number of administration hours needed to facilitate the contract. Table 4 shows the change in form of the 'non-driver labour' cost component of 'bus related costs'. Note that the separation of 'administration hours' and 'wage rate' in the

ITS model is there to enable comparison with the PwC model categories. This separation does not exist in the working model.

Table 4: ‘Non-driver labour’ component of ‘bus related costs’: data and layout for a category four contract, DAFGS eligible, in 2002 dollars.

Category Four contract			
ITS model		PwC model ¹	
Cleaning hours	173.73	Cleaning hours	256.44
Wage rate (\$)	17.06	Wage rate	19.50
Administration hours	146.68	Administration hours	103.20
		Additional admin hours	6.00
		Additional admin hours - DAFGS	33.00
Wage rate (\$)	24.93	Wage rate	19.50
Non-driver labour TOTAL (\$)	6,619.42	Non-driver labour TOTAL (\$)	7,772.97

¹:The PwC model uses monthly data and then multiplies the total by twelve to give a yearly total, to ease comparison hourly data was multiplied by twelve.

The cleaning hours reported in the 2002 BCA survey were much lower than those reported by ITS in 1996, as used in the PwC model. The administration hours reported were 5.52 hours less. The use of award wage rates in the ITS model is a preferred approach than indexing wage rates by CPI, as undertaken in the PwC model. Had the CPI indexed wage rates been substituted into the ITS model, total non-driver labour would have cost \$6,247.63, \$371.79 less than when award wages were used. There could be an argument that the cleaning and administration hours reported in the 2002 BCA survey were conservative. The data used for this section of the PwC model was taken from a 1996 ITS report (King 1996) summarising the results of a daily diary survey undertaken by 506 operators. By asking the operator to only focus on information for the period of a month a lower burden was placed on that operator, than that of asking for information for the whole of the preceding year. Scaling up from 12 months can be problematic.

The costs utilised in the ITS model are conservative. We would not be surprised to find that a more reliable (i.e. less ambiguous) survey would yield higher costs. All costs however, on balance, appear reasonable and defensible.

3.3 Distance Related Costs

Distance related costs include the cost of fuel, oil, repairs and maintenance expressed on a per kilometre basis. The PwC model includes cost per kilometre relationships from 1996 reports, later factored by CPI or, in the case of fuel the percent increase in fuel price. The survey enables the updating of the cost per kilometre relationships and an examination of the categories chosen.

3.3.1 Factoring of costs from year to year

The PwC model uses CPI to factor the costs from one year to the next. This should not be the case for in-house mechanics wages, a component of repairs and maintenance costs. Using the average number of mechanic hours reported in the survey the new model utilises award wage rates. Changes to award wage rates will require data input. The most appropriate method to update repairs and maintenance costs and oil costs continues to be through CPI.

3.3.2 Changes to categories and costs

The PwC model expressed ‘bus insurance comprehensive’ costs as a distance related cost. This cost is a fixed cost and has been included under ‘bus related costs’ in the ITS model. The PwC model refers to in-house repairs and maintenance costs, which it splits into subcategories: parts and labour. However, the survey revealed that repairs and maintenance were carried out both within the operation and by external businesses. This is reflected in the ITS model. The ITS model includes the cost per kilometre estimates from the survey. The mechanic wage rate used is the award rate of pay. Table 5 shows the distance related cost layout of the ITS model, using edited survey costs, compared to the PwC model.

The survey data incorporated into the ITS model reveals a decline in repairs and maintenance costs since 1995 in real terms. Oil costs per kilometre have also decreased. ‘Distance related costs’ are lower for category four operators than category three operators. The kilometre relationships here utilise the contract kilometres fulfilled by the operator. Basing cost decisions on actual kilometres does not represent the true cost of servicing a contract. Any kilometres travelled additional to the

contract kilometres in order to service the contract route are unpaid under the current contract regime and therefore not figured into the model. All relevant costs are accounted for in the ITS model.

Table 5: Distance related costs in 2002, ITS model (with revised layout) using survey costs compared to PwC model.

ITS model	Contract Categories				PwC model	Contract Categories (\$/km)			
	1	2	3	4		1	2	3	4
Oil cost/km(\$)	0.009	0.012	0.020	0.016	Oil	0.007	0.010	0.025	0.024
Repairs & maintenance:					Repairs & maintenance:				
-Inhouse labour -hours	912	5,730	6,144	7,616	-Parts	0.077	0.086	0.138	0.177
-wage(\$/hr)	19.99	19.99	19.99	19.99	-Labour	0.059	0.055	0.097	0.106
-cost/km(\$)	0.031	0.052	0.067	0.064					
-All parts & external labour cost/km(\$)	0.088	0.113	0.153	0.155	Bus insurance (comp)	0.037	0.034	0.036	0.047
TOTAL (\$/km)	0.128	0.177	0.240	0.235	TOTAL	0.180	0.186	0.296	0.354

The PwC model displays fuel costs independently of ‘distance related costs’. The ITS model maintains this division. Due to the large cost of fuel there was merit in maintaining a different heading for fuel on the summary sheet and therefore on the costs sheet. The ITS model utilises the survey data to calculate the fuel cost per kilometre for each category of contract. The primary reason for the use of this data source was the non-availability of rural diesel prices. Refer to the fuel section of ‘Justifiable factors for 2003’ for a cogent argument. Table 6 displays the fuel cost used in the ITS model compared to the PwC model, in 2002 dollars.

The ITS model has included a fuel cost for both Diesel and Alternative Fuel Grant Scheme (DAFGS) eligible and ineligible contract category one operators. This division did not occur in the PwC model. The survey indicated that a majority of category one operators were eligible for DAFGS. It was therefore logical to include this division. If the PwC model approach was continued, category one operators would not be suitably reimbursed, some operators being paid too much and others too little.

Table 6 Comparison of fuel costs per km. between the ITS and PwC models by contract category and DAFGS eligibility, in 2002 dollars.

Model	Category One		Category Two		Category Three		Category Four	
	DAFGS		DAFGS		DAFGS		DAFGS	
	elig.	inelig.	elig.	inelig.	elig.	inelig.	elig.	inelig.
ITS	\$0.1286	\$0.1642	\$0.1510	\$0.1928	\$0.1531	\$0.1955	\$0.1957	\$0.2499
PwC	NA	\$0.1221	\$0.1028	\$0.1336	\$0.1496	\$0.1944	\$0.1703	\$0.2213

3.3.3 Gravel roads

The BCA requested that we consider whether the percent of gravel roads on the contract route impacted on the running costs of a bus operation. It seems reasonable that extra wear and tear on vehicles would be caused by prolonged travel over loose road surfaces. The survey did not request the information necessary to answer this question. The BCA undertook a phone poll of the category four contract operators who responded to the survey. Regression analysis failed to find a relationship between the percent of gravel kilometres on the contract route and either total cost per contract kilometre or repairs and maintenance costs per contract kilometre. ITS recommends further study into this relationship in conjunction with future industry surveys. Previous studies have indicated a relationship between road condition and tyre cost per kilometre, and between fuel consumption per kilometre and road condition (Hensher, 2003). The strengths of these relationships were found to vary due to contract category. Attention must be paid to gathering percent gravel kilometres on the contract route for all contract categories.

3.4 Driver Related Costs

Driver related costs concern the wages paid to the driver of the bus. We undertook a review of the components used in the PwC model and confirmed their relevance or otherwise when compared to the relevant award. The applicable award was the Motor Bus Drivers and Conductors (State) Award.

The PwC model includes a per hour component and a per day component in line with the requirements of the award. This approach has been retained. One error was found in the PwC model. The Australian Tax Office Superannuation Guarantee ruling concerning ordinary time earnings (1994) stated that allowances were to be included

in wages for the purposes of calculating superannuation. The PwC model does not reflect this. Every non commercial contract holder has been under reimbursed since 1994. This situation is rectified in the ITS model.

3.5 Justifiable factors for 2003

3.5.1 Risk

A simple but appropriate definition of risk associated with investing in a business is that it is the opportunity cost of capital for a given project. In other words that amount of money that would have been received had it been invested in a pursuit of similar risk. This has two components: the risk free and the risk premium parts. The risk free component is the amount of return that would have been received on the money had it been invested in a 100% risk free venture. This is widely accepted as being the current, or projected, ten year gilt-edged government bond rate, discussed below. The risk premium is discussed here.

It is necessary to consider a portfolio that offers risk commensurate to the project. In addition, when looking at the rates of return for investments it is necessary to look at annual rates of return over long periods as common stocks fluctuate so much that averages over short periods are meaningless. Brearley *et al.* (2000) report the average rates of return for government bonds and shares for Australia from 1882 to 1987. The authors found that the 10 year government bond average return was 5.21 percent per year and the ordinary shares average annual rate of return was 13.06 percent. The risk premium reported by Brearley *et al.* (2000) is the difference between the average annual rates of return provided by ordinary shares minus the same for ten year government bonds, which equals 7.85 percent. The authors highlight that investors are getting increasingly cautious and that a risk premium between six and eight percent is reasonable.

A discussion paper produced by the Independent Pricing and Regulatory Tribunal (IPART) in August 2002 on the 'Weighted Average Cost of Capital' details the current level of risk premiums accepted across a range of government bodies for utilities. *All bodies accept a risk premium of six percent as reasonable.*

Central to the argument offered by Brearley *et al.* (2000), who provided an historical risk premium of 7.95 percent, was the use of common stocks as an appropriate measure of risk. Such an approach requires the scale of business to be quite large as it implies that the return would be tied to the stock market. The majority of the bus and coach industry are small operators, with none listed on the stock exchange. Therefore, there is an extra risk involved above that of a stock exchange listed company. This would lead to the assumption that given a market accepted risk premium for utilities of six percent, the bus and coach industry requires an extra component above this. The principal justification for this statement is the requirement of bus operators to maintain an average fleet age, assumed to be eight years for non-commercial contract categories one and two and twelve years for non-commercial contract categories three and four. This would be akin to requesting that all energy distribution infrastructures be replaced on an eight, or twelve, yearly basis. This requirement considerably increases the risk of running a bus and coach operation. The cost of purchasing new capital is considerably hindered by the nature of the second hand vehicle market. Considering the average fleet requirements, used vehicle prices are very unpredictable and typically low.

Brearley *et al.* (2000) show that the average rate of return for small firm common stocks to be, over the period 1926-1994, 17.4 percent. This represents a risk premium over government bonds of 12.2 percent. The risk associated with the private bus and coach industry does not directly relate to the risk inherent in the general small-firm, because of an assured reimbursement from the government. However, it does show that there is a greater risk inherent with smaller operations.

The ACC calculations assume that the vehicle is bought outright. Therefore the opportunity cost of capital (i.e. the real rate of interest) used does not account for the risk associated with leasing or hire purchasing the vehicle. The majority of vehicles on non-commercial contract routes are either leased or hire purchased. The 2002 survey reveals that at least 69.9 percent of the vehicles are either leased or hire purchased. Our review of the survey data suggests that a higher percent of vehicles are likely to be leased or hire purchased than reported. The survey question was not totally clear on what was required. However, the additional risk associated with

servicing the debt of the vehicle equates to the difference between the five year fixed term business loan or lease rate and the real rate of interest used in the ACC calculations. A review of business loan and lease rates, included at Appendix 3, revealed an average rate of 7.45% per annum. The difference between this rate and the average 10 year government bond rate for the year from the 1st of April 2002 to the 31st of March 2003 of 5.65% was 1.81%, due to rounding.

Factors that impact on the risk of investing in a non-commercial bus contract include:

- very high capital costs under current average age laws;
- servicing that high level of capital debt;
- greater risk associated with small businesses when compared to stock listed companies;
- Uncertainty over the government's predilection to the removal of the five year contract period;
- The government's preferred position of putting the contracts to competitive tendering;
- Government action related to restructuring the number of contracts operated;
- Growing competition from unstructured alternatives – car pooling, PVC and pseudo charter operations;
- Declining student numbers in some bus contract areas increase the risk of the cessation of contracts, at no fault of the bus operator; and,
- Increasing costs associated with the running of a non commercial contract through additional administrative requirements due to legislative changes, with no change in the reimbursement scheme to account for this.

The combination of the above points and in particular the very high capital costs in the bus and coach industry under current average age laws, the greater risk associated with smaller businesses, and the risk associated with the cost of servicing the capital debt, argues for a market risk premium over the six percent afforded large stock market listed companies. It is difficult to justify a specific percent amount for any of the generators of risk above, except for the cost of servicing the capital debt, as there is no empirical evidence available establishing the risk of bus operations in Australia or abroad. Therefore the minimum reasonable risk premium associated with running a

non-commercial bus contract in NSW is the addition of the risk afforded large stock market listed companies and the risk incurred through the necessity of leasing or hire purchasing the main capital asset. This equates to a risk premium of 7.81% for 2003. The components of this figure will be reviewed prior to any IPART submission.

The risk premium is applied to the capital cost of the asset. The capital cost of the vehicle, in this case, equals the sum of the capital costs of each age of vehicle weighted subject to their representation in the fleet. This is shown in the equation below:

$$RISK_PREMIUM(\$) = ((CC_0 * W_0) + (CC_1 * W_1) + (CC_2 * W_2) + + (CC_e * W_e)) * R$$

where: CC = the Capital Cost for a given aged vehicle (\$)

W = proportion of total vehicles of that age in the fleet (%)

R = risk rate (%)

3.5.2 Real rate of interest

Accepted industry practice is to utilise the Reserve Bank's ten year bond rate. Previously PwC has used a figure obtained from a single day, in May or March, depending on when the report was due. However, the bond rate fluctuates daily. This approach seems to be arbitrary. To remove this bias the ITS model utilises the average ten year bond rate over the previous year (i.e. from 1/4/02 to 31/3/03).

3.5.3 Loan rate

The calculation of the risk premium utilises the prevailing loan rate. The loan rate used must accord with what a bus operator actually incurs. To this end a five year fixed term, non-residentially secured loan rate was used. To recognise that operators also hire purchase their capital asset, the five year lease rate is used. An average rate is taken from across a sample of representative financial institutions (see Appendix 3).

3.5.4 CPI

The CPI rate is used to update previous year's costs to the current year. The calculation of the CPI rate has previously entailed taking the Reserve Bank of Australia (RBA), quarterly, all groups, CPI rate for Sydney and then applying an adjustment factor. The adjustment factor was generated by Econtech to account for

ANTS implementation. The CPI rate for Sydney was used as it was the closest figure to NSW country available. If a quarterly CPI rate was not available at the time of submission a forecast was used. This method is thoroughly defensible and remains in the ITS model.

3.5.5 Fuel price

The cost of fuel is measured on a per kilometre basis. To express fuel prices in current dollars, the method used in the PwC model was to take an average weekly diesel price obtained from Mobil and the percent change in the price per litre of diesel from the preceding year, the latter used to factor the in(de)crease in the fuel cost per kilometre. This is in line with the method used to calculate fuel price in the commercial model. IPART is in favour of this approach and it is retained in the ITS model. However, the fuel price obtained from Mobil was from the metropolitan Sydney area. The overwhelming majority of non-commercial contracts are rurally based. The last available data relating to the difference in the diesel price between Sydney and country NSW is circa July 2000 (ACCC, 2000). This study found country NSW diesel fuel to be 3.2% more expensive than Sydney diesel. More recent data is available only for petrol price differences (FuelTrac, 2003). The average increase in petrol prices in 34 country NSW locations compared to Sydney for November and December 2002 was 4.7%. These figures illustrate that the current method for ascertaining diesel prices, from Mobil Sydney data, is inadequate.

The ITS model uses the weighted average price of diesel reported in the 2002 BCA survey. The diesel price per litre was weighted by the contract category's representation in the total non-commercial contracts in NSW. This resulted in a diesel price of 94.0 cents per litre. For the sake of an example, if it is assumed that there is a 4.7% difference in diesel price between Sydney and country NSW, a country diesel price per litre of 94.0 cents equates to a Sydney diesel price of 89.5 cents per litre. This diesel price is similar to the Sydney diesel price provided by Mobil, which was used in the PwC model. The ITS model proposes the use of the CPI fuel component to further factor in(de)creases in the price of diesel, until such time that an adequate monitoring regime of country NSW diesel prices is undertaken. The fuel component of CPI is available quarterly from the Australian Bureau of Statistics. The 2003 fuel price used will therefore equal the weighted average fuel price found in the survey,

factored by the fuel component of CPI. The survey covered the period until the end of June 2002; therefore the fuel component of CPI used was the increase that occurred from June 2002 to March 2003. This ensured no double counting.

It was a requirement of bus operators to use Low Sulphur Diesel (LSD) from the first of January 2003. This requirement added an extra one cent per litre to the price of diesel. It is difficult to ascertain whether this increase in price was accounted for by the fuel component of CPI. Given this ambiguity, it has been assumed that the increase in price has been accounted for.

3.5.6 Capital cost

For the ACC formula to produce the most accurate replacement cost, current industry capital costs are used. These capital costs are based on the prevailing market environment and therefore better reflect capital cost changes than CPI.

3.5.7 Wage rates

The wage rates used in the reimbursement model are subject to award conditions for the proceeding year, the same method that has been employed previously. From the first of July 2003 superannuation payments are included in wages for the purposes of calculating workers compensation (Workcover New South Wales, 2003).

3.5.8 Residual rate of buses

The residual rate of buses has been set according to industry expertise and advice. Industry believes that residual rates of 15% for contract categories one and two, and 5% for contract categories three and four are defensible. The capital costs utilised in the ACC calculations do not depreciate subject to the residual rates recommended by industry. This relates to the uncertainty of the market value through resale. The market for vehicles is split between those subject to average age laws and those that are not. The operators that are not subject to average age laws, e.g. tourism operations, maintain market values. These are the true market values for the typical vehicles of that contract type. However, the non-commercial contract operator is more likely to receive the residual rate reported here at the end of the economic life of the vehicle.

3.5.9 Economic life

The average bus age requirements set down by the NSW government dictate that the average age over the five year contract be eight years for contract category one and two buses and twelve years for contract category three and four buses. This means that the maximum age for a contract category one or two bus is sixteen years and for a contract category three or four bus twenty four years. Due to these constraints the economic life of a contract category one or two bus is ten years and for a contract category three and four bus is sixteen years.

4 Updating costs to current dollars

A constant failure of the reimbursement system has been its historical nature. The operator is paid instalments that reflect the market in the preceding year in the dollars of that year. The current PwC method indicates that for the 2003/2004 contract period the operator is paid for the changes in costs that occurred over the 2002/2003 period. To address this inadequacy requires a year of 'catch up'. Each year is updated to redress any failure of the predictors plus further predictive factors for the next year. Assuming that the updating of costs was to occur in 2003: this involves the application of the historical measures to 2002 data to bring costs up to 2003 dollars, and then applying additional factors to bring inputs up to 2004 dollars in real terms. Then, in 2004 a review of the effectiveness of the previous year's predictive measures instituted with over-(under-)estimations is determined and included in the predictive factors, to move to 2005 dollars. This process would result in a larger than normal rise in the first year. In the next section we discuss appropriate measures to factor future price changes, using the example of updating 2003 data into 2004 dollars. The implementation of the factoring is easily achievable within the ITS model. The BCA has advised that the updating of the model to current dollars will not take place this period. The BCA would like this issue explored in subsequent periods. To this end ITS has proposed the following method.

4.1 Risk

Just as the general economic climate ebbs and flows, the risk associated with the operation of the contract varies from one year to the next. However, due to the nature of the bus industry it is exceedingly difficult to measure such deviations. The two quantifiable measures of risk can, however, be equated. The risk afforded large stock exchange listed companies is a matter of public record through ACCC and IPART publications, and any deviation from six percent can and should be included in the risk premium. The risk associated with the cost of servicing the capital debt is the difference between the forecast 10 year government bond rate and the forecast five year fixed term loan rate. The risk premium should at least equal the addition of this differential. This rate, it is argued, does not fully include the prohibitive capital costs inherent in the bus and coach industry under current average age laws and the large level of risk associated with smaller businesses.

4.2 Real rate of interest or risk free investment amount

The implementation of a forecast for the 10 year government bond rate to move the 2003 submission into 2004 dollars is a valid approach. Whether the interest rate at the time of submission was used or a forecast used, there is the possibility to redress any inaccuracies at the next contract reimbursement determination.

4.3 Loan rate

Two approaches can be taken towards the updating of the loan rate into 2004 dollars. A valid approach would be to use a forecast provided by a reputable financial institution. Equally valid would be the use of a current figure. Loan rates are difficult to forecast. The method of providing an adjustment to account for any inaccuracies at the next contract reimbursement determination acts as a safety net for either approach.

4.4 CPI

An industry forecast for the proceeding year should be used. This has already been done, albeit on a smaller scale, in previous submissions. CPI should be applied to all applicable cost items. It does not apply to wage rates and fuel costs which are indexed according to existing awards or by agreement in respect of the movement of fuel prices. However, extreme market movements must be heeded. An example of this may be tension surrounding war, driving up the cost of lubricant. Such a rise would not be fully accounted for by CPI and would require a separate indexation.

4.5 Fuel price

The preceding year's fuel component of CPI should be used to factor 2003 fuel costs to 2004 dollars. The overall CPI rate does not adequately reflect changes in fuel price.

4.6 Residual rate

The residual rate for each type of contract category would remain the same, subject to any changes in the market.

4.7 Capital cost

The most appropriate method to factor the 2003 capital cost of the vehicle to future 2004 dollars is through the application of CPI. For the 2005 determination, 2004 capital costs should be sought and then subjected to a CPI adjustment.

4.8 Component costs

The use of a CPI forecast is generally appropriate to factor in underlying cost changes in applicable bus related costs and distance related costs. Fuel prices have been identified as an exception. Attention must be paid to extraneous market forces. Global or local events may impact upon the prices of specific goods above or below the influence of CPI. If such a forecast for the price change of a given product can be

justified, an in(de)crease must be factored into the model. The BCA has received information that lubricant prices have risen by an average of four percent on the first of February 2003. On this occasion the increase is above inflation and should be factored into the 2003 reimbursement.

4.9 Wage rates

The current method of utilising the award rates of pay should continue. However, award determinations sometimes occur after the input factors have been determined. The lost costs borne as a consequence of this must be factored into the next year model. An extra cost per hour for each award type should be entered into the wage sheet.

5 SUMMARY

The ITS model is put forward herein as a replacement for the current PwC model. The ITS model was configured cognisant of the concerns IPART and the BCA (NSW) had in the PwC model. In response to these concerns ITS has critically examined the depreciation method used by the PwC model and adopted an annualised cost of capital (ACC) approach, which better accounts for the replacement cost of the vehicle. ITS has put forward and presented a defensible argument for the risk premium. Utilising survey data, this report shows that the costs detailed in the ITS model are up to date and better reflect the post-GST implementation economy. This report sets out the requirements necessary to update the ITS model so that bus operators are reimbursed in current dollars. ITS found that there was no statistically significant relationship between running on loose surface roads and vehicle repairs and maintenance costs, given the available the data.

In the ITS model the BCA has, in our opinion, a very defensible non commercial contract reimbursement method that it can take to IPART.

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7 APPENDIX 1 Non commercial contract cost index survey with notes

Distributed to operators October 2002, comments in red italics (for future revision)

Company Name: _____

Contract Number: _____

Industry KPI's for NON-COMMERCIAL CONTRACT

This information relates to **only one contract**. Where an operator has more than one contract, shared costs such as admin costs etc, should be divided equally among the number of contracts operated.

**include depreciation of vehicle somewhere so that they don't include in 'other'*

**state whether or not includes GST*

Period: 12 Months ended 30 June 2002

Questions	
<u>Contract Details</u>	
1. School Operating Days	.....days
2. Contract Kilometres per day	.....kms
2A. Actual Kilometres per day <i>needed to fulfil contract</i>	.....kms
3. Contract Operating Hours per day	.....hrs
3A. Actual Operating Hours per day <i>needed to fulfil contract</i>	.....hrs
4. Bus Category being paid for	Category.....
4A. Bus Category actually being used	Category.....
A. <u>Staff Costs</u> <i>reiterate per contract throughout</i>	
A1. Annual Cleaning Hours (for bus)	Hrs
A2. Annual Administration Hours (include hours spent on Contract Compliance, records, customer complaints, child protection, accounts, liaison with schools <i>DAFGS admin</i> , etc).	Hrs
A3. Do you pay Driver/Conductor allowance?	Y / N. If yes, when is the allowance paid eg. for every day or only when cash fares are collected.....
B. <u>Insurance and Registration</u>	
Annual Cost of:	
B1. Greenslip	\$.....p.a.

B2.	Registration	\$.....p.a.
B3.	Comprehensive Insurance Premium	\$.....p.a.
B4.	Other Insurances (eg. Public Liability)	\$.....p.a.
B5.	Market value of vehicle	\$..... <i>delete p.a.</i>.....p.a.

C. <u>Fuel, Oil, Lubricants</u> <i>Oil referred to in heading but not text</i>	
C1.	Litres of fuel consumed in the year
C2.	Average fuel price, exclude DAFGS (based over a 12 month period) <i>provide numerical example</i>
C2A.	If not known indicate total cost of fuel for 12 months, exclude DAFGS
C3.	Are you eligible for DAFGS?
C4.	Diesel/petrol
C5.	Annual cost of Lubricants (if not included in D1)
C6.	Annual cost of Tyres
C7.	What are the total kms travelled in the year (ie. Include charter etc)?
	.....Litres
	\$...../Litre
	\$.....
	Y / N
	D / P
	\$
	\$
	.....kms
D. <u>Bus Repairs and Maintenance</u>	
D1.	Costs per year for parts and labour incurred in maintaining and servicing of vehicle. (Exclude item D2).
D2.	If you do your own maintenance & servicing how many hours per year is spent on these tasks?
	- yourself
	- your own company mechanic
	..... hrs
	..... hrs
E. <u>Administration Costs – applicable to the Contract</u> (If you have more than 1 Contract divide these total costs by the number of contracts) <i>advertising?</i>	
E1.	BCA Membership
E2.	Accounting/audit fees
E3.	Bank charges
E4.	Cleaning materials
	\$.....
	\$.....
	\$.....
	\$.....

E5.	Computer consumables (eg. ribbons, ink cartridges etc)	\$.....
		\$.....
E6.	Computer software (eg. MYOB or other packages)	
E7.	Conference and seminar costs (air fares accommodation, meals etc.)	\$.....
		\$.....
E8.	Courier and freight (if not included in maintenance cost)	\$.....
		\$.....
E9.	Electricity/gas	\$.....
E10.	HVIS costs <i>some operators included in rego, is this applicable?</i>	\$.....
		\$.....
E11.	Land Tax	
	<i>Confusion between land tax and E17 rates</i>	
E12.	Legal fees	
		\$.....
E13.	Motor vehicle use (directly applicable to your bus business eg. trips to TNSW, schools, pick up parts, conferences etc. Use 55cents/km).	\$.....
	<i>Including survey vehicles</i>	\$.....
E14.	OH&S Management Systems	
		\$.....
E15.	Postage	\$.....
		\$.....
E16.	Printing (of timetable, brochures for schools etc.)	\$.....
	<i>Need to differentiate from E25</i>	\$.....
E17.	Rates	\$.....
	<i>Includes water rates?</i>	\$.....
E18.	Rent – premises (eg. bus parking and/or office)	\$.....
		\$.....
E19.	Repairs & maintenance – premises	
E20.	Security (for depot and/or office)	\$.....
E21.	Signage (if not included in repairs & maintenance eg. school bus signs)	\$.....
E22.	Sponsorship & Donations (to schools only)	\$.....
E23.	Staff amenities and supplies (eg. coffee, biscuits, hand towels)	\$.....
		\$.....
E24.	Staff recruitment costs (advertising)	\$.....
		\$.....
E25.	Stationery (bus passes, pens, paper etc)	\$.....
		\$.....
E26.	Subscriptions (Truck & Bus, ABC etc.)	\$.....
		\$.....
E27.	Telephone/fax/mobile	\$.....
	<i>Combine e27&e28 due to rise in bundling</i>	\$.....

E28. Internet	\$.....
E29. Towing (if not included in repairs & maintenance)	\$.....
E30 Training (other than E7)	\$.....
E31. Uniforms (provision & laundry)	\$.....
E32. Waste disposal and EPA costs	
<i>Water costs - rates</i>	
E33. Other. Please specify	\$.....
.....	\$.....
Depreciation (original cost divided by 5 years) of:	\$.....
E34. Surveillance Systems (eg. video camera)	\$.....
E35. Communication equipment (2 ways, mobiles)	\$.....
E36. Computer hardware, office equipment	
E37. Other plant & equipment (eg. workshop equipment)	
F. <u>Bus Costs and Vehicle Details</u>	
F1. How is vehicle financed?	
<i>Should be is or WAS financed,</i>	
- Hire Purchase	Y / N
- Lease	Y / N
- Purchased outright	Y / N
If Hire Purchased/Leased What is Residual Value?	\$.....
F2. What is the annual repayment total?	\$.....
F3. What time period is finance over?	.....yrs
F4. Was security required (other than the bus)?	Y / N
F5. Next Contract anniversary date / /
F6. Age of vehicle at that date	..... yrs
F7. Current average age of fleet if you have more than one	..... yrs
Non-Commercial Contract (as at 1 November 2002)	..... yrs
F8. What was the age of the bus at purchase?	\$.....
F9. What was the cost of purchase and any initial repairs/improvements?	.....
F10. What was the year of acquisition?	.....
F11. What make/type of vehicle do you operate?	.....

F12. What is its seating capacity?	.....
F13. What is its 3 for 2 capacity?	.....
F14. What is its licensed standees?	Y / N
F15. Does vehicle have seat belts?	Y / N
F16. Is the vehicle air-conditioned?	Borrow/Hire?.....
F17. What spare vehicle arrangements do you have?	Other – Please Specify.....

F18. On how many days in the year was it necessary to use a spare vehicle for breakdowns or servicing problems? <i>Include cost associated with spare</i>	.....days
G. <u>Other Costs</u>	
G1. Are there any other costs associated with operating your non-commercial contract?	Y / N
Please specify.....	\$.....per yr
G2. Depot Costs incurred in complying with:	
- OH&S	\$.....
- EPA (if not included in E32) <i>E32 should refer to bus costs only –not depot costs.</i>	\$.....
- Local Government <i>provide example</i>	\$.....
- Licensing of Mechanical Equipment	\$.....
- Other (Please Specify)	\$.....
G3. Do you pay Payroll Tax?	Y / N
H. <u>Contract Details</u>	
H1. Contract holders name	.....
H2. Contract renewal date / /
H3. Contact phone number	.....
I. <u>Revenue (Inclusive of GST)</u>	
I1. What is your 2002/3 financial year revenue from TNSW for this contract?	\$.....
I2. What is your annual revenue from other sources?	\$.....(Charter)
	\$.....(Cash Fares)
I4. Other (please specify eg. advertising on bus)	\$.....
.....	\$.....
.....	\$.....

..... Total Other:	\$.....
<p>J. Vehicle Use</p> <p>Is vehicle regularly used to perform trips on other contracted bus services eg. Commercial Country Town, Village to Town or Town to Town Services?</p> <p>If YES, what percentage of total kms would this represent?</p> <p><i>Rethink question - not answered in current version</i> <i>Aim of question unclear</i></p>	<p>Y / N</p> <p>.....%</p>
<p>K. <u>General</u></p> <p>What other factors influence your costs e.g. road surfaces, traffic/operational difficulties, other (please specify), and how would you calculate the added costs per year?</p> <p><i>Ask for percent loose surface road on contract route and percent of repairs and maintenance costs at 'D' attributable to loose road surface (this should jog their memories so they make sure to include gravel costs at D)</i></p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>

8 APPENDIX 2 ITS model: ACC worksheet

ANNUALISED CAPITAL COST (ACC) AND RISK FACTOR WORKING - NON COMM. CAT. 2, 2002

FACTORS

This year	2002
Real rate of interest	6.32%
Economic life	10
Residual rate	15.00%
Typical vehicle	Toyota Coaster
Risk factor	8.00%
CPI	2.93%

CAPITAL COST	age of vehicle															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2002	\$83,000	\$69,000	\$62,000	\$54,000	\$46,000	\$40,000	\$35,000	\$32,000	\$26,000	\$22,000	\$18,000	\$12,000	\$9,000	\$7,000	\$6,000	\$5,000

ACC	age of vehicle															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2002	\$9,731	\$8,743	\$8,594	\$8,316	\$8,032	\$8,142	\$8,649	\$10,236	\$12,108	\$19,882	0.00	0.00	0.00	0.00	0.00	0.00

Proportion of vehs by age (from survey data)										
2002	5.56%	7.41%	3.70%	11.11%	9.26%	20.37%	9.26%	12.96%	5.56%	14.81%

ACC weighted average by age										
2002	\$540.63	\$647.65	\$318.31	\$924.01	\$743.67	\$1,658.53	\$800.80	\$1,326.90	\$672.68	\$2,945.46

TOTALS

	TOTAL_ACC	RISK	TOTAL REV. REQUIRED
2002	10,578.63	3,401.48	13,980.11

9 APPENDIX 3 Business loan rates

Institution	Product Name Assumed: Non-residentially secured	Variable Rate	Fixed Term Rates (%)			Fees	
			3 yr	4 yr	5 yr	Estab	Line
ANZ Bank	Commercial Loan	7.55	6.82	7.31	7.61	7.8	8
ANZ Bank	Commercial Loan	7.55	6.82	7.31	7.61	7.8	8
BankWest	Business Loan - Affinity Commercially Secured	7.29	7.45	7.57	7.68	7.85	7.97
BankWest	Business Loan - Originator Commercially Secured	7.29	7.45	7.57	7.68	7.85	7.97
Citibank	Commercial Mortgage Rates	7.59	6.99	7.09	7.29	7.29	7.39
Citibank	CitiBank Business Loan	7.59	7.39	7.49	7.79	7.79	7.79
RESI Mortgage Corporation	Commercial Property Loan	7.21	6.55	6.65	6.8	6.95	7.1
Suncorp	Business	7.42	6.9	7	7.1	7.2	7.3
Westpac Banking Corporation	Business Development Loan	6.65	5.9	6.02	6.15	6.27	6.37
Westpac Banking Corporation	Business Development Loan	6.65	6.35	6.47	6.6	6.72	6.82
Adelaide Bank		7.45	6.63	6.73	6.85	7	7.12
Arab Bank Australia Ltd		7.7	8	8.2	8.3	8.32	8.35
Bank of Melbourne		7.4	6.19	6.29	6.41	6.54	6.66
Challenge Bank		7.4	6.19	6.29	6.41	6.54	6.66
Commonwealth Bank		7.55	6.35	6.3	6.6	6.65	6.75
Greater Building Society		7.4	6.49	6.75	6.8	6.9	7.05
Grenfell Securities		-	9.5	9.5	9.5	-	9.5
ING Bank		6.85	6.75	6.85	7	7.15	7.25
National Australia Bank		7.75	6.57	6.76	6.87	6.99	7.09
Savings & Loans CU (SA)		7.07	6.49	6.69	6.69	6.99	6.99
SUNCORP		7.42	6.9	7	7.1	7.2	7.3
ANZ Bank	Commercial Loan	7.55	6.82	7.31	7.61	7.8	8
Leasing Institution	Commercial Hire purchase over \$57,009, National		3 yr 40% Resid	4 yr 30% Resid	5 yr 20% Resid		
St. George			8.7	8.7	8.6		
Bendigo Bank Ltd			7	7.05	7.1		
Bank SA			7.7	7.7	7.75		
AVERAGE (%):		7.34	7.26	7.27	7.45		

Source: <http://www.infochoice.com.au/banking/default.asp?CategoryID=92>,
<http://www.infochoice.com.au/banking/default.asp?CategoryID=96>, accessed 28 April 2003, and
<http://www.cannex.com.au/surveys/busloan.html>, accessed 28 April 2003.