

Longer Distance Bus and Coach Links in Wales

Final Report to: Welsh Assembly Government

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1.

Executive Summary

1.1 OBJECTIVES

- 1.1.1 This project has been carried out for the Long Distance Bus and Coach Study Group of the Welsh Transport Forum, on behalf of the National Assembly for Wales and the Welsh Assembly Government. The objective is to develop a strategy for long distance bus and coach services, which would complement the rail network in Wales.
- 1.1.2 The report defines a service network to meet anticipated demand, together with its characteristics and structure.

1.2 APPROACH TAKEN

- 1.2.1 We have measured existing and potential public transport demand (see chapter 3) on each of seven defined ‘strategic long distance links’ by:
- extrapolating data on existing bus and rail use
 - relating this to a demographic profile of each area served
 - projecting likely ‘unconstrained’ demand for each of the new links.
- 1.2.2 Three scenarios were developed to test service strategies, based on:
- a) ‘infilling’ gaps in the rail network to create a national network based on rail and coach links
 - b) developing a free-standing coach network in the mould of ‘National Express’
 - c) upgrading of existing bus links.
- 1.2.3 Each of these scenarios was tested against cost and demand criteria, and was subject to consultation with key operators and local authorities. Detailed proposals for services were then developed based on an optimum combination of service strategies for the relevant links.

1.3 DEMAND

- 1.3.1 Projected demand for longer-distance bus / coach journeys within Wales is modest. Our modelling suggests that there are over 420,000 annual journeys that are not

being adequately satisfied by existing public transport. This translates to daily flows of up to 300 passengers in the corridors examined.

- 1.3.2 Given the need to ensure either commercial viability or Best Value for any public funding, we tested the service provision scenarios against standard criteria (see chapter 5). Under these criteria, service scenarios a) and b) (as in 1.2.2 above) failed to meet either commercial viability or best value criteria for the given demand in at least six of the seven corridors.

1.4 SERVICE OPTIONS

- 1.4.1 The three service options identified in 1.2.2 above are not intended to be mutually exclusive and it is believed that, subject to application of a standard template (see below) it would be possible to apply different scenarios for each of several linked corridors. It is also possible to plan for incremental upgrading of each corridor in line with demand and funding availability.
- 1.4.2 Although rail connections form an important element in any overall strategy the scenario based on ‘infilling’ missing rail links is necessarily inefficient, does not optimise demand and fails to provide for some key flows. It also creates a second tier of public transport that would, we predict, undermine existing local bus services.
- 1.4.3 The free-standing coach network provides much greater efficiency and can be directly related to the projected flows. Our analysis was discussed with National Express who confirmed our projection of low volume. It would, however, abstract longer-distance passengers from existing local bus services and could only provide low-frequency links. It would therefore fail to optimise patronage.
- 1.4.4 An approach based on the upgrading of existing bus services achieves the best performance in most corridors. It also avoids abstraction from those bus services, and is supported by most operators and local authorities because of this. Where an existing bus service can be upgraded to achieve journey times within 15% of that by a free-standing coach service, we believe that most of the projected longer distance demand can be captured cost-effectively.
- 1.4.5 The financial consequences of adoption of each of the above three scenarios have been calculated and are set out in Table 7. This shows that the ‘bus to coach’ scenario would require less than half the net funding of the next cheapest option.

1.5 RECOMMENDED SERVICE STRATEGY

- 1.5.1 The recommended service strategy is based on the development of eight strategic longer-distance links, each of which is either:
- a) a recasting of existing local bus services, or
 - b) a supplementary coach link co-ordinated with local bus services.

- 1.5.2 The recommended strategic routes are illustrated in Figure C on page 60. All of these would be co-ordinated with each other, and with train services, at key interchange points.
- 1.5.3 Within this strategy the strategic longer-distance network would be achieved with modest additional resource requirements. A template (see below) would be applied, to ensure that each service delivered the required level of quality and formed a clear part of a cogent national network.
- 1.5.4 The projected costs and revenues of the recommended services have been estimated, and are summarised in Table 10.

1.6 DELIVERY MECHANISM

- 1.6.1 The delivery of a cohesive national network necessarily transcends both the individual operators' commercial objectives and local authority aspirations for these services. It is therefore essential that a clear and effective mechanism is in place for delivery.
- 1.6.2 We recommend that:
- a) Each strategic service that is predominantly (more than 80% of service mileage) commercial should be subject to funding assistance by negotiation and agreement through service-specific quality partnerships
 - b) Strategic services that do not meet this commercial viability target should be procured by a nominated lead local authority and should then also be subject to a quality partnership agreement
 - c) each of the defined services should be subject to a Quality Partnership, with operators, local authorities and the Welsh Assembly Government as partners
 - d) The partnerships should include the operator(s), local authorities and the Welsh Assembly Government, and should require:
 - ◆ the service to meet the template standards set within a defined period from adoption, and
 - ◆ subscription to a joint marketing organisation, organised through the Confederation of Passenger Transport Wales (CPT) as a free-standing commercial entity.
- 1.6.3 A joint service and marketing company (see section 9.2) would administer the branding, livery and publicity for these services. It would also operate the through and network ticketing scheme, under the Competition Act Block Exemption rules.

1.7 A STRATEGIC SERVICE TEMPLATE

- 1.7.1 A strategic service template has been developed for the proposed network. The template defines:

- a) vehicle standards
- b) image, branding and marketing requirements, including subscription to a proposed national brand company
- c) through fares and network ticketing availability
- d) infrastructure requirements for defined ‘stations’ at locations of interchange or higher demand
- e) reliability, customer care and operating standards.

1.7.2 We recommend that this template should be adopted for the network, with upgraded services ‘qualifying’ for inclusion when they meet the template standards.

1.7.3 Upgrading to the defined template standards would be achieved progressively for the network, in partnership with local authorities and operators.

1.8 FUNDING

1.8.1 Funding for this upgrading is based on:

- a) a Welsh Assembly Government grant towards meeting the costs of higher vehicle standards
- b) initial Welsh Assembly Government funding for the joint marketing company
- c) consolidation of existing local authority service support to fund some services (with, as appropriate ‘top up’ funding for improved services), and
- d) funding of infrastructure improvements through Transport Grant.

1.8.2 Vehicle upgrading of the entire estimated fleet requirement implies a total grant of £784,000, with implementation to coincide with launch of the brand during year 2.

1.8.3 Our projections of revenue support requirements for enhanced services are based on a target three-year build up to commercial viability. Funding is assumed to follow the ‘kick-start’ model, tapered over this period. Although revenue development is linked to the timing and scale of marketing effort, our calculations suggest that additional funding of £120,000 will be needed in the first full year, reducing to £40,000 in year four and zero beyond this.

1.8.4 As a launch marketing budget, we estimate that £240,000 will be required, and in the order of £100,000 *per annum* thereafter. Welsh Assembly Government would fund a decreasing share of this over four years, indexed to service revenue, but the phasing of this is suggested to reflect a comprehensive marketing launch in year 2, once all revised services are implemented.

1.8.5 Infrastructure enhancements are expected to account for total costs estimated at £1.1 million, and be delivered by local authorities through the Transport Grant mechanism.

1.8.6 The total public funding package is anticipated to amount to £2,706,000, as follows:

- vehicles £896,000
- marketing £430,000
- revenue support £280,000
- infrastructure £1,100,000.

1.9 IMPLEMENTATION STRATEGY

1.9.1 A programme for the progressive upgrading of services to create a full national network has been devised and is detailed in chapter 9. Priority is given to those links with the greatest potential and those that can be achieved relatively easily.

1.9.2 We have based our proposals on an 18 month phased programme of service introductions, with a network upgrade and launch during year 2.

2.

Introduction & Methodology

2.1 BACKGROUND

- 2.1.1 Development of public transport links for longer distance journeys across Wales has been constrained by history and topography. These have combined to produce a network which now provides reasonably well for coastwise movements and links to major English cities, by train or coach. These often reflect the needs of past generations, especially in the existence of through routes to Ireland via both Fishguard and Holyhead. North-south links have been particularly weak.
- 2.1.2 However, the current Welsh context is of a new, domestic centre of gravity in the political, economic and cultural fields. This has renewed interest in strengthening public transport links between the various regions of the country, and redressing some of the loss of flexibility caused by closure of uneconomic rail routes in the 1960s.
- 2.1.3 Evidence of earlier attempts to fill the resulting gaps still exists, in the form of the ‘Traws Cambria’ coach service between Llandudno and south Wales. This limited, daily service, which has run since the late 1970s and is primarily a commercial operation, is confined to the western coastal corridor via Bangor, Aberystwyth and Swansea. An additional route, northwards from Cardiff through Llandrindod Wells, was withdrawn some years ago.

2.2 OBJECTIVES

- 2.2.1 The objective of this project is to develop a strategy for long distance bus and coach services that would complement the rail network in Wales.
- 2.2.2 To deliver this, the report defines both
- the characteristics and
 - the structure and outline
- of a service network to meet anticipated demand, which takes account of experience of express service development elsewhere in the UK.
- 2.2.3 This has enabled estimation of passenger levels, costs and revenues, and hence proposals for funding levels and sourcing. The report also defines the suggested

approach to the planning and organisation of the network, and the relationships between operators and the public sector partners.

- 2.2.4 Transport policies of Welsh Assembly Government aim to promote *'a sustainable transport system which is safe, efficient, clean and fair, and which is relevant and responsive to both local and national needs'*.

The outcomes of this project will support these principles, within the framework of partnership, inclusive and strategic action and good government laid down by the Welsh Assembly Government.

2.3 METHODOLOGY

- 2.3.1 To forecast the potential use of long distance coach links in Wales it is necessary to:

- understand fully the existing use of –
 - ◆ rail services
 - ◆ coach and local bus services
- ascertain the potential for additional public transport use
- calibrate the influences on demand of different service features, including –
 - ◆ speed
 - ◆ direct links
 - ◆ frequency
 - ◆ vehicle quality
 - ◆ fares.

- 2.3.2 These must be set in the context of Welsh demography and operating characteristics. Demographic data were obtained from Welsh Assembly Government, 1999 settlement population estimates by the Office of National Statistics, or the 1991 Census, depending on the level of detail required. These have been supplemented by initial (county level) results of the 2001 Census¹, which became available during the course of the study.

- 2.3.3 Existing rail patronage data were extracted from MOIRA², using the data for stations served by the putative Wales & Borders franchise. This provides annual passenger flows in a station-by-station origin and destination matrix.

- 2.3.4 Current bus demand was ascertained by analysis of electronic ticket machine data obtained from relevant bus operators, comprising Arriva Cymru, Express Motors, First Cymru and Stagecoach in South Wales. These data relate to the summer (July / August) of 2002 which, in some areas, may not be representative of year-round averages. Partial data from March 2002, however, indicate that the magnitude of variations does not suggest that the matrix is unrepresentative.

¹ *regrettably, release of local area statistics has been delayed to July 2003, too late for incorporation to this study*

² *a model produced by TCI Operational Research on behalf of the Passenger Demand Forecasting subscription service*

- 2.3.5 Data were not requested for those south Wales depots where services are not relevant to the links under consideration. Although the passengers travelling wholly within one zone are under-reported in some cases, this does not affect accuracy of the longer-distance flows. On-bus surveys and observations were also carried out on the services of some smaller bus operators in mid Wales, whose services might form part of a strategic link. Similar work was undertaken on specific longer distance services of major operators, including Traws Cambria service 701, to supplement our understanding of the travel patterns on this service.
- 2.3.6 Rail stations were zoned, and the same zones were used for the initial bus analysis. However, these were too coarse to be useful in identifying the medium-length journeys typically undertaken by bus, and were therefore subdivided, generally along local authority boundaries. The resulting zones are detailed in section 3.4.
- 2.3.7 We compared these results with estimated demand for public transport in the comparable areas, using our own methodology validated in many studies elsewhere. When theoretical services were tested against these results, applying elasticity values for various aspects of frequency and service characteristics derived from comparative studies, we were able to estimate the resulting changes in patronage to be expected on each route, and consequently the anticipated revenue.
- 2.3.8 Operating costs were estimated from the resource requirements, using average values from a number of comparable operations in Britain. Other funding requirements were similarly estimated, based on our knowledge and experience of numerous market development and infrastructure upgrading projects.

3.

Demand

3.1 DEMOGRAPHY

- 3.1.1 This chapter presents an overview of population spread and density, with an analysis of some of the key factors that affect demand. These analyses have been used to help calibrate and inform the demand model.
- 3.1.2 The principal analysis uses data from the 1991 Census, as this is the most reliable available at ward level, published by the Office of National Statistics (ONS). Wards have remained largely unchanged, in spite of local government reorganisation in 1996. Where available, we have referred to data from the 2001 Census.
- 3.1.3 The overall population of Wales in 1991 was 2,835,073, which grew by 2.4% to 2,903,085 by 2001. Most of Wales is sparsely populated, as illustrated by the map of population density in Figure A below. However, major population concentrations exist in the south and south east, particularly in Swansea, Cardiff, Newport and their associated valleys, with lesser but still significant concentrations along the north coast and in north-east Wales.
- 3.1.4 Mid Wales is dominated by wards with a very low density (under 15 persons per square kilometre), with much higher concentrations found only in the main towns in the area, such as Aberystwyth, Brecon, Llandrindod Wells and Newtown.
- 3.1.5 A comparison of the results of the 2001 and 1991 Censuses is shown in Table 1.

Table 1 : Comparison of 1991 data with 2001 Census estimates

Year	2001		1991		2001	
Unitary Authority	Total population		Total population		Of pensionable age*	
	No.	% male	No.	% male	No.	% of total
Isle of Anglesey	66.8	48.4%	69.1	48.5%	14.7	21.9%
Blaenau Gwent	70.1	48.5%	72.3	48.7%	13.7	19.5%
Bridgend	128.6	48.6%	128.8	48.3%	24.9	19.3%
Caerphilly	169.5	48.7%	169.6	48.8%	30.2	17.8%
Cardiff	305.4	47.7%	285.5	48.0%	50.9	16.7%
Carmarthenshire	172.8	48.1%	167.7	48.3%	38.8	22.5%
Ceredigion	74.9	48.8%	62.7	48.5%	16.2	21.7%

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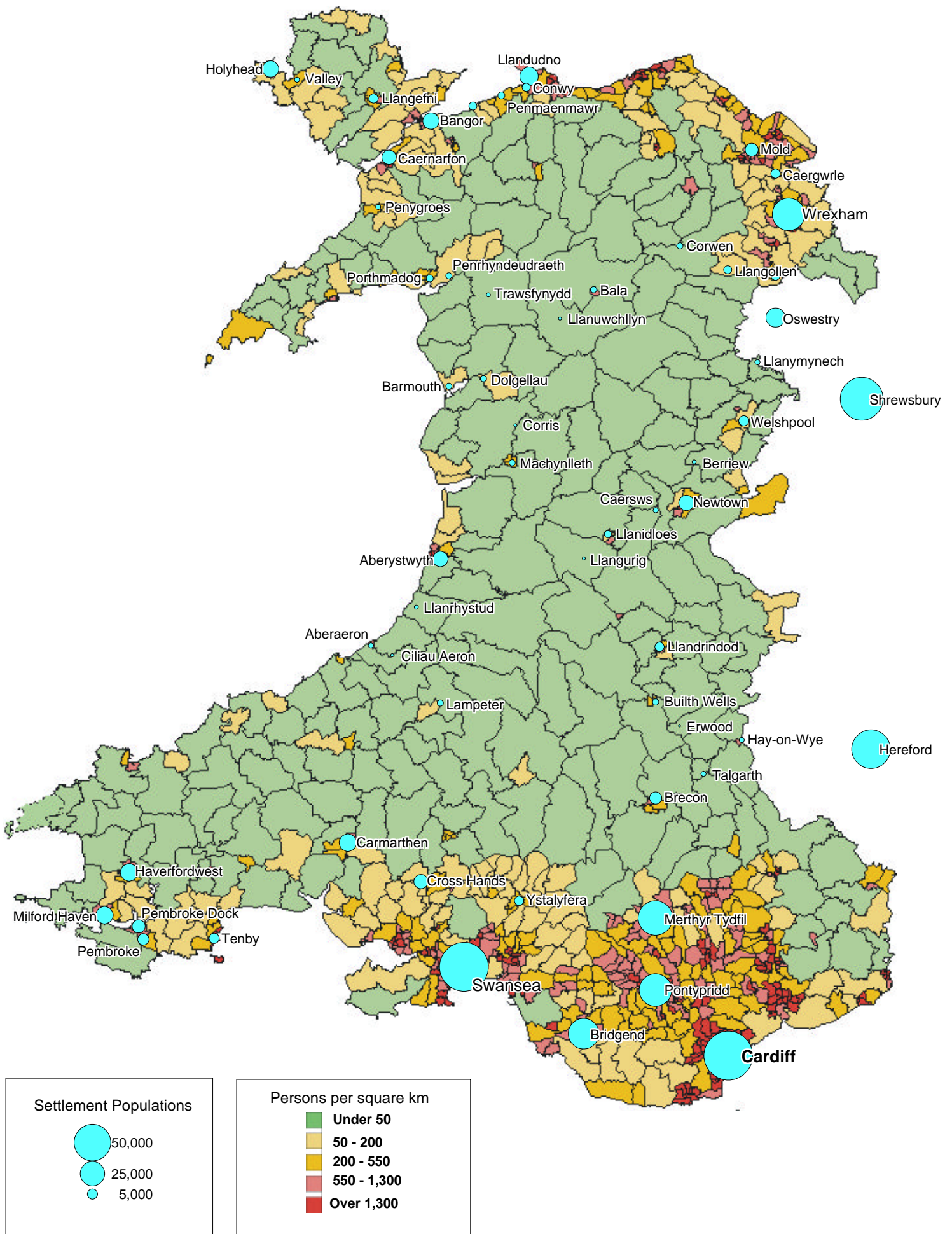
Year	2001		1991		2001	
Unitary Authority	Total population		Total population		Of pensionable age*	
	No.	% male	No.	% male	No.	% of total
Conwy	109.6	47.6%	106.3	46.7%	28.9	26.3%
Denbighshire	93.1	47.9%	88.7	47.3%	21.6	23.2%
Flintshire	148.6	49.1%	141.3	48.8%	26.2	17.6%
Gwynedd	116.8	48.0%	113.3	48.0%	25.7	22.0%
Merthyr Tydfil	56.0	48.1%	59.3	48.1%	10.5	18.8%
Monmouthshire	84.9	48.8%	79.9	48.8%	17.7	20.8%
Neath Port Talbot	134.5	48.3%	138.2	48.2%	28.3	21.0%
Newport	137.0	48.0%	133.3	48.3%	25.5	18.6%
Pembrokeshire	114.1	48.2%	113.2	48.6%	25.1	22.0%
Powys	126.4	49.5%	119.0	49.3%	28.8	22.8%
Rhondda Cynon Taff	231.9	48.5%	232.6	48.6%	43.6	18.8%
Swansea	223.3	48.4%	223.2	48.1%	46.8	21.0%
Torfaen	90.9	48.4%	90.5	48.5%	17.6	19.4%
Vale of Glamorgan	119.3	48.1%	117.2	48.4%	23.2	19.4%
Wrexham	128.5	48.8%	123.1	48.3%	23.9	18.6%
Wales	2903.1	48.4%	2835.1	48.3%	582.5	20.1%

* = pensionable age means 60 and over for women; 65 and over for men

- 3.1.6 The 2001 figures are only estimates at this stage, and are subject to revision in the detailed analysis of area statistics. Nevertheless, some trends can be discerned in both total population and the proportion of people of pensionable age.
- 3.1.7 The significant growth in the total population of south east Wales is evident, especially around Cardiff. In some cases, such as Rhondda Cynon Taff, continuing decline in upper Valleys populations is disguised by expansion in the M4 hinterland. However, mid-Wales has witnessed some of the largest changes since 1991, with the population of Powys growing by over 6%, while that in Ceredigion grew by nearly 20%³. The primarily rural areas of north Wales typically grew by 3 to 5%.
- 3.1.8 Car ownership is one of the most significant factors in determining usage of public transport. The overall percentage of households in Wales with no car has declined to 26% in 2001 (from 32% in 1991), and few areas – even in the south Wales valleys – have more than 30%. In rural mid and north Wales, however, households without cars still form between 17% and 24% of the total, although concentrations of non-car-ownership will be mainly limited to wards in the larger towns.

³ ONS cautions that these direct inter-censal comparisons are not wholly accurate, because of methodological variations, but they are indicative of the scale and nature of change

Figure A: Settlement populations in Wales and population density



- 3.1.9 The proportion in the population of pensionable age has kept pace with the overall growth, being unchanged from that in 1991. This means that the overall percentage at 20.1% remains substantially higher than the average for Great Britain of 18.5%), although there has been a marked reduction in areas of rapid economic growth, such as Cardiff. In contrast, Powys has seen a jump in population accompanied by a small upward shift in the proportion of pensioners.
- 3.1.10 These changes also affect public transport demand, since bus use tends to increase among people of pensionable age. The National Travel Survey⁴ indicates that the average annual number of bus and coach trips for people aged 60-69 equals the average (6 trips p.a.) for all age groups, but for those over 70 is much higher at 11 trips. This may be further accentuated by the relatively new free travel concession for this age group.

3.2 CURRENT RAIL DEMAND

- 3.2.1 This section reports on rail passenger flows within, to and from Wales. Stations were allocated to zones as follows:
- a) Eleven zones, grouping secondary Welsh stations by sections of route.
 - b) Ten zones for major stations, both within and outwith Wales.
 - c) Seven zones for other stations outside Wales, grouped by National Fares Manual (NFM) areas.

Those in Wales are listed in Table 5 below, and are depicted graphically in Figure B.

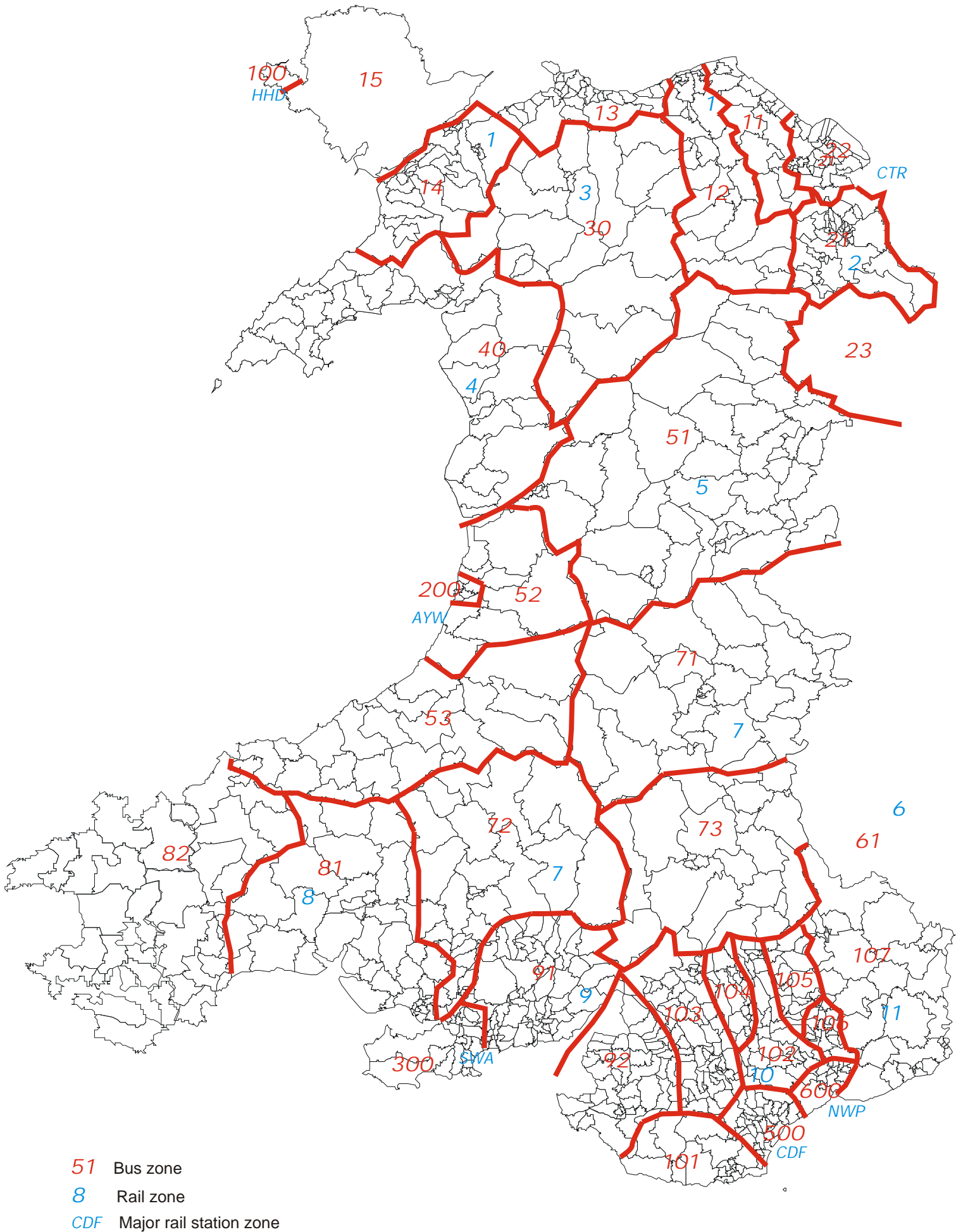
- 3.2.2 For the purposes of grouping, stations outside Wales but included in the core Wales & Borders operating area have been included in a) or b) as appropriate. The Wales & Borders operating area has been defined as all stations bounded by:
- | | |
|-------------------|---------------------------|
| ■ the Welsh coast | ■ Shrewsbury |
| ■ Bidston | ■ Hereford |
| ■ Chester | ■ Chepstow |
| ■ Crewe | ■ Severn Tunnel Junction. |

- 3.2.3 A full definition of zones and the allocation of rail stations to them is given in Appendix A, along with the detailed results, in the form of a triangular matrix of annual journeys between zones.

- 3.2.4 The largest current rail passenger flows are between Cardiff and stations on the Valley Lines network, due to the use of these services for commuting, which is largely absent elsewhere in Wales. Cardiff is the main destination from all other south Wales stations, but Swansea is most significant for the western part of the area.

⁴ *National Travel Survey 2000-2002 Update, published by ONS*

Figure B: Bus and rail analysis zones



- 3.2.5 Similarly, the North Wales Coast zone is dominated by intra-zonal travel, with almost 44% of journeys, and North East Wales also has significant local travel. A notable flow is that of over 50,000 journeys between Bangor and Holyhead, but there is also strong demand to / from Chester and Merseyside.
- 3.2.6 However, north-south travel by rail within Wales is limited; of the 29,000 annual journeys between Zones 1 / 2 and Cardiff, 8,000 were to or from Bangor, showing the effect of the concentration of Welsh institutions there. Travel to Chester, Liverpool, Manchester, the English Midlands or London all exceed passenger volumes to south Wales destinations. The relatively poor performance of the rail link may reflect the usual need to change trains, the indirect route, or the perceived travel time, despite the fact that the rail travel time from most locations is faster than that by car.
- 3.2.7 The Cambrian Coast and the Mid Wales rail lines generate almost exclusively local and east-west travel, with very few passengers using these to travel to points in north or south Wales. Particularly notable is the small flow between Aberystwyth and the Cambrian Coast stations, which reflects poor connections at Dovey Junction⁵.

3.3 CURRENT BUS DEMAND

- 3.3.1 This section examines the level of bus travel between areas within Wales, with a particular emphasis on longer-distance travel. Analysis of electronic ticket machine data enabled construction of a zonal flows matrix to complement that produced for rail services. This was supplemented by some on-bus surveys and observations, notably on Traws Cambria service 701.
- 3.3.2 Each bus fare stage, which identifies boarding and (in most cases) alighting points, was assigned to a zone. The zones applied to this analysis are as shown in Table 5, with the corresponding rail zones for comparison purposes. The zone boundaries are illustrated by the map at Figure B.
- 3.3.3 Each operator's zone-to-zone matrix of recorded passenger journeys was then merged into a composite matrix for Wales. This shows the daily average numbers of passengers (two-way flows) on Mondays to Fridays between each pair of cells in the matrix, and the detailed results are shown in Appendix A.
- 3.3.4 In the North Wales Coast zone, there are strong cross-boundary movements between Denbighshire and Conwy, and between the northern part of Gwynedd and both north Conwy and Anglesey (including Holyhead). Significant flows also occur between Flintshire / Wrexham and Chester. These figures include some relatively short distance movements, but emphasise the general pattern that bus use is strongest along corridors with a parallel rail service.
- 3.3.5 Moving to links that would be used by longer distance travellers, there are strong links up and down the west coast, with an average of 235 passengers travelling between north Gwynedd and the Cambrian Coast / Gwynedd South on an average

⁵ *In the Winter 2002/03 timetable, the average connection time is 56 minutes, with minima of 16 minutes southbound and 35 minutes northbound and a maximum of 90 minutes*

weekday. 228 passengers travel between Gwynedd South and Powys North (i.e. the Machynlleth area), with smaller flows between Powys North and Aberystwyth / Ceredigion North.

- 3.3.6 Nearly 300 daily journeys are made between Aberystwyth and Ceredigion South, but only two passengers between Aberystwyth and the main part of Carmarthenshire. However, 241 passengers travel between Ceredigion South and Carmarthenshire on an average weekday, some of who may be changing buses to make longer distance journeys.
- 3.3.7 557 daily journeys are made between western Carmarthenshire (including Llanelli and Carmarthen) and the eastern part of the county (Cross Hands, Ammanford, Llandeilo etc.). Swansea plays a clear role as a regional centre in this area, with 344 daily journeys to and from Carmarthenshire East and 624 journeys to and from Carmarthenshire West. Cardiff attracted 29 journeys to or from Aberystwyth and Ceredigion South. 7 journeys were made between Cardiff and Carmarthenshire.
- 3.3.8 The main north-south Newtown – Llandrindod Wells – Brecon – Merthyr corridor in Powys was surveyed, and the regional role of these services was also evident from the estimated passenger flows. 71 passengers travelled between north and central Powys on an average weekday, and 16 passengers between central and south Powys. Larger numbers travelled on to Merthyr Tydfil or Cardiff, with 88 daily journeys between Powys South (mainly Brecon) and Merthyr Tydfil and 48 between Powys South and Cardiff.
- 3.3.9 These surveys enabled us to identify some passengers who changed buses to make longer distance journeys. From Powys central, these accounted for 2 journeys and Merthyr Tydfil, and 5 journeys between Cardiff and Powys central.

The ‘Traws Cambria’ service

- 3.3.10 This service has operated for over 20 years, linking north and south Wales as an addition to the established network of local bus, coach and train services. It is jointly operated by Arriva and Stagecoach, with through passengers being required to change coaches at Aberystwyth. The basic service pattern is very sparse, with one daily through journey each way between Llandudno, Aberystwyth and Cardiff, supplemented by a return Aberystwyth – Cardiff – Bristol working which permits a day trip from mid and west Wales. Additional Friday and Sunday journeys on the Aberystwyth – Cardiff section cater for weekend travellers, many of them students.
- 3.3.11 We have examined the loading data for this route, and the extract from the zone-to-zone matrix (excluding intra-zonal flows) for the 701 appears as shown in Table 2, showing the average daily number of Monday – Friday passengers between each pair of zones.
- 3.3.12 It is apparent how small the flows generally are on this infrequent service. Over a third of the passengers travel on the northern section of the 701 between Llandudno and Aberystwyth, which now receives limited Assembly subsidy, although their journeys tend to be shorter.

Table 2 : Traws Cambria inter-zonal flows: Daily Average

Zone	13	14	40	52	53	81	300	92	500	Totals
13 Conwy N	-									-
14 Gwynedd N	1	-								1
40 Gwynedd S	0	3	-							3
52 Ceredigion N	2	8	7	-						17
53 Ceredigion S	0	0	0	0	-					0
81 Carmarthens W	0	0	0	4	2	-				6
300 Swansea	0	2	0	9	2	8	-			21
92 Bridgend	0	0	0	1	0	0	0	-		1
500 Cardiff	0	3	1	15	3	10	0	0	-	32
Totals	3	16	8	29	7	18	0	0	-	81

3.3.13 By comparison, a regular (approximately two-hourly) local service which successfully generates significant longer distance traffic is the Wrexham – Llangollen – Bala – Dolgellau – Barmouth service 94. The zone-to-zone flows on this route are as shown in Table 3 below – there is also, unlike Traws Cambria, significant use made of this route for intra-zonal travel. It is believed that one of the strengths of this service is its relative frequency.

Table 3 : Wrexham – Barmouth inter-zonal flows

Zone	22 Wrexham	12 Denbighshire	30 Bala	40 Cambrian Coast	Totals
22 Wrexham	-	-	-	-	-
12 Denbighshire	105	-	-	-	105
30 Bala	59	54	-	-	113
40 Cambrian Coast	79	28	69	-	176
Totals	243	82	69	-	394

3.4 EXISTING INTER-ZONAL TRAVEL DEMAND

3.4.1 Taking the combined inter-zonal flows for bus and train produces the matrix of estimated annual journeys shown in Table 4 overleaf. This involves significant estimation in scaling up bus journeys from sample weeks, to compare with annual train patronage.

3.4.2 This matrix is based on the (relatively coarse) zoning applied to rail journeys – the allocation of bus zones to rail zones is listed in Table 5. Zones and stations in England have been excluded, other than the Oswestry area (part of zone 2), Herefordshire (zone 6) and Chester, which is a significant sub-regional centre for adjoining areas of Wales. Through-ticketed passengers to / from Ireland are not considered significant in the study context, and are also excluded.

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Table 4 : Inter-zonal passenger flows (estimated annual one-way trips)

Zone		1	2	3	4	5	6	7	8	9	10	11
	Zone / station name	N Wales Coast	NE Wales and Borders	Conwy Valley and Bala	Cambrian Coast	Mid Wales	Marches South	Heart of Wales	West Wales	Swanline	Valley Lines	Gwent
1	N Wales Coast											
2	NE Wales and Borders	153,714										
3	Conwy Valley and Bala	222,966	34,379									
4	Cambrian Coast	76,500	29,807	114,996								
5	Mid Wales	5,357	19,333	-	97,088							
6	Marches South	2,769	5,080	-	55	1,041						
7	Heart of Wales	97	75	-	-	21,600	9,624					
8	West Wales	142	725	-	-	72,600	2,004	175,127				
9	Swanline	710	611	-	-	134	2,654	349	28,658			
10	Valley Lines	177	200	-	-	-	18,637	27,067	4,283	33,494		
11	Gwent	131	502	-	-	52	48,390	36,300	408	1,856	928,548	
	Aberystwyth	325	1,342	-	14,646	472,032	1,305	-	1,200	300	349	119
	Cardiff	17,976	11,801	-	739	5,387	117,459	20,222	98,791	581,149	4,925,248	457,466
	Chester	353,624	556,705	2,423	166	791	4,110	433	563	724	284	355
	Holyhead	235,857	1,516	314	-	-	292	-	-	66	-	-
	Newport (Gwent)	2,029	1,985	-	46	293	37,695	4,270	9,310	28,775	499,712	464,271
	Shrewsbury	5,121	153,207	-	8,024	50,050	141,590	23,475	1,576	1,131	569	1,140
	Swansea	1,160	1,654	-	-	2,888	4,701	122,162	476,002	293,124	19,995	2,044

See below for continuation of Table to right

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Zone / station name	Aberystwyth	Cardiff	Chester	Holyhead	Newport (Gwent)	Shrewsbury
Cardiff	6,762					
Chester	1,193	8,381				
Holyhead	153	1,115	11,832			
Newport (Gwent)	337	614,824	1,551	215		
Shrewsbury	16,006	13,789	32,604	482	2,836	
Swansea	3,089	172,044	1,184	130	25,136	2,854

Table 5 : Bus and rail analysis zones used in Table 4

Bus zones	Local Authority area(s)	Equivalent rail zone		Urban bus zone	Town	Equivalent major rail station zone
		No.	Name			
11 to 15	Anglesey, Conwy, Denbighshire, Flintshire, Gwynedd	1	North Wales Coast	100	Holyhead	HHD
21 to 23	Flintshire, Wrexham, Shropshire	2	NE Wales and Borders	200	Aberystwyth	AYW
30	Conwy, Denbighshire, Gwynedd	3	Conwy Valley	300	Swansea	SWA
40	Gwynedd	4	Cambrian Coast	400	Chester	CTR
51 to 53	Ceredigion, Powys	5	Mid Wales	500	Cardiff	CDF
61	Herefordshire	6	Marches South	600	Newport	NWP
71 to 73	Carmarthenshire, Powys	7	Heart of Wales			
81 to 82	Carmarthenshire, Pembrokeshire	8	West Wales			
91 to 92	Bridgend, Neath Port Talbot	9	Swanline			
101 to 104	Vale of Glamorgan, Merthyr Tydfil, Rhondda Cynon Taff	10	Valley Lines			
105 to 107	Blaenau Gwent, Monmouthshire, Torfaen	11	Gwent			

- 3.4.3 Table 4 shows generally large flows between adjacent areas, especially where major urban centres are involved. Many of these, especially around Cardiff, are catered for primarily by train. Longer distance, and especially cross-country, flows are substantially lower, but are more significant for the purposes of this study.
- 3.4.4 A significant difference between the modes should be noted. Whereas tickets for rail journeys typically represent the whole of a passenger's through trip, bus journeys involving a number of vehicles are normally paid for (and thus recorded) as several individual trips, with no way of identifying those which form part of a longer trip chain. This is unimportant for the vast majority of bus travel, which is predominantly local in nature, but may disguise the small proportion of through travellers who are relevant to this study. We have been able to estimate the frequency of such connecting trips in the south Powys area from our surveys, but elsewhere this may result in (generally slight) under-representation of some inter-zonal bus flows.
- 3.4.5 The weakness of many existing flows through the central parts of Wales reflects the current lack of long distance traffic (as the through transport corridors avoid these areas) as well as the sparsity of population. Nevertheless, there is a marked difference between the eastern and western public transport 'corridors'. On the west side, trips in the Bangor – Carmarthen corridor total 245,200, or around 700 a day. On the eastern side, there is a total for the Wrexham – Merthyr corridor of only 68,000 current trips (less than 200 per day).
- 3.4.6 These flows may be compared with the estimates of through trips between north and south Wales, provided by the North-South Transport Links Study⁶, as shown in Table 6. That study also predicted a 15-35% growth in car travel between south and north Wales by 2017.

Table 6 : Estimated total of south-north Wales person trips (1999)

Mode	No. of person trips (daily average, both directions)	
	October	August
Road (excluding M5)	886	1174
Train	286	
Bus	4	
TOTAL	1176	1464

- 3.4.7 It is apparent that a very modest modal transfer from car to coach of 2-3%, equating to around 30 passengers per day, would increase significantly the existing base traffic. This may be set against a predicted growth in daily car trips of around 250 on average over the next 15 years.
- 3.4.8 Flows may also be related to the population sizes of the settlements⁷ on the corridors proposed for the strategic longer distance services, as illustrated by Figure A. The

⁶ Published by the National Assembly for Wales, 2000. The recommendations of this multi-modal study dealt mainly with road infrastructure

⁷ Estimates for 'urban areas' or 'localities' (source: Index of Place Names 1999; Office for National Statistics)

sizes quoted for all identifiable settlements indicate that the approximate catchment populations for the main corridors are as follows:

■	Western route:		
◆	Cardiff – Aberystwyth	520,340 ⁸	
◆	Cardiff – Haverfordwest	513,900 ⁸	
◆	Aberystwyth – Holyhead	61,420	
■	Eastern route:		
◆	Cardiff – Newtown	381,840 ⁸	
◆	Newtown – Mold	101,080	
■	Cross-country routes:		
◆	Hereford – Swansea	240,950 ⁸	
◆	Shrewsbury – Aberystwyth	99,200	
◆	Wrexham – Barmouth	59,580	

- 3.4.9 In this context, the poor performance of existing north-south links through Powys is evident from Table 4, when the significant overall population of the corridor is compared with (say) that of the Wrexham – Bala – Barmouth route.
- 3.4.10 National Travel Survey (NTS) data⁹ for 1999-2001 reveal that the average person travels 47 miles a year by express coach. With over 350,000 people in these settlements (**excluding** Cardiff, Hereford, Llandudno, Shrewsbury and Swansea), these data imply some 115,000 annual express service trips. There is potential to capture many such longer trips on this network, in addition to those due to its local functions.
- 3.4.11 Although people in Wales as a whole make fewer annual trips (952) of all kinds (6.6% lower than the British average), the main shortfalls are in trip purposes for generally shorter journeys, such as commuting and business (10.5% less), education (9.0% less) and escorting others (13.2% below average). By contrast, ‘visiting friends’, ‘social and entertainment’ and ‘holidays / day trips’ are together only 4.1% below the GB average.

⁸ These figures include the ‘urban settlement’ populations for Cardiff of 272,129 and / or that for Swansea of 171,038, as given in the ONS Index of Place Names gazetteer

⁹ NTS Update 2000/2002, and A Bulletin of Public Transport Statistics: Great Britain 2002 Edition; both published by the Department for Transport

4.

Experience Elsewhere

4.1 COMPARABLE OPERATIONS

4.1.1 There are a number of relevant longer distance network operations elsewhere in the UK, from which lessons may be drawn. We have examined the operations of:

- National Express
- Scottish Citylink
- Stagecoach Express
- First Excel.

4.1.2 We have also considered the marketing aspects of these operations, along with the Green Line brand applied to the Home Counties express and commuter operations of several Arriva, First and independent operators.

4.1.3 While it is appreciated that none of these will entirely replicate the context and operating characteristics of the Welsh network, we can draw relevant conclusions about the application of each model, taking account of the similarities and differences. Each has important lessons to offer about the successful operation of a longer-distance network.

4.2 NATIONAL EXPRESS

4.2.1 The National Express network is the largest of its type in Western Europe, and provides long distance coach services in England, Scotland and Wales at service levels broadly four to five times higher (in terms of service miles *per capita*) than the European norm. Analysis of the different position in European countries by the University of Westminster concluded that this was attributable to:

- a) The greater scale of railway closure experience in Britain.
- b) Licensing systems in other countries designed to protect railways.
- c) Development of the National Express brand by the former National Bus Company as a national provider.
- d) Targetting of niche low-income travel groups (students, the elderly, families without cars).

e) Strong local representation through a national network of ticket agents.

4.2.2 National Express already operates in Wales, mainly in the form of lower frequency links to distant major population centres. However, they welcomed the opportunity to become more involved with the development of coach services in Wales. We discussed their current strategy with them, and they identified their principal market interests as the South Wales to London and Heathrow / Gatwick Airports. Over the past decade, they have developed their ‘Shuttle’ concept of high frequency, regular interval services, and have shifted their focus towards growth markets such as airport access and medium distance flows.

4.2.3 National Express indicated that they do not currently see any prospect of expanding their operations within Wales significantly, as demand levels are below those needed to sustain commercial operation. They have also drawn attention to the difficulty of maintaining fully commercial operations where these parallel heavily-subsidised train services operating at relatively low fares, such as along the North Wales coast. (This has been a factor in discounting any option of including the A55 corridor in our proposals for the longer distance network.) Although National Express has no immediate plans to curtail or truncate any of the traditional lower-frequency links, over the last four years they have forged partnerships with local bus operators to provide greater integration as an alternative to low frequency links.

4.2.4 Within these partnerships through ticketing, guaranteed connections, assistance at terminals and integrated information provision is provided for selected ‘strategic’ services, to form extensions of their own network. The Traws Cambria service already provides such an extension, although greater success is understood to have been achieved with higher frequency ‘regional’ express type links (such as Stagecoach X4 / X16 into Cardiff and X23 / X24 into Newport) linking with the regular interval services to London and Heathrow / Gatwick.

4.2.5 Any Welsh network will have synergies with National Express, and it is anticipated that the network would be associated with that company. This would entail inclusion of services in the National Express Coach Guide and through ticketing arrangements. It is clear to us, however, that National Express is not interested in developing a secondary domestic Welsh coach network as part of its core operations.

4.2.6 The principal lessons from National Express experience are that:

- a) frequency is a critical element of service quality and stimulation of demand;
- b) maintaining a clear and distinct branding is important;
- c) full commercial viability is only achieved on corridors with significant levels of demand – with lower frequency links generally bolted on to these flows with marginal cost and revenues;
- d) there is great value in linking to national ticketing and sales arrangements;
- e) the coach market has distinct socio-demographic characteristics and a more limited overlap with rail travel than is generally perceived;

- f) 'regional' express services can be effectively linked in to the National Express network to secure joint benefits of higher frequency and through service.

4.3 SCOTTISH CITYLINK

- 4.3.1 Scottish Citylink is a similar operation to National Express, being a central planning and marketing company which contracts (virtually) all the operations in its name. The only significant organisational differences from National Express are that Citylink is currently:
 - a) geographically constrained, because of the history of its separation from former National Express ownership, and
 - b) seeking to expand – it has recently purchased an express service operator in Ireland, where it is looking for further opportunities.
- 4.3.2 The former Scottish Bus Group formed Citylink by requiring its local bus company subsidiaries to designate long-standing express links within a Scottish national network. This network was then managed and developed by a central Citylink unit, which applied common branding and standards, effective national marketing and a network strategy to the operation.
- 4.3.3 Citylink has achieved considerable success, increasing use of these services by more than 500% and developing a brand and image that is now well known and recognised throughout Scotland. The network comprises long interurban services, some running as fast links between major population centres while others (notably in Highland) fulfil a mixed local and strategic function for deep rural areas, providing obvious and direct comparisons with the Welsh situation. Cross-border services southwards from Edinburgh and Glasgow into England are entirely operated by National Express, and there is considerable synergy between the two networks through timed connections, through ticketing and interchange.
- 4.3.4 On break-up and disposal of the Scottish Bus Group it was decided to invert the relationship between Citylink and the operating companies, with Citylink effectively 'owning' the services and contracting their provision with the local bus operators. At this stage, an element of competition was introduced for the operating contracts although, in practice, most services have been continued with a single 'operating partner'.
- 4.3.5 A geographic and demographic comparison shows that much of Citylink's operating territory is comparable to Wales, especially when the nature of the needs addressed by its services is considered. Although many of the Scottish towns and cities are larger than their Welsh 'equivalents', their relationships with the rural areas are almost identical; e.g. Bangor fulfils the function of a sub-regional service centre for north-west Wales in just the same way as does Inverness for the Highlands. It is therefore reasonable to infer that service developments will have a similar (proportionate) effect in Wales as in those areas of Scotland away from the central lowlands.

4.3.6 Citylink does see a future market in operating networks in similar areas (such as Ireland and, potentially, Wales). The company has notable practical distinctions from National Express, including:

- a significantly shorter average journey length – more akin to travel distances in Wales;
- a greater focus on local operation, with the bulk of mileage operated as registered ‘Local Bus Services’;
- universal participation in concessionary fare schemes; and
- almost all services offering ticketing on-bus.

4.3.7 The lessons to be learned from Citylink experience are as follows.

- a) Consolidating longer-distance services into a single, well-marketed, national brand can result in substantial increases in patronage.
- b) Frequency is a critical component of market expansion.
- c) Operation and marketing of services can effectively be divorced, such that operation remains with local bus operators but the network is marketed as a ‘seamless’, integrated facility.
- d) Coach trip rates *per capita* in areas of Scotland with similar characteristics to rural Wales appear to be much higher and this must, at least in part, be attributable to the different approach taken.

4.4 STAGECOACH EXPRESS

4.4.1 Although most of the major UK bus groups have withdrawn from coach operations (except as National Express contractors), it is notable that both First and Stagecoach have developed their own express service brands. In the particular case of Stagecoach, this is reflected in several significant sub-networks of limited stop services, positioned at an intermediate level in the market between ‘faster’ local buses and the National Express-type of trunk express service. These networks exist in central Scotland, Cumbria, Lancashire (where it is based on a ‘hub’ at Preston) and Yorkshire, as well as in south Wales.

4.4.2 The ‘Stagecoach Express’ brand applied to these services, including the Cardiff – Abergavenny – Hereford routes X3 (via Newport) and X4 (via Merthyr Tydfil), provides an image distinct from the local Stagecoach buses, although clearly associated with them. The principles involved are:

- regular, clockface operation (hourly or two-hourly)
- standard, all-day service coverage
- higher standard of vehicles (the Plaxton Interurban coach was developed specifically for this application)

- pay-on-board ticketing and simple fares structures.

4.4.3 A further interesting aspect of this brand is its joint application to other operators' fleets. Stagecoach Express livery has been applied to coaches operated on joint services by Trent Buses (737 and 767) and East Yorkshire (X62), providing a unified marketing image to passengers.

4.4.4 Stagecoach Express in Scotland developed partly from some of the former long distance local bus services operated by Fife Scottish (but not incorporated into the Citylink network), the origins of which dated back to Alexanders' days. However, it has now grown out of all recognition, and includes services (such as X60) which had no equivalent before the 1990s. In other cases, frequencies have been doubled, so that there is now a basic half-hourly, inter-connecting network linking Fife and Perth with both Edinburgh and Glasgow. This development has been supported by substantial recent growth in the Edinburgh commuter market, but is not confined to this type of passenger.

4.4.5 The lessons to be learned from Stagecoach Express operation are that:

- a) a clear and distinct image, different from that of existing local bus services, must be developed;
- b) marketing is a very important element of success;
- c) frequency and regular-interval operation is critical;
- d) a high level of operational efficiency must be achieved;
- e) even for medium distance services, ticketing and payment on the bus is used by over 90% of passengers.

4.5 FIRST EXCEL

4.5.1 First has developed its 'Excel' brand as an approximate equivalent to Stagecoach Express, although to date its application has geographically been far more restricted. The principal (and initial) example is the X94 between Peterborough and Norwich (since extended to Great Yarmouth). This has seen a quantum upgrade in vehicles, and a regular, hourly frequency introduced. Passenger growth on the service since its re-launch in 1995 has been in excess of 200%, even before the recent benefit of the partial upgrading of the A47 road. The catchment population served is a little under 500,000, comparable with that of the proposed X1 Cardiff – Aberystwyth corridor.

4.5.2 Unlike Stagecoach Express, Excel was specifically conceived as a means of consolidating three overlapping markets for growth. Those markets are:

- a) local bus journeys, where these do not require time consuming deviations from the 'main road'
- b) town-to-town medium distance movements, and

- c) 'trunk' travel (such as Peterborough – Norwich), co-ordinated with rail services.

4.5.3 In some cases, this resulted in provision of a residual low-frequency local bus link to serve the passenger flows 'bypassed' by the new service. In practice it was found that the number of these lost passengers was tiny compared to the gains enjoyed by the faster, more direct and higher quality Excel service. Most of these local links were subsequently adopted by local authorities as secured services.

4.5.4 Although work has been carried out (and is still proceeding) on developing Excel links in other parts of Britain, it has so far proved difficult to develop a robust commercial business case. This difficulty is attributable to the need to purchase bespoke coach-standard vehicles for the operation, and maintain them as a separate, high quality, fleet. Although the evidence to date shows that this initial capital spend can 'kick start' substantial revenue growth, there remains a significant element of risk, and pressures on capital spending have so far militated against this.

4.5.5 The challenge of finding areas where the happy coincidence of local, inter-town and trunk flows can effectively be consolidated within a single service is also an important consideration that restricts the number of potential schemes. However, the brand has recently been extended to Devon and Cornwall, where new or upgraded services have been introduced as part of a whole network review on:

- X8 Plymouth – Launceston – Bude
- X9 Exeter – Okehampton – Bude
- X10 Exeter – Okehampton – Launceston – Wadebridge – Newquay.

These services will be operated by refurbished mid-life coaches. They further extend the principle of combining local bus movements and fast links in a rural setting, where the needs of the sparse local populations are supplemented by significant optional and tourist traffic. Rail-coach integration is also a feature, with connections and through ticketing at both Exeter and Plymouth.

4.5.6 The lessons to be learned from First Excel are that:

- a) it is necessary to consolidate multiple travel markets to achieve viability in primarily rural areas
- b) investment in higher frequency is important for achieving growth
- c) co-ordination and through ticketing with rail is appropriate, where this can be achieved without disadvantaging other passengers
- d) a commitment to high quality vehicles and operation is crucial
- e) commercial viability is very difficult to sustain, and may not be reached for three years after launch
- f) efficient vehicle diagrams are particularly important where dedicated, high quality vehicles are employed.

4.6 GREEN LINE COACHES

- 4.6.1 The 'Green Line' brand was developed originally as a London Transport subsidiary and later by London Country Bus Services, a National Bus Company operation. This 'brand' identified longer distance, limited stop services between towns around London and into London itself. These services are not typical of those in Wales; the interest is in the organisation which supports their operation and marketing.
- 4.6.2 On break-up and disposal of London County in four separate units, it was felt that the Green Line brand was sufficiently well established and distinctive to be retained. A marketing and support operation was therefore created, and individual operators providing appropriate services were invited to subscribe to its services.
- 4.6.3 Green Line continues to be a distinct service identity, and two of the large national groups (Arriva and First) subscribe to it for their operations. There are perceived advantages in terms of image and recognition, and the support unit is felt to provide good value for the joint marketing spend, despite the much smaller scale of current day operations.
- 4.6.4 The lessons to be learned from Green Line are that:
- a) services of a particular type can be identified and marketed together effectively, regardless of who operates them;
 - b) network marketing of this type can be sufficiently cost effective to attract voluntary subscription from operators;
 - c) an established brand name has significant value in transport.

4.7 SERVICE DEVELOPMENT

- 4.7.1 The examples noted above have been analysed in work for the operators, and key factors have been identified which appear to underlie the success of these service developments. These can be summarised as follows:
- a) new (or modern) high specification vehicles are necessary (but not sufficient in themselves)
 - b) use of the new services to replace (in whole or part) low frequency, low quality local links can underpin early patronage development and offer other benefits
 - c) as far as possible, services should be designed to attract balanced passenger flows
 - d) involvement of the existing local bus service providers is necessary
 - e) market pricing should be adopted, and regularly reviewed
 - f) marketing is a critical element of success, and initial marketing spend must be much greater than bus industry norms

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- g) motivation of staff through a dedicated 'team' approach (based, where possible, in a single depot) is important
- h) there is a long build-up period and, where commercial viability is achieved, this may take up to three years to reach
- i) co-ordination with the National Rail network and with National Express coaches should be pursued, where feasible without disproportionate disbenefits to other passengers.

4.7.2 It is also noted, however, that a significantly higher level of management input has been necessary than for an 'average' service, both at the outset and with regard to continuing operation of the service.

4.7.3 Successful development of these services has taken place over the longer term. A long term perspective therefore needs to be maintained, in contrast to much of the commercial planning usually undertaken by bus operators. This will be assisted by pump priming funds from Welsh Assembly Government.

5.

Options

5.1 ROUTES PROPOSED IN THE BRIEF

5.1.1 A series of six potential routes for investigation was identified in the brief. These were as follows, with optional or alternative places served shown in brackets:

- Aberystwyth – Dolgellau – Caernarfon – Bangor (– Holyhead)
- (Llandudno –) Rhyl – Denbigh – Corwen (– Dolgellau – Aberystwyth)
- Flint / Mold (or Chester) – Wrexham – Newtown – Llanidloes – Aberystwyth
- Cardiff – Brecon – Llandrindod Wells – Rhayader – Aberystwyth
- Hereford (or Newport / Abergavenny) – Brecon – Lampeter – Aberystwyth
- Aberystwyth – (Haverfordwest –) Carmarthen – Swansea.

The potential for the second route to connect at Corwen with existing service 94 was noted, in lieu of a through service. Some other potential routes, including Bangor – Chester (following the A55) and the A5 corridor through Snowdonia, had already been considered and rejected by the Study Group.

5.1.2 In the initial stage of the project, these routes were assessed, and refined as described in section 5.3. In particular, the option of using Aberystwyth as a single hub for all services was considered and rejected, on the grounds that it made connecting journeys on services principally serving the eastern side of mid Wales too indirect, and fatally unattractive.

5.1.3 For similar reasons the Haverfordwest – Carmarthen – Swansea and Aberystwyth – Carmarthen – Swansea corridors were considered separately. A single service dealing with both of these flows was shown to extend journey times so markedly as to make the service unattractive. This in turn had implications for serving Lampeter, which could then be linked to Swansea and Cardiff directly (from Aberystwyth as now) rather than via Brecon.

5.1.4 The modified list of routes for investigation was therefore defined as:

- Aberystwyth – Dolgellau – Caernarfon – Bangor (– Holyhead)
- (Llandudno –) Rhyl – Denbigh – Corwen (– Dolgellau – Aberystwyth)

- Flint / Mold (or Chester) – Wrexham – Newtown
- Newtown – Llanidloes – Aberystwyth
- Cardiff – Brecon – Llandrindod Wells – Rhayader – Newtown
- Hereford (or Newport / Abergavenny) – Brecon – Swansea
- Aberystwyth – Carmarthen – Swansea – Cardiff
- Haverfordwest – Carmarthen – Swansea – Cardiff.

5.2 STRATEGY OPTIONS

- 5.2.1 Our initial analysis of existing public transport links showed that additional long distance coach services in Wales would potentially serve several different markets. The overall operating strategy adopted largely determines the extent to which any one market could be served effectively.
- 5.2.2 We believe that there are three distinct strategies, each of which forms a base scenario. The three are:
- a) **‘Rail-Bridging’**: Filling the gaps between the existing rail network to form a comprehensive national long distance public transport network for Wales.
 - b) **‘Coach-Links’**: Adding a new free-standing tier of coach services to existing local bus and rail services.
 - c) **‘Bus to Coach’**: Upgrading and co-ordinating selective strategic longer distance local bus routes to provide a national network.
- 5.2.3 Each of the above three approaches has common elements, but some distinct differences.
- 5.2.4 The rail-bridging option requires services to be fully integrated into existing rail services. This presents particular challenges because of the irregular operations on several lines. It tends to reduce total mileage operated, in favour of a greater need for passengers to change. There are operating efficiency issues with this approach and it requires a different approach both to ticketing and to the potential for integration with local bus services.
- 5.2.5 The coach-links option builds upon and upgrades the current Traws Cambria operation, reinstating the lapsed eastern service and building the current operation into a full network. The different social profiles of coach users changes the optimum balance in the service characteristics, away from frequency and speed, and towards direct through links and security of connections. This is reflected in our base assumptions on service timetables for this option.
- 5.2.6 The third scenario established is based on the maximum level of integration with existing local bus services. It uses the design criteria established for ‘regional express’ operations, such as Stagecoach Express and First Excel. This approach

attempts to build existing local services into regional express operations through service linking and rationalisation. In many cases only the artificial barriers of local authority boundaries and / or the operating territories of operators have restrained such developments. This third option has the lowest net costs, could minimise risk and may, through consolidating existing and potential demand, achieve greatest commercial success.

- 5.2.7 The ‘bus to coach’ upgrading route does however present the greatest level of institutional barrier including competition legislation, inter-authority co-operation and co-ordination of operator efforts.

5.3 DEVELOPMENT OF PROPOSALS

- 5.3.1 We developed ‘base case’ service patterns based on each of the three scenarios outlined above. These are discussed below for each scenario in turn.

Rail-bridging

- 5.3.2 The rail bridging base case consists of seven services, as listed below. The choice of routes takes into account Strategic Rail Authority (SRA) guidance on funding support for bus and coach enhancement of the rail network:

- R1: Flint – Wrexham – Oswestry – Welshpool
- R2: Merthyr Tydfil – Builth Wells – Newtown
- R3: Carmarthen – Lampeter – Aberystwyth
- R4: Bangor – Porthmadog – Machynlleth – Aberystwyth
- R5: Rhyl – Ruthin – Bala – Dolgellau (– Aberystwyth)

With possible additional links:

- R6: Bala – Ruabon Feeder
- R7: Denbigh – Wrexham Feeder

- 5.3.3 One strategic corridor (Hereford – Brecon – Aberystwyth) is omitted from this base case, as it does not provide any rail link connections to Welsh destinations. Two additional links were added, to Bala and to Denbigh, to link with trains to the east and south.

- 5.3.4 On the services with the highest likely patronage, a two-hourly frequency is assumed, but the link from Bangor and Caernarfon feeding into the rail line at Porthmadog was assessed at a lower frequency, due to the limitations of the Cambrian Coast rail service.

- 5.3.5 The service from the south to Rhyl is similar to the coach link (see below), with the rail link element being that to and from Colwyn Bay and Llandudno. A Denbigh / Ruthin to Wrexham service was added due to the much faster travel time possible to

Cardiff and South Wales by connecting to the trains at Wrexham instead of going through Aberystwyth, and the same is the case with Bala and Corwen.

- 5.3.6 R1 and R2 are very efficient and connect at both ends with current trains. The R2, an extended version of the existing Merthyr – Brecon rail link based on Builth Wells, appeared promising. By contrast, R4 would be problematic due to the existing train timetable, which shows major problems in attempting co-ordination. Dedicated bus connections are required at Machynlleth, due to poor train connections.
- 5.3.7 R6 and R7 would bridge other gaps, but cannot be provided efficiently against the current train timetable, particularly on the R6. There is a trade-off in these cases between efficiency and maximising connections.
- 5.3.8 The service pattern described above would require a resource allocation of 17 coaches, although one vehicle is needed for R2 only in the afternoon peak.

Coach links

- 5.3.9 The coach link base option assumes no compromise on speed and directness of services to cater for local needs. These services would therefore sit as a distinct service level above local bus operations. The coach links base case also consists of seven services, as listed below:
- C1: Mold – Wrexham – Oswestry – Welshpool – Newtown
 - C2: Cardiff – Merthyr Tydfil – Brecon – Builth Wells – Newtown
 - C3: Hereford – Brecon – Lampeter – Aberystwyth
 - C4: (Cardiff –) Swansea – Lampeter – Aberystwyth
 - C5: Bangor – Porthmadog – Dolgellau – Machynlleth – Aberystwyth
 - C6: Rhyl – Ruthin – Bala – Dolgellau (– Machynlleth – Aberystwyth)
 - C7: Newtown – Llanidloes – Aberystwyth
- 5.3.10 The routes are similar to those in the ‘bus to coach’ option (see below), except that travel time is faster. In some instances, notably Newtown – Wrexham and Swansea – Lampeter, the reduction in travel time would be significant. In other cases (services C2 and C3) there would be little difference, either due to the limited stop nature of existing services or the sparsely populated areas the coaches would operate through, which would have a minimal time penalty for any stops.
- 5.3.11 The option of all routes being ‘hubbed’ on Aberystwyth was tested, but was not pursued due to the unattractive overall travel times on the eastern corridor route. For example, a direct travel time between Wrexham and Merthyr Tydfil of 5 hours 5 minutes would increase to 6 hours 40 minutes via Aberystwyth, even by omitting Llandrindod Wells from the route.

- 5.3.12 Two extra services, C3 and C6, would operate to Aberystwyth compared with the bus to coach scenario described below. The extensions of these services are logical as part of the frequency / directness trade-off that is inherent in these services.
- 5.3.13 The coach links base specification was tested on both three-hourly and four-hourly frequencies. The three-hourly versions generally require one additional vehicle as compared with the four-hourly ones. In addition, the single Newtown – Aberystwyth shuttle bus (C7) can make the connections at both places only on the four-hourly version.
- 5.3.14 The total vehicle requirement for the coach links option is based on a 4-hour frequency is 13 coaches (a net increase of 10 against the existing Traws Cambria).

Bus development to coach standards

- 5.3.15 The third base option considered requires the development of existing local bus services to fulfil a medium-distance coach role. This has been a very successful strategy in some parts of Britain, allowing the bulk of local and longer distance movement to be consolidated into a successful network of coach services.
- 5.3.16 A base assumption for seven upgraded services follows but consideration has also been given to a ‘minimum resource’ variant to this option. The differences in the minimum resource variant are described in the test.
- 5.3.17 In this option the seven base services tested were:
- X1: (Cardiff –) Swansea – Carmarthen – Lampeter – Aberystwyth
 - X2: Wrexham – Oswestry – Welshpool – Newtown
 - X3: Newtown – Llanidloes – Aberystwyth
 - X4: Cardiff – Merthyr Tydfil – Brecon – Builth Wells – Newtown
 - X5: Bangor – Porthmadog – Machynlleth – Aberystwyth
 - X6: Rhyl – Ruthin – Corwen (– Bala – Dolgellau – Barmouth)
 - X7: Hereford – Brecon (– Swansea or – Lampeter – Aberystwyth)
- 5.3.18 Service X1 and the associated X5 would replace the current Traws Cambria operation. Solely for the purposes of evaluation, it was assumed that the service started in Swansea, but linked to the existing Cardiff ‘Shuttle’ service. (In operational practice, it is regarded as essential that the vehicles provide a through service across Swansea, even if the Cardiff section is treated for commercial purposes as a separate service.) It would operate direct via Cross Hands between Swansea and Carmarthen, and thence partially replace the current 202. From Lampeter it would again operate limited stop to Aberystwyth. Four vehicles would be used on this service.
- 5.3.19 Service X2 would be based on enhancement and acceleration of Arriva services 2/2A, 71 and 75, with an option of operation from Wrexham to Mold as a

complementary fast link. It would omit Cefn Mawr, where the full sized vehicles on the current 2 have difficulty, and this would allow a competitive travel time between Wrexham and Oswestry using the A483. However, it would serve all local stops between Chirk, Oswestry and Welshpool (with supplementary services between Llanymynech and Oswestry), and between Welshpool and Newtown via the route of the existing 75 (which would continue).

- 5.3.20 Connections would be made at Newtown with the X4 to Cardiff and X3 to Aberystwyth, on a timed transfer basis, allowing a 45-minute break. X2 would require three vehicles.
- 5.3.21 The X3 would primarily provide connections to Caersws, Llanidloes and Aberystwyth from the eastern (X2 and X4) routes, and replace most of the current 501 and 525 services at an improved frequency. Two vehicles would be needed.
- 5.3.22 Service X4 would serve the southern part of the eastern corridor, either running direct between Newtown and Llandrindod Wells for timing reasons – with connections to Rhayader or via Rhayader itself. The X4 would serve all stops north of Merthyr Tydfil, replacing existing services 43, 47 and 526, and run limited stop southwards. Current rail connections would be replaced by the through Brecon – Cardiff service (already provided to a limited extent by Sixty-Sixty Coaches’ service 43, which has proved popular), and the service could be co-ordinated with Stagecoach’s existing Cardiff – Merthyr Tydfil fast services. It would use four buses.
- 5.3.23 Service X5 would provide the northern part of the current Traws Cambria route between Aberystwyth and Bangor, with optional extensions to either Holyhead or Llandudno, although the latter is well served by connecting services at a 20-minute headway [this issue is considered further in section 7.2]. It would serve all stops between Aberystwyth and Caernarfon, then run limited stop to Bangor. Complementary local services would operate between Aberystwyth and Machynlleth as at present, and between Dolgellau and Caernarfon, including links to Blaenau Ffestiniog. Connections would be available at Dolgellau with the X6 (or 94) to Bala. Four vehicles would be used.
- 5.3.24 While the X6, between Dolgellau and Rhyl via Corwen could operate every two hours, owing to connections it would be operationally inefficient. This would also be inconsistent with proposals currently under consideration to increase the frequency of service 94 to hourly between Dolgellau, Corwen and Wrexham.
- 5.3.25 Service X6 would therefore provide a two-hourly link between Rhyl, Denbigh, Ruthin and Corwen, connecting at Corwen with service 94 for both Dolgellau and Wrexham. Four vehicles would be needed for a 30-minute frequency Rhyl – Denbigh service with a two hourly extension to Corwen, over a route with multiple operators currently partly subsidised by Denbighshire County Council.
- 5.3.26 East-west service X7 would replace local services – Stagecoach 39 and then either, Cross Gates Motors’ G14 and Castle Garage 289 or Stagecoach 63. With the modification of the Aberystwyth – Swansea link to serve Lampeter the presumption has been in favour of this through link being maintained to Swansea. Scope for limited stop sections is limited. Connections would be made at Brecon to / from Cardiff. The four buses for this service could be based in Brecon.

5.3.27 The total vehicle requirement for these proposals would be 25. Against this can be set the buses currently used on the services to be incorporated, estimated to be 19 vehicles. For relatively little additional resource (6 buses), therefore, a much higher level of service could be provided.

5.4 SUMMARY

5.4.1 A strategy based on filling gaps in the rail network imposes inefficiencies, has to largely stand alone from existing local bus services and would be relative costly to provide. In the current climate, there is no prospect of funding from railway sources, either a new Wales & Borders Trains franchisee or the SRA. It does, however, minimise the scale of the network, provides full co-ordination with rail services and would reinforce rail use.

5.4.2 A strategy based on ‘traditional’ longer distance coach services would involve substantial expansion of the Traws Cambria operation. It would not facilitate integration with local bus or train services, and would involve duplication of resources and abstraction of passengers, including in areas of low demand. It would, however, deliver the highest level of through linkages and could be adapted to serve social groups with the highest propensity for coach travel (students, the elderly and low-income groups).

5.4.3 A third strategy, based on co-ordinating and enhancing existing ‘strategic’ local bus services presents a different set of challenges and opportunities. Adapting and improving existing services may be more complex than providing new facilities. Institutional barriers including procurement, local authority interests, competition law and inter-operator co-operation would need to be addressed. Some compromise between local and regional travel needs would also be necessary in each corridor. The base case for this option indicates, however, that this route at modest resource cost could achieve the objectives for the services. Apart from making best use of existing funding and avoiding duplication of resources, it also promotes integration.

5.4.4 The anticipated results of each of the three scenarios are summarised in Table 7. The cost and revenue figures shown are the network totals, before adjustment against other continuing services, and the costs are calculated on a similar basis to those in section 7.12. The difference in vehicles required shown in the ‘net change’ column is from the current situation.

Table 7 : Comparative results of tested scenarios

Scenario	Vehicles required:		Anticipated annual aggregate:		Anticipated transfer of revenue from other services	Net overall cost
	Total	Net change	Costs	Revenue		
Rail bridging	17	+17	£ 2.303 m	£ 1.537 m	£ 0.956 m	-£1,722,000
Coach links	13	+10	£ 2.199 m	£ 1.172 m	£ 0.508 m	-£1,535,000
‘Bus to coach’	25	+6	£ 2.277 m	£ 1.874 m	£ 0.304 m	-£707,000

5.4.5 The ‘anticipated transfer of revenue from other services’ is relative to the degree of duplication or incorporation of existing services to the costed network. The importance of this is that such abstraction would [further] undermine the viability of those other services (such as are not replaced by the proposed longer distance routes), thus resulting in a likely demand for revenue support from local authorities to secure their continuation.

5.4.6 This analysis clearly indicates that the third option, bus to coach conversion, has the lowest overall net costs (at 46% of the next cheapest option), and results in the least abstraction. We therefore conclude that neither rail bridging nor coach links would be sustainable, but that the bus to coach option should be pursued.

5.5 OPTION DEVELOPMENT

5.5.1 Further development of the tested options took place in the light of consultation with local authorities and operators. The processes and results of consultations with local authorities, which secure a significant proportion of services in the more sparsely populated areas, are described in Appendix D.

5.5.2 Discussion with representatives of the Confederation of Passenger Transport Wales (CPT) led to a suggestion that operators should have the opportunity to offer adaptations to their commercial operations that would meet the aspirations of the Welsh Assembly Government. This would have the following advantages:

- a) It would protect existing commercial rural services from the adverse impact of provision of additional services ‘over the top’ of existing operations.
- b) It could allow consolidation of longer and medium-distance flows into viable demand levels that would allow better services to be provided.
- c) It would overcome any dissent or objection from operators to proposals for new services.
- d) It would allow the integration of other longer-distance service development initiatives (such as that for the Wrexham – Barmouth link) into this initiative to provide the basis of a national ‘strategic network’.
- e) It would minimise any requirement for additional funding, and could therefore deliver ‘Best Value’.

5.5.3 An assessment of each of the principal corridors under consideration was therefore made against two criteria:

- a) Whether the corridor was principally commercial (over 80% of operations without financial support), or secured.
- b) Whether there was a ‘dominant’ operator (with over 80% of the market) in the corridor.

- 5.5.4 Where a commercial corridor with a dominant operator was identified, a ‘lead’ operator was agreed. The ‘lead’ operators, which took responsibility for assessing and commenting on the proposals for each service, were:
- Arriva: Aberystwyth – Bangor / Newtown; Wrexham – Newtown
 - First: Swansea – Aberystwyth
 - Stagecoach: Swansea – Hereford; Cardiff – Newtown.
- 5.5.5 In the last case, the high volume of movement over the southern section of route between Merthyr Tydfil and Cardiff skews the corridor flows. Stagecoach, as ‘lead operator’ for this corridor, accepted that any service would need to consolidate a series of existing secured operations. On this basis, they accept that they would be required to bid for a contract along with any other operators.
- 5.5.6 Account was also taken of consultation with other stakeholders, particularly the local authority transport co-ordinating officers as noted above, and the relationship with the strategic service aspirations of the regional local authority transport consortia. *Inter alia*, the joint proposal by authorities and operator for development of service 94 between Wrexham and Barmouth was raised. This proposal reinforced our view, based on demographic and service analysis, that the sparsely populated Llanidloes – Aberystwyth corridor is less attractive as a core part of the network, and that the Bala route offered a better alternative primary east-west mid Wales link.
- 5.5.7 These analyses led to development of the revised network proposals contained in the next chapter.

6.

Operator Proposals

6.1 APPROACH TAKEN

- 6.1.1 Indicative timetables were generated for each of the corridors examined and were supplied to the nominated ‘lead’ operator for comment. This was a difficult process, as the timetables were necessarily a compromise between the existing local bus operations and the aspirational longer distance services. We were also concerned that this approach could lead to suggestions that proposals had been devised around the operational constraints of one particular operator. Timetables were therefore designed to meet perceived passenger needs, without considering operating efficiency, and in some cases were thus ‘unbalanced’. Draft timetables were not generally co-ordinated with other services provided by the lead operator, except where this was relevant to the proposals under consideration.
- 6.1.2 Concern was expressed by one of the lead operators at the tight timescale for response, and it was agreed to revise deadlines to allow a more detailed analysis of the implications of the proposals by operators. All three lead operators responded positively with suggested amendments to the proposals which addressed:
- a) concerns about reliability and / or driver duties
 - b) connections / co-ordination with other services, not allowed for in our proposals
 - c) operating efficiency and inter-working potential for the particular operator.
- 6.1.3 The operators’ views are described in section 6.2. Our proposals were then refined, taking appropriate account of the points raised, to the final form shown in chapter 7.

6.2 OPERATOR VIEWS

- 6.2.1 The lead operators identified in section 5.5.4 responded positively to the proposals, making suggestions to improve the commercial feasibility of the routes. These are summarised below.
- 6.2.2 Arriva had, since the start of this study, already decided to undertake service changes in the corridor we have identified as X5, which have implications for the proposals. These involve the linking of Aberystwyth – Machynlleth, Machynlleth – Dolgellau and Dolgellau – Porthmadog services into a single route, as part of a wider scheme that results in an improved service pattern in this area. This development was

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implemented on 17 February 2002 with the support of Gwynedd County Council, and is consistent with the aims of this project. This service would be incorporated into the proposed Aberystwyth – Bangor (X5) route.

- 6.2.3 On the basis of our earlier analysis of existing bus use, it was clear to us that Arriva currently provides the bulk of rural services that could potentially be undermined by any new facilities. Many of their rural routes must be considered as marginal, and any significant loss of revenue would, in our view, probably leave them unable to continue on a commercial basis.
- 6.2.4 The proposals in areas principally served by Arriva are therefore closely aligned with their existing service pattern, and are designed to provide the maximum number of links sought by this study at minimum resource costs. In some instances, this results in a slightly slower journey time than those envisaged, but with benefits for local service frequency.
- 6.2.5 First responded with broad endorsement of the proposals circulated and suggestions for relatively minor adjustments. An interest in providing improved facilities from West Wales to Swansea and Cardiff was expressed, although it was made clear that the business case would need to include co-ordination with National Express services from Cardiff to London and Heathrow and significant growth in longer-distance travel from Pembrokeshire.
- 6.2.6 Stagecoach responded positively to the service proposals but expressed concerns about ensuring adequate layover and recovery time. Further suggestions were also made about the potential for development of Brecon as a major interchange with the four service ‘legs’ to Newtown, Hereford, Cardiff and Swansea.
- 6.2.7 A summary of the original proposal for each corridor, the operator response and our comments on this response is presented in Table 8 below.

Table 8 : ‘Lead’ operator response to service proposals

Service	TAS Proposal	Operator Proposal	Notes
X1	2-hourly Aberystwyth – Cardiff limited stop service, partly replacing Carmarthen – Lampeter service, provided as extension of existing Cardiff – Swansea service and in part utilising spare inter-peak coach resources (2 PVR+ 2 off-peak)	First – as TAS with minor changes Arriva suggested full co-ordination with local service Lampeter – Aberystwyth	Arriva suggestion improves efficiency Lampeter – Aberystwyth, but at expense of integrated operation with Cardiff – Swansea coach and overall efficiency
X2	2-hourly Wrexham – Newtown service, linking existing services but limited stop Wrexham – Oswestry. Optional extension to Mold	Arriva proposed the same Wrexham – Newtown link but without the new fast section, or a Wrexham – Welshpool alternative with connections for Newtown. Optional extension to Mold	The TAS proposal is more expensive to provide but meets the time / cost criteria set out

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Service	TAS Proposal	Operator Proposal	Notes
X3	Need for X3 link questioned if X4 was routed via Llanidloes	Arriva proposed linking this tendered service through to Shrewsbury, using existing resources more efficiently	This service can only be considered in conjunction with the X2 and X4 services and X94 proposal
X4	2-hourly Cardiff – Llanidloes – Newtown service using 4 vehicles	As TAS proposal but using 5 vehicles to provide additional recovery time (should not use number X4)	The 5 th vehicle may render the service not viable – a shortened route to Newtown is proposed instead
X5	2-hourly Aberystwyth – Llandudno linking existing services	As TAS but with some efficiency and co-ordination improvements – subsequent reconsideration of Bangor – Llandudno link Need for discussion through Gwynedd CC on balance between Arriva and Express	The balance of advantage for a northern terminal now lies in operation to Holyhead where possible
X6	Feeder link from Denbigh to service 94 at Corwen	No comments	See service X94 proposal
X7	2-hourly Swansea – Hereford connection with X4 at Brecon	As TAS but with timing adjustments to provide for X4 connections	'Four way' connections at Brecon can only be maintained at the expense of connections at Newtown

6.2.8 Subsequently, Arriva provided further comments, in which preference was expressed for a more cautious approach of developing existing resources, and a need noted to minimise overhead costs. The primacy of school travel requirements in the planning of many rural services was also noted; while we have taken account of many of these in the design of the service proposals, it is acknowledged that some may require detailed adjustment to fulfil the necessary home-to-school / college transport role.

6.2.9 Likewise, Arriva counselled caution on specific branding of vehicles which would be integral to the local bus network, and suggested that passenger comfort should take precedence over accessibility, pending availability of a suitable low-floor dual purpose product. Consultation with the Office of Fair Trading was also suggested over multi-operator ticketing, and comments given on proposed customer care standards.

6.2.10 It should be noted that Wales & Borders Trains was represented throughout on the Working Group, and is wholly supportive of the project, especially in the prospect of bringing improved public transport links to more remote parts of Wales.

6.3 MODIFICATIONS TO PROPOSALS

6.3.1 Minor changes were made to the proposals for service X1 as suggested. To ensure accurate revenue attribution, we have also suggested that the Cardiff – Swansea and Swansea – Aberystwyth route sections should be accounted for separately, although this would operate, from the user's perspective, as a seamless through service.

6.3.2 The X2 proposal presents particular difficulties, as we believe that a simple linking of existing local services would provide an unattractive service. We have therefore taken forward a compromise proposal that would only partially replace the existing local service, requiring the parallel Wrexham – Cefn Mawr journeys to be retained. This change has implications for costs and revenues, but would:

- maintain the robust, regular 15-minute headway service between Wrexham and Cefn Mawr
- take advantage of the speed benefits offered by upgraded sections of the A483 trunk road to offer an attractive through service
- complement the continued hourly Wrexham – Cefn Mawr – Oswestry ‘stopping’ service.

6.3.3 A further Arriva alternative, put forward at a later stage and preferred by the company, was to create a service from Wrexham to Welshpool, where it would connect with X3 to / from Newtown (and Aberystwyth). This would avoid increasing service levels between Welshpool and Newtown, but through passengers would incur the penalty of an additional change. We do not believe that this option is acceptable, on the grounds that:

- a) the additional change would present a substantial deterrent to through travel
- b) interchange facilities in Welshpool are inadequate and have little opportunity for significant improvement
- c) the proposal undermined the robustness and attractiveness of connections with X4 at Newtown (Arriva’s preference was for southward travel via Aberystwyth, which we reject as a viable option)
- d) the Welshpool – Newtown section appears to be one where service enhancement offers genuine opportunities for patronage growth.

6.3.4 Service X3 was only felt to be viable if service X4 did not serve Llanidloes, but the Arriva proposal to link the subsidised Aberystwyth – Llanidloes – Newtown services (501 / 525) with service 75 would provide valuable new through links to Shrewsbury (with rail connection opportunities). This proposal is supported by operational economies, which the operator believes make it viable. Although providing some unique links, this service could also be expected to abstract a limited amount of rail traffic. With the proviso that the local authorities supporting these services are content with the continued support inferred, we have therefore supported Arriva’s suggestion and incorporated it into the revised network.

6.3.5 The alternative Stagecoach service specification for service X4 provides for 5 rather than 4 vehicles, with substantial recovery time at each end of the route. This presents a dilemma, as we believe that this additional resource would result in the service no longer being viable within the criteria adopted. There are, however, opportunities for route and timing changes that would, we believe, allow operation with 4 vehicles and we therefore propose that this pattern should be retained, with whatever route

and timing changes are necessary to maintain reliable operation. This would depend on implementation of service X3 to link Llanidloes and Caersws to the network.

- 6.3.6 The Arriva proposal for service X5 offers several advantages over our original proposal, and is consistent with the changes to be implemented in February 2003. Discussions held since receipt of this proposal have focussed on the operational and passenger advantages of a northern terminal at Llandudno, Bangor or Holyhead. Analysis of passenger movements and discussion of operating patterns lead us to conclude that this service should extend to Holyhead on most journeys, with the remainder terminating at Bangor. The commercial involvement of Express Motors on the Tan-y-Bwlch – Bangor section of this corridor would also require discussion under the auspices of Gwynedd County Council.
- 6.3.7 Proposals for service X6 are inextricably linked to local authority ambitions for service 94, which it is proposed should be enhanced to hourly frequency. With this frequency it would be possible to provide direct connections at Corwen to / from Wrexham and Dolgellau with a Rhyl – Corwen two-hourly service, co-ordinated with the core Rhyl – Denbigh service. This would require the collaboration of Denbighshire County Council, which currently secures the Denbigh – Corwen service using three operators.
- 6.3.8 Stagecoach has also suggested useful adjustments to service X7 to provide effective connections at Brecon between this Hereford – Swansea service and service X4. Although we believe that the ideal ‘four way’ connectional facility cannot be achieved without undue effects on the services, the connections with significant flow potential can be catered for, *viz.* Swansea – mid Wales and Cardiff – Hay-on-Wye.
- 6.3.9 An outline specification for a broadly two-hourly Cardiff – Haverfordwest service, inter-timed with service X1 and integrated with the existing Cardiff – Swansea coach service, has also resulted from further discussions. Viability of this operation would be dependent on financial arrangements for through travel on to National Express services. Like service X3, there is also a rail abstraction issue that would need to be resolved, and projected commercial performance is particularly poor.
- 6.3.10 Revised service specifications are taken forward in our recommendations of service strategy in chapter 7.

7.

Recommended Service Strategy

7.1 PARTNERSHIP

7.1.1 The proposed network of strategic services will overlap with a number of interests in Welsh public transport, none of which should rightly be considered as subordinate to the others. This fact, supported by practical considerations, points to the need to develop these services on the basis of a partnership between:

- Welsh Assembly Government,
- local authorities, and
- public transport operators.

7.1.2 Local authorities have primary responsibility for planning, promoting and securing public transport within their respective areas, and have addressed the regional dimension through the formation of five transport consortia (SWIFT, SWITCH, TAITH, TIGER and the Mid Wales Partnership) which cover the country. Apart from its supervisory relationship with the local authorities, however, the Welsh Assembly Government has a specific locus in development of nation-wide services.

7.1.3 Bus operators in Wales provide 76% of all local bus services on a commercial basis¹⁰, without revenue support from local authorities, including much of the strategic network. They consequently form a major potential contributor to the objectives of the network, in addition to being the eventual providers of service. This contribution can take the form not only of operational expertise, but also private sector revenue and investment, and commercial knowledge and flair. Although the percentage of subsidised services varies widely between different areas of Wales, a high proportion of corridors on the proposed longer distance network is served wholly or mainly by commercial operations (as shown by Table 11 on page 58).

7.1.4 To build on these bases, and secure a network that captures benefits for all sectors, we propose formation of a semi-commercial partnership involving the three groups, which will be formalised through a special type of Quality Partnership agreement. The detailed specification of the services would be incorporated into these agreements, and a 'template' developed for inclusion of services in the network.

¹⁰ source: *Welsh Transport Statistics 2000 – provisional figures 1999-2000*

7.2 SERVICE PATTERN

7.2.1 The services proposed are:

- X1 (Cardiff –) Swansea – Carmarthen – Aberystwyth [linked to X5]
- X2 Mold – Wrexham – Newtown [linked to X4]
- X3 Shrewsbury – Newtown – Llanidloes – Llangurig – Aberystwyth
- X4 Cardiff – Brecon – Newtown [linked to X2]
- X5 Holyhead – Bangor – Dolgellau – Aberystwyth [linked to X1]
- X7 Hereford – Brecon – Swansea
- X94 Wrexham – Bala – Dolgellau – Barmouth [with feeder service from Denbigh and Ruthin]

These services are illustrated in Figure C. Draft outline timetables, as revised following consultation and discussions, are included as Appendix B. The service numbers used for reference are illustrative only, and compare directly with those used in chapter 5.

7.2.2 Service X3 replicates a link between Newtown and Aberystwyth assessed at an earlier stage. Although we had concluded that a regular service would not be viable, it is included in the analysis on the basis of Arriva's proposal, which assumes continued subsidy. We have also tested an X10, (Cardiff –) Swansea – Carmarthen – Haverfordwest, although this is not recommended for implementation.

7.2.3 Further enhancements or alterations to the network were considered in two areas.

- a) Following a further review of the options for a northern terminal for service X5, the potential for diversion to Holyhead was revisited. Although with some potential for abstraction from rail, the operating efficiency to be achieved from the direct fast route using the A55 gives this extension a direct advantage, and will enable ferry connections. This change from the current Traws Cambria northern terminal of Llandudno would be compensated by through ticketing at Bangor with connecting services 5 / 5X, which operate every 20 minutes.
- b) Extension of service X2 between Wrexham and Mold provides a valuable link and a more convenient hub for Flintshire, although current demand on this bus link is moderate, and the population directly served is only around 14,000. Although the North-South Transport Links Study suggested that Chester might be a more appropriate, and more commercially attractive, destination, this would offer poor penetration of the Flintshire population cluster. It would also add resources to a corridor already well served by train (which, with its proposed enhanced hourly service, could link with the bus network by connection at Wrexham General station). We have therefore proceeded on the basis that X2 would terminate at Mold, which can be operated efficiently.

- 7.2.4 There are plans during 2003/04 for road and public transport upgrades on the Wrexham – Shrewsbury corridor, funded by the Department for Transport. Shropshire County Council advises that these include reinforcement of the train service between Chester and Shrewsbury, and upgrading of Arriva’s Oswestry – Shrewsbury bus service to half-hourly operation by low-floor buses. This appears to offer an opportunity to enhance the proposed X2 between Mold / Wrexham and Oswestry to hourly, and link alternate journeys with the increased Arriva Midlands service through to Shrewsbury.
- 7.2.5 The following sections describe the nature and routes of the services which represent our recommended network, following analysis of the demand and potential for longer distance coach travel within Wales, and iteration of the consultative processes with operators, local authorities and the Steering Group.

7.3 SERVICE CHARACTERISTICS

- 7.3.1 These services follow the principle of development from existing bus services where possible, giving maximum utilisation of existing resources and commercial input from the operators, and obtaining synergy from currently subsidised operations. All services will operate primarily as a ‘stopping’ service, but each will have express or limited stop sections in more densely populated areas.
- 7.3.2 However, it should be noted that the incorporation of ‘stopping’ services is predicated on the basis that these are operating primarily by direct routes through sparsely populated country, where stops will be relatively few and short in duration. This means that the service can combine the two, normally distinct, roles of local and longer distance service **without** undue time penalty (generally no more than 15%) for through passengers. Where these conditions cannot be met, there will be a fundamental conflict
- 7.3.3 The limited stop sections are anticipated to be:
- X1 Cardiff – Carmarthen and Lampeter – Aberystwyth
 - X2 Mold – Wrexham – Chirk
 - X4 Cardiff – Merthyr Tydfil
 - X5 Holyhead – Bangor – Caernarfon
 - X7 Crynant – Swansea
 - X94 Wrexham – Llangollen.
- 7.3.4 Some of the existing bus operations are currently commercial; others are contracted by the relevant local authority. In the latter cases, discussions with the authorities concerned have established that:
- a) they support in principle the absorption of the operations into the strategic service

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- b) there are no significant constraints in contractual terms (i.e. all contracts may be terminated or re-negotiated within a suitable timescale).

7.3.5 The strategic services would provide guaranteed connections to extend the range of through journey opportunities, as follows:

- a) X1 and X5 at Aberystwyth - both directions
- b) X2 and X4 at Newtown - both directions
- c) X3 and X2 / X4 at Newtown - both directions
- d) X4 and X7 at Brecon - for Newtown / Swansea and Hereford / Cardiff journeys
- e) X5 and X94 at Dolgellau - primarily for Wrexham / Aberystwyth
- f) X1 and X7 at Swansea - for Brecon / Aberystwyth journeys

An option would be for vehicles to run through between services X1 and X5 at Aberystwyth, and between X2 and X4 at Newtown. Provided drivers undertake or assist with any luggage transfer, we do not believe this to be essential, but it could form an enhancement for discussion at a later stage of development.

7.3.6 These connectional opportunities are illustrated on the outline timetables in Appendix B. Dependent on final timetables, connections c) and d) may provide for connections on the other axes (e.g. Hay-on-Wye to Llandrindod Wells), although these are not catered for in the current draft. Service frequencies would be co-ordinated to maintain connections; each route is proposed to operate every two hours during the main part of the day.

7.3.7 Train connections would be facilitated wherever possible, in particular at the locations shown in Table 9. Example connection times are based on the Winter 2002/03 National Rail timetable and the outline draft timings shown in Appendix B.

Table 9 : Potential rail connections

Station	Bus services calling	Typical train service:		Notes
		Frequency	connecting times	
Aberystwyth	X1 / X5	2-hourly	10-20 mins	
Bangor	X5	hourly or better	5-15 mins	
Carmarthen	X1	Hourly	15-30 mins	
Hereford	X7	Hourly	10-15 mins	
Machynlleth	X5	2-hourly	5 mins	eastbound trains only
Merthyr Tydfil	X4	Hourly	5-10 mins	
Newtown	X2 / X3 / X4	2-hourly	30-50 mins	
Swansea	X1	2 per hour	10-30 mins	
Wrexham General	X2, X94	Hourly	25-50 mins	

- 7.3.8 In view of the timetable constraints created by connections within the strategic network, local service requirements and ‘dovetailing’ with other bus services, guaranteed train connections could not be offered, because of the extensive knock-on disruption caused by delays to await late-running trains. However, at certain locations, specific timetabling consideration should be given to ensure that rail connections are made as far as possible.
- 7.3.9 Facilities for through ticketing between train and bus / coach currently exist for 62 links or local areas, in addition to six new PlusBus areas (all on the South Wales Main Line). It will be appropriate to retain and develop these, and indeed the proposed network will enhance opportunities to do this. It will take over the bus role in certain of these links, such as Carmarthen – Lampeter, and ease the introduction of additional links (Aberystwyth – Aberaeron, for example).
- 7.3.10 The relationship with existing operations of each service is described below, section by section. The current Traws Cambria 701 would be replaced entirely by the proposed X1 and X5.

7.4 X1 CARDIFF – ABERYSTWYTH

- Cardiff – Swansea: express, replacing alternate journeys on First’s Shuttle – hourly frequency, but with separate service accounting
- Swansea – Carmarthen: additional limited stop service calling at Cross Hands, with an option to serve the Botanic Garden of Wales
- Carmarthen – Lampeter: direct stopping service via New Inn – would partially replace alternate journeys on subsidised service 202; a need would remain for parallel Carmarthen – Pencader links, which could be re-joined with service 201 to New Quay
- Lampeter – Aberaeron – Aberystwyth: operating fast via current 701 route, independently of subsidised service 540.

7.4.2 This is the corridor with the greatest potential, but also faces the greatest difficulties in co-ordinating existing operations. The final service proposal extends existing journeys between Cardiff and Swansea on service 100 through to Carmarthen, replacing service 701. From there the service takes over journeys on service 202 to Lampeter, before providing a limited stop facility from there to Aberystwyth.

7.4.3 Arriva expressed a preference for co-ordination of this service with their existing local service between Lampeter, Aberaeron and Aberystwyth, which would have fully co-ordinated services over this section. While we sympathise with their desire to avoid unnecessary duplication, this could unfortunately only be achieved by a counter-productive recasting of the service on its more southerly sections of route, and would create poor connections at Aberystwyth (with coach and train). Arriva’s suggestion defeats a principal objective of the project, and the balance of passenger benefits therefore clearly lies with our considered proposal outlined above. Furthermore, the additional running time entailed by incorporation of the 540 would make economic working impossible (unless the whole service were operated by

Arriva), as vehicles and drivers arriving in Aberystwyth would just miss the corresponding southbound departure, and have to lay over for nearly two hours.

7.4.4 The service requires four coaches, but this could be reduced to two in the peak period, allowing additional peak-only Swansea – Cardiff coaches to be utilised at other times. The route costing allows for 3 vehicles, and excludes the Cardiff – Swansea section.

7.4.5 We recommend that this service should be the first priority in a programme of long distance service development.

7.5 X2 MOLD – NEWTOWN

- Mold – Wrexham: additional limited stop service
- Wrexham – Oswestry: running limited stop via Ruabon and the A483, then absorbing current Arriva service 2A between Chirk and Oswestry
- Oswestry – Welshpool: replacing current through journeys on service 71, omitting deviations from the A483 (which would be served by remaining 2-hourly Oswestry – Llandrinio shortworkings)
- Welshpool – Newtown: additional service, complementing service X3 to provide an approximate hourly frequency.

7.5.2 This service would involve partial replacement of existing services 2A and 71 with an extended Mold – Wrexham – Oswestry – Welshpool – Newtown limited stop link, connecting with service X4 for Cardiff. It would require three coaches.

7.5.3 Service 2A is assumed to continue on alternate hours to maintain the existing service frequency between Oswestry and Chirk [but see 7.2.4 above]. No assumption of any resource saving from the existing hourly Wrexham – Mold service 26 is made.

7.5.4 Arriva made an alternative suggestion that the service from Wrexham should terminate at Welshpool, with onward travel to Newtown and southwards by connection with the X3. The principal reason advanced was to avoid ‘duplicating’ the X3 over the Welshpool – Newtown section, where we have proposed a service pattern which would offer close to an hourly service, a substantial improvement over the current frequency. For the reasons discussed in 6.3.3, we believe this suggestion would seriously undermine the viability of the X2, and lose the growth potential between Welshpool and Newtown. We therefore recommend adoption of the full Mold – Newtown service as described.

7.6 X3 ABERYSTWYTH – SHREWSBURY

- Aberystwyth – Llanidloes: replacement of existing Arriva services 501 and 525
- Llanidloes – Newtown – Shrewsbury: replacement of existing Arriva service 75, linking with X2 and X4 at Newtown

- 7.6.2 This proposal is of lower commercial potential, but was suggested by Arriva for whom it has operational advantages. It is therefore included on the basis that Arriva would be able to deliver the service more cost-effectively than we have allowed for in our costings, with continuation of subsidy by the relevant local authorities. Four vehicles would be required.
- 7.6.3 It would offer significant enhancement of a trunk corridor, and allow better co-ordination with the X2 between Newtown and Welshpool. It also permits the X4 to be routed direct between Newtown and Llandrindod Wells, offering a faster journey and a robust schedule without use of a fifth vehicle. However, it may also lead to abstraction from rail and the single, daily National Express journey over this route.

7.7 X4 CARDIFF – NEWTOWN

- Cardiff – Merthyr Tydfil: express service calling at the University of Glamorgan and Pontypridd, potentially integrated with Stagecoach X4
- Merthyr Tydfil – Brecon: replacing existing subsidised service 43
- Brecon – Llandrindod Wells: replacing existing subsidised service 47
- Llandrindod Wells – Newtown: replacing subsidised service G8 at a much enhanced level.

7.7.2 Although this proposal has implications for four different services, three of these are currently secured by a single local authority (Powys) and the other service is barely affected. The impact of this proposal on tendered services in Powys is therefore significant, and the council will need to be closely involved in the design, specification and contracting processes.

7.7.3 Four coaches would be needed for this timetable, which would represent a large commitment to the smaller operators currently involved in local services, and a potential deterrent to their tendering for the contract. It may therefore be appropriate for Powys County Council to hold discussions with its contracted and commercial service partners. These should aim to establish opportunities for continued participation by the smaller operators in the provision of trunk local services, and hence ensure the ongoing supply of adequate local resources to meet the county's public transport network aspirations.

7.7.4 The inclusion of service X3 enables the X4 to be routed direct via Dolfor between Newtown and Llandrindod Wells, at the expense of poorer connections to Llanidloes and the omission of Rhayader. As noted above, this offers a much faster and more robust schedule, and avoids the use of a fifth vehicle.

7.8 X5 HOLYHEAD – ABERYSTWYTH

- Holyhead – Caernarfon: new limited stop service, connecting at Bangor with existing Arriva 5X, and incorporating the current 2-hourly extension of Express Motors' service 1 between Bangor and Caernarfon

- Caernarfon – Porthmadog: replacing alternate journeys on existing Express Motors’ service 1 (via Penmorfa), and the remaining limited service 2
- Porthmadog – Aberystwyth: replacing Arriva service 32 – it is anticipated that alternate Express journeys on service 1 will also be incorporated, but the hourly service to Blaenau Ffestiniog will be maintained (by connecting short-workings from Porthmadog or Tan-y-Bwlch).

7.8.2 This is a complex proposal involving a new fast link across Anglesey, an adjustment of Express Motors’ link between Bangor and Porthmadog and incorporation of the newly linked Arriva Porthmadog – Machynlleth – Aberystwyth service.

7.8.3 Following discussions with Arriva, we have attempted to maintain connecting and inter-timing arrangements with several other services included within the new network arrangements introduced in February 2003. These arrangements imply inter-working of vehicles between services at Aberystwyth and timed connections at Dolgellau, which provide for both through travel and operating efficiency. Five vehicles are required for a stand-alone service.

7.8.4 The involvement of two operators with significant commercial operations would require careful consideration of the appropriate approach. We recommend that discussions, brokered by Gwynedd County Council, should be held to determine the optimum approach to these issues.

7.9 X7 HEREFORD – SWANSEA

- Hereford – Brecon: replacing existing Stagecoach local service 39
- Brecon – Swansea: replacing existing Stagecoach service 63, running limited stop between Crynant and Swansea.

7.9.2 This effectively joins two current services to offer a through facility, with enhancement of the Swansea section. Connections would be possible with X4 at Brecon, and X1 at Swansea to / from Carmarthen and the coast.

7.9.3 The proposed timetable would need four vehicles.

7.10 X94 WREXHAM – BARMOUTH

- Upgrading of existing Arriva service 94.

7.10.2 This service would, with X5, provide a link between Wrexham and Aberystwyth. There is no case for duplication of this route by service X6 between Corwen and Dolgellau, particularly if the proposed frequency enhancement of service 94 proceeds. A link from Denbigh and Ruthin would therefore be provided by adaptation of the existing local service 151 to provide connections, but this option would need to be subject to detailed discussion with Denbighshire County Council, which currently secures this service.

7.10.3 Three vehicles can provide the base service required for the core network operation, and these are the resources costed in Appendix C. However, if the hourly upgrade goes ahead, a further three vehicles of suitable quality would have to be provided and appropriately branded.

7.11 OTHER SERVICES

7.11.1 We also tested the potential for a Cardiff – west Wales service (X10), which would operate limited stop over the following sections:

- Cardiff – St Clears and
- Pembroke – Haverfordwest.

7.11.2 We have not recommended that service X10 should be pursued, due to a variety of factors. These include its poor projected performance, potential to abstract passengers from rail and overlap with other services. It also proved impossible to identify a viable route which would offer significant passenger benefits from (e.g.) faster, more direct journeys than the current train services, and which could be expected to generate appropriate market growth. However, it could provide a significant link if a decision were taken to support it on public policy grounds, and substantial (and ongoing) additional resources are available for revenue support.

7.11.3 It was assumed that existing National Express operations would be replaced by the X10 between Swansea and Haverfordwest. In the absence of an X10, these should continue, providing three eastbound morning journeys and three afternoon / evening trips westbound. These can offer connections at Carmarthen with X1, and it is anticipated that through ticketing would be extended to these connections.

7.12 PREDICTED COSTS AND REVENUES

7.12.1 Anticipated patronage, with revenue and cost predictions for the proposed services are summarised in Table 10 below (in which X94 is costed at a 2-hourly frequency). Service X10 is also included in this analysis. Further details are contained in Appendix C.

7.12.2 It should be noted that no account is taken in Table 10 of any existing revenue support payments in respect of services which would be subsumed into the new routes. This would be especially significant in the case of services X3 and X4, and is considered further in section 7.14 and Table 11 below.

Table 10 : Patronage and revenue estimates

Service ¹¹	Estimated daily (M-F) ridership	Estimated daily revenue	Total annual revenue	Total annual costs	Projected annual profit / loss	Proportion of costs covered by revenue
X1	606	£1,242	£380,108	£314,448	£65,660	121%
X2	684	£770	£235,742	£271,269	-£35,527	87%
X3	602	£806	£246,749	£338,746	-£91,997	73%
X4	451	£824	£252,031	£369,832	-£117,801	68%
X5	895	£1,409	£431,247	£477,148	-£45,901	90%
X7	537	£1,084	£331,609	£352,272	-£20,663	94%
X10	159	£339	£103,670	£272,782	-£169,113	38%
X94	713	£1,136	£347,708	£346,539	£1,168	100%
Total / Ave.	4,647	£7,611	£2,328,865	£2,743,038	-£414,173	85%
<i>Total / Ave. without X10</i>			<i>£2,225,195</i>	<i>£2,470,256</i>	<i>-£245,060</i>	<i>90%</i>

7.12.3 The only service making a positive contribution would be the X1, which builds on the Traws Cambria tradition of longer distance operation, while the X94 would break even. A number of other services perform well on this assessment, which generally incorporate substantial local services into the proposed network, including the X2, X5 and X7. Lower profitability (and continued reliance on substantial subsidy) would be shown by the X3 and X4. As is demonstrated in section 7.14, existing subsidy profiles would be sufficient to cover the deficit on the network without the X10.

7.12.4 The X10 proposal serves less populated areas and is based on incorporation solely of existing National Express, rather than local, services. The results are especially poor, reflecting the failure of the former ExpressWest service in this area, and this is not likely to be sustainable unless specific additional funding can be justified on the grounds of economic, geographical or social inclusion. Alternative facilities for the Pembrokeshire communities would be offered by maintaining the National Express services over the same corridor, which would offer connections at Carmarthen (northwards) or Swansea (eastwards) with other services in the proposed network.

7.12.5 The standard agreed by the Steering Group was that services should meet a minimum of 50% of their costs. Apart from the X10, all of the proposed services would do so and are therefore recommended for implementation. Service X10 should only be progressed if additional sources of ongoing revenue support can be identified, and are judged to be justified by external, non-transportation benefits.

7.13 DERIVATION OF ESTIMATES

7.13.1 The passenger estimates are based on the existing ridership between the relevant zones, as well as intra-zone ridership along the proposed routes. These have been

¹¹ X1/X10 data exclude existing Cardiff – Swansea revenue & costs

adjusted to take account of the increased level of proposed service, using standard service elasticities. On sections of route where the service level would be largely unchanged, a factor was assigned to account for increased ridership generated by the improved journey opportunities and marketing. The elasticities applied have been derived by TAS from observed changes in demand in many other areas of Great Britain, including rural locations such as Norfolk. Account has been taken of the geographical and demographic characteristics of Wales in applying these factors.

- 7.13.2 Revenue estimates are grossed up from average revenue per passenger journey, based on journey length and current revenue on comparable services. An allowance is made for concessionary fares reimbursement where applicable for 'local' journeys, but **not** for other forms of off-bus revenue including scholars' season ticket sales (which are substantial on some routes).
- 7.13.3 Costs were calculated by determining the hours, miles and peak vehicle requirements to provide the basic timetable for each of the proposed services. Using comparable bus industry figures applicable to the type of operation proposed, annual costs were calculated for each service (on a 2002 base) and these are summarised in Table 10 above. An allowance for overhead costs is also included in the calculations. These costs were based on actual figures obtained from large operators in several areas of Britain, from which a composite typical cost base has been constructed which we believe to be representative of Welsh operating conditions. However, the source costs cannot be revealed in detail because of commercial confidentiality.
- 7.13.4 We are confident that the estimates of costs and revenues are well founded, but these obviously remain estimates, which cannot be guaranteed. Capital and depreciation cost elements relating to vehicles are very variable, depending on the final specifications employed, but we believe our estimates of other operating costs should be accurate to within 5%. Revenue estimates, especially in relation to individual services, are subject to greater potential variation, but this should not exceed $\pm 15\%$ (and less overall).
- 7.13.5 Arriva commented on the cost estimates in an earlier draft report and, in particular, indicated that their cost estimates for a combined 75 / 501 / 525 route were some £100,000 p.a. greater than ours for the X3. However, the current costs for the 94 appear to be below our estimates for the X94 at a similar frequency. This highlights a difficulty of comparison, and may result from the inclusion of some different resources (e.g. duplicate school vehicles, or additional Aberystwyth – Ponterwyd workings, omitted from our estimates). The figures for the 94 are relatively close, adding to confidence in our estimates.

7.14 CURRENT REVENUE SUPPORT

- 7.14.1 The current position with regard to local authority subsidy paid for services on the respective corridors is summarised in Table 11 below. It should be noted that subsidy payments will only contribute to the overall revenue of the service, and the commercial risk remains with the operator in each case.

Table 11 : Secured service payments on proposed corridors 2003/04

Proposed service corridor	Currently secured service(s)	Nature of secured service	Securing authority	Estimated annual cost	Notes
X1	202	Whole service	Carmarthenshire	£56,000	part of service replaced
	540	Whole service	Ceredigion	£24,000*	no change to service
X2	2	Evenings Wrexham – Chirk	Wrexham	£16,000	not affected by proposals
	71	Oswestry – Welshpool	Powys	£32,000	part of service replaced
	75	Welshpool – Newtown section included		£13,000	<i>pro rata</i> with X3 (50% of included section)
X3	501	Whole service	Ceredigion	£15,000*	part of service replaced
	525	Whole service	Powys	£43,000	whole service replaced
	75	Whole service		£74,000	<i>pro rata</i> with X2: service replaced
X4	G8	Whole service	Powys	£42,000	whole service replaced
	47	Whole service		£33,000	whole service replaced
	43	Whole service (see note)		£35,000	1 journey and Merthyr – Cardiff are commercial: whole service replaced
X5	1, 5A	' <i>de minimis</i> ' journeys	Gwynedd	£14,000	part of service replaced
	32	Whole service		£48,000	whole service replaced
	701	Aberystwyth – Llandudno section		£40,000	Welsh Assembly Government funding: whole service replaced
X7	39	Sunday service	Herefordshire	not known	operated by Yeomans
X10	No relevant services assumed to be incorporated				
X94	Currently wholly commercial			nil	enhanced service may need some Sunday subsidy by Denbighshire/Wrexham
Total subsidy on 'replaced' services (estimated) – excluding current Welsh Assembly Government contribution to 701				£324,000	<i>pro rata</i> where appropriate

* = partial information supplied: figure estimated by TAS

7.14.2 Based on our estimates of the subsidy currently applied to those services (in whole or part) which will comprise the proposed long distance network, the existing level of local authority expenditure is sufficient to cover the projected annual deficit (as projected in Table 10 above).

7.14.3 Where the proposed services subsume the existing service requirements, it is presumed that the equivalent amount of revenue support will continue to be provided by the local authority (as it will continue to meet local needs). In those cases where only part of the current contracted provision is incorporated into the new service, the local contribution should be on a *pro rata* basis. Where a service requires additional subsidy solely in order to fulfil a strategic role, however, it is expected that such costs will be met by Welsh Assembly Government. This might apply, for example, if

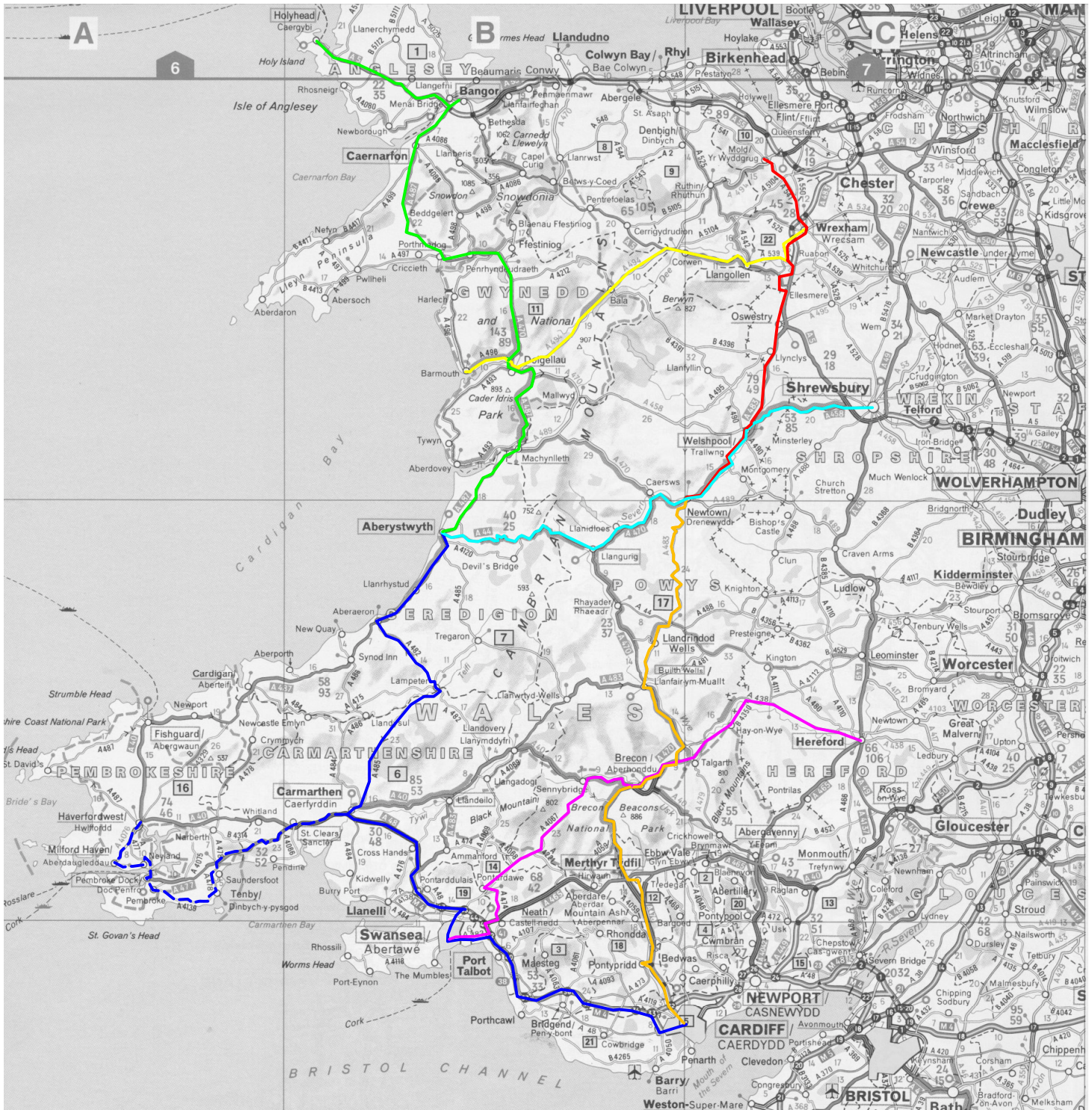
a local need to re-time a journey for school transport purposes was felt to conflict too much with the long-distance function, resulting in the operation of a separate school-oriented journey in addition to the core service.

7.14.4 Shropshire County Council and Herefordshire Council will also have to be consulted, in view of their current or potential involvement in securing services to / from Oswestry and Hereford respectively.

7.14.5 The figures shown in Table 11 take no account of indirect support for services from local authorities' purchase of season tickets for home-to-school or college movements on commercial local bus services. These are not included elsewhere in our revenue estimates, and help to explain the existence of (essentially) commercial services over corridors with apparently inadequate financial performance (*cf.* service X5 in Table 10). Existing services with significant receipts from this source are understood to include:

- 1 Caernarfon – Porthmadog – Blaenau Ffestiniog
- 5A Caernarfon – Penygroes – Nantlle
- 94 Barmouth – Dolgellau – Bala – Wrexham.

**Figure C:
Proposed strategic services**



Proposed routes

- | | | | |
|-------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------------|-----|
|  | X1 |  | X4 |
|  | X10 |  | X5 |
|  | X2 |  | X63 |
|  | X3 |  | X94 |

8.

A Strategic Service Template

8.1 THE TEMPLATE CONCEPT

8.1.1 This template is the mechanism through which a number of objectives and approaches can be reconciled. These include:

- a) offer of a consistent product although delivered by a variety of operators
- b) creation of a coherent image and perception of a national network
- c) clear communication of the standards required of included services
- d) retention of scope for development, innovation and flexibility.

8.1.2 We have set out below a draft template, with several strands, which would form the basis for operation of the strategic service network.

8.1.3 However, it needs to be clear to which services the template would be applied. Although the services we propose as a strategic network are set out in the preceding chapter, objective criteria are needed for definition of those services to be included (or excluded) as circumstances change and services continue to evolve.

8.1.4 As designed, this template is intended for application to services which meet the following criteria:

- the service is of more than local significance
- the service operates in more than one local authority transport partnership area, and does not conflict with their policies
- Welsh Assembly Government and the operator(s) agree that substantial passenger benefits will accrue from designation.

8.2 BRANDING AND MARKETING

8.2.1 Although high standards of planning and operation are essential to the delivery of a safe, attractive and effective network, the issue of marketing is addressed first because this is key to **existence** of the network. This will be a primary responsibility of the proposed SMC (see section 9.2).

- 8.2.2 One important element will be development of a distinctive and effective brand for the network. It is noted that the Steering Group feels strongly that the existing Traws Cambria brand is not appropriate for continued application to this network, and therefore it is recommended that the development of a brand name and image should be contracted to a specialist marketing and design firm. This will need to include development of:
- vehicle livery
 - a house style for promotional and information material
 - standards for graphics and presentation of information.
- 8.2.3 All of these should reflect the values attached to the brand, which should be determined as a matter of policy. It is suggested that these brand values should comprise:
- a) a comprehensive long-distance network
 - b) frequent and reliable services
 - c) comfort and convenience.
- 8.2.4 A substantial marketing campaign will be required to establish the new brand. Apart from promoting the network of services, and advertising its replacement of the former Traws Cambria routes, this marketing and awareness campaign will provide a substantial boost to patronage. This is essential to the commercial success of the network, but may also generate additional traffic on other services as well.
- 8.2.5 The design, targeting and delivery of this initial marketing campaign should also be undertaken by a specialist contractor, and it is assumed that this launch activity would be funded by the Welsh Assembly Government. There will be an ongoing requirement for positive marketing, however, and it is anticipated that the responsibility for the funding of this will transfer to the operators over time. It will be appropriate to divide the costs for this between operators *pro rata*, on the basis of revenues from the services operated.
- 8.2.6 It should be clear that, although provision and effective distribution of high quality **information** on the services – through Traveline, printed material and the internet – is essential, there is a parallel need for their **promotion**. The latter will include general awareness building, as well as more specifically targeted promotion (e.g. to students in Bangor, Aberystwyth, Swansea etc.). A target-led marketing programme will have to be developed, making cost-effective use of general advertising media and techniques, and specifying the particular audience for each activity.
- 8.2.7 Vehicles designated for use on the network should be completely liveried in the adopted style, so that they are clearly identifiable as part of the network. Sufficient liveried vehicles should be maintained to cover the normal peak vehicle requirement on each service, and operators should be required to undertake that such vehicles will not be used regularly on other services. Although substitution of non-liveried vehicles on the strategic network will be acceptable to cover for non-availability or breakdown of a regular vehicle, or to provide necessary duplication, a standard

should be set that such vehicles should not be used on more than 10% of (scheduled) departures.

- 8.2.8 Some operators have expressed an opinion that the branding and marketing initiatives should be taken forward incrementally, with the branding of initial operations being secondary to the existing corporate image of the operator – as is currently the case with Traws Cambria. It would, of course, be possible to follow this path, but we feel it that it would fundamentally weaken the network concept, and significantly damage the opportunity for market growth offered by its development.
- 8.2.9 Nonetheless, in the context of a staged introduction of the longer distance network, it is an option to apply a network brand within the operators’ corporate identities, with a full re-branding exercise (and the main marketing push) undertaken when the final elements of the network are initiated. This would be expected to defer some of the commercial payback accordingly.
- 8.2.10 Experience with such subsidiary branding elsewhere has often been unsatisfactory, with inconsistent or inaccurate usage leading to dilution, poor customer recognition and ultimately disuse of the brand, and it would be extremely unfortunate if much of the current opportunity – and the investment by Welsh Assembly Government – were to be sacrificed in a similar way. If this option is taken, therefore, strict criteria should be applied to the consistent use and prominent display of branding (and its removal from vehicles when on other services) to minimise these risks. Appropriate adjustment would also be required to the ‘pump priming’ support allocated to additional services, to extend it *pro rata* to the period of dual branding.

8.3 VEHICLE STANDARDS

- 8.3.1 Maintaining high quality of vehicles on the services will be a priority. All vehicles used must also be accessible – with dignity – to people with disabilities, whether by low-floor and ramp access or by means of a safe and easily-usable passenger lift. Space for one user travelling in a wheelchair should be provided, as specified in the Public Service Vehicle Accessibility Regulations 2000, with all appropriate restraints and ancillary equipment, and vehicles should meet the Schedule 2 or 3 requirements of those Regulations, as appropriate.
- 8.3.2 The current development of a new style of ‘dual purpose’ coach by Wrightbus is of great potential interest in this context, although no details are yet available. It is understood that this will have a bus-style front module with low, single-step entry (and wheelchair ramp) and a small seating / wheelchair area at the same level. Steps will give access to the remaining high-floor seating area of the vehicle, which will also allow for under-floor luggage accommodation. The experimental use of lift-equipped, high-floor coaches by National Express on service 403 between Bath and London since spring 2002 also offers useful evidence about using this alternative approach. It required extended (12.8m) vehicles to maintain the standard seating capacity, and a variety of operational difficulties and delays has been encountered. Although longer vehicles are now generally permitted, the constricted nature of some main roads in Wales is not an ideal environment for their operation.

- 8.3.3 Dual-purpose or full coach seating¹² will be required, along with other features to create a comfortable and pleasant travelling environment, such as use of soft trim. Minimum seat spacing should exceed legal minima, with a standard of 700 mm clear measured horizontally between the rear of the seat squab and the back of the seat in front. Generally, vehicles should be configured as fully seated, and will not require significant standee capacity.
- 8.3.4 Adequate forced-air ventilation or air conditioning should be standard, along with effective heating capable of coping with harsh winter conditions. This suggests specification of an independent supplementary heating system, to maintain interior temperature when the vehicle is running slowly, or waiting for extended periods (e.g. at connection points).
- 8.3.5 Suitable accommodation for passengers' luggage is required, which should offer at least 2.5 m³ of usable storage space, or 4 m³ on vehicles with 50 or more passenger seats. Appropriate accommodation should be available for pushchairs, etc.
- 8.3.6 A maximum age for any vehicle used on the services should be established, and a limit of seven years is advocated for all liveried vehicles. This might be extended somewhat – say to 10 years – for standby vehicles that do not see **regular** service on the network.
- 8.3.7 It will be necessary to invest significantly in vehicles to match these aspirations across the whole of the proposed network, but there may not be a current business case for operators to commit the required funds, among competing demands. This will therefore require partial funding from the public sector, sharing the investment to reflect the benefits to the operator from new (or newer) vehicles as well as the meeting of the public policy objectives.

8.4 TICKETING

- 8.4.1 All vehicles must be equipped with electronic ticketing equipment, to a specification agreed with the SMC. Data from these services will be provided to the company for the purposes of:
- a) calculation of any through ticket revenue to be distributed to other operators
 - b) assessing the proportion of central costs to be apportioned to the service
 - c) monitoring of performance for the Welsh Assembly Government.
- Appropriate and secure arrangements must be made for drivers to issue emergency tickets where an electronic ticket machine malfunctions or is otherwise not available.
- 8.4.2 Through fares will be available between any two points throughout the network, including for interchange between services. Arrangements may also be made to issue and accept through fares to and from other appropriate services that do not form part

¹² 'Dual purpose' seating implies high-backed (minimum 550 mm from squab to top of backrest), covered in moquette or similar fabric and suitably padded to offer comfort. 'Coach' seating is similar, but with a headrest (and optional armrests and footrest)

of the network, but offer valuable additional connections, including National Express services. Through ticketing arrangements will comply with the provisions of the Public Transport Ticketing Block Exemption issued by the Office of Fair Trading (OFT), and revenue distribution will be administered by the SMC. Revenue and passenger details supplied by operators will be kept confidential by the company, except for aggregate figures as required to be reported to local authorities or Welsh Assembly Government for monitoring purposes.

- 8.4.3 Simplicity in providing for through fares may be facilitated by sale of a day ticket. This facility should in any case be made available for travel throughout the network and for use on designated feeder services. Individual operator network tickets will also be available on designated services within the core operating territory of that operator.
- 8.4.4 The SMC may establish agencies for the advance sale of tickets, and will distribute the revenue from such sales according to the operator(s) on whose service(s) the tickets are used, or another agreed arrangement. Alternatively, association with National Express could permit use of that agency network.
- 8.4.5 Concession fares for elderly and disabled people will generally be available on the services, where these perform the function of a local bus service. However, as the primary intention of the concession fares scheme is to facilitate local travel, and Traws Cambria is currently excluded, it should be considered whether some limitation on the availability of free travel should be applied. The introduction of half fare concessions on National Express services from 1 May 2003 is a further useful parallel.
- 8.4.6 It is suggested that free travel only be available for journeys on advertised through services (even where a change of vehicle is necessary) where the adult single fare is £4.00 or less. This should be monitored by recording of the origin and destination of each pass holder. A nil value ticket should be issued bearing this information. Any holder of a Welsh concession fare pass wishing to make a journey with a higher adult single fare would be required to pay a concession rate of half the adult fare (single or return). Alternatively, they could travel free by changing to a different advertised service (including a later journey on the same route) at a point to which the adult single fare is £4.00 or less. Such a limitation might require amended secondary legislation by the Assembly.
- 8.4.7 Alternatively, the Welsh Assembly Government may wish simply to extend free concessionary travel to the whole network. Although this would, in practice, lead to the inclusion of few additional services, it would logically also require inclusion of the National Express network within Wales to avoid any discriminatory effect. Wales & Borders Trains has also expressed concerns over the effect on its Shrewsbury – Aberystwyth service, should free concessionary travel become available by coach on the same corridor.
- 8.4.8 A clear decision is required on this issue before the overall impact on potential revenue, and consequential effects on other services, can be finalised.

8.5 INFRASTRUCTURE

8.5.1 By their nature, the services will normally share their infrastructure with other local bus and coach services. Given the inadequate standards that are often found in these, however, reasonable investment is likely to be required to upgrade facilities to match the quality aspirations for the network.

8.5.2 It is proposed that a three-tier hierarchy of stations and stops be established, with associated infrastructure requirements, as follows:

- level A – major stopping points in towns over 10,000 population, and other principal interchange points
- level B – key stopping points in other settlements over 1,000 population
- level C – other wayside stopping points.

8.5.3 The required facilities proposed at each level of the hierarchy are set out in Table 12.

Table 12 : Infrastructure standards

Category	Minimum facilities required:		
	Level A	Level B	Level C
Signing	Clear signing of stands with service branding / destinations Guide to stands at central / access points (where dispersed or more than 3 stands)	Bus stop flag with branding	Bus stop flag with branding
Waiting facilities	Waiting room or shelter with heating / lighting, and seating for at least 10 passengers Raised kerb access (where low floor buses used)	Hard standing – min 5 m ² Raised kerb access (where low floor buses used) Shelter with perch seat and (preferably) lighting	Hard standing – min 2 m ² Shelter (preferable)
Information	Comprehensive route and location maps and timetable displays, with traveline number Staffed enquiry point (see text) Where possible, electronic real-time / departure displays	Traveline number on flag Timetable case / display, including location map Optional electronic real-time information displays	Traveline number on flag Timetable case (preferable)
Other facilities	Toilets; public telephone; area lighting; refreshments / shop within 100m, and visible or signed	Area lighting Public telephone (preferable)	

8.5.4 A general infrastructure issue in relation to real-time passenger information (RTPI) systems is that the vehicles involved require some form of location equipment for monitoring and time-prediction purposes. In a network of this nature, this would have to be based on global positioning system (GPS) technology, as used in the existing Gwynedd / Conwy installation (which would be utilised by the proposed

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services). Allowance should therefore be made for fitment of GPS equipment if required, at an approximate cost of £2,400 per vehicle.

8.5.5 It is anticipated that **level A facilities** will be required at the following principal stops and interchanges:

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> ■ Aberystwyth ■ Bangor ■ Brecon ■ Caernarfon ■ Cardiff ■ Carmarthen ■ Dolgellau | <ul style="list-style-type: none"> ■ Holyhead ■ Merthyr Tydfil ■ Newtown ■ Pontypridd ■ Swansea ■ Wrexham. |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

8.5.6 In many of these cases, the facilities are already in place, although they may need renovation or replacement. We consulted with the relevant local authorities, which had already been invited to consider this in the context of potential Transport Grant bids, to establish the likely scale and cost of work required to meet the standards outlined. Where available, the information gathered is shown in Table 13.

Table 13 : Category A infrastructure requirements

Location	Authority	Interchange	Enhancements	Approx. est. cost
Aberystwyth	Ceredigion CC	Rail Station	Recently upgraded – minor enhancements and RTPI required	£25,000
Bangor	Gwynedd CC	Bus Station	RTPI active – recently upgraded	-
Brecon	Powys CC	Bulwark	Upgrade and RTPI required	£60,000
Caernarfon	Gwynedd CC	Penllyn	RTPI active – minor works only	£5,000
Cardiff	Cardiff CC	Bus Station	Recently refurbished – RTPI not appropriate	-
Carmarthen	Carmarthenshire CC	Bus Station	Recently rebuilt – only RTPI required	£14,000
Dolgellau	Gwynedd CC	Eldon Square	RTPI active – new interchange at Marian Car Park site suggested	£220,000
Holyhead	Isle of Anglesey CC	Ferry / rail terminal	New shelter, signing, RTPI	£15,000
Merthyr Tydfil	Merthyr Tydfil CBC	Bus Station	Upgrade to waiting area, signing etc. and RTPI	£40,000
Newtown	Powys CC	Bus Station	Upgrade to shelters etc. and RTPI	£42,000
Pontypridd	Rhondda Cynon Taff CBC	Bus Station	Transport Grant just awarded to upgrade bus station – RTPI required	£14,000

Location	Authority	Interchange	Enhancements	Approx. est. cost
Swansea	Swansea CC	Bus Station	Transport Grant just awarded for new bus station – RTPI required	£14,000
Wrexham	Wrexham CBC	Bus Station	Currently being rebuilt – only RTPI required	£14,000
Total estimated costs				£463,000

8.5.7 Level B facilities will be required at a minimum of one stop (for each direction), at the principal location to serve each relevant settlement. These should also be applied at other points of potentially significant passenger boarding or interchange (for example, Carmarthen rail station, where RTPI would also be appropriate). At Wrexham General Station, it is estimated that about £46,000 would be needed for a turning circle (as a terminus for X94), RTPI and new stops and shelters.

8.5.8 All other stops should conform at least to level C.

8.5.9 Estimates for installation of RTPI are based on extension of the existing Gwynedd / Conwy system (already due to be provided on Barmouth – Wrexham service 94), and assume that all installations will be covered by pre-existing National Band 3 radio stations (for data transmission). Coverage across the more densely populated areas is already reasonable (and improving), but should additional base stations be required, a capital cost of approximately £60,000 would be incurred for each.

8.6 OPERATING STANDARDS AND CUSTOMER CARE

8.6.1 The template should incorporate the expected standards of service delivery, and include specification of the important ‘soft’ elements of planning and operation.

8.6.2 The operational standards should include the following:

- a) planning and control: operators must –
 - ◆ must apply an effective system of supervision and control for the services, including a single contact and control point which is available throughout all times of scheduled operation, is in communication with the vehicles and is contactable by landline
 - ◆ monitor all services regularly for timekeeping and loading
 - ◆ where regular and foreseeable delays to service occur, revise the timetable to create a realistic and robust schedule
 - ◆ where demand regularly or foreseeably exceeds the seating capacity of the vehicle, provide appropriately increased capacity on the journey(s) concerned
 - ◆ inform the SMC at the end of each accounting period of the revenue and passengers in an agreed format, and notify details of any journeys which failed to operate or which suffered a delay of more than 30 minutes

- b) punctuality –
- ◆ all journeys should operate no more than 1 minute early or 10 minutes late at any timing point, unless due to circumstances beyond the operator's control
 - ◆ no more than 5% of journeys should operate outside this 'window' of punctuality due to circumstances beyond the operator's control. Journeys delayed by controller's instruction to await connections will not be counted against this standard
- c) communications –
- ◆ all vehicles operating on the service must carry a functional means of two-way communication with the operator's control point, whether by voice radio, text data transmission or mobile telephone
 - ◆ drivers must use this system to report all delays to their journey which exceed 10 minutes, or other actual or anticipated problems
 - ◆ any operator becoming aware of a problem or delay which may affect the service of another operator on the network must advise that other operator as soon as possible
- d) connections –
- ◆ advertised connections between network services should be maintained at all times, unless otherwise authorised by the control point. Connections are not guaranteed, however, where affected by matters outside the operator's control
 - ◆ where a service arrives late at a connecting point, departure of any advertised connections should be delayed. If the late-running service has not arrived 3 minutes after scheduled departure, the connecting driver should contact his control point for instructions. Normally, departure should be delayed until contact can be made with the late-running vehicle to ascertain likely arrival time and / or whether connecting passengers are on board, but only in exceptional circumstances should departure of the connecting service be delayed beyond 15 minutes
 - ◆ where there are passengers for an advertised connection which has been broken (whether or not authorised), the driver of the arriving service will advise his control point, which will take responsibility for co-ordinating onward travel arrangements for those passengers. Before departing, unless the matter is being dealt with by on-site staff, the driver must advise the affected passengers of the contact number for his control point and a time for them to make further contact. While action will depend on the circumstances, where the failed connection appears due to factors within the operator's control, the control point should normally minimise delay in continuing the journey (e.g. by providing a taxi)
 - ◆ costs incurred in dealing with failed connections will normally be charged to the operator at fault, but any doubt over liability for the

costs should not inhibit action on behalf of passengers. Where liability is disputed between operators, the SMC will adjudicate, and where (exceptionally) the cause appears to have been wholly outwith the operator's control, costs should be borne from SMC's central funding

- e) service disruption –
- ◆ where a journey is delayed or disrupted by circumstances within the operator's control (including vehicle breakdown or non-availability of staff), the operator must take all steps to resume (or start) the journey with minimum delay, and in any case within 40 minutes, **and** arrange cover to ensure that any subsequent journeys to be operated on that schedule start and operate no more than 10 minutes late
 - ◆ where any subsequent journey referred to above starts within 30 minutes of the first report of disruption, the 10 minute delay may be extended to the minimum necessary to implement cover, up to a maximum of 40 minutes
 - ◆ where any journey is delayed by over 10 minutes, the operator should take reasonable steps to inform supervisory staff and waiting passengers at subsequent stopping points of the nature and extent of the delay, and any special arrangements made as a consequence
 - ◆ in cases of serious disruption or delay (e.g. owing to snow), operators should advise and keep updated appropriate information sources, including Traveline, about the situation
- f) vehicles –
- ◆ all vehicles must be clean inside and out at the start of their schedule each day, and be swept out at least once during the day if the duration of their schedule exceeds 8 hours
 - ◆ all vehicles must legibly display correct and appropriate service number and destination information at all times
 - ◆ non-liveried vehicles used to cover for non-availability or breakdown of a regular vehicle should not be used on more than 10% of (scheduled) departures. This will not include vehicles providing irregular duplication
- g) staff training –
- ◆ all drivers employed on the services should have a minimum qualification of Level 2 National Vocational Qualification in Road Passenger Transport (Local Itineraries), including customer care and disability awareness modules.

8.6.3 A Passengers' Charter should support these standards, applicable to all services included in the network. Apart from setting out the service and quality aspirations for the network, this should contain the following provisions:

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- a money-back guarantee if, owing to factors within the operator's control, the passenger's arrival at his / her booked destination is more than:
 - ◆ 40 minutes late – 50% of fare paid
 - ◆ 120 minutes late – 100% of fare paid(on return tickets, the fare paid will be treated as half of the return fare)
- a 100% refund of the fare paid for an advance booking if the passenger(s) cannot be accommodated on the service at the booked place and time (with an exception if this is due to their having a large amount of luggage which was not agreed in advance)
(on return tickets, the fare paid will be treated as half of the return fare)
- the offer of a 20% discount voucher towards a future journey (within 6 months) if the vehicle provided does not meet the quality standards.

8.6.4 Copies of the Passengers' Charter, incorporating a reply-paid comment card, should be available in relevant enquiry offices and on board all vehicles on the network.

8.6.5 Arriva has commented that it would expect those services it operated to be covered by its own Customer Charter, rather than a network-specific policy. We believe that this would potentially lead to the application of different standards and criteria to different services, depending on the identity of the operator. Even if operators' individual standards exceeded the network criteria, such divisions would fundamentally undermine the concept of the national network, and obviate any coherent operational and marketing strategy.

8.6.6 It is therefore regarded as essential that the long distance network has its own, independently determined Passengers' Charter which applies common standards and recompense. Nonetheless, it is desirable that it should be realistic, and relate reasonably closely to any standards applied by the main operators.

9.

Funding & Implementation

9.1 IMPLEMENTATION STRATEGY

9.1.1 Once the principles contained in this report are agreed, it is proposed that the proposals be implemented in the manner set out in this chapter.

9.2 DELIVERY MECHANISM

9.2.1 Creation and operation of a national, strategic service network requires organisation and co-ordination. There are various models which could be applied, with parallels in public transport and other fields; for example:

- a formally contracted operation, either by –
 - ◆ one or more public authorities, or
 - ◆ a commercial organisation, like National Express or Citylink
- a common service and marketing organisation, but with the operators taking the commercial risk – effectively a ‘franchise’ system
- an operators’ ‘co-operative’, which might include others.

9.2.2 We believe the first of these to be unnecessarily bureaucratic and less efficient, losing as it does the existing commercial revenue input, while the last is potentially unstable. A network contracted wholly by public authorities would further be subject to expenditure constraints, as has now occurred with the Strategic Rail Authority, and could prove inflexible.

9.2.3 It is therefore proposed that the mechanism to fulfil this role would conform to the second model. This should be a separately established service and marketing company (SMC), with its membership drawn from operators and the Welsh Assembly Government. As it should be a not-for-profit organisation, and not carry commercial risk, it would be appropriate for it to be limited by guarantee.

9.2.4 The functions of this SMC would be:

- a) active marketing and promotion of the strategic network
- b) establishment and servicing of a network of booking and enquiry agents (which might be by association with the National Express agency network)

- c) apportionment and distribution of any revenues which cannot be attributed to one operator, including through fares and receipts from agents
- d) ensuring the provision and dissemination of accurate information through all sources, including:
 - ◆ printed timetable and other information through transport, tourist and other enquiry points
 - ◆ the traveline telephone enquiry and journey planner services
 - ◆ operation of a website
- e) provision of a handling service for comments and complaints, and a central contact point for lost property enquiries
- f) monitoring and reporting of performance, including compliance with service specifications
- g) liaison with the Welsh Assembly Government and other stakeholders on the development of the network and its characteristics.

9.2.5 Its activities would be funded through a combination of operators' contributions and funds provided by the Welsh Assembly Government. We anticipate that the latter would be the primary source for start-up and launch costs, with progressive transfer to funding by operators as the services become established. In many respects, this would be similar to the current Green Line Coaches organisation which markets London commuter area services, to which appropriate operators subscribe.

9.2.6 Control of the SMC would lie in the hands of its members. There is already a model for such co-operative joint ownership and operation in the form of the 'Traveline' provider, PTI Cymru. This is a not-for-profit company, owned in this case by operators and local authorities, which are represented in approximately the same proportions on the Board. The number of directors appointed by each group is:

- 9 by operators (6 from 'large'¹³ and 3 from 'small')
- 3 by local authorities
- 1 by the Confederation of Passenger Transport Wales (CPT) (not a shareholder).

One directorship is held open at present. This was to be nominated by the Welsh Development Agency, as a representative government agency, but this body is barred from holding a seat on any Board. Instead, observers from the Welsh Assembly Government attend Board meetings.

9.2.7 Although the representation would be slightly different, it is suggested that a similar structure should be applied to the SMC. A potential Board composition would comprise:

- up to 4 appointed by operators of the services

¹³ Arriva, Cardiff Bus, First, Stagecoach

- 1 appointed by CPT
- 1 local authority representative (appointed by the Association of Transport Co-ordinating Officers)
- 1 appointed to represent Welsh Assembly Government.

9.2.8 The shareholdings would reflect this division, with approximately 70% held by operators and the remaining 30% by the public sector. The appropriate public sector shareholder would be subject to discussion.

9.2.9 Operators would be bound in to the network by a formal Quality Partnership agreement, including non-statutory codicils on services and fares. The vehicle standards and funding provisions would form part of the statutory agreement¹⁴, and would include undertakings on the use, disposition and disposal of any vehicles part-funded by the Welsh Assembly Government.

9.2.10 While no party can be bound irrevocably to such an agreement, a substantial period of notice will be required for withdrawal. It is suggested that this be set at six months, with provision for payment of liquidated damages in default.

9.3 THE SERVICE & MARKETING COMPANY

9.3.1 The SMC should be established, and this would have the primary responsibility for project implementation. A clear form of agreement and statement of general requirements for services and operations, based on the template shown in chapter 8, will be formulated. Operators should then be invited, through general advertisement, to register their interest in operating such services, and sign up to the relevant conditions.

9.3.2 A detailed specification will be established for each service, and an invitation issued to operators (on a select list basis) to submit proposals for its fulfilment. This may include bids for subsidy, where appropriate, and a closed bid process will therefore be required. Proposals will then be subject to appraisal, for selection on a 'best value' basis. Specifications should make clear which elements are essential and which (if any) are optional and / or subject to modified proposals.

9.3.3 This will allow the SMC to conclude an agreement with the selected operator, which will normally take the form of an agreement for a fixed term of five years, subject to satisfactory performance. Where revenue support from a local authority is required for the service, the award will first be agreed with the relevant authority, and a contract awarded in parallel.

9.3.4 The Board of the SMC will meet regularly to review the services and their performance, and will submit required reports to the Welsh Assembly Government. Decisions on substantial changes to the services will be made in consultation with Welsh Assembly Government, although operators will retain the ability to rescind their agreement with appropriate notice.

¹⁴ designated under §114 of the Transport Act 2000

9.4 COMPETITION ISSUES

- 9.4.1 Two principal issues related to competition legislation arise from the proposals. In some ways the simpler is the issue of multi-operator ticketing, which is covered by the OFT's Public Transport Ticketing Block Exemption. The fares and ticketing structure is predicated on compliance with the Block Exemption, and discussions with participating operators can be undertaken by the SMC collectively or, if felt necessary, individually.
- 9.4.2 The second issue concerns the participation of operators in the network, and this entails a delicate balance. An important feature is that the great majority of the resources needed to operate the proposed network will comprise commercial services, in some cases funded through the commercially-derived revenues of competing service providers. In other cases, local authority revenue support will form a core funding element to underpin the service, and those authorities depend on the existence of a contested market to ensure that they meet 'best value' requirements. Government also has a general duty to avoid acting so as to disadvantage unfairly one supplier as against another.
- 9.4.3 In these circumstances, it is difficult to secure the provision of a coherent network which respects the legitimate interests of all parties, without some form of agreement between them – and, indeed, this is inherent in the concept of 'partnership' under which it is proposed to meet the project's aspirations. We believe that it is feasible to negotiate an appropriate agreement between all the parties which will satisfy each. However, given that such negotiations between commercial enterprises may be seen as anti-competitive 'market sharing', prohibited by the Competition Act 1998, there are understandable concerns among the parties about liability to enforcement action by the OFT.
- 9.4.4 We have suggested that this problem be addressed by the mechanism of discussions brokered by relevant local authorities (in the form of 'service conferences' – see section 9.6.7 below). Local authorities are not generally regarded as 'enterprises' subject to the Competition Act, and their neutral standing allows them to co-ordinate the actions of competing operators, without those companies compromising their commercial independence. Where a substantial proportion of the network depends on revenue support, and there is a risk of concentration among too few operators, such discussions would allow the authority to facilitate (e.g. by joint bidding or amended tendering arrangements) the continuation of sound businesses for a range of contractors.
- 9.4.5 It should be noted that the provisions of Section 153 and Schedule 10 of the Transport Act 2000 provide additional comfort to the participants in such service conferences, and reinforce the local authorities' role. This applies a 'competition test' to (*inter alia*) authorities' actions in securing bus services, and allows for restriction of competition where it is necessary and proportionate to achieving benefits to passengers. We believe that this would provide appropriate protection for conference participants, but have not sought advice on this from the OFT. It is difficult for OFT to give definitive advice in advance of a specific situation, and it may levy a charge for giving a decision. However, we understand that it has been helpful with informal guidance to at least one local authority in relation to tendering activities with potential consequences on competition.

9.5 FUNDING REQUIREMENTS

- 9.5.1 Funding would be required to raise service quality standards to those necessary to provide an attractive option for longer-distance passengers. It is anticipated that funding assistance will be required for the following, against each of which an appropriate funding mechanism is identified:
- vehicle improvements – grant to operators under §156 of the Transport Act 2000 or (for accessibility improvements) under §106 of the Transport Act 1985
 - infrastructure enhancements – Transport Grant via local authorities, or a grant under §106 of the Transport Act 1985
 - marketing and promotion (with the common identity) – grant to the SMC under §156 of the Transport Act 2000
 - in some cases, an extension of service operating hours (during early mornings, evenings and weekends) to facilitate through travel – via local authorities either through increased Local Transport Services Grant or specific §156 grant.
- 9.5.2 Under the suggested partnership approach it is envisaged that, where appropriate adaptations of commercial services can be achieved, there would be no **additional** revenue funding for the base services themselves. The operation of additional journeys, especially early and late trips at the start or end of journeys for longer distance passengers with limited ‘local’ functions, would require some funding – estimated at £280,000 – on a ‘pump priming’ basis, over three to four years. This allows for the application of an estimated £300,000 *per annum* of existing local authority revenue support to the new services.
- 9.5.3 The vehicle funding would be required to upgrade standards and, in some cases, provide larger capacity on the services. The bulk of this investment may be expected to be borne by the operators themselves, who will receive the benefit of reduced maintenance costs (and commercial benefit from newer vehicles). However, it is reasonable for the Welsh Assembly Government to provide some differential funding, to acknowledge the superiority in standards which is desired and to encourage the placing of scarce new vehicles on services which may not offer the highest commercial rate of return.
- 9.5.4 It is suggested that this funding be a single payment, approximating to the differential in capital cost between a typical local service bus and the acquired vehicle, as agreed with the SMC. This is estimated at £32,000 per vehicle. To upgrade the entire estimated fleet requirement of 28 vehicles¹⁵ would therefore imply a capital cost of £896,000.
- 9.5.5 Infrastructure enhancements are assumed to be funded through local authorities, via the normal Transport Grant mechanism. The largest single category of expenditure is expected to be for level A improvements, accounting for some £463,000, with level

¹⁵ This assumes that service X10 does not go ahead, but includes 2 ‘floating’ spare vehicles

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B enhancements costing a little over £400,000. The expected total costs of the type of enhancements proposed are estimated at £1.1 million.

- 9.5.6 As already noted, marketing is anticipated to be a major activity, requiring substantial input from Welsh Assembly Government initially to launch the service brand and raise awareness. This should taper down as services come on stream and become established, with operators taking a growing share of responsibility for these costs.
- 9.5.7 As a launch budget, we estimate that £240,000 will be required. Thereafter, expenditure is expected to be in the order of £100,000 *per annum*. We anticipate that Welsh Assembly Government would provide 75% of this in year 3, reducing by a further 25% in each subsequent year (but note the comments below on phasing).
- 9.5.8 The extension of service operating hours is catered for within the estimated revenue / cost balance for the proposed services, but any further extensions would potentially require additional funding. The liability for these should be a matter for discussion between the relevant local authority and Welsh Assembly Government, as the balance of local *versus* national interests will vary with each case.
- 9.5.9 The revenue and cost estimates presented earlier in the report are based on the position after projected passenger growth. On the basis of experience with similar services in other areas we would anticipate this passenger growth being achieved over a three year period. Table 14 below therefore presents our projection of spending requirement over the first three years' of service operation, by spending type.

Table 14 : Estimated budget forecast

Item	Year 1 (2004/05)	Year 2 (2005/06)	Year 3 (2006/07)	Total	Notes
Vehicle Grants	-	£896,000	-	£896,000	
Revenue Support	£40,000	£120,000	£80,000	£240,000	excluding local authority support
Marketing Spend	£40,000	£240,000	£100,000	£380,000	continuing at £100k
Local Authority Infrastructure	£60,000	£350,000	£450,000	£860,000	
Total spending	£140,000	£1,494,000	£630,000	£2,376,000	

- 9.5.10 The remainder of the funding required would be spent in subsequent years. Revenue support (i.e. specific to the long distance objectives of the network, as distinct from subsidy for local functions) would reduce to £40,000 in year 4, and thence to nil.
- 9.5.11 There would be reducing exposure of the Welsh Assembly Government from Year 3 onwards, as operators took an incremental share of marketing and administration costs. The overall total of dedicated public spending anticipated would be £2.706 million.

9.6 INTRODUCTION AND PHASING

- 9.6.1 Practicalities dictate that a phased implementation strategy is followed. Although this may be accelerated or amended according to operators' state of readiness to implement changes, the highest priority should be attached to replacement of the current Traws Cambria service, involving proposed services X1 and X5.
- 9.6.2 However, against this should be set the advantages of a 'big bang' approach in marketing terms, which will maximise the benefits of a substantial launch campaign and ensure that the network is recognised. This requires a network to be in place at that time – it would be confusing to launch a 'network' in dribs and drabs, and dissipate the effect of a necessarily large budget aimed at creating widespread public awareness.
- 9.6.3 A means needs to be found to resolve the conflict between these issues. It is therefore suggested that it would be appropriate to put the basic services in place as an initial step, without branding or vehicle renewal, which should be added at the same time as the last service revision is implemented. This will allow for launch of a comprehensive network with impact, while minimising the inherent operational difficulties. This might also go some way towards allaying major operators' fears about loss of their own identities, by allowing time to prove the concept and establish the robustness of the services and their discrete operating patterns before committing to provision of a dedicated fleet.
- 9.6.4 It is suggested that full implementation of the network should be carried out over 18 months, although the full effects may not be evident until a longer period has elapsed. This should enable a suitable 'bedding in' period for the new arrangements, allow sufficient time for training and avoid any sudden or inefficient changes in vehicle requirements.
- 9.6.5 A possible programme for implementation would be as set out in Table 15 below.

Table 15 : Example of implementation timescale

When	What	Notes
Autumn 2003	Agreement between partners; establishment of service and marketing company; determination of template specification	
Winter 2003/04	Invitation of interest from operators; compilation of select list Determination of first detailed service specifications	Start with X1, X5
Spring 2004	Bids from select operators for first services; evaluation and award Conclusion of agreements with National Express / other operators / agents	
Summer 2004	Implementation of first services Determination of vehicle specifications and ordering Implementation of booking agencies etc.	Allow lead time for vehicle delivery

Longer Distance Links in Wales: Final Report

When	What	Notes
Autumn / Winter 2004	Determination of second detailed service specifications; bids from operators; evaluation and award Agreement / preparation of Passengers' Charter	
Spring 2005	Implementation of second tranche of services Determination of third detailed service specifications; bids from operators; evaluation and award	3 rd tranche may not be necessary
Summer 2005	Implementation of third (final) tranche of services Introduction of new, branded vehicles on all services Marketing launch of services and Passengers' Charter	3 rd tranche may not be necessary

9.6.6 This implies that the major marketing spend will occur in year 2, as allowed for in Table 14.

9.6.7 Although there is an assumption of a progressive service-by-service implementation it is recognised that there will be variations in the process between services. We suggest that:

- X1 be subject to a 'service conference' brokered by Carmarthenshire [Arriva, First, National Express & others]
- X2/X3/X7 be subject to a 'service conference' brokered by Powys [operators and adjacent authorities]
- An outline contract specification for X4 should be developed by Powys as lead authority
- X5 development should be brokered by Gwynedd, bringing together the two principal operators.

9.6.8 There will be an ongoing programme of monitoring and review, to be agreed between the SMC and Welsh Assembly Government. The whole programme will require a steering group to oversee its development and the establishment of the SMC, which will then assume lead responsibility for delivery of the network and associated services, within a grant framework agreement with Welsh Assembly Government. This steering group could possibly continue in existence, with a continuing role in monitoring the operation and effectiveness of the arrangements.

Longer Distance Bus & Coach Links in Wales

**Appendix A:
Current Rail and Bus
Flows**



THE TAS PARTNERSHIP LIMITED

SPECIALIST CONSULTANTS IN PUBLIC TRANSPORT

1 CURRENT RAIL DEMAND

1.1 Stations were allocated to zones as follows:

- a) Eleven zones, grouping secondary Welsh stations by sections of route.
- b) Ten zones for major stations, both within and outwith Wales.
- c) Seven zones for other stations outside Wales, grouped by National Fares Manual (NFM) areas.

These are defined in Table 1 below.

1.2 For the purposes of grouping, stations outside Wales but included in the core Wales & Borders franchise operating area have been included in a) or b) as appropriate.

1.3 The results are presented in Table 2, in the form of a triangular matrix of annual journeys between zones.

1.4 A number of cells in the matrix show no data. This does not imply that **no** trips at all were made in the relevant year, but results from a limitation of the MOIRA program, which can report only the largest 9,999 flows. However, the smallest flow included in the matrix is of only 43 annual trips (between zones 5 and 9). As omitted flows are below this threshold, there is no significant effect on the utility of the results.

Table 1 : Rail station allocation to Zones

Zone Type	Zone Name	Description	From station	To station	Excluded Zones / stations
Line section	1	North Wales Coast	Holyhead	Llandudno / Flint	Holyhead
	2	North East Wales and the Borders	Shrewsbury	Crewe	Crewe, Shrewsbury
			Shrewsbury	Chester	Chester, Shrewsbury
			Wrexham Central	Bidston	
	3	Conwy Valley	Glan Conwy	Blaenau Ffestiniog	
	4	Cambrian Coast	Penhelig	Pwllheli	
	5	Mid Wales	Shrewsbury	Aberystwyth	Aberystwyth, Shrewsbury
	6	Marches South	Shrewsbury	Hereford	Shrewsbury
	7	Heart of Wales	Broome	Bynea	
	8	West Wales	Swansea	Fishguard / Milford Haven / Pembroke Dock	Swansea
	9	Swanline	Cardiff Central	Swansea	Cardiff Central, Swansea
10	Valley Lines (including City Line)	Cardiff	Barry Island, Penarth, Cardiff Bay, Coryton, Rhymney, Merthyr Tydfil, Aberdare, Treherbert	Cardiff (Central and Queen St)	
11	Gwent	Newport (Gwent)	Abergavenny	Newport (Gwent)	
		Newport (Gwent)	Chepstow	Newport (Gwent)	
Major station	AYW	Aberystwyth			
	CDF	Cardiff (Central / Queen St)			
	CRE	Crewe			
	CTR	Chester			
	HHD	Holyhead			
	LVL	Liverpool stations			
	MAN	Manchester stations			
	NWP	Newport (Gwent)			
	SHR	Shrewsbury			
	SWA	Swansea			
NFM Area	ZEST	NFM East Area			
	ZLON	NFM London Area			
	ZMID	NFM Midland Area			2, 4, 5, 6, 7, AYW, SHR
	ZNWE	NFM North West Area			1, 2, 3, CTR, CRE, HHD, LVL, MAN
	ZSCO	NFM Scotland Area			
	ZSTH	NFM South Area			
	ZWST	NFM West Area			7 to 11, CDF, NWP, SWA

Table 2 : Annual rail passenger flows in Wales

Between and Zone		1	2	3	4	5	6	7	8	9	10	11
Zone	Zone name											
1	N Wales Coast	522,638										
2	NE Wales & Borders	60,714	297,795									
3	Conwy Valley	61,866	179	36,752								
4	Cambrian Coast		107	96	347,304							
5	Mid Wales	351	1,033		23,288	15,760						
6	Marches South	2,769	5,080		55	1,041	159,610					
7	Heart of Wales	97	75				3,324	28,036				
8	West Wales	142	725				2,004	8,027	155,717			
9	Swanline	710	611			43	2,654	336	28,623	304,476		
10	Valley Lines	177	200				7,837	67	4,283	33,494	1,962,890	
11	Gwent	131	502			52	20,790		408	1,856	15,048	3,520
AYW	Aberystwyth	325	1,342		1,146	55,332	1,305				49	119
CDF	Cardiff	17,376	11,801		739	1,787	108,159	1,922	97,291	581,149	4,602,448	195,566
CRE	Crewe	39,245	30,617	408	368	691	9,407	444	771	977	536	895
CTR	Chester	279,224	113,605	2,423	166	791	4,110	433	563	724	284	355
HHD	Holyhead	81,057	1,516	314			292			66		
LVL	Liverpool	103,783	117,404	1,556	535	1,535	11,197	749	2,028	2,587	1,193	1,129
MAN	Manchester	122,587	45,942	1,104	1,498	2,581	23,982	962	3,587	4,493	2,423	2,512
NWP	Newport (Gwent)	2,029	1,985		46	293	37,695	70	9,310	28,775	83,912	57,771
SHR	Shrewsbury	5,121	153,207		8,024	50,050	141,590	23,475	1,576	1,131	569	1,140
SWA	Swansea	1,160	1,654			188	4,701	18,962	288,502	293,110	12,795	2,044
ZEST	NFM East Area	48,127	13,016	532	924	4,690	27,538	770	13,194	8,394	5,893	3,208
ZLON	NFM London Area	186,986	30,290	2,261	6,507	23,637	137,118	4,225	85,678	122,216	31,461	5,882
ZMID	NFM Midland Area	124,414	84,549	1,005	23,299	44,129	102,979	4,230	17,616	14,243	9,138	10,371
ZNWE	NFM Nth West Area	110,715	24,719	1,190	663	2,479	22,014	568	2,711	4,539	1,047	2,302
ZSCO	NFM Scotland Area	16,363	3,082	139	109	1,395	9,497	294	2,577	4,261	1,357	899
ZSTH	NFM South Area	22,335	4,632	179	269	2,854	22,719	281	21,450	3,897	9,961	1,286
ZWST	NFM West Area	25,528	11,624	139	838	4,264	75,418	888	50,754	49,292	78,301	77,462

Longer Distance Bus & Coach Links in Wales: Appendix A

Zones		AYW	CDF	CRE	CTR	HHD	LVL	MAN	NWP	SHR	SWA
CDF	Cardiff	1,662	-								
CRE	Crewe	805	8,374	-							
CTR	Chester	1,193	8,381	99,350	-						
HHD	Holyhead	153	1,115	3,299	11,832	-					
LVL	Liverpool	3,188	18,893	103,487		7,458	-				
MAN	Manchester	4,886	36,402	189,014	220,925	7,493		-			
NWP	Newport (Gwent)	337	600,724	2,412	1,551	215	5,487	8,355	-		
SHR	Shrewsbury	16,006	13,789	21,364	32,604	482	14,014	29,852	2,836	-	
SWA	Swansea	89	171,744	1,319	1,184	130	3,427	7,814	25,136	2,854	-
ZEST	NFM East Area	10,747	68,184	39,900	70,878	5,498		35,131	17,063	25,608	21,538
ZLON	NFM London Area	24,612	9,003		227,765	18,892	823,064	1,515,137	2,823	78,159	179,256
ZMID	NFM Midland Area	55,284	136,958	175,889	147,896	9,512	275,278	588,971	33,193	479,057	30,313
ZNWE	NFM Nth West Area	6,117	29,339	233,401	290,621	8,322	479,004	4,120,004	8,690	25,709	6,545
ZSCO	NFM Scotland Area	2,672	17,930	15,058	21,860	1,684	50,354	166,546	5,490	5,806	5,752
ZSTH	NFM South Area	5,552	52,571	8,116	21,744	2,345	23,962	122,097	16,761	11,140	17,931
ZWST	NFM West Area	8,207	423,610	39,496	34,092	2,643	105,045	244,122	170,921	24,621	83,817

Zones		ZEST	ZLON	ZMID	ZNWE	ZSCO	ZSTH	ZWST
ZLON	NFM London Area		-					
ZMID	NFM Midland Area	135,076	528,590	4,042,565				
ZNWE	NFM Nth West Area	229,597	685,517	322,031	837,258			
ZSCO	NFM Scotland Area	22,040		4,978	24,558	-		
ZSTH	NFM South Area	1,163		23,830	17,813		-	
ZWST	NFM West Area	141,292	1,476,716	475,827	111,448	26,240	293,486	1,753,976

2 CURRENT BUS DEMAND

2.1 The zones applied to this analysis are as shown in Table 3, with the corresponding rail zones for comparison purposes.

2.2 Each bus fare stage, which identifies boarding and (in most cases) alighting points, was assigned to the relevant zone. Each operator's zone-to-zone matrix of recorded passenger journeys was then merged into a composite matrix for Wales, and this is presented below in Table 4. This shows the daily average numbers of passengers (two-way flows) on Mondays to Fridays between each pair of cells in the matrix.

Table 3 : Bus zone definitions

Zone number	Description	Corresponding rail zone	Note
11	Flintshire (north/west)	1	
12	Denbighshire	1	
13	Conwy North	1	
14	Gwynedd North	1	
15	Isle of Anglesey	1	except Holyhead
21	Deeside / South Flintshire	2	
22	Wrexham area	2	
30	Conwy Valley and Bala	3	including Blaenau Ffestiniog
40	Gwynedd South and Cambrian Coast	4	
51	Mid Wales - Powys North	5	
52	Mid Wales - Ceredigion North	5	except Aberystwyth
53	Ceredigion South	5	
61	Herefordshire	6	
71	Powys Central	7	
72	Heart of Wales - Carmarthenshire East	7	
73	Powys South	N/A	
81	Carmarthenshire West	8	including Llanelli
82	Pembrokeshire	8	
91	Neath Port Talbot	9	
92	Bridgend area	9	
101	Vale of Glamorgan	10	
102	Caerphilly County Borough	10	
103	Rhondda Cynon Taff	10	
104	Merthyr Tydfil	10	
105	Blaenau Gwent	10	
106	Torfaen	N/A	
107	Monmouthshire	11	
Individual towns and cities			
100	Holyhead	HHD	
200	Aberystwyth	AYW	
300	Swansea	SWA	
400	Chester	CTR	
500	Cardiff	CDF	
600	Newport	NWP	

Longer Distance Bus & Coach Links in Wales: Appendix A

Zone number	Description	Corresponding rail zone	Note
700	Bristol	ZWST (part)	

Longer Distance Bus & Coach Links in Wales

Appendix B:
Draft Outline Timetables



THE TAS PARTNERSHIP LIMITED

SPECIALIST CONSULTANTS IN PUBLIC TRANSPORT

Longer Distance Bus & Coach Links in Wales: Appendix B

Eastern Corridor

Northbound - specimen timings

	Service	X7	X4	X3	X2
Cardiff, Bus Station			08:45		
Pontypridd, Bus Station			09:10		
Merthyr Tydfil, Bus Station			09:35		
Swansea, Quadrant Bus Stn.	08:45		-		
Ystradgynlais, Cross	09:25		-		
Sennybridge	09:54		-		
Brecon, Bulwark arr.	10:10		10:10		
Brecon, Bulwark dep.	10:20		10:20		
Talgarth, Square	10:43		-		
Hay on Wye, Oxford Rd.	11:00		-		
Hereford, Rail Station	11:50		-		
Builth Wells, Post Office			11:00		
Llandrindod Wells, Bus Station			11:20		
Cross Gates			11:27		
Dolfor			12:00		
Aberystwyth, Rail Station			-	10:30	
Ponterwyd			-	11:00	
Llanidloes, Gro			-	11:30	
Caersws, Buck Hotel			-	11:51	
Newtown, Bus Station arr.			12:15	12:05	
Newtown, Bus Station dep.				12:15	13:00
Berriew, Golden Lion				12:41	13:26
Welshpool, High Street arr.				12:50	13:35
Welshpool, High Street dep.				12:50	13:39
Shrewsbury, Bus Station				13:35	-
Llanymynech, Lion Hotel					14:01
Oswestry, Bus Station arr.					14:21
Oswestry, Bus Station dep.					14:24
Chirk, Hand					14:42
Ruabon, High Street					14:56
Wrexham, Bus Station					15:11
Mold, Bus Station					15:36

Longer Distance Bus & Coach Links in Wales: Appendix B

Eastern Corridor

Southbound - specimen timings

	Service	X3	X2	X4	X7
Mold, Bus Station			09:50		
Wrexham, Bus Station			10:20		
Ruabon, High Street			10:35		
Chirk, Hand			10:49		
Oswestry, Bus Station arr.			11:07		
Oswestry, Bus Station dep.			11:10		
Llanymynech, Lion Hotel			11:30		
Shrewsbury, Bus Station	10:20		-		
Welshpool, High Street arr.	11:05		11:52		
Welshpool, High Street dep.	11:05		11:55		
Berriew, Golden Lion	11:14		12:04		
Newtown, Bus Station arr.	11:40		12:30		
Newtown, Bus Station dep.	11:45			13:00	
Caersws, Buck Hotel	11:59			-	
Llanidloes, Gro	12:20			-	
Ponterwyd	12:50			-	
Aberystwyth, Rail Station	13:20			-	
Dolfor				13:15	
Cross Gates				13:48	
Llandrindod Wells, Bus Station				13:55	
Builth Wells, Post Office				14:15	
Hereford, Rail Station				-	13:25
Hay on Wye, Oxford Rd.				-	14:15
Talgarth, Square				-	14:32
Brecon, Bulwark arr.				14:55	14:55
Brecon, Bulwark dep.				15:05	15:05
Sennybridge				-	15:21
Ystradgynlais, Cross				-	15:53
Swansea, Quadrant Bus Stn.				-	16:30
Merthyr Tydfil, Bus Station				15:40	
Pontypridd, Bus Station				16:00	
Cardiff, Bus Station				16:30	

Longer Distance Bus & Coach Links in Wales: Appendix B

Western Corridor

Northbound - specimen timings

	Service	X7	X1	X5
	Notes			
Cardiff, Bus Station			11:30	
Sarn, Odeon (McArthur Glen)			12:00	
Hereford, Rail Station	09:25		-	
Hay on Wye, Oxford Rd.	10:15		-	
Brecon, Bulwark	11:05		-	
Sennybridge	11:21		-	
Ystradgynlais, Cross	11:53		-	
Swansea, Quadrant Bus Stn. arr.	12:30	12:30		
Swansea, Quadrant Bus Stn. dep.			12:35	
Cross Hands			13:05	
Carmarthen, Bus Station			13:30	
Lampeter, Y Llew Du			14:10	
Aberaeron, Alban Square			14:40	
Aberystwyth, Rail Station arr.			15:15	
Aberystwyth, Rail Station dep.				15:45
Bow Street				15:55
Machynlleth, Clock				16:25
Corris Uchaf				16:38
Barmouth			-	16:40
Dolgellau, Eldon Square arr.			17:00	17:03
Dolgellau, Eldon Square dep.			17:15	17:10
Llanuwchllyn			-	17:33
Bala			-	17:45
Llandrillo			-	18:05
Corwen, Square			-	18:20
Glyndyfrdwy			-	18:30
Llangollen, Berwyn St.			-	18:40
Ruabon			-	18:55
Wrexham, Bus Station			-	19:10
Trawsfynydd, Cross Foxes				17:38
Tan y Bwlch, Oakeley Arms				17:50
Porthmadog, Australia				18:05
Garndolbenmaen				18:20
Caernarfon, Bus Stn. arr.				18:55
Caernarfon, Bus Stn. dep.				19:00
Bangor, Clock arr.				19:25
Bangor, Clock dep.				19:30
Llangefni, High Street				19:50
Holyhead, Summer Hill				20:05

Longer Distance Bus & Coach Links in Wales: Appendix B

Western Corridor

Southbound - specimen timings

	Service Notes	X94	X5	X1	X7
Holyhead, Summer Hill			08:25		
Llangefni Parkway			08:40		
Bangor, Clock arr.			09:00		
Bangor, Clock dep.			09:05		
Caernarfon, Bus Stn.			09:30		
Garndolbenmaen			10:01		
Porthmadog, Australia			10:20		
Tan y Bwlch, Oakeley Arms			10:35		
Trawsfynydd, Cross Foxes			10:47		
Wrexham, Bus Station		09:15	-		
Ruabon		09:30	-		
Llangollen, Berwyn St.		09:45	-		
Glyndyfrdwy		09:55	-		
Corwen, Square		10:05	-		
Llandrillo		10:20	-		
Bala		10:40	-		
Llanuwchllyn		10:52	-		
Dolgellau, Eldon Square arr.		11:15	11:10		
Dolgellau, Eldon Square dep.		11:20	11:25		
Barmouth		11:42	-		
Corris Uchaf			11:45		
Machynlleth, Clock			12:00		
Bow Street			12:29		
Aberystwyth, Rail Station arr.			12:40		
Aberystwyth, Rail Station dep.				13:30	
Aberaeron, Alban Square				14:05	
Lampeter, Bank				14:35	
Carmarthen, Bus Station				15:15	
Cross Hands				15:40	
Swansea, Quadrant Bus Stn. arr.				16:10	
Swansea, Quadrant Bus Stn. dep.				16:15	16:45
Ystradgynlais, Cross				-	17:25
Sennybridge				-	17:54
Brecon, Bulwark				-	18:10
Hay on Wye, Oxford Rd.				-	19:00
Hereford, Rail Station				-	19:50
Sarn, Odeon (McArthur Glen)				16:45	
Cardiff, Bus Station				17:15	

Longer Distance Bus & Coach Links in Wales

**Appendix C:
Route Costing**



THE TAS PARTNERSHIP LIMITED

SPECIALIST CONSULTANTS IN PUBLIC TRANSPORT

Service	Route	Vehicle Type	Rate/Mile	WageType	Rate/Hour	Rate/PVR	Passengers	Cash Revenue	Subsidy	ContractType	OffBus	Cash+Sub	OBR
X1	Cardiff - Aberystwyth	Coach	£0.16	7	£9.36	£527.38	3,634	£ 7,453		NET		£7,453	£0
X2	Mold - Newtown	Coach	£0.16	7	£9.36	£527.38	4,104	£ 4,622		NET		£4,622	£0
X3	Aberystwyth - Shrewsbury	Coach	£0.16	7	£9.36	£527.38	3,612	£ 4,838		NET		£4,838	£0
X4	Cardiff - Newtown	Coach	£0.16	7	£9.36	£527.38	2,709	£ 4,942		NET		£4,942	£0
X5	Aberystwyth - Holyhead	Coach	£0.16	7	£9.36	£527.38	5,372	£ 8,456		NET		£8,456	£0
X7	Hereford - Swansea	Coach	£0.16	7	£9.36	£527.38	3,221	£ 6,502		NET		£6,502	£0
X10	Cardiff - Haverfordwest	Coach	£0.16	7	£9.36	£527.38	954	£ 2,033		NET		£2,033	£0
X94	Wrexham - Barmouth	Coach	£0.16	7	£9.36	£527.38	4,277	£ 6,818		NET		£6,818	£0
	Other Revenue/Costs												
TOTAL							27,883	£45,664	£0		£0		

Service	Route	Total Rev	Bus Hours	Mileage	PVR	Hourly Costs	Mileage Costs	PVR Costs	Total Operating Costs	Gross Profit	GPMargin	Fixed Costs Apportionment	Net Profit
X1	Cardiff - Aberystwyth	£7,453	217.6	6772.8	3.0	£2,037	£1,084	£1,582	£4,703	£2,751	36.90%	£1,463	£1,287
X2	Mold - Newtown	£4,622	218.5	4902.8	3.0	£2,045	£784	£1,582	£4,412	£211	4.56%	£907	-£697
X3	Aberystwyth - Shrewsbury	£4,838	258.4	7276.0	4.0	£2,419	£1,164	£2,110	£5,692	-£854	-17.65%	£950	-£1,804
X4	Cardiff - Newtown	£4,942	301.2	8452.4	4.0	£2,820	£1,352	£2,110	£6,282	-£1,340	-27.11%	£970	-£2,310
X5	Aberystwyth - Holyhead	£8,456	367.1	10145.6	5.0	£3,436	£1,623	£2,637	£7,696	£760	8.99%	£1,660	-£900
X7	Hereford - Swansea	£6,502	260.4	6772.8	4.0	£2,438	£1,084	£2,110	£5,631	£871	13.40%	£1,276	-£405
X10	Cardiff - Haverfordwest	£2,033	226.1	7820.0	3.0	£2,116	£1,251	£1,582	£4,950	-£2,917	-143.50%	£399	-£3,316
X94	Wrexham - Barmouth	£6,818	299.2	6711.6	3.0	£2,801	£1,074	£1,582	£5,457	£1,361	19.97%	£1,338	£23
	Other Revenue/Costs	£0											
TOTAL		£45,664	2,149	58,854	29.0	£20,110	£9,417	£15,294	£44,821	£843	1.85%	£8,964	-£8,121

Service	Route	NPMargin	Revenue%	Revenue/Bu	GP/Bus	NP/Bus
X1	Cardiff - Aberystwyth	17.27%	16.32%	£2,484	£917	£429
X2	Mold - Newtown	-15.07%	10.12%	£1,541	£70	-£232
X3	Aberystwyth - Shrewsbury	-37.28%	10.60%	£1,210	-£214	-£451
X4	Cardiff - Newtown	-46.74%	10.82%	£1,235	-£335	-£577
X5	Aberystwyth - Holyhead	-10.64%	18.52%	£1,691	£152	-£180
X7	Hereford - Swansea	-6.23%	14.24%	£1,626	£218	-£101
X10	Cardiff - Haverfordwest	-163.13%	4.45%	£678	-£972	-£1,105
X94	Wrexham - Barmouth	0.34%	14.93%	£2,273	£454	£8
	Other Revenue/Costs					
TOTAL		-17.78%	100.00%	£1,575	£29	-£280

Longer Distance Bus & Coach Links in Wales

**Appendix D:
Consultation**



THE TAS PARTNERSHIP LIMITED

SPECIALIST CONSULTANTS IN PUBLIC TRANSPORT

1 CONSULTATION PROCESS

- 1.1 Significant consultation was inherent in the process of this project, both with operators and local authority transport co-ordinators. The consultation with operators is covered in the main report (chapter 6).
- 1.2 Consultation with local authorities followed several paths. Initially, meetings were held with:
- the Association of Transport Co-ordinating Officers (ATCO)
 - the TAITH regional consortium
 - Powys County Council.
- 1.3 As a result of the ATCO meeting, all authorities were invited to submit views on the project. Further consultations took place by telephone or e-mail with Wrexham County Borough Council, Carmarthenshire and Ceredigion County Councils.
- 1.4 Both the Interim Report and the Draft Final Report were then circulated to local authority transport officers for comments, in December 2002 and February 2003 respectively.
- 1.5 This Appendix records the principal points made in all stages of these consultations.

2 LOCAL AUTHORITY RESPONSES

- 2.1 Responses were received from five local authorities, and one from the Welsh Local Government Association (WLGA). These are summarised below, with any comment on subsequent developments shown in brackets *[thus]*.
- a) Caerphilly County Borough Council –
- ◆ concern over effects on smaller operators of incorporating tendered services into routes for which they are not well suited
 - ◆ Local Transport Services Grant inappropriate for significant infrastructure spending *[Transport Grant now preferred mechanism]*
 - ◆ specific comments on certain routes (covered elsewhere)
 - ◆ ‘coach’ should be minimum appropriate vehicle standard, but 7 year age limit may be unnecessarily onerous – costs may be too low
 - ◆ concessionary fares must be available for ‘local’ travel - £4 single fare limit seems reasonable, but may be difficult to communicate *[matter for Welsh Assembly Government to determine]*
- b) Conwy County Borough Council –
- ◆ good connections and through ticketing from Llandudno via Bangor should be ensured if service goes to Holyhead *[agreed]*

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- ◆ service should be numbered / marketed as Holyhead – Cardiff (even if vehicles turn at Aberystwyth) – use of X5 would be very confusing *[noted – numbers used are for reference only]*
 - ◆ hope for synergy with new Wales & Borders Trains franchise
 - ◆ noted previous unsuccessful attempts to co-ordinate Gwynedd area operators *[additional Transport Act 2000 powers place now shift balance in authorities' favour]*
- c) Denbighshire County Council –
- ◆ concern over ability to deliver a consistent and coherent product on a 'commercial' network basis, thus undermining marketability *[SMC and other proposals seek to address this]*
 - ◆ attractiveness of 'bus' network for long journeys will be less than a dedicated coach network – to be effective, services need to adopt a bold approach to providing fast links wherever possible *[a guideline that 'stopping' sections should be no more than 15% slower than an express journey seeks to minimise the disincentive]*
 - ◆ expectation of need for continuing revenue support noted, which will require specific resourcing through LTSG *[separation of 'local' and 'strategic' roles proposed for revenue funding]*
 - ◆ disappointed that no through link is proposed to Denbigh and Rhyl – connections at Corwen may be constrained by other service links *[will be subject to detailed discussion]*
 - ◆ the fare structure needs to be defined *[this will relate directly to existing local scales, with Traws Cambria type fares for longer distances]*
 - ◆ beneficial to make the network part of National Express *[informal discussion with National Express indicates that this type of regional operation does not fit their strategic business plan]*
- d) Gwynedd County Council –
- ◆ flows are small, especially for long distances, but vehicle quality and ticketing need improvement
 - ◆ proposals must take account of existing services – Gwynedd cannot support superimposed long distance services, but there are significant problems in co-ordination, routing and scheduling *[we believe that all these issues have now been reasonably addressed]*
- e) Powys County Council –
- ◆ some existing free concessionary travel may exceed the suggested £4 single fare limit, and should not be compromised
 - ◆ additional funding requirements should be met by specific funding from Welsh Assembly Government, whether LTSG or otherwise *[this is recognised]*

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- ◆ concern over effects of proposed services on the activities of smaller operators, who must be retained in the market *[this is addressed through the 'service conference' proposal, which would give the local authority a prime role in ensuring a stable market]*

f) WLGA –

- ◆ if forecast that over 80% of costs could be met commercially is correct, this could have significant effects on distribution of public transport grants between rail and bus, with the option of vastly expanded rural transport at similar cost *[the network is seen as complementary to rail services, which tend to serve a different market, and exploits most of the primarily commercial strategic corridors available – so large expansion would require higher subsidy levels]*
- ◆ sceptical about cost and revenue forecasts – what would be effect of 25% more cost and 25% less revenue? *[this would give an annual shortfall of around £1.1 million, but is regarded as outside any likely degree of sensitivity]*