

8. Economic Benefits

- 8.1 Within this section we shall investigate the likely economic benefits arising from the full restoration of the Shrewsbury and Newport Canals.
- 8.2 The benefits arising from the canal restoration relate to the potential for:
- ◆ Water-based recreation activities, such as hire and privately owned boats, trip and restaurant boats, canoeing and angling;
 - ◆ Land-based recreation activities, such as walking, cycling, horse riding, sightseeing, picnicking and bird watching;
 - ◆ Development opportunities associated with canal restoration, including the provision of facilities for use of the canal;
 - ◆ Expenditure on construction and maintenance of the canal, in addition to the boats and other facilities associated with the use of the canal.
- 8.3 The potential for each of these is significant on the majority of canal restoration schemes. However, the position of the Shrewsbury and Newport Canals is especially favourable due to the following factors:
- 8.4 The canals lead of an already popular part of the cruising network: indeed, there is thought to be a shortage of capacity, both for cruising water and moorings in the area. There are no moorings for private boats available on the canals and rivers leading into the River Severn, and availability is very limited on the four counties ring. Thus there is already a demand for both the cruising space and mooring facilities the canal will offer. This demand will not die in the foreseeable future. There is anecdotal evidence (directly experienced by an Atkins member of staff) of such a lack of moorings that boat owners in the West Midlands are having to base their boats on the Leicester section of the Grand Union Canal. This trend will continue and a net migration of boats from these more distant moorings to new facilities will occur as new facilities are provided.
- 8.5 The canal passes close to Telford, a major centre of population, and to Shrewsbury, an existing tourist venue. Other canals leading to tourist areas are outstandingly popular. The canals leading to Chester, Stratford, Oxford and Warwick are all very busy throughout the Summer and cities such as Peterborough, Ely, Gloucester, Evesham, Skipton and Lincoln all provide popular focuses on their navigations. The proximity of Telford is especially significant, as it is large local populations that swell the informal visitor presence, and with it, the economic benefits. British Waterways often quote the overall number of people who live within five miles of a navigable waterway. Telford and Shrewsbury between them have a population of over 250,000 who do not currently live within five miles of a navigable waterway, but will once the restoration is complete.
- 8.6 Although much of the canal is rural, and in order to retain the character of both the canal and the countryside this must be protected, there are significant development opportunities along the length of the canal, especially for urban extensions to Telford and Shrewsbury. In addition, there is the opportunity for the canal to act as a catalyst for urban regeneration in Shrewsbury.
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WATER-BASED RECREATION

Hire Boats

- 8.7 As with other sectors within the holiday market, the hire boat industry is increasingly being required to cater for short break holidays – a situation that has evolved over the past 20 years. The majority of boatyards offer three day weekend and four day mid-week breaks at around 60% of the price of a full week. This potential has significantly increased the potential of shorter waterways where a week-long cruise covering the whole waterway may be too leisurely for some users.
- 8.8 The canals proximity to the Shropshire Union Canal, the River Severn and the rest of the waterways network suggests that if complete restoration was to occur a large hire boat operation could exist. Assuming 30 hire boats could be supported and let out for an average of 30 weeks per year, with a weekly hire fee of £700 a yield of £630,000 could be obtained.
- 8.9 Local economic benefit will arise from the daily expenditure of holidaymakers using the hire boats. The bulk of this spend will be on food and drink from shops, public houses and restaurants along the route of the canals. A spend per day per boat of £48.92 has been assumed, based on figures from the East Midlands Waterways Boating Survey in 1991. Therefore, the full scheme could generate a total spend of at least £264,168 per year from hire boat users.
- 8.10 Boats that cater for people with mobility impairments are available on some canals. For example, The Bruce Charitable Trust is a registered charity that provides four wide beamed canal boats on the Kennet and Avon Canal for self catering holidays. Narrow beam boats have been piloted elsewhere either for skippered parties or for families with disabled members.

Private Canal Boats

- 8.11 The number of private boats tends to reflect both the size of the population living in the area and the perceived attractiveness of the waterway system. The economic benefits will arise from:
- ◆ **Expenditure on moorings and maintenance of boats** – The average annual expenditure on boat maintenance is assumed to be approximately £1,950 based on data originally calculated by “Waterways World”. This figure includes mooring fees, repairs and maintenance costs. Thus, 300 Private boats moored along Shrewsbury and Newport Canal could be expected to generate approximately £585,000 per annum to local boatyards. It should be noted, however, that the shortage of moorings within the region may lead to a higher income from mooring as market forces push prices higher.
 - ◆ **Daily expenditure by individuals using the boats** – Daily expenditure per boat is likely to be slightly less for private boats compared to hire boats, as local owners are less likely to spend money on souvenirs and visiting attractions. Therefore a daily spend per boat of £38.86 has been assumed, resulting in a total spend of £186,528.
 - ◆ **Expenditure generated by boat owners when making visits to their moored boats but not using them for cruising purposes** – Boat owners make a

number of visits to their boats each year without going cruising. Expenditure per visit is likely to be substantially less than spending whilst cruising. A survey of visitors to the Kennet and Avon Canal (1990) indicated that boat owner's make an average 16 such visits per year and spend an average of £5.45 per day. Therefore, the full scheme could produce an annual spend of £26,160.

- ◆ Both private and hire boats represent potential business opportunities for land owners and businesses within the area. The revenue to these is included in the above figures, but marinas, boatyards and associated facilities need good canal-side sites accessible to the road network. The nature of the canal means that these sites all belong to local landowners and thus represent an opportunity for them to participate in the restored canal.

Visiting Boats

- 8.12 The above figures relate to the revenue accruing to the local economy as a result of new boats serving a new market and based on the canal or in close proximity to it. Careful examination of the figures reveals that these boats alone would result in less than 2000 boat movements a year along the canal, when the expected figure will be nearer 5000, given the level of use of the four counties ring and the Llangollen Canal. These additional boat movements will be from boats not based on the canal but visiting from adjoining waterways. Some boats based on the canal will also make visits to adjoining waterways, but these will be offset by visiting boats to the canal.
- 8.13 Thus there are an extra 3000 boat movements over and above those forecast by boats based on the canal. The cruising time from Norbury to Shrewsbury and return will be approximately 30 hours, or four days cruising, plus many boaters will spend a total of one day visiting places along the waterway, most notably Shrewsbury itself. The canal can not take credit for the cost of hiring or mooring these boats; even if they are new to the system the revenue does not accrue in the canal corridor, but the visitor spend while these boats are on the canal does accrue to the canal corridor.
- 8.14 The pattern of boat utilisation means that while hire boats only make up about ten percent of the total boat fleet, they tend to make around fifty percent of the journeys: thus of the extra 3000 boat visits we assume that 1500 are by hire boats and 1500 by private boats. As each boat will spend five days on the canal the overall extra number of boat days is 7500 for each category. Using the figures of daily spend in paragraphs 8.5 and 8.7 this gives a total annual spend of £366,900 for hire boat crews and £291,450 for private boat crews: a total of £658,350 from visiting boats.

Trip Boats and Restaurant Boats

- 8.15 Trip boats and restaurant boats tend to operate in proximity to centres of population. Thus the Shrewsbury and Newport Canal should provide good opportunities for such ventures, especially from/to centres of Shrewsbury, Telford and Newport. The Shrewsbury and Newport Canal could easily support at least one trip boat and one restaurant and there is likely to be capacity for more than this if the entire route is opened, together with Humber and Trench Arms.
- 8.16 Assuming that boats will achieve a similar pattern of operation and use as that for existing operators on the Kennet and Avon Canal, a trip boat could expect to carry approximately 3,200 passengers per year at an average charge of £3.50 per head, yielding a total of £11,200 for one boat. A restaurant boat could expect to carry
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approximately 1,800 passengers per year at an average charge of £20 per head, yielding a total of £36,000 per annum.

- 8.17 In addition to expenditure on boat trips visitors will also spend money elsewhere in the local area as part of their overall visit. Based on the Kennet and Avon survey this is likely to be around £4.52 per visit. Thus an additional spend of £22,600 may be generated by people taking boat trips.

Day Boats

- 8.18 Self-drive boats designed for day or half day hire are offered by increasing numbers of boatyards on the main British Waterways network. The majority are narrow boat style accommodating up to 12 passengers which are frequently seen by operators as a means of promoting their holiday hire fleets. An alternative is the smaller glass fibre 'picnic-boat' typically powered by silent electric motors and rented for about £35-40 per day.
- 8.19 Typically day boats will be hired as an ancillary part of another business, either an existing boatyard or marina (whether or not holiday boats are hired) or a waterside public house or hotel.
- 8.20 Day boats designed for the mobility impaired are also available on some canals. For example, day trips for groups of people with physical disabilities are available on the Kennet and Avon Canal, through the aforementioned Bruce Charitable Trust.
- 8.21 If a fleet of two narrow boats are provided for an average of 60 days per year with a daily hire fee of £70, a total spend of £8,400 may be expected. As with trip boat users, there would also be some additional spending associated with a day or half-day hire. Assuming an average of 5 people in each boat party, some 600 visits may be generated. With a daily spend of £4.52 per person; a further £2,712 of associated indirect spending would arise from a successfully established day hire boat operation.

Canoeists

- 8.22 It is assumed that the canal will be suitable for canoeists. Canoeists who are members of the British Canoe Union are permitted to use the main canal system managed by British Waterways free of charge and it is assumed that it would not be practical to levy a licence fee on canoeists and other un-powered boats using the Shrewsbury and Newport Canals. Although there may be some potential for leasing un-powered vessels the income would be minimal. However, canoeists will spend money along the canal during their visit. Assuming the amount of spend per visit would be similar to users on the Kennet and Avon Canal, then an expenditure of £3.66 per head will arise. The number of users is difficult to forecast but an estimated 10,000 visits could be expected on the Shrewsbury and Newport canals per annum, producing an associated spend of £36,600 per year.

Angling

- 8.23 It is estimated that coarse fishing attracts some 3-4% of the population, although it is not one of the faster growing sports in Britain. The Shrewsbury and Newport Canals are not likely to provide particularly good fishing conditions in the early years after restoration as it will take time for a stable ecological habitat and fish population to

become established.. However, fishing is already established on the Shropshire Union Canal, where fishing rights are overseen by a number of different angling clubs and there is potential to build on this basis as well as fishermen who already utilise the stretch of canal in-water through Newport.

- 8.24 In the longer term, sympathetic and active management, possibly through leasing the fishing rights to a local angling club, has the potential to increase the value of the canal for angling. However, for the purposes of this study, the use of the canal for fishing and its associated spending are assumed to be limited. Assuming that use is 25% of the level surveyed on the Kennet and Avon canal, then the Shrewsbury and Newport Canals might attract approximately 6,750 angling visits per year, with an associated spend of £22,342.50, based on an average spend per visit of £3.31.

LAND-BASED RECREATION

- 8.25 As well as water-based activities, the canal corridor will provide opportunities for a wide range of informal activities including walking, cycling, horse riding and “gongoozlers” (i.e. sightseers attracted by the canal environment). Such uses rarely attract any direct costs

Towpath Users

- 8.26 Findings from a national survey of over 2,000 towpath users, undertaken by British Waterways in 2000, reveal that:
- ◆ The majority of towpath use is very local – 24% of the sample lived within one mile and 60% travelled five miles or less. Of the 25% who travelled over eleven miles to access the towpath, around half (53%) were day trippers.
 - ◆ A geographical variation exists in relation to the trip type of non-local visitors whereby London and the Midlands attract higher proportions of day visitors, Scotland is more popular for holidays and the south is popular for both short breaks and holidays.
 - ◆ Towpaths attract visitors of all ages, although the 15-24 year age group appears to be underrepresented.
 - ◆ The most popular reason for visiting a towpath is “to walk for pleasure”. This accounted for 33% of all respondents, although holidaymakers seemed more likely to visit a towpath ‘to look around the area’.
 - ◆ The average length of time spent on a towpath was 1-2 hours, with almost 40% staying one hour or less. However, 20% intended to stay for three hours or more.
 - ◆ A similar proportion of people walk to a towpath as arrive by private motorised transport (40% and 38% respectively)
 - ◆ Of those questioned, the average number of visits to a canal or river used by boats was just under 40 per year.
 - ◆ The mean expenditure for all respondents for the day on which they were interviewed was just under £10, although 50% of towpath users spent nothing at all (see Table 6.1*)

(* The mean figures represent the average based on all respondents, including those who spent nothing. This allows the calculation of a gross estimate for spending related to the waterway if an estimate of the total number of visitors/users was available).

Table 8.1 – Mean Expenditure of Towpath Users

	Mean Amount (£)	% Spending Nothing
Eating and drinking in pubs	3.18	76
Eating and drinking in cafes/restaurants	2.10	74
Food/drink/snacks from shops	0.83	81
Car Parking	0.11	90
Admission tickets	0.23	93
Boat trip/cycle hire	0.24	93
Gifts/souvenirs/books	0.85	90
Overnight accommodation	1.83	92
Other activities	1.14	85
TOTAL	£9.96	50%

(Source: British Waterways - Visitor Surveys 2000)

Cyclists

- 8.27 Almost one in ten of those questioned for the British Waterways survey had cycled to the towpath. With regard to this study, the route of the Shrewsbury – Newport Canal is identified within the Shrewsbury and Atcham Local Plan and is proposed to be part of the Sustrans link to the national cycle network as part of the Peak District Family cycling route.

Horseriding

- 8.28 There are a number of bridleways within the vicinity of the canal basin and there is potential for allowing horseriders to share the towpaths. However, it should be noted that economic benefit is unlikely to be great where no provision exists already. It is also important for the client to consider whether horse riding would be a desirable activity given the potential conflict with pedestrians and the design and maintenance implications of providing access under bridges.

“Gongoozlers”

- 8.29 Sightseeing and watching water-based activities is a major attraction to canal visitors. A survey of the Kennet and Avon Canal in 1990 indicated that 30% of leisure towpath users fell into this category. Levels of interest can be enhanced through the provision of interpretive facilities that inform visitors about the built and wildlife heritage of the canal. Special interest groups, such as canal historians, archaeologists and education groups can also benefit from such provision.

Other Activities

- 8.30 Other activities that a canal towpath and adjoining public open spaces can provide for include bird watching, jogging, photography, picnicking and general relaxation.
- 8.31 The Kennet and Avon canal is 86 miles long and visited by an estimated 11 million visitors per year. However, almost one third of users are either on non leisure trips, visiting a specific attraction, or involved in a water-based activity such as angling or trip boats. Therefore, the land-based leisure use per mile of canal is approximately 87,582 visits per mile. It has been assumed that the Shrewsbury and Newport Canals may achieve half the number of land-based leisure visitors per mile than on the Kennet and Avon Canal, therefore giving a figure of approximately 43,791 visits per mile and approximately 1.1 million visitors per year.
- 8.32 Applying the findings from the towpath users survey regarding mean daily expenditure, 1.1 million visitors could be expected to yield an annual spend of almost £11 million. However, we believe this figure to be unrealistic. Based on the Kennet and Avon survey in 1990, we suggest that 30% of people visiting the towpaths for informal purposes would spend an average of approximately £4.50 that would not otherwise have been spent in the local economy. Therefore the full restoration scheme could yield £1,485,000 per year relating to land-based leisure use.

Summary of Benefits

- 8.33 The annual benefits of the scheme are summarised below:

Table 8.2 – Summary of Scheme Benefits

Activity		Sum
Hire Boat Rental		£630,000
Hire Boat Daily Spend	Based on canal	£264,168
	Visiting	£366,900
Private Boat Spend	Upkeep	£585,000
	Daily Spend	£186,528
	Non-cruising visits	£26,160
	Visiting boats	£291,450
Trip and Restaurant boats		£69,800
Day Boats		£11,112
Canoeists		£36,600
Angling		£44,685
Informal Visitors		£1,485,000
	Total	£3,997,403

DEVELOPMENT OPPORTUNITIES

- 8.34 The restoration of the Shrewsbury and Newport Canals will have an important impact on values of existing local property as well as potential development sites.

Existing Property

- 8.35 Research undertaken by Newcastle University (for British Waterways) on the impact of canal side locations in terms of added value indicated that there was a positive

premium associated with the proximity of residential properties to waterways. The extent of the premium varied according to the type of property and its associated environment. Thus new property developments in a pristine waterway environment with a water frontage attract an average premium of 19% compared with similar properties at some distance from the canal or river. The premium for other properties in a waterside development compared with those at some distance away from the water was 8%.

- 8.36 Therefore, the restoration of the Shrewsbury and Newport Canals could result in increased property values along the length of the canals. However, the benefits will accrue to individual property owners and be realised only on resale. Although this effect has been recognised, no attempt has been made to estimate the overall value that may be attached to such properties.

Potential Canal Side Development

- 8.37 The restoration of the canals will enhance the development prospects and value of available development sites along the canal route as a result of the additional premium attached to waterside property. The effect will primarily apply to residential development but such environmental enhancement may also attract in commercial and industrial development. There will also be the opportunity for water related development on some sites for uses such as boatyards and marinas.

Canal Related Development

- 8.38 The development of facilities to serve the leisure and recreation activities that will arise from canal restoration will generate capital investment in the form of boatyards and catering and retail outlets along the canal. It is difficult to estimate the scale of the latter as such investment will be dependent on a number of variables, such as the ability of existing establishments to cope with increased demand and the development opportunities that may arise along the canal routes. Therefore, no estimate of capital investment with regard to catering and retail outlets has been made.
- 8.39 It has been assumed that boatyard capacity sufficient to provide the bulk of the additional moorings for private boats as well as the base for hire boat operations will be developed to meet the anticipated potential demand.

EXPENDITURE ON CONSTRUCTION AND MAINTENANCE

- 8.40 The construction of the canal and canal related development, together with the ongoing maintenance, will generate employment in the area.
- 8.41 The total capital works cost to restore the Shrewsbury and Newport Canals is estimated to be approximately £84 million. Employment benefits arising from this expenditure will arise from direct employment on the site and from indirect employment in the companies supplying both materials and expertise to the project. The development will involve major civil engineering work and it is assumed that much of the work will be carried out under contract by a national construction company. However, it is likely that 80% of the employees will be drawn from the local area.
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EMPLOYMENT GENERATION

- 8.42 With a total capital works cost of £86 million, it is estimated that 1011 FTE direct jobs would be generated, with an 80/20% split in favour of the local area workforce.
- 8.43 Indirect employment will also be significant as it is likely that many of the building products and materials will be supplied locally. A further 2558 FTE indirect jobs could be generated, half of which are likely to be drawn from the local area. It is also estimated that approximately one third of the construction cost for materials and plant will be fed back into the local economy.

MAINTENANCE COSTS

- 8.44 It is assumed that maintenance costs will be met by revenue raised from the operation of the canal. The bulk of this is licence revenue from the additional boats licensed in the area as a result of the new navigation. However, there is other revenue available to the operator, in the form of rental of canalside property, development of canalside sites (although if the operator of the canal intends to do this, those sites will have to be purchased at commercial rates), the sale of water, drainage charges, etc.

COST BENEFIT ANALYSIS

- 8.45 The benefits identified in this report have been set against the cost to provide an initial indication of value for money. This is done by using recognised techniques for cost benefit analysis. This is not simply setting the capital costs of the scheme against the annual benefits. To do this would be the equivalent of getting an interest free loan to undertake the project. In practice, we have taken the capital costs for each of two scenarios and compared them with the benefits over a thirty year period.
- 8.46 The critical factor for this type of work is the discount rate. This is the rate at which future year costs are discounted compared to present day costs. The principle of this concept can be described in two ways. The first is to pose the question, which is worth more, £1,000 now or the same amount this time next year? The answer is clearly that the money now is worth more, as it could be invested to yield a greater sum by next year. Alternatively, if a sum of money was borrowed, how much would need to be raised to pay it back? Clearly a loan of £10 million could not be repaid with 10 annual payments of £1 million due to the interest accrued. Therefore the value of future expenditure and future monetary benefits is reduced compared to present day values. The rate at which future year values are discounted is known as the discount rate.
- 8.47 For this exercise we have adopted a discount rate of 3.5%, the rate used by the EA in their flood alleviation scheme and quoted in the treasury guidance. We have chosen this rate, rather than the higher 8% used for highway schemes, as the EA model compares monetary costs with monetary benefits, whereas the highway COBA model includes assigned monetary values for non-monetary benefits such as the value of time. Thus the EA model is directly comparable with the monetary costs and benefits used in our model. The effect of this is that for each future year the value of any cost incurred or benefit gained is reduced by 3.5% per annum.

- ◆ To make the model more realistic we made the following assumptions:
- ◆ That construction would be phased over ten years;
- ◆ 50% of construction cost would be spent in the local economy;
- ◆ No benefits from use would accrue until year five when the canal would reach Newport;
- ◆ Benefits would be 20% of forecast in year 6 and building up to 40% in year 10 and then accelerating to 60% in year 11, 80% in year 12 and 100% in year 13;
- ◆ The cost benefit model runs for 30 years from opening.

8.48 The results of the model are given in Table 8.3 below:

Table 8.3 - Cost Benefit Analysis

Item	Value
Capital Cost	£86,000,000
Annual Benefit	£3,975,000
Net Present Value	£5,815,600

- 8.49 The Net Present Value is a technical term indicating the value of the project today. This takes into account the lower value of costs and benefits in future years. A positive net present value indicates that over the period being considered, the scheme has realised more in revenue than the costs of implementing the scheme, and thus any value over zero indicates that the scheme has yielded more than it has cost. This break even figure is usually adequate to satisfy any funding agency that does not have economic development as its key objective. A positive net present value is useful to funding agencies that do have economic development as their objective, as it shows that the contribution of the canal to the economy is greater than the cost of the project.
- 8.50 It can be seen that the scheme has a positive value from the cost benefit model, and is thus value for money in absolute terms. The annual benefits will generate 88 FTE jobs per year, this is based on one third of the revenue to the local economy being spent on salaries, with the average salary per FTE job being £15,000. These jobs are based on the annual benefit, not the net present value, therefore these jobs would occur even if the net present value was zero or negative.
- 8.51 Many of the costs included in the cost benefit analysis may be paid for from sources that do not seek an economic return, such as the Heritage Lottery Fund. In this case these costs do not need to be included in an analysis, but at present they are, overstating the capital cost that must be justified.

Further Comments on Economic Benefits

- 8.52 The above analysis provides a bald estimate of the increase in local revenue and employment as a result of the restoration of the canals. This simple cost benefit model provides a base measure to demonstrate that the scheme “washes its face” in

economic terms. There are many more sophisticated cost benefit models that could be derived for the canal that would estimate concepts such as consumer surplus and producer surplus, and would refine the above figures. Producer surplus in particular varies little from the above figures, as we have counted the money spent in the local economy only once, whereas producer surplus estimates the margin of revenue over cost at each stage. For example, our model might state that a pub meal costs £10, whereas using producer surplus the publican might only gain £2 (the producer surplus) because the meal has cost £8 to provide. However, that £8 is spent by the publican on materials, rental and wages and most remains in the local economy to be recycled again.

- 8.53 Consumer Surplus quantifies the difference between what an individual does pay for something and what they might be willing to pay. This is only relevant if preparing an application to HM Treasury as they consider this in their funding decisions. Consumer Surplus is most relevant where individuals pay nothing for a facility, such as a towpath walk. Including this figure can add considerably to the benefits achieved.
- 8.54 Finally, the model does not consider the long life of the canal. The design life of a canal is in practice at least 100 years, even 200 years without spend other than on maintenance. As a result, the canal has a residual value at the end of the modelled period which can be deducted from the cost side of the equation. Again, this would increase the overall economic benefit.
- 8.55 The value of the regeneration elements should also not be underestimated, although difficult to quantify. If the canal provides a catalyst for regeneration in parts of Shrewsbury, there are models that will allow part of the value of this regeneration to be included. This is likely to add millions of pounds to the economic benefits provided.
- 8.56 Against this, these more sophisticated models generally require an assumption to be made regarding displacement. For example, it would need to be demonstrated that holiday boaters have not been diverted to other waterways nor have they moved from a different type of holiday which would have been spent in the same locality. This is extremely difficult to demonstrate, although the lack of capacity in the local market, and the tendency for boat owners in particular to holiday on local waterways (when they are unlikely to rent a local holiday cottage) suggests displacement is minimal.
- 8.57 To include the above an alternative cost benefit model would be required. This can be prepared by Atkins or other consultants if so desired.