Bridgwater Tidal Sluice Economic Impact Studies

Impact of Improved Access to Somerset Waterways

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1. INTRODUCTION

1.1 This report sets out the likely social and economic benefits arising from the implementation of the Parrett Sluice and the other works identified to allow navigation upstream to Langport and onto the Bridgwater and Taunton Canal in Bridgwater

1.2 This study has been prepared concurrently with the Waterlinks study, and as a result the two benefit analyses contain much of the same information: indeed the text is identical in places as the same information leads to the same conclusions. However it must not be inferred that each scheme produces exactly the same benefits, and thus if one scheme proceeds the other is redundant, not can it be assumed that delivery of both schemes would deliver the sum of the two sets of economic benefits. It may be desirable for a separate paper to examine where the benefits (and costs) overlap and where each scheme delivers unique opportunities.

1.3 The opening up of the waterways to navigation, and creating a route which can sustain a short-break cruising market, is an essential component of the Parrett Sluice proposal. While the sluice impounds the water level making regeneration and development more practical, that in itself doesn't require the river to be navigable. However, 'active' water which is used by boats has been widely shown to be far more attractive as a resource for land-based visitors than water which is not navigated. Thus opening the waterways to navigation can draw in visitors, providing a market for other local attractions. Equally, active waterways provide, in themselves, an additional attraction for visitors, whose primary destination was not a river or canal, thus retaining visitors to the local area.

1.4 The extension of navigation on the Somerset Waterways would therefore create a valuable facility for the local area. Navigation would offer many intangible benefits which cannot readily be valued, as well as direct and indirect economic benefits to the area. It is these economic outputs that will form a key justification for the scheme. This section evaluates these economic benefits.

1.5 The benefits arising from improving navigation relate to the potential for:

- Boat-based recreation activities, such as hire and privately owned boats, trip and restaurant boats.

- Other water-based recreation activities, such as row boating, canoeing and angling;
- Land-based recreation activities, such as walking, cycling, horse riding, sightseeing, picnicking and bird watching;
- Development opportunities associated with opening the waterways to navigation, including the provision of marinas and facilities for use of the waterways;
- Expenditure on construction works and maintenance of the waterways, in addition to the boats and other facilities associated with the use of the waterways.

1.6 The primary economic benefits of the scheme will arise from an increase in visitors to the area, and an increase in the amount of money visitors spend whilst in the area. At present there is a lack of places to spend, outside of the main hubs of Bridgwater, Taunton and Langport. The more visitor attractions and community resources that are created along the route, the more likely it is that land-based visitors using the waterways will spend money. Equally, the development of a 'critical mass' of visitor attractions and boat facilities in the local area will encourage extended, overnight and repeat trips by boat-based visitors as well as land-based ones, with consequent increased benefits to the local economy. Restoring and extending navigation on the waterways gives boaters access to local attractions, and provides an attraction to local visitors in terms of watching water activity.

SUMMARY OF BENEFITS

1.7 In total, visitor spending due to the scheme as described is predicted to create and retain **an additional £942,000 per annum in the local economy, and support 61 additional full-time equivalent jobs**.

1.8 In addition to benefits from visitor spend, there is an economic benefit from the construction phase of the work, as local labour and plant will be used in much of the construction.

1.9 As well as the economic benefits of the scheme there are, as mentioned above, intangible social effects to be gained from increase in access to recreation areas and changes in the local environment. While various methodologies do exist for valuing these social benefits in financial terms, this report will not attempt to quantify them.

2. OVERVIEW OF METHODOLOGY AND ASSUMPTIONS

INTRODUCTION

2.1 This section of the report sets out the methodology and assumptions used to calculate the additional economic benefit that may be retained in the local economy each year as a result of the implementation of the Parrett Sluice and the other works identified to allow navigation upstream to Langport and onto the Bridgwater and Taunton Canal in Bridgwater.

METHODOLOGY

2.2 In assessing economic effect we have relied on a range of previously published studies as well as our own experience. British Waterways have, over the last decade, developed a tourism and leisure demand model which has been applied to a number of different canal and waterway projects to test its validity. Where appropriate we have based our calculations on the assumptions contained within this model.

2.3 In calculating economic impact this report considers only additional visitors and new revenue to be generated through opening the waterways to navigation as described earlier in this report. The remote nature of much of the route means that conservative estimates have been made of economic benefits. The figures used in calculations are based on UK averages or studies carried out elsewhere with adjustments for local conditions where necessary. We have not included existing revenue from operations (for example, existing boat or visitor centre operations).

2.4 The first step is to estimate the number of potential new waterway users. This is broken down by type (boaters, cyclists, anglers etc.) Where possible this is drawn from available data (boat licenses, pedestrian counters) for similar projects, but this data often does not exist or is several years out of date. ‘Proxies’ are therefore used, such as national survey data. The usage figures used in this assessment are higher than those estimated during the options appraisal, mainly due to allowances for hire boat movement and further investigation into the local market conditions.

2.5 Expenditure associated with additional visitors of different types is calculated through estimating activity patterns. Average spend per head estimates drawn from national and local surveys are then applied to these visitor numbers to obtain an overall expenditure figure. For this study we have used expenditure figures used by BW in their 2006 'Economic Evaluation of the Restoration of the Kennet & Avon Canal' as set out in Table 2.1 below, adjusted where appropriate to match known local conditions on the Somerset Waterways.

Table 2.1 – Expenditure Associated with Additional Visitors to Waterways

Visitor Type	Expenditure Category	Expenditure	Source/ Rationale
Moored Boats: Boat-related expenditure	Annual boat running costs (excl. Licence fee & moorings)	£870.46	Private Boating Price-Demand Study, 1997 (BW/EA), Inflated
	Mooring fees p.a.	£655.47	Private Boating Price-Demand Study, 1997 (BW/EA), Inflated
Moored Boats: Non-cruising visits	Non-cruising visits - spend per head	£11.01	BW Log Book Survey, 1993, Inflated
Moored Boats: Cruising Trips	Mean spend/person/day	£9.44	BW Log Book Survey, 1993, Inflated
Visiting Boats: Cruising trips	Mean spend/person/day - private	£9.44	Hire Boat Survey, 1990, Inflated
	Mean spend/person/day - hire	£13.32	Hire Boat Survey, 1991, Inflated
Hire Boats	Av.cost/hire(£s)	£761.39	Shoulder rates for 7-day hire of 4-berth boat
	Cruising spend per person per day	£13.32	1990 BW Hire Boat survey, Inflated
Trip Boats	Av.cost per trip	£4.98	Average cost based on BW System
Day Boats	Boat hire cost per day	£52.44	Based on Day boat operations on BW system
	Cruising spend per person per day	£11.00	UKDVS 2002/3 'water with boats' category
Canoeing	Visitor spend per visit	£3.20	BW Owners of Unpowered Boats Survey 1995, Inflated
Angling	Visitor spend per trip (incl. travel/permits)	£6.50	BW Survey of Individual Anglers, 1996, Inflated
Cycling	Visitor spend per trip (incl. travel)	£7.01	BW K&A Towpath Survey 2005
Informal Visitors	Visitor spend per trip	£4.57	BW Day Visit Survey 2004
Overnight (Holiday) Visitors	Visitor spend per day (incl. travel/accommodation)	£55.00	UK Tourism Survey 2004

Source: BW/ECOTEC

2.6 To convert predicted boat numbers into a figure for the number of canal visitors, we use similar assumptions to this recent BW study which are based on various British Waterways reports and statistics. These assumptions are:

- Hire boats: There are 23 7-day hires per boat per year, with average craft occupancy of 4.1 people: although the market is likely to be dominated by short term hire (3 and 4 night breaks) these cumulatively equate to full weeks.

- Day Boats: Assumed to be hired for an average of 115 days per year, with average craft occupancy of 4.1 people per boat.

- Employment directly resulting from visitor expenditure is calculated using standard industry multipliers. 1 full-time equivalent (FTE) job is assumed to result from each £35,000 of expenditure on tourism and leisure, and 1 FTE is assumed to result from each £70,000 of expenditure on boating materials and supplies, sales and construction. These figures are updated from those used in the analysis of the Kennet & Avon report.

- Calculating visitor numbers takes account of additionality and displacement assumptions as for the Kennet & Avon Study and assumes that 80% of visits and spend would take place elsewhere in the local area in the absence of the scheme to restore waterways navigation (20% of land-based visits and associated spend are thus net additional as a result of the scheme). All boating activity is assumed to be additional to the newly navigable waterways and the waterways corridor.

- At point of purchase, all the money is spent within the local economy; however, some goes on to be recycled within the local economy as well, in that outlets servicing visitors use local labour and local suppliers. This gives a multiplier effect in that for every £1 spent in the local economy, more than one pound’s worth of value is gained. Equally, money spent in establishments which are not locally operated or which source supplies from outside the area can quickly ‘leak’ from the local economy.

- The level of spend within the local economy and the multiplier affecting how much remains within it is dependent on what opportunities for spending there are within the local area, and the level of local ownership, operation and sourcing. The boating industry is made up primarily of small entrepreneurial businesses that are locally owned and managed. Therefore, a higher proportion of the income generated should stay within the local area than would be the case for nationally or internationally based firms. We have used a typical multiplier of 1.3 as used by British Waterways, and assumed 60% leakage, based on previous studies into rural tourism used as a proxy by BW.

3. BOAT BASED RECREATION

INTRODUCTION

3.1 This section of the report provides an overview of the baseline situation with regard to boat based recreation on the River Parrett and the Taunton Canal in Bridgwater. It then goes on to assess the likely economic benefit that could arise from increased boat based recreation as a result of the implementation of the Parrett Sluice to allow navigation on these waterways.

BASELINE

3.2 Currently only the Bridgwater & Taunton Canal is navigated, a single stretch of 23km. At present there are 57 boats registered on the Bridgwater & Taunton Canal (BW figures). Navigation movements are not recorded; however, due to the shallowness of the canal, particularly near Bridgwater, it is estimated that movement levels are low.

THE PROPOSAL

3.3 The network to be created is a ‘closed’ inland waterways route, in that all inland craft using it are confined to the system created. The boat-based traffic to be created will be predominantly inland craft. However, the Somerset Waterways are unusual as an inland network in that they are easily accessible by smaller coastal craft.

3.4 Navigation figures will be made up almost entirely of additional trips resulting from the increase in the availability of (and desirability of) moorings and business opportunities.

3.5 Cruising options will be:

- Out-and-back cruises from marina bases using the non-tidal waterways between Bridgwater, Taunton & Langport. This option, offering a cruising range of 42 km which could range from a trips of few days to a leisurely week, will be available to all boats, though will be more attractive to inland craft (private and hire) than coastal craft.

- Navigation inland by small coastal craft. This number is likely to be low. However, a marina at Bridgwater in particular would serve known demand for non-tidal moorings in the Bristol Channel, and encourage use of the Somerset Waterways by coastal craft.

3.6 There will also be some additional trips made by existing craft on the Bridgewater & Taunton Canal because of the extended route options available.

3.7 For the purposes of this report we have estimated just under 5000 additional boat nights per annum, almost all of which arise from new moored inland boats. We would expect approximately 40% of these movements to be attributable to hire boats.

HIRE BOATS

3.8 At present there are no hire boats on the Bridgwater and Taunton canal.

3.9 Research data collected by BW indicates that, nationally, 80% of boating holidays are under one week, with 10% of all holidays being short breaks of up to 4 days (BW survey data, 2004). However, the short-break market is increasing. As with other sectors of the holiday market, the hire boat industry is increasingly catering for short break holidays. This situation has evolved over the last 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. The 2-5 day break accounted for 20% of hire boat holidays in 1999 (Boating Holidays Survey, Mintel, March 1999) and this proportion appears to be increasing. The industry has successfully repackaged boating holidays to accommodate this demand with flexible schedules to meet customer demands and more comforts to compensate for off-season weather conditions and temperatures. This development has significantly increased the market potential of shorter waterways such as the Somerset Waterways.

3.10 Those from the AB socio-economic group and those from the south and south east of England have a far higher propensity to have taken a boating holiday than any other groups. The Somerset Waterways are well-positioned to take advantage of the local short break market.

3.11 The national average on BW waters is around one hire boat for every mile. The prevailing view is that, currently, the Bridgewater & Taunton's short length is suppressing demand. The increase in waterway length available for navigation (making it suitable for a week-long hire) is likely to make hire cruising much more attractive; anecdotal information suggests that there is potential for small-scale local operations.

3.12 If the project was progressed there would be potential for hire bases at any of the marinas. In addition, the growth in use of the internet has led to increased potential for small-scale hire operations of one or two boats; these could be based on-line anywhere on the non-tidal system.

3.13 If the full project was to be implemented, we estimate that the system would attract up to half the BW national average for hire boats; We conservatively suggest around 12 hire boats could be supported and let out for an average 23 weeks per year. Assuming an average weekly hire fee of £761 this could yield £210,036 per annum.

3.14 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 waterway. A spend per day per boat of £54.61 has been assumed, based on current BW estimates for the Kennet & Avon Canal. Therefore, the scheme could generate an additional spend of £105,506 per year. The distribution of the benefit depends on the availability of spending opportunities along the route; Taunton and Langport, as locations offering enough attractions to spend two nights, would be likely to see the greatest benefit.

3.15 Boats that cater for people with mobility impairments are available on some canals. The Somerset Waterways would be well suited to this type of provision as disabled access is much easier in wide beam boats than in narrow boats. Additionally, the route would provide an excellent focus for youth and community boats taking groups of youngsters from the local area or further afield. The route would offer a short-break cruising route passing through a range of environments, and offer links with other projects such as the Climate Change Centre.

PRIVATE CANAL BOATS

3.16 Positive demographic trends and the increasing popularity of canal boating are driving growth in licensed craft, particularly amongst the over 50s. This age group is growing much faster than any other.

3.17 Unlike hire boats, 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 BW national average is around 10 boats per mile and this sector of the market has shown sustained growth for some years. BW[1] estimates that there are 57 long-term moorings on the Bridgwater and Taunton Canal. Of the BW moorings, there are (small) waiting lists for the moorings at Bathpool and Maunsell, but the marina at Bridgwater Docks is not full. Nationally, there is a strong demand for

[1] Paul Madement, Moorings Officer, British Waterways. Conversation 10.4.07

secure residential moorings; at present many of the Bridgwater moorings are 'unofficially' residential.

3.18 We have assumed at least 140 additional private boats on the new waterway, based in one or two marinas, at possible locations set out below. Based on creating approximately 19km of newly navigable waterway connected to 23km of existing waterway with 140 new private boats to be based in the area, the spend per boat can be estimated as follows:

- **Expenditure on maintenance of boats** - The average annual expenditure on boat maintenance (excluding license fees & moorings) is assumed to be £870.46. Thus, 140 private boats moored on the waterway could be expected to generate an estimated £121,864 per annum to local boatyards.

- **Expenditure on Moorings & License fees.** Average private mooring fees on BW waters are £655.47 pa (Kennet & Avon study estimates - 2004 prices). British Waterways mooring fees are approximately £1300 per year for a 45ft narrowboat (used by BW as 'typical' length). However, mooring fees in the local area for this length are lower at approximately £900 pa (2006-7 prices) – this reflects the low demand on a short waterway and would be likely to increase with increased demand. Mooring fees at private marinas tend to be up to double BW prices, and those accommodating coastal craft can be higher still. Mooring fees nationally are rising at well above the rate of inflation (BW increase of 6% 2006-7).

- For the purposes of this study we assume a conservative average mooring fee of £1100 pa for 140 boats. This gives an estimated potential mooring income of £154,000

- Licence fee income would be dependent on the future management of the navigation. Assuming the navigation were to be managed by BW or the EA, it is likely that use of the waterway would be incorporated into their licensing agreements. This would contribute to maintenance and has been factored out of this study; license fees are therefore not included as 'benefits'.

- **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, entertainment and visiting attractions. Calculations from the most recent Kennet & Avon study indicate a cruise rate of approximately 115 days per year. This seems extremely high. Recent surveys by BW indicate that the total number of days boat owners spent cruising in the 12 months 2005-6 averaged 68 days, nationally.

- Given the cruising range available, we would conservatively estimate that private boats moored on the Somerset Waterways would cruise for approximately 18 days per year, all of which would necessarily be in the local area. We have therefore assumed that the 140 new boats moored on the canal would spend around 2520 days in the area between them and that a further 513 additional days would be spent cruising by boats already moored on the canal due to the extended opportunities available. This equates to a total spend of £110,371 at a rate of £36.39 per boat per day.

- The BW figures do suggest a very high rate of boat trips of one day or less, which may make the actual canal usage figures higher than this: however trips that do not involve an overnight stay on the boat generally result in a very low level of spend.

- **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. BW figures show expenditure per visit to be slightly higher than spending whilst cruising. Recent figures for the Kennet and Avon Canal indicated that boat owners make an average of 18 such visits per year and spend on average £11.01 per person per day. Therefore, the full scheme, assuming 2 persons per boat as indicated by BW survey information, could produce an annual spend of £55,490, mainly on local goods and services.

TRIP BOATS AND RESTAURANT BOATS

3.19 There is currently one 12-seater trip boat operating on the Bridgwater and Taunton Canal, operating 1-hour trips from the Maunsell visitor centre on weekends from Easter to the end of September. Trip boats and restaurant boats tend to operate in proximity to centres of population and on stretches which are relatively lock-free, though one or possibly two locks provide interest. We would estimate there is potential for one additional trip boat (approx 30-seater) out of Bridgwater, where two route options would exist, and possibly one smaller 12-seater from Langport. We have assumed these to run at approximately 70% capacity

3.20 Detailed economic data for comparison is not available for current operations on the local canal network. However, based on current trip boat operations and on similar operations elsewhere with an average charge of £4.98 per trip and an average passenger load of 9 passengers for the smaller boat and 21 for the larger boat, trip boats would generate an additional £32,515 of spend.

3.21 The MCA must certify all restaurant vessels seating over 12 passengers. Given the local visitor market we have assumed a small restaurant boat could be viable at some point on the route. It can be assumed that this could run at 90% occupancy (it is not viable to operate a restaurant boat at low occupancy). Operations elsewhere can typically run approximately 200 trips per year. At similar use rates and at an average charge of £20.00 per head (Based on typical current pricing for local restaurant boats and supported by studies elsewhere[2]), a 12-seater restaurant boat could expect to yield a total of £43,200 per year.

3.22 In addition to the expenditure on a boat trip, visitors will also spend money elsewhere in the local area as part of their overall visit. Based on the most recent Kennet and Avon survey, this is likely to be around £4.57 per visit. For the purposes of this study, this spend has been incorporated into numbers for informal land-based visitors.

DAY BOATS

3.23 Self-drive boats designed for one day or half day hire are offered by increasing numbers of boatyards. 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.

3.24 The majority are of narrow boat style accommodating up to 12 passengers which are frequently seen by operators as a means of promoting their holiday hire fleets. On rivers, smaller cruiser-style boats are also popular. The average day boat hire on the BW system is £52.44.

3.25 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.

3.26 There would appear to be the potential for day boats on the expanded waterway, especially from Bridgwater, where two day-return alternatives would be attractive, or out of Langport. It is anticipated that four such boats will be supported by the scheme. Assuming hire for 115 days a year each at £50/day this would result in a spend of £43,746 per annum.

CANOEISTS & UNPOWERED VESSELS

3.27 Parts of the waterway are currently assumed to be suitable for canoeists, and their restoration to navigation for powered boats might make them less attractive than currently to casual canoeists, but this is countered by making the tidal Parrett non-tidal and thus much more acceptable to less experienced canoeists. Canoeists who

[2] **Kennet and Avon Canal Survey,** 1991, unpublished.

are members of the British Canoe Union are likely to be permitted to use the River Parrett as well as the main canal system managed by British Waterways free of charge. As a result it is assumed that it would not be practical to levy a licence fee on casual canoeists and other unpowered boats and it is assumed for the purposes of this report that the income from these vessels would be minimal.

3.28 However, day hire operations may hire rowboats, dinghies and canoes. The presence of this kind of operation can act as a draw to land-based visitors who like to simply watch the activity, creating a ‘honeypot’ effect as for example on the River Wey near Guildford Boat House. The existence of affordable, easily accessible access to the water can also raise interest and participation in the canal or river. We would suggest that canoe, dinghy or rowboat hire could be incorporated into hire operations, possibly in Langport, and that these would add to the attractiveness of the riverside experience in those towns. In terms of spend by hirers, 15 small boats hired for an average of 21 hours per week during a 23 week season at £5 per hour would generate £36,225 of income. For the purposes of this report, any additional spend by visitors hiring unpowered craft has been incorporated into numbers for informal land-based visitors

COASTAL CRAFT

3.29 The Somerset Waterways are accessible by coastal craft; The Parrett Sluice would make that access useful to both the craft and Bridgwater, as at present although craft can navigate to the town, they can’t stop when they get there. The Parrett Sluice would create a non tidal navigation to the town and make reopening the Ron Oakley lock much easier, presenting two mooring opportunities, one on the river and one in Bridgwater Dock.

3.30 The Bristol Channel is a busy cruising area and it is likely that both visitor moorings and permanent moorings would prove popular. In addition, because the Parrett Sluice makes inland navigation along the Parrett more practicable (as opposed to using the Bridgwater and Taunton Canal) many coastal vessels will be comfortable with trips to Burrowbridge and Langport. Indeed, if the Waterlinks proposal to make the Tone navigable were to proceed, many coastal cruisers may prefer that route to Taunton over the canal route

3.31 The British Marine Federation identifies that the demand for new berths and moorings in the UK is high and in many cases far exceeds supply. Where demand cannot be met by supply, the lack of provision has repercussions for the rest of the industry. Although demand does vary from region to region, pressure on existing facilities are expected to continue to growth and these current constraints are expected to hold back growth in the domestic market for leisure boats, confining boat sales and the growth of other marine industry operations and services

3.32 The Royal Yachting Association's UK Coastal Atlas of Recreational Boating details recreational cruising routes, sailing and racing areas around the UK coast. From a line between Cardiff and Weston-super-Mare up the Bristol Channel, towards Sharpness the Atlas identifies numerous "recreational routes shown to have heavy use", i.e. very popular routes. Heavy use routes are indicated from the central area of the Bristol Channel providing links with Cardiff and Avonmouth and most other ports: this indicates that there is a significant market for Bridgwater to tap into.

3.33 Recent research undertaken by the South East England Development Agency on leisure cruising in their region provides further evidence of the potential benefits to other local marinas from the creation of a new facility. The research indicates that given the general characteristic of the leisure yachting sector, where craft 'port hop' rather than undertake long sea journeys, the development of one destination along a key sailing route tends to enable other destinations to feel the benefits. The research also suggests that the future growth markets are the day sailing and family cruising markets which both require shorter trips and sailing destinations within close proximity of one another.

3.34 Given the cruising in the Bristol Channel, and Bridgwater's land based transport links to a significant market including the south coast, it is likely that Bridgwater could fill at least 300 permanent berths if these were provided, particularly in view of the lack of non-tidal moorings on the English side of the Bristol Channel. Visitor moorings would also prove popular: some boaters would continue up the Parrett meaning they would spend more than one night. From an inland viewpoint Bridgwater may sometimes have a negative perception (one of the factors the sluice is intended to counter) but in the context of the Bristol Channel Bridgwater will fare well given non tidal moorings and the strong visitor numbers to other "non-destinations" such as Portishead and Barry.

3.35 Coastal moorings tend to be more expensive per metre than inland moorings, and this will certainly be the case between the Somerset Waterways and the Bristol Channel. The typical inland mooring fee is £75 per metre per annum while coastal vary from £88 (for moorings that dry out at low tide) to £215 per metre per annum and more. However, estuarial cruisers tend to be shorter than inland waterway boats. In addition these boats use more fuel. A twin engined cruiser crossing the Channel to Cardiff and back from Bridgwater would consume of the order of £100 of diesel, while an inland cruiser would struggle to get through this much in three weeks.

3.36 Because of the above, we have assumed a higher level of spend for any coastal boats moored permanently in Bridgwater. We have assumed £2,000 per boat for running costs and moorings rather than the figure of just over £1,500 per boat for inland boats. Because of the nature of coastal cruising, maintenance and repair are much more likely to be undertaken at the home base because moving the boat is more complex. Thus, assuming 200 coastal boats, a more conservative figure than the 300 above, are moored in the vicinity of Bridgwater a total of £400,000 will be spent by the owners of moored boats.

3.37 However, owners of coastal boats will, almost by definition, leave the Somerset Waterways when using their boats, so spend while using boats will be the sole preserve of visiting craft owners.

3.38 As with inland boat owners, owners of coastal craft make visits to their boats without actually using the vessel to cruise. This has been assumed to be in line with the estimates for inland craft, and thus 200 boats would each generate 18 trips with an average spend of £11.01 per person on each trip and an average occupancy of two people per boat, generating a total of £79,272.

3.39 Estimating visiting boats is much more difficult and very heavily dependent upon both Bridgwater and the facilities being promoted effectively. Because the waterway also offers inland penetration we have considered other instances where this occurs. In doing this there is a need to be careful of over-reliance on instances where inland craft make journeys on the "interconnecting" tidal waters (i.e. where tidal water is used to make a short cut between non-tidal waters). The most relevant would appear to be the River Medway at Allington and the River Ancholme at South Ferriby, as both connect estuarial waters with a significant inland cruise, and neither are used as marinas which means the effect of boats being stored for coastal use on those rivers is limited. The figures for these indicate around 1500 visits per annum. Sadly, others that would be of interest such as the Tees Barrage do not have figures available.

3.40 Taking a more conservative view of these figures suggests that Bridgwater may expect 1,000 visits per annum from coastal cruisers. In Bridgwater at least, these boats would expect to pay for a mooring, although with inland boaters also stopping in Bridgwater, and not normally paying for moorings, some conflict may occur. Clearly coastal boats that then proceeded to Langport would not be paying for moorings inland.

3.41 Because of the potential for inland penetration some boats will spend more than one night. Again, to be conservative, we have assumed that only 10% will take advantage of this and stay for a second night. We have assumed the same rate of daily spend as for inland craft, plus a mooring charge of £10 per night in Bridgwater: this gives

1100 nights with a spend of £38.86 per night and 1000 overnight moorings with a mooring fee of £10 attached. This makes a total of £52,746.

3.42 The overall spend in the Somerset waterway economy from Coastal Craft is thus £532,018

4. LAND BASED TOURISM AND RECREATION

INTRODUCTION

4.1 This section of the report provides assesses the likely economic benefit that could arise from increased land based tourism and recreation as a result of the implementation of the Parrett Sluice.

OVERVIEW OF PROJECTED BENEFITS

4.2 The waterway corridor will provide opportunities for a wide range of informal activities, including walking, cycling, horse riding and "gongoozlers" (i.e. sightseers attracted by the waterway environment). Other activities that a towpath and adjoining public open spaces can provide for include bird watching, jogging, photography, picnicking and general relaxation. Such uses rarely attract any direct costs, although it must be assumed that riverside pathways will be constructed and that there must be reasonable access points to the waterway.

4.3 Economic benefits from making the Parrett navigable and from increasing activity on the canal will be affected by the ability of the local economy to tap into increased visitor numbers and potential, and the degree to which the active waterside environment is highlighted as an attraction. For example, at present several pubs exist along the route but not all of these appear to be operating at capacity. The following paragraphs explore additional development possibilities which might cater to visitor needs.

TOWPATH USERS

4.4 Findings from a national survey of over 2,000 towpath users, undertaken by British Waterways in 1998 (British Waterways Towpath Users Survey 1998, British Waterways, Unpublished) reveals that:

- The majority of towpath use is very local - 24% of the sample surveyed 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 under-represented.

- 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% of those surveyed 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.

4.5 Anecdotal evidence indicates that the patterns of visits have not changed significantly. Recent BW surveys show that top reasons for using canal towpaths include: walking for pleasure, walking the dog and (jointly) to watch birds/wildlife. A significant percentage also use towpaths for cycling or as a shortcut to somewhere else. Average dwell time for towpath visitors is 1h 31mins across all of BW's waterways.

4.6 Based on the results of British Waterway's survey of visitors to the Kennet and Avon Canal, the BW Demand Model assumes that 20% of informal visits to the canal, as well as 20% of cycle trips, are made by people staying overnight in the local area. Given the nature of the area as a growing tourism destination it is likely that this proportion would be similar for the Somerset Waterways.

4.7 The mean expenditure for all respondents for the day on which they were interviewed for the BW towpath survey was just under £10, although 50% of towpath users spent nothing at all (see table below). However, although this figure is backed by research it appears high given anecdotal experience and the volume of visitors who are from the immediate locality of the canal. The most recent BW Day visit survey (2004) gave an average of £4.57 spend for informal visitors which we have used for the purposes of this study. However, Table 4.1 below, from the 1998 BW study, is useful in that it shows the breakdown of expenditure among visitors surveyed, thus highlighting areas for potential economic development.

Table 4.1 – Breakdown of Spend by Towpath Users

Activity	Mean Expenditure (£)	% of respondents who spent nothing
Eating and drinking in pubs	3.18	76
Easting and drinking in cafes and 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**	**-**

4.8 The Kennet and Avon canal is 138 km long and visited by an estimated 9.4 million walking or cycling visitors per year plus day boat, trip boat, canoeing and angling activities of 405,000 visitors. Therefore, the land-based leisure use dominates and is approximately 170,205 visits per km. In view of the influence of this figure on the overall benefits, great caution is required in assuming a number this high, as the Kennet and Avon Canal is surrounded by other tourist attractions, including a world heritage city, and is internationally known. More typical figures would be in the range of 50-60,000 visitors per km.

4.9 Due to the remote nature of much of the waterway corridor, a very conservative figure of 6000 additional visits per km of new navigation is realistic, giving 114,000 additional visitors per year. The majority of these would be in and around the main settlements and the marina bases. It is likely that, in addition to additional visitor numbers, dwell time would increase overall; again, this offers potential for increased spend, though we have not attempted to calculate this here.

4.10 While the spend per head for cyclists within the BW model is higher than that for walkers, given the broad nature of the figures used, we have used a figure for daily expenditure of £4.57 per person for all visitors.

4.11 Using these assumptions, informal land-based visitors could be expected to spend £520,980 in the local area per year. This allows for 80% 'displacement', as money would have been spent anyway, even if the waterways were not navigable

4.12 We have not attempted in this report to attribute expenditure to different land-based users of the waterways. The descriptions below, however, give more detail of principal user groups, possible non-financial benefits and an overview of how benefits might be enhanced.

“GONGOOZLERS”

4.13 Sightseeing and watching water-based activities is a major attraction to waterway visitors. A survey of the Kennet and Avon Canal (1991, BW unpublished) 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.

4.14 Economic benefits can be maximised by focusing commercial activities such as cafes, souvenirs, trip boats, cycle hire and pubs around ‘honeypot’ sites along the waterway where good access from local populations exists. Suitable areas on the Somerset Waterways would be in the three main towns of Bridgewater, Taunton and Langport, and at attractions such as Westonzoyland pumping station and Burrowbridge.

ANGLERS

4.15 The waterways are already used for angling, though the full extent of use is not known. In particular, the current tidal length is a very poor quality fishery. Sympathetic and active management has the potential to increase the value of the waterways for angling should the managing determine that any conflict with other water-based users could be overcome. However, for the purposes of this study, the additional use of the waterways for fishing and its associated spending are assumed to be limited; anglers are therefore incorporated into the estimates for ‘land-based visitors’

4.16 Canals and rivers around the UK make excellent coarse fisheries, even where they are used for navigation (although excessive navigation makes fish much less likely to bite). Waterways provide a cheaper option than artificial fisheries, which are sometimes blamed for making fishing too expensive for the beginner and less well off angler. The other notable feature of those who fish is that more often than not they would not otherwise make constructive use of a waterway. Walking and narrow boating are often seen as ‘middle class’ activities and while this is a sweeping generalisation, there is no doubt the cost of boating can make is the preserve of the wealthy and certainly acts as a bar to, say, someone who is unemployed. Although fishing can be expensive, rod fishing using basic equipment is fairly cheap and the only ongoing expenditure is an annual rod licence and sometimes day tickets or membership of the angling club to whom the fishing rights belong. Thus fishing is accessible to all.

4.17 Although it is not one of the faster growing sports in Britain, latest figures by the EA note that 11% of the population (21% among 12-16 year olds) have fished in the last 2 years (Ten Things You Should Know About Angling Environment Agency (2004)) and as many again would if they had someone to go with, somewhere to fish and could borrow/hire equipment. Among disabled people angling is the second choice of activity to try and the first choice to repeat. The Environment Agency[3] estimate that coarse fisheries are worth £2.3b to the economies of England and Wales, with river and canal fisheries being worth £0.75b. (The figures are not exclusive; much of the river and canal figures will be included in the coarse fisheries figures). The EA also state that, in a survey in 2001, 3.9m people, or 9% of the population over the age of 12 had fished during the past three years. In 2002/2003 1.2m rod licenses were sold[4].

WALKERS

4.18 Walking is Britain's most popular outdoor recreation and the popularity of recreational walking is rising. Unlike most other physical activities, walking is popular with all age groups and both sexes. Information from the Ramblers Association[5] notes that 77% of UK adults, or about 38 million people, say they walk for pleasure at least once a month. 62% of these walk more than 2 miles/3.2km and say that walking is their main form of exercise (ICM 2000). The most recent official national survey (National Statistics 1997) found 44.5% of adults went for a walk of over two miles for leisure at least once every four weeks. 891 million day trips for leisure in Great Britain in 1998 included a 'walk', up from 41% in 1993 and 38% in 1987 (National Statistics 1997). Ramblers' Association membership has risen from around 38,000 in 1980 to 111,500 in 1995 and over 140,000 today. Out of walking trips for all purposes in 2001, 16% were 'just to walk', including walking dogs. This figure has risen from 12% in 1986 (DfT 2003).

4.19 BW information indicates that around 40% of visitors walk to their canal visit. Given the remote nature of much of the new route, the proportion may be less for the Somerset Waterways. This is reflected in the lower overall level of bankside visitors forecast.

3 (www.environment-agency.gov.uk/subjects/fish/762572/ 765834/766433/?version=1&lang= e)
4 (www.environment-agency.gov.uk/commondata/ 105385/ onfparticipation766409.pdf).
5 (http://www.ramblers.org.uk/info/factsandfigures/recreation.html)

CYCLISTS

4.20 Almost one in ten of those questioned for the 1998 British Waterways towpath survey above had cycled to the towpath. This can be compared with approximately 5% of reported visitors to the Kennet and Avon who are cycle-based. The Kennet & Avon report notes that the most recent National Cycle Network Route User Monitoring Report indicates a steady increase in usage of the national cycle network (by both cyclists and walkers) between 2000-04; much of the increased use is associated with the expansion of the National Cycle network. There are several instances of cooperation between SUSTRANS and BW to fund and support the creation/upgrading of cycle networks along towpaths, for example the Bletchley-Leighton Buzzard route on the Grand Union opened in 2005.

4.21 The National Cycling Strategy, launched in July 1996, highlights the potential role of cycling in addressing issues of social inclusion, citing it as a possible means of widening the opportunities available to all sections of society. Regular cycling not only significantly improves fitness; it reduces obesity; decreases the risk of strokes, coronary heart disease and certain types of cancer and osteoporosis.

4.22 Given the terrain and the fact the rivers would not necessarily be visible from cycle paths, the amount by which cycling would be increased by restoring the rivers to navigation is uncertain. However, boat users, who can carry bicycles aboard, are likely to use cycles to explore further afield. They are also likely to be an increased market for cycle hire establishments, for example at Langport.

HORSE RIDERS

4.23 The potential for horse riding exists but the 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 a suitable surface.

OVERNIGHT VISITORS

4.24 The British Waterways Demand model assumes that 20% of visits to the canal are made by people staying overnight in the local area (i.e. 80% are day trippers). This is supported by the results of the Kennet and Avon Towpath Survey 2005 which indicated that 20.2% of respondents were in the area on a short-break or holiday (either staying with friends and relatives or in paid accommodation). In 2003 there were 19.2m trips to Somerset, of which 18% were overnight visits (Value of Tourism Report 2003). The average length of stay in the county for all trips is 4.15 nights, making overnight visitors an important proportion of the total visitor market.

4.25 The State of Tourism South West intelligence report (2003) identifies key market opportunities and products in the South West (seen as offering the best potential for future growth and prosperity and worthy of the most marketing effort) as being:

- Weekend breaks aimed at the pre-family market;
- Breaks of any length and additional holidays aimed at the post family market;
- Breaks and additional holidays aimed at affluent families;
- Main summer holidays aimed at less affluent families; and
- Breaks and holidays aimed at key Western Europe markets.

4.26 These priorities fit well with the profile of waterways user markets.

5. SUMMARY OF ECONOMIC BENEFITS

5.1 Table 5.1 below provides a summary of the likely annual economic benefits of the scheme which can be quantified at this stage, based upon the analysis undertaken in Chapters 2-4 of this report.

Table 5.1 – Summary of Economic Benefits

NEW BOATS RUNNING COSTS	£121,864
NEW BOATS – TOTAL EXPENDITURE (CRUISING & NON-CRUISING TRIPS)	£147,193
ADDITIONAL BENEFITS FROM EXISTING MOORED BOATS CRUISING	£18,668
HIRE BOAT BENEFITS	£315,543
TRIP BOAT BENEFITS	£32,515
RESTAURANT BOAT BENEFITS	£43,200
DAY BOAT BENEFITS	£43,746
UNPOWERED BOAT HIRE BENEFITS	£36,225
COASTAL CRAFT	£532,018
INFORMAL LAND-BASED VISITOR SPEND	£520,980
TOTAL SPEND	*£1,811,952.00*
TOTAL INCOME RETAINED IN ECONOMY AFTER MULTIPLIERS & LEAKAGES	**£942,215**
TOTAL EMPLOYMENT GENERATED - FTEs	61

5.2 The table demonstrates that **a total of £942,215 additional income could be retained in the local economy each year as a result of the implementation of the Parrett Sluice and the other works identified to allow navigation upstream to Langport and onto the Bridgwater and Taunton Canal in Bridgwater**. An additional 61 jobs could also be created.

6. NON-FINANCIAL BENEFITS

INTRODUCTION

6.1 Waterways have a value beyond their immediate leisure and economic benefits in that they provide a resource that can benefit health, social inclusion, community cohesion and education. Identifying the non-financial benefits of the navigations and how these social benefits can be maximised can be a means of linking to alternative funding sources who do not seek financial return. While social benefits improve with full operation, many are a result of the planning and construction phase.

TRAINING

6.2 Working on the waterways can enhance people's skills and employment opportunities. Schemes have already been used on Monmouthshire and Brecon Canal where training projects, based around towpath improvements and lock gate construction, have been allied to the government's New Deal employment training; there are many opportunities for working with local authorities and voluntary/public sector training organisations. Nationally there is a particular shortage of skills in the heritage and rural skills industries. Waterways projects, particularly in such a rural area, offer potential for training in these trades. A long-standing problem with these traditional crafts is the low income compared to the level of skill necessary; it is recognised that better off economies can support, and value, traditional crafts that are more expensive than modern techniques. Groups such as the Waterways Recovery Group (WRG) and the National Trust offer training in traditional skills as part of 'leisure' activities.

EDUCATION & AWARENESS

6.3 Waterways are a wonderful way to engage children with heritage, nature and encourage healthy lifestyles, benefits which are long-lasting. There is potential, particularly with dedicated volunteer or paid support, to expand links with schools in running school cruises. BW are actively building links with schools across the UK and developing educational materials to link waterway-related learning into various elements and levels of the national curriculum; waterways can help bring subjects in the National Curriculum 'alive.' Imaginative interpretation associated with the canal, particularly around ‘honeypot’ sites, can raise local awareness of heritage, environmental and social issues, stimulating interest in further learning.

HEALTH

6.4 As outlined in the details on cycling, walking, angling and canoeing above, canals provide a valuable resource for exercise. With suitable surfacing and given the minimal gradient of most towpath, this resource is easily accessible to the disabled, parents with pushchairs, and those who may be averse to more ‘adventurous’ walks or new to the countryside. Example projects carried out between Groundwork UK (who have partnerships with over 40 local trusts in England, Wales and Ireland) and BW include:

- Gnosall Healthy Trail, Staffordshire – The trail encourages people of all ages and abilities to walk along the Shropshire Union Canal by grading different routes according to effort taken to walk them;
- Laburnum Boat Club, London – Based on the Regent’s Canal in Hackney, the Laburnum Boat Club offers canoeing and sailing for children and young people, and carries out water sports training with unemployed people;

COMMUNITY

6.5 Waterways can help to bring different sections of the community together and provide a focus of local pride, and community consultation linked to planning change is a valuable form of social inclusion. In the case of small rural villages which are increasingly ‘dormitory’ villages for larger urban areas, a waterway can bring vitality, whether or not economic benefits are gained. Where local services (for example, convenience shopping) are at risk of closure or do not exist, the additional trade stemming from the canal can safeguard or create these. It is important for communities to take ‘ownership’ of ‘their’ canal to get maximum benefit – this can be achieved through various projects. For example, at Osterley Lock in London, parents and pupils from a local high school created art work that has been incorporated into the lock landscape of the Grand Union Canal site near Brentford in West London

CANOEING

6.6 Canoeing is recognised as often proving beneficial to the local community and acting as a means of promoting social inclusion. Use of the waterways for canoeing offers the opportunity to introduce people, particularly children and youths to a somewhat less conventional sport that many people may have not otherwise had the chance to try out. If managed properly canoeing can take place quietly, with relatively little impact on the surrounding environment, and can often generate local expenditure in parking and storage fees. Many Scout and Guide groups throughout the UK take part in canoeing on a regular or occasional basis.

6.7 'Paddle Sport for All' run by the BCU has an open access policy aimed at allowing people to develop their canoeing skills and by doing so; increase the profile of the sport. Evidence has shown with correct management and assistance, canoeing programmes can prove beneficial to the local community and act as a means of promoting social inclusion. The range of assistance, funding and support available would greatly help the establishment and development of a canoeing programme, which could attract a wider tourist audience, offer opportunities (for young people in particular) to learn new skills and prove an asset as a local community resource.

ANGLING

6.8 In addition to economic benefits, the EA recognise the role of angling in social inclusion when properly organised (Our Nations Fisheries Environment Agency 2002) and the Countryside Alliance has highlighted the conservation efforts of anglers. By actively promoting healthy fish stocks, whilst caring for the water and waterside habitat, the actions of anglers are proving to be beneficial to waterside plants, insects, mammals and reptiles alike.

6.9 The UK Government has now recognised the role of angling in achieving social policy goals and as a means of social inclusion. In 2003, Sport England provided approximately £750,000 match funding for several APP (Angling Participation Project– a strategic Partnership between the EA, Angling Governing bodies, Sport England and British Waterways) supported projects. In addition angling Governing Bodies have now developed a Government approved, NVQ accredited, Angling Coach Licensing Scheme and Associated Child Protection Policy to ensure events and projects the EA promote are safe and enjoyable for all.

SOCIAL INCLUSION

6.10 While social benefits and social inclusion are inherently difficult to quantify, the government publishes the Index of Multiple Deprivation 2000 (IMD) for England to provide a guide to the extent of various types of deprivation within areas. Waterways can contribute to addressing these deprivation domains, particularly living environment, education and health.

6.11 British Waterways believe waterways can be used as a resource within projects that tackle the many causes of exclusion e.g. low skills, propensity to criminal or anti-social behaviour, poor levels of confidence and low levels of community esteem. Examples of such uses include:

- Training - working on the waterways can enhance people’s skills and employment opportunities;
- Education – waterways can help bring subjects in the National Curriculum ‘alive’;
- Young People – projects can be targeted at young people ‘at risk’ of falling into criminal and anti-social behaviour;
- Community – waterways can help to bring different sections of the community together and provide a focus of local pride; and
- Planning and Consultation – exclusion takes place when people are not involved in changes that take place in their local area, hence community consultation linked to planning change is a valuable form of social inclusion.

6.12 There is potential for linking the scheme to projects targeted at young people ‘at risk’ of falling into criminal and anti-social behaviour, helping to provide skills and build pride and respect for the local environment. The people who are least likely to use the waterways are much the same people who suffer from other types of exclusion in the UK. Improving the waterway environment, easing safety fears and making the waterway more accessible will do much to eliminate exclusion, however such methods will not always be enough, community involvement and encouraging more people to visit the waterways is often needed. The Inland Waterways Amenity Advisory Council (IWAAC) commends partnership approaches between waterways authorities, local authorities and the voluntary sector. IWAAC believes that inland waterways are a beneficial community resource that can and should be used as such. The cycling and angling initiatives described earlier in this report are examples of ways in which the canal can link with wider social inclusion and health initiatives.

VOLUNTEERING

6.13 Research carried out by community, heritage and environmental organisations is increasingly demonstrating the value of volunteering, particularly its role in building skills, bonding communities and expanding employment opportunities. Encouraging young people to become involved in volunteering is seen as a key aim of many national organisations. While the construction is likely to have minimal volunteer input, as the scheme develops there will remain a strong role for volunteer involvement particularly through maintenance and interpretation.