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## Appendices to 2020 Vision for Funding Our Waterways

We are the Environment Agency. It's our job to look after your environment and make it a **better place** - for you, and for future generations.

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# Appendices

Appendices	Page
A External engagement	1
B Data Tables	2
C Waterway activity descriptions	9
D Waterway activity expenditure by region 2006/7	10
E Delivery options evaluation	11
F The management of European Waterways	12
G Asset investment and service options	18
H Commercial development	24

## Appendix A- External Engagement

Below is a list of the organisations and groups that have been consulted on the Funding Strategy, in addition to direct consultation with registered craft owners.

### **Users**

Amateur Rowing Association  
Association of Waterway Cruising Clubs

The Barge Association  
British Canoe Union

Inland Waterways Association  
National Association of Boat Owners  
National Navigation Users Forum  
Residential Boat Owners Association  
Royal Yachting Association  
Welsh Canoeing Association

### **Associated Governing Bodies**

Association of Inland Navigation Authorities  
British Waterways  
Defra

### **Trade**

Association of Pleasure Craft Operators  
British Boating Federation  
British Marine Federation

Commercial Boat Operators' Association  
Passenger Boats Association

### **Regional Bodies**

East of England Development Agency  
Regional Fisheries, Ecology and Recreation Committees  
South East England Development Agency  
Waterways Working Groups (Thames, Southern, Anglian)  
Thames User Group (navigation)  
Association of Rivers Trusts  
Wye Navigation Committee  
London Waterways Commission

### **Other Governing Bodies**

Inland Waterways Advisory Council  
Local Government Association  
National Trust

### **Other User Bodies**

Electric Boat Association  
Medway Rivers Project  
Ramblers' Association  
SUSTRANS  
National Federation of Fisheries and Angling Consultative  
National Federation of Anglers

# Appendix B- Data Tables

**Table One** – Numbers of registered craft by Region 2006/7

	<b>Anglian</b>	<b>Southern</b>	<b>Thames</b>	<b>Total</b>
Powered craft	3731	900	10413	<b>15064</b>
Unpowered craft	806	268	6596	<b>7670</b>
Hire craft	48	0	348	<b>396</b>
Passenger craft	0	2	57	<b>59</b>
House boats	12	3	93	<b>108</b>
Visiting powered craft	146	580	4143	<b>4869</b>
Visiting unpowered craft	46	205	3462	<b>3713</b>
<b>Total</b>	<b>4789</b>	<b>1963</b>	<b>25112</b>	<b>31864</b>

**Table Two** – Environment Agency Navigation Funding 2006/7 (Fig.1)

<b>Funding Source</b>	<b>£ million</b>
GiA (Defra & NaW)	£3.9
Capital GiA (Defra &EA)	£10.0
Craft registration	£3.6
Other income	£1.2
EA other functions	£3.9
<b>Total Funding</b>	<b>£22.6</b>

**Table Three – Environment Agency Waterway Statistics 2006/7**

	<b>Anglian</b>	<b>Southern</b>	<b>Thames</b>	<b>EA Wales</b>	<b>Total</b>
Income (Non GiA)	£1,123,471	£400,200	£3,323,274	£0	£4,846,945
Staff	26.2	17.5	128.6	5.4	177.7
Registered craft	4789	1963	25112	0	31864
Length (kms)	521	31	217	251	1020
Locks (automated)	3	1	36	0	49
Locks (manual)	62	9	12	0	83
Locks (disused)	0	1	0	0	1
Boats	4	3	19	0	26
Weirs/sluices	Not waterways	10	81	0	624
Lock laybys/stages	127	19	103	0	249
24 hr moorings	41	0	20	0	61
Long stay moorings	105	3	162	0	270
Lock Houses	3	3	61	0	67
Water point	17	3	20	0	40
Sewage disposal	2	3	13	0	18
Refuse disposal	12	3	19	0	34
Pump out	6	3	7	0	16
Power hook up	0	0	18	0	18
Public Toilets	1	0	25	0	26
Slipways	4	1	6	0	11
Boat rollers	0	0	4	0	4
Canoe portage points	59	14	45	0	118
Camp sites	1	0	7	0	8
Towpath length	0	1.5km	127km	0	128.5 km

**Table Four– Waterways Activity Expenditure 2006/7 (Fig. 2)**

Activity	£ million					
	Anglian	Southern	Thames	EA Wales	Head office	Total
<b>Asset backlog</b>	£2.6	£2.8	£4.5	£0.0	£0.1	£10.0
<b>Asset maintenance</b>	£1.2	£0.4	£2.3	£0.1	£0.1	£4.1
<b>Enforcement</b>	£0.2	£0.2	£1.2	<£0.1	<£0.1	£1.6
<b>Customer service</b>	£0.4	£0.2	£1.9	£0.1	£0.1	£2.8
<b>Marketing</b>	£0.3	£0.1	£0.3	<£0.1	£0.2	£1.0
<b>Strategic planning</b>	£0.3	£0.1	£0.4	£0.2	£0.5	£1.5
<b>Matrix Services</b>	£0.2	£0.1	£1.3	<£0.1	£0.0	£1.6
<b>Total</b>	£5.3	£3.8	£11.9	£0.6	£1.0	£22.6

**Table Five- Asset Investment Options (Fig.3)**

Investment Option	£ million					
	Anglian	Southern	Thames	EA Wales	Head office	Total
Current (no backlog)	£1.2	£0.4	£2.3	£0.1	£0.1	£4.1
1- Walk Away	£0.7	£0.3	£3.2	£0.12	£0.09	£4.3
2 -Fit for purpose	£3.9	£2.9	£5.8	£0.12	£0.10	£12.8
3 - Assisted standard	£5.0	£3.6	£8.5	£0.13	£0.14	£17.4
4- Meet Waterway Standards	£6.1	£4.2	£11.1	£0.19	£0.17	£21.8
5- Deliver Waterway Plans	£7.2	£6.1	£12.9	£0.41	£0.21	£26.8

NB: Figures exclude asset backlog investment.

**Table Six –Levels of Service (Fig. 4)**

Service level	£ million					Total
	Anglian	Southern	Thames	EA Wales	Head office	
Current	£1.4	£0.7	£5.2	£0.8	£0.8	£8.7
1- Walk Away	£0.6	£0.2	£0.2	£0.0	<£0.1	£1.1
2 –Fit for purpose	£1.6	£0.4	£2.2	£0.5	£0.5	£5.3
3 - Assisted service	£2.1	£0.7	£3.5	£0.5	£0.7	£7.5
4- Meet Waterway Standards	£2.9	£1.1	£4.6	£0.8	£0.8	£10.2
5- Deliver Waterway Plans	£7.1	£1.4	£5.5	£1.4	£1.0	£16.4

**Table Seven – Lock Traffic Case Study (Case Study Two)**

	Mean lock traffic (per lock year)		
	U/S Reading	D/S Reading	Total
Powered launch	5461.6	12146.9	17608.4
Hired launch	1231.2	1562.0	2793.3
Passenger boat	1483.3	1470.0	2953.3
Visiting launch	199.7	433.0	632.7
Unpowered	735.3	777.1	1512.4
Total craft	9111.0	16389.0	25500.1
Lock operations	5496.1	7283.2	12779.3

**Table Eight – Funding Gap Analysis by Activity 2006/7 (Fig. 5)**

Activity	£ million		
	2006/7 Expenditure <sup>1</sup>	Option/level 3 Need	Difference
Maintenance	£4.1	£17.4	<b>-£13.3</b>
Enforcement	£1.6	£1.5	£0.1
Customer service	£2.8	£2.3	£0.6
Marketing	£1.0	£1.0	£0.0
Strategic planning	£1.5	£1.2	£0.3
Matrix services	£1.6	£1.3	£0.4
<b>Total</b>	<b>£12.7</b>	<b>£24.7</b>	<b>-£12.0</b>

<sup>1</sup> Includes matrix funding

**Table Nine – Regional Funding Gap Analysis (Fig. 6)**

Service	Anglian	Southern	Thames	EA Wales	Head office	Total
2006/7 <sup>2</sup> (A)	£2.6	£1.1	£7.4	£0.6	£0.9	£12.7
Need (B)	£7.1	£4.1	£12.1	£0.6	£0.8	£24.7
Shortfall (B-A)	£4.5	£2.9	£4.6	£0.0	-£0.1	£12.0

Need = Assisted investment standard and service level (option/level 3).

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<sup>2</sup> Includes Matrix funding

**Table Ten – Proposed Regional Funding by Activity**

	£ million							
Activities	Anglian	Southern	Thames	EA Wales	Head Office	Central	RSU's	Total
<b>Core funded</b>								
<b>Maintenance</b>	£1.48	£0.42	£1.39	£0.11	£0.00	£0.22	£0.00	£3.62
<b>Enforcement</b>	£0.27	£0.12	£0.42	£0.01	£0.01	£0.03	£0.00	£0.86
<b>Customer service</b>	£0.69	£0.16	£1.03	£0.14	£0.02	£0.03	£0.00	£2.07
<b>Marketing</b>	£0.14	£0.02	£0.09	£0.02	£0.11	£0.16	£0.17	£0.71
<b>Strategic</b>	£0.24	£0.06	£0.22	£0.23	£0.38	£0.06	£0.12	£1.30
<b>Matrix services</b>	£0.08	£0.00	£0.00	£0.04	£0.00	£0.00	£0.00	£0.12
<b>Core Total</b>	<b>£2.91</b>	<b>£0.78</b>	<b>£3.15</b>	<b>£0.55</b>	<b>£0.51</b>	<b>£0.50</b>	<b>£0.29</b>	<b>£8.69</b>
<b>Non Core funded</b>								
<b>Asset Backlog</b>	£2.64	£2.81	£4.45	£0.00	£0.10	£0.00	£0.00	£10.00
<b>Matrix services</b>	£0.00	£0.04	£3.89	£0.00	£0.00	£0.00	£0.00	£3.93
<b>Non Core Total</b>	<b>£2.64</b>	<b>£2.85</b>	<b>£8.34</b>	<b>£0.00</b>	<b>£0.10</b>	<b>£0.00</b>	<b>£0.00</b>	<b>£13.93</b>
<b>Total Funding</b>	<b>£5.55</b>	<b>£3.63</b>	<b>£11.51</b>	<b>£0.55</b>	<b>£0.61</b>	<b>£0.50</b>	<b>£0.29</b>	<b>£22.62</b>

**Table Eleven – Core Service comparison to 2006/7 service (Fig.7)**

	£ million		
	2006/7 service <sup>3</sup>	New core service	Difference
Anglian	£2.65	£2.91	£0.26
Southern	£1.03	£0.78	-£0.25
Thames	£3.52	£3.15	-£0.37
EA Wales	£0.55	£0.55	£0.00
Head office	£0.93	£0.51	-£0.42
Central	£0.00	£0.50	£0.50
Regional Strategic Unit	£0.00	£0.29	£0.29
Total	£8.69	£8.69	

<sup>3</sup> Excludes matrix and backlog funding

# Appendix C – Waterway activity descriptions

<b>Activity</b>	<b>Includes</b>
Asset Maintenance	Tree/obstruction investigation and removals, fairway maintenance, dredging, day to day site management, site H&S, signage, asset monitoring and inspection, property management, asset repairs and replacement.
Enforcement	Registrations, navigation consents/licenses/conditions, river events – administration, checks, enforcement action (warnings, formal cautions, prosecution, court attendance).
Customer Service	Customer charter services, assisting lock passage, information and advice.
Promotion & Marketing	Website, publications, newsletters, media, partnerships, River Thames Alliance, Agency events and attendance at shows etc.
Strategy & Planning	Stakeholder engagement, Government liaison and negotiation, policy & process, business planning, budget management, workforce planning, Navigation strategies, commercial income, planning consultations.
Matrix Services	Services to the wider Environment Agency business including weir/water level management for FRM/WR, integrated promotion of Fish & Rec, ecological considerations & mitigation, Agency Change Projects, WFD, Pollution prevention.

# Appendix D- Waterways activity expenditure by region 2006/7

Fig D1- Anglian

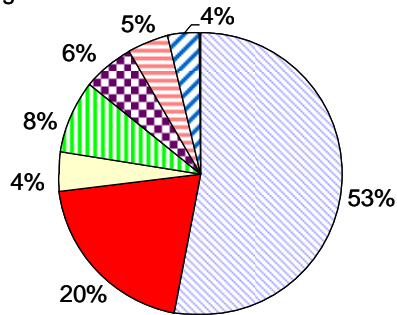


Fig D2 - Southern

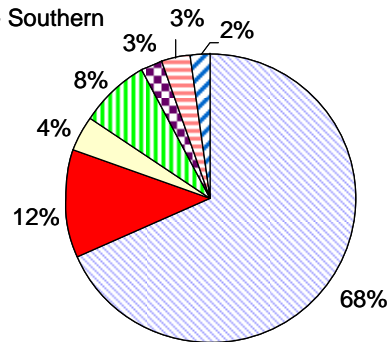


Fig D3 - Thames

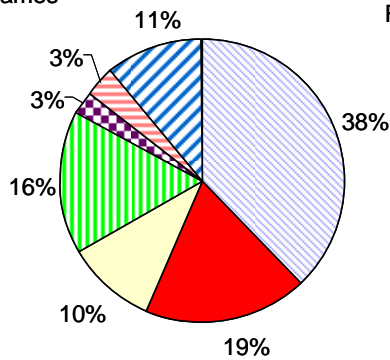


Fig D4 - EA Wales

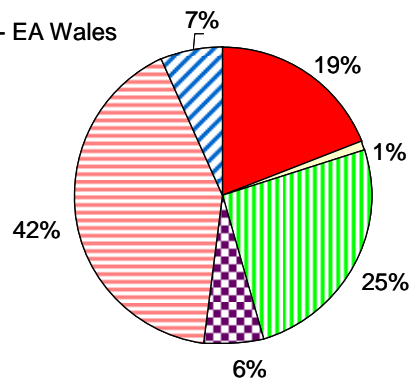
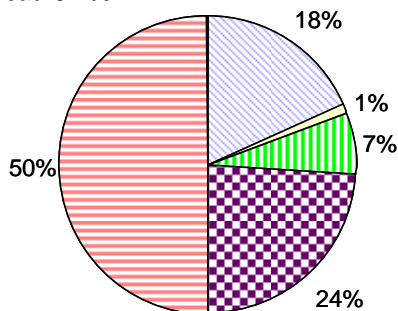


Fig D5 - Head Office



**Legend**



# Appendix E- Delivery options evaluation

	<b>Public Private Partnership</b>	<b>Other Operators</b>	<b>Adapted Delivery</b>	<b>Rationalised</b>
Enables optimisation of asset whole life costs	4	2	4	4
Sufficient business to support option	1	2	3	4
Supports national prioritisation of waterway activities	2	1	4	4
Promotes commercial opportunities and accounts for market forces	4	2	4	2
Investment in waterways attractive to funders (public & private)	3	1	3	2
Speeds and increases funding	3	1	3	3
Minimises cost/ complexity of change	2	1	4	2
Limits issues with employees/industrial relations	2	1	3	2
Allows for changes in funding available/ need	3	1	4	3
Preserves our reputation	2	2	4	2
Is robust in the face of political change	3	3	3	3
<b>Total</b>	<b>29</b>	<b>17</b>	<b>39</b>	<b>31</b>

Scoring – 1 (low) to 5 (high)

# Appendix F- The management of European Waterways

## BACKGROUND

As part of our Funding Strategy, we have reviewed our operation as a Navigation Authority against a number of the other European Navigation Authorities. We have assessed those that are as close in character, operational structures and funding sources against our operation to our own, although there are significant differences that make comparison difficult.

The European waterway network is extensive and provides uninterrupted navigation from the North Sea to the Black Sea and Mediterranean. There are 36,000km of waterway across the EU states, including rivers, canals, lakes and coastal lagoons.

Over 11,000 commercial vessels use the EU waterways, transporting loads equal to 440,000 x 50 tonne trucks. In the Netherlands 40% of all freight transported is transferred by inland waterway at some point. This compares to 0.1% in the UK and 6% across the rest of Europe. Outside of Europe, the United States transfers 12% of freight by inland waterway.

Over 1 million leisure craft use the EU waterways, ranging from canoes and dinghys to large cruisers and barges.

This paper highlights perceived good practice within other Authorities and issues that arise from comparing our operation.

## SELECTED NAVIGATION AUTHORITIES

We compared those European Inland Navigation Authorities that were comparable to our operation in terms of their delivery and funding structures. This included Navigation Authorities in the Netherlands, Ireland, France and Belgium.

We did not compare with the major river navigations of the Rhine, Elbe and Danube, as the scale and operation of these waterways are magnitudinally different to our waterways. We also considered waterways in Eastern Europe, the Iberian peninsular and North Eastern Italy but did not find sufficient information to compare with.

### Belgian Navigation

**Promotie Binnenvaart Vlaanderen VZW** and **Voies Hydrauliques Wallonie** are the major Belgian Navigation Authorities. Each receives State and Regional funding as part of the devolved Belgian Regional Governments. Each works closely with local authorities to promote recreational and commercial use of Belgian waterways as part of the wider European network

Belgium has a dense network of some 1600km of inland waterways crossing the country's two regions, Flanders and Wallonia. The Belgian network has good links with the networks of northern France and southern Netherlands.

### French Navigation

**Voies Navigables de France (VNF)** manages one of the largest waterway networks in Europe (6,700 km of converted canals and rivers). VNF is a public organisation, supervised by the French Ministry of Equipment, Transport, Territorial Development, Tourism and Maritime Affairs. VNF works with institutional partners and waterway users to contribute to all environmental conservation and sustainable development policies.

Boat ownership in France is estimated at 1:63 per head of population, with half using inland waters. There are over 2,400 freight vessels registered on the network.

### **Irish Navigation**

In recent years, Ireland has been at the forefront of European efforts to restore long-abandoned canals for their economic, heritage, tourist, recreational and environmental value. History was made in 1999, when the British-Irish Agreement Act was signed that established **Waterways Ireland** (along with five other North/South bodies).

There are no official estimates for Irish boat ownership but it is suggested that it is not more than 10,000, these being mostly small craft.

### **Dutch Navigation**

The main network is state-owned and operated by the **Rijkswaterstaat**. The smaller waterways are managed by many different provincial Authorities or Drainage Boards, for whom navigation is often a low priority.

The Netherlands has some 6000km of rivers and canals that form the densest network of inland waterways in Europe. Many of the canals provide drainage as well as navigation. The network serves all parts of the country. The main commercial waterways are some 2200 km in length and provide for about 40% of international freight movements in the Netherlands and 20% of domestic freight. Commercial use is such that one of the key issues facing Dutch waterways is the provision of alternative routes and navigation structures for recreational navigation. The busiest locks on the network see more than 50,000 boats passing per year. Planning for commerce and recreation is complicated by the large number of separate waterway authorities.

### **United Kingdom Navigation**

England and Wales have two main navigation authorities, the Environment Agency and British Waterways. Each organisation receives funding from Government and registered users. The combined network is some 4600km in length. There are additionally another 23 navigation authorities managing a further 700km of waterway, including the Boards and the Middle Level Commissioners.

It is estimate that there are in excess of 76,000 vessels registered on the entire inland network and all the major authorities charge for vessels registration.

## **KEY FINDINGS**

Key comparison data and statistics have been drawn from annual reports, corporate plans and personal communications. These are summarised in Tables C1 to C3.

Within mainland Europe the French, Dutch and Belgian waterways are all state run. Their funding comes directly from government funds and the Navigation Authorities are directly run by government, at either a national level, or a devolved regional level common throughout Europe. The key business driver for all the State owned waterways is the transport of freight. Waterways are seen as part of a multi-modal transport network. On these waterways recreational boating is subsidiary to the transport needs. In the Netherlands, the regional governments are looking to open the wider network of small canals to meet the growing needs of leisure boaters. A similar case is true for Belgium.

In France, VNF is looking at its network and has a strategy for devolving responsibility of waterways with limited commercial value to urban authorities or regional government.

Waterways Ireland clearly states that its primary objective is to promote recreational boating. Funds come from both the Republic and the devolved Northern Ireland Executive for leisure, tourism and heritage purposes. It is one of six organisations that reports directly to the joint north/south ministerial council.

In all the above cases the organisations clearly identify the operational use as their prime driver rather than their statutory obligation.

The income comparison (Table F1) reveals that we receive a little over one quarter of the income per leisure boat that British Waterways receives, but far more than the other comparators. Yet the efficiency of our leisure boating income is around the same as British Waterways in terms of network length, greatly exceeding the other Navigation Authorities.

This suggests our network is more attractive to leisure boaters than the other waterways. However, the comparison to British Waterways income suggests that there is potential to greatly increase our income per leisure boat. Much of the additional income British Waterways receives is provided through associated commercial services, such as marinas and moorings.

The expenditure comparison, (Table F2), reveals that we are spending the least per kilometre of network. We also have the greatest staff efficiency in terms of the size of our network and expenditure. However, many of our overheads are absorbed by the rest of the Environment Agency. Some of these differences may be explained by the wider roles undertaken by navigation staff in the other authorities, such as administering British Waterways property portfolio and drainage in the Netherlands.

The indicative comparison of registration charges, (Table F3), highlights that the relevant States fund the majority of the waterways. This has much to do with the importance of these waterways for freight transportation, although Waterways Ireland is the notable exception. Here State funding is being provided largely to promote tourism and the wider social and economic benefits that the waterways are perceived to provide.

## **CONCLUSION**

Whilst we are highly efficient in what we deliver, there is opportunity for us to increase our income, for example through commercial opportunities, providing services to leisure boaters, and a greater focus on tourism. We should also not overlook the potential to generate income through increased freight transfer, although the latter is likely to prove more limited due to the nature of our network in terms of its fluctuating flows and river dimensions.

**Table F1 – Comparison of income and leisure boating use for various European waterways (2005)**

	Waterway Length km	Leisure Boats	Total Income (1) £k	Leisure Boating Income £k	Income per leisure boat £/boat	Leisure Boating Income per km £/km
Environment Agency	1034	30,773	19,100	5,200	168.97	5029.01
British Waterways	3540	29,000	182,100	19,400 (4)	658.62	5480.20
VNF –France	6051	250,000	237,762	3,776	15.10	624.00
Waterways Ireland	755	10,500	18,500	177	16.85	234.43
Rijkwaterstaat	5046	456,000	360,000	*	*	*
AWZ- Flanders	1523	14,700 (2)	37,430	0 (3)	0	0
VHW – Wallonia	452	14,700 (2)	38,460	0 (3)	0	0

Conversion rate = £1 = €1.43

1. Total income includes Government grant, freight fees, leisure boating and other income sources.
  2. Total for the whole of Belgium
  3. All tolls scrapped in 2006
  4. Includes income from moorings, marina and commercial sales
- \*. Figure not known

**Table F2 – Comparison of expenditure and staffing efficiency for various European waterways (2005)**

	Waterway Length km	Number of employees	Total Expenditure £k	Expenditure per km £/km	Expenditure per employee £/emp	Employees per km emp/km
Environment Agency	1034	177	19,100	18,47	107,909	0.17
British Waterways	3540	1876	190,100	53,70	101,332	0.53
VNF -France	6051	4913	208,321	34,43	42,401	0.81
Waterways Ireland	755	344	17,432	23,09	50,674	0.46
Rijkwaterstaat	5046	3,700+ (1)	354,900	70,33	95,918	0.73+
AWZ- Flanders	1523	756	34,390	22,58	22,580	0.50
VHW - Wallonia	452	1050	33,566	74,26	31,967	2.32

Conversion rate = £1 = €1.43

1. Includes drainage staff.

**Table F3 - Indicative Annual Registration Charges on European Waterways.**

	Unpowered Craft	Small motor vessels	Medium sized vesse	Large leisure craft	Notes
Environment Agency	£18-25	£363	£486	£954	(1)
British Waterways	£34.37	£363	£486	£954	(1)
VNF - France	£24.50	£81.25	£163.28	£326.64	(2)
Rijkswaterstaat	0	0	0	0	(3)
VHW - Wallonia	0	0	0	0	(3)
AWZ- Flanders	0	0	0	0	(3)
Waterways Ireland	0	0	0	0	(4)

Conversion rate = £1 = €1.43

#### Notes

1. The gold licence figures have been used for powered craft as they most accurately reflect the similar charges on the European network, and the extent of the available network.
2. This is for the VNF network; local commune/department managed waterways not connected to the VNF network do not charge.
3. Craft under 10bhp do not need to register. Registration is free to all other craft. A utility charge is levied by Waterways Ireland on the Shannon – Erne network and is purchased via a swipecard with a number of prepaid units, 1 unit per lock passage, 10 units per pumpout. A 10 unit card costs £4.40, a 20 unit £8.88. Other waterways charge £0.69 a locking. The Barrow canal charges £89 for vessels permanently moored on the waterway.
4. The Dutch and Belgian government run and regional waterways do not charge for registration, (craft licensing ceased in Belgium in 2006). However, you are required to “register” being on the network and hold insurance the national or international certificate of competence.

# Appendix G- Asset investment and service options

Our current asset investment costs were assessed for each waterway unit by the Regional engineers based upon their experience and knowledge of our assets and their maintenance needs.

The rest of our service delivery costs were assessed for each waterway unit by our Regional staff based upon their experience and time recording data, (Table G1).

**Table G1 – Costs by waterway unit 2006/7**

<b>Waterway Unit</b>	<b>Asset Investment</b>	<b>£ million Service cost</b>	<b>Total</b>
Ancholme, Welland, Glen & Stour	£0.4	£0.6	£1.1
Nene & Great Ouse	£2.5	£1.7	£4.2
Medway	£1.5	£0.6	£2.1
Rye Harbour	£1.4	£0.5	£1.8
Upper Thames	£1.8	£2.7	£4.5
Middle & Lower Thames	£3.0	£4.4	£7.4
Wye	£0.0	£0.2	£0.2
Dee Harbour	£0.0	£0.3	£0.3
Head Office	£0.2	£0.8	£1.0
<b>Total</b>	<b>£10.9</b>	<b>£11.8</b>	<b>£22.7</b>

Dee Harbour was not included in analysis as the future investment and service levels will largely be determined by the provisions of a pending Harbour Revision Order. Consequently, whilst current expenditure was collated for the harbour, service levels were not developed.

We defined five options for our future levels of asset investment and service, (Table I2) and subdivided our service delivery, (excluding asset investment) into six task areas, (Appendix E). The costs for delivering each task at each level was estimated for each waterway unit. Our current costs were compared to these estimates to identify their relative position against the five options. The outputs of this comparison are given in Tables I3 to I10.

**Table G2 – Service Levels and Investment Options**

Option	Description
1) No service/Walk Away	No service/investment by Environment Agency other than that needed to make assets safe. Allow waterway to deteriorate to closure. No assisted passage.
2) Fit for purpose	Minimum services and investment to keep navigation open and fit for purpose. Reactive maintenance. Statutory duties met. Assisted passage at gateway and high risk locks.
3) Assisted standard/service	Maintain fit for purpose infrastructure, and provide some additional facilities and service to assist passage. Assisted passage at gateway, high risk and high use locks.
4) Meet Waterway Standards	Maintain and improve services and infrastructure to Waterways Standards. Assisted passage at gateway, high risk, high and medium use locks.
5) Deliver Waterway Plans	Improve services and investment to deliver Waterways Plans. Assisted passage at all locks.

TABLE G3 : ANCHOLME, WELLAND, GLEN AND STOUR Waterway Unit Service Level Comparison 2006/07.

Current and Service Levels (£ millions)							
Service Level	Asset Maintenance <sup>4</sup>	Enforcement	Customer Service	Promotion & Marketing	Strategic Planning	Matrix Services	Total
1	0.15	0.02	0.06	0.05	<b>0.04</b>	0.03	0.34
2	0.72	<b>0.04</b>	<b>0.09</b>	<b>0.08</b>	0.09	0.04	<b>1.06</b>
3	<b>0.74</b>	0.08	0.18	0.11	0.10	0.05	1.49
4	0.91	0.13	0.19	0.12	0.12	0.06	1.96
5	1.08	0.27	0.30	0.13	0.13	<b>0.07</b>	2.85
	1.27	0.68	0.53	0.16		0.08	

TABLE G4: NENE AND GREAT OUSE Waterway Unit Service Level Comparison (2006/07).

Current and Service Levels (£ millions)							
Service Level	Asset Maintenance <sup>4</sup>	Enforcement	Customer Service	Promotion & Marketing	Strategic Planning	Matrix Services	Total
1	0.52	0.04	0.16	0.11	0.07	0.05	0.96
2	3.02	<b>0.19</b>	<b>0.35</b>	0.18	0.15	0.08	<b>4.23</b>
3	<b>3.13</b>	<b>0.20</b>	0.51	0.20	0.18	0.08	5.63
4	4.10	0.46	0.61	<b>0.22</b>	0.20	0.09	6.96
5	5.00	0.71	0.72	0.23	<b>0.21</b>	<b>0.12</b>	11.34
	5.88	2.49	2.19	0.27	0.19	0.34	

<sup>4</sup> Current figure (highlighted) includes backlog funding.

TABLE G5 : MEDWAY Waterway Unit Service Level Comparison (2006/07).

Service Level	Current and Service Levels (£ millions)						Total
	Asset Maintenance <sup>5</sup>	Enforcement	Customer Service	Promotion & Marketing	Strategic Planning	Matrix Services	
1	0.15	0.00	0.03	0.00	0.01	0.00	0.18
2	1.58	0.11	0.10	0.02	0.03	0.03	1.88
3	<b>1.71</b>	<b>0.12</b>	<b>0.12</b>	0.04	<b>0.06</b>	0.06	<b>2.13</b>
4	2.12	0.15		<b>0.05</b>		<b>0.07</b>	2.50
5	2.53	0.17	0.18	0.15	0.15	0.09	3.21
5	3.46	0.19	0.18	0.20	0.20	0.15	4.39

TABLE G6 : RYE HARBOUR WATERWAY Waterway Unit Service Level Comparison (2006/07).

Service Level	Current and Service Levels (£ millions)						Total
	Asset Maintenance <sup>5</sup>	Enforcement	Customer Service	Promotion & Marketing	Strategic Planning	Matrix Services	
1	0.14	0.00	0.01	0.00	0.01	0.00	0.16
2	1.26	0.01	0.04	0.02	0.03	0.01	1.37
3	<b>1.48</b>	0.03	0.06	0.02	0.04	0.02	1.65
4	1.69	<b>0.04</b>	0.07	0.03	<b>0.06</b>	0.02	<b>1.74</b>
5	1.69			<b>0.05</b>	0.10	<b>0.02</b>	1.95
5	2.59	0.07	0.08	0.07	0.15	0.03	2.99
			<b>0.09</b>				

<sup>5</sup> Current figure (highlighted) includes backlog funding.

TABLE G7 : Upper Thames Waterway Unit Service Level Comparison (2006/07).

Service Level	Current and Service Levels (£ millions)						Total
	Asset Maintenance <sup>6</sup>	Enforcement	Customer Service	Promotion & Marketing	Strategic Planning	Matrix Services	
1	1.09	0.00	0.08	0.00	0.00	0.00	1.17
2	2.09	0.13	0.27	0.05	0.06	0.22	2.82
3	<b>2.57</b>	0.23	0.43	0.10	0.10	0.34	4.25
4	3.07	0.37	0.57	0.13	0.14	0.39	<b>4.50</b>
5	3.90	<b>0.41</b>	0.63	0.30	<b>0.15</b>	0.44	5.50
	4.66	0.43	<b>0.72</b>		0.19	<b>0.52</b>	6.50

TABLE G8 : Middle and Lower Thames Waterway Unit Service Level Comparison (2006/07).

Service Level	Current and Service Levels (£ millions)						Total
	Asset Maintenance <sup>6</sup>	Enforcement	Customer Service	Promotion & Marketing	Strategic Planning	Matrix Services	
1	2.07	0.00	0.11	0.00	0.03	0.00	2.21
2	3.71	0.27	0.48	0.13	0.16	0.44	5.20
3	<b>4.11</b>	0.52	0.76	<b>0.20</b>	<b>0.26</b>	0.54	<b>7.36</b>
4	5.46	0.72	0.95	0.26	0.35	0.60	7.79
5	7.20	<b>0.80</b>	1.08	0.36	0.48	0.73	10.20
	8.19	0.85	<b>1.19</b>	0.47		<b>0.80</b>	11.80

<sup>6</sup> Current figure (highlighted) includes backlog funding.

TABLE G9 - Wye (Environment Agency Wales) Waterway Unit Service Level Comparison (2006/07).

Service Level	Current and Service Levels (£ millions)						
	Asset Maintenance <sup>7</sup>	Enforcement	Customer Service	Promotion & Marketing	Strategic Planning	Matrix Services	Total
1	0.00	0.00	0.00	0.00	0.00	0.00	0.01
2	0.01	0.00	0.09	0.03	0.01	0.02	0.17
3	0.02	0.01	0.12	0.03	0.02	0.03	0.23
4	0.08	0.02	0.32	0.08	0.05	0.08	0.63
5	0.30	0.03	0.64	0.17	0.11	0.16	1.41

TABLE G10 – Environment Agency Head Office Waterway Unit Service Level Comparison (2006/07).

Service Level	Current and Service Levels (£ millions)						
	Asset Maintenance <sup>7</sup>	Enforcement	Customer Service	Promotion & Marketing	Strategic Planning	Matrix Services	Total
1	0.09	0.00	0.01	0.02	0.00	N	0.12
2	0.10	0.01	0.02	0.11	0.38	O	0.62
3	0.14	0.02	0.03	0.21	0.45	P	0.85
4	0.17	0.03	0.05	0.27	0.47	R	0.99
5	0.19	0.05	0.06	0.35	0.50	O	1.03
	0.21		0.07		0.52	V	1.17
						I	
						S	
						O	
						N	

<sup>7</sup> Current figure (highlighted) includes backlog funding.

# Appendix H- Commercial Development

We have worked with the Agency's commercial development team to assess opportunities to increase our income through commercial ventures. This work is part of a wider recreation and navigation enterprise activity feasibility project being progressed by the Agency.

Commercial opportunities are being considered that:

- generate income through contestable markets (under Wider Markets guidelines);
- develop new or existing revenue streams under existing responsibilities and statutory powers.

The realisation of new income streams will initially focus on making the most of our estate, through lease or sale for domestic/commercial purposes and the feasibility for longer term opportunities such as marina development and energy generation. A summary of our current thinking is provided in Tables H1-H5, excluding marina development for which our initial assessment is ongoing.

We recognise that the departmental ownership of some assets may be an issue. We aim to resolve such issues through the Agency's Enterprise Governance Board in order to optimise income to the Agency, increasing our income as part of this process.

Our ability to undertake some ventures and to gain the greatest returns are constrained by our governance. To maximise our income, we need changes to or agreements on the governance that controls how any income we receive is treated. Currently, the governance requires that:

- unless otherwise agreed, receipts from the sale of goods and services; rent of land and moorings, are treated as negative public expenditure and thus would reduce the Grant in Aid we receive;
- we are not permitted to retain property for which we no longer have an operational use.

An agreement is already established, the wider markets guidelines, that allows us to retain income up to £100K from an individual sale or rental without affecting our Grant in Aid. We will explore opportunities with Defra to obtain further agreements to retain the commercial income we generate without impacting on GiA in the short to medium term and to incorporate the operation of such ventures as operations necessary for navigation delivery.

Once fully evaluated our proposals will be presented to the Enterprise Governance Board for approval.

**TABLE H1 – Sale or lease of land and property**

Description	Benefits	Risks	Mitigations
<p>The sale or lease of riverside property and land which either is currently or may become surplus to operational requirements.</p> <p>The initial focus is on lock keeper's cottages in the Thames and Anglian regions.</p> <p>Options that are being considered are:-</p> <ul style="list-style-type: none"> <li>• Outright sale</li> <li>• Long term lets</li> <li>• Holiday lets</li> <li>• Retail lease</li> </ul> <p>Factors such as access, operational considerations, current occupants, and risk management (e.g. H&amp;S issues) will affect our ability to deliver. These may prohibit or delay outright sale which would be the preferred option under wider markets.</p>	<p><b>Initial Financial</b>            Assuming we can achieve the following:-            Outright sale – 10 units            Residential lets – 10 units            Holiday lets – 10 units            Retail lets – 5 units            Capital released could be in the region of £1.5M - £2M residential letting fees between £120k and £180k, holiday lets between £80k and £160k and retail lets of £150k -£200k</p> <p>No estimates yet for other land holdings</p> <p><b>Environmental</b>            No direct benefits</p> <p><b>Additional</b>            Any retail developments would potentially draw additional people to the river which increases recreational use and generates further revenue opportunities</p>	<ol style="list-style-type: none"> <li>1. Operational risks to flood risk management</li> <li>2. Retail would require change of use permissions</li> <li>3. Potential H&amp;S and operational risks of having members of the public on or close to operational sites</li> <li>4. Loss of control of development in close proximity to prime locations</li> <li>5. Unknown costs to upgrade access, install H&amp;S protections etc</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Risk assessment within evaluation</b></li> <li>2. Fall back to other lease option</li> <li>3. Risk assessment within evaluation</li> <li>4. Only sell where operational and environmental considerations are not likely to be impacted</li> <li>5. Considerations to be made during initial survey</li> </ol>

**TABLE H2 – Moorings and permits**

Description	Benefits	Risks	Mitigations
<p>The Agency currently generates over £400k from moorings, mainly on the Thames.</p> <p>Initiatives under evaluation are:-</p> <ul style="list-style-type: none"> <li>• Review existing charging schemes to ensure they are market based and revenues are being maximised</li> <li>• Seek to build new low-cost / low facility off-channel moorings</li> <li>• Upgrade riverside moorings to finger moorings where possible to increase capacity</li> <li>• Review our ability to charge Riparian boat owners who moor their boats above our riverbed (Lower Thames)</li> <li>• Seek PPP opportunities to build new environmentally friendly marinas and implement a break-through charge.</li> </ul>	<p><b>Initial Financial</b> This area is speculative until a detailed site opportunity register is compiled. It would however be reasonable to target to increase our mooring revenues by 50%, or £200k per annum.</p> <p>Low cost moorings (based on Anglian experience) cost around £2k - £5k to put in place.</p> <p>There would be significant generation potential if we are able to charge for mooring over our riverbed with revenues up to £1 million envisaged.</p> <p><b>Environmental</b> New marinas can be built to meet specific environmental objectives</p> <p><b>Additional</b> Lack of moorings is often cited as the main reason for discouraging new boat owners, so low cost moorings could encourage wider social access by lowering the costs of boat ownership.</p>	<p>1. To be assessed</p>	

**TABLE H3 – Advertising and sponsorship**

Description	Benefits	Risks	Mitigations
<p>Initiatives under evaluation are:-</p> <ul style="list-style-type: none"> <li>• Increasing advertising revenue in EA publications, charging for free publications</li> <li>• Sponsorship of locks and launches (to include co-branding of signage, information boards etc) [NB roundabout sponsorship is currently typically £2000 to 5000pa]</li> <li>• Registration plate advertising</li> <li>• Film location charging (e.g Teddington Lock)</li> </ul>	<p><b>Initial Financial</b> Advertising in and/or charging for publications could raise an additional £20k - £40k. Lock sponsorship could raise £100,000 per annum (£2000 for 50 locks) Other advertising / location charging could bring in up to £20k.</p> <p><b>Environmental</b> Improved environment at locks (e.g. gardens)</p> <p><b>Additional</b> Better signage / information at locks.</p>	<ol style="list-style-type: none"> <li>1. Unsympathetic advertising impacts on the rural environment and our reputation.</li> <li>2. Charging for advice based publications reduces take-up and leads to H&amp;S issues.</li> <li>3. H&amp;S issues arising from filming etc at EA locations.</li> <li>4. Potential infringements of local legislation.</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Standardise the location, style and size of advertising materials</b></li> <li>2. Give first copy free then charge for additional copies.</li> <li>3. H&amp;S survey of locations and risk register compiled. Risk mitigation practiced.</li> <li>4. Legal counsel during evaluation.</li> </ol>

**TABLE H4 – Lock side retail**

Description	Benefits	Risks	Mitigations
<p>Boaters and walkers could benefit from increased access to retail services at locks. Current options under evaluation are:-</p> <ul style="list-style-type: none"> <li>• Long term lease of space for mobile retail units (e.g coffee bars, ice cream stands)</li> <li>• Development of a standard “Lock Stock” shopping concept run by franchised operators and also potentially carrying EA merchandise</li> <li>• Running and operating “Lock Stock” shops through an EA Enterprise mechanism (with an alcohol licence could be “Lock Stock and Two Foaming Barrels”</li> <li>• “Lock Spot” wireless broadband internet points</li> <li>• Cycle Hire (own or franchised)</li> <li>• Lock side Car Park charging</li> </ul> <p>Any start-up costs would seek to be covered by partners e.g retail group or PPP, franchisee or other.</p>	<p><b>Initial Financial</b>  Rents from 30 Mobile retail units could be expected to generate £20k-£30k per year.  Franchise income from 15 “Lock Stock” franchises could generate £100k to £200k per year.  Profit from 15 “Lock Stock &amp; Barrels” could generate £300k to £500k per year.  Lock Spots could generate £20k - £40k per year  Cycle hire and car parking would break even or possibly make a small profit.</p> <p><b>Environmental</b>  Car park charging would discourage access by car</p> <p><b>Additional</b>  Any retail developments would potentially draw additional people to the river which increases recreational use and generates further revenue opportunities  Bike hire would encourage fitness.</p>	<ol style="list-style-type: none"> <li>1. Retail may require planning permission</li> <li>2. Potential H&amp;S and operational risks to having members of the public on or close to operational sites</li> <li>3. Mixing alcohol and water</li> <li>4. Retail seen as unwelcome in river environment</li> <li>5. Risk of unfair competition complaints from local retailers</li> <li>6. Impact upon subsistence living of lock staff with tea rooms.</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Assess as part of evaluation</b></li> <li>2. Assessed as part of evaluation</li> <li>3. Only allow sale where physical separation possible.</li> <li>4. Will be considered by planning</li> <li>5. Will be considered by planning</li> <li>6. To be addressed.</li> </ol>

**TABLE H5 – Power generation (longer term opportunity)**

Description	Benefits	Risks	Mitigations
<p>New low head venture power generation techniques could be used to generate power from the water currently spilling over weirs.</p> <p>In the past environmental, fisheries and water abstraction issues have posed problems. These can now potentially be overcome.</p> <p>Currently it is assumed that the opportunity to generate power will be let to a third party in return for an annual rental. The third party would then be responsible for installing capacity to an agreed specification.</p> <p>Initial estimates for the Thames show that the total power generation capacity is around 10MW of which it may be reasonable to assume 30% can be realised without compromising operational or environmental factors.</p>	<p><b>Financial (tentative)</b> Based on typical payments to land owners for wind schemes of around £40k-£60k per MW pa we could achieve revenues of £400k - £600k pa</p> <p><b>Environmental</b> Increased generation of renewable power.  Venturi generators have been shown to be beneficial in water aeration and are fish friendly.</p> <p><b>Additional</b> Could power our own local infrastructure.</p>	<ol style="list-style-type: none"> <li>1. Operation of flood risk capability may be compromised</li> <li>2. Environmental damage</li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Full consultation with FRM and only siting generation in areas of low operational risk</b></li> <li>2. Selection of appropriate low-impact technology and close management of partner during installation</li> </ol>